UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY *of the* UNITED STATES 1934

PART 7

LOWER MISSISSIPPI RIVER BASIN

Prepared in cooperation with the States of
COLORADO, KANSAS, MISSOURI, NEW MEXICO, TENNESSEE, and TEXAS

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 762

UNITED STATES DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 762

SURFACE WATER SUPPLY *of the* UNITED STATES 1934

PART 7
LOWER MISSISSIPPI RIVER BASIN

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ILLUSTRATION

SURFACE WATER SUPPLY OF THE LOWER MISSISSIPPI RIVER BASIN, 1934

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results 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 the 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		

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 organiza-

[1] Only $340,000 available for expenditure.

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

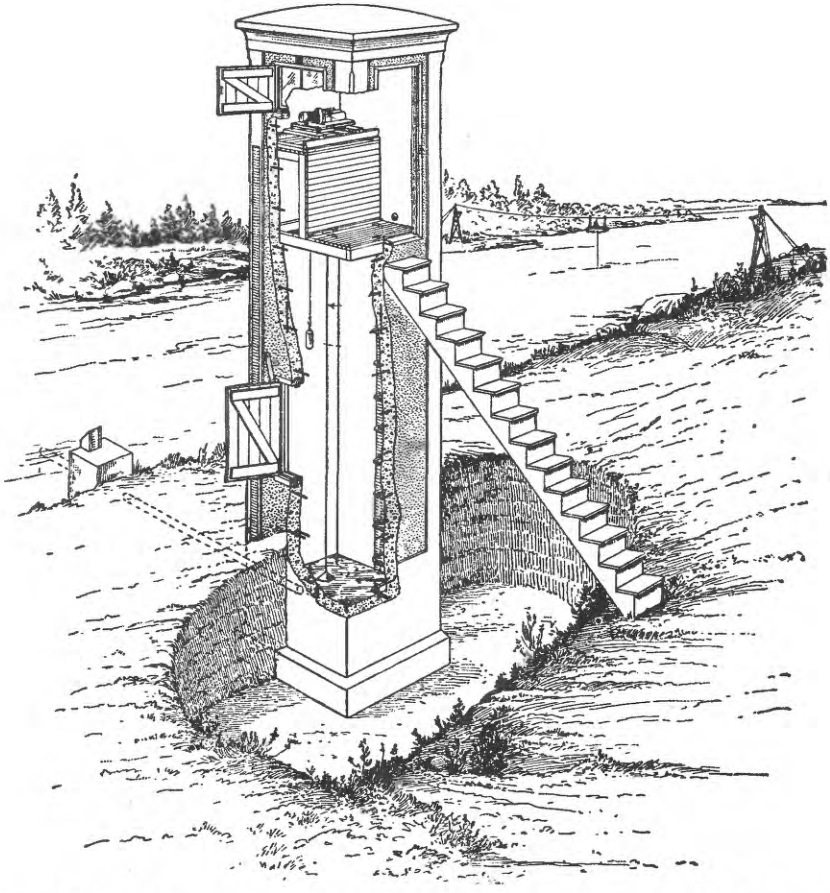

FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

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 stat on, 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 gag ng 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 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 nonrecording 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 depth 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 station 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 four significant figures instead of three 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 four significant figures instead of three 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., Customhouse, Eighth and Olive Streets.
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., State Capitol.
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 as follows:

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

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

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	[2] 35, 36	36	36	36	[3] 36, 37	37	37	[4] 37, 38	38, [5] 39	38, [6] 39	38	38	38
1900 [7]	47, [8] 48	48	48, [9] 49	49	49	49, [10] 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	[11] 65, 66, 75	66, 75	[11] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[2] 82, 83	83	[12] 82, 83	[11] 83, 85	84	[11] 83, 84	84	85	85	85	85	85	85
1903	97	[2] 97, 98	98	97	[11] 98, 99, [13] 100	99	[11] 98, 99	99	100	100	100	100	100	100
1904	[14] 124, [15] 125, [16] 126	[16] 126, 127	128	129	[11] 128, 130	130, [17] 131	[11] 128, 131	132	133	133, [18] 134	134	135	135	135
1905	[14] 165, [15] 166, [16] 167	[16] 167, 168	169	170	171	172	[11] 169, 173	174	175, [19] 177	176, [18] 177	177	178	178	[20] 177, 178
1906	[14] 201, [15] 202, [16] 203	[16] 203, 204	205	206	207	208	[11] 205, 209	210	211, [19] 213	212, [18] 213	213	214	214	214
1907–8	241	242	243	244	245	246	247	248	249	250, [18] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [18] 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

[1] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, part 4.
[2] James River only.
[3] Gallatin River.
[4] Green and Gunnison Rivers and Colorado River above Gunnison River.
[5] Mojave River only.
[6] Kings and Kern Rivers and south Pacific slope basins.
[7] 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. Monthly discharge for 1900 in 22d Annual Report, part 4.
[8] Wissahickon and Schuylkill Rivers to James River.
[9] Scioto River.
[10] Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.
[11] Tributaries of Mississippi River from east.
[12] Lake Ontario and tributaries to St. Lawrence River proper.
[13] Hudson Bay only.
[14] New England rivers only.
[15] Hudson River to Delaware River, inclusive.
[16] Susquehanna River to Yadkin River, inclusive.
[17] Platte and Kansas Rivers.
[18] The Great Basin in California, except Truckee and Carson River Basins.
[19] Below junction with Gila River.
[20] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work in the several States was done under cooperative agreements as follows: In Colorado, with the office of the State engineer, M. C. Hinderlider, State engineer; in Kansas, with the water-resources division of the Kansas Board of Agriculture, George S. Knapp, chief engineer; in Missouri and for the station on the White River at Beaver, Ark., with the Missouri Geological Survey, H. A. Buehler, State geologist, the Missouri Game and Fish Department, W. C. Buford, commissioner, the Missouri Highway Department, T. H. Cutler, chief highway engineer, the city of Joplin, J. J. Sanders, commissioner, department of streets and public improvements, and the city of Springfield, F. F. Edmonds, commissioner, department of public property and public utilities; in New Mexico, with the office of the State engineer, Thomas M. McClure, State engineer; in Tennessee, with the Tennessee Division of Geology, Walter F. Pond, State geologist; in Texas, with the State through the board of water engineers, John A. Norris, chairman, C. S. Clark, and A. H. Dunlap.

Acknowledgments are also due 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 organizations and corporations: In Arkansas, by the Arkansas Power & Light Co. and White River Power Co.; in Colorado, by the Arkansas Valley Ditch Association; in Mississippi, by the Vicksburg Bridge & Terminal Co.; in Missouri, by the Little River Drainage District, Empire District Electric Co., and Current River Power Co.; in New Mexico, by Springer Ditch Co. and Phelps Dodge Co.

Funds for the rehabilitation of gaging stations, repairs, replacemen of equipment, improvement of records, and establishment and opera tion of new stations on the Mississippi 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 Arkansas (except White River at Beaver), in Oklahoma, and Red River near Denison, Tex., J. H. Gardiner; in Colorado, Robert Follansbee, the work being done in collaboration with M. C. Hinderlider, State engineer, and L. T. Burgess, State chief hydrographer; in Kansas, J. B. Spiegel; in Mississippi, C. E. McCashin (until Sept. 18, 1934) succeeded by D. H. Barber; in Missouri, Mississippi River at Memphis, Tenn., and White River at Beaver, Ark., H. C. Beckman; in New Mexico, Berkeley Johnson; in Tennessee (except as noted above), W. R. King (until July 26, 1934) succeeded by C. E. McCashin; in Texas (except as noted above), C. E. Ellsworth.

MISSISSIPPI RIVER

Mississippi River at St. Louis, Mo.

Location.- Water-stage recorder at foot of Washington Street, just downstream from west pier of Eads Bridge, St. Louis. Prior to May 5, 1934, staff gage a third of a mile downstream at foot of Market Street (same datum) was used. Zero of gage is 379.94 feet above mean sea level (1929 adjustment of U. S. Coast and Geodetic Survey) and 379.80 feet above mean Gulf level.

Drainage area.- 701,000 square miles (authority Mississippi River Commission).

Records available.- March 1933 to September 1934. Daily gage heights have been published in reports of Mississippi River Commission since January 1861; in reports of U. S. Weather Bureau since January 1890. Results of discharge measurements made intermittently by Corps of Engineers, U. S. Army, and Mississippi River Commission since 1866 are contained in reports of those organizations.

Extremes.- Maximum discharge recorded during year, 136,000 second-feet Apr. 24 (gage height, 9.0 feet); minimum, 35,200 second-feet Dec. 29 (gage height, -4.4 feet).
1933-34: Maximum discharge recorded, 434,000 second-feet May 17, 1933 (gage height, 27.0 feet); minimum, that of Dec. 29, 1933.
Maximum stage known, 41.39 feet June 28, 1844.

Remarks.- Records good. Gage-height record furnished by Corps of Engineers, U. S. Army, Oct. 1 to Dec. 31; by U. S. Weather Bureau Jan. 1 to May 4, and collected in cooperation with U. S. Weather Bureau for the remainder of the year.

Discharge measurements, 1933-34

Date	Width	Area of section	Mean velocity	Gage height	Discharge
	Feet	Square feet	Feet per second	Feet	Second-feet
1933					
Mar. 16	1,558	36,900	3.39	7.82	125,000
Mar. 22	1,557	37,000	3.38	7.90	125,000
Mar. 29	1,577	40,600	3.74	10.62	152,000
Apr. 5	1,672	55,300	5.30	18.45	293,000
Apr. 12	1,707	60,100	5.46	21.04	328,000
Apr. 19	1,706	59,200	5.04	19.96	298,000
Apr. 26	1,621	50,800	4.25	15.34	216,000
May 3	1,601	46,100	3.86	13.21	178,000
May 10	1,626	49,300	4.38	15.26	216,000
May 17	1,783	70,500	6.16	26.89	434,000
May 24	1,716	62,600	5.40	22.55	338,000
May 31	1,738	68,000	5.96	25.66	405,000
June 7	1,696	58,800	4.85	20.08	285,000
June 14	1,596	47,000	4.83	13.06	180,000
June 21	1,591	45,200	3.74	12.32	169,000
June 28	1,574	40,400	3.42	9.52	138,000
July 5	1,590	47,700	3.96	14.77	189,000
July 12	1,581	41,500	3.54	10.48	147,000
July 19	1,564	36,700	3.19	7.18	117,000
July 26	1,553	33,700	2.86	5.21	96,300
Aug. 2	1,548	31,600	2.71	3.88	85,500
Aug. 9	1,538	29,500	2.66	3.01	79,700
Aug. 16	1,541	30,000	2.63	2.94	78,900
Aug. 23	1,514	25,800	2.46	.50	63,500
Aug. 30	1,523	26,200	2.51	.98	65,900
Sept. 6	1,514	25,500	2.40	.47	61,200
Sept.13	1,523	25,300	2.40	.25	60,800
Sept.20	1,533	27,000	2.71	1.59	73,200
Sept.27	1,549	29,500	2.84	3.29	84,000
1933-34					
Oct. 4	1,553	33,400	2.98	5.41	99,700
Oct. 11	1,523	25,500	2.42	.61	61,900
Oct. 18	1,518	23,600	2.41	-.37	57,000
Oct. 25	1,539	27,500	2.62	2.17	72,000
Nov. 1	1,523	24,500	2.46	.08	60,300
Nov. 8	1,523	24,000	2.34	-.34	56,100
Nov. 15	1,523	23,400	2.30	-.86	53,800
Nov. 22	1,523	23,400	2.26	-.87	52,800
Nov. 28	1,523	23,000	2.32	-1.03	53,400
Dec. 6	1,525	24,500	2.57	.26	63,100
Dec. 13	1,531	24,700	2.48	.20	61,200
Dec. 20	1,530	23,400	2.41	-.50	56,300
1933-34					
Jan. 1	1,517	19,500	2.13	-3.21	41,500
Jan. 3	1,518	20,700	2.14	-2.60	44,300
Jan. 8	1,519	20,800	2.20	-1.92	45,800
Jan. 9	1,518	20,800	2.18	-2.00	45,400
Jan. 17	1,519	20,700	2.12	-2.42	44,000
Jan. 23	1,530	22,800	2.27	-1.11	51,700
Feb. 3	1,541	26,100	2.49	1.05	65,100
Feb. 9	1,526	22,700	2.31	-1.25	52,400
Feb. 12	1,536	24,800	2.49	.23	61,700
Feb. 23	1,541	26,500	2.67	1.45	70,700
Mar. 5	1,543	26,400	2.76	1.61	71,200
Mar. 13	1,566	33,400	3.08	5.61	103,000
Mar. 21	1,539	26,600	2.61	1.39	69,400
Mar. 30	1,556	31,000	2.87	3.97	89,000
Apr. 4	1,556	31,100	2.89	4.06	89,900
Apr. 12	1,556	32,400	2.88	4.75	93,400
Apr. 19	1,571	36,100	3.32	7.38	120,000
Apr. 28	1,576	35,800	3.38	7.54	121,000
May 7	1,546	30,600	2.79	3.62	85,300
May 15	1,541	27,700	2.66	1.90	73,600
May 22	1,541	28,200	2.71	2.58	76,400
May 28	1,546	27,200	2.75	2.07	74,700
May 30	1,528	25,700	2.53	.93	65,000
June 7	1,536	25,300	2.49	.46	63,000
June 14	1,538	25,400	2.58	1.00	65,500
June 21	1,546	27,100	2.70	1.92	73,100
June 28	1,536	26,300	2.61	1.25	68,600
July 6	1,536	26,500	2.67	1.46	70,700
July 12	1,532	25,600	2.66	1.10	68,000
July 18	1,554	29,400	2.85	2.96	83,800
July 28	1,521	25,600	2.49	.53	63,700
Aug. 2	1,505	22,700	2.26	-1.14	51,300
Aug. 10	1,496	20,600	2.20	-2.35	45,300
Aug. 17	1,526	22,600	2.38	-1.13	53,900
Aug. 25	1,526	22,400	2.30	-1.25	51,500
Sept. 1	1,496	19,800	2.07	-3.04	41,000
Sept. 7	1,521	21,600	2.27	-1.83	49,100
Sept.14	1,543	26,200	2.61	1.30	73,500
Sept.20	1,549	29,300	2.74	3.00	80,400

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Gage height, in feet, of Mississippi River at St. Louis, Mo., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	0.1	-1.5	-3.2	0.2	-2.3	4.0	6.4	0.48	1.73	-0.74	-2.93
2	4.3	-.1	-1.0	-2.7	.7	-2.3	4.0	5.8	.50	1.96	-1.17	-2.60
3	5.9	-.2	-.7	-2.6	1.0	-1.8	4.6	5.3	.25	2.75	-1.45	-1.93
4	5.6	-.2	-.6	-3.0	.6	-.6	4.3	4.7	.31	2.84	-1.64	-1.79
5	4.1	-.2	-.3	-3.0	.2	1.5	3.5	4.07	.45	2.11	-1.87	-2.05
6	3.0	0	.2	-2.7	-.3	2.8	3.2	3.72	.48	1.48	-2.04	-2.08
7	2.3	-.2	.2	-2.2	-.8	1.7	3.3	3.59	.46	1.13	-2.16	-1.79
8	1.8	-.4	.1	-2.0	-1.4	1.2	4.4	3.41	.48	.88	-2.31	-1.36
9	1.4	-.5	.3	-2.0	-1.2	1.2	5.6	3.23	.57	.69	-2.38	-.97
10	1.1	-.5	.2	-2.4	-.6	1.8	6.1	2.97	.85	.65	-2.35	-.63
11	.7	-.5	.1	-2.8	-.1	4.5	5.4	2.79	1.09	.74	-2.33	-.31
12	.3	-.6	.2	-2.4	.2	6.6	4.8	2.63	1.40	1.14	-2.24	-.33
13	.3	-.7	.2	-2.0	.5	5.6	5.1	2.47	1.37	1.75	-2.19	-.63
14	.3	-.9	.2	-2.3	.3	4.0	6.2	2.18	1.00	2.17	-2.30	1.20
15	.1	-.9	.2	-2.4	-.2	3.1	6.6	1.88	1.30	2.24	-2.37	4.52
16	0	-1.0	.2	-2.4	-.1	3.0	6.6	1.61	3.80	1.90	-1.76	5.27
17	-.1	-.9	.2	-2.4	.3	3.0	6.5	1.54	4.78	2.02	-.96	5.01
18	-.4	-.8	-.1	-2.6	.7	3.0	6.8	1.88	4.04	2.84	1.91	4.46
19	-.6	-.7	-.3	-2.3	1.1	2.8	7.2	2.78	3.15	3.48	3.34	3.87
20	-.6	-.8	-.5	-1.9	1.3	2.0	7.8	3.46	2.36	3.69	1.78	2.96
21	-.3	-.8	-.8	-1.6	.9	1.4	8.2	3.24	1.90	3.71	.15	2.03
22	.5	-.9	-.7	-1.2	.5	1.1	8.3	2.52	1.72	3.16	-.66	1.14
23	1.5	-1.1	-.5	-1.1	1.2	1.8	8.8	1.88	1.49	2.56	-1.02	.39
24	2.8	-1.0	-.7	-1.3	2.2	2.1	9.0	1.69	1.41	1.94	-1.00	.02
25	2.3	-.9	-1.1	-1.4	2.0	2.1	8.7	2.02	1.55	1.30	-1.25	.37
26	1.0	-.9	-1.3	-1.0	1.0	2.1	8.3	2.04	1.19	.75	-1.55	.86
27	.2	-.9	-1.6	-.6	-.2	2.2	8.0	1.77	1.20	.61	-1.88	.82
28	.1	-1.0	-3.2	-.4	-1.0	2.6	7.5	1.56	1.26	.51	-2.22	.43
29	.2	-1.3	-4.4	-.3		3.4	7.0	1.30	1.36	.29	-2.54	.28
30	.4	-1.5	-4.3	-.3		3.9	6.6	.87	1.66	-.04	-2.90	1.59
31	.3		-3.7	-.3		4.0		.52		-.39	-3.04	

Discharge, in second-feet, of Mississippi River at St. Louis, Mo., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80,000	60,400	50,700	41,800	59,200	48,200	89,600	110,000	64,000	72,500	54,000	40,800
2	91,200	59,200	53,800	44,000	62,500	49,700	89,600	104,000	64,000	74,000	50,900	42,500
3	104,000	57,800	56,400	44,000	64,600	52,000	94,400	99,800	62,600	80,000	49,700	45,800
4	102,000	57,800	57,000	41,800	62,500	58,900	92,000	94,400	62,600	80,800	48,500	47,600
5	88,800	57,800	59,000	41,300	59,800	71,200	84,800	88,800	63,000	75,500	47,300	46,300
6	80,000	58,500	62,300	42,400	57,200	80,500	83,400	86,400	62,700	71,000	46,800	46,300
7	74,000	57,200	62,300	44,600	54,600	73,300	84,200	84,800	62,700	68,100	46,200	48,100
8	70,200	55,900	61,600	45,100	50,900	70,100	94,200	84,000	62,200	66,700	45,100	51,100
9	67,400	55,200	62,300	45,100	52,700	70,100	107,000	82,400	62,200	65,300	45,100	54,100
10	65,300	55,200	61,600	43,400	56,600	75,500	111,000	80,800	64,800	64,600	45,100	56,100
11	62,500	55,200	60,900	41,300	59,800	96,600	103,000	79,200	66,200	65,300	45,600	57,000
12	59,800	55,200	60,900	43,400	61,800	114,000	95,000	78,500	68,800	68,100	46,200	57,000
13	60,400	54,100	60,900	45,600	63,900	105,000	98,000	77,800	68,100	73,200	46,800	56,100
14	60,400	52,800	60,900	44,600	62,500	91,200	109,000	75,500	65,800	76,200	46,200	72,000
15	59,800	52,800	60,900	44,000	59,200	84,400	114,000	73,200	72,100	77,000	46,200	94,700
16	59,200	52,200	60,900	44,000	59,800	84,100	114,000	71,000	91,200	75,500	49,700	97,700
17	58,500	52,800	60,900	44,000	62,500	83,600	115,000	70,200	96,300	76,200	55,200	94,100
18	56,600	53,500	59,000	42,900	65,300	83,600	116,000	72,600	88,800	83,200	74,800	89,800
19	55,200	54,600	57,600	44,600	68,100	80,000	119,000	78,500	82,400	88,000	84,600	85,000
20	54,600	53,300	56,400	46,800	69,500	75,000	125,000	84,000	76,200	89,600	72,200	79,000
21	56,600	53,300	54,400	48,500	66,700	70,500	128,000	81,600	73,200	89,600	60,100	72,200
22	61,100	52,700	55,000	50,900	63,900	70,400	129,000	76,200	71,800	84,800	54,900	65,700
23	68,100	51,500	56,400	51,500	68,800	74,500	134,000	71,800	70,200	79,200	52,300	60,600
24	78,000	52,700	55,000	50,300	76,200	77,300	136,000	71,000	69,500	74,800	52,500	58,700
25	73,200	53,300	52,500	49,700	74,800	77,800	133,000	74,000	70,200	69,500	50,700	60,600
26	63,900	54,000	51,900	52,100	67,400	77,800	129,000	74,000	68,100	65,300	48,900	64,600
27	59,700	54,000	50,100	54,600	59,700	78,500	126,000	71,800	68,100	64,600	46,500	64,600
28	59,000	53,300	41,100	55,900	54,500	80,500	121,000	70,200	68,800	63,900	45,000	61,800
29	60,900	51,900	35,200	56,600		86,800	116,000	68,100	69,500	61,800	43,500	60,400
30	61,800	50,700	35,900	56,600		88,000	112,000	66,100	71,800	59,200	40,800	77,800
31	61,100		38,800	55,900		89,600		64,000		57,200	39,800	

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	104,000	54,600	68,170	4,192,000
November	60,400	50,700	54,630	3,251,000
December	62,300	35,200	55,250	3,397,000
January	56,600	41,300	47,010	2,891,000
February	76,200	50,900	60,320	3,461,000
March	114,000	48,200	78,020	4,797,000
April	136,000	83,400	110,100	6,550,000
May	110,000	64,000	79,500	4,888,000
June	96,300	62,200	70,260	4,181,000
July	89,600	57,200	72,930	4,484,000
August	84,600	39,800	51,010	3,136,000
September	97,700	40,800	63,600	3,784,000
The year	136,000	35,200	67,700	49,010,000

Mississippi River at Cape Girardeau, Mo.

Location.- Staff gage in sec. 5, T. 30 N., R. 14 E., at foot of Themis Street, Cape Girardeau, half a mile above highway bridge and 52 miles above mouth of Ohio River. Zero of gage is 304.76 feet above mean sea level (1929 adjustment of U. S. Coast and Geodetic Survey) and 304.54 feet above mean Gulf level.

Drainage area.- 716,000 square miles (authority Mississippi River Commission and U. S. Weather Bureau).

Records available.- March 1933 to September 1934. Daily gage heights have been published in reports of Mississippi River Commission since May 1896; in reports of U. S. Weather Bureau from February 1891 to February 1894 and since December 1904. Results of discharge measurements made intermittently since 1903 by Corps of Engineers, U. S. Army, and Mississippi River Commission at Thebes, 6 miles downstream, and referred to Cape Girardeau gage are contained in reports of those organizations.

Extremes.- Maximum discharge recorded during year, 140,000 second-feet Apr. 27 (gage height, 14.4 feet); minimum, 39,000 second-feet Jan. 1 (gage height, 4.6 feet).
1933-34: Maximum discharge recorded, 525,000 second-feet May 18, 19, 1933; maximum gage height, 34.4 feet May 19, 1933; minimum, that of Jan. 1, 1934.
Maximum stage known, 42.53 feet July 4, 1844.

Remarks.- Records good. Stage-discharge relation occasionally affected by backwater from Ohio River. Discharge determined on basis of slope as obtained by use of auxiliary staff gages located at Moccasin Springs and Grays Point, Mo. Gage-height record furnished by Corps of Engineers, U. S. Army.

Discharge measurements, 1933-34

Date	Width	Area of section	Mean velocity	Gage height	Discharge
	Feet	Square feet	Feet per second	Feet	Second-feet
1933					
Mar. 18	2,348	35,900	3.80	13.60	136,000
Mar. 23	2,583	39,700	3.75	15.34	149,000
Mar. 31	3,022	53,800	3.16	20.39	170,000
Apr. 6	3,054	75,000	4.14	27.06	311,000
Apr. 13	3,061	75,800	4.68	27.46	355,000
Apr. 20	3,047	75,700	4.64	27.52	351,000
Apr. 27	3,031	57,400	4.08	21.98	234,000
May 4	3,022	50,100	4.09	19.03	205,000
May 12	3,038	56,800	4.19	21.62	238,000
May 18	3,077	96,600	5.34	34.36	516,000
May 25	3,068	86,200	4.56	30.72	393,000
June 1	3,071	89,700	4.96	32.13	445,000
June 8	3,044	64,500	4.85	24.91	313,000
June 15	3,022	42,300	4.35	18.27	184,000
June 22	2,863	41,100	4.21	17.14	173,000
June 29	2,497	35,700	3.92	15.19	140,000
July 6	3,022	60,000	4.34	19.89	217,000
July 13	2,625	39,100	3.96	16.02	155,000
July 20	2,322	32,500	3.66	13.55	119,000
July 27	2,097	28,800	3.47	11.90	100,000
Aug. 3	1,984	26,300	3.34	10.90	88,000
Aug. 10	1,925	25,300	3.33	10.40	84,300
Aug. 17	1,944	25,400	3.30	10.48	83,900
Aug. 24	1,716	21,600	3.09	8.70	66,800
Aug. 31	1,756	22,000	3.27	9.11	71,900
Sept. 7	1,689	21,800	2.97	8.54	64,600
Sept.14	1,701	21,700	3.01	8.44	65,300
Sept.21	1,751	23,200	3.13	9.12	72,900
Sept.28	1,910	25,800	3.28	10.45	84,800
1933-34					
Oct. 5	2,103	28,900	3.63	12.03	105,000
Oct. 12	1,796	21,200	3.13	8.50	66,400
Oct. 19	1,664	20,100	2.98	7.76	60,000
Oct. 26	1,845	24,000	3.44	9.78	82,700
Nov. 2	1,681	20,900	3.08	8.08	64,400
Nov. 9	1,660	19,900	2.97	7.66	59,200
Nov. 16	1,644	19,100	2.91	7.18	55,500
Nov. 23	1,641	19,600	2.85	7.13	55,900
Nov. 29	1,536	19,800	2.81	6.96	55,600
Dec. 7	1,646	20,800	2.89	7.48	60,200
Dec. 14	1,652	20,100	3.19	7.72	64,200
Dec. 21	1,650	20,000	3.06	7.45	61,200
Jan. 2	1,346	16,900	2.48	5.02	41,900
Jan. 5	1,373	17,300	2.70	5.77	46,800
Jan. 13	1,375	16,900	2.67	5.74	45,100
Jan. 19	1,374	17,200	2.69	5.78	46,200
Jan. 24	1,409	18,200	2.86	6.58	52,100
Feb. 6	1,440	20,100	3.18	7.84	64,000
Feb. 15	1,440	19,700	3.30	7.72	65,000
Feb. 21	1,464	20,200	3.46	8.22	69,900
Mar. 9	1,514	21,600	3.54	9.22	76,400
Mar. 16	2,062	27,500	3.35	11.71	91,800
Mar. 23	1,713	21,200	3.45	9.12	73,200
Mar. 31	2,109	27,300	3.81	11.94	104,000
Apr. 9	2,034	27,700	3.55	11.31	98,400
Apr. 18	2,229	30,700	3.81	12.69	117,000
Apr. 28	2,397	34,600	3.99	14.21	138,000
May 3	2,179	30,400	3.75	12.36	114,000
May 9	1,855	26,000	3.42	10.23	88,900
May 17	1,750	24,500	3.23	9.27	79,100
May 22	1,883	25,800	3.48	10.15	89,900
May 28	1,758	23,800	3.28	8.99	78,000
June 5	1,618	21,400	2.99	7.78	64,100
June 12	1,685	22,200	3.09	8.15	68,500
June 20	1,860	25,800	3.46	10.35	89,300
June 26	1,733	22,800	3.14	8.67	71,700
July 2	1,732	23,000	3.21	8.74	73,900
July 11	1,622	21,600	3.07	8.02	66,400
July 17	1,752	23,400	3.31	9.08	77,500
July 27	1,690	22,900	3.08	8.45	70,500
Aug. 3	1,453	20,600	2.82	7.21	58,000
Aug. 9	1,391	18,800	2.56	6.05	48,200
Aug. 18	1,395	19,300	2.68	6.30	51,700
Aug. 25	1,488	20,200	2.91	7.11	58,800
Aug. 31	1,375	18,200	2.55	5.68	46,400
Sept. 7	1,391	18,200	2.72	6.01	49,500
Sept.12	1,438	20,300	3.02	7.29	61,300
Sept.19	2,270	30,900	3.79	12.72	117,000
Sept.25	1,680	23,000	2.93	8.15	67,400

Gage height, in feet, of Mississippi River at Cape Girardeau, Mo., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10.2	8.2	6.7	4.6	6.9	7.1	13.2	13.2	8.3	8.5	7.6	5.6
2	10.1	8.1	6.6	5.1	7.0	6.6	12.0	12.8	8.0	8.7	7.6	5.4
3	10.4	7.9	6.7	5.2	7.6	6.1	11.8	12.4	8.0	8.8	7.2	5.5
4	11.5	7.8	7.2	5.9	8.1	6.3	11.7	11.9	8.0	9.0	6.9	5.7
5	12.0	7.8	7.1	5.8	8.1	6.7	11.8	11.6	7.8	9.5	6.6	6.1
6	11.5	7.8	7.6	5.9	8.0	7.3	11.4	11.1	7.8	9.5	6.5	6.2
7	10.6	7.8	7.7	5.5	7.6	8.9	11.4	10.7	7.8	9.1	6.4	6.0
8	9.9	7.8	7.8	5.9	7.6	9.6	11.1	10.4	7.8	8.8	6.3	6.0
9	9.4	7.7	7.8	6.1	6.7	9.3	11.1	10.3	7.8	8.4	6.1	6.1
10	9.0	7.6	7.8	6.3	6.6	9.1	11.5	10.1	7.9	8.1	6.0	6.5
11	8.8	7.4	7.8	6.2	6.7	9.2	12.6	9.9	7.9	8.0	5.9	6.9
12	8.6	7.4	7.8	5.9	6.9	9.8	12.7	9.8	8.1	8.0	5.8	7.4
13	8.4	7.4	7.7	5.7	7.3	11.8	12.0	9.6	8.4	8.1	5.8	7.7
14	8.2	7.3	7.7	5.8	7.6	13.1	11.6	9.5	8.6	8.3	5.9	7.7
15	8.1	7.2	7.7	6.1	7.8	12.6	11.8	9.6	8.6	8.9	5.9	8.0
16	8.2	7.2	7.7	6.0	7.7	11.8	12.4	9.6	8.4	9.1	5.8	9.7
17	8.2	7.0	7.9	5.9	7.3	11.1	12.7	9.2	8.8	9.1	5.9	12.0
18	8.0	7.0	7.9	5.9	7.3	11.0	12.7	9.1	10.2	9.0	6.3	12.5
19	7.8	7.0	7.8	5.9	7.6	10.5	12.7	9.2	10.9	9.1	7.0	12.8
20	7.7	7.2	7.7	5.9	7.9	10.2	12.9	9.2	10.5	9.7	9.1	12.5
21	7.5	7.2	7.6	5.9	8.0	9.8	13.2	9.8	9.9	10.2	9.9	11.5
22	7.7	7.2	7.5	6.1	8.2	9.6	13.5	10.1	9.4	10.3	9.1	10.4
23	7.8	7.1	7.4	6.6	8.0	9.2	13.8	10.0	9.0	10.2	8.1	9.5
24	8.7	7.0	7.4	6.7	7.9	9.2	14.0	9.5	8.9	9.9	7.4	8.8
25	9.4	6.9	7.4	6.7	8.6	9.3	14.2	9.1	8.7	9.4	7.1	8.2
26	9.8	6.9	7.1	6.6	9.2	9.4	14.3	9.0	8.7	8.9	7.0	7.9
27	9.4	6.9	6.9	6.6	9.2	10.1	14.4	9.1	8.6	8.6	6.9	8.1
28	8.6	6.9	6.6	6.8	7.9	10.6	14.2	9.0	8.5	8.1	6.6	8.3
29	8.1	6.9	5.8	7.0		10.9	13.8	8.9	8.4	7.9	6.3	8.4
30	8.1	6.8	5.1	7.0		11.2	13.4	8.8	8.4	7.8	6.0	8.5
31	8.1		4.7	7.1		11.9		8.6		7.7	5.8	

Discharge, in second-feet, of Mississippi River at Cape Girardeau, Mo., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84,300	65,300	53,400	39,000	55,100	60,600	117,000	124,000	69,200	71,900	62,500	44,400
2	85,500	64,300	52,500	42,300	57,600	55,700	102,000	120,000	65,900	73,700	62,400	42,700
3	87,400	62,600	53,600	42,600	62,500	50,200	99,300	115,000	66,800	74,300	57,500	44,000
4	99,200	61,600	57,200	48,100	66,900	51,700	98,500	108,000	66,700	76,700	54,700	46,000
5	105,000	60,600	56,100	47,200	66,300	54,600	99,600	106,000	65,900	82,200	52,900	49,600
6	98,200	60,600	61,000	47,500	65,300	62,500	96,000	98,000	63,900	81,400	52,100	51,200
7	83,400	60,600	61,600	44,200	61,800	77,400	96,300	93,200	63,900	77,300	51,200	49,700
8	80,400	60,600	63,500	47,200	62,800	83,500	94,600	90,800	64,900	74,000	50,600	49,400
9	75,600	59,600	63,500	48,500	64,400	78,000	96,400	89,800	64,900	70,300	48,900	50,800
10	72,000	58,500	63,400	50,200	63,800	75,000	102,000	87,600	65,400	67,200	47,900	54,000
11	69,300	57,100	63,400	49,000	64,900	72,400	115,000	85,500	65,400	65,800	47,100	57,000
12	67,300	57,100	64,500	46,800	66,500	77,900	116,000	84,500	67,800	66,200	46,200	62,000
13	65,700	57,100	63,500	45,100	61,400	103,000	107,000	82,900	69,900	67,400	47,100	65,300
14	63,800	56,200	63,500	45,900	64,000	115,000	102,000	82,200	72,300	69,800	48,100	64,900
15	62,800	55,300	63,500	48,000	65,700	106,000	107,000	83,200	72,300	75,400	48,100	66,900
16	63,800	55,600	63,500	47,500	64,700	94,000	114,000	82,500	70,200	77,800	47,600	67,500
17	63,800	53,800	65,300	46,800	60,800	85,200	117,000	79,800	76,500	77,800	48,400	115,000
18	61,800	53,500	65,300	47,100	61,400	87,100	117,000	79,800	90,700	76,300	52,200	120,000
19	60,000	53,500	64,300	47,100	64,300	85,700	118,000	80,800	96,700	78,400	60,800	121,000
20	60,000	56,200	63,000	47,200	66,900	83,200	120,000	81,000	90,600	84,700	84,100	117,000
21	58,100	55,900	62,400	47,100	67,900	81,000	125,000	87,800	84,300	89,700	90,300	102,000
22	60,400	55,900	61,400	48,900	69,700	78,900	129,000	90,000	79,400	90,800	80,100	89,400
23	61,000	55,300	60,600	52,100	67,700	73,600	132,000	87,600	75,300	89,200	67,600	80,400
24	69,900	54,100	60,600	52,900	67,500	75,800	134,000	81,500	74,700	85,300	61,000	73,900
25	77,800	54,600	60,400	52,900	76,800	77,700	137,000	76,800	72,300	80,900	58,400	67,900
26	81,500	54,600	57,700	51,700	84,800	77,600	138,000	76,000	72,300	75,500	57,000	65,300
27	77,100	54,700	56,300	52,900	84,400	83,200	140,000	78,000	71,700	72,300	56,200	69,100
28	68,600	54,400	53,400	54,700	69,800	87,800	138,000	77,000	70,700	67,300	54,400	70,500
29	64,700	55,300	46,200	56,200		91,500	132,000	75,700	70,900	65,300	52,000	72,500
30	64,300	54,700	41,400	56,500		96,200	127,000	75,400	70,900	63,900	49,200	72,700
31	63,700		39,100	57,500		106,000		72,900		63,000	47,600	

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October	105,000	58,100	72,720	4,472,000
November	65,300	53,500	57,310	3,410,000
December	65,300	39,100	58,870	3,620,000
January	57,500	39,000	48,750	2,997,000
February	84,800	53,800	64,850	3,601,000
March	115,000	50,200	80,260	4,935,000
April	140,000	94,600	115,600	6,876,000
May	124,000	72,900	88,170	5,421,000
June	96,700	63,900	72,350	4,305,000
July	90,800	63,000	75,220	4,625,000
August	90,300	46,200	56,260	3,460,000
September	121,000	42,700	70,740	4,209,000
The year	140,000	39,000	71,730	51,930,000

Mississippi River at Memphis, Tenn.

Location.- Staff gage 1,000 feet below Harahan Bridge (U. S. Highways 64 and 70) and 1.3 miles below Beale Street at Memphis. Zero of gage is 183.91 feet above mean sea level (1929 adjustment of U. S. Coast and Geodetic Survey) and 184.21 feet above mean Gulf level.

Records available.- April to September 1934. Daily gage heights from Beale Street gage have been published in reports of Mississippi River Commission since November 1871 and in reports of U. S. Weather Bureau December 1890 to August 1932; from present gage in reports of U. S. Weather Bureau since September 1932. Gages are at same datum and read alike to nearest tenth of a foot below about 7 feet; Beale Street gage reads about 1.4 feet higher at 40 feet. Results of discharge measurements made intermittently by Corps of Engineers, U. S. Army, and Mississippi River Commission since 1882 are contained in the reports of those organizations.

Drainage area.- 932,800 square miles (authority Mississippi River Commission).

Extremes.- Maximum discharge recorded during period, 393,000 second-feet Apr. 30 (gage height, 15.8 feet); minimum, 113,000 second-feet Sept. 10 (gage height, 1.5 feet). Maximum stage known, 46.55 feet Apr. 9, 1913, read on Beale Street gage; this corresponds to about 45.5 feet on gage below Harahan Bridge.

Remarks.- Records good. Gage-height record furnished by U. S. Weather Bureau.

Discharge measurements, 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	Second-feet		Feet	Square feet	Feet per second	Feet	Second-feet
Apr. 16	1,932	96,900	3.98	15.72	386,000	July 20	1,867	76,400	2.25	5.57	172,000
Apr. 26	1,927	94,800	4.01	15.28	380,000	July 25	1,867	74,100	2.13	4.50	158,000
May 8	1,897	83,300	2.82	9.02	235,000	Aug. 2	1,849	71,200	1.73	2.67	123,000
May 16	1,877	78,300	2.34	6.28	183,000	Aug. 8	1,862	73,200	2.02	4.01	148,000
May 24	1,877	78,300	2.34	6.28	183,000	Aug. 16	1,865	73,100	2.00	3.86	146,000
May 30	1,867	75,100	2.05	4.59	154,000	Aug. 22	1,877	75,600	2.21	5.39	167,000
June 7	1,852	71,900	1.68	2.86	121,000	Aug. 30	1,867	75,700	2.25	5.38	170,000
June 14	1,877	77,400	2.25	5.81	174,000	Sept. 8	1,843	69,900	1.76	2.31	123,000
June 19	1,882	78,400	2.31	6.22	181,000	Sept.14	1,843	68,900	1.74	1.87	120,000
June 28	1,882	79,900	2.45	7.02	196,000	Sept.21	1,878	75,900	2.48	5.88	188,000
July 3	1,867	75,000	2.05	4.76	154,000	Oct. 3	1,863	72,600	2.19	4.32	159,000
July 10	1,862	73,700	1.90	3.93	140,000						

Gage height, in feet, of Mississippi River at Memphis, Tenn., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	3.4	3.9	14.7	5.3	5.4	24.7	15.7	4.3	4.8	2.2	4.8
2	7.1	3.3	3.8	13.6	5.6	8.1	25.6	15.6	4.1	4.6	2.6	4.5
3	6.9	3.2	3.4	12.4	5.7	9.7	26.4	14.4	4.1	4.8	2.8	4.4
4	6.7	3.0	3.0	11.4	5.7	10.8	27.0	13.5	3.8	4.6	3.4	4.2
5	6.2	2.8	3.0	10.8	5.9	12.1	27.4	12.6	3.4	4.6	4.5	3.5
6	5.9	2.9	3.6	10.1	6.1	13.9	27.6	11.5	3.2	4.4	5.0	2.9
7	6.0	3.0	3.5	9.8	5.9	16.1	27.7	10.0	2.9	3.9	4.5	2.5
8	6.4	3.0	3.3	9.4	5.4	18.4	27.5	9.1	2.5	3.7	4.0	2.3
9	6.3	3.7	3.6	9.0	5.2	20.2	26.7	8.7	2.8	3.8	4.0	1.9
10	5.8	4.9	4.2	8.7	5.0	21.9	25.4	8.4	3.6	4.0	4.0	1.5
11	5.1	5.4	5.3	9.5	5.0	23.3	23.5	8.0	3.9	3.9	3.8	1.6
12	4.8	4.9	6.2	11.8	5.0	24.7	21.3	7.4	4.3	4.0	3.2	1.6
13	4.4	4.3	6.6	14.2	4.9	25.9	19.0	6.9	4.9	3.9	2.3	1.6
14	4.0	3.6	6.5	16.1	4.8	26.9	17.6	6.5	5.7	3.3	2.3	1.8
15	3.9	3.4	6.2	17.8	4.9	27.5	16.4	6.4	6.0	3.0	3.1	2.6
16	3.8	3.1	6.0	18.9	4.9	28.2	15.7	6.3	6.1	3.4	3.7	3.1
17	3.5	2.9	5.8	19.4	4.5	28.7	15.4	6.1	6.3	4.1	4.4	3.3
18	3.2	2.7	5.9	19.1	3.9	29.1	15.3	6.1	6.4	4.8	5.0	3.3
19	3.3	2.4	6.2	18.3	3.4	29.7	15.5	6.4	6.3	5.3	5.5	3.8
20	3.4	2.8	8.4	17.1	2.9	29.0	15.5	6.6	6.1	5.5	5.7	4.9
21	3.3	2.8	10.8	15.8	2.4	28.2	15.5	6.5	6.8	5.5	5.5	5.8
22	2.9	2.7	11.8	14.4	2.4	26.5	15.3	6.3	8.0	5.3	5.4	6.3
23	2.5	2.6	13.0	13.0	2.3	24.0	15.2	6.3	8.6	4.9	6.0	6.4
24	2.2	2.4	14.5	11.6	2.3	21.3	15.2	6.3	8.5	4.5	7.0	6.2
25	2.6	2.4	15.7	10.1	2.5	19.2	15.2	6.4	7.9	4.5	7.9	5.9
26	3.7	2.9	16.5	8.1	2.6	18.1	15.2	6.5	7.3	4.8	8.5	5.3
27	4.4	3.2	16.8	6.0	2.7	18.3	15.4	6.2	7.0	5.1	9.1	4.4
28	4.7	3.2	16.8	5.4	3.3	19.0	15.5	5.6	7.0	4.6	8.3	3.5
29	4.7	3.4	16.6	5.3		20.6	15.7	4.9	6.6	3.9	6.4	3.1
30	4.1	3.8	16.2	5.3		22.2	15.8	4.6	5.6	3.2	5.4	3.0
31	3.6		15.6	5.2		23.6		4.5		2.5	5.2	

Discharge, in thousands of second-feet, of Mississippi River at Memphis, Tenn., 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								390	147	156	117	161
2								388	144	152	122	156
3								358	142	156	126	154
4								336	138	152	135	151
5								314	130	152	154	140
6								289	127	149	163	132
7								256	122	140	156	126
8								237	116	138	148	123
9								229	121	139	148	117
10								222	134	142	148	113
11								214	139	140	145	114
12								203	147	142	135	116
13								195	157	140	122	116
14								187	173	132	122	119
15								186	178	128	134	130
16							386	184	180	134	143	138
17							378	180	184	145	154	141
18							376	180	184	157	163	143
19							383	186	182	168	172	151
20							383	189	178	171	174	170
21							383	187	191	172	170	187
22							378	184	214	168	168	197
23							376	184	227	163	179	199
24							378	184	224	158	199	195
25							378	186	212	158	217	189
26							378	187	201	163	229	178
27							383	182	195	166	244	161
28							386	171	195	158	227	146
29							390	159	187	145	189	140
30							393	154	169	134	170	138
31								152		122	166	

Month	Discharge in thousands of second-feet			Run-off in thousands of acre-feet
	Maximum	Minimum	Mean	
October				
November				
December				
January				
February				
March				
April 1-30	393	376	381.9	11,360
May	390	152	221.1	13,590
June	227	116	167.9	9,993
July	172	122	149.7	9,203
August	244	117	162.5	9,995
September	199	113	148.0	8,809
The period				62,950

Mississippi River near Vicksburg, Miss.

Location.- Water-stage recorder in T. 16 N., R. 3 E., at combined highway and railway bridge of Vicksburg Bridge & Terminal Co., 1½ miles below mouth of Yazoo River and 3 miles southwest of Vicksburg. Zero of gage is 46.16 feet above mean sea level.

Drainage area.- 1,144,500 square miles (measured by Mississippi River Commission).

Records available.- April 1930 to September 1934. Stages only April 1930 to June 1931.

Extremes.- Maximum discharge during year, 877,000 second-feet Apr. 13 (gage height, 34.56 feet); minimum, 142,000 second-feet Nov. 29, 30, Aug. 18; minimum gage height, 1.59 feet Aug. 18.

1930-34: Maximum discharge, 1,410,000 second-feet Feb. 26, 1932; maximum gage height, 50.27 feet Feb. 29, 1932; minimum discharge, 125,000 second-feet Nov. 19, 1931; minimum gage height, that of Aug. 18, 1934.

Remarks.- Records excellent.

Discharge measurements, 1933-34

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	Second-feet		Feet	Square feet	Feet per second	Feet	Second-feet
Oct. 2	2,470	79,500	2.47	6.18	195,000	Mar. 16	2,689	134,000	5.07	27.07	680,000
Oct. 9	2,470	80,800	2.56	6.82	207,000	Mar. 17	2,699	135,000	5.38	28.24	728,000
Oct. 16	2,470	77,600	2.40	5.54	186,000	Mar. 20	2,719	138,000	5.68	30.34	786,000
Oct. 19	2,452	74,800	2.20	4.46	164,000	Mar. 22	2,749	143,000	5.77	31.21	825,000
Oct. 23	2,435	72,900	2.10	3.52	153,000	Mar. 24	2,749	144,000	5.85	31.55	843,000
Oct. 30	2,447	74,800	2.28	4.14	171,000	Mar. 27	2,744	141,000	5.56	30.23	784,000
Oct. 31	2,465	76,600	2.32	4.83	178,000	Mar. 30	2,734	134,000	5.20	27.78	699,000
Nov. 3	2,465	77,500	2.40	5.46	186,000	Apr. 2	2,744	136,000	5.43	28.36	738,000
Nov. 7	2,455	73,800	2.18	4.12	161,000	Apr. 5	2,754	141,000	5.72	30.49	805,000
Nov. 14	2,470	76,800	2.45	5.17	188,000	Apr. 7	2,754	141,000	5.95	31.83	839,000
Nov. 15	2,470	79,200	2.46	5.80	195,000	Apr. 9	2,754	145,000	5.98	32.98	867,000
Nov. 17	2,470	76,900	2.37	5.36	182,000	Apr. 13	2,774	151,000	5.80	34.54	876,000
Nov. 20	2,444	74,900	2.20	3.88	164,000	Apr. 14	2,774	151,000	5.78	34.48	872,000
Nov. 22	2,423	72,500	2.15	3.24	156,000	Apr. 16	2,759	147,000	5.64	33.43	829,000
Nov. 27	2,402	70,800	2.10	2.70	149,000	Apr. 18	2,739	142,000	5.34	31.47	756,000
Nov. 29	2,409	70,000	2.01	2.46	141,000	Apr. 20	2,729	135,000	5.23	29.06	706,000
Dec. 2	2,428	71,600	2.12	2.88	152,000	Apr. 22	2,724	129,000	4.98	26.75	642,000
Dec. 5	2,438	72,900	2.25	3.54	164,000	Apr. 24	2,704	124,000	4.86	25.14	604,000
Dec. 8	2,440	74,000	2.12	3.56	157,000	Apr. 27	2,689	117,000	4.72	23.08	554,000
Dec. 9	2,440	73,400	2.16	3.49	159,000	May 1	2,535	112,000	4.54	21.26	509,000
Dec. 12	2,455	74,000	2.19	3.76	162,000	May 4	2,535	110,000	4.44	20.46	488,000
Dec. 15	2,475	77,200	2.34	4.66	181,000	May 7	2,525	107,000	4.33	18.84	463,000
Dec. 18	2,480	81,500	2.60	6.36	211,000	May 10	2,520	99,100	3.99	15.80	396,000
Dec. 19	2,480	81,900	2.61	6.74	214,000	May 12	2,515	93,100	3.82	13.52	355,000
Dec. 21	2,490	84,500	2.74	7.41	232,000	May 15	2,510	89,800	3.71	12.20	333,000
Dec. 22	2,485	86,700	2.94	8.31	255,000	May 17	2,505	87,000	3.44	10.75	299,000
Dec. 23	2,500	90,400	3.21	9.84	290,000	May 19	2,505	82,800	3.25	9.27	268,000
Dec. 24	2,505	94,700	3.46	12.09	328,000	May 21	2,500	81,800	3.12	8.41	255,000
Dec. 26	2,510	103,000	4.00	14.36	412,000	May 24	2,490	80,000	3.12	8.03	250,000
Dec. 28	2,540	109,000	4.27	17.30	466,000	May 27	2,485	78,900	3.12	7.74	246,000
Dec. 30	2,525	113,000	4.37	18.95	493,000	June 10	2,363	71,100	2.59	4.38	184,000
Jan. 1	2,609	114,000	4.42	19.62	504,000	June 19	2,385	76,900	2.95	6.65	227,000
Jan. 3	2,609	111,000	4.33	19.08	481,000	June 23	2,455	78,600	3.04	7.08	239,000
Jan. 5	2,520	109,000	4.02	17.74	438,000	July 3	2,475	77,400	2.89	6.81	224,000
Jan. 8	2,515	102,000	3.84	15.06	392,000	July 6	2,465	72,200	2.70	5.08	195,000
Jan. 10	2,515	99,100	3.68	13.70	364,000	July 10	2,363	70,000	2.58	4.23	181,000
Jan. 12	2,510	97,100	3.55	13.12	345,000	July 13	2,348	68,500	2.42	3.54	166,000
Jan. 15	2,515	100,000	3.77	14.01	377,000	" 17-18	2,403	68,300	2.46	3.16	168,000
Jan. 17	2,624	109,000	4.31	17.45	469,000	July 23	2,353	68,700	2.60	3.94	179,000
Jan. 19	2,624	117,000	4.57	20.58	535,000	July 27	2,358	70,200	2.58	4.16	181,000
Jan. 21	2,629	119,000	4.54	21.82	540,000	Aug. 2	2,348	68,600	2.44	3.44	168,000
Jan. 24	2,624	116,000	4.22	20.28	490,000	Aug. 4	2,333	66,300	2.28	2.46	151,000
Jan. 26	2,520	110,000	3.86	18.02	425,000	Aug. 7	2,313	65,100	2.22	1.90	146,000
Jan. 27	2,515	106,000	3.84	16.76	407,000	Aug. 12	2,348	68,800	2.44	3.25	168,000
Feb. 1	2,490	86,800	3.11	9.29	270,000	Aug. 18	2,313	64,500	2.20	1.63	142,000
Feb. 3	2,480	82,400	2.86	7.60	235,000	Aug. 20	2,328	66,300	2.29	2.19	152,000
Feb. 5	2,470	80,600	2.80	6.98	226,000	Aug. 23	2,353	69,600	2.62	3.74	182,000
Feb. 9	2,475	80,200	2.77	6.64	222,000	Aug. 27	2,373	71,900	2.73	4.70	196,000
Feb. 14	2,465	77,300	2.64	5.73	204,000	Aug. 29	2,455	75,600	2.97	6.25	225,000
Feb. 20	2,460	75,400	2.58	5.00	194,000	Sept. 1	2,460	78,800	3.07	7.05	242,000
Feb. 27	2,435	70,400	2.23	3.03	157,000	Sept. 3	2,460	74,800	2.87	5.80	215,000
Mar. 3	2,455	75,600	2.56	4.49	194,000	Sept. 6	2,358	70,700	2.60	4.08	184,000
Mar. 5	2,470	81,900	3.06	7.37	248,000	Sept.10	2,343	68,500	2.49	3.15	171,000
Mar. 6	2,485	86,900	3.35	9.56	291,000	Sept.13	2,358	70,100	2.54	3.76	178,000
Mar. 7	2,505	89,700	3.55	11.43	319,000	Sept.16	2,333	66,900	2.50	2.67	166,000
Mar. 9	2,515	99,800	3.91	14.42	390,000	Sept.19	2,333	66,300	2.37	2.42	157,000
Mar. 11	2,530	108,000	4.74	18.68	512,000	Sept.22	2,338	68,700	2.59	3.49	178,000
Mar. 12	2,535	116,000	4.70	21.01	550,000	Sept.25	2,373	76,500	2.92	6.34	224,000
Mar. 14	2,659	125,000	4.92	24.40	625,000	Sept.28	2,373	77,100	3.00	6.74	231,000

Gage height, in feet, of Mississippi River near Vicksburg, Miss., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.06	5.40	2.68	19.62	9.28	3.23	27.89	21.22	6.91	7.66	3.83	7.00
2	6.18	5.59	2.87	19.48	8.30	3.66	28.41	20.95	6.36	7.30	3.50	6.31
3	6.27	5.43	3.13	19.12	7.65	4.56	29.08	20.70	5.90	6.87	3.00	5.61
4	6.49	5.09	3.36	18.65	7.26	5.51	29.75	20.42	5.51	6.28	2.42	4.98
5	6.81	4.71	3.53	17.88	6.99	7.16	30.43	20.08	5.34	5.61	1.95	4.45
6	7.04	4.36	3.77	16.97	6.82	9.29	31.12	19.68	5.10	5.13	1.76	4.04
7	7.10	4.09	3.75	16.06	6.70	11.27	31.76	18.93	4.96	4.87	1.84	3.71
8	7.02	3.82	3.56	15.11	6.62	12.90	32.34	18.00	4.84	4.71	2.25	3.40
9	6.85	3.58	3.50	14.36	6.64	14.56	32.96	16.94	4.63	4.50	2.71	3.17
10	6.74	3.39	3.58	13.79	6.63	16.55	33.46	15.67	4.38	4.26	3.18	3.20
11	6.74	3.31	3.69	13.39	6.51	18.70	33.96	14.44	4.13	3.97	3.36	3.53
12	6.77	3.42	3.76	13.14	6.29	20.80	34.33	13.49	3.95	3.72	3.21	3.83
13	6.72	4.04	3.82	12.96	5.97	22.78	34.51	12.98	3.97	3.54	3.05	3.74
14	6.44	5.04	4.05	13.08	5.71	24.50	34.43	12.61	4.17	3.46	2.93	3.38
15	5.99	5.73	4.56	13.92	5.52	25.91	34.11	12.13	4.39	3.41	2.73	3.00
16	5.52	5.77	5.32	15.45	5.42	27.13	33.49	11.50	4.62	3.37	2.41	2.63
17	5.15	5.42	5.95	17.26	5.27	28.16	32.61	10.67	5.57	3.27	1.98	2.31
18	4.76	4.88	6.41	18.91	5.17	29.04	31.55	9.88	6.33	3.05	1.64	2.32
19	4.44	4.38	6.70	20.42	5.13	29.75	30.33	9.24	6.65	2.88	1.75	2.45
20	4.15	3.92	6.92	21.39	5.01	30.27	29.05	8.75	6.81	2.87	2.14	2.72
21	3.84	3.57	7.36	21.80	4.84	30.78	27.83	8.39	6.93	3.09	2.64	3.07
22	3.63	3.28	8.23	21.71	4.54	31.20	26.76	8.19	7.03	3.50	3.22	3.54
23	3.51	3.06	9.68	21.20	4.10	31.47	25.87	8.08	7.08	3.96	3.78	4.37
24	3.51	2.97	11.97	20.36	3.67	31.55	25.08	8.02	7.11	4.27	4.18	5.55
25	3.51	2.94	13.65	19.32	3.36	31.38	24.37	7.88	7.32	4.42	4.37	6.40
26	3.38	2.84	14.98	18.14	3.23	31.06	23.70	7.73	7.80	4.40	4.48	6.88
27	3.23	2.72	16.20	16.83	3.09	30.23	23.06	7.74	8.26	4.22	4.75	6.88
28	3.21	2.56	17.32	15.38	3.11	29.21	22.52	7.86	8.43	4.00	5.38	6.72
29	3.56	2.48	18.26	13.77		28.32	22.02	7.89	8.26	3.86	6.17	6.45
30	4.19	2.53	19.00	12.01		27.78	21.57	7.74	7.96	3.88	6.88	6.05
31	4.88		19.48	10.52		27.64		7.41		3.93	7.27	

Discharge, in thousands of second-feet, of Mississippi River near Vicksburg, Miss., 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	187	148	504	270	161	726	506	231	243	175	241
2	195	190	152	497	250	173	739	500	221	234	170	226
3	197	185	155	481	238	197	761	495	212	226	161	210
4	200	180	161	467	231	214	780	488	205	216	150	200
5	207	172	164	443	226	244	801	484	202	204	146	190
6	210	166	167	426	224	286	818	477	197	195	144	183
7	212	161	164	411	222	318	837	463	195	192	144	178
8	210	158	158	392	222	354	849	443	192	188	152	175
9	207	155	160	378	222	394	868	420	188	185	160	172
10	205	154	161	367	222	449	871	394	185	182	167	172
11	205	154	161	354	219	513	874	371	178	175	172	175
12	207	155	162	344	216	546	874	354	176	168	167	178
13	205	157	162	340	209	589	874	346	176	166	164	176
14	200	185	167	344	204	626	868	338	182	167	162	173
15	193	193	180	375	200	656	855	331	185	167	160	168
16	185	193	192	415	198	681	831	316	188	167	155	164
17	180	183	204	465	198	726	796	298	207	168	148	158
18	170	176	212	500	197	750	758	280	221	167	142	156
19	162	170	214	532	195	772	731	266	227	166	143	158
20	161	164	219	548	193	785	706	261	232	166	150	162
21	156	161	232	539	190	804	671	255	234	168	160	170
22	154	156	253	536	185	824	644	251	238	173	170	178
23	152	155	286	520	176	840	622	251	239	180	183	193
24	152	154	327	495	168	843	603	250	239	185	188	210
25	152	152	375	463	164	837	587	248	243	185	192	226
26	152	150	413	428	161	821	569	246	250	185	193	234
27	149	149	441	407	158	782	555	246	258	182	197	234
28	155	144	465	380	160	747	539	250	260	178	209	231
29	161	142	481	350		716	527	250	256	176	224	227
30	172	142	493	316		701	518	246	250	176	239	221
31	180		502	291		716		239		176	248	

Month	Discharge in thousands of second-feet			Run-off in thousands of acre-feet
	Maximum	Minimum	Mean	
October	212	149	182	11,180
November	193	142	165	9,824
December	502	148	249	15,330
January	548	291	429	26,400
February	270	158	204	11,340
March	843	161	583	35,830
April	874	518	735	43,740
May	506	239	341	20,950
June	260	176	216	12,830
July	243	166	184	11,320
August	248	142	172	10,580
September	241	156	191	11,380
The year	874	142	305	220,700

Meramec River near Steelville, Mo.

Location.- Water-stage recorder in NE¼ sec. 21, T. 38 N., R. 4 W., 2½ miles north of Steelville. Zero of gage is 680.45 feet (revised) above mean sea level. Chain gage at same location and datum used prior to May 24, 1934.

Drainage area.- 830 square miles.

Records available.- December 1922 to September 1934.

Average discharge.- 11 years (1923-34), 576 second-feet.

Extremes.- Maximum discharge during year, 15,100 second-feet Sept. 14 (gage height, 14.34 feet): minimum, 74 second-feet July 22 (gage height, 0.35 foot).
1922-34: Maximum discharge recorded, 36,000 second-feet Apr. 1, 1927 (gage height, 19.40 feet); minimum, that of July 22, 1934.
Maximum stage known, 26.5 feet Aug. 20, 1915 (discharge, about 60,000 second-feet).

Remarks.- Records good. Discharge estimated Dec. 5, Mar. 9, Apr. 3-6, 8, May 23.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	132	130	134	128	132	625	422	161	134	87	119
2	151	132	130	134	132	184	443	363	154	128	87	121
3	134	132	130	134	128	344	530	324	146	115	85	137
4	134	141	125	148	128	528	633	272	139	109	85	148
5	130	146	126	148	128	484	728	255	134	105	81	151
6	121	146	128	151	128	363	823	363	128	105	81	141
7	121	151	123	171	123	306	920	306	123	101	81	132
8	117	151	123	198	123	272	748	272	121	101	81	121
9	117	151	123	196	123	248	575	240	123	97	83	115
10	111	151	123	212	119	225	528	225	300	95	83	111
11	107	146	123	198	119	225	443	196	449	93	81	1,320
12	128	137	123	198	119	212	402	198	225	91	81	6,210
13	115	132	123	198	119	198	382	171	171	93	83	6,490
14	156	137	123	198	119	171	324	255	158	91	81	12,300
15	146	128	119	198	119	166	306	920	146	91	81	7,370
16	161	123	119	198	119	156	363	855	139	93	316	5,020
17	164	123	123	184	115	151	985	625	128	89	1,990	1,850
18	171	130	123	184	128	171	652	484	121	87	755	1,260
19	196	130	137	171	128	171	528	382	137	85	484	920
20	240	125	141	161	128	196	443	288	119	83	255	734
21	212	125	198	156	128	344	382	272	113	79	255	734
22	212	125	198	156	128	363	363	255	225	76	196	985
23	196	126	171	156	128	324	306	240	201	78	171	855
24	198	130	171	151	119	272	272	225	154	79	164	625
25	184	130	158	151	137	225	240	212	144	81	171	552
26	164	130	158	141	141	255	255	196	137	83	719	484
27	154	125	139	141	141	1,650	288	198	126	85	268	443
28	154	125	139	141	132	1,700	1,050	184	123	83	198	422
29	144	130	134	137		1,190	678	171	121	85	156	1,530
30	130	125	134	137		855	506	171	123	83	137	1,260
31	130		134	128		625		164		83	128	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	240	107	153	0.184	0.21	9,420
November	151	123	134	.161	.18	7,960
December	198	119	137	.165	.19	8,430
January	212	128	165	.199	.23	10,140
February	141	115	126	.152	.16	7,000
March	1,850	132	416	.501	.58	25,600
April	1,050	240	524	.631	.70	31,200
May	920	164	313	.377	.43	19,260
June	449	113	160	.193	.22	9,500
July	134	76	92.9	.112	.13	5,710
August	1,990	81	246	.296	.34	15,130
September	12,300	111	1,755	2.11	2.35	104,400
	12,300	76	351	.423	5.72	253,600

Meramec River near Eureka, Mo.

Location.- Wire gage in SE¼ sec. 32, T. 44 N., R. 4 E., at State highway bridge 2 miles east of Eureka. Zero of gage is 406.18 feet above mean sea level.

Drainage area.- 3,800 square miles.

Records available.- August 1903 to July 1906; October 1921 to September 1934.

Average discharge.- 13 years (1921-34), 2,900 second-feet.

Extremes.- Maximum discharge recorded during year, 27,100 second-feet Sept. 18 (gage height, 17.91 feet); minimum, 217 second-feet Aug. 15 (gage height, 0.53 foot).
1921-34: Maximum discharge recorded, 64,000 second-feet Apr. 3, 1927; maximum gage height, 30.72 feet May 17, 1933; minimum discharge, that of Aug. 15, 1934; minimum gage height, 0.33 foot Oct. 2, 3, 1932.
Maximum stage known, 39.2 feet Aug. 22, 1915 (discharge, about 175,000 second-feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,780	760	562	658	625	625	4,280	2,760	690	532	284	625
2	1,280	725	562	658	594	830	3,260	2,300	658	502	284	900
3	1,050	690	562	625	594	1,690	2,760	2,030	690	445	284	1,280
4	900	658	562	658	594	2,570	2,390	1,780	760	418	265	1,520
5	795	725	562	795	594	3,620	2,300	1,600	625	392	284	1,050
6	725	725	594	830	562	3.620	2,570	1,440	625	392	284	900
7	658	760	594	975	562	2,760	4,280	1,360	562	368	265	865
8	625	795	594	1,200	562	2,210	5,300	1,360	532	368	265	795
9	625	760	594	1,280	562	1,860	4,850	1,280	532	368	248	690
10	562	725	562	1,280	532	1,600	3,740	1,120	1,120	345	232	625
11	532	690	532	1,360	532	1,440	3,160	1,050	1,940	345	232	658
12	532	658	532	1,440	532	1,280	2,660	975	2,300	345	248	1,120
13	562	658	532	1,360	532	1,200	2,300	865	2,480	345	232	3,500
14	975	658	562	1,280	532	1,120	2,030	900	1,520	324	232	11,700
15	1,120	625	532	1,200	532	1,050	1,860	1,780	1,120	324	217	18,100
16	975	594	532	1,200	532	938	1,940	7,250	900	303	284	20,900
17	900	562	532	1,120	532	900	2,300	4,700	795	303	3,620	25,500
18	975	562	562	1,120	532	900	2,570	3,160	760	303	5,300	26,000
19	975	562	625	1,050	532	900	2,960	2,390	658	324	5,300	8,300
20	1,200	562	725	975	532	975	2,660	2,030	625	368	2,300	4,280
21	1,050	594	830	900	562	1,360	2,210	1,780	658	574	1,780	3,500
22	2,960	562	830	865	562	1,690	1,940	1,520	625	368	1,520	4,420
23	2,210	562	900	830	562	1,940	1,780	1,360	532	345	1,120	4,420
24	2,390	562	865	795	532	2,210	1,600	1,200	502	324	1,200	3,740
25	2,300	594	830	795	562	2,120	1,440	1,120	1,280	284	1,600	2,960
26	1,520	594	795	760	658	2,120	1,600	975	1,360	284	975	2,390
27	1,200	594	795	760	725	8,150	2,030	938	900	284	865	2,210
28	760	562	760	725	658	11,200	3,380	865	725	303	938	2,120
29	938	562	760	690		12,700	4,280	795	625	303	1,050	4,700
30	865	594	725	690		11,300	3,260	760	562	284	830	4,560
31	795		658	658		6,350		725		284	725	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,960	532	1,120	0.295	0.34	68,890
November	795	562	641	.169	.19	38,150
December	900	532	650	.171	.20	39,990
January	1,440	625	953	.251	.29	58,580
February	725	532	569	.150	.16	31,580
March	12,700	625	3,007	.791	.91	184,900
April	5,300	1,440	2,790	.734	.82	166,000
May	7,250	725	1,747	.460	.53	107,400
June	2,480	502	922	.243	.27	54,860
July	574	284	356	.094	.11	21,920
August	5,300	217	1,073	.282	.33	65,980
September	26,000	625	5,478	1.44	1.61	325,900
The year	26,000	217	1,608	.423	5.76	1,164,000

Bourbeuse River at Union, Mo.

Location.- Wire gage in SW¼ sec. 26, T. 43 N., R. 1 W., at bridge at State Highway 50 about 600 feet above Flat Creek and 1 mile east of Union. Chain gage at same location used prior to Oct. 21, 1933. Zero of gage is 491.93 feet above mean sea level.

Drainage area.- 767 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 632 second-feet.

Extremes.- Maximum discharge during year, 12,600 second-feet Sept. 16 (gage height, 14.10 feet); minimum, 20 second-feet Aug. 11, 12, 15 (gage height, 0.39 foot).
1921-34: Maximum discharge, 22,500 second-feet Apr. 3, 1927 (gage height, 19.10 feet); minimum discharge, 17 second-feet Nov. 5, 1931, July 22, 1932; minimum gage height, that of Aug. 11, 12, 15, 1934.
Maximum stage known, 25.5 feet Aug. 22, 1915 (discharge, about 50,000 second-feet).

Remarks.- Records fair. Gage-height record collected in cooperation with the U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	364	100	46	64	64	59	1,190	381	56	103	22	97
2	250	88	42	59	62	100	810	297	51	78	36	180
3	206	84	46	56	59	157	620	250	74	67	34	418
4	157	76	49	56	59	810	514	193	76	58	29	250
5	126	80	49	66	56	2,070	475	180	50	53	29	157
6	113	73	50	67	54	1,040	620	146	45	48	27	157
7	121	67	49	76	51	666	1,190	136	38	46	26	117
8	97	64	46	106	49	437	1,350	126	38	37	24	106
9	88	62	46	121	46	381	1,040	108	35	34	23	100
10	76	59	48	193	46	266	712	102	810	35	21	97
11	70	100	56	456	46	220	620	95	919	35	20	90
12	64	103	59	346	46	168	475	86	2,160	34	20	88
13	59	88	59	266	42	168	400	80	810	32	21	2,250
14	51	73	56	220	42	146	364	77	364	30	21	7,820
15	51	67	53	206	40	136	330	83	250	29	20	11,800
16	56	64	50	220	40	124	330	83	193	28	1,980	12,600
17	51	59	51	250	39	113	297	74	146	27	4,670	11,500
18	49	56	50	206	39	121	400	78	124	25	3,300	3,200
19	42	56	53	168	46	113	712	126	126	27	1,890	1,190
20	64	53	59	146	51	110	475	157	180	50	437	1,040
21	54	54	53	126	44	117	346	126	112	34	437	760
22	313	51	53	117	40	117	297	106	84	26	235	576
23	810	49	56	112	46	281	235	89	71	24	193	534
24	1,890	51	59	103	44	475	206	82	60	23	620	534
25	666	49	73	100	49	620	180	77	1,190	23	330	494
26	364	46	112	94	66	666	180	77	400	23	220	364
27	266	46	97	88	56	2,440	313	77	250	21	168	400
28	180	44	88	82	56	6,740	381	66	180	27	146	576
29	157	42	78	76		8,300	381	59	136	26	136	1,270
30	126	49	73	70		3,100	418	60	110	23	117	3,300
31	110		70	70		2,070		59		23	103	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,890	42	229	0.299	0.34	14,060
November	103	42	65.1	.085	.09	3,870
December	112	42	59.0	.077	.09	3,630
January	456	56	141	.184	.21	8,700
February	66	39	49.2	.064	.07	2,730
March	8,300	59	1,043	1.36	1.57	64,130
April	1,350	180	529	.690	.77	31,460
May	381	59	121	.158	.18	7,410
June	2,160	35	305	.398	.44	18,120
July	103	21	37.1	.048	.06	2,280
August	4,670	20	495	.645	.74	30,460
September	12,600	88	2,069	2.70	3.01	123,100
The year	12,600	20	428	.558	7.57	310,000

Big River at Byrnesville, Mo.

Location.- Chain gage in SE¼ sec. 12, T. 42 N., R. 3 E., at highway bridge 200 feet below dam and mill at Byrnesville.

Drainage area.- 892 square miles.

Records available.- May 1922 to September 1934.

Average discharge.- 12 years, 767 second-feet.

Extremes.- Maximum discharge recorded during year, 7,080 second-feet May 16 (gage height, 13.70 feet); minimum, 42 second-feet Aug. 14 (gage height, 1.50 feet).
1922-34: Maximum discharge recorded, 21,900 second-feet Apr. 2, 1927 (gage height, 22.63 feet); minimum discharge, 34 second-feet July 18, 1931; minimum gage height, that of Aug. 14, 1934.
Maximum stage known, 30.2 feet in August 1915 (discharge, about 80,000 second-feet).

Remarks.- Records good except those below 200 second-feet, which are fair. Flow slightly regulated by gristmills above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	494	162	144	188	162	144	1,030	720	188	82	66	138
2	324	162	144	175	150	285	720	584	175	82	62	127
3	250	162	150	175	162	870	650	494	285	106	58	150
4	217	162	162	202	162	1,160	552	440	175	106	58	368
5	188	217	162	250	162	1,210	552	415	162	96	58	345
6	162	233	162	324	150	950	870	368	150	87	55	345
7	150	250	150	368	150	650	1,720	391	144	82	55	285
8	144	217	150	440	150	522	1,900	345	144	74	48	202
9	132	202	144	494	144	466	1,300	304	144	87	48	188
10	132	188	138	466	144	391	1,030	267	188	96	45	162
11	127	175	138	415	144	368	830	250	285	78	45	285
12	175	150	132	368	132	324	685	233	324	70	45	391
13	175	150	132	368	144	304	584	217	250	66	45	466
14	650	150	132	415	144	285	494	391	217	62	42	2,080
15	366	150	132	391	144	250	466	2,210	188	58	55	2,900
16	267	144	127	345	138	233	755	5,450	162	58	74	1,660
17	267	138	162	324	132	217	1,030	1,560	150	62	685	1,210
18	324	132	175	285	132	217	670	990	144	58	1,160	755
19	345	132	250	250	162	250	685	720	132	74	440	522
20	285	132	285	250	150	415	552	584	150	250	304	415
21	285	138	345	250	150	755	466	466	150	188	250	368
22	1,350	150	345	233	150	790	415	415	127	132	267	650
23	522	144	324	217	144	790	391	345	116	111	233	720
24	440	162	267	217	144	650	345	345	106	96	202	522
25	345	150	250	217	150	522	324	285	101	82	188	345
26	267	162	233	202	150	870	391	267	96	78	175	304
27	233	162	233	202	144	3,450	650	250	96	74	162	250
28	217	162	233	188	138	4,040	2,820	217	92	78	217	304
29	188	150	188	175		2,610	1,610	217	87	78	217	616
30	188	150	175	162		1,610	950	202	78	78	175	870
31	175		175	162		1,120		188		80	150	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,350	127	303	0.340	0.39	18,620
November	250	132	165	.185	.21	9,790
December	345	127	192	.215	.25	11,780
January	494	162	281	.315	.36	17,290
February	162	132	147	.165	.17	8,190
March	4,040	144	862	.966	1.11	52,990
April	2,820	324	855	.959	1.07	50,850
May	5,450	188	649	.728	.84	39,930
June	324	78	160	.179	.20	9,530
July	250	58	90.3	.101	.12	5,550
August	1,160	42	183	.205	.24	11,270
September	2,900	127	598	.670	.75	35,590
The year	5,450	42	375	.420	5.71	271,400

Castor River at Zalma, Mo.

Location.- Chain gage in S½ sec. 29, T. 29 N., R. 9 E., at bridge on State Highway 51 in Zalma. Zero of gage is 350.55 feet above mean sea level.

Drainage area.- 395 square miles.

Records available.- September 1921 to September 1934.

Average discharge.- 13 years, 512 second-feet.

Extremes.- Maximum discharge recorded during year, 2,560 second-feet Mar. 27 (gage height, 12.78 feet); minimum dischargs, 27 second-feet Aug. 9; minimum gage height, 1.09 feet Aug. 10.

1921-34: Maximum discharge, 19,400 second-feet Dec. 14, 1927 (gage height, 26.50 feet); minimum discharge, that of Aug. 9, 1934; minimum gage height, 1.06 feet Sept. 21, 30, 1931.

Maximum stage known, 28.0 feet in August 1915 (discharge, about 30,000 second-feet).

Remarks.- Records fair. Discharge estimated Nov. 22, 26, Dec. 1, 3, Feb. 14, 17.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	237	159	94	174	109	82	575	270	78	46	40	60
2	159	138	94	159	104	99	502	221	78	74	39	60
3	152	138	95	152	109	174	448	221	70	74	39	56
4	132	138	99	205	109	670	412	197	62	46	36	60
5	104	152	99	412	109	1,210	376	205	86	43	34	64
6	99	182	174	448	109	828	786	358	78	43	34	70
7	99	174	120	484	99	632	1,510	394	74	43	35	70
8	90	145	114	632	99	538	1,310	270	64	43	30	64
9	86	138	109	670	99	430	946	253	70	40	27	60
10	82	126	104	575	82	412	766	221	78	43	28	43
11	78	132	104	502	82	376	632	189	120	43	30	56
12	94	120	104	448	94	340	556	174	114	38	30	114
13	99	126	99	412	94	304	484	145	94	40	30	237
14	99	114	99	376	90	287	430	145	82	39	40	304
15	90	109	99	322	90	237	376	189	74	60	70	304
16	114	104	99	322	90	237	358	221	74	53	74	270
17	152	104	114	270	90	197	340	197	70	43	99	237
18	159	104	197	253	86	322	304	182	70	39	159	182
19	120	99	253	237	90	448	287	166	67	38	114	304
20	138	99	340	221	90	538	237	152	64	38	104	287
21	132	104	340	182	86	502	221	132	60	37	86	99
22	376	104	340	166	94	412	237	126	60	30	78	94
23	448	104	304	189	90	412	221	120	56	29	78	66
24	287	104	270	159	94	394	189	104	46	30	82	82
25	270	104	253	166	99	376	174	104	99	30	74	74
26	237	100	237	159	99	466	159	94	70	30	74	78
27	237	99	237	145	94	2,560	197	94	53	32	99	78
28	221	94	221	145	90	1,940	304	90	53	50	94	70
29	197	94	197	132		1,210	340	78	50	53	70	82
30	182	94	166	126		946	287	78	46	53	60	86
31	166		174	114		670		78		43	64	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	448	78	166	0.420	0.48	10,190
November	182	94	120	.304	.34	7,140
December	340	94	173	.438	.50	10,610
January	670	114	289	.732	.84	17,770
February	109	82	95.4	.242	.25	5,300
March	2,560	82	589	1.49	1.72	36,200
April	1,510	159	465	1.18	1.32	27,700
May	394	78	176	.446	.51	10,850
June	120	46	72.7	.184	.21	4,320
July	74	29	43.3	.110	.13	2,660
August	159	27	62.9	.159	.18	3,870
September	304	43	124	.314	.35	7,400
The year	2,560	27	199	.504	6.83	144,000

South Fork of Obion River near Greenfield, Tenn.

Location.- Staff gage at bridge on State Highway 43, 2¾ miles south of Greenfield, Weakley County, and 10 miles above confluence with Middle Fork.

Drainage area.- 431 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 4,480 second-feet Dec. 20 (gage height, 13.54 feet); minimum discharge, 105 second-feet several days during July, August, and September; minimum gage height, 2.18 feet several days in October, July, August, and September.

1929-34: Maximum discharge recorded, 12,800 second-feet Jan. 10, 1930 (gage height, 15.52 feet); minimum discharge, 97 second-feet several days in August, September 1930, October, November 1931, and September 1932; minimum gage height, 1.5 feet several days in August and September 1930.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	135	127	135	227	169	329	293	160	127	143	119	105
2	127	127	135	207	207	688	270	151	127	112	112	105
3	127	127	197	197	197	1,830	248	160	127	112	105	105
4	127	187	178	217	187	1,510	237	151	119	112	105	105
5	119	406	143	237	169	946	227	151	127	112	105	105
6	119	197	434	217	169	490	227	160	151	135	105	105
7	119	151	248	1,510	169	281	848	160	135	197	105	169
8	119	143	169	768	169	2,710	535	151	135	135	105	119
9	119	135	160	393	160	2,810	281	143	135	119	105	112
10	119	135	151	293	160	2,350	248	135	259	112	105	105
11	119	135	143	248	160	1,140	248	227	169	112	105	127
12	119	135	317	248	160	505	237	207	135	112	105	227
13	135	135	380	270	160	341	207	151	135	105	105	505
14	127	135	207	227	160	281	187	135	127	105	178	462
15	119	135	169	207	160	248	187	448	127	105	119	448
16	187	135	816	197	160	237	187	248	127	143	105	420
17	160	135	2,610	207	160	227	178	151	281	112	112	143
18	127	135	3,610	197	160	227	178	143	1,010	112	119	119
19	119	135	4,220	237	178	293	187	135	565	420	112	112
20	119	135	4,480	217	169	270	178	135	151	227	115	112
21	119	143	4,220	217	160	270	169	135	135	119	105	281
22	187	143	3,310	248	207	248	169	406	317	112	119	448
23	207	143	535	217	270	227	178	151	169	112	135	151
24	135	135	393	197	178	1,200	169	143	119	112	367	127
25	135	143	329	187	1,510	3,310	160	135	135	112	270	119
26	127	135	293	187	2,350	3,450	160	135	119	112	187	119
27	127	135	237	187	1,470	3,990	178	135	119	127	112	119
28	127	135	217	187	688	3,790	248	135	119	119	105	640
29	127	135	217	187		2,430	169	127	119	112	105	2,060
30	127	135	217	178		505	160	127	112	112	105	1,830
31	119		237	169		341		127		105	105	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	207	119	132	0.306	0.35
November	406	127	149	.346	.39
December	4,480	135	939	2.18	2.51
January	1,510	169	280	.650	.75
February	2,350	160	365	.847	.88
March	3,990	227	1,209	2.81	3.24
April	848	160	238	.552	.62
May	448	127	170	.394	.45
June	1,010	112	191	.443	.49
July	420	105	132	.306	.35
August	367	105	127	.295	.34
September	2,060	105	323	.749	.84
The year	4,480	105	356	.826	11.21

Obion River at Obion, Tenn.

Location.- Chain gage at toll bridge on State Highway 3, a quarter of a mile south of Obion, Obion County, and 7 miles below mouth of North Fork. Zero of gage is 261.23 feet above mean Gulf level.

Drainage area.- 1,880 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 20,700 second-feet Dec. 21 (gage height, 17.02 feet); minimum, 368 second-feet Aug. 8 (gage height, 0.46 foot). 1929-34: Maximum discharge recorded, 47,000 second-feet Jan. 11, 1930 (gage height, 21.9 feet); minimum, 311 second-feet several days during August and September 1930; minimum gage height, 0.22 foot Sept. 21, 1931.

Remarks.- Records poor. Discharge estimated Jan. 24, 25, 27-29, Feb. 5, 6, 8-11. Some possibility of backwater from Mississippi River during extremely high stages on both rivers.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,030	555	570	1,630	650	9,550	8,200	747	510	480	407	407
2	1,780	540	586	1,290	682	9,100	5,900	682	495	540	435	407
3	1,330	525	618	1,030	747	8,650	3,750	650	480	555	465	407
4	747	618	666	1,070	781	8,200	2,980	634	480	480	450	407
5	666	1,090	714	1,530	730	8,200	2,620	618	480	450	407	407
6	525	1,730	730	1,610	690	7,400	2,080	666	540	450	394	407
7	495	1,700	832	1,610	650	6,600	1,650	764	995	650	394	394
8	495	1,470	938	1,920	650	5,900	1,490	730	1,030	634	381	435
9	480	1,270	938	2,160	640	5,200	1,530	666	747	555	381	495
10	480	1,010	883	2,330	640	8,200	1,380	602	698	495	381	450
11	465	764	815	2,390	630	10,400	1,190	586	747	450	368	450
12	465	634	730	2,220	634	9,550	995	650	798	435	368	570
13	465	570	747	1,920	634	8,200	919	764	682	420	381	698
14	480	555	919	1,610	682	6,250	832	650	570	420	420	1,490
15	510	555	1,050	1,290	666	4,300	764	815	525	420	480	1,780
16	730	555	1,230	1,070	666	3,150	730	1,130	480	420	586	1,900
17	1,070	540	1,800	938	650	2,890	698	1,440	480	450	650	1,980
18	995	540	3,020	866	650	2,390	698	1,290	495	450	781	2,000
19	634	540	13,200	849	666	1,950	682	976	832	480	730	1,800
20	450	555	18,700	866	666	1,750	682	698	1,110	698	480	1,230
21	495	570	20,700	900	666	1,580	666	618	1,130	747	480	747
22	666	586	20,200	919	666	1,400	650	602	866	602	435	666
23	1,050	618	17,200	919	747	1,250	634	919	866	480	586	832
24	1,580	618	15,000	860	832	2,300	650	1,090	798	435	1,290	1,680
25	2,000	586	11,400	820	1,630	2,830	650	976	666	420	1,980	1,360
26	1,750	570	4,900	781	2,560	7,800	618	798	666	407	1,880	957
27	1,580	555	3,020	784	2,830	15,000	618	634	650	420	1,420	650
28	1,310	555	2,740	760	6,250	19,700	849	555	570	420	866	540
29	866	555	2,500	760		17,200	976	525	525	420	540	730
30	698	555	2,240	730		14,000	866	510	480	407	450	1,980
31	570		1,950	682		10,900		510		407	420	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,030	450	899	0.478	0.55
November	1,730	525	736	.391	.44
December	20,700	570	4,888	2.60	3.00
January	2,390	555	1,262	.671	.77
February	6,250	630	1,057	.562	.59
March	19,700	1,250	7,155	3.81	4.39
April	8,200	618	1,565	.832	.93
May	1,440	510	758	.403	.46
June	1,130	480	680	.362	.40
July	747	407	487	.259	.30
August	1,980	368	635	.338	.39
September	2,000	394	942	.501	.56
The year	20,700	368	1,769	.941	12.78

Rutherford Fork of Obion River near Bradford, Tenn.

Location.- Chain gage at bridge on old State Highway 54, 5½ miles southwest of Bradford, Gibson County, and 17 miles above confluence with South Fork.

Drainage area.- 190 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 5,800 second-feet Mar. 24 (gage height, 15.86 feet); minimum, 13 second-feet several days in August.
1929-34: Maximum discharge recorded, 7,650 second-feet Jan. 9, 1930 (gage height, 18.10 feet); minimum discharge, 13 second-feet several days during October 1931 and August 1934; minimum gage height, 0.83 foot June 22, 26, 1932.

Remarks.- Records fair. Discharge estimated May 13.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	24	33	82	52	114	149	45	27	35	19	86
2	45	24	33	80	59	371	128	42	26	32	19	42
3	40	24	142	72	56	950	114	39	24	28	19	32
4	37	121	68	100	56	685	107	37	24	28	19	30
5	37	149	44	80	54	300	100	41	31	26	18	28
6	35	86	371	300	49	164	100	44	38	26	17	25
7	35	59	128	585	47	135	485	58	35	100	16	68
8	33	46	121	317	45	3,100	233	46	27	44	15	44
9	33	39	67	201	42	745	135	39	25	30	15	31
10	32	32	52	135	42	389	107	33	65	28	14	22
11	30	30	45	107	41	201	100	30	33	28	14	194
12	32	33	82	100	40	149	93	30	30	26	13	61
13	31	37	178	93	42	128	83	38	25	25	13	54
14	31	35	93	86	42	107	73	45	24	23	13	82
15	31	35	69	78	40	93	69	283	23	23	30	142
16	121	35	505	74	40	82	65	545	21	32	19	54
17	48	34	1,510	70	39	70	65	194	217	26	20	33
18	31	35	4,380	67	41	93	63	85	850	25	27	26
19	29	35	4,240	70	49	114	63	59	427	35	22	24
20	28	35	1,370	70	47	114	60	46	156	28	18	23
21	26	37	485	93	42	100	58	40	63	25	27	128
22	32	39	266	83	59	100	55	121	58	24	25	645
23	27	38	178	76	64	86	58	121	52	25	24	233
24	26	39	142	68	55	3,210	54	69	49	22	900	67
25	26	39	128	63	201	3,100	48	39	59	21	164	52
26	26	39	114	60	465	2,620	44	36	34	21	74	40
27	26	37	100	59	233	1,280	60	32	33	26	42	34
28	25	37	83	59	156	525	61	29	32	22	37	217
29	25	37	77	54		317	54	28	30	22	32	2,570
30	26	36	82	48		217	48	27	30	21	30	665
31	24		82	42		171		27		21	39	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	121	24	35.4	0.186	0.21
November	149	24	44.2	.233	.26
December	4,380	33	493	2.59	2.99
January	585	42	112	.589	.68
February	465	39	78.5	.413	.43
March	3,210	70	640	3.37	3.88
April	485	44	97.7	.514	.57
May	545	27	75.8	.399	.46
June	850	21	85.6	.451	.50
July	100	21	29.0	.153	.18
August	900	13	56.6	.298	.34
September	2,570	22	192	1.01	1.13
The year	4,380	13	163	.858	11.63

North Fork of Obion River near Union City, Tenn.

Location.- Staff gage at bridge on State Highway 22, 4½ miles southeast of Union City, Obion County, and 9 miles above confluence with Obion River.

Drainage area.- 490 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1933, 11,300 second-feet Dec. 31 (gage height, 18.10 feet); minimum discharge, 128 second-feet Oct. 16, 17, 21-25, Nov.10; minimum gage height, 4.05 feet July 19, 20, 24.
Maximum discharge recorded during year ending Sept. 30, 1934, 6,920 second-feet Dec. 19 (gage height, 16.40 feet); minimum, 111 second-feet several days in July, August, and September (gage height, 4.50 feet).
1929-34: Maximum discharge recorded, about 13,800 second-feet Jan. 10, 1930 (gage height, estimated, 19.7 feet); minimum, 85 second-feet Aug. 10, 1931.

Remarks.- Records fair except those for August and September 1933, which are poor. Records for 1933 have been revised and supersede those published in Water-Supply Paper 747.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	186	170	148	9,060	880	246	7,780	266	167	142	244	156
2	155	155	148	7,790	599	232	6,630	334	167	142	190	156
3	141	148	148	5,570	357	219	5,210	266	154	142	2,760	260
4	2,140	141	141	1,490	274	195	1,200	213	154	142	2,560	2,250
5	2,610	134	141	850	274	195	588	1,520	154	142	2,350	1,690
6	820	134	148	549	232	207	5,790	836	154	142	726	474
7	281	162	155	457	457	1,790	5,400	368	154	136	260	260
8	186	141	162	525	1,520	1,160	3,330	2,040	154	136	216	202
9	170	134	155	860	763	525	707	960	154	1,600	202	202
10	155	128	178	880	415	339	446	4,090	154	1,240	190	190
11	445	281	221	549	274	289	9,600	4,860	148	281	260	178
12	445	212	595	457	479	246	7,540	10,200	154	174	202	178
13	155	170	446	357	274	246	4,860	11,000	160	154	190	202
14	148	155	281	322	2,660	246	986	9,060	154	148	178	202
15	134	141	260	305	5,280	2,940	3,570	6,920	148	148	178	178
16	128	545	178	274	3,690	1,030	5,030	1,980	148	148	156	757
17	128	270	141	880	1,650	599	2,590	544	148	142	156	474
18	148	194	141	1,150	1,060	735	750	360	148	136	156	230
19	141	230	141	1,720	763	6,740	446	291	148	131	156	202
20	134	250	141	1,060	2,710	6,930	334	261	148	131	146	178
21	128	230	155	2,610	1,720	5,790	303	235	142	142	146	166
22	128	178	326	8,280	850	3,690	293	211	148	136	146	156
23	128	162	545	9,330	502	1,460	266	203	148	136	146	156
24	128	445	2,410	8,800	376	794	242	195	142	131	146	156
25	128	281	3,390	7,340	322	817	242	468	142	544	136	296
26	221	230	1,490	2,820	679	646	258	243	142	7,350	136	230
27	445	186	621	1,150	376	405	234	504	142	7,810	136	202
28	270	162	595	599	289	293	227	235	142	8,540	136	1,240
29	162	155	281	395		258	213	235	142	8,540	156	1,600
30	155	155	3,850	339		303	234	203	148	5,230	178	580
31	141		11,300	322		8,030		181		788	166	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,610	128	351	0.716	0.83
November	545	128	203	.414	.46
December	11,300	141	936	1.91	2.20
January	9,330	274	2,487	5.08	5.86
February	5,280	232	1,062	2.17	2.26
March	8,030	195	1,536	3.13	3.61
April	9,600	213	2,510	5.12	5.71
May	11,000	181	1,916	3.91	4.51
June	167	142	150	3.06	.34
July	8,540	131	1,449	2.96	3.41
August	2,760	136	423	.863	.99
September	2,250	156	453	.924	1.03
The year	11,300	128	1,127	2.30	31.21

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North Fork of Obion River near Union City, Tenn.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	216	156	166	260	156	580	394	226	151	127	135	111
2	190	156	190	230	190	3,510	320	196	151	135	187	119
3	156	178	178	216	202	2,450	282	187	143	135	135	143
4	136	156	190	244	202	1,200	270	178	135	127	111	135
5	127	850	202	526	190	757	246	206	135	119	111	127
6	127	580	178	358	178	474	320	236	1,720	119	119	135
7	127	260	202	608	178	336	294	216	727	135	119	135
8	118	202	190	474	178	3,610	270	187	236	135	111	135
9	118	178	178	426	166	2,350	246	178	169	135	111	135
10	118	178	166	316	156	1,360	226	169	178	135	111	119
11	118	166	166	260	166	552	236	169	206	127	111	187
12	127	166	166	260	166	402	236	450	151	119	111	169
13	146	166	166	260	178	358	226	348	143	119	111	216
14	136	166	166	230	178	316	226	178	135	111	111	2,690
15	127	166	178	230	166	280	226	667	135	111	246	1,940
16	526	166	1,840	216	166	244	226	757	135	111	111	1,600
17	316	156	2,980	202	166	230	196	348	135	111	119	1,280
18	190	156	6,120	202	166	244	196	216	127	111	169	282
19	156	156	6,920	230	176	426	196	178	160	334	143	196
20	146	156	6,710	260	190	380	187	169	143	236	111	169
21	136	166	5,070	244	178	296	187	169	127	160	119	143
22	500	178	1,130	230	278	260	206	757	697	127	119	1,800
23	1,640	166	552	216	260	336	196	334	187	111	258	490
24	1,480	166	402	216	202	1,360	187	258	178	111	1,100	294
25	450	178	316	202	3,140	2,020	187	196	306	111	757	178
26	216	178	296	202	4,910	5,400	196	178	246	111	206	151
27	178	166	260	202	3,410	6,310	258	169	127	119	143	143
28	166	166	230	202	955	2,760	394	160	127	111	127	143
29	166	156	216	190		920	412	160	119	111	119	1,980
30	166	156	230	166		536	334	151	127	111	119	2,980
31	156		244	156		394		143		119	111	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,640	118	280	0.571	0.66
November	850	156	206	.420	.47
December	6,920	166	1,168	2.38	2.74
January	608	156	266	.543	.63
February	4,910	156	602	1.23	1.28
March	6,310	230	1,311	2.68	3.09
April	412	187	253	.516	.58
May	757	143	262	.535	.62
June	1,720	119	249	.508	.57
July	334	111	132	.269	.31
August	1,100	111	186	.380	.44
September	2,980	111	611	1.25	1.40
The year	6,920	111	461	.941	12.79

South Fork of Forked Deer River at Jackson, Tenn.

Location.- Chain gage at bridge on State Highway 5, half a mile south of Jackson, Madison County. Zero of gage is 331.14 feet above mean Gulf level.

Drainage area.- 574 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 9,050 second-feet Dec. 19 (gage height, 16.90 feet); minimum discharge, 99 second-feet Aug. 16; minimum gage height, 2.64 feet Oct. 15.
1929-34: Maximum discharge recorded, 19,800 second-feet Jan. 14, 1932 (gage height, 19.8 feet); minimum discharge, 91 second-feet Oct. 13, 1931; minimum gage height, 1.58 feet July 9, 1929.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	155	181	416	314	374	647	200	286	339	138	122
2	147	155	190	374	374	2,670	535	190	274	225	130	122
3	139	252	1,670	374	334	5,100	454	181	263	194	130	130
4	139	190	910	374	294	5,730	427	181	298	184	184	269
5	132	1,410	427	395	275	4,830	374	172	563	165	292	174
6	132	335	2,870	480	256	2,960	348	427	704	156	269	130
7	132	241	1,310	2,550	256	1,610	1,440	274	400	247	194	204
8	132	210	591	1,470	275	1,140	675	220	348	315	122	194
9	132	200	400	764	275	816	508	200	322	184	114	122
10	132	181	348	593	256	688	454	230	1,540	174	114	122
11	132	181	322	480	275	616	535	400	563	174	114	122
12	139	190	286	480	256	480	374	190	400	165	114	603
13	139	200	310	480	256	416	322	181	481	156	106	575
14	132	181	298	395	237	395	310	164	348	156	106	720
15	132	172	310	354	237	374	298	1,540	335	156	106	339
16	400	164	4,010	354	228	374	348	647	322	292	99	1,850
17	274	172	5,730	334	228	374	508	374	454	165	174	492
18	172	181	7,520	334	228	416	374	310	5,410	156	492	292
19	164	181	9,050	354	314	640	298	274	3,000	519	156	258
20	147	181	8,570	354	237	616	263	252	1,920	388	147	194
21	147	200	5,570	354	237	790	252	241	1,130	258	130	165
22	147	263	3,100	458	314	547	263	850	661	156	247	3,050
23	200	200	1,050	374	294	664	322	454	413	147	388	413
24	164	200	738	334	275	4,710	263	427	269	138	632	269
25	147	200	712	334	570	5,570	220	348	258	130	225	204
26	139	190	712	334	1,750	5,570	210	335	214	165	904	194
27	155	374	502	314	1,230	5,570	220	322	194	156	225	174
28	155	181	458	275	395	4,960	220	310	315	147	184	194
29	155	181	437	256		2,520	210	310	292	363	147	1,300
30	147	181	437	228		1,340	200	298	269	147	138	1,430
31	147		437	246		820		286		138	130	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	400	132	159	0.277	0.32
November	1,410	155	243	.423	.47
December	9,050	181	1,918	3.34	3.85
January	2,550	228	491	.855	.99
February	1,750	228	374	.652	.68
March	5,730	374	2,054	3.58	4.13
April	1,440	200	396	.690	.77
May	1,540	164	348	.606	.70
June	5,410	194	742	1.29	1.44
July	519	130	208	.362	.42
August	904	99	215	.375	.43
September	3,050	122	481	.838	.94
The year	9,050	99	~~648~~ 633	1.11	15.14

South Fork of Forked Deer River at Chestnut Bluff, Tenn.

Location.- Staff gage at highway bridge 1 mile west of Chestnut Bluff, Crockett County, and 12 miles above confluence with North Fork of Forked Deer River. Zero of gage is 256.71 feet above mean Gulf level.

Drainage area.- 1,080 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,440 second-feet Dec. 21-22 (gage height, 17.90 feet); minimum discharge, 108 second-feet Sept. 11 (gage height, 8.35 feet).

1929-34: Maximum discharge recorded, 21,500 second-feet Jan. 17, 1932 (gage height, 19.9 feet); minimum discharge, that of Sept. 11, 1934; minimum gage height, 3.2 feet Aug. 5-13, 1930.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	368	199	260	635	368	790	5,290	305	178	305	199	168
2	305	210	260	590	402	900	3,760	305	168	735	188	141
3	260	222	290	545	440	1,970	1,540	290	159	635	178	124
4	235	248	900	635	420	2,600	955	275	168	420	168	124
5	222	440	900	845	385	3,000	735	275	275	368	159	168
6	210	845	1,060	900	368	3,320	635	290	320	305	168	141
7	188	500	1,780	2,040	350	3,670	1,010	545	350	305	159	124
8	188	385	1,900	2,600	350	4,930	2,250	460	305	500	150	124
9	188	335	1,060	2,920	350	5,170	1,060	385	260	500	150	124
10	178	305	735	2,180	335	5,050	735	368	545	402	150	115
11	178	275	545	1,240	320	4,120	635	335	1,360	335	150	108
12	178	260	460	900	320	1,970	590	350	735	290	141	260
13	178	248	420	790	335	1,060	500	305	545	260	150	440
14	188	248	385	735	335	845	460	260	420	235	141	635
15	188	248	350	635	320	635	440	900	320	222	141	635
16	248	235	460	545	320	545	440	1,720	275	222	132	845
17	305	235	2,530	545	320	500	500	1,540	260	210	132	1,240
18	350	235	4,030	500	305	500	545	845	1,300	210	150	735
19	260	235	4,710	500	320	545	500	545	2,180	235	402	500
20	235	248	5,990	500	335	685	440	402	2,760	368	335	335
21	210	260	8,190	500	335	735	402	335	3,490	320	222	275
22	210	275	8,190	545	335	845	368	545	4,300	260	178	1,300
23	235	305	7,960	590	350	685	368	590	4,300	235	159	1,900
24	235	290	7,720	545	350	2,320	385	440	1,970	210	1,720	1,300
25	222	260	6,870	500	685	3,490	368	335	1,060	188	1,180	685
26	222	275	5,290	460	1,540	4,820	335	275	735	188	685	460
27	210	260	3,000	440	1,970	5,840	350	248	545	260	735	368
28	210	260	1,360	440	1,180	6,500	335	222	440	235	385	305
29	210	260	955	420		6,500	335	199	460	222	260	1,240
30	210	260	735	385		6,320	320	188	440	235	199	1,900
31	199		635	350		5,840		178		210	168	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	368	178	227	0.210	0.24
November	845	199	295	.273	.30
December	8,190	260	2,578	2.39	2.76
January	2,920	350	837	.775	.89
February	1,970	305	491	.455	.47
March	6,500	500	2,797	2.59	2.99
April	5,290	320	886	.820	.91
May	1,720	178	460	.426	.49
June	4,300	159	1,021	.945	1.05
July	735	188	310	.287	.33
August	1,720	132	304	.281	.32
September	1,900	108	561	.519	.58
The year	8,190	108	903	.836	11.33

Middle Fork of Forked Deer River near Alamo, Tenn.

Location.- Staff gage at bridge on State Highway 54, 5 miles north of Alamo, Crockett County, and 15 miles above confluence with North Fork.

Drainage area.- 410 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 7,430 second-feet Dec. 20 (gage height, 13.34 feet); minimum, 86 second-feet Aug. 12-13 (gage height, 1.58 feet). 1929-34: Maximum discharge recorded, 10,500 second-feet Jan. 29, 1932 (gage height, 14.0 feet); minimum discharge, 71 second-feet several days in August 1930; minimum gage height, 1.26 feet July 1, 11, 17, 1931.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	151	118	126	204	151	213	280	134	103	110	103	89
2	126	118	126	195	186	460	241	134	103	460	103	89
3	118	118	420	168	168	2,670	222	126	103	134	96	103
4	118	118	160	186	160	1,240	204	126	103	103	96	96
5	118	655	151	195	151	1,010	204	126	110	103	96	96
6	118	280	985	204	142	865	186	260	142	96	103	96
7	118	151	765	1,620	134	320	840	222	126	186	96	89
8	118	134	655	765	134	3,190	610	151	118	151	96	89
9	110	118	420	440	134	1,590	300	118	103	126	96	96
10	110	118	186	260	134	960	222	118	655	118	89	96
11	110	118	160	213	134	280	204	118	400	103	89	241
12	103	118	142	204	134	280	186	118	151	96	86	151
13	118	118	142	195	134	241	168	110	151	96	86	340
14	110	118	134	195	134	222	160	110	134	96	89	241
15	110	118	134	168	134	195	151	1,240	118	96	96	126
16	151	110	540	168	134	186	151	630	110	96	89	400
17	168	118	3,520	168	134	168	151	232	110	118	103	134
18	134	118	5,750	160	134	186	151	151	4,140	118	110	103
19	118	118	7,430	168	160	222	186	134	1,970	118	222	103
20	118	118	7,430	168	151	241	160	126	910	151	151	96
21	110	126	6,380	177	134	222	151	118	222	110	89	96
22	118	151	1,970	222	320	213	142	1,060	700	103	103	2,550
23	118	142	520	186	195	186	142	232	195	103	103	935
24	118	134	400	168	168	1,470	151	126	160	103	1,040	241
25	118	134	300	168	1,500	5,750	134	118	126	96	360	134
26	118	126	260	160	960	4,140	134	118	118	103	300	126
27	118	118	222	160	655	6,060	142	110	118	110	103	110
28	118	118	213	160	260	2,050	134	103	110	103	89	110
29	118	118	186	151		1,060	126	103	110	103	103	1,040
30	118	126	168	134		420	126	110	110	96	103	1,180
31	118		204	134		340		103		103	96	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	168	103	120	0.293	0.34
November	655	110	146	.356	.40
December	7,430	126	1,297	3.16	3.64
January	1,620	134	254	.620	.71
February	1,500	134	252	.615	.64
March	6,060	168	1,182	2.88	3.32
April	840	126	212	.517	.58
May	1,240	103	219	.534	.62
June	4,140	103	394	.961	1.07
July	460	96	123	.300	.35
August	1,040	86	148	.361	.42
September	2,550	89	313	.763	.85
The year	7,430	86	391	.954	12.93

Hatchie River at Bolivar, Tenn.

Location.- Staff gage at new highway bridge on State Highway 18, about 250 feet upstream from Illinois Central Railroad bridge, 2,000 feet below mouth of Spring Creek, and 1 mile north of Bolivar, Hardeman County. Zero of gage is 323.86 feet above mean Gulf level.

Drainage area.- 1,430 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 13,600 second-feet Mar. 6 (gage height, 15.78 feet); minimum discharge, 234 second-feet Aug. 15-17; minimum gage height, 1.56 feet Aug. 17.

1929-34: Maximum discharge recorded, 39,700 second-feet Jan. 14, 1932 (gage height, 19.6 feet); minimum, 134 second-feet Aug. 12-14, 1930 (gage height, 1.1 feet).

Remarks.- Records good except those below 500 second-feet, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	845	356	478	991	666	2,590	4,750	685	324	1,600	1,080	356
2	514	356	590	969	705	3,130	4,550	666	308	2,410	666	308
3	442	373	1,300	947	805	7,640	4,040	647	308	2,700	424	308
4	356	514	1,640	905	865	7,640	3,220	628	356	2,490	356	324
5	324	1,040	2,130	885	825	10,400	2,410	609	407	1,840	324	324
6	308	1,270	2,540	1,060	745	13,000	1,950	725	496	1,220	308	496
7	308	1,340	2,970	1,840	705	12,500	2,160	805	666	825	278	533
8	293	1,060	3,420	2,450	666	10,900	2,330	845	925	825	278	390
9	278	745	3,130	2,900	666	8,940	2,590	745	1,010	1,040	293	340
10	278	552	3,130	3,050	647	7,640	2,700	609	905	969	278	324
11	278	478	3,220	3,050	628	6,450	2,540	533	1,080	725	263	293
12	278	460	3,220	2,970	647	5,220	2,130	496	1,670	552	263	293
13	278	460	3,050	2,700	666	4,550	1,800	571	1,920	496	248	340
14	278	442	2,450	2,220	666	3,760	1,400	590	1,840	442	248	424
15	278	442	1,840	1,800	685	2,900	1,170	685	1,400	407	234	533
16	407	442	1,820	1,440	666	2,160	1,080	628	845	407	234	785
17	442	424	2,830	1,220	628	1,700	1,300	552	947	705	234	725
18	590	424	6,830	1,080	609	1,400	1,600	533	2,070	991	248	969
19	647	424	9,400	1,010	628	1,400	1,620	514	2,700	865	278	785
20	478	442	6,100	969	628	1,470	1,420	478	2,900	805	514	496
21	373	478	5,780	991	666	1,600	1,170	442	2,900	991	725	407
22	340	552	5,220	1,040	685	1,670	1,060	552	2,970	1,140	685	571
23	356	725	4,550	1,040	725	1,670	991	666	3,050	825	571	496
24	424	925	4,200	1,010	745	2,130	1,080	865	3,050	514	442	390
25	647	765	3,420	969	865	3,530	1,300	825	2,760	390	373	356
26	705	628	2,700	905	1,420	4,200	1,140	590	2,010	340	705	340
27	552	514	2,070	865	1,980	5,490	947	442	1,220	324	1,300	324
28	424	496	1,720	865	2,370	5,490	805	373	825	308	1,570	324
29	373	478	1,340	825		5,220	765	356	805	407	1,440	514
30	373	478	1,120	745		5,220	705	340	991	1,060	885	725
31	373		1,040	685		4,970		324		1,400	552	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	845	278	414	0.290	0.33
November	1,340	356	603	.422	.47
December	9,400	478	3,073	2.15	2.48
January	3,050	685	1,432	1.00	1.15
February	2,370	609	829	.580	.60
March	13,000	1,400	5,051	3.53	4.07
April	4,750	705	1,891	1.32	1.47
May	865	324	591	.413	.48
June	3,050	308	1,455	1.02	1.14
July	2,700	308	968	.677	.78
August	1,570	234	526	.368	.42
September	969	293	460	.322	.36
The year	13,000	234	1,450	1.01	13.75

Hatchie River near Stanton, Tenn.

Location.- Staff gage at bridge on State Highway 1, 1 mile below Nashville, Chattanooga & St. Louis Railway bridge and 4 miles north of Stanton, Haywood County. Zero of gage is 267.34 feet above mean Gulf level.

Drainage area.- 1,940 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 12,900 second-feet Mar. 9 (gage height, 16.20 feet); minimum discharge, 355 second-feet Aug. 18-21; minimum gage height, 2.22 feet Aug. 18.
1929-34: Maximum discharge recorded, 46,200 second-feet Jan. 17, 1932 (gage height, 19.40 feet); minimum, 308 second-feet Aug. 12-15, 1930 (gage height, 2.1 feet).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	819	595	689	2,790	976	1,550	5,220	1,110	582	1,680	680	1,040
2	887	565	673	1,950	958	1,920	5,020	1,040	546	1,320	952	864
3	904	565	705	1,550	958	2,910	5,020	996	528	1,530	1,110	680
4	819	565	737	1,320	940	3,700	4,840	952	510	1,840	974	564
5	705	580	958	1,290	958	4,070	4,840	974	546	1,970	760	510
6	641	625	1,390	1,290	976	4,840	4,540	1,080	582	2,150	620	510
7	595	769	1,800	1,950	994	7,330	4,320	1,020	620	2,210	546	478
8	550	958	2,010	2,310	958	11,300	4,150	1,020	640	2,180	494	494
9	535	1,070	2,080	2,360	940	12,900	3,910	1,060	720	1,730	462	546
10	520	1,090	2,150	2,310	904	11,300	3,700	1,060	974	1,220	430	528
11	505	976	2,230	2,360	887	9,780	3,420	1,040	1,410	1,150	430	510
12	490	836	2,360	2,440	870	8,450	3,170	930	1,360	1,170	415	478
13	490	753	2,490	2,590	870	7,330	2,990	864	1,320	1,060	415	494
14	490	705	2,590	2,690	870	6,420	2,880	820	1,410	906	400	582
15	490	673	2,690	2,850	870	5,720	2,830	1,710	1,560	780	385	582
16	505	657	3,090	2,970	870	5,220	2,690	1,710	1,680	720	370	640
17	520	641	3,840	3,030	870	4,680	2,310	1,600	1,760	680	370	780
18	535	625	6,420	2,910	870	4,420	2,000	1,320	2,780	640	355	908
19	565	625	12,100	2,400	870	4,070	1,760	1,040	3,700	680	355	930
20	595	625	10,500	1,860	853	3,700	1,760	886	3,990	820	355	908
21	641	625	11,300	1,500	836	3,170	1,810	820	3,910	952	355	952
22	657	625	9,780	1,340	853	2,490	1,780	800	3,770	908	415	974
23	625	641	7,860	1,250	853	2,210	1,680	930	3,420	930	528	930
24	595	657	6,420	1,290	887	2,780	1,510	952	3,110	1,060	620	908
25	565	705	5,450	1,270	904	3,840	1,390	886	2,930	1,040	640	864
26	565	785	5,220	1,220	976	4,420	1,360	930	2,830	842	620	582
27	595	853	4,840	1,200	1,200	5,020	1,410	974	2,780	700	582	528
28	641	819	4,540	1,160	1,370	5,220	1,440	908	2,780	600	640	510
29	689	753	4,230	1,090		5,450	1,440	780	2,780	546	740	582
30	657	721	3,910	1,050		5,720	1,200	680	2,450	528	842	680
31	625		3,630	1,010		5,720		620		528	908	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	904	490	613	0.316	0.36
November	1,090	565	723	.373	.42
December	12,100	673	4,151	2.14	2.47
January	3,030	1,010	1,890	.974	1.12
February	1,370	836	934	.481	.50
March	12,900	1,550	5,408	2.79	3.22
April	5,220	1,200	2,880	1.48	1.65
May	1,710	620	1,017	.524	.60
June	3,990	510	1,933	.996	1.11
July	2,210	528	1,131	.583	.67
August	1,110	355	573	.295	.34
September	1,040	478	685	.353	.39
The year	12,900	355	1,838	.947	12.85

Wolf River at Rossville, Tenn.

Location.- Chain gage at county highway bridge half a mile north of Rossville, Fayette County, and 8 miles downstream from Moscow and mouth of North Fork.

Drainage area.- 531 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 13,200 second-feet Dec. 19 (gage height, 10.84 feet); minimum, 157 second-feet several days in August and September (gage height, 3.1 feet).

1929-34: Maximum discharge recorded, 16,400 second-feet Jan. 9, 1930 (gage height, 11.32 feet); minimum discharge, 125 second-feet Oct. 1-27, 1931; minimum gage height, 2.24 feet Aug. 12-14, 1930.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,680	205	257	345	285	650	650	244	169	390	244	169
2	745	205	257	330	300	1,780	468	244	169	452	205	157
3	300	205	650	330	315	7,580	405	244	181	300	193	157
4	244	231	1,290	345	315	6,260	375	244	169	244	181	181
5	218	315	1,290	345	300	5,050	360	244	181	218	181	181
6	205	360	2,600	548	285	2,300	484	885	193	193	169	181
7	205	375	4,670	2,020	285	1,420	650	715	181	205	169	181
8	205	375	3,590	1,580	270	1,180	484	360	181	231	169	169
9	193	300	3,250	1,180	270	1,290	436	330	181	205	181	169
10	193	244	2,020	1,090	270	970	468	270	169	193	169	169
11	193	231	1,020	925	270	845	375	244	181	193	169	169
12	193	231	564	548	285	670	345	231	218	193	169	169
13	193	231	375	436	285	500	315	218	244	181	169	193
14	193	231	345	390	285	405	315	218	218	181	169	181
15	193	231	345	375	285	375	300	218	193	181	157	181
16	231	231	845	345	285	360	330	218	169	257	157	169
17	244	231	4,670	330	270	345	452	231	516	231	157	169
18	231	231	11,600	315	270	360	436	231	2,300	193	169	216
19	244	231	11,600	315	285	420	484	218	2,020	181	169	193
20	231	244	7,130	330	270	436	436	205	1,580	181	169	169
21	205	270	3,940	346	285	436	345	205	1,020	193	193	169
22	205	315	2,300	405	300	436	315	205	670	169	231	257
23	205	300	1,420	390	300	548	336	193	330	169	205	193
24	205	300	845	360	315	845	330	193	244	169	193	169
25	193	285	516	345	345	1,780	330	193	216	169	436	169
26	193	270	452	330	631	3,250	300	193	218	169	231	169
27	205	257	405	315	548	4,300	285	181	205	169	218	169
28	205	257	375	315	580	3,590	270	181	205	315	205	157
29	205	257	345	300		3,250	257	181	205	420	205	390
30	205	257	330	285		2,020	244	181	218	244	181	452
31	205		330	270		1,180		169		244	169	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,580	193	273	0.514	0.59
November	375	205	264	.497	.55
December	11,600	257	2,246	4.23	4.88
January	2,020	270	519	.977	1.13
February	631	270	321	.605	.63
March	7,580	345	1,770	3.33	3.84
April	650	244	386	.727	.81
May	885	169	281	.492	.57
June	2,300	169	432	.814	.91
July	452	169	227	.427	.49
August	436	157	193	.363	.42
September	452	157	194	.365	.41
The year	11,600	157	596	1.12	15.23

St. Francis River near Patterson, Mo.

Location.- Chain gage in N½ sec. 16, T. 29 N., R. 5 E., 3 miles east of Patterson. Zero of gage is 372.70 feet above mean sea level.

Drainage area.- 956 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 1,100 second-feet.

Extremes.- Maximum discharge during year, 10,200 second-feet Apr. 7 (gage height, 11.2 feet, from flood marks); minimum discharge, 15 second-feet Aug. 11, 12; minimum gage height, 0.64 foot Aug. 9, 11, 12.
1921-34: Maximum discharge recorded, 57,400 second-feet May 14, 1933 (gage height, 26.80 feet); minimum, that of Aug. 11, 12, 1934.
Maximum stage known, about 31.8 feet in August 1915.

Remarks.- Records good except those for days of rapidly changing stage, which are generally fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	493	188	98	224	188	133	1,130	800	94	36	20	134
2	338	177	98	224	188	188	951	660	87	33	19	126
3	250	166	116	224	177	391	840	575	124	35	18	151
4	212	155	112	277	166	4,800	684	495	101	32	18	222
5	177	177	116	391	166	3,250	634	438	94	33	18	456
6	155	166	145	1,480	166	1,880	1,800	515	84	33	19	366
7	127	177	145	1,630	166	1,200	9,200	456	78	174	18	287
8	112	177	145	1,710	155	1,130	3,760	401	75	56	16	222
9	105	166	131	1,800	145	895	2,750	348	69	43	16	185
10	98	155	127	1,400	145	840	1,970	316	234	37	16	174
11	88	145	124	1,200	145	735	1,480	274	174	33	15	209
12	116	135	120	1,010	135	684	1,220	234	132	34	15	419
13	102	131	112	895	133	536	1,050	222	116	33	17	348
14	224	127	112	840	129	493	950	247	124	32	18	1,410
15	177	124	109	787	127	410	800	287	101	34	24	3,050
16	338	116	107	659	126	372	752	1,050	98	33	68	3,650
17	410	114	177	562	122	372	660	660	84	32	136	1,340
18	493	105	224	493	118	410	617	438	78	32	197	1,050
19	410	102	610	450	114	493	575	366	70	30	197	800
20	264	95	1,130	391	116	895	495	316	67	30	185	535
21	224	102	1,130	372	118	951	438	287	59	29	209	476
22	787	95	840	338	122	895	401	254	56	27	174	383
23	2,450	98	659	306	129	787	366	209	54	27	151	332
24	1,070	112	562	306	145	659	348	197	52	27	140	274
25	735	109	472	306	155	562	302	185	49	26	124	247
26	450	105	410	292	166	634	287	162	46	27	247	222
27	372	102	338	264	145	4,320	316	140	43	24	752	197
28	338	98	292	250	145	4,320	2,650	132	40	24	302	197
29	277	98	264	237		2,850	1,410	124	36	22	222	316
30	237	96	237	224		1,880	1,000	112	38	21	174	3,050
31	224		224	212		1,400		101		20	151	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	2,450	88	382	0.400	0.46	23,510
November	188	95	150	.156	.15	7,760
December	1,130	98	306	.320	.37	18,820
January	1,800	212	637	.666	.77	39,180
February	188	114	145	.152	.16	8,040
March	4,800	133	1,270	1.33	1.53	78,080
April	9,200	287	1,328	1.39	1.55	79,010
May	1,050	101	354	.370	.43	21,760
June	234	36	85.2	.089	.10	5,070
July	174	20	35.6	.037	.04	2,200
August	752	15	119	.124	.14	7,350
September	3,650	126	694	.726	.81	41,310
The year	9,200	15	459	.480	6.51	332,100

St. Francis River at Fisk, Mo.

Location.- Chain gage in NW¼ sec. 28, T. 25 N., R. 8 E., at bridge on State Highway 60 at Fisk. Zero of gage is 307.94 feet above mean sea level.

Drainage area.- 1,370 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge during year, 5,550 second-feet Apr. 9 (gage height, 21.98 feet); minimum discharge, 125 second-feet Aug. 4-13; minimum gage height, 1.35 feet Aug. 6.
1927-34: Maximum discharge, 41,900 second-feet May 15, 1933 (gage height, 28.89 feet, from flood mark); minimum discharge, 125 second-feet Aug. 5, 7-13, 1930, and Aug. 4-13, 1934; minimum gage height, 1.35 feet Aug. 6, 1934.
Maximum stage known, 28.0 feet Apr. 18, 1927 (discharge, about 50,000 second-feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,920	455	269	468	416	390	2,710	1,350	259	160	130	329
2	1,570	429	269	455	403	429	2,180	1,180	249	160	130	299
3	1,230	403	269	455	377	740	1,860	1,020	259	155	130	289
4	922	390	279	468	365	690	1,640	906	279	155	125	279
5	650	390	289	954	353	1,730	1,440	815	299	150	125	289
6	481	403	289	1,050	353	2,590	1,540	740	259	150	125	341
7	390	390	289	1,340	341	2,410	1,960	725	239	150	125	429
8	341	365	309	1,660	329	2,000	4,580	710	229	166	125	429
9	309	353	309	1,760	329	1,690	5,460	695	219	219	125	403
10	289	353	309	1,850	319	1,460	4,510	635	279	192	125	353
11	279	353	299	1,740	309	1,260	3,400	576	403	172	125	319
12	259	341	289	1,420	309	1,080	2,680	520	390	166	125	299
13	259	319	289	1,260	299	956	2,050	520	353	150	125	341
14	279	299	289	1,240	299	906	1,780	442	341	145	130	494
15	289	319	279	1,160	289	800	1,540	429	279	145	135	938
16	329	299	279	1,070	289	740	1,370	442	259	155	135	1,690
17	403	289	416	970	289	680	1,230	605	249	192	140	2,020
18	507	279	755	890	279	695	1,110	800	239	166	209	1,860
19	534	279	860	815	279	1,000	1,000	740	229	150	239	1,570
20	534	279	956	740	279	1,110	906	650	209	145	289	1,290
21	494	279	1,070	695	269	1,160	845	548	200	140	309	1,050
22	590	279	1,230	650	279	1,190	785	494	192	140	319	845
23	680	279	1,160	620	279	1,210	725	442	178	135	970	710
24	1,110	269	1,070	576	289	1,160	665	416	185	135	1,240	576
25	1,240	269	938	534	299	1,210	620	390	185	135	906	507
26	890	269	815	520	309	1,460	590	341	172	140	590	455
27	815	269	725	507	329	2,270	680	329	166	145	403	416
28	740	279	650	494	365	3,490	725	309	166	140	429	377
29	650	289	590	468		4,510	1,070	299	160	145	494	390
30	548	269	534	442		4,170	1,460	279	155	135	455	468
31	507		494	429		3,360		269		135	377	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,920	259	646	0.472	0.54	39,740
November	455	269	325	.237	.26	19,310
December	1,230	269	546	.399	.46	33,550
January	1,850	429	894	.653	.75	54,940
February	416	269	319	.233	.24	17,700
March	4,510	390	1,575	1.15	1.33	96,830
April	5,460	590	1,770	1.29	1.44	105,300
May	1,350	269	601	.439	.51	36,920
June	403	155	243	.177	.20	14,440
July	219	135	154	.112	.13	9,460
August	1,240	125	304	.222	.26	18,660
September	2,020	279	668	.488	.54	39,780
The year	5,460	125	672	.491	6.66	486,600

Little River Ditch 81 near Kennett, Mo.

Location.- Chain gage in NE¼ sec. 4, T. 18 N., R. 10 E., at bridge on State highway 84 about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- October 1926 to September 1934. September 1921 to September 1926 at Kirk, 1¼ miles upstream.

Average discharge.- 13 years, 300 second-feet.

Extremes.- Maximum discharge during year, 1,490 second-feet Mar. 27 (gage height, 10.28 feet); minimum, 40 second-feet Aug. 11 (gage height, 2.45 feet).
1926-34: Maximum discharge, 2,760 second-feet Apr. 21, 1927 (gage height, 15.11 feet, from graph based on gage readings); minimum discharge, that of Aug. 11, 1934; minimum gage height, 2.31 feet Sept. 5-8, 1930.

Remarks.- Records good except those for days of rapidly changing stage, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	95	85	137	110	159	560	128	92	74	46	69
2	148	95	85	132	105	161	431	122	86	80	47	69
3	137	95	90	126	115	288	333	122	88	74	50	74
4	132	90	90	132	115	288	289	116	86	74	45	74
5	120	100	90	181	115	252	303	122	86	69	42	80
6	115	120	85	228	110	216	275	122	86	68	42	74
7	115	110	85	228	110	192	261	122	86	80	44	74
8	110	105	85	276	110	216	247	116	86	74	43	74
9	105	105	85	264	105	252	233	110	92	74	43	69
10	105	100	85	252	105	228	219	110	104	68	41	69
11	100	100	85	216	105	216	206	110	128	65	40	69
12	100	100	80	204	105	204	206	104	148	62	41	69
13	100	100	80	181	105	181	206	110	116	62	62	69
14	95	90	80	170	105	170	193	104	104	60	56	80
15	95	90	80	170	105	170	180	141	98	61	53	116
16	100	90	90	159	100	159	180	148	98	59	50	98
17	100	90	90	148	100	148	167	134	98	59	53	92
18	105	90	170	148	100	159	167	128	98	56	56	92
19	100	90	288	148	100	204	154	116	92	55	64	86
20	95	90	288	137	100	228	154	110	92	54	65	80
21	95	90	264	137	100	204	148	110	86	52	68	80
22	90	90	228	137	100	192	148	110	86	50	86	80
23	100	90	216	132	100	192	148	104	86	49	92	80
24	115	90	192	126	100	216	141	104	80	49	122	80
25	110	90	181	126	132	240	134	104	80	47	116	74
26	105	90	170	126	181	835	134	104	80	46	98	74
27	105	90	170	126	181	1,470	141	104	74	53	92	74
28	100	90	159	120	181	1,180	148	98	74	50	86	74
29	100	85	148	115		960	134	98	74	49	80	92
30	95	85	148	115		800	128	98	74	46	80	98
31	95		137	115		680		92		46	74	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	170	90	108	6,660
November	120	85	94.5	5,620
December	288	80	136	8,350
January	276	115	162	9,940
February	181	100	114	6,350
March	1,470	148	357	21,980
April	560	128	212	12,630
May	148	92	114	6,980
June	148	74	91.9	5,470
July	80	46	60.2	3,700
August	122	40	63.8	3,920
September	116	69	79.4	4,730
The year	1,470	40	133	96,330

Little River Ditch 1 near Kennett, Mo.

Location.- Chain gage in NE¼ sec. 4, T. 18 N., R. 10 E., at bridge on State highway 84, about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- October 1926 to September 1934. September 1921 to September 1926 at Kirk, 1¼ miles upstream.

Average discharge.- 13 years, 681 second-feet.

Extremes.- Maximum discharge recorded during year, 2,810 second-feet Mar. 27 (gage height, 12.37 feet); minimum, 12 second-feet Aug. 12 (gage height, 2.69 feet).
1926-34: Maximum discharge recorded, 7,520 second-feet Apr. 25, 1927 (gage height, 16.56 feet); minimum discharge, 8 second-feet Sept. 13-18, 1932; minimum gage height, 2.57 feet Sept. 18, 1932.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	469	82	69	187	162	238	1,170	170	84	57	24	73
2	469	79	68	170	162	256	992	170	82	54	26	65
3	426	79	73	162	153	662	852	162	79	53	26	66
4	328	76	73	170	145	1,080	742	162	76	52	21	65
5	238	90	70	238	145	992	688	162	76	49	18	59
6	178	93	70	366	137	769	636	162	76	49	19	57
7	145	98	70	491	137	585	585	162	76	54	16	59
8	129	96	70	636	137	514	537	153	70	54	15	57
9	121	93	70	769	137	852	514	145	70	52	15	53
10	113	90	70	688	129	824	491	129	87	46	14	50
11	104	90	70	561	129	662	469	137	99	44	13	49
12	99	87	68	469	121	537	405	129	104	44	12	46
13	96	90	65	405	129	469	366	121	90	44	22	49
14	93	84	65	366	121	426	347	121	84	39	52	65
15	90	80	68	328	129	366	310	196	82	41	63	94
16	100	76	76	292	121	347	310	178	79	41	46	121
17	99	76	79	274	121	328	274	153	75	40	41	102
18	93	79	153	256	113	347	256	145	76	36	36	87
19	93	79	328	256	121	405	238	129	70	36	32	90
20	87	76	561	238	113	561	221	129	68	35	36	83
21	84	82	796	238	113	636	212	121	65	32	49	76
22	86	76	585	221	121	561	204	113	62	28	96	76
23	90	76	469	212	113	469	196	113	62	31	89	68
24	104	75	385	204	113	447	187	105	59	28	145	63
25	104	73	292	196	145	514	178	105	58	28	170	59
26	104	73	256	187	256	1,400	170	102	58	31	170	57
27	104	70	238	187	274	2,770	178	96	53	31	145	52
28	100	72	221	187	256	2,570	178	96	53	31	129	49
29	90	70	204	170		2,330	178	93	50	28	105	72
30	90	68	187	170		1,790	178	93	50	28	93	79
31	79		187	162		1,500		87		28	82	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	469	79	149	9,130
November	98	68	80.9	4,820
December	796	65	195	12,010
January	769	162	305	18,760
February	274	113	145	8,040
March	2,770	238	845	51,980
April	1,170	170	409	24,320
May	196	87	134	8,210
June	104	50	72.4	4,310
July	57	28	40.1	2,470
August	170	12	58.7	3,610
September	121	46	68.1	4,050
The year	2,770	12	210	151,700

Little River Ditch 66 near Kennett, Mo.

Location.- Chain gage in NE¼ sec. 4, T. 18 N., R. 10 E., at bridge on State highway 84, about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- October 1926 to September 1934. September 1921 to September 1926 at Kirk, 1¼ miles upstream.

Average discharge.- 13 years, 344 second-feet.

Extremes.- Maximum discharge recorded during year, 2,040 second-feet Mar. 28 (gage height, 13.62 feet); minimum, 18 second feet Aug. 11 (gage height, 2.50 feet).
1926-34: Maximum discharge, 3,650 second-feet Apr. 25, 1927 (gage height, 17.70 feet, from graph based on gage readings); minimum, that of Aug. 11, 1934.

Remarks.- Records good. Little River Ditch 66-A is an auxiliary to Ditch 66, the two ditches being separated by a low, narrow bank and interconnected by cut-offs. Above stage of 6.4 feet part of the flow is carried by Ditch 66-A, and above stage of 13 feet the two ditches in the vicinity of the gage unite to form one continuous body of water. For the purpose of determining the discharge of each ditch, the division between them is taken at the top of the bank which separates them during low stages.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	880	138	114	228	179	228	1,040	256	108	62	31	50
2	748	138	108	214	179	228	860	228	102	64	31	50
3	658	132	114	200	172	422	694	228	97	64	31	48
4	534	132	114	200	165	604	604	214	97	64	29	46
5	406	152	114	242	158	658	550	214	97	58	26	44
6	331	172	114	422	152	568	502	228	97	58	24	46
7	271	200	114	518	152	486	470	242	97	61	24	46
8	228	200	114	534	152	438	534	228	92	56	22	45
9	214	186	114	586	145	502	534	228	92	54	22	35
10	186	172	114	550	152	454	486	214	108	52	19	34
11	168	172	114	486	145	391	438	200	108	49	18	35
12	158	165	114	422	145	351	406	186	120	44	20	34
13	158	158	108	376	145	331	361	179	120	44	29	34
14	152	152	108	346	138	316	346	172	114	44	36	56
15	158	145	108	316	138	286	331	200	108	45	27	97
16	158	145	108	301	132	271	316	179	97	45	25	92
17	152	138	108	271	126	256	286	172	92	46	24	97
18	186	138	165	256	126	271	286	165	92	46	26	86
19	200	138	454	256	132	286	271	158	92	44	32	75
20	179	132	622	242	132	361	256	152	86	42	35	64
21	165	132	604	228	132	391	228	145	80	40	48	58
22	165	126	518	228	138	391	228	145	75	42	52	56
23	158	126	518	214	136	346	228	145	70	40	37	54
24	179	126	376	200	132	331	228	132	70	42	70	52
25	228	126	316	200	165	346	214	126	70	39	186	50
26	214	126	286	200	228	470	200	120	64	39	186	46
27	200	126	286	186	256	1,590	214	120	64	40	132	41
28	186	126	271	186	228	2,020	228	120	62	37	102	41
29	172	120	256	179		1,900	271	114	60	35	80	55
30	158	114	242	179		1,640	256	114	56	34	64	64
31	152		228	179		1,420		114		32	57	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	880	152	261	16,060
November	200	114	145	8,630
December	622	108	227	13,970
January	586	179	295	18,140
February	256	126	156	8,690
March	2,020	228	599	36,820
April	1,040	200	396	23,540
May	256	114	175	10,790
June	120	56	89.6	5,330
July	64	32	47.2	2,900
August	186	18	49.8	3,060
September	97	34	54.4	3,240
The year	2,020	18	209	151,200

Little River Ditch 66-A near Kennett, Mo.

Location.- Chain gage in NE¼ sec. 4, T. 18 N., R. 10 E., at bridge on State highway 84, about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- January 1927 to September 1934.

Extremes.- Maximum discharge recorded during year, 630 second-feet Mar. 28 (gage height, 13.52 feet); no flow on many days.
1927-34: Maximum discharge, 2,340 second-feet Apr. 25, 1927 (gage height, 17.6 feet, from graph based on gage readings); no flow on many days.

Remarks.- Records poor. See "Remarks" under Little River Ditch 66.

Discharge, in second-feet, 1933-34

Oct. 1	54	Mar. 4	5	Mar. 31	210
Oct. 2	32	Mar. 5	16	Apr. 1	88
Oct. 3	16	Mar. 6	5	Apr. 2	42
Dec.20	7	Mar.27	314	Apr. 3	16
Dec.21	7	Mar.28	630	Apr. 4	4
Jan. 9	4	Mar.29	512		
Jan.10	2	Mar.30	342		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	54	0	3.3	202
November	0	0	0	0
December	7	0	.5	28
January	4	0	.2	12
February	0	0	0	0
March	• 630	0	65.6	4,030
April	88	0	5.0	298
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The year	630	0	6.32	4,570

Note.- No flow during year except for days given above.

Little River Ditch 251 near Kennett, Mo.

Location.- Chain gage in NW¼ sec. 3, T. 18 N., R. 10 E., at bridge on State highway 84, about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- November 1926 to September 1934.

Extremes.- Maximum discharge during year, 3,590 second-feet Mar. 28 (gage height, 13.66 feet); minimum, 64 second-feet Aug. 11 (gage height, 2.15 feet).
1926-34: Maximum discharge, 6,510 second-feet Apr. 24, 25, 1927 (gage height, 17.67 feet); minimum, 52 second-feet Sept. 5-8, 1930 (gage height, 2.10 feet).

Remarks.- Records fair. Discharge estimated Jan. 24, Feb. 2.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,530	282	234	450	384	472	1,840	472	225	143	81	152
2	1,330	263	216	428	373	472	1,560	472	225	152	81	134
3	1,140	263	234	406	362	902	1,330	450	216	152	83	143
4	930	263	234	428	342	1,200	1,170	428	216	152	80	134
5	738	282	234	494	322	1,260	1,110	428	216	143	75	134
6	586	322	234	790	322	1,110	1,020	450	216	143	75	143
7	494	362	225	960	322	930	960	450	206	152	73	143
8	450	362	225	1,050	322	874	1,050	450	197	143	71	126
9	406	342	225	1,110	302	1,020	1,050	428	197	134	67	126
10	362	342	234	1,050	302	930	930	406	225	126	65	117
11	342	322	234	902	302	790	874	384	234	126	64	117
12	322	322	225	790	302	712	790	362	263	126	69	110
13	322	302	216	712	302	660	712	362	244	126	110	110
14	302	282	216	660	302	634	686	342	244	126	110	161
15	322	282	216	610	302	562	660	384	225	117	91	234
16	322	282	225	586	282	538	634	384	216	117	86	244
17	302	263	234	538	282	516	586	362	206	117	83	244
18	342	282	342	516	263	516	562	342	197	117	88	225
19	362	263	902	516	282	562	538	322	197	117	99	197
20	342	263	1,260	494	282	686	516	322	188	110	102	170
21	322	263	1,200	472	263	818	494	302	170	110	134	152
22	302	263	1,020	450	282	764	494	302	161	110	143	152
23	302	263	846	450	282	686	494	282	161	102	161	152
24	342	263	758	428	282	634	472	282	152	102	206	134
25	406	244	610	406	322	712	450	282	152	96	428	134
26	384	244	586	406	472	1,260	428	263	152	96	494	117
27	362	244	562	406	538	2,820	450	263	143	89	362	117
28	342	244	538	384	494	3,540	472	244	143	91	282	110
29	322	244	494	384		3,320	516	244	134	87	282	134
30	302	234	472	362		2,860	494	244	134	82	206	161
31	282		472	362		2,430		234		81	179	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,530	282	481	29,580
November	362	234	282	16,760
December	1,260	216	448	27,580
January	1,110	362	581	35,700
February	538	263	328	18,230
March	3,540	472	1,135	69,800
April	1,840	428	778	46,300
May	472	234	353	21,700
June	263	134	195	11,610
July	152	81	119	7,310
August	494	64	146	8,980
September	244	110	151	8,980
The year	3,540	64	418	302,500

Little River Ditch 259 near Kennett, Mo.

Location.- Chain gage in NW¼ sec. 3, T. 18 N., R. 10 E., at bridge on State highway 84, about 4 miles east of Kennett. Zero of gage is about 240 feet above mean sea level.

Records available.- November 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,160 second-feet Mar. 28, 29; maximum gage height, 11.38 feet Mar. 29; minimum discharge, 0.3 second-foot Aug. 9-14; minimum gage height, 1.72 feet Aug. 9, 10.

1926-34: Maximum discharge, 4,140 second-feet Apr. 29, 1927 (gage height, 15.57 feet); minimum discharge, 0.1 second-foot Aug. 4, 5, Oct. 22 to Nov. 17, 1931, Sept. 16-19, 1932; minimum gage height, 1.33 feet Aug. 29, 30, Sept. 4-8, 19, 20, 22, 23, 1930.

Remarks.- Records poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	7	4.3	67	39	79	755	37	9	3.6	0.7	2.3
2	45	7	4.1	62	39	104	455	35	8	3.6	.6	1.9
3	39	6	5	57	37	231	271	33	8	3.2	.7	1.8
4	37	6	6	67	35	221	202	33	7	3.2	.5	1.6
5	26	9	6	125	33	184	395	31	8	3.0	.5	1.4
6	21	11	6	133	31	149	329	33	8	2.9	.4	1.3
7	18	13	6	149	29	125	271	35	15	3.6	.4	1.4
8	15	13	6	202	29	141	211	35	7	3.3	.4	1.4
9	14	11	5	184	27	251	184	35	7	2.9	.3	1.3
10	12	11	5	149	26	211	157	29	8	2.7	.3	1.2
11	11	11	5	118	24	166	141	26	9	2.6	.3	1.1
12	10	9	5	104	26	141	125	24	11	2.3	.3	1.0
13	9	9	5	97	24	125	111	22	11	2.2	.3	1.1
14	9	9	5	91	24	111	104	20	10	2.1	.3	2.5
15	9	7	5	82	22	97	97	22	9	2.0	.4	2.9
16	9	7	9	76	21	91	91	27	8	2.0	.4	3.5
17	10	7	22	70	20	91	82	33	8	1.9	.4	3.5
18	11	6	166	64	20	91	73	33	8	1.8	.5	3.3
19	11	6	439	64	18	125	70	29	7	1.7	.4	3.1
20	11	6	487	62	18	166	62	27	6	1.6	.5	2.7
21	10	6	439	60	18	175	57	24	6	1.5	1.0	2.4
22	9	6	329	57	20	149	54	24	5	1.5	1.1	2.7
23	10	5	241	57	18	149	52	20	4.9	1.4	1.3	2.4
24	11	5	175	54	18	281	50	16	4.9	1.4	3.3	2.2
25	11	4.9	125	52	37	539	45	15	4.3	1.2	4.5	2.1
26	10	4.8	104	50	118	1,000	43	14	4.1	1.1	6	2.1
27	10	4.6	97	50	97	1,080	41	12	4.1	1.2	8	1.8
28	9	4.8	85	47	91	1,140	41	12	3.6	1.0	8	1.6
29	9	4.9	76	43		1,160	39	12	3.6	.9	6	3.8
30	e	4.9	70	41		1,110	37	11	3.3	.8	4.2	5
31	8		70	37		1,030		11		.7	3.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	52	8	15.6	960
November	13	4.6	7.40	440
December	487	4.1	97.2	5,980
January	202	37	82.9	5,100
February	118	18	34.2	1,900
March	1,160	79	346	21,250
April	755	37	155	9,210
May	37	11	24.8	1,530
June	15	3.3	7.19	428
July	3.6	.7	2.09	129
August	8	.3	1.78	109
September	5	1.0	2.21	132
The year	1,160	.3	65.1	47,170

Big Lake outlet near Manila, Ark.

Location.- Chain gage in SE¼ sec. 9, T. 14 N., R. 9 E., 3½ miles southeast of Manila. Zero of gage is 223.44 feet above mean sea level.

Records available.- September 1927 to December 1933 (discontinued).

Extremes.- Maximum discharge recorded during period, 6,020 second-feet Nov. 30 to Dec. 8 (gage height, 13.0 feet); minimum, 230 second-feet Oct. 20-21 (gage height, 3.0 feet).

1927-33: Maximum discharge recorded, 15,900 second-feet Jan. 16, 1930 (gage height, 19.85 feet); minimum, 105 second-feet Sept. 18, 1932 (gage height, 2.4 feet).

Remarks.- Records poor. Gage-height records furnished by Mississippi County Drainage District No. 17.

Discharge, in second-feet, 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	380	255	6,020									
2	405	255	6,020									
3	430	280	6,020									
4	430	405	6,020									
5	380	510	6,020									
6	380	575	6,020									
7	330	685	6,020									
8	330	685	6,020									
9	305	685	5,000									
10	305	645	4,910									
11	280	575	4,910									
12	280	540	4,120									
13	255	510	4,120									
14	255	480	4,050									
15	255	455	3,460									
16	255	455	3,460									
17	255	455	3,400									
18	255	455	3,340									
19	255	430	3,160									
20	230	430	3,050									
21	230	510	2,950									
22	255	1,050	2,950									
23	255	1,250	2,950									
24	255	1,550	3,000									
25	255	2,400	3,050									
26	255	3,580	3,050									
27	280	4,050	3,000									
28	280	4,910	2,950									
29	280	5,000	2,950									
30	280	6,020	3,000									
31	280		3,050									

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	430	230	295	18,160
November	6,020	255	1,336	79,510
December	6,020	2,950	4,130	254,000
January				
February				
March				
April				
May				
June				
July				
August				
September				
The period				351,700

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White River at Beaver, Ark.

Location.- Chain gage in sec. 20, T. 21 N., R. 26 W., at Missouri & North Arkansas Railway bridge a quarter of a mile east of depot at Beaver. Zero of gage is 885.55 feet above mean sea level.

Drainage area.- 1,270 square miles.

Records available.- July 1909 to December 1910; May 1923 to September 1934.

Extremes.- Maximum discharge recorded during year, 16,500 second-feet Oct. 23 (gage height, 14.83 feet); minimum, 45 second-feet Aug. 14, 16, 19 (gage height, 2.18 feet).

1909-10, 1923-34: Maximum discharge recorded, 65,000 second-feet Apr. 16, 1927 (gage height, 37.0 feet); minimum discharge, 33 second-feet Sept. 10, 1925; minimum gage height, 1.55 feet Oct. 1-8, 1909.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,300	1,270	360	710	595	1,390	2,930	680	260	110	52	78
2	1,180	1,100	349	650	570	1,210	2,470	620	243	106	50	314
3	810	1,180	327	620	548	1,120	2,160	548	226	101	50	4,260
4	620	2,100	316	620	525	1,210	1,960	740	226	96	87	11,300
5	485	3,110	550	650	502	1,080	3,170	2,160	226	89	56	4,550
6	396	3,920	585	1,300	480	960	11,300	3,560	226	89	53	1,920
7	338	2,520	550	1,960	458	842	8,580	3,050	209	87	52	1,230
8	285	2,000	485	3,170	435	805	6,200	2,360	226	85	50	912
9	260	1,620	420	4,120	412	710	4,550	1,760	226	83	50	693
10	238	1,350	396	3,050	412	680	3,700	1,390	226	76	52	599
11	216	1,100	354	2,470	390	620	3,300	1,080	226	76	50	553
12	229	970	327	2,160	370	570	3,430	920	412	72	49	489
13	229	850	316	1,860	370	548	3,050	772	548	74	48	468
14	327	770	290	1,660	350	525	2,470	680	370	74	46	576
15	372	658	270	1,480	350	502	2,160	620	350	81	48	532
16	372	585	255	1,300	332	480	1,960	570	296	78	46	510
17	408	518	255	1,120	332	458	2,260	548	243	196	48	532
18	1,350	452	265	1,080	314	480	2,360	525	226	136	48	576
19	1,010	408	2,200	1,000	314	502	3,050	480	193	103	46	489
20	810	360	4,800	920	314	680	2,580	435	183	87	50	426
21	658	384	4,850	842	314	2,930	2,060	390	183	76	48	489
22	2,200	360	3,430	805	332	3,170	1,760	595	174	66	48	510
23	12,800	970	2,580	1,080	314	2,470	1,570	412	165	65	60	1,620
24	11,000	732	2,060	1,040	314	2,060	1,390	390	150	60	56	1,300
25	4,500	620	1,760	960	332	2,470	1,160	350	144	61	142	972
26	2,990	585	1,480	920	2,160	5,450	1,040	435	134	58	106	799
27	4,350	485	1,210	842	3,170	7,140	920	458	125	61	76	645
28	4,200	452	1,080	772	1,860	9,750	842	370	120	58	74	553
29	2,520	420	920	740		6,980	772	332	120	53	74	532
30	2,000	384	842	680		4,850	740	314	115	53	76	532
31	1,620		740	620		3,700		278		53	70	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	12,800	216	1,970	1.55	1.79	121,100
November	3,920	360	1,074	.846	.94	63,930
December	4,850	255	1,117	.880	1.01	68,670
January	4,120	620	1,329	1.05	1.21	81,720
February	3,170	314	613	.483	.50	34,050
March	9,750	458	2,140	1.69	1.95	131,600
April	11,300	740	2,863	2.25	2.51	170,400
May	3,560	278	897	.706	.81	55,180
June	548	115	226	.178	.20	13,430
July	196	53	82.8	.065	.07	5,090
August	142	46	60.0	.047	.05	3,690
September	11,300	78	1,299	1.02	1.14	77,270
The year	12,800	46	1,141	.898	12.18	826,100

White River at Forsyth, Mo.

Location.- Water-stage recorder in SE¼ sec. 33, T. 24 N., R. 20 W., in Forsyth, a quarter of a mile below Swan Creek. Zero of gage is 640.32 feet above mean sea level (revised).

Drainage area.- 4,610 square miles.

Records available.- January to September 1926; February 1930 to September 1934.

Extremes.- Maximum discharge during year, 21,300 second-feet Apr. 7 (gage height, 11.25 feet); minimum discharge, 36 second-feet July 14 (gage height, 1.20 feet); minimum daily discharge, 39 second-feet July 26.

1926, 1930-34: Maximum discharge, 84,600 second-feet May 15, 1933 (gage height, 29.3 feet); minimum discharge and gage height, those of July 14, 1934; minimum daily discharge, that of July 26, 1934.

Maximum stage known, 45.36 feet (by levels to flood mark) Apr. 16, 1927 (discharge, about 160,000 second-feet). (Erroneous date in previous reports).

Remarks.- Records good. Flow regulated by hydroelectric plant of Empire District Electric Co. Discharges computed from plant records Oct. 25-31, Nov. 1, Apr. 27-30, May 1.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,880	2,980	1,120	1,380	2,390	4,640	8,270	2,010	1,270	136	101	785
2	5,030	2,870	1,090	2,220	1,850	2,230	7,440	1,830	401	279	60	4,940
3	2,500	2,110	1,400	1,150	740	2,110	6,260	1,870	157	227	124	7,200
4	2,490	3,120	1,390	965	311	2,850	6,520	2,280	756	158	201	8,440
5	1,800	4,350	1,010	1,880	1,310	3,350	13,100	2,860	988	122	229	13,700
6	1,750	5,360	906	1,660	1,520	2,470	15,100	3,220	937	91	118	7,690
7	1,010	5,450	1,560	3,690	1,370	2,030	20,100	4,570	934	257	165	5,300
8	353	5,020	1,710	6,650	1,470	2,370	17,000	5,190	494	264	212	4,310
9	730	4,020	1,350	7,290	915	2,430	13,000	4,440	171	243	173	213
10	754	3,650	755	7,460	792	2,600	10,700	3,420	163	306	775	538
11	908	3,570	924	6,280	1,290	1,180	9,830	3,070	3,930	279	281	1,010
12	867	970	1,550	5,440	1,440	1,400	8,690	2,010	3,960	55	94	991
13	1,440	2,960	1,100	4,860	1,100	1,620	8,180	1,320	1,940	194	63	1,690
14	1,020	2,330	750	3,620	948	1,640	7,450	2,090	543	133	256	3,900
15	178	2,340	1,430	3,460	1,160	1,370	6,190	2,280	642	245	215	1,230
16	2,030	2,530	1,520	3,610	929	1,700	6,210	2,460	909	213	210	390
17	1,850	1,190	941	2,780	819	1,980	5,690	2,420	848	103	82	1,540
18	1,230	968	983	2,990	394	579	6,200	2,280	1,420	295	112	1,810
19	2,440	425	4,140	2,980	968	2,310	6,520	1,230	914	298	243	1,520
20	3,300	1,360	5,360	2,240	1,200	2,390	6,490	1,120	818	332	98	1,500
21	3,250	1,850	6,750	2,330	697	4,340	5,960	1,850	700	447	246	1,120
22	2,900	1,050	7,600	2,580	943	5,610	5,220	2,410	763	107	101	2,010
23	6,180	1,340	6,040	2,610	1,260	6,170	4,540	1,910	329	112	448	393
24	17,100	1,670	4,660	2,320	737	5,500	3,990	1,490	176	178	550	1,800
25	14,800	2,020	4,220	2,360	970	4,790	4,000	1,700	906	120	301	2,200
26	8,000	2,030	3,430	2,230	1,930	6,190	2,830	649	698	39	607	1,900
27	5,800	1,580	2,840	1,480	4,370	14,900	3,120	170	677	57	579	1,360
28	5,200	1,340	3,300	1,610	4,770	17,600	2,170	1,810	370	286	746	1,040
29	6,000	1,580	2,420	1,940		17,800	1,330	1,510	280	58	554	2,000
30	7,700	626	1,760	1,900		13,800	2,470	442	87	44	570	1,040
31	3,100		1,380	2,060		10,500		1,150		171	589	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	17,100	178	3,761	0.816	0.94	231,300
November	5,450	425	2,422	.525	.59	144,100
December	7,600	750	2,432	.528	.61	149,500
January	7,460	965	3,098	.672	.77	190,500
February	4,770	311	1,378	.299	.31	76,550
March	17,800	579	4,853	1.05	1.21	298,400
April	20,100	1,330	7,492	1.63	1.82	445,800
May	5,190	170	2,173	.471	.54	133,600
June	3,960	87	906	.197	.22	53,910
July	447	39	189	.041	.05	11,600
August	775	60	294	.064	.07	18,060
September	13,700	213	2,785	.604	.67	165,700
The year	20,100	39	2,651	.575	7.80	1,919,000

White River near Flippin, Ark.

Location.- Staff gage in NW¼ sec. 9, T. 19 N., R. 15 W., 2½ miles north of Flippin. Zero of gage is 420.92 feet above mean sea level.

Drainage area.- 6,170 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 23,500 second-feet Mar. 29 (gage height, 13.52 feet); minimum, 134 second-feet July 31, Aug. 8 (gage height, 4.16 feet).

1928-34: Maximum discharge recorded, 116,000 second-feet May 16, 1933 (gage height, 32.3 feet); minimum discharge, 134 second-feet Dec. 18, 1932, July 31, Aug. 8, 1934; minimum gage height, 4.08 feet Dec. 18, 1932.

Maximum stage known, 46.6 feet Apr. 16, 1927.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,770	4,330	1,510	2,190	2,050	5,920	13,400	3,170	1,330	446	178	590
2	4,770	2,810	1,510	1,700	2,190	5,440	10,200	3,170	1,100	280	182	710
3	4,990	3,170	1,450	2,190	2,190	4,550	9,340	2,490	1,270	286	150	3,540
4	3,730	2,650	1,510	2,190	2,190	2,810	7,940	2,330	900	228	138	8,500
5	2,650	2,650	1,510	2,050	1,100	4,130	12,100	2,330	710	250	158	9,640
6	2,650	4,550	1,630	2,190	750	4,770	16,600	2,990	590	298	158	14,100
7	2,810	4,990	900	2,650	1,330	3,530	18,700	3,730	950	292	150	9,640
8	2,330	5,680	1,770	5,920	1,910	2,610	20,200	5,210	1,000	232	134	6,640
9	1,390	5,210	1,910	8,220	1,770	2,490	18,700	5,680	1,150	166	166	4,130
10	1,330	3,730	1,630	9,340	1,910	2,490	15,100	5,440	1,150	174	162	2,330
11	1,210	4,130	1,630	8,780	750	3,170	12,700	4,770	2,990	226	196	1,100
12	1,150	4,130	950	7,420	950	3,170	11,500	3,730	2,050	268	590	1,000
13	1,450	2,650	850	6,400	1,390	2,330	10,200	3,350	3,730	274	406	1,270
14	1,270	1,390	1,840	5,680	1,390	2,190	9,340	2,330	2,810	292	286	2,650
15	1,910	2,990	1,450	4,990	1,270	1,910	8,780	2,330	2,190	340	238	4,770
16	900	2,650	900	4,550	1,330	2,050	7,940	2,490	1,630	310	292	3,170
17	1,510	2,650	1,510	4,130	1,330	2,190	7,420	3,170	1,150	238	170	2,050
18	1,910	1,450	1,840	3,530	1,330	1,770	6,640	2,650	900	182	178	1,510
19	2,650	1,270	2,810	3,170	1,210	4,550	7,420	2,650	950	174	298	1,910
20	2,190	950	5,210	3,350	750	4,770	7,420	2,050	1,630	190	244	1,840
21	3,530	710	6,640	2,810	710	4,770	7,160	1,840	1,210	232	310	1,700
22	4,990	750	6,640	2,990	1,390	6,400	6,900	1,630	1,100	244	388	1,630
23	5,920	950	8,780	3,350	900	7,420	6,160	2,330	1,000	244	316	1,570
24	6,900	900	6,900	2,990	1,100	7,940	5,920	2,190	1,210	382	406	1,150
25	16,200	1,150	5,210	2,650	5,440	7,420	5,440	2,190	590	256	478	900
26	16,200	2,190	4,770	2,650	2,610	8,500	4,770	1,910	630	196	670	2,490
27	8,780	2,330	4,130	2,490	2,190	14,400	4,330	1,700	590	182	590	2,650
28	7,420	2,650	3,530	2,810	4,990	21,600	3,530	1,100	590	238	590	2,050
29	6,640	1,840	3,170	2,330		22,700	3,530	1,000	550	214	590	1,700
30	6,400	1,450	2,810	2,330		21,600	2,190	1,840	550	166	710	2,190
31	5,210		2,330	2,330		19,400		1,570		138	630	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	16,200	900	4,379	0.710	0.82	269,300
November	5,680	710	2,632	.427	.48	156,600
December	8,780	850	2,878	.467	.54	177,000
January	9,340	1,700	3,883	.629	.72	238,800
February	5,440	710	1,736	.281	.29	96,440
March	22,700	1,770	6,748	1.09	1.26	414,900
April	20,200	2,190	9,386	1.52	1.70	558,500
May	5,680	1,000	2,753	.446	.51	169,300
June	3,730	550	1,273	.206	.23	75,770
July	446	138	246	.040	.05	15,150
August	710	134	327	.053	.06	20,130
September	14,100	590	3,304	.535	.60	196,600
The year	22,700	134	3,299	.535	7.26	2,388,000

White River at De Valls Bluff, Ark.

Location.- Water-stage recorder in sec. 16, T. 2 N., R. 4 W., 1 mile northeast of De Valls Bluff and 21 miles above mouth of Cache River. Prior to Dec. 22, 1933, staff gage used at same location and datum. Zero of gage is 152.67 feet above mean sea level.

Drainage area.- 23,500 square miles.

Records available.- December 1927 to September 1934.

Extremes.- Maximum discharge during year, 83,600 second-feet Apr. 2-6 (gage height, 24.8 feet); minimum, 3,440 second-feet Aug. 12, 16 (gage height, 2.18 feet).
1927-34: Maximum discharge recorded, 140,000 second-feet June 28, 29, 1928 (gage height, 28.5 feet); minimum, that of Aug. 12, 16, 1934.
Maximum stage known, 34.6 feet Apr. 23, 1927.

Remarks.- Records good. Discharge estimated Oct. 1-6, Jan. 2-5, Feb. 9-11.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10,600	15,000	7,000	18,900	11,600	10,200	82,200	24,000	9,320	5,860	3,760	6,400
2	13,000	13,900	7,000	17,400	11,000	12,800	83,600	22,500	8,760	5,660	3,760	6,060
3	12,800	13,200	7,240	16,100	10,600	15,800	83,600	21,000	8,340	5,760	3,680	5,760
4	12,600	12,500	7,000	15,400	10,300	17,400	83,600	19,500	8,080	5,960	3,680	5,560
5	12,500	11,600	7,120	15,300	10,000	18,400	83,600	18,400	8,080	5,860	3,680	5,460
6	12,200	11,200	7,480	15,900	9,880	18,900	83,600	17,500	7,840	5,560	3,600	5,560
7	11,900	10,700	7,600	17,900	9,740	19,300	80,700	16,700	7,840	5,360	3,600	6,880
8	11,600	10,400	7,480	19,100	9,600	19,500	79,200	16,200	7,720	5,170	3,520	9,740
9	11,200	10,300	7,480	19,700	9,180	19,800	77,800	16,600	7,480	4,990	3,520	11,900
10	10,700	10,700	7,600	20,400	8,760	20,200	77,800	17,000	7,360	4,900	3,520	13,400
11	9,880	11,300	7,720	21,200	8,340	20,400	74,900	17,400	7,000	4,810	3,520	13,600
12	9,180	11,800	7,480	22,300	8,200	20,200	72,000	17,400	6,880	4,720	3,440	12,800
13	8,480	11,800	7,240	23,100	8,080	19,700	69,400	17,500	7,000	4,630	3,520	11,900
14	7,960	11,600	7,240	23,800	7,960	18,900	66,700	17,200	7,600	4,540	3,520	10,700
15	7,360	11,000	7,240	23,800	7,840	18,200	64,100	16,600	8,480	4,450	3,520	9,600
16	7,240	10,600	7,360	23,400	7,720	17,200	61,400	15,800	8,760	4,360	3,440	8,340
17	7,000	10,200	7,600	22,500	7,600	16,200	56,500	15,300	8,760	4,270	3,520	7,480
18	7,000	9,740	11,000	21,000	7,480	15,300	53,000	14,800	8,900	4,180	3,680	7,360
19	6,880	9,040	16,400	19,700	7,480	14,600	50,100	14,500	8,760	4,180	4,000	8,200
20	7,000	8,620	21,400	18,600	7,480	14,800	47,300	14,200	8,200	4,180	4,180	9,600
21	7,000	8,340	24,700	17,500	7,480	16,100	45,700	13,800	7,720	4,180	4,360	10,300
22	7,000	8,200	27,200	16,600	7,480	18,400	43,400	13,600	7,240	4,180	4,360	10,400
23	7,120	8,080	28,500	15,800	7,480	20,400	41,300	13,100	6,880	4,090	4,270	10,200
24	7,480	7,840	29,400	15,100	7,360	21,800	39,400	13,100	6,640	4,000	4,270	9,600
25	8,200	7,600	29,400	14,500	7,360	24,500	37,100	12,800	6,520	4,000	4,360	9,180
26	9,460	7,480	28,800	14,000	7,720	32,700	34,500	12,400	6,400	3,920	4,630	8,760
27	10,900	7,240	27,700	13,800	8,200	45,700	31,900	11,800	6,280	3,920	5,560	8,480
28	12,400	7,120	26,400	13,400	8,760	52,000	29,400	11,300	6,060	3,920	7,120	8,080
29	14,600	7,120	24,500	13,100		61,400	27,400	10,700	6,060	3,840	7,720	7,960
30	16,100	7,000	22,500	12,600		72,000	26,000	10,200	5,960	3,840	7,480	7,840
31	15,900		20,600	12,200		79,200		9,740		3,840	6,880	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	16,100	6,880	10,100	0.430	0.50	621,300
November	15,000	7,000	10,040	.427	.48	597,400
December	29,400	7,000	14,950	.636	.73	919,100
January	23,800	12,200	17,870	.760	.88	1,099,000
February	11,600	7,360	8,596	.366	.38	477,400
March	79,200	10,200	25,550	1.09	1.26	1,571,000
April	83,600	26,000	59,570	2.54	2.83	3,545,000
May	24,000	9,740	15,870	.663	.76	957,300
June	9,320	5,960	7,564	.322	.36	450,100
July	5,960	3,840	4,617	.196	.23	283,900
August	7,720	3,440	4,312	.183	.21	265,100
September	13,600	5,460	8,903	.379	.42	529,800
The year	83,600	3,440	15,630	.665	9.04	11,320,000

James River at Galena, Mo.

Location.- Chain gage in NW¼ sec. 7, T. 24 N., R. 23 W., at bridge on State Highway 44 at Galena, half a mile above Railey Creek. Zero of gage is 925.94 feet above mean sea level.

Drainage area.- 1,000 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 12 years (1922-34), 998 second-feet.

Extremes.- Maximum discharge recorded during year, 2,130 second-feet Apr. 6 (gage height, 4.77 feet); minimum, 24 second-feet Aug. 1, 2, 4 (gage height, 1.10 feet).
1921-34: Maximum discharge, 41,900 second-feet Apr. 15, 1927 (gage height, 25.2 feet, from graph based on several gage readings); minimum discharge, that of Aug. 1, 2, 4, 1934; minimum gage height, 0.56 foot Sept. 6, 7, 9, 10, 1925.

Remarks.- Records good except those for days of rapidly changing stage, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	855	277	149	160	197	154	990	392	151	85	24	118
2	692	265	165	146	187	165	855	367	146	101	26	136
3	660	258	146	138	177	174	758	344	140	89	29	418
4	504	265	140	160	168	187	692	367	157	77	26	822
5	392	320	143	160	154	344	1,340	392	151	69	27	596
6	344	298	146	149	154	392	2,040	344	143	71	37	392
7	298	367	138	197	163	367	1,640	320	143	66	30	298
8	250	392	140	277	154	344	1,560	367	136	62	26	231
9	224	367	138	446	157	320	1,410	344	136	54	29	193
10	200	367	130	446	151	277	1,270	320	114	51	26	165
11	190	320	126	446	154	265	1,130	277	123	47	26	140
12	190	298	123	446	146	234	1,060	258	130	49	24	123
13	168	265	126	446	149	228	922	246	130	45	27	1,270
14	160	254	118	446	154	220	822	250	128	45	29	790
15	187	238	123	534	149	210	758	320	126	51	27	855
16	418	214	116	534	140	187	855	344	367	60	29	725
17	474	203	133	474	140	177	1,960	320	298	58	44	628
18	392	184	128	418	143	206	1,560	298	177	54	73	504
19	367	184	193	392	138	200	1,200	277	184	42	89	392
20	344	177	298	344	133	234	990	258	177	37	87	367
21	504	171	254	320	151	265	855	246	154	37	91	320
22	565	168	231	320	149	277	790	228	143	37	83	298
23	628	165	203	298	140	367	822	220	130	35	71	298
24	725	168	197	277	136	392	692	228	116	37	71	258
25	628	160	200	269	140	367	628	210	101	34	97	238
26	534	151	200	238	149	367	534	187	95	45	138	224
27	474	143	197	228	168	628	534	174	97	81	116	197
28	418	149	177	206	171	1,340	504	163	91	42	184	187
29	367	149	168	197		1,800	446	165	89	35	277	231
30	344	149	171	214		1,480	418	160	85	30	200	258
31	298		171	217		1,200		151		29	151	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	855	160	413	0.413	0.48	25,380
November	392	143	236	.236	.26	14,050
December	298	116	164	.164	.19	10,090
January	534	138	308	.308	.36	18,930
February	197	133	154	.154	.16	8,550
March	1,800	154	431	.431	.50	26,520
April	2,040	418	1,001	1.00	1.12	59,570
May	392	151	275	.275	.32	16,930
June	367	85	145	.145	.16	8,640
July	101	29	53.4	.053	.06	3,280
August	277	24	71.4	.071	.08	4,390
September	1,270	118	389	.389	.43	23,150
The year	2,040	24	303	.303	4.12	219,500

Wilson Creek near Springfield, Mo.

Location.- Water-stage recorder in NW¼SE¼ sec. 28, T. 29 N., R. 22 W., three-quarters of a mile below Jordan Creek and 2 miles southwest of Springfield. Zero of gage is 1,196.1 feet above mean sea level.

Drainage area.- 19.4 square miles.

Records available.- May 1932 to September 1934.

Extremes.- Maximum discharge during year, 424 second-feet June 15 (gage height, 3.82 feet); minimum, 3.2 second-feet Aug. 9 (gage height, 0.32 foot); minimum daily discharge, 4.8 second-feet Jan. 1, Feb. 10, 28.

1932-34: Maximum discharge, about 2,440 second-feet June 27, 1932 (gage height, 7.62 feet); minimum discharge, 2.2 second-feet Sept. 30, 1932; minimum gage height, that of Aug. 9, 1934; minimum daily discharge, 3.2 second-feet Oct. 8, 1932.

Remarks.- Records good except those estimated Oct. 22-27, Dec. 4-7, Jan. 13-18, Feb. 12, which are fair. Sewage from Springfield enters above this station. Springfield water supply is pumped from Little Sac River Basin.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	8.2	8.2	4.8	6.8	6.0	13.7	12.7	7.6	6.6	5.7	15
2	13.2	11.6	9.6	5.2	5.6	14.8	13.2	12.7	31	6.9	6.0	54
3	11.1	10.6	6.8	6.4	5.6	10.6	12.1	13.4	12.8	6.3	5.4	39
4	10.1	20	7	11.6	5.2	9.1	40	17	8.4	5.4	5.4	13.6
5	9.6	14.2	8	6.0	6.0	10.1	31	11.7	8.0	6.0	5.4	10.4
6	9.1	12.1	9	5.2	6.4	9.6	26	10.8	7.6	6.0	5.7	9.6
7	8.2	11.6	10	18	6.4	10.1	25	10.4	7.6	6.3	5.2	8.0
8	7.3	11.6	9.6	11.1	6.4	9.1	23	10.0	7.2	5.7	5.0	7.2
9	6.8	11.1	10.1	9.6	6.0	8.6	22	8.8	6.9	6.3	5.0	7.2
10	7.3	11.1	10.1	9.6	4.8	7.7	26	8.4	6.3	6.3	5.2	7.2
11	6.8	10.1	8.2	11.6	5.2	7.3	20	8.0	11.3	6.0	5.2	7.6
12	9.6	8.2	6.8	12.1	6.0	7.3	18	8.8	6.9	6.3	5.4	15
13	7.7	9.1	6.0	12	6.8	7.7	17	8.4	6.3	6.3	5.7	10.0
14	6.8	9.6	6.0	12	7.3	6.8	16	22	6.3	17	5.0	28
15	41	8.2	6.8	11	6.8	6.8	48	17	47	8.8	5.0	9.6
16	31	8.6	8.2	11	6.4	6.8	34	10.4	16	6.9	9.2	7.2
17	13.2	8.6	11.6	10	6.0	7.7	23	10.4	19	6.7	11.1	7.2
18	10.1	8.2	8.6	10	9.6	9.1	21	10.8	12.7	5.2	8.4	7.2
19	9.6	7.7	25	9.6	5.6	9.6	19	10.0	10.0	5.7	6.3	6.9
20	31	8.6	8.2	9.1	5.2	8.2	18	9.2	8.8	6.0	6.6	6.6
21	16	10.6	7.7	7.7	7.3	8.6	16	9.6	7.6	5.7	6.6	19
22	15	8.6	7.7	8.2	6.8	8.6	21	13.9	6.9	5.7	12.5	8.0
23	14	10.6	6.4	8.2	6.0	7.7	16	10.0	6.6	6.0	8.0	6.6
24	13	9.6	6.0	7.7	5.6	7.7	15	9.2	6.6	5.7	5.7	7.2
25	12	9.6	5.2	7.7	11.1	7.3	14.1	8.8	6.6	5.4	6.3	7.2
26	11	7.7	5.2	7.3	5.6	41	14.6	8.0	6.6	5.7	5.7	8.4
27	10	8.6	5.2	6.8	5.2	28	26	7.6	6.3	5.4	23	7.6
28	9.6	9.1	5.2	6.4	4.8	21	13.6	7.6	6.3	5.2	8.0	7.6
29	9.1	9.6	6.0	5.2		18	12.7	7.6	6.3	5.0	6.3	26
30	9.1	8.2	5.6	7.7		18	13.6	7.2	7.2	5.7	5.7	10.0
31	9.1		5.2	6.8		15		7.6		6.0	5.2	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	41	6.8	12.7	0.655	0.76	782
November	20	7.7	10.0	.515	.57	597
December	25	5.2	8.04	.414	.48	494
January	18	4.8	8.89	.458	.53	547
February	11.1	4.8	6.30	.325	.34	350
March	41	6.0	11.4	.588	.68	702
April	48	12.1	21.0	1.08	1.20	1,250
May	22	7.2	10.6	.546	.63	651
June	47	6.3	10.5	.541	.60	624
July	17	5.0	6.36	.328	.38	391
August	23	5.0	6.93	.357	.41	426
September	54	6.6	12.8	.660	.74	762
The year	54	4.8	10.5	.541	7.32	7,580

Buffalo River near Rush, Ark.

Location.- Staff gage in SE¼ sec. 10, T. 17 N., R. 15 W., immediately above Rush Creek, 24 miles above mouth, and 1⅛ miles southeast of Rush. Zero of gage is 458.70 feet above mean sea level.

Drainage area.- 1,110 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 22,600 second-feet Mar. 26 (gage height, 12.38 feet); minimum, 40 second-feet Aug. 8-16 (gage height, 1.20 feet). 1928-34: Maximum discharge recorded, 65,800 second-feet May 14, 1933 (gage height, 23.9 feet); minimum discharge, 40 second-feet Aug. 8-16, 1934; minimum gage height, 0.6 foot Sept. 25-30, Oct. 1-3, 7-9, 1929, Sept. 10-22, 1932. Maximum stage known, 49.5 feet in April 1927.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	290	398	230	440	480	830	2,580	880	306	82	58	70
2	235	362	235	410	440	780	2,190	785	271	82	56	85
3	245	338	266	410	440	830	1,940	740	336	82	52	3,560
4	235	386	308	440	410	830	1,580	740	264	82	52	3,700
5	215	930	560	1,350	410	830	4,220	1,350	250	82	46	1,700
6	185	1,220	560	1,480	410	730	5,810	3,700	238	82	46	830
7	165	930	512	1,200	380	680	4,400	3,700	226	82	46	560
8	150	680	456	2,260	350	640	3,560	2,450	226	82	40	392
9	135	600	404	2,260	350	640	3,000	1,820	214	76	40	306
10	115	504	362	1,870	320	600	2,450	1,520	214	76	40	250
11	101	440	338	1,610	320	560	2,720	1,240	408	76	40	208
12	135	410	320	1,350	308	560	2,660	980	292	70	40	175
13	135	380	302	1,100	308	520	2,320	830	232	70	40	155
14	130	350	278	980	296	520	2,060	785	196	70	40	160
15	130	320	260	880	284	480	1,820	1,030	185	180	40	160
16	130	302	245	780	278	440	1,700	2,190	170	84	40	145
17	245	278	410	680	272	440	2,060	1,400	196	76	76	132
18	368	260	2,700	640	272	880	1,940	1,030	220	76	76	124
19	326	245	4,410	560	260	2,130	2,320	785	190	70	61	116
20	290	240	6,320	560	260	3,000	2,060	695	165	70	52	116
21	266	240	3,600	560	272	3,150	1,820	650	145	70	52	124
22	386	240	2,400	980	278	2,850	1,580	1,060	140	64	52	150
23	1,040	250	1,870	1,040	272	2,400	1,400	880	132	64	58	140
24	1,740	235	1,480	930	272	4,920	1,300	695	124	64	70	140
25	1,040	255	1,220	830	350	8,000	1,080	605	116	58	82	132
26	730	240	980	780	1,100	21,000	980	560	108	58	76	132
27	600	240	830	680	1,280	16,400	930	520	100	52	70	145
28	560	240	680	640	1,040	8,200	1,150	472	100	70	70	145
29	520	230	600	640		5,300	1,150	424	94	67	70	160
30	480	230	520	600		4,260	980	376	88	58	70	196
31	434		480	520		3,280		328		58	70	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,740	101	379	0.341	0.39	23,320
November	1,220	230	398	.359	.40	23,710
December	6,320	230	1,101	.992	1.14	67,710
January	2,260	410	953	.859	.99	58,590
February	1,280	260	418	.377	.39	23,230
March	21,000	440	3,119	2.81	3.24	191,800
April	5,810	930	2,197	1.98	2.21	130,800
May	3,700	328	1,137	1.02	1.18	69,900
June	408	88	198	.178	.20	11,790
July	180	52	75.3	.068	.08	4,627
August	82	40	55.6	.050	.06	3,418
September	3,700	70	480	.432	.48	28,580
The year	21,000	40	880	.793	10.76	637,500

North Fork of White River at Tecumseh, Mo.

Location.- Chain gage in sec. 16, T. 22 N., R. 12 W., at bridge on State Highway 80 at Tecumseh, half a mile below Bryant Creek. Zero of gage is 548.39 feet above mean sea level.

Drainage area.- 1,180 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 12 years (1922-34), 1,270 second-feet.

Extremes.- Maximum discharge recorded during year, 1,850 second-feet Mar. 28 (gage height, 2.44 feet); minimum discharge, 343 second-feet Aug. 9-11; minimum gage height, 0.88 foot July 19, 20, 23-25, 29, 30, Aug. 1-11.
1921-34: Maximum discharge recorded, 53,000 second-feet June 13, 1928 (gage height, 24.00 feet); minimum discharge, that of Aug. 9-11, 1934; minimum gage height, 0.84 foot Oct. 8, 10, 1933.
Maximum stage known, 31.6 feet in July 1905.

Remarks.- Records good. Discharge estimated May 1, July 4, 14, Sept. 27, 28.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	930	514	469	546	530	522	1,200	642	462	385	357	406
2	722	514	530	522	514	562	1,140	618	455	385	357	554
3	626	514	538	522	514	610	1,030	650	469	378	350	634
4	594	602	530	562	514	642	980	634	469	374	350	668
5	578	642	530	570	498	659	880	610	455	371	350	610
6	546	634	506	586	490	626	1,530	618	455	371	350	570
7	546	602	483	677	498	618	1,200	610	448	364	357	530
8	514	578	483	830	498	610	1,200	586	441	378	350	506
9	490	578	469	980	498	562	1,140	578	441	364	343	483
10	506	554	462	930	483	546	1,060	562	462	364	343	476
11	490	538	462	880	476	530	1,030	554	514	364	343	618
12	530	514	462	812	469	538	980	546	514	364	483	490
13	530	522	455	758	469	522	930	538	469	364	554	538
14	506	506	455	740	469	514	880	578	455	364	427	740
15	506	506	455	704	469	506	880	594	448	385	448	930
16	586	490	455	677	469	506	880	570	455	378	469	980
17	594	506	514	650	469	506	821	562	498	385	713	830
18	554	498	530	634	469	767	803	538	455	371	722	722
19	546	490	930	626	469	794	767	522	455	364	602	659
20	554	483	930	610	469	880	731	522	448	364	506	610
21	538	498	880	618	462	930	704	522	434	371	530	602
22	677	490	785	602	483	880	722	554	420	378	476	570
23	659	490	749	586	462	830	713	530	434	364	668	554
24	618	483	704	578	462	803	704	506	530	364	490	546
25	586	483	642	578	659	740	659	490	434	364	483	506
26	570	462	618	562	626	1,030	650	476	413	455	462	506
27	578	476	594	562	546	1,720	695	469	399	392	434	500
28	546	476	562	546	538	1,850	650	462	406	371	434	500
29	530	476	554	546		1,660	642	455	392	357	413	522
30	530	469	554	522		1,470	634	448	392	357	406	514
31	522		562	514		1,300		455		357	392	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	930	490	574	0.486	0.56	35,310
November	642	462	520	.441	.49	30,920
December	930	455	576	.488	.56	35,410
January	980	514	646	.547	.63	39,730
February	659	462	499	.423	.44	27,710
March	1,850	506	814	.690	.80	50,050
April	1,530	634	895	.758	.85	53,270
May	650	448	548	.464	.53	33,720
June	530	392	451	.382	.43	26,820
July	455	357	373	.316	.36	22,940
August	722	343	450	.381	.44	27,690
September	980	406	596	.505	.56	35,450
The year	1,850	343	579	.491	6.65	419,000

North Fork of White River near Henderson, Ark.

Location. Staff gage in NE¼SW¼ sec. 26, T. 20 N., R. 12 W., 1 mile below Bennetts Bayou, 19 miles above mouth, and 1 mile southeast of Henderson.

Drainage area.- 1,640 square miles.

Records available.- July 1909 to December 1910, October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,000 second-feet Apr. 6 (gage height, 5.70 feet); minimum, 375 second-feet Aug. 12 (gage height, 1.34 feet).
1928-34: Maximum discharge recorded, 39,800 second-feet Jan. 24, 1929 (gage height, 17.0 feet); minimum, that of Aug. 12, 1934.
Maximum stage known, 29.5 feet in August 1915.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	520	520	552	620	585	810	1,830	770	552	460	432	520
2	890	520	620	620	585	890	1,590	730	552	432	432	585
3	770	552	620	585	585	1,070	1,480	730	552	432	405	1,480
4	692	620	620	655	585	1,020	1,370	730	552	432	405	1,120
5	655	655	620	692	585	980	1,270	730	552	432	405	850
6	620	692	585	730	585	890	4,720	730	552	432	405	730
7	585	655	585	850	585	850	2,350	730	552	432	380	655
8	552	655	552	1,120	585	770	2,220	730	520	432	380	585
9	552	620	552	1,220	552	730	1,830	692	520	405	380	552
10	520	585	552	1,270	552	770	1,710	692	585	405	380	552
11	520	585	520	1,220	552	730	1,590	655	692	405	380	552
12	585	585	520	1,170	552	730	1,480	655	620	405	380	552
13	552	585	520	1,070	552	692	1,370	620	620	405	730	692
14	552	585	520	980	552	692	1,220	655	585	405	620	935
15	552	585	520	890	552	655	1,170	655	552	432	520	1,270
16	620	585	520	890	520	655	1,120	730	552	432	490	1,270
17	620	585	692	850	520	655	1,070	692	552	432	730	1,120
18	585	585	692	810	520	1,120	1,020	655	552	405	770	935
19	585	585	1,960	770	520	1,480	960	655	552	405	730	810
20	552	585	1,480	730	520	1,710	850	620	520	405	692	730
21	552	585	1,270	730	520	1,480	810	585	520	405	655	692
22	620	585	1,070	730	552	1,370	890	585	490	405	655	655
23	730	552	980	730	520	1,270	690	620	490	405	620	620
24	692	552	890	692	552	1,220	890	620	490	405	770	620
25	620	552	850	692	3,610	1,370	850	585	655	405	730	620
26	620	552	810	655	1,370	3,320	810	585	552	432	655	585
27	620	552	770	655	1,020	3,760	850	552	520	405	620	585
28	585	552	730	655	890	3,040	810	552	520	405	585	585
29	585	552	692	620		2,760	810	552	490	405	552	585
30	585	520	655	585		2,350	770	520	460	380	552	585
31	552		655	585		1.960		552		460	520	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	890	520	608	0.371	0.43	37,370
November	692	520	583	.355	.40	34,670
December	1,960	520	748	.455	.52	45,970
January	1,270	585	809	.493	.57	49,730
February	3,610	520	721	.440	.46	40,020
March	3,760	655	1,348	.822	.95	82,910
April	4,720	770	1,354	.826	.92	80,570
May	770	520	650	.396	.46	40,000
June	692	460	549	.335	.37	32,670
July	460	380	417	.254	.29	25,660
August	770	380	547	.334	.37	33,640
September	1,480	520	754	.460	.51	44,880
The year	4,720	380	757	.461	6.27	548,100

Black River at Leeper, Mo.

Location.- Chain gage in SW¼NE¼ sec. 27, T. 28 N., R. 3 E., at Missouri Southern Railroad bridge at Leeper. Zero of gage is 425.22 feet above mean sea level.

Drainage area.- 957 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 949 second-feet.

Extremes.- Maximum discharge recorded during year, 4,280 second-feet Aug. 22 (gage height, 5.95 feet); minimum, 133 second-feet Aug. 11 (gage height, 1.22 feet).
1921-34: Maximum discharge (revised), 78,400 second-feet May 14, 1933 (gage height, 20.01 feet); minimum, that of Aug. 11, 1934.
Maximum stage known, about 24.7 feet in March 1904.

Remarks.- Records good except those for days of rapidly changing stage, which are fair. Gage-height record collected in cooperation with the U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	450	315	280	355	315	280	905	615	264	192	145	280
2	425	315	280	335	315	315	835	560	247	192	145	280
3	400	315	315	315	315	378	768	505	280	192	148	280
4	335	315	315	378	298	615	675	478	247	192	148	400
5	335	355	298	425	298	1,010	645	450	247	192	148	645
6	315	335	315	478	298	940	905	450	247	192	143	532
7	298	315	298	560	298	800	1,400	425	247	192	143	450
8	280	315	296	560	298	735	1,680	400	247	192	145	400
9	280	315	296	615	280	675	1,400	378	232	167	145	355
10	264	315	298	615	280	615	1,240	355	264	180	137	335
11	264	315	298	615	280	560	1,080	355	378	167	133	315
12	298	298	280	568	280	505	940	315	315	162	141	355
13	298	298	298	560	280	505	835	315	315	167	205	450
14	355	298	280	532	280	478	735	355	298	162	192	1,770
15	355	280	280	505	280	425	705	355	280	205	180	2,290
16	425	280	280	478	264	400	735	940	280	180	167	3,240
17	400	298	298	478	264	400	645	835	247	180	378	2,180
18	378	280	355	425	264	532	615	675	232	167	400	1,490
19	378	280	400	425	264	478	588	560	232	167	400	1,160
20	355	280	478	400	264	560	560	505	218	153	335	940
21	355	280	532	378	264	645	532	450	218	153	335	768
22	560	280	560	378	280	645	505	425	218	153	1,680	705
23	560	280	532	378	280	615	478	400	218	153	1,010	615
24	466	298	478	355	280	588	425	355	205	157	560	560
25	425	280	450	355	335	532	400	335	218	148	450	532
26	400	280	450	355	315	560	400	315	218	157	505	450
27	378	280	400	355	298	1,010	450	315	205	157	478	450
28	378	280	400	335	298	1,490	560	298	192	153	450	425
29	355	280	378	315		1,400	768	280	192	155	378	450
30	335	280	355	315		1,160	675	280	192	150	280	505
31	335		355	315		1,010		264		150	280	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	560	264	369	0.386	0.44	22,700
November	355	280	298	.311	.35	17,720
December	560	280	359	.375	.43	22,080
January	615	315	435	.455	.52	26,730
February	335	264	288	.301	.31	16,000
March	1,490	280	673	.703	.81	41,380
April	1,680	400	769	.804	.90	45,790
May	940	264	437	.457	.53	26,860
June	378	192	246	.257	.29	14,660
July	205	148	170	.178	.21	10,470
August	1,680	133	335	.350	.40	20,600
September	3,240	280	787	.822	.92	46,820
The year	3,240	133	431	.450	6.11	311,800

Current River near Eminence, Mo.

Location.- Staff gage in SE¼NW¼ sec. 15, T. 29 N., R. 3 W., 1 mile below Jacks Fork and 8 miles northeast of Eminence. Zero of gage is 568.9 feet above mean sea level.

Drainage area.- 1,230 square miles.

Records available.- August 1921 to September 1934.

Average discharge.- 13 years, 1,480 second-feet.

Extremes.- Maximum discharge recorded during year, 4,670 second-feet Sept. 15 (gage height, 5.47 feet); minimum discharge, 360 second-feet July 21-25, 27-31, Aug. 1-13; minimum gage height, 1.08 feet Aug. 3-10.
1921-34: Maximum discharge, 59,400 second-feet June 9, 1928 (gage height, 24.3 feet); minimum, that of July 21-25, 27-31, Aug. 1-13, 1934.

Remarks.- Records good. Discharge interpolated Jan. 14, Feb. 26, 27, Apr. 24, June 15, Sept. 22.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	635	544	514	544	514	486	1,080	635	458	405	360	432
2	604	544	514	514	514	544	1,000	604	458	405	360	486
3	573	544	544	514	514	770	920	604	486	382	360	514
4	573	573	544	573	514	1,080	845	604	458	382	360	1,350
5	544	635	544	635	486	1,040	808	604	458	382	360	920
6	544	604	514	635	486	920	1,820	604	458	382	360	700
7	544	604	514	735	486	808	2,320	635	458	382	360	604
8	544	604	514	920	486	700	1,920	604	458	382	360	544
9	514	573	514	920	486	668	1,620	573	458	382	360	514
10	514	573	514	845	486	668	1,440	573	458	382	360	486
11	514	573	514	770	486	635	1,350	514	458	382	360	514
12	573	573	514	735	486	604	1,080	514	458	382	360	700
13	573	544	514	700	486	573	1,000	514	432	382	360	770
14	573	544	514	684	486	573	920	604	432	382	382	1,440
15	544	544	514	668	486	573	920	770	502	382	382	4,670
16	604	544	514	635	486	544	920	845	573	382	635	2,840
17	735	544	635	635	486	544	1,260	735	573	382	635	1,820
18	700	544	635	604	486	700	1,080	700	514	382	604	1,260
19	700	514	770	573	486	735	1,000	635	486	382	458	1,080
20	668	514	920	573	458	920	845	604	458	382	458	882
21	635	544	845	573	458	1,040	808	573	432	360	1,000	845
22	700	544	770	573	486	1,000	770	573	432	360	3,060	808
23	635	514	735	544	486	882	770	573	432	360	1,170	770
24	635	514	700	544	486	808	719	573	432	360	735	700
25	635	514	668	544	544	770	668	544	432	360	635	668
26	604	514	668	544	525	770	700	514	405	382	573	635
27	573	514	604	514	506	1,080	700	486	405	360	514	604
28	573	514	573	514	486	1,720	700	486	405	360	486	604
29	573	514	544	514		1,530	668	486	405	360	458	658
30	573	514	544	514		1,440	635	486	405	360	432	635
31	544		544	514		1,260		458		360	432	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	735	514	595	0.484	0.56	36,600
November	635	514	548	.446	.50	32,600
December	920	514	596	.485	.56	36,630
January	920	514	623	.507	.58	38,290
February	544	458	492	.400	.42	27,330
March	1,720	486	861	.692	.80	52,330
April	2,320	635	1,043	.848	.95	62,050
May	845	458	588	.478	.55	36,150
June	573	405	456	.371	.41	27,130
July	405	360	376	.306	.35	23,140
August	3,060	360	572	.465	.54	35,160
September	4,670	432	982	.798	.89	58,440
The year	4,670	360	644	.524	7.11	465,800

Current River at Van Buren, Mo.

Location.- Chain gage in NE¼NW¼ sec. 25, T. 27 N., R. 1 W., at bridge on State Highway 60 in Van Buren. Zero of gage is 445.74 feet (revised) above mean sea level.

Drainage area.- 1,640 square miles.

Records available.- June 1921 to September 1934 in reports of U. S. Geological Survey; September 1912 to June 1921 in reports of Missouri University and Missouri Bureau of Geology and Mines.

Average discharge.- 13 years (1921-34), 1,860 second-feet.

Extremes.- Maximum discharge recorded during year, 5,720 second-feet Sept. 15 (gage height, 5.12 feet); minimum discharge, 550 second-feet July 23, 24, Aug. 1, 3-13, 15; minimum gage height, 1.09 feet Aug. 7.
1921-34: Maximum discharge, 56,000 second-feet May 14, 1933 (gage height, 16.7 feet, from flood marks); minimum, 542 second-feet Sept. 6, 8, 9, 12, 1925
Maximum stage known, 26.0 feet Mar. 26, 1904, from flood marks.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	905	748	675	710	675	748	1,540	878	680	595	572	622
2	865	748	710	710	675	785	1,320	840	680	595	572	622
3	825	748	748	710	675	905	1,270	840	680	595	572	710
4	825	748	748	748	675	1,170	1,120	840	680	595	572	1,180
5	748	785	748	785	640	1,380	1,080	840	650	595	550	1,280
6	748	825	675	825	675	1,270	1,660	878	650	595	550	915
7	748	825	675	905	640	1,270	2,920	840	680	595	550	840
8	748	785	675	988	675	1,030	2,770	840	650	595	572	742
9	748	748	675	1,080	640	945	2,320	808	742	595	550	710
10	748	748	675	1,080	640	945	2,040	775	710	572	550	680
11	710	748	675	1,030	640	865	1,780	775	710	572	572	650
12	748	748	675	988	640	825	1,540	775	710	572	572	808
13	748	710	675	905	640	825	1,380	775	680	572	572	1,040
14	785	710	675	905	640	765	1,270	775	650	572	595	2,450
15	748	748	675	905	640	825	1,220	840	650	595	572	4,180
16	825	710	675	865	640	748	1,220	1,000	742	595	622	3,870
17	865	748	748	825	640	748	1,320	1,000	808	572	742	2,580
18	1,030	710	785	785	608	988	1,380	915	775	595	742	1,950
19	945	710	905	785	640	1,080	1,270	878	710	572	710	1,600
20	905	675	988	785	608	1,660	1,170	840	650	572	680	1,380
21	865	710	1,170	785	640	1,320	1,080	808	650	572	808	1,140
22	1,030	675	1,030	748	675	1,320	1,030	808	622	572	1,380	1,090
23	945	710	945	748	640	1,270	1,030	775	595	572	1,950	1,000
24	865	710	905	710	640	1,120	988	775	622	572	1,280	1,000
25	825	675	825	748	710	1,080	905	775	622	572	1,000	915
26	825	675	785	710	710	1,220	905	742	595	595	878	878
27	825	675	748	710	710	1,660	945	710	595	595	775	840
28	825	675	710	710	748	1,910	915	710	595	595	742	840
29	785	675	710	675		2,040	878	680	595	595	680	808
30	748	675	710	675		1,910	878	680	595	572	650	840
31	748		748	675		1,780		680		572	650	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,030	710	823	0.502	0.58	50,580
November	825	675	726	.443	.49	43,200
December	1,170	675	767	.468	.54	47,140
January	1,080	675	813	.496	.57	50,010
February	748	608	658	.401	.42	36,530
March	2,040	748	1,175	.716	.83	72,250
April	2,920	878	1,371	.836	.93	81,610
May	1,000	680	810	.494	.57	49,780
June	808	595	666	.406	.45	39,620
July	595	572	584	.356	.41	35,900
August	1,950	550	735	.448	.52	45,190
September	4,180	622	1,272	.776	.87	75,690
The year	4,180	550	867	.529	7.18	627,500

Current River at Doniphan, Mo.

Location.- Chain gage in N½ sec. 27, T. 23 N., R. 2 E., at bridge on State Highway 42, three-quarters of a mile west of Doniphan. Zero of gage is 319.128 feet (revised) above mean sea level.

Drainage area.- 2,030 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 2,800 second-feet.

Extremes.- Maximum discharge during year, 6,210 second-feet Sept. 16 (gage height, 6.63 feet); minimum discharge, 880 second-feet Aug. 1-14, 16; minimum gage height, 1.75 feet Aug. 4, 7, 9-11.

1921-34: Maximum discharge, 51,700 second-feet Apr. 15, 1927 (gage height, 20.3 feet, from flood marks, present datum); minimum discharge, that of Aug. 1-14, 16, 1934; minimum gage height, that of Aug. 4, 7, 9-11, 1934.

Maximum stage known, 28.8 feet (present datum) during March 1904 (discharge, about 107,000 second-feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,430	1,280	1,210	1,210	1,140	1,140	2,420	1,430	1,140	1,000	880	1,070
2	1,350	1,210	1,210	1,210	1,140	1,210	2,220	1,430	1,140	1,000	880	1,070
3	1,350	1,210	1,210	1,210	1,140	1,350	2,030	1,350	1,070	1,000	880	1,070
4	1,280	1,280	1,210	1,280	1,140	1,510	1,940	1,350	1,070	1,000	880	1,140
5	1,280	1,280	1,210	1,350	1,140	1,850	1,940	1,350	1,070	940	880	1,590
6	1,280	1,280	1,210	1,350	1,140	1,940	2,320	1,670	1,140	1,000	880	1,670
7	1,280	1,280	1,210	1,430	1,140	1,760	2,850	1,510	1,070	1,000	880	1,350
8	1,210	1,280	1,210	1,510	1,140	1,670	3,920	1,430	1,070	940	880	1,280
9	1,210	1,280	1,140	1,590	1,140	1,510	3,560	1,350	1,070	940	880	1,210
10	1,210	1,280	1,210	1,670	1,070	1,430	3,080	1,350	1,280	940	880	1,140
11	1,210	1,280	1,140	1,670	1,070	1,430	2,850	1,280	1,210	940	880	1,070
12	1,280	1,280	1,140	1,590	1,070	1,350	2,520	1,280	1,140	940	880	1,140
13	1,280	1,210	1,140	1,510	1,140	1,350	2,320	1,280	1,140	940	940	1,350
14	1,280	1,210	1,140	1,510	1,140	1,280	2,120	1,280	1,070	1,000	880	1,940
15	1,280	1,210	1,140	1,430	1,070	1,280	2,030	1,350	1,070	1,000	940	3,320
16	1,280	1,210	1,140	1,430	1,070	1,280	1,940	1,430	1,070	1,000	880	6,070
17	1,280	1,210	1,430	1,350	1,070	1,280	1,940	1,510	1,210	1,000	1,000	4,050
18	1,350	1,210	1,350	1,350	1,070	1,350	2,030	1,430	1,210	940	1,140	2,960
19	1,510	1,210	1,510	1,350	1,070	1,590	1,940	1,430	1,210	940	1,140	2,420
20	1,430	1,210	1,590	1,280	1,070	1,670	1,850	1,350	1,140	940	1,070	2,030
21	1,350	1,210	1,590	1,280	1,070	1,850	1,760	1,280	1,070	940	1,510	1,850
22	1,510	1,210	1,670	1,280	1,140	1,850	1,670	1,280	1,070	940	1,850	1,670
23	1,510	1,210	1,590	1,280	1,140	1,850	1,670	1,280	1,070	940	2,520	1,590
24	1,430	1,210	1,510	1,280	1,140	1,760	1,590	1,280	1,070	940	2,220	1,510
25	1,350	1,210	1,430	1,210	1,210	1,670	1,510	1,280	1,070	940	1,760	1,430
26	1,350	1,210	1,350	1,210	1,210	2,960	1,510	1,210	1,070	940	1,430	1,350
27	1,350	1,140	1,350	1,210	1,210	2,850	1,590	1,210	1,000	940	1,280	1,350
28	1,280	1,140	1,280	1,210	1,140	2,740	1,510	1,140	1,000	940	1,210	1,280
29	1,280	1,140	1,210	1,210		2,960	1,510	1,140	1,000	940	1,140	1,350
30	1,280	1,210	1,210	1,140		2,960	1,510	1,140	1,000	940	1,070	1,280
31	1,280		1,280	1,140		2,630		1,140		940	1,070	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	1,510	1,210	1,324	0.652	0.75	81,380
November	1,280	1,140	1,226	.604	.67	72,970
December	1,670	1,140	1,295	.638	.74	79,640
January	1,670	1,140	1,346	.663	.76	82,770
February	1,210	1,070	1,122	.553	.58	62,340
March	2,960	1,140	1,784	.879	1.01	109,700
April	3,920	1,510	2,122	1.05	1.17	126,200
May	1,670	1,140	1,330	.655	.76	81,760
June	1,280	1,000	1,100	.542	.60	65,470
July	1,000	940	959	.472	.54	58,990
August	2,520	880	1,149	.566	.65	70,630
September	6,070	1,070	1,787	.880	.98	106,300
The year	6,070	880	1,379	.679	9.21	998,200

Round Spring at Round Spring, Mo.

Location.- Staff gage in sec. 20, T. 30 N., R. 4 W., at Round Spring. Zero of gage is 666.4 feet above mean sea level.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 86 second-feet Apr. 6; minimum discharge, 12 second-feet Aug. 8, 9, 10, 12-15, 20, 28-31; minimum gage height, 0.04 foot July 28.
1928-34: Maximum discharge recorded, 520 second-feet during period of backwater from Current River May 14, 1933; minimum, that of August 1934.

Remarks.- Records fair. Discharge estimated Jan. 20, June 8, July 26, Sept. 11.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	20	20	15	16	14	23	16	18	16	14	13
2	22	19	20	16	16	16	20	17	17	16	15	13
3	20	19	20	17	18	31	20	18	18	15	13	26
4	18	20	20	16	18	26	18	17	18	16	13	20
5	18	20	20	17	18	22	18	20	19	14	13	16
6	18	19	21	17	18	20	86	17	17	17	13	16
7	18	19	20	17	17	22	80	16	18	16	13	13
8	18	23	20	22	18	16	54	16	18	15	12	13
9	18	20	19	22	16	17	46	16	17	14	12	13
10	20	19	18	19	16	16	37	20	17	14	12	13
11	18	19	17	18	16	16	34	16	18	14	13	17
12	18	22	16	17	16	15	34	17	17	15	12	21
13	18	19	17	17	16	15	33	18	17	18	12	22
14	18	19	16	18	16	15	25	18	17	15	12	26
15	22	19	15	17	16	15	23	18	17	14	12	75
16	20	19	17	16	15	15	22	18	16	15	13	46
17	20	19	17	15	15	16	20	18	16	14	14	39
18	20	18	19	16	16	22	21	17	16	18	15	31
19	20	18	18	16	15	24	21	16	16	15	13	28
20	20	18	19	16	16	24	22	16	16	14	12	26
21	20	18	17	16	16	21	22	16	16	15	14	22
22	20	22	18	17	14	20	19	16	16	15	13	24
23	19	19	16	16	14	17	18	16	18	15	15	22
24	19	18	16	19	15	16	17	18	16	15	14	22
25	19	18	15	18	15	15	17	17	16	16	13	19
26	20	18	15	16	15	18	18	18	16	16	13	18
27	20	19	15	16	14	42	22	18	16	16	13	18
28	19	19	15	17	14	40	17	18	16	15	12	18
29	19	19	16	17		40	16	17	15	20	12	26
30	19	19	17	17		33	16	18	16	16	12	19
31	20		17	17		29		18		16	12	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	22	18	19.4	1,190
November	23	18	19.2	1,140
December	21	15	17.6	1,080
January	22	15	17.1	1,050
February	18	14	15.9	883
March	42	14	21.5	1,320
April	86	16	28.0	1,660
May	20	16	17.3	1,060
June	19	15	16.8	1,000
July	20	14	15.5	952
August	15	12	12.9	795
September	75	13	23.1	1,370
The year	86	12	18.7	13,500

Jacks Fork at Eminence, Mo.

Location.- Wire gage in W½ sec. 26, T. 29 N., R. 4 W., at new bridge on State Highway 19 at Eminence. Chain gage at highway bridge 1,400 feet upstream used prior to July 26, 1934; datum of chain gage is 0.29 foot higher than present gage. Zero of present gage is 620.01 feet above mean sea level.

Drainage area.- About 376 miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 456 second-feet.

Extremes.- Maximum discharge recorded during year, 2,280 second-feet Sept. 15 (gage height, 4.60 feet); minimum discharge, 78 second-feet July 26, 27, Aug. 2, 6-10; minimum gage height, 2.02 feet July 6-8.

1922-34: Maximum discharge recorded, about 25,000 second-feet June 13, 1928 (gage height, 16.24 feet, at former location); minimum, that of July 26, 27, Aug. 2, 6-10, 1934.

Remarks.- Records good. Discharge estimated Aug. 21.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	141	130	135	118	135	292	162	110	95	82	100
2	147	147	141	135	116	147	261	162	113	95	80	113
3	147	141	132	132	118	196	248	153	130	95	80	124
4	141	141	135	141	113	256	221	150	130	90	82	1,060
5	141	156	141	141	113	256	196	141	124	90	82	362
6	141	182	141	199	113	221	594	144	118	85	78	236
7	138	185	141	217	116	192	857	141	115	85	76	185
8	132	166	138	252	118	185	720	136	110	85	78	159
9	127	169	132	350	116	172	594	141	108	87	76	141
10	127	159	130	292	118	162	478	138	113	87	78	130
11	118	150	132	256	118	156	430	130	118	85	82	141
12	132	147	132	225	118	153	380	124	118	85	82	225
13	147	147	132	199	121	144	297	130	118	85	92	261
14	150	147	132	192	121	144	284	141	108	85	87	553
15	153	144	127	182	116	132	270	138	115	85	87	1,840
16	166	130	127	175	116	132	256	182	261	82	102	904
17	297	135	162	162	115	132	240	182	217	87	118	553
18	261	132	156	156	116	162	225	150	159	92	124	362
19	210	135	206	150	116	256	213	144	135	82	115	266
20	202	135	302	150	116	345	202	138	130	82	108	229
21	172	144	324	144	116	339	175	132	121	80	100	202
22	178	135	240	138	116	288	188	132	115	80	166	192
23	176	135	221	138	116	240	182	135	110	80	147	229
24	178	138	206	138	121	213	175	132	105	80	147	221
25	175	127	185	135	138	192	169	130	105	80	138	178
26	172	132	178	135	144	206	169	127	102	76	130	166
27	162	130	166	130	135	345	175	130	102	78	118	162
28	150	130	172	130	135	634	172	130	102	82	116	153
29	153	130	159	130		553	175	113	97	82	110	159
30	153	130	147	124		404	169	113	97	82	108	178
31	141		138	118		334		113		82	102	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	297	116	163	0.434	0.50	10,000
November	185	127	144	.383	.43	8,570
December	324	127	165	.439	.51	10,130
January	350	118	171	.455	.52	10,510
February	144	113	120	.319	.33	6,650
March	634	132	240	.638	.74	14,730
April	857	169	300	.798	.89	17,870
May	182	113	139	.370	.43	8,560
June	261	97	124	.330	.37	7,350
July	95	78	84.8	.226	.26	5,210
August	166	78	102	.271	.31	6,300
September	1,840	100	326	.867	.97	19,410
The year	1,840	78	173	.460	6.26	125,300

Alley Spring at Alley, Mo.

Location.- Staff gage in sec. 25, T. 29 N., R. 5 W., at Alley, 400 feet below spring outlet. Zero of gage is 664.49 feet above mean sea level.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 189 second-feet Apr. 7 (gage height, 2.01 feet); minimum, 57 second-feet Sept. 9-11.
1928-34: Maximum discharge recorded, 633 second-feet May 14, 1929, May 14, 1933; maximum gage height, 3.37 feet May 14, 1933; minimum discharge, 56 second-feet Dec. 27-29, 1931, Apr. 2-6, 1932.

Remarks.- Records good. Occasional run-off from small valley above spring is included in records.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr	May	June	July	Aug.	Sept.
1	80	77	73	75	72	66	84	64	64	65	59	59
2	79	77	75	75	72	67	78	65	64	64	59	59
3	79	77	77	75	72	80	75	65	66	64	59	59
4	78	77	77	75	71	85	72	65	66	64	59	67
5	78	78	77	79	70	82	69	64	66	64	59	62
6	78	78	77	75	70	78	167	63	66	65	59	61
7	77	78	77	78	70	73	109	62	66	65	59	59
8	77	77	76	90	70	72	165	62	66	65	59	58
9	77	77	76	90	69	72	143	61	66	63	59	57
10	77	77	76	88	69	70	122	61	66	63	59	57
11	76	78	75	86	69	69	106	60	66	63	61	57
12	76	78	75	85	70	70	95	59	66	62	61	59
13	77	77	74	84	67	69	88	61	66	62	60	60
14	77	77	74	83	67	68	83	61	67	63	60	65
15	77	76	74	80	67	68	79	61	67	63	60	143
16	77	77	73	79	68	67	77	61	68	61	59	134
17	79	77	72	79	68	68	74	62	69	60	61	118
18	79	77	72	78	68	66	72	62	69	60	60	86
19	80	78	73	78	68	76	70	62	70	60	65	76
20	79	77	82	78	68	78	69	62	68	60	64	71
21	79	77	78	78	68	79	66	62	68	60	64	68
22	78	77	78	78	68	75	66	62	67	60	65	70
23	79	76	82	78	68	71	67	63	66	60	66	69
24	78	76	78	78	66	69	66	63	66	58	66	67
25	78	76	77	77	66	70	66	63	66	58	64	66
26	78	76	77	76	66	71	65	63	66	58	63	65
27	77	76	76	77	66	90	65	63	66	58	63	63
28	78	76	76	76	66	103	65	63	66	58	62	62
29	78	76	76	75		106	65	63	66	59	61	61
30	78	75	76	74		94	65	64	66	59	60	65
31	77		76	73		86		64		59	59	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	80	76	77.9	4,790
November	78	75	76.9	4,570
December	82	72	76.0	4,670
January	90	73	79.0	4,860
February	72	66	68.5	3,810
March	106	66	76.1	4,680
April	189	65	87.8	5,220
May	65	59	62.5	3,840
June	70	64	66.5	3,960
July	65	58	61.4	3,770
August	66	59	61.1	3,760
September	143	57	70.8	4,210
The year	189	57	72.0	52,140

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Big Spring near Van Buren, Mo.

Location.- Staff gage in sec. 6, T. 26 N., R. 1 E., 400 feet below spring outlet, 4 miles southeast of Van Buren. Zero of gage is 430.04 feet (revised) above mean sea level.

Records available.- January to June 1922, April 1923 to September 1934.

Extremes.- Maximum discharge during year (estimated), 600 second-feet Sept. 15; minimum, 253 second-feet Aug. 15.
1922-34: Maximum discharge (estimated), 1,300 second-feet during backwater from Current River in June 1928; minimum, that of Aug. 15, 1934.

Remarks.- Records good except those estimated Apr. 7-9, Sept. 14-17, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	332	328	324	314	308	299	400	318	281	281	277	260
2	332	328	324	314	308	301	381	318	281	283	276	260
3	332	328	326	314	308	324	374	316	281	283	272	260
4	332	328	326	314	304	341	365	314	281	283	270	260
5	332	328	324	316	304	357	359	312	277	286	270	260
6	328	328	324	316	304	348	388	312	281	283	269	270
7	328	328	324	318	306	335	436	306	279	283	265	262
8	332	326	322	328	304	326	463	310	277	286	264	260
9	332	328	322	332	304	322	456	308	277	286	262	260
10	332	328	322	337	304	314	460	308	277	290	258	257
11	332	328	320	332	304	314	428	303	274	290	257	255
12	332	328	320	328	303	312	402	301	274	290	257	260
13	332	328	320	326	303	312	388	299	274	294	256	281
14	332	328	322	324	303	308	377	299	274	294	257	295
15	328	328	320	322	303	308	368	299	274	294	253	580
16	328	328	320	318	303	308	363	303	274	297	256	560
17	328	328	320	318	303	308	361	306	272	299	257	500
18	328	328	320	316	303	346	365	303	277	299	260	393
19	328	328	320	314	303	361	359	297	276	301	260	348
20	326	328	341	314	303	361	350	295	279	297	260	330
21	328	328	350	312	301	361	341	295	272	295	260	318
22	328	328	346	312	301	361	332	295	272	297	262	306
23	328	326	341	312	301	354	332	295	272	297	370	303
24	328	326	328	312	301	350	328	295	276	297	352	299
25	328	326	328	308	301	343	326	290	276	301	303	295
26	328	324	322	308	301	339	322	290	276	295	281	292
27	328	324	320	308	301	440	326	288	279	299	274	288
28	328	324	324	308	301	440	328	285	277	297	274	288
29	328	324	320	306		466	326	285	276	294	267	285
30	328	324	320	308		446	324	283	279	290	264	285
31	328		318	308		416		281		283	260	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	332	328	330	20,280
November	328	324	327	19,470
December	350	318	325	19,990
January	337	306	317	19,470
February	308	301	303	16,850
March	466	299	349	21,460
April	463	322	371	22,070
May	318	281	300	18,460
June	281	272	276	16,450
July	301	281	292	17,940
August	370	253	272	16,700
September	580	255	312	18,590
The year	580	253	315	227,700

Eleven Point River near Bardley, Mo.

Location.- Chain gage in NW¼ sec. 20, T. 23 N., R. 2 W., at bridge on State highway 42, about 7 miles southwest of Bardley. Zero of gage is about 410.7 feet above mean sea level. Chain gage on highway bridge 100 feet upstream was used prior to June 25, 1934; zero of that gage was 0.06 foot higher than present gage.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 777 second-feet.

Extremes.- Maximum discharge recorded during year, 1,190 second-feet Sept. 15 (gage height, 3.51 feet); minimum discharge, 190 second-feet Aug. 31, Sept. 1; minimum gage height, 1.70 feet Aug. 8, 9.

1921-34: Maximum discharge, 27,800 second-feet Apr. 14, 1927 (gage height, 18.74 feet, from flood marks); minimum discharge, that of Aug. 31, Sept. 1, 1934; minimum gage height, 1.06 feet Sept. 6-11, 1925. Maximum stage known, 19.7 feet in August 1915.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	405	310	283	310	286	266	505	380	290	246	207	192
2	380	310	290	290	286	286	480	380	286	246	207	201
3	380	330	310	290	286	355	455	355	283	252	204	219
4	355	330	290	310	283	430	455	355	283	243	201	213
5	355	330	290	310	280	405	430	380	283	249	201	204
6	355	330	290	310	276	380	562	535	283	255	201	210
7	355	330	286	330	276	355	705	480	280	249	201	207
8	355	330	286	355	280	330	705	430	276	246	198	201
9	355	330	280	360	276	310	675	405	276	243	201	198
10	355	310	280	380	276	310	645	405	310	237	201	198
11	330	310	276	355	276	310	618	380	286	240	201	195
12	355	310	272	355	276	290	562	380	280	240	201	207
13	355	310	272	355	276	290	535	355	272	234	219	210
14	330	290	272	355	276	290	505	355	269	231	210	455
15	330	290	276	330	272	290	505	355	269	237	207	970
16	330	290	276	330	269	290	505	355	276	228	213	505
17	330	290	290	310	269	290	455	330	276	225	222	405
18	330	290	330	310	269	330	455	330	272	225	219	330
19	330	290	355	310	269	380	430	330	269	219	210	310
20	330	290	405	310	262	405	405	330	269	219	207	286
21	330	310	430	310	266	405	405	310	269	216	222	266
22	380	290	405	310	272	405	405	310	266	207	219	252
23	380	290	380	310	269	380	405	310	262	210	219	243
24	380	290	380	290	262	380	380	310	266	210	219	237
25	355	286	355	290	280	355	360	310	262	210	213	234
26	330	286	330	290	269	430	380	310	255	213	207	228
27	330	283	330	290	269	802	405	290	258	213	204	225
28	330	283	310	290	266	738	380	290	255	210	198	225
29	330	283	310	286		645	380	290	255	207	195	228
30	330	283	310	286		590	380	290	266	207	195	222
31	310		310	286		562		290		207	192	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	405	310	348	21,390
November	330	283	303	18,020
December	430	272	315	19,360
January	380	286	317	19,480
February	286	262	274	15,220
March	802	266	396	24,360
April	705	380	485	28,740
May	535	290	352	21,650
June	310	255	273	16,270
July	255	207	228	14,030
August	222	192	207	12,720
September	970	192	276	16,420
The year	970	192	314	227,700

Greer Spring at Greer, Mo.

Location.- Water-stage recorder in SE¼SW¼ sec. 36, T. 25 N., R. 4 W., 300 feet below lower outlet of spring and 1 mile north of Greer. Zero of gage is about 539.74 feet above mean sea level. Staff gage 200 feet downstream used prior to June 25, 1934; zero of staff gage was 0.74 foot lower than present gage.

Records available.- August to December 1904, November 1921 to September 1934.

Average discharge.- 12 years (1922-34), 360 second-feet.

Extremes.- Maximum discharge recorded during year, 336 second-feet Apr. 10-15; minimum, 131 second-feet Sept. 10, 11 (gage height, 0.33 foot).
1921-34: Maximum discharge recorded, 903 second-feet May 26, 1927 (gage height, 1.43 feet); minimum, that of Sept. 10, 11, 1934.

Remarks.- Records fair. Gage read three times a week Oct. 1 to June 25; discharge estimated for remaining days prior to June 25 and for Aug. 18, 19, 21-31.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	241	218	205	215	198	205	301	259	195	156	142	136
2	241	216	205	218	195	210	295	253	195	156	142	136
3	241	215	205	222	193	215	289	247	195	159	139	139
4	241	215	205	225	192	220	285	247	195	156	136	150
5	241	215	205	225	190	215	280	247	195	153	136	150
6	241	215	205	225	188	215	300	241	192	153	139	147
7	239	212	205	225	185	215	315	235	190	153	139	142
8	237	210	202	225	192	213	322	232	190	150	139	139
9	235	210	200	222	200	212	329	228	190	150	139	134
10	232	210	200	220	185	210	336	225	190	150	136	134
11	230	211	200	220	188	210	336	225	190	150	139	136
12	230	212	198	220	190	208	336	225	187	150	139	150
13	230	214	195	220	192	207	336	220	186	150	139	159
14	228	215	195	220	193	205	336	218	185	150	139	179
15	226	212	195	220	195	205	336	217	185	150	139	257
16	225	210	198	225	195	205	329	215	185	150	142	264
17	222	210	202	230	195	205	322	215	185	150	139	254
18	220	210	205	227	195	218	315	215	185	153	139	226
19	220	210	215	223	195	230	308	215	183	153	139	220
20	220	208	225	220	196	242	308	210	181	150	139	201
21	220	206	236	218	198	253	308	208	179	150	140	198
22	241	205	247	215	200	249	283	207	177	150	140	191
23	241	205	240	215	202	245	280	205	176	147	140	185
24	241	205	233	215	205	241	277	205	174	147	140	182
25	236	207	225	210	202	241	274	205	173	147	138	179
26	230	208	225	205	205	240	271	203	167	150	138	176
27	230	210	225	203	205	250	265	202	164	150	138	170
28	230	208	220	202	205	320	259	200	162	145	138	167
29	225	205	215	200		329	253	198	159	142	136	167
30	220	205	215	200		315	247	197	159	142	136	162
31	219		215	200		301		195		142	136	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	241	219	231	14,230
November	218	205	210	12,520
December	247	195	212	13,010
January	230	200	217	13,350
February	205	185	196	10,860
March	329	205	234	14,380
April	336	247	301	17,910
May	259	195	220	13,520
June	195	159	182	10,850
July	159	142	150	9,230
August	142	136	139	8,530
September	264	134	174	10,370
The year	336	134	205	148,800

Little Red River near Heber Springs, Ark.

Location.- Staff gage in NE¼ sec. 1, T. 10 N., R. 10 W., 4 miles northeast of Heber Springs.

Drainage area.- 1,160 square miles.

Records available.- September 1927 to September 1934.

Extremes.- Maximum discharge recorded during year, 49,100 second-feet Mar. 26 (gage height, 31.9 feet); minimum, 1 second-foot Aug. 11, 12, 16-23 (gage height, 2.4 feet).
1927-34: Maximum discharge recorded, about 88,800 second-feet Apr. 6, 1928 (gage height, 42.35 feet); no flow Oct. 1-19, 22-30, 1929, Aug. 2-18, 1930.

Remarks.- Records fair. Gage-height record furnished by Arkansas Power & Light Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	142	200	550	580	870	3,200	1,730	114	39	5	12
2	63	132	190	520	550	870	2,530	1,430	132	41	6	12
3	61	180	190	520	520	1,220	2,110	1,220	180	43	6	10
4	52	180	190	1,270	490	1,370	1,850	1,170	122	71	6	12
5	48	170	180	6,870	460	1,430	14,500	1,270	120	61	4	1,170
6	44	190	190	4,440	430	1,170	15,500	1,430	105	64	4	520
7	42	240	278	3,550	400	1,120	12,400	2,960	84	61	3	315
8	41	355	302	3,640	385	1,020	7,000	2,110	99	37	3	230
9	39	302	328	3,460	355	1,430	4,880	1,610	94	28	3	180
10	38	252	302	3,120	315	1,490	4,660	1,320	84	24	3	140
11	37	230	278	2,460	315	1,320	3,120	1,970	99	20	1	112
12	36	210	252	2,040	302	1,220	2,810	1,220	430	20	1	90
13	35	200	240	1,790	302	1,120	2,320	1,170	230	19	2	75
14	32	180	230	1,490	290	970	1,970	780	136	18	2	65
15	30	160	210	1,370	278	870	1,610	660	106	15	2	55
16	32	142	302	1,270	265	780	1,610	1,020	122	14	1	65
17	35	132	580	1,120	265	700	1,850	620	99	13	1	60
18	36	122	4,230	1,070	278	660	2,040	780	128	12	1	57
19	38	114	6,480	1,020	278	1,670	2,880	580	84	11	1	53
20	41	106	8,850	970	265	2,880	3,120	520	76	10	1	52
21	38	190	3,550	970	265	3,120	2,530	430	69	10	1	50
22	41	302	3,040	1,020	252	2,880	1,850	550	61	7	1	47
23	52	290	2,390	1,220	252	2,530	1,850	1,120	56	7	1	44
24	92	265	1,850	1,170	240	7,000	1,370	660	52	5	3	40
25	252	265	1,490	1,070	278	17,800	1,320	490	50	4	3	37
26	240	252	1,270	1,020	550	40,500	1,020	355	48	4	4	34
27	190	240	1,070	970	1,220	48,500	920	278	44	4	6	31
28	160	230	870	870	1,220	34,500	1,730	230	41	4	12	29
29	160	220	780	820		7,140	2,530	190	39	4	12	28
30	156	210	660	700		4,030	1,850	170	38	5	12	37
31	152		620	620		3,550		142		5	12	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	252	30	76.7	0.066	0.08	4,720
November	355	106	207	.178	.20	12,300
December	8,850	180	1,342	1.16	1.34	82,500
January	6,870	520	1,709	1.47	1.70	105,100
February	1,220	240	414	.357	.37	23,010
March	48,500	660	6,314	5.44	6.27	388,200
April	15,500	920	3,631	3.13	3.49	216,100
May	2,960	142	974	.840	.97	59,870
June	430	38	105	.091	.10	6,230
July	71	4	21.9	.019	.02	1,350
August	12	1	4.0	.0034	.004	244
September	1,170	10	122	.105	.12	7,260
The year	48,500	1	1,253	1.08	14.66	906,900

Arkansas River at Granite, Colo.

Location.- Water-stage recorder in sec. 31, T. 11 S., R. 79 W., at Granite, just above mouth of Cache Creek.

Drainage area.- 431 square miles.

Records available.- May 1897 to September 1899, April 1910 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1897 to September 1899, April 1910 to September 1934 in reports of State engineer.

Average discharge.- 24 years (1910-34), 334 second-feet.

Extremes.- Maximum discharge during year, 1,020 second-feet May 31 (gage height, 3.33 feet); minimum daily discharge occurred during winter.
1897-99, 1910-34: Maximum discharge, 2,900 second-feet June 16, 1924 (gage height, 4.57 feet); minimum (not recorded) occurred during winter.

Remarks.- Records good except those for Dec. 20 to Mar. 5, which were based on one discharge measurement, temperature records, and water released from storage. Minor diversions for irrigation above station. Flow affected by storage in Sugar Loaf and Twin Lakes Reservoirs on tributaries above station (total capacity, 72,120 acre-feet). Ewing Ditch, Busk-Ivanhoe Tunnel, and Fremont Pass Ditch bring water from Colorado River Basin to Arkansas River above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	75	77			60	104	358	826	301	168	125
2	98	70	74			60	104	340	731	280	153	120
3	111	68	70			60	98	331	670	230	148	120
4	114	75	75			60	102	367	658	203	138	114
5	111	75	68			61	109	391	605	240	138	107
6	109	74	65			55	104	405	553	269	142	111
7	100	75	74			52	116	455	476	233	140	116
8	98	75	74			61	135	525	455	197	148	140
9	120	79	72		*56	50	153	616	482	200	173	206
10	158	74	75			52	142	725	455	209	163	185
11	160	74	72			55	145	744	460	216	158	160
12	163	77	70			62	182	812	476	213	148	155
13	125	75	72			62	173	860	476	188	150	155
14	94	102	70			67	173	806	445	176	158	153
15	94	132	54			72	171	787	435	163	163	148
16	94	155	44			80	166	781	405	163	163	142
17	94	145	42			72	158	853	381	153	148	135
18	86	116	42			68	158	853	344	153	160	130
19	79	75	48			65	166	873	318	153	160	125
20	75	77	48			74	163	873	276	148	203	150
21	75	72	50			77	185	873	293	158	176	163
22	74	75	50			80	191	806	272	200	158	158
23	75	67	50			82	188	769	251	209	148	153
24	82	62	50			98	269	694	262	331	148	150
25	82	65	50			125	276	738	284	276	135	148
26	80	62	75			138	284	731	265	269	130	148
27	82	65	130			130	284	738	265	269	135	142
28	79	70	130			114	293	688	381	254	138	132
29	75	72	130			125	314	793	381	244	135	130
30	75	75	100			109	327	853	372	230	128	128
31	74		80			120		922		191	125	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	163	74	97.8	6,010
November	155	62	81.8	4,870
December	130	42	69.4	4,270
January			50	3,070
February			55	3,050
March	138	50	78.9	4,850
April	327	98	181	10,800
May	922	331	689	42,400
June	826	251	432	25,700
July	331	148	217	13,300
August	203	125	151	9,280
September	206	107	142	8,450
The year	922		188	136,000

*Discharge measurement.

Arkansas River at Salida, Colo.

Location.- Water-stage recorder in sec. 32, T. 50 N., R. 9 E., at Salida. South Arkansas River enters 1½ miles below.

Drainage area.- 1,210 square miles.

Records available.- April 1895 to October 1903, November 1909 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; April 1895 to October 1903, November 1909 to September 1934 in reports of State engineer.

Average discharge.- 24 years (1910-34), 634 second-feet.

Extremes.- Maximum discharge during year, 1,600 second-feet May 11 (gage height, 4.10 feet); minimum daily discharge, 163 second-feet Mar. 23.
1895-1903, 1909-34: Maximum discharge, 5,100 second-feet June 16, 1924 (gage height, 7.2 feet); minimum daily discharge, 140 second-feet Sept. 19-21, 1902.

Remarks.- Records good. Diversions for irrigation above station. Flow regulated by Clear Creek Reservoir (capacity, 11,444 acre-feet) and as noted on Arkansas River at Granite, Colo.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	216	226	204	268	189	183	537	1,160	468	322	254
2	243	226	226	213	261	192	178	542	1,010	413	349	250
3	243	223	226	207	257	192	210	537	906	392	308	250
4	254	226	223	210	223	189	201	532	858	349	308	254
5	247	243	226	192	198	183	216	566	786	364	419	247
6	243	254	216	189	198	183	216	786	716	388	363	247
7	243	268	226	170	201	189	230	996	660	392	326	257
8	243	268	226	170	201	178	250	1,120	585	333	308	264
9	243	261	219	176	201	178	275	1,180	590	311	333	322
10	264	261	226	192	207	173	261	1,460	646	297	372	341
11	279	247	223	186	201	168	243	1,560	570	315	364	304
12	282	247	219	178	189	170	247	1,400	575	326	337	286
13	279	254	223	173	195	170	264	1,440	610	297	322	286
14	247	254	236	195	195	170	264	1,250	585	290	333	279
15	233	286	230	213	186	170	250	1,210	546	282	356	275
16	226	300	230	213	183	173	261	1,260	509	272	360	282
17	230	315	210	198	192	178	261	1,340	482	261	345	261
18	230	297	223	201	195	170	240	1,320	442	254	330	243
19	230	236	223	204	189	165	243	1,300	434	243	356	230
20	230	223	226	195	195	165	254	1,290	404	247	396	233
21	230	216	226	201	195	165	275	1,280	468	254	429	261
22	233	210	230	204	192	165	304	1,160	421	275	384	254
23	230	216	223	216	189	163	326	1,070	404	322	349	254
24	226	213	213	213	195	176	364	972	421	421	330	290
25	223	207	216	216	195	204	460	996	468	451	318	272
26	223	207	216	207	192	216	482	1,010	455	495	304	264
27	219	210	226	204	195	223	486	996	446	468	297	261
28	219	216	300	213	192	216	455	960	482	425	290	247
29	219	213	300	216		216	455	1,100	504	368	290	286
30	213	216	293	233		195	491	1,200	504	360	279	330
31	210		272	279		181		1,280		330	268	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	282	210	238	14,600
November	315	207	241	14,300
December	300	210	232	14,300
January	279	170	203	12,500
February	268	183	203	11,300
March	223	163	183	11,300
April	491	178	295	17,600
May	1,560	532	1,090	67,000
June	1,160	404	585	34,800
July	495	243	344	21,200
August	429	268	337	20,700
September	341	230	269	16,000
The year	1,560	163	353	255,600

Arkansas River at Canon City, Colo.

Location.- Water-stage recorder in sec. 32, T. 18 S., R. 70 W., in Canon City just above mouth of Sand Creek.

Drainage area.- 3,090 square miles.

Records available.- May 1888 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1888 to September 1934 in reports of State engineer.

Average discharge.- 47 years (1887-1934), 737 second-feet.

Extremes.- Maximum discharge during year, 2,380 second-feet Aug. 2 (gage height, 3.05 feet); minimum daily discharge, 151 second-feet Apr. 2.
1888-1934: Maximum discharge, 19,000 second-feet Aug. 2, 1921 (gage height, 10.7 feet); minimum daily discharge, 108 second-feet Apr. 10, 15, 1897.

Remarks.- Records good. Diversions for irrigation above station. Regulation same as noted on Arkansas River at Granite and Salida.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	196	271	312	294	236	153	512	1,140	455	215	198
2	233	206	298	279	294	220	151	529	1,020	541	500	193
3	233	193	290	275	283	218	161	512	986	455	575	186
4	236	206	287	275	287	212	201	529	1,030	294	368	191
5	246	240	298	268	257	201	196	512	1,010	268	321	191
6	250	240	290	268	233	193	229	512	970	287	620	191
7	246	271	294	268	233	193	223	570	863	326	382	184
8	246	279	312	268	223	188	257	747	784	312	298	196
9	246	264	303	260	220	181	253	986	679	298	298	218
10	246	275	316	260	257	181	240	1,220	541	243	298	257
11	279	279	312	268	268	181	220	1,390	483	233	303	257
12	294	268	298	268	260	181	215	1,460	494	260	344	229
13	307	257	290	246	271	172	223	1,460	506	253	250	218
14	321	260	307	236	275	165	246	1,360	517	226	268	218
15	287	233	287	268	271	155	253	1,220	500	229	303	212
16	268	264	279	307	250	156	215	1,230	494	283	290	209
17	246	271	283	275	250	174	209	1,240	423	442	287	206
18	243	279	264	290	240	176	201	1,290	387	188	268	184
19	236	275	312	283	236	176	188	1,260	349	176	294	170
20	236	236	321	354	236	172	191	1,250	339	169	312	167
21	233	233	316	354	236	172	201	1,260	330	170	339	170
22	223	233	321	321	236	169	236	1,190	354	176	344	186
23	233	240	321	303	229	170	279	1,080	316	209	312	181
24	223	250	298	307	236	218	316	1,010	316	260	268	196
25	215	243	303	294	243	260	392	938	354	455	312	212
26	212	243	303	246	226	298	489	978	382	529	298	196
27	212	240	303	226	236	283	535	954	354	478	223	191
28	226	240	330	226	233	240	506	906	344	378	212	191
29	229	240	378	223		198	494	962	527	307	204	184
30	215	240	363	229		174	500	1,100	428	268	198	229
31	193		363	271		165		1,160		243	191	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	321	193	244	15,000
November	279	193	246	14,600
December	378	264	307	18,900
January	354	223	275	16,900
February	294	220	250	13,900
March	298	155	196	12,100
April	535	151	272	16,200
May	1,460	512	1,010	62,100
June	1,140	316	575	34,200
July	541	169	304	18,700
August	620	191	313	19,200
September	257	167	200	11,900
The year	1,460	151	351	253,700

Arkansas River near Pueblo, Colo.

Location.- Water-stage recorder in sec. 34, T. 20 S., R. 65 W., at south side waterworks intake, 2⅝ miles west of Pueblo.

Drainage area.- 4,730 square miles.

Records available.- May 1885 to September 1886, September 1894 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1885 to September 1886, September 1894 to September 1934 in reports of State engineer.

Average discharge.- 40 years (1894-1934), 727 second-feet.

Extremes.- Maximum discharge during year, 2,580 second-feet Aug. 3 (gage height, 4.22 feet); minimum daily discharge, 8 second-feet July 21.
1885-86, 1894-1934: Maximum discharge, 103,000 second-feet (slope measurement, including estimated discharge of Dry Creek, 19,500 second-feet) June 3, 1921 (gage height, 24.66 feet, gage at Pueblo); minimum daily discharge, 8 second-feet Apr. 13, 1933, July 21, 1934.

Remarks.- Records good except those for Jan. 8-13, Mar. 14-16, which were estimated. Diversions for irrigation above station. Regulation (see description for Arkansas River at Salida).

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	162	177	318	200	169	110	294	926	276	86	57
2	54	140	256	262	223	147	96	350	818	204	81	62
3	44	140	270	342	223	125	72	326	735	150	926	67
4	52	154	223	262	169	140	140	350	673	143	262	67
5	59	207	184	200	200	125	154	342	639	136	117	72
6	72	223	246	169	125	110	154	326	587	83	192	81
7	67	177	231	177	132	100	177	310	519	156	426	81
8	59	215	207	190	147	100	169	401	460	170	147	72
9	57	215	215	160	110	91	105	717	376	177	125	91
10	52	246	231	140	177	62	105	936	376	116	177	117
11	140	254	246	140	200	72	110	1,160	334	80	223	147
12	169	200	215	150	184	125	91	1,150	326	68	207	110
13	169	177	231	160	177	96	86	1,290	310	80	192	91
14	154	125	192	200	177	90	110	1,370	270	74	192	91
15	110	154	200	169	162	75	125	1,120	302	48	105	132
16	67	177	223	215	164	60	117	1,200	318	54	154	59
17	67	154	246	215	140	52	86	1,180	302	46	464	57
18	62	215	192	177	223	62	100	1,180	246	143	140	54
19	57	231	169	177	147	57	125	1,200	177	36	132	39
20	54	239	184	177	125	46	91	1,200	132	21	169	44
21	54	125	207	286	177	36	81	1,100	110	8	147	52
22	72	154	215	392	184	26	72	1,050	110	23	147	62
23	117	154	246	310	184	44	105	1,020	105	20	169	105
24	96	162	215	294	110	67	169	896	96	44	132	81
25	81	169	231	318	105	100	231	789	117	147	132	96
26	76	154	223	294	100	110	318	761	154	510	154	105
27	105	169	184	262	154	184	401	761	162	443	100	100
28	96	125	270	262	169	117	376	744	154	278	86	96
29	96	100	239	239		110	367	700	131	177	100	140
30	105	100	278	231		86	310	847	352	125	96	125
31	105		278	140		91		1,010		86	72	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	169	44	84.7	5,210
November	254	100	174	10,400
December	266	169	224	13,800
January	392	140	227	14,000
February	223	100	165	9,160
March	184	26	92.7	5,700
April	401	72	158	9,400
May	1,370	294	841	51,700
June	926	96	344	20,500
July	510	8	133	8,180
August	926	72	189	11,600
September	147	39	85.1	5,060
The year	1,370	8	227	164,700

Arkansas River near Nepesta, Colo.

Location.- Water-stage recorder in sec. 31, T. 21 S., R. 60 W., at Oxford Farmers Canal Co.'s dam, 1½ miles west of Nepesta.

Drainage area.- 9,130 square miles.

Records available.- September 1897 to October 1903, July 1909 to November 1912, October 1933 to September 1934 in reports of U. S. Geological Survey; September 1897 to October 1903, July 1909 to November 1912, January 1914 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 4,830 second-feet July 29 (gage height, 3.50 feet); no flow Aug. 21-25.
1897-1903, 1909-12, 1914-34: Maximum discharge, 180,000 second-feet (slope measurement) at point 9 miles upstream June 4, 1921; no flow at times during 1902, 1910, 1931, 1934.

Remarks.- Records fair. Discharge estimated Feb. 1-6, 8, 20-23, 25, 26, July 20. No records Dec. 1 to Jan. 31. Storage, regulation, and diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	241				214	145	306	877	251	76	34
2	89	241				193	178	330	934	164	75	33
3	79	236				206	227	437	948	123	543	37
4	72	241				189	206	396	712	64	366	39
5	74	241				168	214	374	639	185	206	34
6	60	324				178	210	318	539	79	137	42
7	92	270			241	193	236	345	471	23	330	39
8	81	282			250	171	232	381	429	19	276	36
9	82	227			251	158	222	540	388	52	123	43
10	92	210			236	218	197	712	270	89	112	47
11	101	210			168	193	202	1,040	236	89	218	85
12	97	210			210	181	174	1,010	218	74	488	116
13	118	178			288	185	155	1,060	214	54	206	103
14	131	185			352	151	151	1,370	214	48	189	90
15	126	131			337	158	178	1,040	241	47	128	324
16	105	174			352	145	206	1,030	282	34	105	66
17	128	107			381	158	181	1,020	318	22	352	57
18	140	140			352	164	142	1,010	306	17	337	53
19	142	164			282	181	148	992	265	90	227	53
20	145	178				171	168	963	218	22	193	45
21	137	193				168	123	978	174	0	120	44
22	145	227				137	99	821	145	0	137	52
23	145	189				148	126	862	128	0	148	60
24	171	193			185	181	168	688	128	0	128	64
25	185	294				184	214	726	103	0	107	64
26	164	218				186	241	726	89	981	60	74
27	155	236			90	189	403	739	116	688	25	84
28	158	232			89	185	498	675	114	345	49	96
29	171	213				168	396	700	84	260	57	46
30	178	227				168	366	700	71	148	49	27
31	171					164		834		105	43	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	185	60	123	7,560
November	324	107	214	12,700
December				
January				
February			250	13,900
March	218	137	176	10,800
April	498	99	214	12,700
May	1,370	306	746	45,900
June	934	71	326	19,400
July	981	0	131	8,060
August	543	25	181	11,100
September	324	27	66.2	3,940

Note.- Average flow for missing periods in February estimated, 245 second-feet.

Arkansas River at La Junta, Colo.

Location.- Water-stage recorder in sec. 2, T. 24 S., R. 55 W., at East Bridge, in La Junta, just above mouth of King Arroya. During period of record this station has been maintained at several different locations at La Junta, and all records are comparable.

Drainage area.- 12,200 square miles.

Records available.- December 1893 to December 1895, January to December 1901, April to October 1903, August to November 1908, April 1912 to December 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; December 1893 to December 1895, January to December 1901, April to October 1903, August to November 1908, April 1912 to September 1934 in reports of State engineer.

Average discharge.- 22 years (1912-34), 267 second-feet.

Extremes.- Maximum discharge during year, 12,600 second-feet Sept. 15 (gage height, 8.90 feet, temporary gage); minimum daily discharge, 7 second-feet Sept. 24-26. 1893-95, 1901, 1903, 1908, 1912-34: Maximum discharge, 200,000 second-feet (slope measurement) June 4, 1921 (gage height, 18.4 feet, revised); no flow Jan. 20-23, Mar. 20-22, 1915.

Remarks.- Records good except those estimated Feb. 25 to Mar. 9. Storage regulation and diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	39	30	62	127	20	21	76	331	36	31	19
2	28	46	80	70	64	70	18	71	372	34	81	16
3	27	54	114	100	32	75	21	62	315	35	51	12
4	28	50	162	68	28	60	35	79	245	39	66	12
5	35	97	199	72	42	55	45	81	215	51	49	14
6	130	127	124	54	28	55	35	76	163	54	33	15
7	118	185	134	97	22	35	31	90	115	42	38	14
8	33	194	140	47	29	30	34	66	79	34	47	14
9	30	130	127	32	30	70	57	83	44	35	54	18
10	30	83	127	33	28	62	42	90	37	34	48	17
11	30	54	154	49	32	52	38	227	27	37	52	14
12	29	36	127	40	34	57	36	384	36	38	108	19
13	26	30	140	47	66	33	23	435	20	35	43	19
14	26	36	140	41	81	31	29	610	16	38	44	19
15	26	35	144	46	104	23	37	543	29	35	64	2,840
16	24	30	158	55	120	26	34	475	24	34	68	110
17	24	29	134	50	160	22	30	455	18	34	71	27
18	26	30	114	46	146	35	31	488	44	34	54	20
19	26	30	140	42	191	48	31	488	21	32	77	10
20	23	32	105	31	223	20	52	529	23	30	77	10
21	26	30	102	30	112	32	39	488	28	28	137	9
22	30	29	111	30	81	28	42	337	26	29	42	8
23	23	27	88	46	146	24	40	396	29	30	33	8
24	24	26	114	66	211	34	42	191	30	29	38	7
25	32	25	91	213	20	56	44	174	32	28	35	7
26	37	32	76	105	20	36	42	254	34	36	31	7
27	37	36	91	114	20	22	86	215	32	23	28	19
28	36	168	88	137	20	23	90	154	34	21	22	9
29	47	44	86	144		23	115	157	34	20	18	9
30	80	35	86	147		29	63	122	34	26	19	8
31	40		62	140		37		108		28	19	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	130	23	37.4	2,300
November	194	25	59.6	3,550
December	199	30	116	7,130
January	213	30	72.7	4,470
February	223	20	79.2	4,400
March	75	20	39.5	2,430
April	115	18	42.8	2,550
May	610	62	258	15,900
June	372	16	82.9	4,930
July	54	20	33.5	2,060
August	137	18	50.9	3,130
September	2,840	7	111	6,600
The year	2,840	7	82.1	59,450

Arkansas River at Lamar, Colo.

Location.- Water-stage recorder in sec. 30, T. 22 S., R. 46 W., at highway bridge 1 mile north of Lamar.

Drainage area.- 19,800 square miles.

Records available.- May to December 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1913 to September 1934 in reports of State engineer.

Average discharge.- 21 years, 305 second-feet.

Extremes.- Maximum discharge during year, 34,700 second-feet Sept. 16 (gage height, 8.00 feet); minimum daily discharge, 1 second-foot, estimated, July 23-26, Aug. 13-18.

1913-34: Maximum discharge, 165,000 second-feet (slope measurement) June 5, 1921; no flow at times during 1913-15.

Remarks.- Records poor. Storage, regulation, and diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		*5	*3		33	7		8	*4	*3	*3	*2
2			*5		33	4		8	*4	*3	*3	*5
3			*4		32			35		*3	6	30
4			*5		31			14		10	4	19
5					28			10		*3	6	7
	*3			*3								
6					30			8			6	3
7					26			10			5	*3
8					20			*4		*3	*3	*3
9					19			*4	*3		*2	10
10					20			*4		*2	*2	46
		*3										
11			*4	6	18						*2	57
12				*9	25						*2	16
13				*12	21							9
14				*12	19							5
15	*3			14	16				*5		*1	2,800
16				*8	19				49			9,600
17				*9	16	*3		*3	10	*2		145
18				*10	14				*5			14
19				*12	4				*5		11	8
20	*7			24	3				*5		23	7
21		*4		24	3				*4		36	5
22				26					*4		69	
23				28					*4	*1	44	
24	*3	*3		43				306		*1	78	
25		*4	*3	36	*3			90		*1	25	
26		*3		24				*5	*3	*1	12	*3
27		*5		26				*5		473	4	
28	*5	*5		33				*5		700	*3	
29	*5	*4		33				*5		11	*3	
30	*6	*4		33				*4		*3	*3	
31	*6			29				*4		*3	*2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	7		3.5	215
November	5		3.4	202
December	5		3.6	221
January	43		15.5	953
February	33		16.1	894
March	7		3.2	197
April			*3	179
May	306		18.3	1,130
June	49		5.2	309
July	700	1	40.5	2,490
August	78		11.7	719
September	9,600	2	427	25,400
The year	9,600		45.5	32,910

*Estimated.

Arkansas River at Holly, Colo.

Location.- Water-stage recorder in sec. 14, T. 23 S., R. 42 W., just above the mouth of Wild Horse Creek and 300 feet below highway bridge half a mile south of Holly.

Drainage area.- 25,000 square miles.

Records available.- October 1907 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; October 1907 to September 1934 in reports of State engineer.

Average discharge.- 27 years, 361 second-feet.

Extremes.- Maximum discharge during year, 6,330 second-feet Sept. 16 (gage height, 4.50 feet); minimum daily discharge, 1 second-foot (estimated) Aug. 12 to Sept. 15.

1907-34: Maximum discharge, 136,000 second-feet (slope measurement) Oct. 20, 1908 (gage height, 11.0 feet, former datum); no flow Aug. 9, 1924, May 27-31, June 1-8, 28-30, July 1-3, 1925.

Remarks.- Records good except those estimated for Oct. 4-7, Jan. 3-13, Sept. 4-14, which are fair. Extensive storage regulation, and diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	16	69	77	62	150	15	11	4	7	4	1
2	26	33	72	77	51	112	15	65	4	6	4	1
3	24	27	62	60	48	92	16	23	5	6	3	1
4	23	31	62	50	33	69	15	36	5	5	3	1
5	22	33	60	40	36	62	15	27	5	51	2	1
6	22	39	60	40	39	60	15	16	5	6	2	1
7	21	37	62	50	39	53	15	14	5	64	2	1
8	21	31	62	70	44	60	15	12	5	1,080	2	1
9	23	34	60	60	46	60	14	11	4	131	2	1
10	21	37	60	50	65	48	13	10	4	37	2	1
11	17	36	53	50	77	27	11	10	5	21	2	1
12	18	37	46	55	74	21	9	10	4	11	1	1
13	20	37	48	60	79	21	10	10	4	8	1	1
14	21	39	46	72	77	20	10	14	4	7	1	1
15	18	42	46	77	72	19	9	12	6	6	1	1
16	16	42	46	74	69	19	8	10	743	6	1	3,890
17	18	42	44	84	77	44	9	10	433	8	1	951
18	18	42	41	82	72	69	9	10	116	8	1	150
19	18	41	36	77	65	92	9	9	53	6	1	31
20	18	41	74	77	69	100	9	8	34	5	1	16
21	17	41	60	65	69	53	10	9	20	5	1	14
22	17	41	51	69	60	34	10	15	14	4	1	13
23	17	41	49	65	62	26	10	13	10	4	1	13
24	17	39	48	62	67	24	9	53	8	4	1	13
25	17	39	44	62	131	23	9	796	7	4	1	13
26	17	44	18	65	135	20	13	241	6	4	1	13
27	17	48	166	62	119	17	13	65	6	1,540	1	13
28	17	48	84	58	147	16	10	41	6	701	1	13
29	15	48	84	60		16	10	16	6	175	1	12
30	13	46	74	62		16	8	8	6	36	1	12
31	14		84	62		17		6		10	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	27	13	19.1	1,170
November	48	16	38.4	2,280
December	166	18	60.4	3,710
January	84	40	63.7	3,920
February	147	33	70.9	3,940
March	150	16	47.1	2,900
April	16	8	11.4	678
May	796	6	51.3	3,150
June	743	4	51.2	3,050
July	1,540	4	128	7,870
August	4	1	1.55	95
September	3,890	1	173	10,300
The year	3,890	1	59.5	43,060

Arkansas River at Syracuse, Kans.

Location.- Water-stage recorder in NW¼ sec. 18, T. 24 S., R. 40 W., at highway bridge half a mile south of Syracuse.

Drainage area.- 25,500 square miles.

Records available.- August 1902 to July 1906, June 1921 to September 1934.

Average discharge.- 13 years (1921-34), 335 second-feet.

Extremes.- Maximum discharge during year, 13,600 second-feet Sept. 16 (gage height, 6.52 feet); minimum, 2 second-feet June 13, 14, July 3, 4, 19-26.
1902-6, 1921-34: Maximum stage, about 11.75 feet (present datum) June 6, 1921 (discharge not determined); minimum discharge, 1 second-foot July 31, 1931. Bank-full stage, 7.0 feet.

Remarks.- Records fair. Discharge estimated Jan. 10-12 and interpolated Sept. 21, 22. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	36	174	170	130	237	71	9	6	3	12	3
2	24	63	180	160	128	255	66	32	7	3	8	4
3	27	63	170	145	121	215	60	121	10	2	7	4
4	34	44	154	130	113	151	60	21	7	2	6	3
5	44	46	146	157	101	128	57	16	5	105	5	3
6	44	46	132	160	101	113	54	12	4	40	5	3
7	42	48	132	133	109	95	27	8	4	9	4	3
8	40	48	132	128	113	89	24	7	3	533	4	3
9	36	48	128	125	109	128	21	7	3	216	4	5
10	42	48	128		109	137	19	7	3	80	4	4
11	50	48	128	130	128	126	16	7	3	23	4	4
12	52	54	130		137	105	14	7	3	11	4	3
13	50	77	130	133	141	97	13	7	2	7	4	4
14	34	86	132	132	141	92	13	7	2	5	3	4
15	32	89	130	160	132	95	13	6	4	4	4	3
16	29	89	146	141	130	101	12	5	132	3	4	6,400
17	28	89	141	137	132	66	13	4	780	3	5	1,750
18	27	89	141	157	137	66	12	4	170	3	4	482
19	46	92	132	157	132	133	11	4	92	2	3	249
20	42	92	137	154	132	137	11	3	48	2	3	130
21	29	92	151	145	132	145	10	3	26	2	3	80
22	27	92	141	141	130	141	10	4	14	2	4	40
23	28	95	137	141	121	121	10	3	9	2	4	8
24	26	95	174	137	128	113	10	4	7	2	4	7
25	26	95	128	137	101	109	10	482	6	2	4	5
26	26	97	157	137	54	105	12	416	5	2	4	5
27	25	101	146	137	89	92	12	174	4	105	4	5
28	27	97	146	133	128	86	11	77	4	542	4	5
29	27	126	215	130		86	10	29	4	470	3	5
30	25	121	223	130		83	10	11	4	121	3	4
31	25		190	130		74		8		36	4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	52	22	33.3	2,050
November	126	36	76.8	4,570
December	223	128	149	9,180
January	180	125	142	8,760
February	141	54	120	6,660
March	255	66	120	7,380
April	71	10	23.1	1,370
May	482	3	48.5	2,980
June	780	2	45.7	2,720
July	542	2	75.8	4,650
August	12	3	4.5	274
September	6,400	3	308	18,300
The year	6,400	2	95.2	68,900

Arkansas River at Garden City, Kans.

Location.- Water-stage recorder in NW¼ sec. 19, T. 24 S.. R. 32 W., half a mile south of Garden City.

Drainage area.- 28,800 square miles.

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 249 second-feet.

Extremes.- Maximum discharge during year, 2,660 second-feet Sept. 17 (gage height, 5.35 feet); no flow for several days.
1922-34: Maximum discharge, 21,200 second-feet Aug. 9, 1929 (gage height, 7.74 feet); no flow during several periods. Bank-full stage, 7.0 feet.

Remarks.- Records fair except those for Mar. 19 to May 8, Sept. 17, 18, which are poor. Discharge interpolated Sept. 18. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	36	51	43	105	5	4				0
2	0	11	70	16	26	138	2	4				0
3	0	30	33	4	14	130	2	2				0
4	1	17	14	2	14	114	2	4				0
5	2	8	16	28	12	100	2	2				0
6	2	15	13	37	11	89	2	2				0
7	2	19	10	18	8	74	2	2				0
8	2	15	3	10	10	76	3	2				0
9	2	12	3	33	11	69	2	2				0
10	2	11	2	41	8	89	2	2				0
11	2	11	2	45	33	69	2	2				0
12	1	12	4	61	70	82	2	2				0
13	2	12	6	41	76	63	2	2				0
14	2	14	6	61	72	51	2	2				0
15	2	11	5	66	89	51	2	1				0
16	1	9	6	72	89	45	4	1				0
17	1	5	4	80	70	47	4	0				490
18	1	5	4	47	68	47	4	0				245
19	0	6	2	37	63	76	4	0				0
20	0	8	2	33	63	78	4	0				0
21	0	5	4	33	68	68	4	0				0
22	1	2	5	33	68	57	4	0				0
23	1	2	4	49	65	37	2	0				0
24	0	23	6	49	61	26	2	0				0
25	0	38	4	37	86	28	2	0				0
26	0	24	2	47	22	20	2	0				0
27	0	23	1	31	31	16	3	0				0
28	0	23	4	26	61	10	2	0				0
29	0	15	8	31		5	2	0				0
30	0	14	13	45		8	3	0				0
31	0		18	51		6		0				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2	0	0.9	54
November	38	0	13.3	793
December	70	1	10.1	619
January	80	2	39.3	2,420
February	89	8	46.8	2,600
March	130	5	61.4	3,780
April	5	2	2.7	159
May	4	0	1.2	71
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	490	0	24.5	1,460
The year	490	0	16.5	11,960

Note.- No flow during months left blank.

Arkansas River at Larned, Kans.

Location.- Water-stage recorder in NE¼ sec. 5, T. 22 S., R. 16 W., at Larned, about a quarter of a mile above Pawnee River.

Drainage area.- 34,900 square miles.

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 249 second-feet.

Extremes.- Maximum discharge during year, 326 second-feet Sept. 2 (gage height, 2.81 feet); no flow June 1-13, June 26 to Aug. 31, Sept. 8-30.
1922-34: Maximum discharge, 14,300 second-feet Aug. 25, 1923 (gage height, 9.5 feet); no flow during several periods. Bank-full stage, 8.5 feet.

Remarks.- Records fair except those estimated Oct. 1, 2, Nov. 23 to Dec. 6, Jan. 30 to Feb. 3, Feb. 17-22, 24, Mar. 10-12, Sept. 1, 2, which may be poor. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	24		45		68	68	33	0			14
2	46	26		42	40	101	66	33	0			174
3	46	26		20		157	59	14	0			138
4	45	29	50	16	49	112	64	22	0			71
5	44	31		26	46	88	75	19	0			36
6	44	34		36	48	82	71	19	0			17
7	42	32	62	28	42	77	68	13	0			4
8	40	31	57	16	41	81	59	6	0			0
9	35	28	64	23	47	79	53	7	0			0
10	30	28	63	39	47	79	45	9	0			0
11	29	28	59	58	60	78	36	3	0			0
12	25	29	53	79	63	77	30	3	0			0
13	22	30	63	71	65	77	32	44	0			0
14	24	31	63	60	65	63	36	39	2			0
15	37	31	59	58	60	64	37	28	3			0
16	41	32	57	54	55	64	40	21	3			0
17	49	34	56	58		40	46	19	13			0
18	45	34	46	61		48	46	13	9			0
19	37	34	50	61		58	39	11	125			0
20	35	34	71	69	53	82	40	8	109			0
21	28	34	67	60		66	40	7	33			0
22	25	34	64	57		59	39	26	15			0
23	25		63	65	52	59	36	14	8			0
24	24		57	61	48	63	36	8	3			0
25	23		45	45	45	73	39	6	1			0
26	25	34	20	45	36	77	42	15	0			0
27	25		12	66	36	73	39	40	0			0
28	26		6	55	61	71	36	7	0			0
29	24		21	49		66	37	4	0			0
30	26		30	45		68	34	.2	0			0
31	25		45	40		73		1				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	22	33.5	2,060
November	34	24	31.5	1,880
December	71	6	50.1	3,080
January	79	16	48.7	3,000
February	65	36	50.2	2,790
March	157	40	74.9	4,610
April	75	30	46.3	2,750
May	44	1	15.9	980
June	125	0	10.8	643
July	0	0	0	0
August	0	0	0	0
September	174	0	15.1	900
The year	174	0	31.3	22,690

Note.- No flow during months left blank.

Arkansas River near Wichita, Kans.

Location.- Chain gage on line between secs. 7 and 18, T. 27 S., R. 1 E., at Thirteenth Street Bridge, at Wichita, 1½ miles above mouth of Little Arkansas River.

Drainage area.- 40,300 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 505 second-feet.

Extremes.- Maximum discharge during year, 547 second-feet Sept. 7 (gage height, 4.87 feet); no flow July 23-29, Aug. 3-19, 22-31, Sept. 1-4.
1921-34: Maximum discharge, 12,000 second-feet Aug. 18, 1927 (gage height, 14.75 feet); no flow during several periods. Bank-full stage, 14 feet.

Remarks.- Records fair. Backwater from ice Dec. 18-21, 25, 26, Jan. 9-12, Feb. 21-27.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	60	23	71	159	129	201	115	89	61	1	0
2	199	68	*22	68	140	134	195	111	66	40	1	0
3	169	72	21	68	132	171	195	111	58	35	0	0
4	157	76	21	68	119	171	195	111	60	*21	0	0
5	146	80	28	74	123	*200	195	111	50	9	0	487
6	141	70	33	84	*119	228	207	*138	37	43	0	535
7	141	57	36	94	115	228	231	164	37	34	0	547
8	141	60	46	98	115	222	213	185	35	25	0	343
9	136	60	52		111	222	207	159	30	14	0	170
10	131	64	49	*99	115	222	207	*143	*24	8	0	167
11	116	60	49		132	222	201	127	19	3	0	132
12	106	60	46		132	216	207	123	14	1	0	120
13	102	57	33	100	136	216	201	*184	11	1	0	79
14	93	57	31	107	136	210	195	245	10	1	0	70
15	100	57	28	100	132	204	195	259	11	*1	0	64
16	111	54	28	92	132	198	204	248	13	1	0	45
17	106	54	33	123	132	198	193	242	9	1	0	42
18	106	54		119	132	277	187	255	8	1	0	175
19	102	54		115	136	196	162	262	8	1	0	212
20	89	48	*33	115	140	193	182	198	45	1	1	175
21	93	48		123		198	176	210	84	1	1	136
22	93	51	33	115		187	*164	213	101	1	0	128
23	93	40	33	111		176	152	182	131	0	0	124
24	89	34	33	111	*130	171	147	164	222	0	0	61
25	93	32	*33	111		157	143	125	222	0	0	55
26	93	32	*34	115		157	129	105	157	0	0	47
27	89	29	36	111		176	121	94	114	0	0	49
28	76	27	36	111	132	187	117	91	105	0	0	52
29	64	25	38	185		193	113	91	91	0	0	52
30	60	25	41	169		198	113	91	72	3	0	76
31	64		82	169		193		91		7	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	199	64	11.3	6,930
November	80	25	52.2	3,100
December	82	21	35.8	2,200
January	185	68	107	6,590
February	159	111	130	7,200
March	277	129	195	12,000
April	231	113	179	10,650
May	262	91	160	9,810
June	222	8	64.4	3,830
July	61	0	10.1	619
August	1	0	.1	7.9
September	547	0	138	8,220
The year	547	0	98.3	71,160

*Estimated.

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Arkansas River at Arkansas City, Kans.

Location.- Water-stage recorder in NW¼ sec. 25, T. 34 S., R. 3 E., half a mile west of Arkansas City and 5 miles above mouth of Walnut River.

Drainage area.- 44,700 square miles.

Records available.- September 1902 to July 1906, September 1921 to September 1934.

Average discharge.- 13 years (1921-34), 1,226 second-feet.

Extremes.- Maximum discharge during year, 1,880 second-feet Apr. 7 (gage height, 8.77 feet); minimum, 57 second-feet July 24 (gage height, 6.11 feet).
1902-5, 1921-34: Maximum gage height, 25.46 feet June 11, 1923 (discharge not determined); minimum discharge, 12 second-feet in March and April 1923, owing to diversion by power canal of Kansas Gas & Electric Co. Bank-full stage, 16.0 feet.

Remarks.- Records good except those for October to February, Sept. 11-30, which are fair. Backwater from ice Feb. 24-28. Discharge estimated Feb. 24-28, Mar. 5, 7. No diversions for irrigation from Arkansas River below a point 55 miles east of Colorado-Kansas State line.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	603	429	296	304	314	510	406	355	365	240	61	63
2	575	434	300	400	288	450	406	355	355	202	63	91
3	568	434	365	486	390	530	400	417	360	185	65	101
4	582	462	428	468	422	744	439	456	336	169	61	96
5	549	439	444	395	422	692	744	456	314	150	61	121
6	530	434	395	332	390	641	1,170	428	314	156	59	116
7	510	428	375	380	350	578	1,690	400	309	172	59	153
8	498	406	355	510	360	516	1,480	385	280	210	61	300
9	468	400	332	562	350	510	1,130	390	264	175	59	309
10	468	395	322	568	345	480	885	434	252	144	63	370
11	456	390	318	542	345	462	736	428	240	130	59	510
12	450	385	304	575	345	428	617	412	232	116	59	336
13	456	370	304	624	345	406	549	575	232	108	65	224
14	462	345	300	652	370	395	498	817	216	103	69	192
15	468	340	300	652	365	385	456	1,050	224	98	69	172
16	498	332	304	610	365	375	434	1,480	280	86	69	169
17	504	327	314	556	360	355	468	1,320	314	84	69	147
18	492	314	318	498	365	336	462	1,110	288	77	71	133
19	480	309	395	504	340	336	456	903	284	75	73	127
20	474	304	395	498	385	314	450	784	288	71	71	169
21	474	300	412	504	375	332	439	712	272	67	77	530
22	474	309	385	504	340	360	417	652	260	61	80	792
23	462	304	370	492	360	375	412	631	288	57	69	422
24	450	300	365	510		355	400	624	292	57	67	256
25	439	296	355	462		345	385	549	345	59	65	185
26	450	292	336	444	350	350	390	510	400	63	65	163
27	450	292	288	412		360	375	480	355	67	65	196
28	450	292	248	380		375	365	450	304	75	65	202
29	456	296	268	370		385	365	417	268	77	65	826
30	444	296	284	390		395	360	406	236	63	65	492
31	434		292	360		395		390		65	59	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	603	434	486	29,900
November	462	292	355	21,130
December	444	248	338	20,760
January	652	304	482	29,640
February	422	288	360	19,980
March	744	314	435	26,720
April	1,690	360	593	35,270
May	1,480	355	606	37,240
June	400	216	292	17,390
July	240	57	112	6,870
August	80	59	65.4	4,020
September	826	63	266	15,800
The year	1,690	57	366	265,000

Arkansas River at Webbers Falls, Okla.

Location.- Water-stage recorder in NW¼ sec. 18, T. 12 N., R. 21 E., at Webbers Falls, 6 miles above mouth of Canadian River. Prior to July 7, 1934, chain gage was used at same location and datum. Zero of gage is 444.53 feet above mean sea level.

Drainage area.- 97,100 square miles.

Records available.- October 1933 to September 1934.

Extremes.- Maximum discharge recorded during year, 57,200 second-feet Apr. 10 (gage height, 14.5 feet); minimum, 148 second-feet Aug. 21 (gage height, 3.48 feet). Maximum stages known, 38.2 feet in June 1833 and 33.6 feet in April 1927.

Remarks.- Records good except those for Oct. 1 to July 7, which are fair. Gage-height record furnished by U. S. Weather Bureau prior to July 7 and collected in cooperation with that Bureau for the remainder of the year.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,200	6,500	3,150	5,050	3,800	2,350	2,750	3,800	3,350	1,950	294	1,850
2	11,600	6,200	3,150	4,800	3,550	3,350	3,350	3,800	2,950	1,950	302	3,300
3	11,200	5,050	2,750	4,600	3,550	3,350	3,550	3,550	2,750	1,750	310	8,350
4	9,600	5,050	2,750	8,600	3,350	3,550	3,550	4,300	2,550	1,550	302	19,000
5	7,750	20,200	2,750	9,600	3,350	3,350	17,200	6,800	2,350	1,400	286	23,200
6	7,400	30,200	2,750	7,750	3,350	2,950	31,600	15,700	2,150	1,400	275	16,700
7	6,800	16,200	2,550	8,450	3,350	2,950	36,400	30,200	2,150	1,190	262	9,600
8	5,900	12,400	2,550	17,800	3,350	2,750	46,000	31,600	1,950	1,120	246	6,800
9	4,800	10,400	2,550	32,400	3,350	3,800	56,000	19,000	1,750	1,120	238	5,300
10	4,050	8,450	2,550	23,200	3,350	3,550	57,200	12,400	1,750	1,000	230	4,800
11	3,550	7,400	2,550	16,700	3,150	3,150	46,000	9,200	2,750	1,000	223	4,550
12	4,300	6,800	2,350	13,700	3,150	2,950	28,100	7,750	5,050	950	209	14,200
13	6,500	6,200	2,950	12,000	3,150	2,750	19,000	8,800	4,800	900	223	13,200
14	5,900	5,900	2,950	11,200	3,150	2,750	15,200	7,400	2,950	850	216	12,400
15	4,800	5,050	2,550	9,600	2,550	2,750	12,000	6,200	2,350	800	209	16,200
16	4,800	4,800	2,550	9,200	2,350	2,750	9,200	5,600	3,150	750	202	34,800
17	7,750	4,050	2,750	8,450	2,350	2,550	8,800	5,050	2,950	700	202	44,200
18	10,000	3,550	2,350	7,750	2,350	2,550	12,000	10,400	2,950	650	188	39,200
19	9,600	4,300	3,150	7,400	2,350	2,550	12,000	29,500	2,750	640	160	16,700
20	9,600	4,050	3,800	7,100	2,350	2,550	14,200	28,100	6,500	600	160	12,400
21	8,450	4,050	21,400	6,200	2,350	2,550	13,200	17,600	5,900	580	154	10,800
22	13,700	4,050	22,000	6,200	2,150	2,550	10,800	11,600	4,550	560	195	11,600
23	12,000	3,600	22,600	5,900	2,150	2,350	8,800	8,450	4,050	530	382	22,000
24	18,400	3,800	17,800	5,300	2,150	2,350	7,750	7,400	6,200	480	660	17,800
25	13,700	3,550	12,400	5,300	2,150	2,150	7,100	8,800	5,900	450	800	12,800
26	12,000	3,350	10,800	5,050	2,550	2,950	6,900	5,900	4,800	430	1,250	10,400
27	10,400	3,150	8,800	5,050	2,550	2,950	5,050	5,300	3,550	391	2,150	7,100
28	8,450	3,150	8,100	4,800	2,350	3,350	4,550	4,050	3,150	364	1,850	5,900
29	9,200	3,150	6,500	4,300		3,150	4,300	4,050	2,350	346	1,550	5,900
30	8,450	3,150	6,200	4,300		2,950	4,050	3,550	1,950	337	1,850	10,400
31	7,100		5,600	3,800		2,750		3,350		328	1,950	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,400	3,550	8,805	542,500
November	30,200	3,150	6,932	412,500
December	22,600	2,350	6,376	392,000
January	32,400	3,800	9,098	559,200
February	3,800	2,150	2,845	158,000
March	3,800	2,150	2,881	177,100
April	57,200	2,750	16,850	1,003,000
May	31,600	3,350	10,630	653,400
June	6,500	1,750	3,410	202,900
July	1,950	328	873	53,680
August	2,150	154	566	34,770
September	44,200	1,850	14,050	835,900
The year	57,200	154	6,939	5,025,000

Arkansas River at Van Buren, Ark.

Location.- Chain gage in sec. 24, T. 9 N., R. 32 W., at Van Buren, 1½ miles below Lee Creek. Zero of gage is 372.36 feet above mean sea level.

Drainage area.- 150,000 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge recorded during year, 116,000 second-feet Apr. 9 (gage height, 17.90 feet); minimum, 216 second-feet Aug. 19, 21 (gage height, 1.14 feet).
1927-34: Maximum discharge recorded, 315,000 second-feet May 16, 1929 (gage height, 29.0 feet); minimum, that of Aug. 19, 21, 1934.
Maximum stage known, 35.0 feet in April 1927.

Remarks.- Records 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	10,100	8,870	3,950	6,630	5,650	5,890	8,870	5,890	4,750	3,070	720	3,410
2	17,000	7,990	4,150	5,890	5,650	6,370	7,990	5,650	4,350	2,910	700	9,300
3	15,600	6,890	3,950	5,650	5,410	6,870	7,150	5,190	4,150	3,070	680	24,800
4	13,600	6,630	3,770	8,270	5,190	19,000	6,890	6,630	4,750	2,750	622	43,800
5	12,100	14,300	3,590	27,200	4,970	18,400	27,000	14,000	4,550	2,590	486	54,400
6	10,100	47,200	3,590	27,200	4,750	13,200	112,000	49,600	3,950	2,440	550	50,800
7	8,870	42,700	3,770	23,100	4,550	12,100	111,000	65,200	3,950	2,290	502	28,100
8	7,990	29,000	3,950	29,000	4,550	7,710	112,000	76,000	3,770	2,000	470	15,600
9	7,150	20,000	3,590	49,600	4,550	6,890	114,000	60,400	3,410	2,000	394	10,800
10	6,130	14,800	3,410	56,800	4,970	7,710	81,200	33,000	3,070	1,860	400	8,870
11	5,650	12,500	3,410	40,500	6,130	7,430	66,400	20,600	2,910	1,650	376	7,990
12	5,650	11,100	3,230	27,200	7,710	6,630	48,400	16,000	3,070	1,650	370	8,570
13	5,190	9,790	3,410	21,800	6,890	5,890	32,000	13,600	8,270	1,520	315	19,000
14	8,270	9,470	3,230	19,500	5,890	5,650	23,800	13,200	13,600	1,450	335	19,500
15	10,100	8,570	3,230	17,000	4,970	5,190	20,000	11,800	11,800	1,320	325	17,400
16	11,400	7,430	3,230	15,600	4,750	4,970	17,400	10,100	9,170	1,320	300	35,000
17	12,500	6,370	3,070	14,000	4,550	4,550	15,600	9,170	7,430	1,320	295	56,800
18	12,800	5,650	3,230	12,800	4,350	4,750	16,000	8,570	5,890	1,260	320	42,700
19	15,200	5,410	6,370	11,800	4,350	5,650	18,400	15,200	5,190	1,140	260	30,000
20	13,600	5,190	7,990	11,100	4,550	7,150	19,500	35,000	5,410	1,140	275	18,400
21	13,200	5,190	7,430	11,400	5,650	8,570	19,500	33,000	10,400	1,080	245	15,200
22	20,600	6,890	19,000	13,600	5,410	8,570	17,400	20,000	9,470	1,020	265	14,800
23	32,000	6,630	23,100	14,000	4,970	7,430	14,800	14,000	6,630	960	285	16,500
24	24,600	7,150	24,600	12,100	4,350	7,150	12,100	11,800	5,650	960	320	24,600
25	37,200	6,890	19,500	10,400	4,350	11,100	10,400	10,100	6,370	905	280	19,500
26	25,400	5,890	14,000	8,870	4,750	14,800	9,170	10,800	6,890	905	370	13,600
27	18,400	5,190	12,100	7,940	5,650	21,800	7,990	8,270	6,630	850	494	10,400
28	13,200	4,750	10,100	7,430	6,130	23,100	7,150	7,430	5,190	850	1,080	7,430
29	12,500	4,550	8,570	6,890		20,600	6,630	6,370	4,350	817	1,720	9,000
30	12,100	4,150	7,430	6,370		14,800	6,370	5,890	3,590	806	3,070	21,200
31	10,400		6,890	6,130		10,800		5,410		795	3,590	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	37,200	5,190	13,830	850,100
November	47,200	4,150	11,240	668,700
December	24,600	3,070	7,445	457,900
January	56,800	5,650	17,280	1,063,000
February	7,710	4,350	5,201	288,900
March	23,100	4,550	10,090	620,300
April	114,000	6,370	32,570	1,938,000
May	76,000	5,190	19,610	1,206,000
June	13,600	2,910	5,954	354,300
July	3,070	795	1,571	96,590
August	3,590	245	658	40,490
September	56,800	3,410	21,920	1,304,000
The year	114,000	245	12,280	8,888,000

Arkansas River at Little Rock, Ark.

Location.- Staff gage in sec. 3, T. 1 N., R. 12 W., at Little Rock. Zero of gage is 223.39 feet above mean sea level.

Drainage area.- 158,000 square miles.

Records available.- September 1927 to September 1931, October 1933 to September 1934.

Extremes.- Maximum discharge recorded during year, 127,000 second-feet Apr. 9 (gage height, 15.52 feet); minimum, 850 second-feet Aug. 23 (gage height, -4.16 feet).
1927-31, 1933-34: Maximum discharge, 275,000 second-feet May 19, 1929 (gage height, 23.3 feet); minimum, that of Aug. 23, 1934.
Maximum stages known, 34.6 feet in June 1833 and 33.0 feet Apr. 20, 1927.

Remarks.- Records fair. Gage-height record furnished by U. S. Weather Bureau prior to Dec. 31 and collected in cooperation with that Bureau for the remainder of the year.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,500	17,700	9,100	14,800	12,200	8,220	56,200	14,000	10,000	7,100	1,330	1,220
2	10,600	16,800	8,500	13,200	11,500	10,000	45,000	12,900	8,800	6,320	1,220	1,440
3	10,600	15,600	8,500	12,500	10,900	11,500	38,700	11,800	8,220	5,320	1,220	2,620
4	11,500	14,400	8,220	14,400	10,300	12,200	31,400	11,500	7,660	4,900	1,330	5,320
5	16,400	13,200	9,100	18,600	9,700	12,500	34,700	11,200	7,660	4,500	1,280	21,700
6	19,600	12,900	10,000	23,000	9,400	13,600	47,400	11,800	7,660	4,100	1,280	38,700
7	17,700	13,200	9,700	26,400	9,100	19,600	82,200	14,000	8,220	4,100	1,160	50,600
8	15,600	14,000	9,100	37,300	8,500	22,400	122,000	31,400	8,220	3,900	1,160	51,400
9	14,400	41,500	8,500	42,200	8,220	20,700	126,000	54,600	7,380	3,500	1,160	42,900
10	12,500	40,800	8,220	43,600	7,940	17,700	121,000	63,700	6,580	3,300	1,160	31,400
11	11,800	32,700	8,220	47,400	7,660	15,200	114,000	61,000	6,580	3,300	1,060	22,400
12	11,200	26,400	8,220	54,600	7,380	13,600	101,000	47,400	6,060	3,120	1,060	17,200
13	10,600	21,300	7,660	52,200	7,380	12,900	87,000	35,400	5,800	2,780	1,060	14,400
14	10,000	17,700	7,380	42,900	7,660	12,500	72,700	27,100	5,800	2,620	950	13,200
15	9,400	15,600	7,100	35,400	8,800	11,500	57,800	21,800	6,320	2,480	950	13,200
16	9,400	14,400	7,100	30,800	9,700	10,900	46,600	19,600	5,800	2,480	1,060	19,600
17	9,400	13,200	7,100	28,300	9,100	10,000	38,700	18,200	10,300	2,620	950	24,600
18	11,500	12,900	14,800	25,800	8,220	10,000	33,400	16,800	12,900	2,780	1,060	26,400
19	13,600	11,500	24,600	23,500	7,660	10,600	32,100	14,800	11,800	2,780	1,000	43,600
20	15,200	10,300	32,700	21,800	7,380	12,900	30,800	13,200	10,600	2,620	950	56,200
21	15,600	10,600	40,100	20,200	7,100	15,200	29,500	12,200	9,100	2,220	950	49,800
22	17,700	10,600	36,700	20,700	6,840	16,000	30,200	14,400	7,380	1,990	900	36,700
23	19,600	10,600	32,100	22,400	6,840	16,800	30,200	29,500	6,580	1,990	850	27,700
24	33,400	10,300	27,700	23,000	7,100	18,200	28,300	32,100	6,840	1,770	900	24,100
25	36,700	10,000	30,200	23,500	7,940	21,800	26,400	25,200	10,600	1,770	950	23,500
26	37,300	10,900	35,400	23,000	8,220	47,400	23,000	19,100	10,300	1,550	950	25,200
27	33,400	10,900	34,700	20,700	8,220	75,400	20,200	16,000	7,940	1,440	1,440	30,200
28	37,300	10,900	29,500	17,700	7,940	82,000	17,700	14,000	6,840	1,440	1,880	26,400
29	32,100	10,300	23,500	15,600		78,100	16,400	12,900	6,840	1,440	1,440	20,700
30	25,800	9,700	19,600	14,000		72,700	15,200	12,500	7,380	1,440	1,440	17,200
31	20,200		17,200	12,900		65,500		10,600		1,330	1,280	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	37,300	9,400	18,120	1,114,000
November	41,500	9,700	16,030	95,390
December	40,100	7,100	17,440	1,072,000
January	54,600	12,500	26,530	1,631,000
February	12,200	6,840	8,532	473,900
March	82,000	8,220	25,080	1,542,000
April	126,000	15,200	51,860	3,086,000
May	63,700	10,600	22,930	1,410,000
June	12,900	5,800	8,072	480,300
July	7,100	1,330	3,000	184,500
August	1,880	850	1,141	70,180
September	56,200	1,220	25,990	1,546,000
The year	126,000	850	18,740	12,710,000

South Arkansas River near Salida, Colo.

Location.- Water-stage recorder in sec. 5, T. 49 N., R. 9 E., three quarters of a mile above mouth and 1½ miles southwest of Salida.

Drainage area.- 208 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; June 1929 to September 1934 and at point 1½ miles downstream April 1922 to December 1924 in reports of State engineer.

Extremes.- Maximum discharge during year, 192 second-feet May 11 (gage height, 2.62 feet); minimum daily discharge, 0.2 second-foot May 21.
1922-24, 1929-34: Maximum daily discharge, 1,220 second-feet June 17, 1923; no flow at times during 1922, 1931-33.

Remarks.- Records fair. Discharge estimated Jan. 7 to Feb. 7, when the stage-discharge relation was affected by ice. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	4.2	33	45	43	14	5.4	25	0.8	0.7	0.5	1.1
2	.5	5.0	42	46	42	14	1.9	16	.4	1.0	.5	1.6
3	.6	7.2	44	44	41	14	2.7	22	.4	1.1	.6	1.4
4	.6	9.5	48	44	40	15	9.2	30	.4	.8	.5	1.2
5	.7	12	48	42	39	12	30	22	.4	.7	.6	1.1
6	.7	16	48	50	38	9.2	42	22	.6	.6	1.8	1.3
7	.7	23	46		37	7.0	44	30	.7	.6	1.2	1.2
8	.6	27	47		36	6.7	48	38	.7	.4	2.1	1.4
9	.6	26	47		34	6.4	54	45	.7	.3	1.0	2.0
10	.6	25	53	44	37	5.7	44	129	.7	.3	.8	1.0
11	.7	33	49		38	5.7	47	141	.7	.3	1.1	.9
12	.9	34	47		41	7.7	57	95	.6	.4	1.1	1.3
13	1.0	32	47		38	6.4	56	60	.4	.5	1.1	1.4
14	1.3	34	52		37	5.2	44	27	.4	.5	1.0	1.2
15	1.2	33	50		34	7.5	35	14	.5	.5	1.0	1.1
16	1.1	34	51		31	6.4	33	10	.6	.5	1.0	1.2
17	1.7	33	54		31	7.7	26	7.2	1.3	.5	1.0	1.0
18	1.5	33	57		31	6.7	20	4.4	1.5	.5	1.0	1.1
19	1.4	31	57		32	5.7	22	.7	1.3	.5	1.1	1.2
20	1.4	28	54		30	5.7	27	.3	1.3	.5	1.1	1.4
21	1.1	27	55	42	29	6.2	46	.2	1.2	.4	1.0	2.0
22	1.2	27	54		28	6.4	54	.3	1.2	.4	1.1	1.8
23	1.3	25	54		25	6.2	57	.8	.9	.4	1.0	1.7
24	1.2	28	56		20	6.7	52	.8	.9	.8	1.0	5.9
25	1.3	28	54		15	8.0	47	1.1	1.0	.5	.8	1.8
26	2.6	27	54		20	8.0	60	1.2	.8	.8	.5	1.7
27	3.6	26	58		13	8.0	51	1.0	.8	.7	.5	1.5
28	3.4	26	59		14	7.7	46	1.1	.7	.4	.6	1.6
29	2.4	26	50			7.2	42	1.2	.7	.4	.6	1.7
30	2.7	27	44			7.0	37	2.1	.7	.4	.7	1.6
31	2.8		45			6.4		1.9		.4	.7	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.6	0.5	1.35	83
November	34	4.2	24.9	1,480
December	59	33	50.2	3,090
January			43.0	2,640
February	43	13	31.9	1,770
March	15	5.2	7.95	489
April	60	1.9	38.0	2,260
May	141	.2	24.2	1,490
June	1.5	.4	.78	46
July	1.1	.3	.54	33
August	2.1	.5	.92	57
September	5.9	.9	1.55	92
The year	141	.2	18.7	13,530

Grape Creek near Westcliffe, Colo.

Location.- Water-stage recorder and weir in sec. 30, T. 21 S., R. 72 W., 1 mile above high-water line of De Weese-Dye Reservoir and 3 miles northwest of Westcliffe.

Drainage area.- 346 square miles.

Records available.- December 1924 to June 1928, October 1933 to September 1934 in reports of U. S. Geological Survey; December 1924 to June 1928, March 1930 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 75 second-feet Apr. 7 (gage height, 0.96 foot); minimum daily discharge, 1 second-foot several days in June and July.
1924-28, 1930-34: Maximum discharge, 732 second-feet July 22, 1930 (gage height, 4.60 feet); minimum daily discharge, 1 second-foot at times during June, July 1930, June, July 1934.

Remarks.- Records fair. Discharge estimated Apr. 1-3. No records Nov. 6 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	10					25	9	5	2	3	6
2	5	12					25	11	4	2	3	5
3	6	12					25	12	4	2	6	5
4	8	12					29	12	3	2	4	4
5	9	12					21	10	3	2	3	5
6	8						26	8	3	2	3	4
7	8						45	8	2	2	3	4
8	7						32	10	2	2	4	5
9	6						18	11	2	2	4	6
10	7						13	9	1	2	3	5
11	8						12	11	1	2	4	4
12	8						10	11	1	2	3	4
13	7						10	12	1	2	3	4
14	8						12	11	1	2	3	4
15	8						12	10	1	1	5	5
16	6						10	8	2	1	4	4
17	6						13	6	2	2	4	4
18	8						17	4	1	2	4	4
19	8						12	3	1	2	5	4
20	8						10	3	1	1	10	4
21	7						10	3	1	2	6	6
22	8						8	2	1	2	7	5
23	8						8	3	1	2	10	5
24	8						10	3	1	2	6	5
25	8						11	11	1	3	6	4
26	8						10	11	1	3	6	5
27	8						14	8	2	11	6	4
28	8						14	8	2	5	6	4
29	8						10	6	2	3	6	4
30	8						8	5	2	2	5	4
31	10							5		2	5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	10	4	7.5	461
November 1-5	12	10	11.6	115
December				
January				
February				
March				
April	43	8	15.9	946
May	12	2	7.9	486
June	5	1	1.8	107
July	11	1	2.4	148
August	10	3	4.8	295
September	6	4	4.5	268

St. Charles River at Burnt Mill, Colo.

Location.- Water-stage recorder in sec. 8, T. 23 S., R. 66 W., at Burnt Mill.

Drainage area.- 166 square miles.

Records available.- October 1933 to September 1934 (discontinued) in reports of U. S. Geological Survey; March 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 138 second-feet July 4 (gage height, 1.40 feet); minimum daily discharge, 2 second-feet July 20-24, Sept. 2, 19, 20. 1923-34: Maximum discharge, 21,800 second-feet Aug. 22, 1925 (gage height, 22.13 feet); minimum daily discharge, 1 second-foot at times during 1927, 1931-32.

Remarks.- Records fair. Discharge estimated Mar. 1-4, 9-12, Apr. 2, 3, 7-15. No records Dec. 6 to Feb. 28. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	6	5			6	20	36	11	7	4	3
2	6	6	7			8	22	35	10	6	4	2
3	6	7	6			8	25	29	9	6	4	3
4	6	6	8			8	34	26	10	10	4	3
5	6	6	8			8	29	23	10	5	4	3
6	5	5				10	15	20	10	5	3	3
7	5	7				10	15	19	10	4	3	3
8	5	8				6	15	17	8	3	3	3
9	5	7				6	15	18	8	3	3	3
10	5	6				8	15	21	7	3	4	3
11	5	6				10	15	22	6	3	4	4
12	5	10				10	15	18	6	3	4	3
13	5	11				12	15	15	3	3	3	3
14	5	11				12	15	19	3	3	4	3
15	5	8				13	15	16	4	3	4	3
16	5	6				14	15	14	7	3	5	4
17	6	6				15	16	12	9	3	6	3
18	6	6				8	13	14	11	3	5	3
19	6	6				14	9	14	10	3	5	2
20	6	7				13	14	12	5	2	6	2
21	6	7				14	25	12	5	2	6	3
22	6	6				16	33	19	5	2	4	3
23	6	6				16	34	16	5	2	6	3
24	6	6				12	23	13	4	2	6	3
25	6	6				13	25	12	5	3	5	3
26	6	5				12	27	12	6	3	4	3
27	6	5				10	30	12	6	9	3	3
28	6	6				10	27	12	6	7	4	3
29	7	5				11	23	10	5	5	5	3
30	7	6				12	23	12	5	4	4	3
31	7					19		12		4	3	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	7	5	5.7	350
November	11	5	6.6	393
December 1-5	8	5	6.8	67
January				
February				
March	19	6	11.1	682
April	34	9	20.6	1,230
May	36	10	17.5	1,080
June	11	3	7.0	417
July	10	2	4.0	246
August	6	3	4.3	264
September	4	2	3.0	179

Huerfano River at Manzanares Crossing, near Redwing, Colo.

Location.- Water-stage recorder in sec. 5, T. 27 S., R. 71 W., at Manzanares Crossing, 3½ miles southwest of Redwing.

Drainage area.- 76 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; July 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum stage during year, 4.30 feet July 27 (discharge not determined); minimum probably occurred during winter.
1923-34: Maximum, that of July 27, 1934; minimum daily discharge, 10 second-feet Dec. 30, 31, 1923, Sept. 18, Oct. 28, 1926, Nov. 17, 1931, Nov. 23, 1932.

Remarks.- Records fair. Discharge estimated Oct. 12-18, July 28 to Aug. 13, Sept. 2-7. No records Nov. 11 to Apr. 17.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	18						55	42	21	21	12
2	21	17						52	38	19	20	12
3	22	16						49	38	19	19	12
4	21	16						42	34	18	18	13
5	20	18						40	32	17	18	13
6	17	20						43	31	16	17	14
7	18	20						58	28	16	17	14
8	17	19						66	27	16	16	15
9	16	18						68	28	15	15	21
10	17	16						80	26	16	14	14
11	17							74	26	18	13	14
12	17							73	27	16	12	14
13	16							66	25	14	12	14
14	15							59	24	16	11	13
15	15							56	23	15	15	14
16	14							54	26	14	17	13
17	13							51	26	16	22	12
18	13						35	50	23	19	27	12
19	12						36	54	21	17	22	12
20	12						36	49	20	16	22	14
21	13						41	49	20	16	19	13
22	13						50	49	18	16	19	14
23	14						54	51	18	18	18	41
24	14						55	50	19	22	15	74
25	15						60	49	18	22	13	54
26	15						60	49	18	21	15	44
27	14						59	46	18	86	14	32
28	15						55	49	16	25	14	24
29	16						54	55	28	24	13	28
30	16						52	56	82	23	11	27
31	16							52		22	11	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	22	12	16.0	984
November 1-10	20	16	17.8	353
December				
January				
February				
March				
April 18-30	60	35	49.8	1,280
May	80	40	54.6	3,360
June	82	16	27.3	1,620
July	86	14	20.3	1,250
August	27	11	16.5	1,010
September	74	12	20.8	1,240

Cucharas River near La Veta, Colo.

Location.- Water-stage recorder in sec. 5, T. 30 S., R. 68 W., 4½ miles southwest of La Veta.

Drainage area.- 75 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; January 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 60 second-feet July 23 (gage height, 1.95 feet); minimum daily discharge, 1 second-foot Oct. 31, Nov. 1, 2, Sept. 6-8, 11-20, 22-30.
1923-34: Maximum daily discharge, 624 second-feet May 23, 1926; minimum daily discharge, 1 second-foot at times during 1927-28, 1933-34.

Remarks.- Records fair. Discharge estimated Nov. 9 to Dec. 11, Dec. 19-31, Sept. 23-30. No record Jan. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2	1					10	31	27	6	5	2
2	3	1					13	28	25	6	5	2
3	4	4					13	24	23	5	5	2
4	5	6					14	23	18	5	5	2
5	5	3					14	19	15	6	4	2
6	4	4	2				11	19	17	6	4	1
7	4	5					12	22	18	5	5	1
8	5	5					14	24	20	6	5	1
9	6	5					12	26	23	5	5	2
10	6	4					19	30	22	4	4	2
11	8						22	32	20	4	4	1
12	8		2				24	36	18	4	4	1
13	8		2				26	35	17	4	4	1
14	8		2				29	36	18	4	4	1
15	5		2				19	34	19	4	4	1
		4										
16	5		2				19	30	16	5	4	1
17	5		2				21	26	16	5	4	1
18	5		2				23	23	14	5	3	1
19	6						22	23	11	5	3	1
20	7						24	24	11	5	4	1
21	6						25	24	7	6	4	2
22	7						29	38	6	6	4	1
23	8						31	33	6	7	3	1
24	8						33	32	6	6	3	1
25	5		2				34	36	6	6	3	1
		3										
26	3						35	38	6	10	3	1
27	2						34	38	7	13	3	1
28	2						31	29	7	13	4	1
29	2						30	31	6	7	4	1
30	2						29	35	6	6	2	1
31	1							30		6	2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	8	1	5.0	307
November	6	1	3.6	214
December			2.0	123
January				
February				
March				
April	35	10	22.4	1,330
May	38	19	29.3	1,800
June	27	6	14.4	857
July	13	4	6.0	369
August	5	2	3.9	240
September	2	1	1.3	77

Purgatoire River at Trinidad, Colo.

Location.- Water-stage recorder in sec. 18, T. 33 S., R. 64 W., at foot of State Street, in Trinidad. Prior to 1922 station was located at Commercial Street Bridge. Flow comparable.

Drainage area.- 742 square miles.

Records available.- May 1896 to July 1899, August to December 1905, November 1906 to March 1907, October 1907 to November 1912, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1896 to July 1899, August to December 1905, November 1906 to March 1907, October 1907 to November 1912, April 1916 to September 1934 in reports of State engineer.

Average discharge.- 22 years (1907-12, 1916-18, 1919-34), 89.4 second-feet.

Extremes.- Maximum discharge during year, 1,810 second-feet July 26, 27 (gage height, 3.80 feet); minimum daily discharge, 6 second-feet Dec. 17, Jan. 6, 7.
1896-99, 1905-12, 1916-34: Maximum discharge, 45,400 second-feet Sept. 30, 1904 (gage height, 16.6 feet, Commercial Street gage); minimum daily discharge, 2 second-feet Apr. 9, 10, 14-24, 1911, Apr. 13-22, 1925.

Remarks.- Records good except those estimated for Dec. 17-20, Feb. 25, 26, Mar. 26, July 4. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	34	17	14	14	18	22	44	132	54	22	24
2	22	49	21	17	16	17	20	44	124	44	25	24
3	40	49	18	15	14	20	20	41	114	33	28	28
4	37	51	20	15	15	20	25	42	111	137	43	24
5	30	53	19	17	15	17	27	41	111	43	42	21
6	30	53	14	6	15	19	28	36	91	28	33	20
7	30	68	22	6	17	20	27	38	68	22	48	34
8	32	58	24	11	17	18	27	44	60	17	26	27
9	29	51	21	9	15	21	27	51	57	17	22	42
10	26	49	23	18	10	18	32	84	54	16	30	31
11	24	42	22	22	18	20	32	84	48	16	36	20
12	24	38	18	20	18	18	33	84	39	16	43	18
13	26	32	20	18	29	19	33	84	38	14	41	13
14	30	29	15	18	34	20	34	97	44	13	46	21
15	35	23	12	24	29	20	37	106	58	19	39	36
16	29	20	10	22	26	21	41	82	66	21	47	23
17	32	21	6	15	27	26	44	80	51	25	73	19
18	35	20	13	15	26	73	43	79	48	19	57	17
19	40	16	14	22	22	26	39	80	38	19	54	14
20	35	15	18	11	26	20	37	80	29	16	42	12
21	30	15	20	14	26	20	41	88	26	19	37	12
22	22	16	18	22	21	21	41	170	25	24	32	9
23	22	15	17	22	24	22	46	111	23	17	27	8
24	21	13	13	22	30	28	48	111	27	34	23	7
25	20	15	15	21	29	27	56	150	31	77	27	17
26	20	15	14	15	29	25	62	147	27	272	47	17
27	20	16	18	13	29	23	66	129	25	350	39	14
28	24	17	13	13	22	22	60	132	38	71	31	14
29	23	15	11	17		22	51	129	47	33	28	14
30	26	15	13	13		22	48	144	51	42	26	13
31	27		14	13		22		156		25	24	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	40	20	27.8	1,710
November	68	13	30.8	1,830
December	24	6	16.5	1,010
January	24	6	16.1	990
February	34	10	21.9	1,220
March	73	17	22.7	1,400
April	66	20	38.2	2,270
May	170	36	89.9	5,530
June	132	23	56.7	3,370
July	350	13	50.1	3,080
August	73	22	36.7	2,260
September	42	7	19.8	1,180
The year	350	6	35.7	25,850

Purgatoire River at Ninemile Dam, near Higbee, Colo.

Location.- Water-stage recorder in sec. 32, T. 26 S., R. 54 W., at Ninemile Dam, 4 miles southwest of Higbee and 4 miles above Smith Canyon.

Drainage area.- 2,900 square miles.

Records available.- October 1933 to September 1934 in report of U. S. Geological Survey; October 1924 to September 1934 in reports of State engineer.

Average discharge.- 10 years, 101 second-feet.

Extremes.- Maximum discharge during year, 64,500 second-feet Sept. 15, from slope measurement (gage height, 12.00 feet); no flow for several days during summer. 1924-34: Maximum discharge, that of Sept. 15, 1934; no flow at times during 1924-25, 1927, 1929-34.

Remarks.- Records fair. Discharge estimated Nov. 5, 6, Dec. 19, 24-29, Jan. 7-17, 22, Feb. 25-27, Mar. 18, July 9, Sept. 10, 20-25. Discharge measured through Parshall Flume Oct. 1-4, 20, June 24-29, July 4, 5, 10-17, 19-23, 31, Aug. 1, 4-15, 23-29, Sept. 2-14, 26-30. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	10	21	18	16	32	13	7	0	475	8	178
2	10	14	40	19	16	33	14	4	0	186	148	6
3	7	14	36	23	17	26	11	3	0	115	122	1
4	7	15	37	21	16	21	11	3	0	25	33	0
5	72	10	35	22	17	19	10	3	0	60	19	0
6	118	10	31	18	18	17	10	2	0	226	11	0
7	46	17	30	14	17	15	10	2	0	29	4	0
8	37	21	25	14	17	19	8	0	0	190	3	0
9	19	23	21	14	17	17	8	0	0	70	1	0
10	14	25	23	14	19	14	9	0	0	42	1	1
11	12	23	22	14	21	14	8	0	0	13	0	0
12	12	25	23	14	21	17	6	0	0	8	0	32
13	12	40	21	15	22	14	4	0	0	8	44	13
14	10	30	21	15	35	13	4	0	0	0	49	6
15	10	22	18	15	28	12	4	0	80	0	18	11,300
16	8	22	26	15	26	14	3	0	848	0	112	343
17	8	21	23	15	23	14	3	0	370	4	410	109
18	8	19	22	21	26	10	3	0	246	48	297	58
19	8	18	16	21	33	15	2	0	118	43	159	167
20	8	19	14	17	30	14	3	0	42	14	343	100
21	8	17	16	17	26	13	3	51	23	8	326	30
22	10	17	20	17	32	16	3	122	20	1	109	20
23	10	15	20	18	33	16	2	230	12	1	42	18
24	9	14	10	17	25	14	2	125	3	0	48	16
25	9	14	10	18	20	14	2	37	2	0	22	12
26	10	14	10	19	20	12	2	10	2	212	15	10
27	10	14	10	17	20	12	5	7	3	2,010	8	10
28	10	14	12	17	26	18	5	10	5	450	3	11
29	10	14	12	17		15	3	3	1	221	1	10
30	10	13	19	14		16	2	1	0	109	0	9
31	11		19	14		12		0		48	114	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	118	7	17.5	1,080
November	40	10	18.1	1,080
December	40	10	21.5	1,320
January	23	14	16.9	1,040
February	35	16	22.8	1,270
March	33	10	16.4	1,010
April	14	2	5.8	345
May	230	0	20.0	1,230
June	848	0	59.2	3,520
July	2,010	0	149	9,160
August	410	0	79.7	4,900
September	11,300	0	415	24,700
The year	11,300	0	70.0	50,660

Purgatoire River at Highland Dam, near Las Animas, Colo.

Location.- Water-stage recorder in sec. 1, T. 25 S., R. 53 W., at Highland Dam, 11 miles southwest of Las Animas, Colo.

Drainage area.- 3,320 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; October 1931 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 33,000 second-feet (slope measurement) Sept. 15 (gage height, 14.00 feet, from flood marks); no flow for several days.

1931-34: Maximum discharge, that of Sept. 15, 1934; no flow at times during 1932-34.

Remarks.- Records fair except those estimated Oct. 9 to Nov. 12, Dec. 15 to Jan. 21, Jan. 25, Feb. 1-6, 13, June 25, July 15, 22, 26, Sept. 15-30, which may be poor. Discharge measured through Parshall Flume Oct. 1-8, Feb. 16 to Apr. 13, May 26 to Sept. 14 (below 34 second-feet). Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	6	17	9	6	23	11	0	0	175	63	234
2	5	6	28	9	4	19	S	0	0	100	78	85
3	4	6	25	9	4	18	S	0	0	32	162	17
4	3	4	24	10	6	17	8	0	0	25	80	S
5	3	7	22	10	6	15	7	0	0	33	25	4
6	3	6	21	10	7	12	7	0	0	41	14	0
7	49	6	19	10	16	15	8	0	0	55	9	0
8	30	6	18	9	16	15	7	0	0	319	8	0
9	7	12	17	8	19	16	6	0	0	108	4	20
10	7	19	17	6	20	14	5	0	0	79	2	32
11	7	20	14	10	20	12	4	0	0	22	0	16
12	5	15	14	10	13	11	3	0	0	10	22	7
13	4	14	14	6	8	12	1	0	0	S	34	3
14	2	7	14	6	9	13	0	0	0	4	20	1
15	1	13	14	6	10	12	0	0	0	1	24	2,300
16	0	13	14	6	18	10	0	0	324	0	15	2,500
17	0	10	13	10	17	7	0	0	289	0	96	500
18	0	12	13	6	18	2	0	0	86	0	171	100
19	0	13	13	12	20	17	0	0	19	13	140	75
20	0	14	12	12	24	15	0	0	16	6	90	50
21	1	13	12	12	25	13	0	0	13	2	275	40
22	7	10	12	13	23	11	0	97	7	1	108	30
23	8	9	12	11	14	10	0	112	4	0	126	25
24	10	10	11	9	14	16	0	74	1	0	90	20
25	12	12	11	6	15	14	0	48	51	0	60	15
26	12	12	11	8	25	13	0	23	81	60	18	10
27	10	14	10	10	18	12	0	18	16	2,390	13	10
28	10	12	10	8	17	11	0	16	4	500	12	10
29	9	11	4	9		13	0	12	3	195	4	10
30	8	12	10	10		17	0	6	1	126	7	9
31	6		10	9		13		1		93	5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	0	7.4	455
November	20	4	10.8	643
December	28	4	14.7	904
January	13	6	8.9	547
February	25	4	14.7	816
March	23	2	13.5	830
April	11	0	2.8	167
May	112	0	13.2	812
June	324	0	30.5	1,810
July	2,390	0	142	8,730
August	275	0	57.3	3,520
September	2,500	0	204	12,100
The year	2,500	0	43.4	31,330

Wild Horse Creek at Holly, Colo.

Location.- Water-stage recorder in sec. 15, T. 23 S., R. 42 W., a quarter of a mile southeast of Holly and just above mouth.

Records available.- October 1922 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; October 1922 to September 1934 in reports of State engineer.

Average discharge.- 12 years, 8.73 second-feet.

Remarks.- Records poor. Discharge estimated Mar. 1-12, May 1, July 7. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0			2	8	7		0	0	
2		0	0			12	9	26		0	0	
3		2	0			6	9	3		0	0	
4		2	0			2	10	1		0	0	
5		0	0			1	9	0		0	0	
6		0	0			1	10	0		0	0	
7		0	0			1	6	0		7	0	
8		0	0			1	0	0		34	0	
9		2	0			11	0	0		0	0	
10		3	0			2	0	0		4	0	
11		3	0			1	0	0		0	0	
12		2	0			1	0	0		0	0	
13		3	0			0	0	0		0	0	
14		3	0			0	0	0		0	11	
15		0	8			0	0	0		0	0	
16		0	7			0	0	0		0	0	
17		0	0			0	0	0		0	0	
18		0	0			0	0	0		0	0	
19		0	0			0	0	0		0	0	
20		0	0			0	0	0		0	0	
21		0	0			0	0	0		0	0	
22		0	0			0	0	0		0	0	
23		0	0			0	0	0		0	0	
24		0	0			0	0	0		0	0	
25		0	0			0	0	0		0	0	
26		0	0			0	0	0		0	0	
27		0	0			0	0	0		0	0	
28		0	0			0	0	0		0	0	
29		0	0			0	0	0		0	0	
30		0	0			0	0	0		0	0	
31			0			0		0		0	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	3	0	.7	42
December	8	0	.5	31
January	0	0	0	0
February	0	0	0	0
March	12	0	1.3	80
April	10	0	2.0	119
May	26	0	1.2	74
June	0	0	0	0
July	34	0	1.5	92
August	11	0	.4	25
September	0	0	0	0
The year	34	0	.6	463

Note.- No flow during months left blank.

Holly Drain near Holly, Colo.

(Formerly published as "Holly Drain near Coolidge, Kans.")

Location.- Water-stage recorder in sec. 16, T. 23 S., R. 41 W., 100 yards west of Colorado-Kansas line, 1 mile above mouth, and 3½ miles east of Holly. Cheyenne Creek enters just above station.

Records available.- January 1924 to September 1927, October 1933 to September 1934 in reports of U. S. Geological Survey; January 1924 to September 1934 in reports of State engineer.

Average discharge.- 10 years, 33.6 second-feet.

Extremes.- Maximum discharge during year, 225 second-feet May 2 (gage height, 6.12 feet); minimum daily discharge, 12 second-feet Aug. 20.
1924-34: Maximum discharge, 390 second-feet July 29, 1927 (gage height, 6.5 feet); minimum daily discharge, 12 second-feet January 1924, Aug. 17, 18, 20, 21, 1927, Aug. 20, 1934.

Remarks.- Records good except those estimated Oct. 1, 3-5, 7-9, 26-30, Nov. 1-6, 8-12, 14-17, 19, Dec. 19-25, 27-31, Jan. 2-4, 6, 7, 9-11, 13-15, 17-23, 25, 26, 28.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	31	30	33	27	48	29	35	20	27	21	13
2	26	30	29	34	27	48	27	78	21	20	20	14
3	25	30	28	35	26	29	27	36	22	21	20	14
4	24	29	30	38	26	23	23	32	20	27	19	16
5	23	29	30	44	27	21	23	29	21	31	18	15
6	23	29	33	30	28	20	21	26	21	22	17	15
7	23	28	30	24	27	20	22	27	22	21	17	15
8	24	25	28	22	28	23	28	27	20	75	16	15
9	25	28	28	22	23	30	24	26	20	24	16	15
10	26	28	27	22	21	29	23	25	21	20	15	15
11	29	29	29	22	23	46	23	26	19	19	15	17
12	31	29	29	22	23	47	24	25	20	18	15	17
13	31	30	28	24	24	50	22	25	20	18	15	17
14	31	30	28	26	24	59	22	27	18	19	15	17
15	31	30	38	28	24	63	23	27	24	19	14	16
16	30	29	41	34	23	58	63	24	31	18	14	17
17	28	29	40	34	26	36	26	21	22	17	14	21
18	31	29	34	33	30	30	22	25	20	17	13	19
19	31	29	33	33	27	29	23	20	21	17	13	25
20	31	28	32	32	36	35	24	19	21	17	12	23
21	30	30	30	32	30	62	25	20	25	17	15	18
22	30	31	28	32	24	56	23	22	19	17	14	19
23	30	31	26	31	23	53	24	20	20	17	14	20
24	30	31	25	31	22	58	26	20	19	17	14	25
25	30	34	24	31	20	54	26	25	22	17	15	25
26	30	30	23	31	21	55	24	24	21	17	14	23
27	30	29	24	31	30	51	24	20	20	22	14	23
28	30	28	26	29	33	51	24	19	20	25	15	20
29	30	28	28	28		46	24	21	20	24	16	21
30	30	28	30	32		42	25	21	22	21	14	22
31	31		31	29		40		20		22	13	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	31	23	28.4	1,750
November	34	28	29.4	1,750
December	41	23	29.7	1,830
January	44	22	30.0	1,840
February	36	20	25.8	1,430
March	63	20	42.3	2,600
April	63	21	25.5	1,520
May	78	19	26.2	1,610
June	31	18	21.1	1,260
July	75	17	22.0	1,350
August	21	12	15.4	947
September	25	13	18.4	1,090
The year	78	12	26.2	18,980

Amazon Canal near Hartland, Kans.

Location.- Water-stage recorder in SE¼ sec. 9, T. 25 S., R. 37 W., 2½ miles below head gate and half a mile west of Hartland.

Records available.- Irrigation seasons 1921-24, October 1930 to September 1934 in reports of U. S. Geological Survey; March 1921 to September 1934 in reports of Division of Water Resources, Kansas State Board of Agriculture.

Extremes.- Maximum discharge during year, 277 second-feet June 17 (gage height, 6.80 feet); no flow during extensive periods.
1921-24, 1930-34: Maximum discharge, 490 second-feet Aug. 28, 1933 (gage height, 8.80 feet); no flow during extensive periods.

Remarks.- Records fair. Canal diverts water from left bank of Arkansas River in sec. 7, T. 25 S., R. 37 W. Water used for irrigation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0	0	125		0	0	0		0
2			0	0	0	111		0	0	0		0
3			0	0	0	106		0	0	0		0
4			0	0	0	50		0	0	0		0
5			19	0	0	0		0	0	0		0
6			60	0	0	0		0	0	0		0
7			83	0	0	0		0	0	0		0
8			82	0	0	0		0	0	80		0
9			78	0	0	0		0	0	207		0
10			76	0	0	0		0	0	34		0
11			77	0	0	0		0	0	0		0
12			81	0	0	0		0	0	0		0
13			81	0	0	0		0	0	0		0
14			81	0	0	0		0	0	0		0
15			77	0	0	0		0	0	0		0
16			77	0	0	0		0	0	0		56
17			83	0	0	0		0	194	0		239
18			84	31	0	0		0	205	0		196
19			12	103	0	0		0	133	0		21
20			34	99	0	0		0	11	0		0
21			36	88	0	0		0	0	0		0
22			64	6	0	0		0	0	0		0
23			72	0	0	0		0	0	0		0
24			72	0	6	0		0	0	0		0
25			7	0	160	0		19	0	0		0
26			0	0	146	0		91	0	0		0
27			0	0	133	0		2	0	0		0
28			0	0	129	0		0	0	0		0
29			0	0		0		0	0	0		0
30			0	0		0		0	0	0		0
31			0	0		0		0		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	84	0	43.7	2,690
January	103	0	10.5	649
February	160	0	20.5	1,140
March	125	0	12.6	778
April	0	0	0	0
May	91	0	3.6	222
June	205	0	18.1	1,080
July	207	0	10.4	637
August	0	0	0	0
September	239	0	17.1	1,020
The year	239	0	11.3	8,220

Note.- No flow during months left blank.

South Side Ditch near Hartland, Kans.

Location.- Water-stage recorder in SE¼ sec. 15, T. 25 S., R. 37 W., three-quarters of a mile south of Hartland and 1½ miles below diversion from Arkansas River.

Records available.- Irrigation seasons 1921-24, October 1930 to September 1934 in reports of U. S. Geological Survey; March 1921 to September 1934 in reports of Division of Water Resources, Kansas State Board of Agriculture.

Extremes.- Maximum discharge during year, 306 second-feet Sept. 16 (gage height, 8.15 feet); no flow during extensive periods.
1921-24, 1930-34: Maximum, that of Sept. 16, 1934; no flow during extensive periods.

Remarks.- Records fair except those for Sept. 16-21, which are poor. Ditch diverts water from right bank of Arkansas River in sec. 16, T. 25 S., R. 37 W. Water used for irrigation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	96				0	0	13	0
2				0	97				0	0	0	0
3				0	94				0	0	0	0
4				0	87				0	0	0	0
5				0	86				0	0	0	0
6				0	87				0	0	0	0
7				0	88				0	0	0	0
8				0	90				0	61	0	0
9				0	89				0	189	0	0
10				0	88				0	25	0	0
11				0	0				0	0	0	0
12				0	0				0	0	0	0
13				0	0				0	0	0	0
14				0	0				0	0	0	0
15				0	0				0	0	0	0
16				0	0				0	0	0	277
17				0	75				130	0	0	180
18				0	64				133	0	0	82
19				0	0				0	0	0	148
20				0	0				0	0	0	101
21				0	0				0	0	0	57
22				41	0				0	0	0	31
23				100	0				0	0	0	16
24				100	0				0	0	0	15
25				74	0				0	0	0	14
26				12	0				0	0	0	0
27				12	0				0	0	0	0
28				63	0				0	107	0	0
29				95					0	114	0	0
30				94					0	48	0	0
31				97						20	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January	100	0	22.2	1,360
February	97	0	37.2	2,060
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	133	0	8.8	522
July	189	0	18.2	1,120
August	13	0	.4	26
September	277	0	30.7	1,830
The year	277	0	9.6	6,920

Note.- No flow during months left blank.

1230 O—35——7

Great Eastern Canal at Lakin, Kans.

Location.- Water-stage recorder in NE¼ sec. 28, T. 24 S., R. 36 W., half a mile west of Lakin and 6 miles northeast of Hartland.

Records available.- Irrigation seasons 1921-24, October 1930 to September 1934 in reports of U. S. Geological Survey; March 1921 to September 1934 in reports of Division of Water Resources, Kansas State Board of Agriculture.

Extremes.- Maximum discharge during year, 462 second-feet Sept. 17 (gage height, 7.83 feet); no flow during extensive periods.
1921-24, 1930-34: Maximum, that of Sept. 17, 1934; no flow during extensive periods.

Remarks.- Records poor. Stage-discharge relation affected by ice Dec. 30 to Jan. 6, Jan. 8-14. Discharge estimated Dec. 30 to Jan. 6, Jan. 8-14, 22, Feb. 15-25, 28, Mar. 1-3. Canal diverts water from left bank of Arkansas River in sec. 16, T. 25 S., R. 37 W. Water used directly for irrigation or stored in Lake McKinney.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	33		0				0	0		0
2		0	165		0	110			0	0		0
3		0	77	150	0				0	0		0
4		23	9		0	70			0	0		0
5		31	60		0	125			0	0		0
6		36	13		0	105			0	0		0
7		36	5	68	0	77			0	0		0
8		34	2	50	0	58			0	0		0
9		31	0	70	0	92			0	0		0
10		30	0		0	100			0	0		0
11		31	0		84	92			0	0		0
12		30	0	100	143	72			0	0		0
13		13	0		114	62			0	0		0
14		0	0		114	54			0	0		0
15		0	0	91		55			0	0		0
16		0	0	52	90	54			0	0		293
17		0	0	121		36			166	0		445
18		0	0	104	90	15			122	0		309
19		0	11	11	90	94			0	0		123
20		0	36	0		97			0	0		22
21		0	36	0	100	85			0	0		2
22		0	28	11		88			0	0		1
23		0	1	0		85			0	0		0
24		30	0	0	3	77			0	0		0
25		62	1	0	3	74			0	0		0
26		55	38	71	3	75			0	0		0
27		26	27	64	7	0			0	0		0
28		0	68	35	3	0			0	97		0
29		0	101	0		0			0	39		0
30		0	180	0		0			0	23		0
31			180	0		0				0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	62	0	15.6	928
December	180	0	34.5	2,120
January		0	69.9	4,300
February	143	0	47.3	2,630
March	125	0	66.8	4,110
April	0	0	0	0
May	0	0	0	0
June	166	0	9.6	571
July	97	0	5.1	315
August	0	0	0	0
September	445	0	39.8	2,370
The year	445	0	24.0	17,300

Note.- No flow during months left blank.

Farmers Ditch near Garden City, Kans.

Location.- Water-stage recorder in NW¼ sec. 4, T. 24 S., R. 34 W., 4 miles below head gate, 4 miles northwest of Holcomb, and 10 miles west of Garden City.

Records available.- Irrigation seasons 1921-24, October 1930 to September 1934 in reports of U. S. Geological Survey; March 1921 to September 1934 in reports of Division of Water Resources, Kansas State Board of Agriculture.

Extremes.- Maximum discharge during year, 251 second-feet May 27 (gage height, 7.40 feet); no flow during extensive periods.
1921-24, 1930-34: Maximum discharge, 317 second-feet Aug. 5, 1933 (gage height, 7.97 feet); no flow during extensive periods.

Remarks.- Records good except those for Sept. 17-19, which are fair. Ditch diverts water from left bank of Arkansas River in sec. 12, T. 24 S., R. 35 W. Water used for irrigation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	44	0		0	74	9	1	0		0
2		0	8	0		0	62	9	0	0		0
3		0	9	0		0	55	9	0	0		0
4		12	63	0		0	54	29	0	0		0
5		5	67	0		0	55	52	0	0		0
6		4	17	0		0	55	32	0	0		0
7		0	6	0		0	55	22	0	0		0
8		0	3	0		0	49	16	0	0		0
9		0	0	0		0	39	11	0	37		0
10		0	0	0		0	33	8	0	14		0
11		2	0	0		0	29	8	0	0		0
12		0	0	0		0	25	7	0	0		0
13		0	0	0		27	24	7	0	0		0
14		31	0	0		29	23	7	0	0		0
15		57	0	0		30	22	7	0	0		0
16		65	0	0		29	21	5	0	0		0
17		67	0	0		28	21	4	0	0		189
18		69	0	0		0	21	3	0	0		215
19		70	0	0		5	20	2	0	0		33
20		74	0	0		7	19	2	0	0		13
21		77	0	0		7	17	1	0	0		6
22		77	0	0		6	17	2	0	0		4
23		53	0	0		6	15	2	0	0		0
24		9	0	0		0	15	2	0	0		0
25		6	0	0		0	13	0	0	0		0
26		1	0	0		0	12	72	0	0		0
27		1	0	0		33	13	223	0	0		0
28		51	0	0		62	15	161	0	0		0
29		67	0	0		72	13	83	0	0		0
30		71	0	0		76	11	43	0	0		0
31			0	2		81		19		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	77	0	29.0	1,720
December	67	0	7.0	430
January	2	0	.1	4.0
February	0	0	0	0
March	81	0	16.1	988
April	74	11	29.9	1,780
May	223	0	27.6	1,700
June	1	0	0	2.0
July	87	0	3.2	200
August	0	0	0	0
September	215	0	15.3	912
The year	223	0	10.7	7,740

Note.- No flow during months left blank.

Garden City Canal near Garden City, Kans.

Location.- Water-stage recorder in SW¼ sec. 3, T. 24 S., R. 34 W., 1⅛ miles below diversion from Arkansas River, 3 miles west of Holcomb, and 9 miles west of Garden City.

Records available.- Irrigation seasons 1921-24, October 1930 to September 1934 in reports of U. S. Geological Survey; April 1921 to September 1934 in reports of Division of Water Resources, Kansas State Board of Agriculture.

Extremes.- Maximum discharge during year, 63 second-feet July 11 (gage height, 7.45 feet); no flow during extensive periods.
1921-24, 1930-34: Maximum discharge, 80 second-feet Oct. 5, 1930 (gage height, 7.14 feet, new datum); no flow during extensive periods.

Remarks.- Records fair. Discharge estimated June 6-13. Canal diverts water from left bank of Arkansas River in sec. 5, T. 24 S., R. 34 W. Water used for irrigation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	6	3	11	0	2	0.6	8	0		0
2		0	10	2	12	0	2	.6	11	0		0
3		0	4	3	12	0	2	.6	7	0		0
4		1	3	3	12	0	2	.6	20	0		0
5		3	3	3	12	0	1	.9	13	0		0
6		3	10	3	13	0	1	.7		0		0
7		3	27	2	13	0	1	.6		0		0
8		3	23	5	14	0	1	.6		0		0
9		3	21	4	20	0	1	.6		30		0
10		3	20	3	21	0	1	.6	3	43		0
11		3	11	3	3	0	1	.7		51		0
12		2	4	2	3	0	1	.4		22		0
13		2	3	3	2	0	1	.6		6		0
14		2	3	2	1	0	1	.6	2	2		0
15		1	3	3	0	0	1	.4	1	0		0
16		1	2	3	0	0	1	.2	2	0		0
17		1	2	2	0	0	1	.1	4	0		31
18		.9	2	2	0	0	1	.1	e	0		9
19		.9	2	2	0	0	1	.1	4	0		5
20		.9	2	1	0	0	1	.1	4	0		4
21		.9	2	2	0	2	1	0	19	0		4
22		.9	9	2	0	2	1	0	16	0		3
23		1	11	2	0	12	1	0	8	0		1
24		4	9	2	0	11	.9	0	3	0		3
25		4	5	1	0	11	1	0	2	0		0
26		4	2	.5	0	10	1	1	.3	0		0
27		4	3	1	0	6	1	3	.1	0		0
28		2	3	1	0	2	1	2	0	0		0
29		2	3	1		2	.8	2	0	0		0
30		2	3	2		3	.7	1	0	0		0
31			4	8		3		1		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	4	0	1.95	116
December	22	2	6.9	426
January	8	.5	2.47	152
February	21	0	5.3	296
March	12	0	2.1	127
April	2	.7	1.11	66
May	3	0	.63	39
June	20	0	5.21	310
July	51	0	5.0	305
August	0	0	0	0
September	31	0	2.0	119
The year	51	0	2.70	1,960

Note.- No flow during months left blank.

Pawnee River near Larned, Kans.

Location.- Water-stage recorder in NW¼ sec. 34, T. 21 S., R. 18 W., at Moffet Dam, 11½ miles west of Larned.

Drainage area.- About 2,300 square miles.

Records available.- November 1924 to September 1934.

Extremes.- Maximum discharge during year, 1,820 second-feet Aug. 31 (gage height, 17.44 feet); minimum, 1 second-foot July 24 to Aug. 24, Sept. 29.
1924-34: Maximum discharge, 3,640 second-feet May 26, 1933 (gage height, 23.37 feet); no flow during periods in 1926, 1930, 1931, and 1933. Bank-full stage, 24 feet.

Remarks.- Records good except those for Oct. 1 to Apr. 30, which are fair. Discharge estimated Feb. 25, 26, Mar. 21, 22, Apr. 7 to May 2. Diversions for irrigation by pumping above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	6	6	5	4	6	5	3	2	4	1	727
2	4	6	11	4	2	8	5	3	2	3	1	458
3	5	5	17	4	3	8	5	2	2	2	1	345
4	4	6	20	4	4	10	5	3	2	2	1	64
5	4	6	15	4	5	14	4	2	2	2	1	29
6	4	6	11	4	5	16	4	2	15	2	1	16
7	3	6	7	4	5	15		9	13	2	1	11
8	3	5	5	4	5	16		4	4	2	1	6
9	4	5	5	4	4	18		2	2	2	1	5
10	4	5	5	4	5	16		2	2	5	1	4
11	4	5	4	4	6	13		2	157	2	1	2
12	4	5	4	4	6	12		2	77	2	1	2
13	4	6	4	4	6	10		2	29	3	1	2
14	5	5	4	4	6	8		2	13	3	1	2
15	6	5	4	4	5	9	4	2	8	3	1	2
16	4	5	5	4	5	7		3	18	2	1	2
17	15	5	6	4	7	7		3	49	2	1	2
18	137	5	3	5	9	7		2	522	2	1	2
19	41	5	3	6	7	8		2	1,230	2	1	2
20	18	6	3	6	7	9		2	770	2	1	2
21	10	4	4	6	8	9		2	142	2	1	2
22	8	3	5	6	7	8		2	55	2	1	2
23	6	4	4	5	9	7	3	2	34	2	1	2
24	5	3	5	5	8	6		153	24	1	1	2
25	3	3	5	5	9	6		73	16	1	75	2
26	3	3	5	5	8	6		367	11	1	836	2
27	3	4	5	4	8	6	3	68	6	1	228	2
28	5	5	5	5	7	6		7	5	1	50	2
29	5	6	5	4		6		5	5	1	12	1
30	5	6	5	5		5		3	4	1	5	2
31	6		6	5		5		3		1	1,270	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	137	3	10.8	666
November	6	3	5.0	296
December	20	3	6.3	389
January	6	4	4.5	280
February	9	2	6.1	337
March	18	5	9.2	567
April	5	3	3.9	230
May	367	2	23.8	1,470
June	1,230	2	107	6,390
July	5	1	2.0	125
August	1,270	1	80.6	4,940
September	727	1	56.8	3,380
The year	1,270	1	26.4	19,070

Little Arkansas River at Valley Center, Kans.

Location.- Chain gage in SW¼ sec. 1, T. 26 S., R. 1 W., 1 mile south of Valley Center and 14 miles above mouth.

Drainage area.- 1,332 square miles (revised).

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 143 second-feet.

Extremes.- Maximum discharge recorded during year, 201 second-feet Sept. 29 (gage height, 3.84 feet); minimum, 1 second-foot Dec. 27.
1922-34: Maximum discharge recorded, 10,500 second-feet June 11, 1923 (gage height, 18.02 feet); minimum, 1 second-foot Dec. 27, 1933. Bank-full stage, 10 feet.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	17	17	12	19	22	21	6	12	14	16	12
2	137	26	16	16	19	26	22	6	12	14	14	13
3	90	30	22	13	22	35	22	7	11	14	14	15
4	70	39	21	20	19	39	26	13	11	13	13	15
5	52	37	24	29	22	42	22	10	10	13	12	14
6	43	42	24	22	22	37	30	18	10	23	12	13
7	34	42	24	25	22	37	35	41	9	22	12	13
8	29	35	24	23	22	39	26	108	9	22	12	12
9	28	39	17	18	22	37	19	108	10	18	12	12
10	27	50	17	16	22	32	12	66	10	16	11	16
11	27	47	17	15	26	28	11	41	10	15	11	15
12	28	50	16	16	24	26	19	25	10	14	10	14
13	24	56	16	15	26	26	21	25	10	14	11	12
14	23	63	17	15	26	21	16	54	11	14	12	12
15	24	56	16	15	26	17	17	158	11	14	12	12
16	23	56	19	16	24	23	19	168	14	13	12	12
17	25	56	8	16	24	29	11	107	14	13	12	12
18	23	63	6	16	26	18	21	90	15	13	12	11
19	22	56	9	20	26	23	11	73	14	13	12	11
20	19	17	5	20	26	22	12	55	14	13	11	10
21	16	17	9	20	24	18	14	44	13	13	11	10
22	19	17	4	22	22	18	12	36	14	13	12	26
23	22	17	8	20	22	15	11	28	15	13	12	23
24	21	14	5	23	22	16	12	26	20	13	12	179
25	22	16	11	20	14	15	12	23	16	14	13	69
26	22	17	4	20	9	23	12	19	15	14	12	47
27	21	17	1	18	9	18	10	16	14	14	13	37
28	30	17	11	18	19	18	10	15	14	14	15	27
29	24	17	16	16		15	8	14	14	14	14	201
30	16	17	12	16		18	6	14	14	14	14	131
31	16		20	16		20		13		15	13	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	137	16	34.8	2,140
November	63	14	34.8	2,070
December	24	1	14.1	869
January	29	12	18.3	1,120
February	26	9	21.6	1,200
March	42	15	24.9	1,530
April	35	6	16.7	992
May	168	6	46.0	2,830
June	20	9	12.5	746
July	23	13	14.7	904
August	16	10	12.4	762
September	201	10	33.5	2,000
The year	201	1	23.7	17,160

Walnut River at Winfield, Kans.

Location.- Chain gage in NE¼ sec. 33, T. 32 S., R. 4 E., 1 mile south of Winfield and 1 mile above Black Creek.

Drainage area.- 1,894 square miles (revised).

Records available.- November 1921 to September 1934.

Average discharge.- 13 years, 618 second-feet.

Extremes.- Maximum discharge recorded during year, 5,660 second-feet May 16 (gage height, 13.84 feet); minimum, 1 second-foot Aug. 24-27, 29-31, Sept. 1.
1921-34: Maximum discharge recorded, 94,400 second-feet Nov. 18, 1928 (gage height, 40.61 feet); no flow Nov. 11, 1928. Bank-full stage, 30 feet.

Remarks.- Records fair. Discharge estimated Feb. 28. Flow occasionally regulated by mill above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	16	12	20	15	22	24	44	48	72	6	1
2	19	16	12	17	17	28	22	47	44	16	5	2
3	23	14	16	20	16	31	21	79	44	14	4	1
4	20	15	17	20	16	35	47	163	34	11	4	1
5	21	14	11	21	16	38	1,990	140	36	10	3	1
6	17	14	21	18	14	35	3,040	111	38	11	2	2
7	15	14	22	20	14	34	2,100	120	39	10	3	2
8	19	13	17	20	15	31	1,080	88	34	9	3	2
9	15	14	16	20	16	29	423	59	32	9	5	6
10	15	19	19	19	15	29	312	53	27	8	4	232
11	17	14	21	21	14	31	176	53	29	7	4	163
12	16	14	21	21	11	22	152	45	28	6	4	20
13	16	13	18	16	14	26	102	68	24	7	3	44
14	17	3	15	21	14	22	90	130	43	7	3	28
15	18	12	17	21	13	21	87	140	111	6	3	69
16	17	3	17	20	13	21	82	3,480	2,600	8	4	44
17	19	13	11	18	14	22	80	930	1,180	7	2	71
18	20	13	16	22	8	18	85	930	384	8	2	100
19	22	14	41	20	15	20	80	296	203	8	3	25
20	47	15	33	21	19	21	83	203	120	8	3	99
21	43	14	34	14	14	20	80	152	53	7	3	2,260
22	38	14	34	17	19	21	71	120	56	5	2	347
23	48	14	32	17	15	20	65	111	48	7	2	465
24	40	13	20	17	19	17	54	87	38	7	1	203
25	30	14	18	16	16	17	63	75	29	7	1	152
26	28	14	14	17	14	22	61	62	25	7	1	111
27	20	15	23	17	16	26	59	58	25	7	1	74
28	19	14	20	14	14	21	54	54	15	5	2	75
29	18	14	17	19		21	53	55	17	5	1	830
30	16	14	16	14		28	51	56	34	5	1	384
31	17		20	20		24		54		7	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	48	15	23.0	1,410
November	19	3	13.4	799
December	41	11	20.0	1,230
January	22	14	16.6	1,150
February	19	8	14.9	825
March	38	17	24.9	1,530
April	3,040	21	356	21,200
May	3,480	44	260	15,990
June	2,600	15	181	10,790
July	72	5	10.0	617
August	6	1	2.8	171
September	2,260	1	194	11,530
The year	3,480	1	92.9	67,240

Cimarron River at Oilton, Okla.

Location.- Wire-weight gage in SW¼ sec. 29, T. 19 N., R. 7 E., at highway bridge half a mile north of Oilton and 25 miles above confluence with Arkansas River.

Records available.- July to September 1934.

Extremes.- Maximum discharge recorded during period, 9,900 second-feet Sept. 3 (gage height, 9.15 feet); minimum, 17 second-feet Aug. 11, 12 (gage height, 3.26 feet).

Remarks.- Records fair. Discharge estimated July 1-3.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										72	18	1,050
2										72	18	3,630
3										72	18	9,000
4										72	18	4,380
5										66	18	2,430
6										114	18	1,620
7										118	18	1,300
8										69	18	1,000
9										53	19	760
10										48	18	3,630
11										44	17	3,630
12										42	17	9,000
13										38	22	6,330
14										32	26	2,270
15										31	23	1,560
16										28	23	1,050
17										27	23	900
18										26	22	680
19										25	23	560
20										22	23	600
21										22	22	2,270
22										20	55	1,250
23										19	470	600
24										18	142	415
25										18	365	365
26										18	1,250	365
27										18	900	340
28										18	900	315
29										18	720	1,690
30										18	365	1,820
31										18	850	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October				
November				
December				
January				
February				
March				
April				
May				
June				
July	118	18	41.2	2,530
August	1,250	17	208	12,770
September	9,000	315	2,167	128,900
The period				144,200

Verdigris River at Independence, Kans.

Location.- Water-stage recorder in NE¼ sec. 32, T. 32 S., R. 16 E., 2 miles east of Independence and 3½ miles below Elk River. Prior to Dec. 26, 1933, chain gage was used at same location and datum.

Drainage area.- 2,952 square miles (revised).

Records available.- April to September 1904, November 1921 to September 1934.

Average discharge.- 13 years (1921-34), 1,497 second-feet.

Extremes.- Maximum discharge during year, 13,900 second-feet May 16 (gage height, 24.10 feet); no flow July 27-29, Aug. 12-21.
1904, 1921-34: Maximum discharge, 124,000 second-feet Oct. 3, 1927 (gage height, 46.04 feet at former site); no flow Oct. 18, 20, 22-24, 1932; July 27-29, Aug. 12-21, 1934. Bank-full stage, 36 feet.

Remarks.- Records good except those for Oct. 1 to Dec. 26, which are fair. Discharge interpolated Dec. 25.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	9	10	134	82	54	46	98	125	13	6	1
2	93	8	14	127	82	82	54	96	100	12	5	1
3	46	55	11	127	79	203	45	125	77	10	5	3
4	24	380	11	138	69	424	394	1,700	65	7	4	3
5	20	333	10	145	58	424	2,060	4,730	52	6	3	2
6	15	215	10	134	55	306	4,940	1,660	36	11	2	1
7	11	115	12	285	62	245	9,450	1,080	25	81	2	1
8	8	79	14	394	69	188	3,890	702	20	55	1	1
9	8	57	15	325	69	153	1,580	486	17	23	1	1
10	6	46	16	328	57	136	1,020	552	17	14	1	2
11	4	43	15	352	55	119	770	502	14	11	1	3
12	3	29	14	330	55	102	552	380	16	24	0	3
13	4	19	14	298	55	94	424	263	12	28	0	8
14	4	23	13	266	60	91	366	1,300	11	17	0	618
15	5	17	13	235	58	79	339	10,100	35	12	0	213
16	9	15	13	225	54	75	314	13,300	1,940	9	0	62
17	151	15	12	190	51	70	306	9,820	1,620	7	0	22
18	60	13	11	181	49	65	366	1,980	945	5	0	12
19	30	11	2,800	169	51	58	409	1,160	325	4	0	11
20	15	11	6,550	156	49	46	366	875	203	3	0	46
21	10	10	1,220	156	48	51	285	665	138	2	0	618
22	10	11	702	142	48	54	240	518	96	2	2	1,340
23	9	12	535	147	48	49	203	409	171	1	2	822
24	6	12	349	140	55	38	190	352	136	1	2	325
25	3	12	243	121	69	38	169	325	102	1	1	173
26	48	9	136	111	67	40	149	298	57	1	1	107
27	309	8	190	107	62	46	147	233	39	0	1	75
28	147	10	153	103	52	58	134	188	24	0	1	84
29	55	11	138	91		54	121	171	15	0	1	1,660
30	21	10	129	75		43	105	160	14	1	1	651
31	14		127	77		51		142		5	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	309	3	40.3	2,480
November	380	8	53.3	3,170
December	6,550	10	435	26,780
January	394	75	187	11,520
February	82	48	59.6	3,310
March	424	38	114	7,010
April	9,450	45	981	58,380
May	13,300	96	1,750	107,900
June	1,940	11	215	12,780
July	81	0	11.8	726
August	6	0	1.4	87
September	1,660	1	229	13,620
The year	13,300	0	342	247,800

Neosho River near Iola, Kans.

Location.- Water-stage recorder in NE¼ sec. 9, T. 25 S., R. 18 E., 3 miles southwest of Iola and half a mile below Elm Creek.

Drainage area.- 3,795 square miles (revised).

Records available.- August 1895 to November 1903, October 1917 to September 1934.

Average discharge.- 17 years (1917-34), 1,149 second-feet.

Extremes.- Maximum discharge during year, 16,400 second-feet May 15 (gage height, 18.27 feet); minimum, 0.6 second-foot Sept. 7 (gage height, 2.56 feet).
1895-1903, 1917-34: Maximum discharge, 46,000 second-feet Sept. 13, 1926 (gage height, 33.2 feet); no flow for several days in September and October 1897.

Remarks.- Records good except those for Dec. 13-15, 25, Jan. 8 to Mar. 10, which were estimated.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,120	28	28	40		30	61	41	77	35	12	1
2	790	30	28	40		118	66	34	77	28	12	3
3	334	34	25	38		446	68	31	61	25	14	5
4	163	31	25	38		151	80	70	57	21	14	2
5	91	35	25	35		118	69	206	48	21	14	.8
6	80	34	25	35		91	3,220	151	47	41	14	.7
7	66	34	22	80		80	3,730	1,380	54	41	14	.6
8	64	32	20	150		70	1,420	620	47	44	14	1
9	59	30	21			60	680	455	44	40	14	2
10	48	26	20			55	590	272	38	34	11	8
11	47	27	23	45		77	457	612	339	26	10	6
12	57	25	30			84	313	419	468	44	7	5
13	70	23				61	253	403	125	46	6	3
14	64	22	30			66	151	4,940	151	40	1	6
15	55	23				63	134	15,300	334	34	1	9
16	52	21	31	35		63	118	11,300	392	31	1	6
17	61	22	30			55	96	3,820	1,350	27	1	3
18	57	22	28			59	104	1,540	1,680	28	.9	3
19	403	23	590			61	96	1,000	1,120	27	.8	2
20	245	27	682			57	84	700	1,220	27	.7	36
21	138	28	282			55	84	528	545	22	.7	292
22	82	28	110			50	102	430	282	18	1	534
23	82	30	94			50	94	329	206	17	1	206
24	59	27	86			52	86	262	134	12	1	131
25	50	26	65	30		50	75	229	104	15	.9	70
26	50	22	44			54	73	176	96	12	1	55
27	41	21	38			55	70	144	82	16	.9	159
28	35	20	34			64	68	128	64	17	.9	167
29	35	22	32			63	61	118	47	14	1	121
30	34	23	30			63	54	107	42	14	1	113
31	34		36			66		96		14	.9	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,120	34	147	9,050
November	35	20	26.6	1,580
December	682	20	83.7	5,150
January			40.7	2,500
February			30	1,670
March	446	30	80.2	4,930
April	3,730	54	426	25,340
May	15,300	31	1,475	90,690
June	1,680	38	311	18,510
July	46	12	26.8	1,650
August	14	.7	5.57	343
September	534	.6	65.0	3,870
The year	15,300	.6	228	165,300

Neosho River near Parsons, Kans.

Location.- Chain gage in NE¼ sec. 21 T. 31 S., R. 21 E., half a mile above St. Louis-San Francisco Railway bridge and 10 miles east of Parsons.

Drainage area.- 4,828 square miles (revised).

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 2,038 second-feet.

Extremes.- Maximum discharge recorded during year, 15,700 second-feet May 17 (gage height, 18.03 feet); no flow Aug. 26-31, Sept. 1-10, 12, 13.
1921-34: Maximum discharge recorded, 48,100 second-feet Nov. 24, 1928 (gage height, 27.50 feet); minimum, that of August and September 1934. Bank-full stage, 24 feet.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	825	39	16	65	53	34	111	76	130	74	2	0
2	1,420	36	19	59	45	41	113	67	119	64	2	0
3	1,260	36	16	64	39	167	96	65	119	42	1	0
4	675	45	16	72	36	925	300	96	113	26	1	0
5	340	77	19	69	35	625	2,200	1,200	142	23	1	0
6	228	54	19	70	36	380	1,660	1,600	130	26	2	0
7	154	42	19	111	37	263	6,310	675	106	27	27	0
8	42	39	20	130	35	181	5,250	980	76	35	32	0
9	98	36	17	181	35	154	2,140	1,260	56	41	21	0
10	88	39	19	282	34	142	1,780	725	52	36	11	0
11	77	34	17	228	35	100	1,090	525	56	29	6	1
12	69	31	16	195	33	87	725	380	725	25	8	0
13	65	28	16	167	30	76	550	725	1,040	28	2	0
14	65	24	17	181	28	79	450	500	475	23	1	1,480
15	69	23	16	181	30	90	575	6,970	320	21	1	4,650
16	76	23	14	154	28	76	320	13,500	3,880	15	1	1,540
17	85	23	16	142	62	74	263	15,100	1,900	11	1	246
18	76	23	14	119	69	76	228	5,650	1,420	15	1	81
19	65	22	425	104	53	69	228	1,900	2,140	17	1	53
20	54	20	1,960	98	53	60	195	1,310	1,310	15	1	35
21	167	19	1,660	96	52	52	181	980	1,480	11	1	117
22	212	19	825	83	46	53	142	825	875	8	1	47
23	167	18	475	81	39	52	119	625	450	5	1	228
24	119	19	263	85	40	50	119	500	320	4	1	525
25	108	19	212	87	41	47	130	380	228	3	1	282
26	98	16	181	77	36	50	119	300	167	4	0	181
27	56	17	130	72	35	58	113	263	130	4	0	119
28	56	18	42	64	33	65	92	228	106	4	0	90
29	52	18	70	60		81	83	195	92	3	0	2,080
30	42	17	72	59		104	67	167	85	2	0	1,370
31	41		70	64		130		154		2	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,420	41	224	13,780
November	77	16	29.1	1,730
December	1,960	14	216	13,280
January	282	59	113	6,940
February	69	28	40.3	2,240
March	925	34	143	8,810
April	6,310	83	859	51,110
May	15,100	65	1,868	114,900
June	3,880	52	608	36,160
July	74	2	20.8	1,280
August	32	0	4.1	254
September	4,850	0	444	26,430
The year	15,100	0	382	276,900

Cottonwood River at Cottonwood Falls, Kans.

Location.- Chain gage in NW¼ sec. 28, T. 19 S., R. 8 E., at Cottonwood Falls.

Drainage area.- 1,432 square miles (revised).

Records available.- April 1932 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,860 second-feet Apr. 5 (gage height, 6.57 feet); minimum, 1 second-foot Aug. 15 to Sept. 13.
1932-34: Maximum discharge recorded, 11,800 second-feet July 6, 1932 (gage height, 20.92 feet); minimum, that of August and September 1934.

Remarks.- Records fair. Discharge estimated for ice period Feb. 21-28.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	4	11	13	8	22	24	10	18	6	2	1
2	49	4	15	12	9	24	20	15	14	5	2	1
3	45	4	19	12	9	31	18	18	10	5	2	1
4	42	5	19	13	8	34	102	14	7	5	2	1
5	45	4	21	14	10	33	740	9	7	4	2	1
6	44	4	23	12	10	35	333	75	7	5	2	1
7	41	4	27	13	10	36	177	102	7	5	2	1
8	30	4	33	16	10	42	118	97	7	9	2	1
9	23	4	27	21	10	42	79	67	6	18	2	1
10	3	4	23	20	12	33	67	52	5	17	2	1
11	2	4	16	16	12	30	38	42	5	13	2	1
12	2	4	15	18	17	29	36	39	4	8	2	1
13	2	4	15	19	20	26	31	39	4	5	2	1
14	9	4	12	19	15	20	34	625	4	5	2	49
15	3	4	12	22	15	18	30	600	22	5	1	507
16	3	4	11	22	16	17	31	485	203	4	1	203
17	17	5	10	18	15	18	29	238	160	4	1	61
18	3	5	9	17	14	16	26	133	113	4	1	49
19	3	7	10	18	12	17	31	111	73	4	1	34
20	3	9	13	18	12	13	26	83	55	4	1	27
21	4	7	10	16		13	22	69	34	10	1	25
22	4	9	12	15		15	23	53	29	15	1	220
23	4	11	13	15		17	22	53	20	17	1	193
24	3	12	13	15		16	19	42	15	36	1	85
25	4	13	13	16	10	16	16	35	12	35	1	50
26	4	13	13	15		17	15	23	9	7	1	63
27	4	12	13	16		15	15	23	7	2	1	83
28	4	13	13	15		16	15	29	6	2	1	149
29	5	12	13	15		16	14	24	6	2	1	177
30	4	12	12	13		20	11	20	7	2	1	395
31	5		13	10		22		20		2	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	2	14.8	912
November	13	4	6.8	407
December	33	9	15.5	950
January	22	10	16.0	984
February	20	8	11.6	643
March	42	13	23.2	1,430
April	740	11	72.1	4,290
May	625	9	10.5	6,440
June	203	4	29.2	1,740
July	36	2	8.5	526
August	2	1	1.5	89
September	507	1	80.1	4,770
The year	740	1	32.0	23,180

Spring River near Waco, Mo.

Location.- Chain gage on line between SE¼ sec. 7 and NE¼ sec. 18, T. 29 N., R. 33 W., at highway bridge 1½ miles east of Waco. Zero of gage is 835.25 feet above mean sea level.

Drainage area.- 1,160 square miles.

Records available.- April 1924 to September 1934.

Average discharge.- 10 years, 905 second-feet.

Extremes.- Maximum discharge recorded during year, 3,950 second-feet Apr. 15 (gage height, 7.70 feet); minimum, 11 second-feet July 24 (gage height, 0.80 foot).
1924-34: Maximum discharge, 57,400 second-feet Aug. 17, 1927 (gage height, 28.6 feet, from flood marks); minimum, that of July 24, 1934.

Remarks.- Records fair. Flow slightly regulated by operation of small mills.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	364	125	65	75	108	102	206	167	65	38	25	73
2	219	127	99	99	117	121	167	167	82	34	26	81
3	206	131	56	125	110	278	167	156	81	37	27	62
4	167	144	75	115	90	459	234	144	60	48	23	60
5	117	192	82	115	90	328	1,520	192	89	36	27	70
6	123	382	78	114	99	234	780	310	87	48	26	64
7	104	310	86	114	102	180	539	219	65	45	17	56
8	106	219	89	206	90	167	382	167	62	27	18	53
9	89	167	81	278	80	156	328	156	65	26	28	64
10	110	144	74	248	78	140	310	167	42	28	26	56
11	106	156	51	248	86	136	263	156	382	40	22	49
12	89	123	102	248	54	108	234	142	459	32	20	60
13	86	87	76	192	99	117	219	106	192	29	21	219
14	94	134	84	206	99	119	192	108	108	28	15	382
15	156	127	74	156	68	134	2,100	144	94	26	19	1,190
16	156	121	66	192	69	112	2,980	144	539	22	29	950
17	180	104	89	167	82	112	1,520	138	835	18	27	345
18	167	78	87	180	56	92	727	127	192	41	27	234
19	167	80	676	167	62	87	459	108	121	40	27	167
20	142	82	780	144	112	125	328	99	89	31	24	142
21	134	104	539	131	80	112	294	96	77	27	29	156
22	180	119	310	127	97	114	248	106	59	24	49	144
23	294	99	219	136	78	90	263	110	58	15	56	129
24	263	117	180	127	82	97	328	85	49	12	38	96
25	180	94	144	134	78	74	278	99	46	24	19	144
26	192	68	131	127	92	76	206	96	62	27	21	110
27	206	84	136	127	102	134	294	82	50	30	31	97
28	180	86	129	78	104	129	248	71	48	31	28	90
29	192	102	142	97		129	206	90	41	30	70	1,800
30	156	112	99	110		167	156	74	41	23	68	1,190
31	167		121	114		206		70		15	71	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	364	86	164	0.141	0.16	10,100
November	382	68	134	.116	.13	7,970
December	780	51	161	.139	.16	9,900
January	278	75	152	.131	.15	9,320
February	117	54	88.1	.076	.08	4,890
March	459	74	150	.129	.15	9,190
April	2,980	156	539	.465	.52	32,080
May	310	70	132	.114	.13	8,120
June	835	41	141	.122	.16	8,410
July	48	12	30.1	.026	.03	1,850
August	71	15	30.8	.027	.03	1,890
September	1,800	49	278	.240	.27	16,530
The year	2,980	12	166	.143	1.97	120,200

Turkey Creek at Joplin, Mo.

Location.- Water-stage recorded in NW¼NW¼ sec. 34, T. 28 N., R. 33 W., 80 feet below bridge on Lone Elm Road, a quarter of a mile below Joplin Creek, and about 1 mile northwest of Joplin.

Drainage area.- 33 square miles.

Records available.- July 1932 to September 1934.

Extremes.- Maximum discharge during year, 500 second-feet Sept. 29 (gage height, 5.01 feet); no flow for several days during July and August.
1932-34: Maximum discharge, 1,150 second-feet Apr. 20, 1933 (gage height, 7.57 feet); no flow for several days during July and August 1934.

Remarks.- Records fair. Considerable diversions around gage by Joplin storm sewers.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	4.5	3.5	3.8	4.2	5.3	5.2	3.0	1.2	0.2	0	11
2	3.9	4.7	3.5	3.8	4.3	11	4.7	3.0	2.9	.2	0	4.5
3	3.7	5.0	3.4	5.5	4.4	7.4	4.8	4.9	2.0	.2	0	7.8
4	3.6	11	3.4	5.9	4.2	6.8	7.9	3.6	1.3	.2	0	2.1
5	3.5	5.2	3.2	4.4	4.1	6.5	5.9	3.0	1.5	.1	0	1.5
6	3.4	4.3	3.1	4.4	3.9	5.7	7.9	2.8	1.5	.e	0	1.2
7	3.2	4.1	3.1	26	4.1	5.6	6.5	2.6	1.2	.4	0	1.0
8	3.1	3.8	3.0	12	4.1	5.2	6.0	2.6	.5	.3	0	1.0
9	2.9	3.7	3.0	9.0	3.9	5.0	5.7	2.3	.6	.2	0	.9
10	2.8	3.7	3.1	7.7	3.e	4.8	6.0	2.2	.6	.1	0	2.0
11	2.8	3.7	3.1	7.2	4.1	4.8	5.0	2.3	2.4	.1	0	1.2
12	2.9	3.7	3.1	7.9	3.9	4.9	4.5	2.2	1.0	0	.8	.9
13	2.8	3.6	3.1	7.4	3.9	4.7	4.4	2.2	.8	0	.2	37
14	3.0	3.6	3.1	6.8	3.9	4.5	4.3	2.8	.6	.1	.2	70
15	11	3.8	3.1	6.3	4.2	4.5	11	3.6	1.6	5.8	.2	27
16	4.7	3.8	3.1	5.7	3.9	4.7	5.7	2.2	1.5	.2	5.3	12
17	4.2	3.5	3.5	5.5	3.9	5.2	5.3	1.9	1.0	.2	.5	8.4
18	4.4	3.9	9.4	5.3	7.1	4.9	4.e	1.5	.e	.1	.5	6.6
19	4.5	3.7	44	5.3	4.3	4.7	4.7	1.3	.6	0	.4	5.6
20	e.9	4.2	13	5.3	3.8	4.e	4.3	1.2	.6	0	.4	10
21	11	3.8	7.2	5.2	5.2	4.8	3.9	1.1	.6	0	.8	9.4
22	11	3.5	6.2	4.9	4.8	4.5	3.8	1.5	.4	0	1.0	5.9
23	6.3	3.3	5.6	4.8	4.1	4.4	3.8	1.8	.6	.2	1.0	4.9
24	5.2	3.3	5.0	4.9	4.7	4.4	3.8	1.7	.3	1.2	.5	4.4
25	4.8	3.2	4.7	4.8	13	4.3	3.8	1.6	.2	1.4	1.3	3.7
26	13	3.1	4.3	4.7	5.6	8.2	3.6	1.6	.2	.6	.6	3.4
27	7.0	3.4	3.8	4.7	5.6	5.7	5.3	1.2	.2	1.8	.5	3.3
28	6.0	3.7	3.7	4.4	5.5	5.0	3.6	1.2	.1	.1	.5	3.9
29	5.5	3.8	3.7	4.1		4.5	3.3	1.3	.2	.1	.4	86
30	5.2	3.7	3.9	3.9		4.9	3.1	1.3	.2	0	.4	15
31	4.8		3.9	4.2		4.8		1.2		0	.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	13	2.8	5.34	328
November	11	3.1	4.08	243
December	44	3.0	5.57	343
January	26	3.8	6.32	388
February	13	3.8	4.73	263
March	11	4.3	5.37	330
April	11	3.1	5.09	303
May	4.9	1.1	2.15	132
June	2.9	.1	.91	54
July	5.8	0	.47	29
August	5.3	0	.51	32
September	86	.9	11.7	697
The year	86	0	4.34	3,140

Shoal Creek near Joplin, Mo.

Location.- Water-stage recorder in S½ sec. 28, T. 27 N., R. 33 W., at Grand Falls hydroelectric plant of Empire Electric Co., 4 miles south of Joplin. Datum of recorder is 1.00 foot lower than that of indicating float gage which was used at same location prior to Apr. 24, 1934.

Drainage area.- 458 square miles.

Records available.- April 1924 to September 1934.

Average discharge.- 10 years, 438 second-feet.

Extremes.- Maximum discharge during year, 1,260 second-feet Oct. 23 (gage height, 3.16 feet, former datum); minimum, 10.9 second-feet Apr. 9; minimum daily discharge, 16 second-feet Aug. 6.
1924-34: Maximum discharge, about 17,200 second-feet June 27, 1932; minimum, 8 second-feet Oct. 9, 1931, while power plant was shut down; minimum daily discharge, that of Aug. 6, 1934.

Remarks.- Records fair Oct. 1 to Apr. 24; good thereafter. Flow regulated by Grand Falls hydroelectric plant.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	211	214	118	167	112	130	138	101	92	60	42	91
2	244	240	140	194	159	138	130	106	88	175	38	50
3	228	180	135	150	128	158	166	108	98	53	42	76
4	172	202	114	156	113	130	134	128	94	92	42	62
5	137	264	147	166	130	132	150	130	84	66	34	69
6	168	234	122	151	110	116	166	124	90	61	16	68
7	158	226	117	226	125	173	144	140	90	68	36	45
8	151	231	105	255	140	133	148	124	60	62	33	46
9	141	183	98	291	125	123	158	114	76	61	32	48
10	116	195	113	232	140	140	161	96	77	68	32	72
11	130	194	91	260	122	94	171	108	103	47	42	49
12	123	179	112	260	106	122	148	111	98	56	25	55
13	129	186	126	194	141	99	156	91	130	53	32	93
14	138	140	104	274	106	117	166	98	88	53	36	206
15	117	176	89	240	132	122	166	96	84	58	33	492
16	137	128	94	162	126	112	155	128	110	56	42	211
17	133	172	119	232	128	128	151	110	84	66	40	149
18	122	172	138	182	122	95	141	92	90	44	36	131
19	138	159	566	201	85	113	140	92	68	48	38	118
20	240	122	480	154	170	115	126	89	67	47	37	114
21	643	171	413	201	142	115	135	88	66	45	40	104
22	506	134	317	158	116	90	110	82	62	41	42	98
23	800	150	272	176	113	94	111	334	64	44	48	92
24	420	106	301	174	122	104	106	143	60	51	48	86
25	338	158	212	171	104	104	128	126	69	35	52	84
26	355	147	212	149	135	110	117	122	71	43	44	80
27	316	158	247	148	122	118	118	102	62	58	86	70
28	302	128	180	123	115	119	118	99	40	39	64	70
29	262	113	219	158		135	108	100	57	50	49	244
30	255	138	183	133		129	102	88	78	46	36	200
31	184		172	147		140		80		51	40	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-feet
October	600	116	242	0.528	0.61	14,900
November	264	106	173	.378	.42	10,310
December	566	89	189	.413	.48	11,620
January	291	123	190	.415	.48	11,670
February	170	85	125	.273	.28	6,920
March	173	90	121	.264	.30	7,430
April	171	102	139	.303	.34	8,270
May	334	80	115	.251	.29	7,040
June	130	40	80.0	.175	.20	4,760
July	175	35	58.0	.127	.15	3,560
August	86	16	40.5	.088	.10	2,490
September	492	45	112	.245	.27	6,690
The year	800	16	132	.288	3.92	95,660

Canadian River at Logan, N. Mex.

Location.- Water-stage recorder in sec. 15, T. 13 N., R. 33 E., 1 mile south of Logan, three-quarters of a mile above Chicago, Rock Island & Pacific Railroad bridge, 5 miles below Ute Creek, and 5 miles above Tucumcari Creek.

Drainage area.- 11,200 square miles.

Records available.- June 1904 to February 1905, December 1908 to May 1914, October 1930 to September 1934 in reports of U. S. Geological Survey; June 1904 to February 1905, December 1908 to May 1914, October 1922 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, about 32,400 second-feet Sept. 1 (gage height, 10.80 feet); no flow at times.
1930-34: Maximum discharge, about 102,000 second-feet Oct. 11, 1930 (gage height, 19 feet); no flow during several periods.

Remarks.- Records poor. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	4					0		0		*7,800
2		0	3		*30			0		0		*1,500
3		0	3			*15		0	*100	0		*800
4	*10	0	3					0		0	*70	*300
5		0	3	*30	26			0		0		*150
6		0	3		26			0		0		*100
7	6	0	4		26			0		0		*50
8	6	1	5		25	*5		0	*60	0		*20
9	6	1	6		26			0		*100	*10	
10	7	1	6		26			0		*400		
11	24	2	7		28	0		0		*200	0	*15
12	41	2	6		30	0		0			0	
13	33	2	7		30	0		7	*20	*50	0	
14	33	2	7		30	0		8			0	
15	36	2	7		46	0		4	0	0	0	
16	27	2	6		52	0		3	0	0	0	
17	19	2	6	*20	42	0		3	0	0	0	
18	14	3	5		34	0		2	0	0	0	*10
19	11	3	5		28	0		0	0	0	0	
20	8	3	5		0	0		0	0	0	0	
21	7	3	4			0		0	0	0	0	8
22	5	3	4		*25	0		0	0	0	*200	7
23	4	3	5			0		0	0	0	*1,000	5
24	3	4	6			0		0	0	*20	*350	4
25	3	4	7		23	0		0	0	*600	250	2
26	2	4	7		24	0		0	0	*200	174	1
27	2	3				0		0	0		*4,000	1
28	1	4			*20	0		*80	0	*80	*700	2
29	1	4	*10	*30		0		*350	0		*200	4
30	1	3				0		*200	0	*200	*100	1
31	0					0		*200			*50	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	41	0	11.6	714
November	4	0	2.0	121
December		3	5.9	365
January			24.5	1,510
February	52		28.8	1,600
March		0	3.2	198
April	0	0	0	0
May	350	0	27.6	1,700
June		0	28.0	1,670
July	600	0	78.4	4,820
August	4,000	0	243	14,960
September	7,800	1	364	21,640
The year	7,800	0	68.1	49,300

*Estimated.

Note.- No flow during April.

Cieneguilla Creek near Therma, N. Mex.

Location.- Water-stage recorder in Maxwell Grant, 6 miles south of Therma, Colfax County, about 3,500 feet upstream from high-water line of Eagle Nest Reservoir and a quarter of a mile below mouth Schoolhouse Draw. Prior to Sept. 15, 1934, station was located about a quarter of a mile downstream.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; April 1928 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 57 second-feet May 21; maximum gage height, 2.38 feet Apr. 5, during construction of fish dam just below gage; minimum discharge not determined.

1930-34: Maximum discharge, 147 second-feet Apr. 25, 1932; maximum gage height, 3.26 feet June 30, 1932; minimum discharge not determined.

Remarks.- Records fair except those estimated Nov. 23 to Dec. 7, Apr. 4-25, May 17-19, 21, June 8-28, Aug. 23-27, which are poor. No record Dec. 9 to Feb. 21, Feb. 23 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	2.0					7	1.6	3.0	0.2	0.4	1.7
2	1.4	2.1					7.3	1.8	2.0	.2	.9	1.2
3	1.5	2.1					6.9	2.3	2.3	.2	.7	.9
4	1.6	2.4	2					4.4	3.5	.2	.4	.7
5	1.7	2.8						2.5	1.8	.2	.4	.7
6	2.0	3.2					7	1.5	1.3	.2	.4	1.1
7	1.8	2.5						1.1	1.2	.2	.4	1.2
8	1.7	2.5	*1.9					1.0		.3	.4	1.1
9	1.6	2.9						.7		.2	.4	1.4
10	1.6	2.9						.9		.2	.4	1.3
11	1.6	2.9						1.5		.2	.4	.9
12	1.6	2.9					5	1.1		.2	.4	1.0
13	1.8	3.0						.7		.2	.5	1.2
14	1.8	2.9						.6		.2	.5	.8
15	1.8	2.8						.5		.2	.4	.8
16	1.8	2.9					8	.4		.2	.4	.8
17	1.8	2.7								.2	.4	.8
18	1.8	2.9						.1	.1	.2	.4	.8
19	1.8	2.7								.2	.4	.8
20	1.8	2.7						.1		.2	.6	.8
21	1.8	2.7					4	6		.3	.7	.8
22	1.8	2.7			*3.8			22		.3	.6	.8
23	1.9							18		.5		.8
24	1.8							13		.8		.9
25	1.9							20		.6	.8	.9
26	1.9	2.5					4.2	7.6		2.1		.8
27	1.9						3.4	4.8		1.4		.8
28	1.9						3.3	3.8		.9	1.0	.8
29	1.9						2.2	3.8	.2	.6	1.1	.8
30	1.9						1.8	8.5	.2	.5	1.0	.8
31	2.0							5.7		.5	1.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.0	1.3	1.76	108
November	3.2	2.0	2.64	157
December 1-8			1.99	32
January				
February				
March				
April		1.8	5.20	310
May	22		4.39	270
June	3.5		.59	35
July	2.1	.2	.41	25
August	1.2	.4	.61	37
September	1.7	.7	.94	56

*Discharge measurement.

1230 O—35——8

Cimarron River at Ute Park, N. Mex.

Location.- Water-stage recorder in Maxwell Grant, about 1 mile east of post office at Ute Park, Colfax County, and half a mile below mouth of Ute Creek.

Drainage area.- 235 square miles.

Records available.- July 1907 to December 1914, October 1930 to September 1934 in reports of U. S. Geological Survey; July 1907 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 175 second-feet July 4 (gage height, 2.92 feet); minimum recorded, about 2.2 second-feet between Dec. 8 and Feb. 5 (gage height, 1.16 feet).
1930-34: Maximum, that of July 4, 1934; minimum, that occurring between Dec. 8, 1933, and Feb. 5, 1934.

Remarks.- Records good except those estimated Nov. 29, 30, Dec. 1-4, 6, 7, Dec. 10 to Feb. 3, which are poor. Flow regulated by storage in Eagle Nest Reservoir. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	39				6.4	6.4	66	101	126	24	11
2	5.4	31	5.8		4.6	6.7	7.3	66	91	148	34	11
3	5.6	27				6.7	7.6	71	94	123	31	15
4	7.6	22			4.6	6.2	8.1	71	100	124	23	15
5	12	14	6.2		4.6	6.2	7.8	73	85	153	23	21
6	14	26			4.6	5.9	7.6	71	77	144	42	16
7	14	25	5.9		5.0	5.9	7.3	76	66	94	49	16
8	14	23	5.6		4.8	5.6	7.3	80	57	76	66	16
9	15	20	5.9		5.4	5.9	7.8	81	37	108	74	18
10	13	18			5.4	5.6	8.1	84	52	107	85	31
11	16	16			7.0	5.9	8.4	85	100	104	98	31
12	16	11			8.4	5.9	9.5	87	112	98	107	31
13	16	11			8.4	5.6	10	94	116	95	121	53
14	15	10			6.4	5.2	13	102	123	61	123	58
15	12	9.5			6.4	5.0	20	102	124	53	123	28
16	16	7.8			6.7	5.0	37	104	90	88	100	28
17	17	7.3			6.7	5.0	45	104	81	88	77	53
18	17	7.0			6.4	5.6	42	107	110	88	48	55
19	19	6.7			5.9	5.4	39	110	108	90	44	54
20	20	6.4	5.6		6.2	4.8	41	118	107	90	50	34
21	19	6.4			6.2	4.8	41	127	108	60	35	31
22	14	6.2			6.2	7.3	37	115	106	50	16	26
23	21	5.9			6.2	5.0	38	106	73	83	9.2	26
24	27	5.9			6.7	5.0	38	100	71	85	8.1	34
25	35	5.4			6.7	5.2	39	108	110	92	8.1	34
26	40	5.4			6.7	5.2	39	106	110	73	8.8	34
27	41	5.4			7.0	5.2	40	104	126	44	7.8	34
28	30	5.2			6.7	5.2	39	104	146	30	7.6	33
29	26	5.4				5.2	49	106	150	18	7.3	26
30	43					5.6	82	115	126	22	7.8	23
31	42					5.4		110		21	9.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	43	5.4	19.6	1,210
November	39		13.1	782
December			5.67	349
January			5.0	307
February	8.4		6.04	335
March	7.3	4.8	5.60	344
April	62	6.4	25.4	1,510
May	127	66	95.3	5,860
June	150	37	98.6	5,870
July	153	21	85.0	5,230
August	123	7.3	47.3	2,910
September	58	11	29.9	1,780
The year	153		36.6	26,490

Sixmile Creek near Therma, N. Mex.

Location.- Water-stage recorder in Maxwell Grant, at highway bridge 3 miles southwest of Therma, Colfax County, and a quarter of a mile above high-water line of Eagle Nest Reservoir.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; April 1928 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year not determined; maximum gage height, 1.57 feet Apr. 5, during ice conditions; no flow at times.
1930-34: Maximum discharge, 16 second-feet May 4, 1933; maximum gage height, 2.06 feet Sept. 20, 1931, and May 4, 1933; no flow at times.

Remarks.- Records fair except those estimated, which are poor. No records Dec. 1 to Jan. 19, Jan. 21 to Feb. 21, Feb. 23 to Mar. 31. Stage-discharge relation affected by ice Nov. 8-12, 14-17, 19-22, Apr. 4-6. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	2.4					0.7	0.7	0.8	0.5	0.1	
2	1.9	2.7					.7	.7	.1	.3	.1	
3	1.9	2.7					.8		0	.1	0	
4	1.9	2.9						*1	.1	.2	0	
5	1.7	2.7					*1		.1	.1	0	
6	1.4							.8	0	0	0	
7	1.4						1.0	.5	.1	0	0	*0.7
8	1.6						.8	0	0	0	0	
9	1.6						.7	0	0	0	0	
10	1.4	*2.5						0	0	.6	0	
11	1.6							0	.2	.1	0	
12	1.6						*.8	0	.3	.1	0	
13	1.6	2.7						.6	0	.1	.2	1.4
14	1.6							.7	0	.1	.2	1.2
15	1.6	*3							0	0	0	.9
16	1.6						.9	*.4	0	0	0	.9
17	1.6						.8		.4	.2	0	.9
18	1.7	2.9						.2	.5	.1	0	.9
19	1.7							.1	0	0	0	.8
20	1.9			†1.5			.8	.1	0	0	.2	.8
21	1.7							.3	0	0	0	.8
22	1.6				†1.9			.8	0	0	0	.8
23	1.6						.9	.5	0	0	0	1.6
24	1.6	*2.5					1.0	.5	.1	0	0	2.1
25	1.9						1.0	.5	.1	0	0	1.6
26	2.2						1.2	.7	.1	0	.1	1.2
27	2.2						1.3	.8	.1	.6	0	1.2
28	2.2						*.8	.4	0	.6	0	1.2
29	2.2						.8	.3	.1	.6		1.2
30	2.2						.8	.8	.1	.6	.1	1.2
31	2.2							.9		.2		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.2	1.4	1.77	109
November			2.62	156
December				
January				
February				
March				
April			.87	52
May		0	.49	30
June	.8	0	.11	6
July	.8	0	.17	11
August	.2	0	.04	2
September	2.1		.97	58

*Estimated.

†Discharge measurement.

Moreno Creek at Therma, N. Mex.

Location.- Water-stage recorder in Maxwell grant, at highway bridge 1,000 feet west of Therma, Colfax County, and half a mile above high-water line of Eagle Nest Reservoir. Datum lowered 0.45 foot Sept. 8.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; April 1928 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 34 second-feet Aug. 13 (gage height, 1.11 feet, old datum); no flow Aug. 4, 8-10.
1930-34: Maximum discharge, 126 second-feet Mar. 4, 1932; maximum gage height, 1.72 feet (old datum) Mar. 20, 1931; no flow Aug. 4, 8-10, 1934.

Remarks.- Records good except those estimated Nov. 23 to Dec. 7, Aug. 29 to Sept. 7, which are poor. No record Dec. 9 to Jan. 19, Jan. 21 to Feb. 21, Mar. 3-31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.5				2.9	2	0.6	0.2	0.1	0.2	
2	.6	.4				2.9	2.2	.8	.1	.1	1.4	
3	.6	.5					1.9	.8	.2	.1	.1	
4	.8	.5					3.4	.8	.1	.1	0	
5	.9	.9	1				3.6	.6	.1	.1	.8	0.1
6	.9	.6					3.9	.8	.1	.1	.1	
7	1.0	.8					3.4	.8	.1	.1	.1	
8	.9	.8	1.0				3.2	.8	.1	.1	0	.1
9	1.0	.8					2.9	.6	.1	.1	0	.2
10	1.0	.8					2.4	.5	.1	.1	0	.1
11	1.1	.6					2.2	.4	.1	.1	.1	.1
12	1.4	.6					1.4	.6	.1	.1	.1	.1
13	1.1	.5					1.4	.4	.1	.1	4.0	.1
14	1.3	.5					1.3	.4	.1	.1	.1	.1
15	1.1	.6					1.1	.2	.1	.1	.1	.1
16	1.1	1.0					1.3	.1	.1	.1	.1	.1
17	.9	.6					1.3	.1	.1	.1	.1	1
18	.9	.6					1.3	.1	.1	.4	.1	.1
19	.9	.9					1.1	.1	.1	.4	.1	.1
20	1.0	1.0		*0.6			.9	.1	.1	.5	.3	.1
21	1.3	.9					.8	.1	.1	.5	2.2	.2
22	1.1	.9			3.6		.8	.1	.1	.6	.6	.3
23	.9				4.3		.9	.1	.1	.6	.2	.2
24	.9				2.2		.9	.1	.1	.8	.1	.4
25	.6				1.6		.9	.1	.1	.8	.4	.4
26	.5	.9			2.6		.8	.9	.1	1.0	.4	.2
27	.5				2.9		.9	.8	.1	2.6	.2	.2
28	.4				2.4		.9	.2	.1	1.1	.2	.2
29	.4						.9	.2	.1	.8		.2
30	.5						.9	.5	.1	.6	.2	.2
31	.5							.4		.4		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.4	0.4	0.86	53
November		.4	.75	45
December 1-8			1.00	16
January				
February 22-28	4.3	1.6	2.80	39
March 1, 2	2.9	2.9	2.90	12
April	3.9	.8	1.70	101
May	.9	.1	.43	26
June	.2	.1	.11	6
July	2.6	.1	.41	25
August	4.0	0	.41	25
September	.4	.1	.15	9

*Discharge measurement.

Colmor Intake Canal near Ocate, N. Mex.

Location.- Water-stage recorder in SW¼ sec. 12, T. 22 N., R. 19 E., 130 feet below head gate, 5 miles southwest of Lake Charette, and 10 miles southeast of Ocate.

Records available.- May 1933 to September 1934.

Extremes.- Maximum discharge during year, 7.0 second-feet Feb. 17 (gage height, 1.48 feet); no flow at times.
1933-34: Maximum discharge, about 695 second-feet Aug. 26, 1933 (gage height, 5.14 feet); no flow at times.

Remarks.- Records good. Discharge estimated Jan. 28 to Feb. 2. Canal delivers water to Lake Charette, which is utilized as a storage reservoir by the Colmor Irrigation District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0.2	1.8		0				
2				0		1.9		0				
3				0	.1	1.4		0				
4				0	.1	.7		0				
5				0	0	.5		0				
6				0	0	.4		0				
7				0	0	.3		0				
8				0	0	.2		0				
9				0	0	.2		0				
10				0	.7	.2		0				
11				0	1.4	.2		0				
12				0	1.5	.1		0				
13				0	2.5	0		0				
14				0	2.8	0		0				
15				0	3.9	0		0				
16				0	4.8	0		0				
17				0	5.8	0		0				
18				0	2.4	0		0				
19				0	2.2	0		0				
20				0	2.3	0		0				
21				0	1.6	0		0				
22				0	1.1	0		0				
23				0	1.4	0		0				
24				0	2.0	0		0				
25				.7	1.6	0		0				
26				.6	1.0	0		.8				
27				.9	1.0	0		0				
28					1.3	0		0				
29				.6		0		0				
30						0		0				
31						0		0				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January	.9	0	.15	9.1
February	5.8	0	1.50	83
March	1.9	0	.25	16
April	0	0	0	0
May	.8	0	.03	1.6
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
The year	5.8	0	.15	110

Note.- No flow during months left blank.

Mora River at La Cueva, N. Mex.

Location.- Water-stage recorder in Mora Grant, at highway bridge at La Cueva, a quarter of a mile below Las Vegas-Mora highway bridge and half a mile below La Cueva dam site, below wasteway from La Cueva Canal.

Records available.- August 1903 to July 1911; April 1931 to September 1934.

Extremes.- Maximum discharge during year, 70 second-feet July 26 (gage height, 1.32 feet); no flow Dec. 26, 27, 29-31, Jan. 1-4.
1931-34: Maximum discharge, about 930 second-feet May 2, 1931 (gage height, 3.20 feet); no flow Dec. 26, 27, 29-31, 1933, Jan. 1-4, 1934.

Remarks.- Records good except those estimated, which are poor. Stage-discharge relation affected by ice Dec. 16-18. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	9.0	11	0	1.5	1.5	0.5	3.2	2.6	1.8		5.9
2	4.0	13	9.0	0	1.0	1.5	2.2	3.6	3.6	2.2	*1.4	4.0
3	5.4	13	8.6	0	1.0	1.0	1.8	3.6	1.2	1.8		3.2
4	6.4	12	8.2	0	1.0	.8	1.5	3.2	1.5	2.6		4.0
5	6.4	12	11	3.6	.8	.5	.8	3.2	4.3	2.6	1.2	
6	5.4	13	10		1.2	.8	1.2	3.6	4.3	2.9	1.2	
7		13	11		1.2	1.0	1.2	2.9	4.6	2.9	1.5	*5
8	*6.5	14	10		1.8	1.0	1.2	2.9	3.2	4.6	1.0	
9		14	11		1.5	1.0	1.2	3.2	4.3	1.8	1.2	
10		14	11		1.5	1.5	1.5	3.2	6.4	1.8	1.8	1.2
11	7.7	13	11		2.2	.8	2.6	3.6	4.6	2.2	2.2	3.2
12	4.3	14	9.5		2.2	1.0	4.3	3.2	4.0	2.2	2.2	3.6
13	4.0	13	9.0		2.9	1.0	5.0	2.9	2.9	2.9	3.2	4.3
14	5.0	13	8.6		2.2	.5	4.6		3.6	2.2	2.6	2.9
15	5.9	13	8.2		2.6	.2	5.4		2.9	2.6	2.6	2.2
16	11	12		*2	2.6	.8	6.4	*3	2.6	2.2	2.2	1.8
17	9.5	13			2.9	.5	4.6		2.2	1.8	1.8	1.8
18	11	13	*6		1.2	1.0	4.3		2.6	2.2	1.5	4.0
19	12	11			1.5	1.0	3.2		2.6	4.6	1.2	4.3
20	11	11			1.0	.5	2.9		2.9	3.6	2.2	2.9
21	11	10	4.0		.5	.5	4.0	3.2	3.2	2.6	2.9	3.2
22	12	8.6	1.8		.5	1.2	4.6	4.0	3.2	2.6	3.6	4.3
23	11	10	.8		1.5	*1	4.0	3.2	2.9	3.2	2.2	3.6
24	8.6	9.5	.1		2.6		2.6	3.2	2.6	3.6	1.5	4.3
25	9.0	9.0	.1		.5	.5	2.9	.8		4.0	1.2	5.0
26	11	*10	0		1.2	2.2	3.2	1.5		11	1.5	3.2
27	11	11	0	1.0	1.5	2.9	3.6	5.0	*2		1.8	1.8
28	11	11	.1	1.5	1.8	3.6	4.0	6.4		*5	2.6	1.8
29	11	10	0	1.0		2.9	4.3	2.9		1.8	2.6	1.8
30	11	10	0	1.2		3.6	3.2	1.8		*1.6	2.6	1.8
31	9.0		0	2.2		2.2		1.2			7.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	12	3.2	8.19	503
November	14	8.6	11.7	698
December	11	0	5.94	365
January		0	1.69	104
February	2.9	.5	1.57	87
March	3.6	.2	1.27	78
April	6.4	.5	3.09	184
May	6.4	.8	3.11	191
June	6.4		3.03	180
July	11		3.02	185
August	7.2	1.0	2.09	129
September		1.2	3.50	208
The year	14	0	4.03	2,910

*Estimated.

Mora River near Golondrinas, N. Mex.

Location.- Water-stage recorder in Mora Grant, half a mile above mouth of Coyote Creek and 2 miles east of Golondrinas, Mora County.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; March 1915 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year not determined; no flow at times.
1930-34: Maximum discharge, about 585 second-feet May 2, 1931 (gage height, 5.05 feet); no flow at times.

Remarks.- Records fair except those estimated Dec. 16-21, Jan. 5 to Feb. 1, July 8-17, July 24 to Sept. 23, which are poor. Stage-discharge relation affected by ice Dec. 16-21, Jan. 5. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	11	15	4.9	5	5.4	0.9	1.1	0	0		
2	3.0	13	13	4.9	5.1	5.1	.3	1.5	0	0		
3	3.2	16	11	4.9	4.9	4.7	.3	2.0	0	0		70
4	5.9	16	10	4.3	4.3	4.3	.5	2.0	0	0		
5	4.7	18	10		4.5	4.7	.7	2.1	0	0		
6	6.8	21	12		4.3	4.0	1.8	2.7	0	0		
7	5.6	20	12		5.9	4.3	1.2	3.8	0	0		
8	5.0	18	13		8.1	4.0	1.6	4.9	0	15		
9	5.6	20	13		8.4	4.3	.9	4.3	0			
10	5.6	19	13		10	4.0	1.1	3.8	0			5
11	5.3	19	13		11	3.6	1.2	3.2	.1			
12	4.5	17	13		14	3.4	1.2	2.4	.1			
13	3.9	16	13		13	3.4	3.6	2.1	.2	3		
14	5.4	15	13		12	2.8	4.9	.8	.2			
15	4.6	15	12		11	2.6	4.5	0	.1			
16	9.5	14			8.1	2.2	3.8	0	.1			
17	8.7	13		5	4.3	3.2	7.8	0	.1			
18	8.1	15			2.1	4.5	6.2	0	0	.1		
19	8.6	14	10		.6	2.4	4.7	0	0	.2		
20	8.7	13			.3	2.1	3.4	0	0	.1		1
21	8.2	11			.1	1.8	2.4	.1	0	0		
22	10	11	8.1		.8	1.4	1.5	.7	0	0		
23	9.2	10	5.6		2.0	1.5	1.5	.3	0	0		
24	7.7	10	5.1		5.4	2.4	2.6	.6	0			.6
25	7.6	9.7	6.4		7.8	2.6	2.7	3.2	0			.7
26	9.6	9.1	5.1		7.3	2.6	1.8	.4	0			.6
27	11	7.8	5.4		5.4	1.6	3.4	1.0	0	1		.4
28	12	8.8	4.9		5.1	1.5	1.8	27	0			.2
29	13	10	5.4			1.5	1.0	2.2	0			.2
30	12	12	5.6			1.3	.7	.4	0			.2
31	11		3.8			1.4		0				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	13	3.0	7.32	450
November	21	7.8	14.1	838
December	15	3.8	9.72	598
January			4.97	305
February	14	.1	6.10	339
March	5.4	1.3	3.05	188
April	7.8	.3	2.33	139
May	27	0	2.34	144
June	.2	0	.03	1.8
July	15	0	1.63	100
August	0	0	0	0
September		.2	13.7	815
The year		0	5.41	3,920

Note.- No flow during August.

Mora River near Shoemaker, N. Mex.

Location.- Water-stage recorder in sec. 10, T. 18 N., R. 20 E., 5½ miles east of Shoemaker and about 23 miles above confluence with Canadian River.

Drainage area.- 1,160 square miles.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; October 1914 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,570 second-feet May 26 (gage height, 4.30 feet); no flow at times.
1930-34: Maximum discharge, about 2,830 second-feet June 12, 1933 (gage height, 5.52 feet); no flow at times.

Remarks.- Records fair except those estimated Dec. 17-22, Jan. 6-21, June 9-12, July 11-14, Sept. 12-14, which are poor. Stage-discharge relation affected by ice Dec. 17-22, Jan. 6-21. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	2	6	10	18	15	4	3	2	1	0	258
2	5	3	6	11	18	14	3	2	2	1	0	33
3	4	2	7	14	18	11	4	2	2	1	0	11
4	5	2	6	14	18	10	4	3	2	1	0	6
5	7	4	6	15	18	9	6	3	86	1	0	4
6	8	3	7		18	8	6	2	66	1	0	4
7	5	3	4		18	5	5	2	6	98	0	4
8	4	3	5	15	17	3	4	2	4	69	0	3
9	4	6	4		15	3	3	2	3	8	0	3
10	5	6	5		21	3	3	3	3	7	0	3
11	6	4	5		24	2	3	4	2	4	0	3
12	4	4	5		19	2	3	3	2	2	0	2
13	2	4	7		16	3	3	3	1	1	0	1
14	2	4	8		15	3	4	3	1	1	0	1
15	2	4	8		15	3	4	2	1	0	0	0
16	2	4	9	20	16	3	4	2	1	0	0	0
17	2	2	10		16	5	5	2	1	0	0	0
18	2	3			16	5	4	2	1	0	0	0
19	2	4	15		16	4	4	2	1	0	0	0
20	2	3			15	3	4	2	1	0	0	0
21	2	3	20		14	4	4	2	1	0	0	0
22	2	5		20	13	4	4	4	1	0	0	0
23	2	6	20	21	14	4	3	3	1	1	0	0
24	2	8	15	21	13	5	3	14	1	2	0	0
25	2	5	14	24	13	4	3	5	1	1	0	0
26	2	4	14	24	14	4	3	77	1	1	0	0
27	2	4	18	21	13	5	4	200	1	2	0	0
28	2	3	14	20	15	4	3	19	1	2	0	0
29	2	3	13	20		4	3	7	1	1	1	0
30	2	4	12	19		5	3	5	1	1	1	0
31	2		10	18		4		4		0	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	8	2	3.2	196
November	8	2	3.8	228
December		4	10.3	631
January	24	10	18.3	1,120
February	24	13	16.3	904
March	15	2	5.2	319
April	6	3	3.8	224
May	200	2	12.5	772
June	86	1	6.6	393
July	98	0	6.7	411
August	1	0	.1	6.0
September	258	0	11.2	666
The year	258	0	8.1	5,870

Coyote Creek near Golondrinas, N. Mex.

Location.- Water-stage recorder in Mora Grant, 1⅝ miles northeast of Golondrinas, three-quarters of a mile below Coyote Creek dam site, and 1¼ miles above confluence with Mora River.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; April 1928 to December 1931 in reports of State engineer.

Extremes.- Maximum discharge during year, 219 second-feet July 8 (gage height, 3.63 feet); minimum, 0.3 second-foot June 14, 15, July 6.
1930-34: Maximum discharge, about 685 second-feet June 20, 1933 (gage height, 4.91 feet); minimum, that of June 14, 15, July 6, 1934.

Remarks.- Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	2.5	4.5	4.3	9.6	5.7	2.5	1.8	0.9	0.5	0.8	2.4
2	4.1	2.6	5.0	4.1	9.2	5.4	2.8	1.6	1.0	.5	.8	1.4
3	3.9	3.1	4.5	4.7	9.2	5.0	2.8	1.5	1.0	.4	1.0	1.4
4	5.0	2.9	3.4	3.9	8.0	7.7	2.8	1.6	.8	.4	.9	1.5
5	3.9	1.9	3.2	4.5	7.7	7.0	2.6	1.6	.8	.4	1.0	1.4
6	3.9	3.1	3.4	6.4	7.4	8.0	2.6	1.6	.8	.3	.9	1.2
7	3.9	3.1	3.9	12	4.5	8.7	2.5	1.6	.7	9.6	.8	6.2
8	3.6	4.1	3.9	11	5.2	10	2.6	1.6	.6	10	.8	8.4
9	3.9	2.8	4.3	13	6.7	13	2.9	1.4	.6	5.8	.8	2.8
10	3.6	4.1	4.3	12	7.7	13	2.9	1.2	.6	1.6	.9	2.4
11	4.1	3.4	4.5	9.6	7.0	9.2	3.1	1.2	.4	1.4	1.0	1.8
12	4.1	3.2	4.5	7.0	10	8.0	2.8	1.2	.4	1.5	1.1	1.8
13	3.9	3.4	4.1	8.7	11	7.0	2.6	.9	.4	1.2	1.1	1.8
14	4.5	3.4	3.9	10	11	7.0	2.8	.9	.4	1.2	1.3	1.9
15	5.7	3.4	3.2	12	12	7.0	3.1	.9	.4	1.2	1.2	1.9
16	5.2	3.4	3.4	11	11	7.4	2.8	.9	.4	1.2	.9	2.1
17	4.7	3.9	4.1	11	11	7.0	2.8	.9	.4	1.2	.9	2.1
18	4.7	3.9	4.7	11	11	7.0	2.6	.8	.4	5.9	1.1	2.1
19	4.3	2.8	4.7	10	8.7	7.4	2.6	.8	.4	1.7	1.0	1.9
20	4.3	2.4	4.5	11	8.7	8.0	3.1	.8	.4	1.6	.9	2.1
21	4.1	2.4	5.4	9.2	8.7	7.4	2.6	.8	.4	1.5	.9	2.2
22	3.6	2.5	5.2	12	8.7	5.7	2.8	.8	.4	1.3	.9	1.9
23	3.2	2.5	4.5	10	11	5.0	2.6	.9	.4	1.3	1.0	1.6
24	3.1	2.5	4.3	9.6	11	4.7	2.5	1.1	.4	1.4	.9	1.6
25	3.2	2.8	4.3	9.6	11	7.0	2.6	8.5	.4	1.4	.8	1.7
26	4.1	3.2	4.5	9.6	11	4.7	2.1	2.6	.4	1.4	.8	1.7
27	3.1	4.1	4.3	12	9.6	3.9	1.9	1.8	.4	1.2	.9	1.7
28	2.9	4.3	4.7	10	6.7	3.1	1.8	1.6	.4	1.9	1.0	1.8
29	2.8	4.5	4.1	11		2.9	1.9	1.1	.4	1.2	1.1	1.9
30	2.4	4.5	4.1	10		2.9	1.8	1.2	.4	1.0	1.2	2.2
31	2.4		3.9	10		2.6		1.1		1.0	12	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5.7	2.4	3.88	239
November	4.5	1.9	3.22	192
December	5.4	3.2	4.24	260
January	13	3.9	9.36	576
February	12	4.5	9.08	504
March	13	2.6	6.72	413
April	3.1	1.8	2.60	155
May	8.5	.8	1.49	92
June	1.0	.4	.53	31
July	10	.3	2.01	123
August	12	.8	1.31	81
September	8.4	1.2	2.30	137
The year	13	.3	3.87	2,800

Lee Creek near Van Buren, Ark.

Location.- Staff gage in SW¼ sec. 31, T. 10 N., R. 32 W., at Arkansas-Oklahoma State line, 6¾ miles northwest of Van Buren.

Drainage area.- 430 square miles.

Records available.- September 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 13,700 second-feet Sept. 2 (gage height, 13.3 feet); no flow July 23 to Sept. 1.
1930-34: Maximum discharge recorded, 32,200 second-feet May 15, 1933 (gage height, 22.3 feet); no flow Sept. 1-24, 1930, Sept. 8-21, 1932, July 23 to Sept. 1, 1934.

Remarks.- Records fair. Gage-height record furnished by Van Buren Waterworks Improvement District No. 1

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	148	171	209	218	276	722	179	32	3		0
2	171	134	167	195	204	335	625	159	27	2		7,620
3	134	120	171	195	195	470	530	152	24	2		7,580
4	114	148	200	658	183	440	500	280	26	2		1,030
5	96	500	187	960	171	440	6,000	890	27	2		560
6	88	385	171	755	163	360	3,090	722	29	1		280
7	80	310	159	2,290	155	385	1,890	560	41	1		183
8	70	254	148	2,130	148	300	1,410	440	40	1		144
9	65	222	134	1,330	141	272	1,100	335	32	1		144
10	59	195	134	1,030	134	244	890	280	26	1		117
11	53	171	124	855	127	231	820	236	27	1		105
12	500	155	114	722	120	218	722	204	41	1		88
13	240	141	108	525	114	204	525	204	45	1		65
14	195	127	102	560	108	191	560	155	43	1		59
15	360	117	96	500	108	179	500	141	34	1		68
16	385	108	93	470	102	171	440	130	26	1		63
17	470	99	93	440	96	163	592	124	21	1		59
18	360	93	102	412	102	222	855	111	17	1		40
19	267	88	440	360	102	267	690	99	14	1		40
20	500	82	890	360	108	300	560	88	12	1		36
21	530	500	788	412	108	500	470	78	11	1		1,030
22	690	592	625	440	108	440	412	70	9	1		960
23	960	440	500	412	102	365	385	65	7	0		500
24	690	360	440	385	96	500	335	63	6	0		335
25	470	300	385	360	191	1,410	305	78	5	0		244
26	360	249	330	330	470	2,210	280	65	4	0		163
27	300	231	290	310	360	2,370	254	65	4	0		138
28	267	195	258	290	295	1,650	236	55	3	0		111
29	226	179	231	262		1,260	218	47	3	0		258
30	191	171	226	244		1,030	200	43	3	0		1,730
31	171		222	226		820		38		0		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	960	53	299	18,380
November	592	82	227	13,520
December	890	93	261	16,050
January	2,290	195	604	37,140
February	470	96	162	8,980
March	2,370	163	588	36,180
April	6,000	200	874	52,000
May	890	38	199	12,250
June	45	3	21.3	1,270
July	3	0	.9	56
August	0	0	0	0
September	7,620	0	792	47,110
The year	7,620	0	336	242,900

Note.- No flow during August.

Red River near Denison, Tex.

Location.- Chain gage on Denison-Colbert toll bridge half a mile below Missouri-Kansas-Texas Railroad bridge and 4½ miles northeast of Denison. Zero of gage is 507.0 feet above mean sea level.

Drainage area.- 38,330 square miles (revised).

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 4,880 second-feet.

Extremes.- Maximum discharge recorded during year, 24,600 second-feet Mar. 1 (gage height, 8.63 feet); minimum, 75 second-feet Aug. 21 (gage height, 0.33 foot). 1923-34: Maximum discharge recorded, about 132,000 second-feet Oct. 17, 1923 (gage height, 19.2 feet, present datum); minimum, that of Aug. 21, 1934.

Remarks.- Records fair. No diversions.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,900	1,180	760	1,180	690	13,200	1,670	1,780	3,610	920	200	3,610
2	1,560	1,270	600	1,140	655	21,700	1,560	1,670	3,110	880	182	3,110
3	1,360	1,360	800	2,950	620	18,300	1,560	1,560	2,660	800	182	3,440
4	1,180	1,270	1,090	3,790	655	17,700	1,460	3,270	2,260	725	160	4,350
5	1,090	1,360	1,560	4,550	655	11,600	2,390	4,350	2,020	690	176	4,970
6	1,040	1,270	1,560	4,550	690	7,760	5,640	17,100	2,140	620	170	5,190
7	960	1,270	1,560	3,970	655	6,360	6,620	11,200	2,020	620	170	9,160
8	920	1,270	1,360	3,110	1,090	5,640	3,610	5,870	2,020	585	194	6,110
9	880	1,140	1,270	3,270	2,020	4,970	2,950	4,760	2,020	550	194	3,970
10	840	1,180	1,160	3,110	2,950	4,550	2,660	3,970	3,110	515	176	3,270
11	840	1,560	1,090	2,660	3,110	3,790	2,390	3,440	4,350	515	155	2,950
12	860	1,460	1,040	2,260	2,140	2,950	3,440	3,110	4,550	487	140	2,390
13	840	1,360	1,000	1,900	1,670	2,660	4,970	2,660	3,440	459	125	3,440
14	840	1,270	960	1,670	1,560	2,390	5,190	2,390	2,390	438	120	17,700
15	920	1,090	960	1,460	1,360	2,020	5,190	2,140	2,140	410	120	9,160
16	1,900	1,000	880	1,360	1,780	1,760	4,350	2,140	1,670	392	135	8,420
17	1,760	920	680	1,270	1,560	1,560	3,270	1,760	1,360	398	120	17,100
18	1,900	860	840	1,160	3,110	1,560	2,950	1,560	1,160	380	110	11,200
19	2,140	840	800	1,140	4,350	1,560	3,790	1,560	1,270	374	100	7,760
20	2,020	640	760	1,090	2,660	1,560	2,800	1,670	1,460	338	90	7,170
21	1,670	640	760	1,040	2,260	1,560	2,260	1,900	1,560	326	85	5,670
22	1,900	840	1,140	1,000	2,020	1,460	2,020	2,260	2,020	302	120	4,760
23	4,550	800	1,780	960	1,670	1,360	1,900	1,900	2,660	302	120	2,950
24	4,760	880	1,670	920	1,460	1,900	1,760	1,780	2,260	302	206	2,660
25	3,270	800	1,360	840	2,950	2,390	2,140	2,520	2,140	284	284	2,140
26	2,800	760	1,670	640	2,660	3,110	2,600	2,600	2,020	266	212	1,900
27	2,390	725	1,780	640	2,140	2,800	2,660	3,270	1,780	266	218	1,670
28	1,900	690	1,670	800	1,460	2,020	2,390	6,890	1,560	254	218	1,560
29	1,560	725	1,360	600		1,670	2,020	5,190	1,270	242	266	1,360
30	1,360	725	1,270	760		1,780	1,900	5,190	1,040	218	242	1,270
31	1,270		1,160	725		1,670		4,550		218	1,510	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,760	840	1,717	105,600
November	1,560	690	1,052	62,630
December	1,780	760	1,187	72,970
January	4,550	725	1,843	113,300
February	4,350	620	1,807	100,400
March	21,700	1,360	5,011	308,100
April	6,620	1,460	3,011	179,200
May	17,100	1,560	3,749	230,500
June	4,550	1,040	2,236	133,100
July	920	218	454	27,920
August	1,510	85	210	12,890
September	17,700	1,270	5,354	318,600
The year	21,700	85	2,300	1,665,000

Red River at Garland City, Ark.

Location.- Chain gage in SE¼ sec. 17, T. 14 S., R. 25 W., on St. Louis Southwestern Railway bridge at Garland City.

Drainage area.- 51,140 square miles.

Records available.- October 1927 to December 1931, June to September 1934.

Extremes.- Maximum discharge recorded during period, 13,900 second-feet Sept. 8 (gage height, 10.18 feet); minimum, 525 second-feet Aug. 31 (gage height, 2.96 feet).
1927-31, 1934: Maximum discharge recorded, 119,000 second-feet May 22, 23, 1930 (gage height, 32.5 feet); minimum discharge, 400 second-feet Oct. 8-19, 1931; minimum gage height, that of Aug. 31, 1934.
Maximum stage known, 35.4 feet in April 1927.

Remarks.- Records poor.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									3,710	2,580	814	575
2									3,380	2,580	808	615
3									4,050	2,740	796	645
4									5,240	2,580	772	645
5									5,600	2,960	772	655
6									5,070	2,020	760	676
7									4,560	1,720	760	9,840
8									3,880	1,560	736	13,900
9									3,380	1,490	718	13,600
10									3,220	1,320	700	12,900
11									3,220	1,250	712	10,100
12									3,220	1,210	700	9,440
13									3,540	1,150	688	9,240
14									3,380	1,090	670	8,040
15									3,220	1,020	660	6,860
16									3,540	948	655	5,960
17									5,780	922	645	5,960
18									8,640	922	655	8,440
19									6,860	882	645	11,200
20									5,780	914	635	10,500
21									4,560	898	615	12,700
22									3,540	882	610	13,200
23									2,900	858	595	11,600
24									2,580	858	595	9,440
25									2,100	820	595	8,240
26									1,790	820	585	7,440
27									1,860	808	575	7,240
28									1,860	944	565	6,500
29									1,940	814	555	5,960
30									2,580	826	545	5,240
31										814	530	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October				
November				
December				
January				
February				
March				
April				
May				
June	8,640	1,790	3,833	228,100
July	2,740	808	1,303	80,130
August	814	530	667	40,990
September	13,900	575	7,578	450,900
The period				800,100

Pease River near Crowell, Tex.

Location.- Water-stage recorder and auxiliary chain gage at Quanah-Crowell highway bridge, 7 miles above Kansas City, Mexico & Orient Railway bridge, and 8 miles north of Crowell, Foard County. Zero of gage is 1,330.44 feet above mean sea level (Texas State Highway Department datum).
Drainage area.- 2,937 square miles, about 533 square miles of which is probably non-contributing.
Records available.- January 1924 to September 1934.
Extremes.- Maximum discharge during year, about 11,400 second-feet Sept. 14 (gage height, 7.10 feet); no flow at times.
1924-34: Maximum discharge not determined; maximum gage height, from graph based on gage readings, 9.92 feet Oct. 3, 1926; no flow at times.
Maximum stage known, 19.6 feet June 1891.
Remarks.- Yearly records fair. Daily and monthly records not sufficiently accurate for publication. No diversions. Total yearly run-off, 52,960 acre-feet.

Little Wichita River near Archer City, Tex.

Location.- Water-stage recorder at Archer City-Wichita Falls highway bridge, 1.5 miles below confluence of North and Middle Forks of Little Wichita River, and 4.8 miles north of Archer City, Archer County.
Drainage area.- 496 square miles.
Records available.- May 1932 to September 1934.
Extremes.- Maximum discharge during year, 2,530 second-feet Mar. 3 (gage height, 22.50 feet); no flow at times.
1932-34: Maximum discharge, 7,750 second-feet May 28, 1933 (gage height, 25.01 feet); no flow at times.
Remarks.- Records good below and fair above 40 second-feet. Discharge estimated Dec. 5-20. No diversions above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	46	0.1	466	2.9	1.0	0		0	0.2
2	0	0	.1	22	.1	1,720	2.4	.5	0		0	.2
3	0	3.2	6.7	16	.1	2,440	1.7	.3	0		0	1.3
4	0	57	6.1	48	.1	1,490	1.5	.2	0		0	38
5	0	31		29	.1	44	1.0	10	0		0	22
6	0	18		13	.1	21	.7	17	0		0	5.6
7	0	7.5		5.1	.1	12	.5	6.5	0		0	1.5
8	0	3.4		2.9	105	7.5	.4	4.2	0		0	.5
9	0	2.2		2.0	660	3.9	.3	2.2	0		0	1.0
10	0	1.2		1.2	347	3.6	.3	1.0	0		0	23
11	0	.6		.7	28	1.7	.2	.5	0		0	8.6
12	0	.2	3.6	.5	14	1.2	.1	.2	0		0	1.9
13	0	.2		.2	6.5	1.0	.1	.1	0		0	.7
14	0	.1		.2	3.6	.9	.1	.1	0		0	534
15	0	0		.2	2.0	.7	.1	.1	0		0	1,450
16	.5	0		.1	1.5	.5	26	.1	0		0	903
17	2.9	0		.1	.9	.3	19	0	2.7		0	33
18	.9	0		.1	124	.2	239	0	73		0	16
19	.2	0		.1	498	.2	415	0	28		0	7.0
20	0	0		.1	67	.2	48	0	10		0	3.9
21	0	4.2	38	.1	24	.3	19	0	2.9		0	6.1
22	0	28	16	.1	12	.4	10	0	1.2		0	46
23	0	21	7.5	.1	7.0	.3	4.5	0	.6		0	28
24	0	7.5	3.4	.1	3.6	.2	11	0	.4		0	16
25	0	3.1	2.2	0	2.4	5.4	46	0	.2		0	8.0
26	0	2.2	1.5	0	1.5	117	21	0	.1		16	3.6
27	0	1.3	.9	0	1.0	58	12	0	0		27	2.0
28	0	.9	.6	.1	.7	34	6.5	0	0		9.6	1.0
29	0	.4	14	.1		16	3.1	0	0		3.6	.6
30	0	.1	55	.1		8.6	1.9	0	0		1.0	.2
31	0		88	.1		3.9		0			.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.9	0	0.15	8.9
November	57	0	6.44	383
December	88	0	9.60	590
January	48	0	6.07	373
February	668	.1	68.5	3,810
March	2,440	.2	208	12,810
April	415	.1	29.8	1,770
May	17	0	1.42	87
June	73	0	3.97	236
July	0	0	0	0
August	27	0	1.86	114
September	1,450	.2	105	6,270
The year	2,440	0	36.5	26,450

Note.- No flow during July.

Washita River near Durwood, Okla.

Location.- Chain gage in sec. 3, T. 4 S., R. 3 E., 3 miles north of Durwood.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,020 second-feet Mar. 2 (gage height, 17.61 feet); minimum, 17 second-feet Aug. 14 (gage height, 2.77 feet).
1928-34: Maximum discharge recorded, 23,300 second-feet May 25, 1933 (gage height, 33.9 feet); minimum, that of Aug. 14, 1934.
Maximum stage known, 38 feet in April and June 1927.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	510	405	280	405	325	3,700	480	600	600	310	92	1,500
2	455	405	305	430	355	7,460	480	570	630	310	95	1,580
3	380	455	1,580	1,155	355	4,500	480	570	570	280	92	3,920
4	330	510	1,220	4,100	355	1,740	480	4,780	1,220	240	92	4,280
5	295	1,220	1,360	2,220	380	1,220	4,570	5,310	1,290	210	86	4,600
6	270	1,010	1,150	1,220	355	1,010	3,820	3,040	1,220	215	92	3,420
7	250	600	730	1,500	355	905	1,360	1,580	905	215	86	1,430
8	225	455	430	1,360	405	835	1,010	1,080	765	210	68	1,010
9	200	430	405	1,150	1,500	765	835	835	510	190	75	730
10	172	355	480	1,010	1,360	730	1,500	765	430	164	75	1,150
11	152	355	430	835	765	660	3,420	695	380	156	60	1,220
12	152	355	405	695	600	600	3,920	630	490	148	32	3,620
13	134	355	355	600	600	540	4,320	600	1,010	148	19	4,460
14	140	330	305	540	540	510	4,010	570	660	144	17	4,280
15	172	305	265	510	455	510	2,280	510	405	140	60	3,920
16	260	305	235	480	430	510	1,430	510	405	134	83	3,920
17	1,150	305	255	480	405	480	1,220	540	380	98	75	3,370
18	2,220	295	330	480	800	455	1,150	870	330	89	65	2,160
19	905	285	355	480	800	430	1,150	730	320	131	65	2,020
20	510	285	905	455	540	430	1,010	600	405	122	62	1,880
21	1,810	355	1,660	430	510	430	940	540	510	113	51	1,580
22	3,960	600	2,020	405	455	430	870	510	480	122	43	1,290
23	2,990	1,080	1,680	405	430	430	800	540	630	113	51	1,010
24	1,810	275	1,580	430	430	455	730	1,010	1,150	128	70	835
25	940	225	1,080	430	380	510	765	940	1,010	110	51	730
26	765	205	570	430	380	660	800	765	600	89	41	600
27	600	205	480	405	405	600	800	630	455	101	41	480
28	510	235	430	380	380	540	730	870	430	140	95	430
29	455	275	405	380		510	695	1,150	405	95	1,220	405
30	405	315	405	330		480	660	905	380	92	2,880	380
31	405		405	325		480		905		89	2,220	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,960	134	759	46,670
November	1,220	205	426	25,370
December	2,020	235	732	45,020
January	4,100	325	789	48,510
February	1,500	325	538	29,850
March	7,460	430	1,081	66,470
April	4,570	480	1,557	92,660
May	5,310	510	1,101	67,670
June	1,290	320	639	38,000
July	310	89	156	9,610
August	2,880	17	263	16,170
September	4,600	380	2,074	123,400
The year	7,460	17	842	609,400

Little River near Horatio, Ark.

Location.- Chain gage in E½ sec. 11, T. 10 S., R. 32 W., 2 miles south of Horatio.

Records available.- December 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 25,100 second-feet Apr. 9 (gage height, 27.36 feet); minimum, 1 second-foot Aug. 18 to Sept. 1 (gage height, 3.1 feet).
1930-34: Maximum discharge recorded, 35,000 second-feet Jan. 24, 1932 (gage height, 31.8 feet); minimum, that of Aug. 18 to Sept. 1, 1934.
Maximum stage known, 38 feet in August 1915.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,240	300	540	1,190	1,050	1,890	3,910	790	205	29	4	1
2	1,540	280	570	1,470	930	3,660	3,180	685	190	26	4	2
3	1,050	240	2,620	1,680	870	8,000	2,620	565	169	29	4	29
4	810	210	3,580	6,900	870	8,800	2,240	585	157	32	3	2,070
5	600	170	2,240	10,700	750	7,500	5,130	735	151	28	2	5,020
6	460	240	1,820	10,100	690	5,620	19,700	3,340	145	20	2	4,090
7	385	280	1,680	8,000	630	4,160	24,000	4,720	157	34	2	2,240
8	300	300	1,330	6,610	600	3,580	24,600	3,100	151	20	2	685
9	260	300	990	5,890	540	4,540	24,900	2,030	139	14	2	545
10	225	280	870	5,260	540	5,530	23,000	1,540	124	13	2	405
11	195	260	810	4,090	720	4,720	18,500	1,120	136	12	2	385
12	195	240	690	3,340	750	3,820	10,600	990	145	12	2	325
13	195	240	570	2,780	720	3,180	4,450	790	133	10	2	265
14	180	225	510	2,310	690	2,620	2,940	685	190	10	2	235
15	300	180	485	2,030	630	2,310	2,380	585	235	13	2	220
16	810	170	435	1,750	570	1,960	2,170	505	220	12	2	190
17	2,460	160	435	1,540	540	1,680	2,700	465	190	11	2	175
18	3,020	120	3,060	1,540	540	1,610	3,020	405	142	10	1	166
19	2,100	180	10,100	1,540	540	1,540	2,860	385	112	10	1	154
20	1,890	170	10,700	1,400	690	1,610	4,180	365	103	9	1	142
21	2,030	170	11,600	1,540	870	1,680	4,630	345	97	8	1	136
22	1,820	4,000	5,530	2,240	930	1,610	3,580	305	91	8	1	133
23	1,540	3,580	3,820	3,020	870	1,540	3,100	305	79	7	1	236
24	1,120	2,540	2,860	2,940	810	1,400	2,310	285	67	6	1	385
25	1,190	1,750	2,310	2,620	870	1,750	1,890	285	55	5	1	325
26	990	1,400	1,890	2,240	930	11,100	1,610	265	51	5	1	265
27	750	1,050	1,540	2,030	1,400	19,500	1,400	250	47	5	1	220
28	630	870	1,260	1,820	1,610	17,500	1,190	235	43	5	1	205
29	510	750	1,050	1,540		12,800	990	235	35	5	1	205
30	435	630	930	1,330		8,000	920	220	32	5	1	235
31	360		990	1,190		5,170		205		5	1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,020	180	987	60,670
November	4,000	120	710	42,220
December	11,600	435	2,510	154,300
January	10,700	1,190	3,311	203,600
February	1,610	540	791	43,930
March	19,500	1,400	5,174	318,100
April	24,900	920	6,957	414,000
May	4,720	205	882	54,230
June	235	32	126	7,520
July	34	5	15.5	829
August	4	1	1.8	109
September	5,620	1	676	40,240
The year	24,900	1	1,851	1,340,000

Sulphur River near Darden, Tex.

Location.- Staff gage on St. Louis Southwestern Railway bridge 1 mile south of Darden, Bowie County. Zero of gage is 221.7 feet above mean sea level.

Drainage area.- 2,754 square miles.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 1,793 second-feet.

Extremes.- Maximum discharge during year, 16,300 second-feet Apr. 10 (gage height, 26.1 feet, from graph based on gage readings); no flow Aug. 10-29 and Sept. 20-29. 1923-34: Maximum discharge, 67,200 second-feet May 19, 1930 (gage height, 31.7 feet, from graph based on gage readings); no flow at times.

Remarks.- Records good. No diversions. 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	503	50	19	280	52	2,040	6,800	4,010	150	9.5	0.1	1.7
2	464	39	37	610	48	2,960	4,440	2,690	108	7.4	.1	1.7
3	254	33	110	1,270	48	3,440	3,200	1,650	77	5.8	.1	2.5
4	122	39	129	1,770	44	3,710	2,440	760	62	5.8	.1	11
5	77	36	67	1,840	36	4,640	2,220	475	50	5.8	.1	3.5
6	77	33	82	2,220	38	8,500	2,550	487	46	4.2	.1	2.5
7	102	30	166	2,640	34	13,900	2,920	535	481	4.2	.1	1.7
8	72	27	415	3,320	34	12,700	3,520	735	330	4.2	.1	1.7
9	46	50	690	3,780	104	11,900	7,430	1,130	174	4.2	.1	.9
10	36	102	599	5,100	307	10,700	15,900	1,050	87	4.2	0	.9
11	30	87	380	5,400	422	8,600	15,100	1,050	67	3.0	0	.9
12	27	72	298	4,650	946	6,050	13,100	990	58	3.0	0	.9
13	30	54	222	3,480	1,610	4,150	11,500	862	50	3.0	0	.9
14	27	42	157	1,970	1,840	2,960	9,200	549	39	3.0	0	.2
15	72	36	102	1,090	1,790	2,000	6,550	289	33	3.0	0	.2
16	977	30	82	517	1,450	1,200	4,250	192	448	2.1	0	.2
17	1,610	27	92	254	1,040	588	2,800	143	326	2.1	0	.1
18	1,840	21	62	178	705	343	2,160	102	199	2.1	0	.1
19	2,090	21	62	157	523	206	2,160	82	390	1.3	0	.1
20	2,340	19	82	129	464	129	2,420	72	428	1.3	0	0
21	2,610	16	82	129	690	122	2,760	67	268	1.3	0	0
22	2,670	13	72	115	958	143	2,880	67	146	1.3	0	0
23	2,120	11	72	115	814	136	2,340	62	62	.6	0	0
24	1,230	11	72	102	605	129	1,750	58	42	.6	0	0
25	523	30	72	92	453	553	1,590	50	28	.6	0	0
26	390	58	62	92	370	1,780	2,060	42	26	.6	0	0
27	352	54	44	82	464	2,800	2,460	208	23	.6	0	0
28	214	39	38	72	1,390	4,890	3,360	298	19	.2	0	0
29	129	30	34	62		9,900	4,450	222	16	.2	0	0
30	92	24	45	62		10,700	4,950	206	13	.2	3.5	.1
31	72		230	54		9,500		192		.2	1.7	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,670	27	684	42,050
November	102	11	37.8	2,250
December	690	19	151	9,310
January	5,400	54	1,343	82,580
February	1,840	34	617	34,280
March	13,900	122	4,560	280,400
April	15,900	1,590	4,975	296,100
May	4,010	42	630	38,730
June	481	13	142	8,420
July	9.5	.2	2.76	170
August	3.5	0	.20	12
September	11	0	1.06	63
The year	15,900	0	1,097	794,400

Cypress Creek near Jefferson, Tex.

Location.- Water-stage recorder at Farrell Bridge, on Jefferson-Harleton highway, 8 miles west of Jefferson, Marion County, and 14 miles above mouth of Black Cypress Creek. Prior to Nov. 2, 1933, staff gage was used at same location and datum.

Drainage area.- 848 square miles.

Records available.- July 1924 to September 1934.

Average discharge.- 10 years, 596 second-feet.

Extremes.- Maximum discharge during year, 4,870 second-feet Mar. 31 (gage height, 16.13 feet); minimum, 0.1 second-foot Aug. 22 to Sept. 2 (gage height, 0.17 foot). 1924-34: Maximum discharge, about 22,600 second-feet May 20, 1930 (gage height, 25.37 feet, from flood marks); no flow for several periods.

Remarks.- Records good except those for estimated period Dec. 4-15, which are fair. No diversions.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	26	41	764	278	517	4,310	1,450	99	8.4	1.5	0.1
2	34	24	81	856	294	1,570	3,250	1,580	87	8.2	1.4	.1
3	33	20	174	910	294	2,220	2,580	1,550	74	15	1.2	1.0
4	32	31		1,200	266	2,270	2,120	1,360	66	33	1.2	1.5
5	30	43		1,390	250	2,270	1,840	1,270	167	22	1.1	1.2
6	27	50		1,360	241	2,440	1,920	1,190	176	18	1.1	.9
7	24	50		1,330	232	3,150	1,920	1,020	124	33	1.0	.8
8	18	45		1,300	228	3,910	1,720	892	156	34	1.0	.8
9	15	43		1,330	266	3,910	1,620	874	144	22	1.0	.8
10	14	45	346	1,360	458	3,450	1,660	1,090	102	16	1.0	.9
11	12	46		1,390	548	2,890	1,760	1,620	80	13	1.0	.9
12	12	46		1,390	628	2,440	1,840	1,920	85	9.8	1.0	1.2
13	22	45		1,300	692	2,120	1,920	1,920	88	7.6	1.0	1.8
14	31	44		1,120	740	1,800	1,840	1,720	80	6.4	.9	2.5
15	39	44		856	772	1,550	1,690	1,480	72	5.5	.8	3.0
16	47	41	286	612	788	1,240	1,520	1,160	74	4.9	.7	2.5
17	42	38	846	430	788	964	1,270	788	85	4.4	.6	1.9
18	36	36	1,090	360	804	724	964	461	77	4.0	.5	1.6
19	28	36	946	388	556	564	740	266	60	3.7	.4	1.5
20	50	36	654	444	604	472	596	210	52	3.3	.3	1.4
21	80	36	437	458	724	430	516	187	45	3.0	.2	1.3
22	71	37	316	444	676	402	472	169	35	2.7	.1	1.2
23	50	38	261	430	612	388	416	156	29	2.4	.1	1.2
24	44	38	241	416	564	452	720	156	24	2.2	.1	1.2
25	42	36	223	388	516	906	928	144	20	2.1	.1	1.1
26	37	36	200	374	500	1,570	892	148	17	2.1	.1	1.0
27	27	37	182	349	472	1,880	836	144	15	2.0	.1	1.0
28	20	38	164	327	416	1,840	910	132	12	1.9	.1	.9
29	18	38	169	305		1,840	1,000	156	11	1.9	.1	1.0
30	42	39	207	278		3,020	1,220	152	9.4	1.8	.1	1.0
31	38	[illegible]	490	256		4,730		120		1.7	.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	80	12	33.8	2,080
November	50	20	38.7	2,300
December	1,090	41	360	22,150
January	1,390	256	778	47,830
February	856	228	526	29,210
March	4,730	388	1,869	114,900
April	4,310	416	1,500	89,240
May	1,920	120	822	50,550
June	176	9.4	72.2	4,300
July	34	1.7	9.55	587
August	1.5	.1	.64	39
September	3.0	.1	1.24	74
The year	4,730	.1	502	363,300

1230 O—35——9

Ouachita River at Remmel Dam, near Malvern, Ark.

Location.- Water-stage recorder in SW¼NW¼ sec. 36, T. 3 S., R. 18 W., 700 feet below Remmel Dam and 9 miles northwest of Malvern. Zero of gage is 247.94 feet above mean sea level.

Drainage area.- 1,540 square miles.

Records available.- January 1925 to September 1934.

Extremes.- Maximum discharge during year, 63,700 second-feet Mar. 26 (gage height, 25.2 feet); minimum daily discharge, 48 second-feet Sept. 16.
1925-34: Maximum discharge, about 138,000 second-feet Apr. 21, 1927 (gage height, 35.7 feet); minimum, 15 second-feet Sept. 12, 13, 1925 (gage height, 1.52 feet); minimum daily discharge, 39 second-feet June 22, 1929.
Maximum stage known, 36.3 feet May 16, 1923 (discharge, about 140,000 second-feet).

Remarks.- Records good. Regulation by Remmel Dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	249	784	598	2,180	1,490	606	3,670	438	321	112	121	94
2	254	724	1,380	2,230	2,020	1,570	2,950	675	349	104	115	108
3	577	767	1,600	1,600	1,730	435	2,930	916	137	111	135	109
4	392	449	1,160	2,680	184	112	3,340	910	714	111	120	106
5	620	156	1,970	2,920	1,080	180	16,400	3,140	753	99	122	433
6	504	583	1,830	2,840	1,670	246	13,700	1,620	87	103	124	412
7	230	716	1,530	2,740	1,930	538	10,700	1,250	91	93	948	383
8	181	700	1,230	2,960	2,020	550	5,880	427	92	117	702	141
9	122	591	528	2,960	2,280	354	5,880	964	103	110	157	100
10	584	377	746	3,070	838	1,310	7,010	1,660	89	109	120	336
11	445	288	1,460	3,070	350	391	6,840	2,120	74	180	135	147
12	522	150	1,570	3,070	751	1,280	4,350	1,190	111	129	74	1,630
13	487	628	1,890	2,850	180	1,820	2,850	393	103	308	112	1,460
14	140	190	1,010	1,900	671	1,520	2,740	1,080	96	849	80	1,530
15	151	342	1,200	2,150	497	952	2,440	994	86	188	90	358
16	600	140	1,260	2,850	441	1,460	2,740	826	137	1,110	114	48
17	536	172	1,670	2,630	211	1,790	2,960	478	105	1,590	122	379
18	476	293	2,470	2,330	194	1,230	2,740	783	120	515	82	343
19	433	136	2,440	1,630	140	1,460	2,850	356	188	144	109	1,460
20	501	358	2,600	1,430	128	1,400	2,850	544	84	117	99	1,500
21	626	607	2,740	482	487	1,350	2,740	1,010	92	125	230	518
22	466	1,060	2,740	1,450	116	2,000	2,740	795	88	125	88	324
23	788	1,380	2,740	1,890	140	1,840	2,850	1,030	101	103	186	50
24	567	1,080	2,410	2,280	120	1,790	2,740	1,090	104	309	169	112
25	497	1,160	1,690	2,430	132	2,640	2,740	908	103	134	178	614
26	591	418	1,230	1,970	141	45,400	2,740	599	111	124	85	207
27	462	1,040	1,090	1,730	151	17,700	2,590	134	94	122	137	140
28	752	1,610	979	750	320	12,700	2,740	397	99	108	127	438
29	323	1,410	2,110	978		8,870	2,260	229	92	117	114	265
30	847	372	1,870	1,310		5,290	1,800	181	95	119	117	105
31	378		1,730	1,730		5,220		456		129	135	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	847	122	461	28,370
November	1,610	140	621	36,980
December	2,740	526	1,660	102,100
January	3,070	482	2,171	133,500
February	2,280	116	729	40,490
March	45,400	112	4,000	246,000
April	16,400	1,800	4,392	261,300
May	3,140	134	890	54,730
June	753	74	161	9,560
July	1,590	93	249	15,300
August	948	74	169	10,410
September	1,630	48	462	27,470
The year	45,400	48	1,335	966,200

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow were made at a number of other points, as shown by the following table:

Miscellaneous discharge measurements in Lower Mississippi River drainage basin during the year ending September 30, 1934.

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				sec.-ft.
Aug. 1	Meramec Spring..	Meramec River.	Sec. 1, T. 37 N., R. 6 W., 6 miles southeast of St. James, Mo.	56.0
Aug. 23	.....do.....	.....do.....	.....do.....	86.9
Aug. 23	Blue Grass Spring	.....do.....	NW¼SW¼ sec. 34, T. 44 N., R. 4 E., 3 miles east of Eureka, Mo.	.1
Aug. 15	Blue Spring	St. Francis River	Sec. 4, T. 27 N., R. 6 E., 8 miles southeast of Greenville, Mo.	46.0
July 18	Roaring River Spring	Roaring River.	Sec. 27, T. 22 N., R. 27 W., 7 miles south of Cassville, Mo.	14.4
July 16	James River	White River	Sec. 27, T. 28 N., R. 22 W., 2⅛ miles southeast of Battlefield, Mo.	7.30
Aug. 4	.....do.....	.....do.....	.....do.....	3.62
Aug. 8	.....do.....	.....do.....	.....do.....	3.47
Sept. 5	.....do.....	.....do.....	.....do.....	3.13
Jan. 5	Wilson Creek....	James River...	NW¼SE¼ sec. 7, T. 28 N., R. 22 W., at Wilson Creek Fall, 6 miles southwest of Springfield, Mo.	4.0
Jan. 5	.....do.....	.....do.....	SE¼NW¼ sec. 18, T. 28 N., R. 22 W., just below Wilson Creek Spring, 6 miles southwest of Springfield, Mo.	9.8
Aug. 18	Blue Spring.....	North Fork of White River	SW¼NW¼ sec. 14, T. 24 N., R. 11 W., 4 miles southeast of Dora, Mo.	12.3
Aug. 18	Double Spring...	.....do.....	NE¼NE¼ sec. 32, T. 24 N., R. 11 W., 6 miles south of Dora, Mo.	142
Aug. 18	Althea Spring...	.....do.....	Sec. 25, T. 23 N., R. 12 W., 5 miles northeast of Tecumseh, Mo.	17.8
Aug. 18	Wylder Spring...	Spring Creek..	Sec. 14, T. 23 N., R. 11 W., 5 miles north of Caulfield, Mo.	9.03
Aug. 19	Hunter Creek....	Bryant Creek..	Sec. 22, T. 26 N., 15 W., just above Crystal Spring, 6 miles southeast of Ava, Mo.	3.68
Aug. 18	Hodgson Mill Spring	.....do.....	Sec. 34, T. 24 N., R. 12 W., near Sycamore, Mo.	44.7
Aug. 19	Crystal Spring..	Hunter Creek..	Sec. 22, T. 26 N., R. 15 W., 6 miles southeast of Ava, Mo.	17.3
Aug. 14	Mill Spring.....	Black River...	Sec. 36, T. 28 N., R. 3 E., at Mill Spring, Mo.	9.24
Aug. 15	Markham Spring..	.....do.....	Sec. 23, T. 27 N., R. 4 E., 3 miles west of Williamsville, Mo.	7.56
Aug. 14	Keener Spring...	.....do.....	Sec. 9, T. 26 N., R. 5 E., 6 miles south of Williamsville, Mo.	15.2
Aug. 13	Montauk Spring..	Current River.	SE¼ sec. 22, T. 32 N., R. 7 W., half a mile north of Montauk, Mo.	38.2
July 26	Cave Spring.....	.....do.....	S½ lot 2, NW¼ sec. 19, T. 26 N., R. 2 E., 3½ miles west of Hunter, Mo.	2.14
July 26	Jordan Spring...	.....do.....	W½NE¼SW¼ sec. 24, T. 26 N., R. 1 E., 3½ miles west of Hunter, Mo.	11.8
Aug. 16	Boze Mill Spring	Eleven Point River	Sec. 16, T. 23 N., R. 2 W., 12 miles east of Alton, Mo.	13.9
Aug. 17	Thomasson Mill Spring	.....do.....	Sec. 16, T. 22 N., R. 2 W., 18 miles southeast of Alton, Mo.	23.8
Aug. 17	Blue Spring	.....do.....	Sec. 6, T. 22 N., R. 2 W., 18 miles southeast of Alton, Mo.	58.6
Aug. 18	Neosho River....	Arkansas River	Grove, Okla.....	251
Oct. 7	Ocate Creek.....	Canadian River	Lot 2, Sec. 2, T. 22 N., R. 18 E., 300 feet above Naranjos diversion and 2 miles below Ocate, N. Mex.	1.96
Oct. 11	.....do.....	.....do.....	.....do.....	2.28
Nov. 5	.....do.....	.....do.....	.....do.....	4.89
Oct. 10	Colmor Main Service Canal	Ocate Creek...	NE¼SW¼ sec. 35, T. 23 N., R. 20 E., at head, 8 miles southwest of Colmor, N. Mex.	.39

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