

Magnitude and Frequency of Floods in the United States

Part 7. Lower Mississippi River Basin

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1681



UNITED STATES DEPARTMENT OF THE INTERIOR

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MAGNITUDE AND FREQUENCY OF FLOODS IN THE UNITED STATES

PART 7. LOWER MISSISSIPPI RIVER BASIN

By JAMES L. PATTERSON

ABSTRACT

This report describes methods by which the magnitude and frequency of expected floods for most streams in the lower Mississippi River basin may be determined. Flood data were used to define flood-frequency curves applicable to the area. Composite frequency curves were drawn showing the relation of mean annual floods to floods having recurrence intervals from 1.2 to 50 years. In some areas, it was found that the slope of the composite frequency curve varies with drainage area. An adjustment curve was defined for use in conjunction with the composite curve for these areas. Other curves express the relation of the mean annual flood to drainage-basin characteristics. By combining data from the composite and mean-annual-flood curves, flood-frequency curves may be drawn for streams in the lower Mississippi River basin not materially affected by the works of man. Neither of the two types of curves just mentioned should be extrapolated beyond the range defined by base data. Frequency curves, described in this report, were based on analysis of flood records collected at gaging stations having 5 or more years of record not materially affected by regulation or diversion.

INTRODUCTION

This report describes methods by which the magnitude and frequency of floods at most sites in the lower Mississippi River basin may be determined. In addition to flood-frequency analysis, the accumulation of flood data in the report area is presented.

Flood-frequency reports have been published for several States that are partly within the area covered by this report. These States are Kansas, Kentucky, Louisiana, Missouri, and Tennessee. A list of publications for these States is included in the selected bibliography.

ACKNOWLEDGMENTS

This report was prepared in the Fort Smith office of the U.S. Geological Survey. The author was assisted in computation and preparation of the data by H. W. Sengel, Jr., T. E. Lamb, and others. Technical assistance was furnished by Tate Dalrymple and A. Rice Green of Floods Section, U.S. Geological Survey, Washington, D.C. Basic data were compiled by personnel in the district offices of the Surface Water Branch under the supervision of their district engineers.

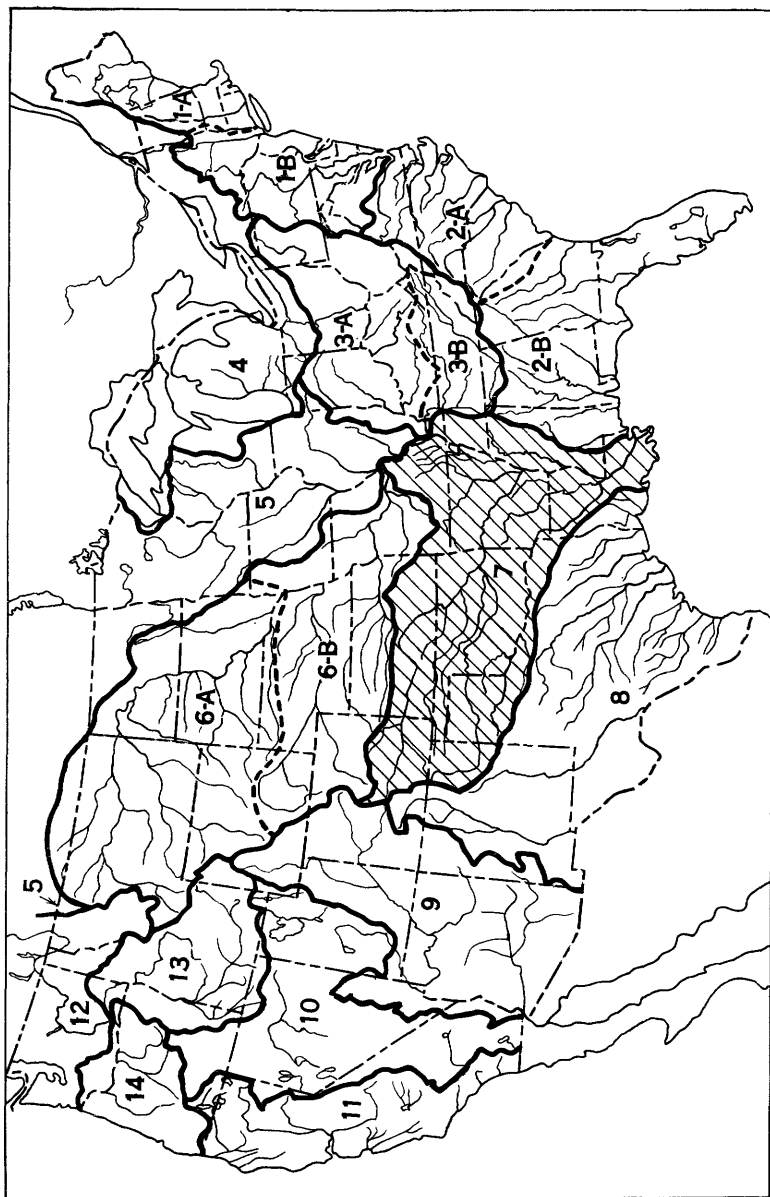


FIGURE 1.—Map of contiguous United States showing area covered by this report.

Unless otherwise noted, the data were collected by the U.S. Geological Survey with the assistance of many Federal and State agencies, municipalities, corporations, and private individuals. Credit has been given for this cooperation in the annual reports of the Geological Survey entitled, "Surface Water Supply of the United States". This report is not included in the cooperative program.

DESCRIPTION OF THE AREA

RIVER BASINS

The area covered by the lower Mississippi River basin is in the south-central part of the United States (fig. 1). Included in this area are the main stem of the Mississippi River, all its western tributaries downstream from the Missouri River, and all its eastern tributaries downstream from the Ohio River. The principal river basins to the east of the Mississippi River are the Obion, Hatchie, Yazoo, and Big Black basins. To the west are the Meramec, St. Francis, White, Arkansas, and Red River basins, which are all tributary to the Mississippi River. Two groups of streams are not Mississippi River tributaries: (1) the group of rivers heading in southern Mississippi and flowing into Lake Pontchartrain, and (2) the group that includes streams west of the Mississippi River and south of the Red River. These two groups are included under "Mississippi River Delta" streams.

TOPOGRAPHY

The topography of the area covered by this report is diverse. The lower Mississippi River basin extends into four major physiographic divisions: (1) the Rocky Mountain System in south-central Colorado and north-central New Mexico, (2) the Interior Plains consisting of the Great Plains province in eastern Colorado and New Mexico, Oklahoma and Texas Panhandles, and southwestern Kansas; and the Central Lowland province in southeastern Kansas, most of Oklahoma, and north-central Texas, (3) the Interior Highlands consisting of the Ozark Plateaus and Ouachita province in southern Missouri, the northwest half of Arkansas, and eastern Oklahoma, and (4) the Atlantic Plain, consisting of the Coastal Plain province in northeast Texas, southeast Arkansas, Louisiana, and all the lower Mississippi River basin east of the Mississippi River.

Elevations range from gulf level, at the mouth of the Mississippi River, to 14,000 feet or higher for some peaks in Colorado. Eastward from the high mountains in the western part of the area, the elevation ranges from about 5,000 feet in eastern Colorado and New Mexico to 1,000 feet in eastern Kansas, Oklahoma, and Texas, which is the eastern boundary of the Interior Plains area. Minor relief in the

Lowland Plains is provided by the Flint Hills in southeastern Kansas, the Sandstone Hills in eastern Oklahoma, and the Arbuckle and Wichita Mountains in south-central and southwestern Oklahoma.

The Ouachita and Ozark Mountains are rugged in the Interior Highlands in Missouri, Arkansas, and eastern Oklahoma. Some peaks rise to an elevation of more than 2,800 feet.

Elevations in the Coastal Plains area range from sea level at the mouth of the Mississippi River to about 500 feet at Crowley's Ridge, a low narrow ridge in northeastern Arkansas and southeastern Missouri.

CLIMATE

Climate, like topography, varies greatly. Conditions range from humid in the eastern part of the area to semiarid in the western part. Precipitation ranges along the eastern edge of the area from about 45 inches in southwestern Kentucky to about 60 inches in southeastern Louisiana. West of the Mississippi River, precipitation decreases fairly uniformly from about 50 inches in eastern Arkansas to less than 15 inches in the western Great Plains and then increases to about 30 inches in the high mountains of Colorado and New Mexico.

Floods in the eastern part of the area are generally caused by rainstorms lasting several days and moving northeastward. Although these storms may occur during any month of the year, they occur more frequently from January to May. Great floods have occurred during late summer or early fall as a result of hurricanes originating in the Gulf of Mexico.

In the central and western part of the area, floods are caused more frequently by intense rainstorms of short duration and occur most frequently during the summer. On the eastern slope of the high mountains in Colorado and New Mexico, flood peaks are generally due to snowmelt and occur in late spring or early summer. Except in the extreme western part of the area, snowmelt seldom contributes to peak flows.

FLOOD-FREQUENCY ANALYSIS

RECORDS AVAILABLE

Data on peak flow at 783 points (gaging stations) having 5 or more years of record on streams in the lower Mississippi River basin are included in this report. The locations of the 783 gaging stations are shown on plate 1.

Steamflow records for only 393 of the gaging stations were used in defining regional flood-frequency relations. In general, only those stations having 5 or more years of peak discharge record not materially affected by unnatural conditions were used in the analysis. An inventory of pertinent data for the 393 gaging stations is given in table 1.

RECORDS NOT USED IN REGIONAL ANALYSIS

Gaging-station records not used in the regional analysis fall in one of the following categories:

1. Peak discharge materially affected by regulation or diversion.
2. Peak discharge materially affected by channel rectification.
3. Drainage area indeterminate.
4. Only peak stages available.
5. Less than 25 percent difference between drainage areas for gaging stations on the same stream.
6. Large streams such as the Arkansas and Red Rivers whose peak-flow characteristics differ greatly from those of adjacent tributary streams.

Maximum stages and discharges, if known, are listed in table 2 for each of the remaining 390 gaging stations not used to define regional flood-frequency relations. Similar data for miscellaneous sites and for gaging stations having less than 5 years of record are listed in table 3.

FLOODS IN LOWER MISSISSIPPI RIVER BASIN

Table 1.--Inventory of data for gaging stations used to define regional flood-frequency relations

Table 1.—Inventory of data for gaging stations used to define regional flood-frequency relations											
No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Elevation (feet)	Period of known floods (water years)	Station Q _{2.33} (cfs)	Areal Q _{2.33} (cfs)	Date	Maximum stage and discharge		
									Stage height (feet)	Discharge	
										Cfs	Cfs per sq mi
Meramec River basin											
115	Green Acre Branch near Rolla, Mo....	B1	0.622	-	1949-58	480	-	June 9, 1950	6.85	1,900	3,050
120	Beinke Branch near Rolla, Mo.....	B1	1.05	-	1949-58	500	-	June 9, 1950	3.36	1,190	1,130
120.5	Dry Fork near St. James, Mo.....	B1	370	-	1944-50	9,200	9,400	Aug. 15, 1948	21.7	28,000	75.7
130	Meramec River near Steelville, Mo....	B1	781	-	1915-58	18,700	15,200	Aug. 20, 1915	26.5	60,000	76.8
145	Meramec River near Sullivan, Mo....	B1	1,475	-	1915-58	22,500	22,700	August 1915	33.5	90,000	81.0
150	Bourbeuse River near St. James, Mo..	B3	21.3	-	1948-58	4,580	2,970	Oct. 11, 1949	11.08	8,250	387
155	Lanes Fork near Vicksy, Mo.....	B3	24.1	-	1948-58	4,100	3,150	June 7, 1945	12.0	9,400	390
160	Bourbeuse River near Spring Bluff, B3	B3	608	-	1915-58	18,000	17,400	August 1915	35.7	60,000	98.7
165	Bourbeuse River at Union, Mo.....	B1	808	-	1897-1958	13,800	15,500	Aug. 22, 1915	28.5	50,000	61.9
170	Meramec River at Robertsville, Mo..	B1	2,673	-	1915-58	35,200	33,100	August 1915	36.1	125,000	45.8
185	Big River at Byrnesville, Mo.....	B1	917	-	1915-58	16,100	16,700	Aug. 21, 1915	30.2	80,000	87.2
190	Meramec River near Eureka, Mo.....	B1	3,788	-	1904-5, 1915-48	39,000	41,500	Aug. 22, 1915	39.2	175,000	46.2
Headwater diversion channel basin											
210	Castor River at Zalma, Mo.....	B1	423	-	1920-58	12,700	10,200	Jan. 14, 1937	27.67	40,400	95.5
Mayfield Creek basin											
225	Perry Creek near Mayfield, Ky.....	G4	1.72	-	1952-58	886	-	March 1952	10.3	-	-
230	Mayfield Creek at Lovelaceville, Ky.	G4	211	-	1953-58 1926-58	7,560	7,650	Mar. 20, 1955 January 1937	7.12 21.1	846 19,800	492 93.8
Obion Creek basin											
235	Obion Creek at Pryorsburg, Ky.....	G4	36.3	-	1949-58 1952-58	3,130	2,560	Feb. 14, 1949 Nov. 18, 1957	13.0 12.60	- 5,330	- 147
Bayou du Chien basin											
240	Bayou du Chien near Clinton, Ky....	G4	68.5	-	1940-58	3,520	3,800	Jan. 15, 1951	15.00	6,880	100
Obion River basin											
245	South Fork Obion River near Greenfield, Tenn.	F8	431	-	1930-58	9,200	9,200	Jan. 22, 1937	17.82	25,600	59.4
250	Rutherford Fork Obion River near Bradford, Tenn.	F8	203	-	1930-58	5,300	5,600	Jan. 22, 1937	20.06	9,730	47.9
254	North Fork Obion River at U.S. Highway 45E near Martin, Tenn.	F8	375	-	1939-58	8,100	8,400	Nov. 19, 1957	23.05	30,300	80.8
255	North Fork Obion River near Union City, Tenn.	F8	490	-	1930-58	11,200	10,000	Jan. 22, 1937	22.0	49,200	100
260	Obion River at Obion, Tenn.....	F8	1,880	-	1930-58	25,400	24,000	Jan. 24, 1937	25.4	99,500	52.9

265	Reelfoot Creek near Samburg, Tenn...	P8	110	-	1951-58	3,590	3,900	Nov. 18, 1957	14.83	6,690	60.8
275	South Fork Forked Deer River at Jackson, Tenn.	P4	574	-	1950-58	12,000	14,300	Jan. 21, 1935	24.00	43,600	76.0
280	South Fork Forked Deer River at Chestnut Bluff, Tenn.	P8	1,100	-	1950-58	14,500	17,000	Jan. 25, 1935	22.5	45,000	40.9
285	North Fork Forked Deer River at Trenton, Tenn.	P4	71.3	-	1951-58	4,780	3,900	Jan. 30, 1956	13.39	11,800	165
290	Middle Fork Forked Deer River near Alamo, Tenn.	P4	410	-	1950-58	9,800	11,700	Jan. 30, 1956	16.70	34,300	83.7
291	North Fork Forked Deer River at Dyersburg, Tenn.	P8	867	-	1939-40, 1944-58	10,600	14,500	Nov. 20, 1957	27.82	22,400	25.8
Hatchie River basin											
292.75	Hatchie River near Pocahontas, Tenn.	P4	300	-	1941-58	8,420	9,600	Feb. 14, 1948	29.4	21,900	73.0
293	Tusculum River Canal near Corinth, Miss.	P4	277	-	1950-58	11,400	9,100	Mar. 22, 1955	15.70	27,100	97.8
294	Hatchie River at Pocahontas, Tenn...	P4	820	-	1942-58	18,700	18,000	Feb. 14, 1948	29.40	47,600	58.0
295	Hatchie River at Bollivar, Tenn....	P4	1,430	-	1950-58	22,600	25,500	Feb. 15, 1948	21.53	56,300	39.4
300	Hatchie River near Stanton, Tenn...	P8	1,940	-	1950-58	25,700	24,500	Jan. 22, 1935	20.35	59,000	30.4
300.5	Hatchie River at Rialto, Tenn.....	P8	2,233	-	1959-58	28,300	26,800	Jan. 13, 1946	22.62.9	55,700	24.9
Loosahatchie River basin											
302.8	Loosahatchie River at Brunswick, Tenn.	P4	506	-	1955-58 1959-58	20,100	13,300	January 1935 Jan. 9, 1946	28.5 25.92	39,700	78.5
Wolf River basin											
305	Wolf River at Rossville, Tenn.....	P4	503	-	1950-58	12,500	13,200	Jan. 20, 1935	13.75	40,000	79.5
317	Wolf River at Raleigh, Tenn.....	P4	765	-	1955-58 1957-58	16,100	17,200	Jan. 20, 1935 Jan. 9, 1946	23.72 20.40	41,400	54.1
St. Francis River basin											
375	St. Francis River near Patterson, Mo.	B2	956	-	1915-58	36,000	31,000	August 1915	33.8	100,000	105
401	St. Francis River at St. Francis, D5	D5	1,781	-	1916-58	18,600	13,900	Mar. 15, 1935	28.2	39,200	22.0
404.5	St. Francis River at Lake City, Ark.	D5	2,385	-	1917-58	16,500	17,100	Jan. 22-24, 1937	13.3	36,700	15.4
410	Little River ditch 81 near Kennett, Mo.	C5	111	-	1927-58	1,920	1,910	Apr. 21, 1927	15.11	2,760	24.9
420	Little River ditch 1 near Kennett, Mo.	C5	235	-	1927-58	4,510	3,280	Apr. 25, 1927	16.56	7,520	32.0
425	Little River ditch 251 near Lil-bourn, Mo.	C5	235	-	1945-58	2,290	3,280	June 1945	15.6	-	-
430	Castor River at Aquilla, Mo.....	C5	175	-	1945-58	2,270	2,640	Feb. 15, 1950	-	3,210	13.7
435	Little River ditch 1 near More-house, Mo.	C5	450	-	1945-58	5,460	5,200	June 1945	14.2	4,100	23.4
440	Little River ditch 251 near Kennett, Mo.	C5	883	-	1927-58	9,490	8,400	May 23, 1957	-	7,020	15.6
460	Little River ditch 259 near Kennett, Mo.	C5	89.0	-	1927-58	1,750	1,640	Mar. 25, 1958	19.85	15.6	1.4
								Nov. 24, 1957	21.70	13,100	14.8
								Apr. 27, 1927	15.57	4,140	46.5

See footnotes at end of table.

FLOODS IN LOWER MISSISSIPPI RIVER BASIN

Table 1.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and kind of hydro-logic area	Contributing drainage area (sq mi.)	Elevation (feet)	Period of known floods (water years)	Station Q _{2.33} (cfs)	Areal Q _{2.33} (cfs)	Date	Maximum stage and discharge			
									Gage height (feet)	Discharge		
										Cfs	Cfs per sq mi.	
St. Francis River basin--Continued												
466	Right Hand Chute of Little River at Rivervale, Ark.	D5	2,113	-	1939-58	15,400	15,700	Jan. 19, 1950 Nov. 23, 1957	13.57	31,400	14.9	2.0
470	St. Francis River floodway near Marked Tree, Ark.	D5	5,258	-	1935-58	24,700	30,000	Jan. 27, 1937	-	58,000	11.0	1.9
475	St. Francis River at Marked Tree, Ark.											
478	St. Francis River at Parkin, Ark.	D5	6,475	-	1928-58	28,000	35,100	Feb. 2, 1937	-	74,100	11.4	2.1
479	St. Francis Bay at Riverfront, Ark.	D5	807	-	1935-58	9,790	7,900	Feb. 13, 1957	39.7	-	-	-
479.5	L'Anguille River at Palestine, Ark.	D5		-	1949-58	-	-	May 20, 1953	-	15,600	19.3	2.0
White River basin												
485	West Fork White River near Fayetteville, Ark.	A9	118	-	1938-45	13,100	12,200	Apr. 14, 1945	21.50	53,000	44.9	4.3
490	War Eagle Creek near Hindsville, Ark.	A9	262	-	1943-58	17,200	20,500	May 10, 1943	28.1	50,000	191	2.4
505	Kings River near Berryville, Ark.	A2	532	-	1927-58	17,600	21,500	Apr. 14, 1927	38.0	62,000	117	2.9
510	James River below Battlefield, Mo.	A7	328	-	1926-31	9,400	10,000	June 28, 1928	16.1	16,800	51.2	1.7
520	Wilson Creek near Springfield, Mo.	A7	19.4	-	1932-58	1,050	1,050	June 27, 1937	7.82	2,440	126	2.3
525	James River at Galena, Mo.	A7	987	-	1922-58	21,500	20,000	May 20, 1945	27.82	52,700	53.4	2.6
576	Buffalo River near Rush, Ark.	A9	1,081	-	1918-58	42,500	51,300	Aug. 19, 1915	45.5	164,000	150	8.0
579	North Fork River near Tipton, Mo.	A9	561	-	1918-58	11,000	13,500	Jan. 4, 1950	18.05	27,400	46.8	3.2
580	North Fork River near Tipton, Mo.	A7	570	-	1918-58	11,000	13,500	Jan. 4, 1950	18.05	27,400	46.8	3.2
585	North Fork River near Tipton, Mo.	A7	1,157	-	1943-58	24,600	23,400	May 15, 1905	19.64	26,800	71.9	5.0
590	North Fork River near Henderson, Ark.	A7	1,612	-	1910, 1915-43	53,500	29,000	August 1915	29.5	65,000	73.5	5.7
615	Black River near Annapolis, Mo.	B2	484	-	1929-43	24,400	20,200	May 11, 1943	20.1	61,000	37.8	2.1
625	Black River at Leesport, Mo.	B2	957	-	1939-58	27,000	31,000	June 8, 1945	22.5	45,400	93.8	2.2
630	Black River at Poplar Bluff, Mo.	B	1,245	-	1904-58	20,000	20,000	March 1904	22.5	125,000	131	4.0
640	Black River near Corning, Ark.	B	1,749	-	1904-58	13,500	13,500	March 1904	22.5	100,000	80.3	5.0
645	Big Creek near Yukon, Mo.	A3	8.36	-	1915-58	11,470	11,470	June 13, 1945	16.92	48,600	27.8	3.6
660	Jacks Fork at Eminence, Mo.	A3	398	-	1922-58	11,000	13,600	May 15, 1956	5.20	4,860	581	-
665	Current River near Eminence, Mo.	A3	1,272	-	1922-58	27,100	27,200	June 13, 1928	16.24	40,000	101	2.9
670	Current River at Van Buren, Mo.	A3	1,667	-	1904-58	28,000	30,900	May 11, 1943	21.49	48,800	38.4	1.8
680	Current River at Doniphan, Mo.	A3	2,058	-	1904-58	32,500	34,800	Mar. 26, 1904	29.0	-	75.0	-
685	Little Black River near Fair-dealing, Mo.	B2	187	-	1934-42	10,600	11,000	Aug. 21, 1915	-	125,000	63.8	4.0
690	Black River at Pocahontas, Ark.	B	4,843	-	1927-58	26,200	25,500	March 1904	23.4	150,000	63.8	3.7
695	Spring River at Imboden, Ark.	A3	1,162	-	1915-58	25,500	25,500	Apr. 17, 1927	22.5	13,600	72.7	1.2
705	Eleven Point River near Thomasville, Mo.	A6	361	-	1951-58	5,900	5,950	August 1915	32.1	125,000	108	4.9
715	Eleven Point River near Bardley, Mo.	A6	793	-	1915-58	10,500	9,850	Apr. 3, 1957	17.95	16,900	46.8	2.8
								Aug. 20, 1915	19.7	44,000	55.5	4.5

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720	Eleven Point River near Ravenden Springs, Ark.	A6	1,123	-	1930-33,1935, 1939-58	12,000	12,400	Jan. 25, 1949	20.21	34,000	30.3	2.7
725	Black River at Black Rock, Ark.....	B	7,323	-	1905-58	43,500	-	Aug. 21, 1915	31.9	160,000	21.8	3.7
730	Strawberry River near Evening Shade, Ark.	B3	225	-	1939-58	9,700	9,900	Jan. 24, 1949	26.59	31,000	138	3.1
735	Piney Fork Strawberry River at Evening Shade, Ark.	B3	99	-	1939-58	5,500	6,500	Jan. 24, 1949	23.42	17,500	177	2.8
740	Strawberry River near Poughkeepsie, Ark.	B3	476	-	1937-58	17,900	15,100	Jan. 24, 1949	29.30	52,500	110	3.5
750	Middle Fork Little Red River at Shirley, Ark.	B9	294	-	1935-58	25,000	22,000	Jan. 24, 1949	31.0	101,000	344	4.6
755	South Fork Little Red River near Clinton, Ark.	B9	316	-	1939-58	23,400	23,000	Aug. 13, 1957	28.16	59,500	188	2.6
760	Little Red River near Heber Springs, Ark.	D9	1,141	-	1927-58	52,500	53,000	Jan. 25, 1949	46.53	117,000	103	2.2
775	Cache River at Patterson, Ark.....	D5	1,041	-	1918-58	7,600	9,500	Apr. 19, 1927	16.1	24,500	23.5	2.6
777	Bayou DeVew at Morton, Ark.....	D5	422	-	1933-58	3,900	5,000	Jan. 26, 1937	18.57	-	-	1.3
780	Lagune Bayou near Stuttgart, Ark...	D5	175	-	1936-54	2,850	2,650	Nov. 23, 1957	18.23	6,700	15.9	1.3
								Jan. 24, 1937	16.9	6,580	37.6	2.5
Arkansas River basin												
795	East Fork Arkansas River near Leadville, Colo.	G24	50	9,700	1890,1912, 1914-24	400	360	June 15, 1921	2.03	794	15.9	2.2
810	Tennessee Fork near Leadville, Colo.	G24	48	9,760	1890,1911-24	299	344	June 14, 1918	2.05	450	9.38	1.3
830	Halfmoon Creek near Malta, Colo....	G24	23	9,740	1947-58	230	216	June 30, 1957	3.48	450	19.6	2.1
865	Clear Creek above Clear Creek Reservoir, Colo.	G24	59	8,900	1946-58	660	462	June 29, 1957	-	1,300	22.0	2.8
890	Cottonwood Creek below Hot Springs, near Buena Vista, Colo.	G24	65	8,530	1912-23, 1950-58	357	562	July 1, 1957	4.52	1,180	18.2	2.1
910	Chalk Creek near Nathrop, Colo.....	G25	97	8,110	1950-58	465	392	June 10, 1952	2.70	1,050	10.8	2.7
960	Little Beaver Creek near Pikes Peak, Colo.	A23	1.00	11,000	1917-50	3.3	2.7	Aug. 4-6, 1929	-	10.3	10.3	3.8
985	Sackett Creek near Pikes Peak, Colo.	A23	.65	10,900	1917-50	2.9	2.0	June 23-30,1947	-	7.41	11.4	3.7
1000	North Gatamont Creek near Green Mountain Falls, Colo.	A23	5.80	9,190	1935-50	10.6	10	May 21, 1947	-	30.5	5.26	3.0
1005	South Cascade Creek at Cascade, Colo.	A23	3.41	8,400	1935-50	8.3	8.3	Aug. 7, 1936	-	28.2	8.27	3.4
1010	Lion Creek near Halfway, Colo.....	A23	2.00	9,250	1917-50	2.8	4.8	June 4, 1921	-	11.6	5.80	2.4
1015	Sheep Creek near Halfway, Colo.....	A25	.73	9,100	1917-50	2.2	-	June 5, 1921	-	12.8	17.5	4.4
1060	Fountain Creek near Fountain, Colo.	A24	676	5,340	1939-52,1955	5,340	4,980	May 28, 1940	9.19	22,100	32.7	4.4
1065	Fountain Creek at Pueblo, Colo.....	A24	926	4,680	1921-22, 1924-25, 1935,1941-58	8,000	6,160	May 30, 1955	-	35,000	37.8	5.7
1085	St. Charles River near Pueblo, Colo.	E24	468	4,690	1942-55	6,720	3,840	May 19, 1955	7.53	20,600	44.0	5.4
1110	Huerfano River at Manzanares Crossing, near Redwing, Colo.	E25	73	8,150	1924-58	340	314	Aug. 2, 1951	8.14	10,200	140	32.5
1140	Cucharas River at Boyd Ranch near La Veta, Colo.	E25	56	7,800	1935-58	199	276	May 23, 1955	4.05	444	7.92	1.6
1160	Huerfano River below Huerfano Valley Dam, near Undercliffe, Colo.	E25	1,673	4,890	1900-58	5,340	5,980	July 5, 1958	14.5	16,800	10.0	2.8
1180	Apishapa River near Aguilar, Colo..	E27	126	6,410	1940-50,1955	2,110	2,140	July 14, 1948	7.84	4,500	35.7	2.1

See footnotes at end of table.

Table 1.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region hydro-logic area	Contributing drainage area (sq mi.)	Elevation (feet)	Period of known floods (water years)	Station Q2.33 (cfs)	Areal Q2.33 (cfs)	Maximum stage and discharge			
								Date	Gage height (feet)	Discharge	
										Cfs	Ratio to areal Q2.33
Arkansas River basin--Continued											
1190	Apishapa River near White Rock, Colo.	E24	737	4,790	1942-47	4,320	5,130	July 25, 1945	4.52	8,280	11.2
1195	Apishapa River near Fowler, Colo....	E24	1,125	4,320	1922-25, 1939-58	6,070	7,200	Aug. 22, 1923	-	83,000	73.8
1210	Timpas Creek near Rocky Ford, Colo.	E24	451	4,220	1923, 1927-58	3,860	3,980	July 5, 1958	19.0	23,000	51.0
1225	Horse Creek near Sugar City, Colo..	E24	1,080	4,270	1940-47	2,580	4,270	Oct. 23, 1941	6.20	5,400	5.00
1245	Purgatoire River at Trinidad, Colo.	E27	795	5,980	1859-1958	9,200	7,650	Sept. 30, 1904	16.6	45,400	57.1
1260	Purgatoire River near Alfalfa, Colo.	E27	1,320	5,280	1905-7, 1925, 1927, 1952-58	11,200	12,100	May 19, 1955	31.9	41,900	31.7
1265	Purgatoire River at Ninemile Dam near Higbee, Colo.	E24	2,900	4,240	1924-58	14,000	13,500	May 19, 1955	17.7	80,000	27.6
1280	Purgatoire River at Highland Dam near Las Animas, Colo.	E24	3,376	3,980	1932-55	15,100	15,400	May 20, 1955	19.30	73,400	21.7
1295	Rule Creek near Caddos, Colo.....	E24	435	3,890	1941-46, 1949, 1951, 1955, 1956	1,980	4,100	June 5, 1949	20.05	11,600	26.7
1310	Caddos Creek at Caddos, Colo.....	E24	131	3,740	1942-46, 1949, 1956	1,890	1,860	Aug. 19, 1956	10.7	11,800	90.1
1412	Pawnee River near Larned, Kans.....	E22	2,010	-	1923-58	3,400	4,430	July 28, 1958	28.22	16,300	8.11
1435	Low Creek near Lyons, Kans.....	E22	1,849	-	1929-51	2,700	1,760	July 12, 1929	22.75	26,000	57.8
1442	Little Arkansas River at Valley Creek, Kans.	E21	1,250	-	1877-1958	6,700	7,800	Apr. 16, 1945	22.05	32,000	25.8
1448	North Fork Minnecah River near Cheney, Kans.	E21	b693	-	1923-58	5,010	5,300	May 16, 1957	15.09	23,700	34.2
1452	South Fork Minnecah River near Murdock, Kans.	E21	b543	-	1950-58	3,600	4,600	June 26, 1957	11.87	25,900	47.7
1455	Minnecah River near Peck, Kans....	E21	1,785	-	1923-58	10,400	9,900	June 9, 1923	26.4	70,000	39.2
1471	Whitewater River at Augusta, Kans..	E20	456	-	1951-55	5,600	7,250	May 27, 1953	26.52	27,200	59.6
1478	Walnut River at Winfield, Kans....	E20	1,840	-	1877-1958	20,200	20,500	Apr. 23, 1944	38.30	105,000	57.1
1484	Salt Fork Arkansas River near Alva, Okla.	E21	1,009	-	1904-58	11,000	6,850	May 8, 1922	10.3	-	-
1490	Medicine Lodge River near Kiowa, Kans.	E21	914	-	1938-50, 1955	7,000	6,450	Oct. 23, 1941	9.08	27,000	26.8
1495	Salt Fork Arkansas River near Cherokee, Okla.	E21	2,439	-	1941-50	11,200	12,200	Oct. 23, 1941	11.7	35,000	14.4
1510	Salt Fork Arkansas River at Tonkawa, Okla.	E21	b4,520	-	1904-58	17,700	18,200	June 10, 1923	26.8	-	-
1515	Chikaskia River near Corbin, Kans..	E20	794	-	1923-58	8,000	11,500	June 9, 1923	22.82	40,800	9.03
1520	Chikaskia River near Blackwell, Okla.	E20	1,859	-	1923-58	18,500	20,500	June 10, 1923	26.8	80,000	73.6
1530	Black Bear Creek at Pawnee, Okla....	E21	576	-	1908, 1942-58	5,060	4,800	May 19, 1943	28.19	17,800	30.9
1535	Chimarron River near Gay, N. Mex....	E21	545	-	1940-58	3,400	4,200	Oct. 5, 1954	20.5	8,500	15.6
1545	Chimarron River near Kenton, Okla....	E21	b1,038	-	1951-58	8,100	7,200	July 6, 1958	13.67	26,300	25.3
1550	Chimarron River above Ute Creek near Boise City, Okla.	E21	b1,879	-	1906, 1942-54	17,500	10,600	Apr. 20, 1942	20.1	80,000	42.6

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	b4,107	-	1895-96,1905,	8,280	7,200	Apr. 21, 1942	12.1	69,000	16.8	9.8
222 Cimarron River near Liberal, Kans..	b4,107	-	1895-42	3,100	2,450	May 20, 1955	8.01	13,600	16.8	9.8
222 Crooked Creek near Nye, Kans.	b8,513	-	1915-58	28,500	26,000	May 16, 1957	9.10	94,500	16.7	5.6
221 Cimarron River near Wynoka, Okla.	b8,504	-	1918-57	920	2,750	May 15, 1957	9.1	6,420	11.7	3.4
221 Turkey Creek near Drummond, Okla.	b11,5	-	1914-57	2,760	2,750	May 16, 1957	21.61	18,800	44.3	
221 Cimarron River near Guthrie, Okla.	b11,966	-	1912-58	34,000	34,800	May 17, 1957	18.58	158,000	75.8	6.8
221 Skelton Creek near Lovell, Okla.	b12,410	-	1912-58	3,960	3,800	May 16, 1957	34.58	75,200	13.2	4.5
221 Cimarron River at Perkins, Okla.	b12,926	-	1912-58	36,800	36,500	May 17, 1957	19.53	149,000	185	19.8
E17 Council Creek near Stillwater, Okla.	b12,926	-	1912-58	2,290	2,050	Aug. 14, 1942	17.54	18,000	11.5	4.1
221 Cimarron River at Manford, Okla.	b13,923	-	1909-58	45,500	38,200	October 1908	25.7	-	581	8.8
E17 Polecat Creek below Heyburn Reser- voir, near Heyburn, Okla.	123	-	1936-55	7,080	4,650	Sept. 4, 1940	25.2	103,000	7.40	2.7
E19 Verdigris River near Coyleville, Kans.	747	-	1940-58	15,000	18,200	Sept. 4, 1940	31.5	26,000	211	5.6
E19 Verdigris River near Altoona, Kans.	1,138	-	1939-58	16,000	22,300	July 12, 1951	41.25	130,000	174	7.1
E19 Fall River near Eureka, Kans.	336	-	1927-58	16,000	12,500	July 12, 1951	31.09	71,000	82.4	3.2
E19 Otter Creek at Climax, Kans.	129	-	1945-58	8,000	7,950	June 30, 1951	29.60	91,800	275	7.3
E19 Fall River near Fall River, Kans.	585	-	1869-1958	16,400	16,400	June 30, 1951	39.0	15,400	119	1.9
E19 Fall River at Fredonia, Kans.	827	-	1925-58	13,500	19,100	June 16, 1951	1823	48,000	82.1	2.9
E19 Elk River near Elk City, Kans.	575	-	1867-1958	17,700	16,000	Apr. 30, 1945	36.17	49,500	142.2	5.6
E19 Verdigris River at Independence, Kans.	2,892	-	1869-1958	32,500	36,800	June 30, 1951	30.15	81,500	142	5.1
E19 Verdigris River near Lenapeh, Okla.	3,639	-	1939-58	34,500	39,000	May 17, 1945	47.6	117,000	40.5	3.4
E19 Caney River near Elgin, Kans.	745	-	1939-58	16,000	14,300	May 20, 1945	40.44	137,000	37.6	3.5
E19 Caney River near Hulah, Okla.	736	-	1926-58	20,000	18,000	Apr. 10, 1944	29.80	55,500	79.8	2.5
E19 Caney Creek near Copan, Okla.	424	-	1944-58	11,800	13,900	Apr. 10, 1944	39.45	51,000	69.3	2.8
E19 Caney River near Ramona, Okla.	1,955	-	1927-58	16,000	28,500	May 21, 1943	30.58	36,400	85.8	2.6
E19 Verdigris River near Claremore, Okla.	6,534	-	1931,1935-36, 1945-58	44,000	53,000	May 21, 1943	30.12	38,500	19.7	1.4
E17 Bird Creek at Avant, Okla.	364	-	1935-58	11,700	8,900	Oct. 3, 1945	55.05	182,000	27.9	3.4
E17 Hominy Creek near Skiatook, Okla.	340	-	1945-58	8,560	8,900	May 21, 1943	29.6	-	-	-
E17 Bird Creek near Sperry, Okla.	905	-	1945-58	15,100	8,500	May 12, 1957	29.0	25,400	69.8	2.9
E19 Verdigris River near Inola, Okla.	7,911	-	1915-58	47,500	15,500	June 10, 1949	35.06	14,200	41.8	1.7
E19 Neosho River at Council Grove, Kans.	250	-	1940-58	12,500	56,000	May 21, 1943	31.88	86,500	95.6	5.6
E18 Cottonwood River near Marion, Kans.	329	-	1939-58	6,900	7,350	May 21, 1943	35.50	224,000	28.3	6.0
E18 Cedar Creek near Cedar Point, Kans.	1,115	-	1939-58	10,500	4,350	July 11, 1951	28.57	66,000	484	10.4
E18 Cottonwood River at Rimadale, Kans.	1,015	-	1867-1958	10,500	4,350	June 29, 1951	23.70	52,400	476	9.0
E18 Middle Creek near Rimadale, Kans.	92	-	1917-51	4,500	3,900	Apr. 23, 1944	37.5	40,000	38.3	5.1
E18 Cottonwood River at Cottonwood Falls, Kans.	1,402	-	1866-1958	11,500	15,000	June 11, 1951	27.06	196,000	147	13.1
E18 Neosho River at Strawn, Kans.	2,933	-	1885-1958	26,000	21,500	July 11, 1951	30.54	400,000	136	18.6
E18 Neosho River near Tola, Kans.	3,818	-	1855-1958	26,500	24,700	July 13, 1951	43.0	456,000	114	17.7
E18 Neosho River near Parsons, Kans.	4,905	-	1925-58	30,000	28,000	July 14, 1951	40.20	410,000	83.6	14.6
E18 Lightning Creek near McCune, Kans.	197	-	1938-46	5,400	6,100	July 19, 1943	17.81	23,000	117	3.8
E18 Labette Creek near Oswego, Kans.	211	-	1935-48	5,700	6,450	June 22, 1948	23.2	30,000	142	4.7

See footnotes at end of table.

2210	Mora River near Shoemaker, N. Mex.	E25	bl,033	6,170	1915-22,1924, 1927-58	3,940	3,460	June 3, 1948	12.79	15,200	14.7	4.4
2225	Conchas River at Varadero, N. Mex.	E27	b393	4,430	1937-58	6,060	6,020	Sept. 1, 1942	19.5	44,000	112	7.3
2265	Ure Creek near Logan, N. Mex.	E27	bl,456	3,760	1909-58	14,700	15,200	May 1, 1914	22.95	-	-	-
2300	Little River below Hog Creek, near Norman, Okla.	E17	257	-	1941-58	8,000	7,250	May 25, 1957	17.0	70,000	48.1	4.6
2305	Little River near Tecumseh, Okla.	E17	456	-	1953-58	8,000	-	-	28.85	34,600	135	4.8
2310	Little River near Sasakwa, Okla.	E17	865	-	1932-58	11,400	10,200	June 1932	25.58	60,000	132	5.9
2320	Gaines Creek near Krebs, Okla.	E17	588	-	1939-58	18,100	15,100	May 11, 1950	33.48	44,600	51.6	3.0
2325	North Canadian River near Guyton, Okla.	E	bl,175	-	1912-58	11,000	12,000	Feb. 18, 1938	31.9	70,000	119	5.8
2330	Coldwater Creek near Hardisty, Okla.	E21	b767	-	1937-58	11,400	-	Sept. 23, 1941	13.82	44,000	37.4	3.9
2335	Palo Duro Creek near Spearman, Tex.	E21	b440	-	1939-58	4,780	5,750	June 25, 1947	9.07	24,600	32.1	4.3
2340	North Canadian River at Beaver, Okla.	E	b3,685	-	1936-58	3,400	4,000	Sept. 4, 1938	22.5	34,000	77.3	8.5
2345	North Canadian River near Fort Supply, Okla.	E	b5,068	-	1923-43	11,800	-	Oct. 6, 1946	14.55	70,000	19.0	5.9
2350	Wolf Creek at Lipscomb, Tex.	E21	b475	-	1937-58	9,480	-	Oct. 9, 1946	11.83	50,000	9.87	5.3
2355	Wolf Creek near Shattuck, Okla.	E21	b1,961	-	1938-44	5,700	4,200	Oct. 21, 1941	5.80	20,000	42.1	4.8
2360	North Canadian River at Woodward, Okla.	E21	b6,775	-	1938-58	7,260	8,700	Oct. 22, 1951	6.87	24,000	23.0	3.6
2375	North Canadian River near Selling, Okla.	E	b7,414	-	1920-58	9,200	-	June 22, 1937	10.9	81,600	58.9	9.6
2380	North Canadian River near Canton, Okla.	E	b7,601	-	1938-58	8,740	-	May 18, 1953	10.9	43,000	6.34	4.7
2390	North Canadian River near El Reno, Okla.	E	b8,143	-	1947-58	6,900	-	Oct. 13, 1923	16.4	40,100	5.41	4.6
2395	North Canadian River near Wetumka, Okla.	E	b9,391	-	1914-58	6,900	-	May 19, 1951	16.8	-	-	-
2420	Belloc Creek at Chandler, Okla.	E17	46	-	1938-58	2,300	2,540	Oct. 13, 1923	12.63	24,800	3.28	3.6
2425	Deep Fork near Beggs, Okla.	E17	2,018	-	1903-7	4,780	-	Oct. 28, 1941	15.98	15,000	1.84	3.1
2435	Sallisaw Creek near Sallisaw, Okla.	A9	182	-	1923-58	16,100	-	October 1923	26.9	-	-	-
2450	Poteau River at Cauthron, Ark.	B2	200	-	1938-58	16,700	25,000	Apr. 15, 1945	26.40	66,000	7.03	4.1
2475	Fourche Maline near Red Oak, Okla.	B2	122	-	1943,1949-55	15,900	16,000	June 24, 1948	15.20	-	-	-
2485	Poteau River near Wister, Okla.	B2	993	-	1939-58	12,700	11,500	May 23, 1952	11.80	2,910	63.3	1.1
2495	Cove Creek near Lee Creek, Ark.	B9	36.9	-	1942-58	7,540	8,400	May 11, 1943	34.55	66,800	33.1	2.7
2500	Lee Creek near Van Buren, Ark.	B9	427	-	1935-58	16,700	15,000	Apr. 15, 1945	27.4	110,000	604	6.9
2510	Proctor Bayou near Waukegan, Ark.	B2	217	-	1939-58	13,800	11,000	June 24, 1949	23.34	31,000	155	2.7
2515	Proctor Bayou at Rudy, Ark.	B2	372	-	1943-58	20,200	19,600	June 25, 1942	22.34	26,500	216	3.1
2520	Mulberry River near Mulberry, Ark.	B2	54.8	-	1938-58	33,100	31,800	Apr. 25, 1935	22.34	78,500	79.2	2.5
2525	Spadra Creek at Clarksville, Ark.	B9	274	-	1938-58	5,780	5,780	May 16, 1957	13.16	20,500	558	3.5
2530	Piney Creek near Dover, Ark.	B9	242	-	1938-58	31,700	28,000	Apr. 15, 1945	35.0	112,000	262	4.0
2535	Illinois Bayou near Scottsville, Ark.	B9	242	-	1938-58	5,780	5,780	Apr. 15, 1945	35.0	112,000	262	4.0
2540	Petit Jean Creek near Booneville, Ark.	B2	247	-	1938-58	13,000	13,200	Apr. 16, 1939	29.95	82,600	121	3.0
2545	Petit Jean Creek near Waveland, Ark.	B2	517	-	1938-58	18,200	21,000	Apr. 16, 1939	29.95	82,600	121	3.0

See footnotes at end of table.

Table 1.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi.)	Elevation (feet)	Period of known floods (water years)	Station Q _{2.33} (cfs)	Maximum stage and discharge			
							Date	Gage height (feet)	Discharge	
									Cfs	Ratio to areal Q _{2.33}
									Cfs per sq mi.	
Arkansas River basin--Continued										
2600	Dutch Creek at Waltham, Ark.....	B2	74	-	1937-58	6,100	1937	19.5	-	-
2605	Petit Jean Creek at Danville, Ark....	B2	741	-	1946-58	22,000	Jan. 24, 1949	18.45	13,700	2.2
2615	Fourche La Pave River near Gravelly Ark.	D9	415	-	1917-58	26,500	Apr. 17, 1939	31.82	70,800	2.7
2625	Fourche La Pave River near Nimrod, Ark.	D2	680	-	1939-58	23,700	Jan. 24, 1949	28.86	54,000	2.0
2630	South Fourche La Pave River near Hollis, Ark.	D9	211	-	1927-58	23,800	June 1935	30.9	39,000	1.6
2645	Bayou Meto near Stuttgart, Ark.....	D11*	647	-	1942-58	22,400	Mar. 30, 1945	19.47	54,400	3.0
2650	Crooked Creek near Humphrey, Ark....	D11*	647	-	1936-58	3,950	Jan. 26, 1937	25.50	9,350	2.0
Yazoo River basin										
2660	Cane Creek near New Albany, Miss....	F13	22.2	-	1939-41, 1950-58	3,240	Mar. 21, 1955	9.08	8,680	2.7
2670	Hell Creek near New Albany, Miss....	F4	27.3	-	1939-1942, 1952-58	2,140	June 17, 1939	-	3,600	1.7
2680	Tallahatchie River at Etta, Miss....	F13	526	-	1937-58	26,100	Mar. 21, 1955	17.32	79,000	3.4
2685	Cypress Creek near Etta, Miss.....	F13	28.5	-	1939-42, 1952-58	3,450	Mar. 22, 1955	29.32	8,800	2.4
2690	North Tippah Creek near Ripley, Miss.	F4	20.0	-	1939-42, 1948, 1952-58	1,960	July 21, 1953	13.63	6,180	3.4
2699.9	Tippah Creek near Potts Camp, Miss.	F4	359	-	1943-58	10,800	Feb. 13, 1948	20.78	24,000	2.2
2710	Clear Creek near Oxford, Miss.....	F13	10.3	-	1939-41, 1950-58	2,360	Apr. 4, 1957	11.66	3,980	2.0
2730	Tallahatchie River near Sardis, Miss.	F13	1,595	-	1929-58	39,000	Jan. 15, 1952	26.36	65,300	1.4
2740	Yocoma River near Oxford, Miss.....	B16	282	-	1905-58	10,000	Mar. 21, 1955	23.72	44,100	4.5
2742.5	Okuchalofa Creek at Water Valley, Miss.	B16	94.1	-	1952-58	4,400	Mar. 21, 1955	27.56	21,000	4.4
2750	Yocoma River at Enid Dam near Enid, Miss.	B16	560	-	1929-58	19,500	Feb. 14, 1948	21.61	36,300	2.3
2755	Long Creek near Courtland, Miss....	D14	66.2	-	1940-43, 1952-58	14,900	May 28, 1954	25.02	38,300	2.8
2760	Coldwater River near Lewisburg, Miss.	F13	218	-	1940-58	11,500	Jan. 8, 1946	15.60	25,900	1.9
2775	Coldwater River near Coldwater, Miss.	F13	617	-	1929-42	22,700	Jan. 21, 1935	21.00	79,500	3.1
2777	Hickabala Creek near Senatobia, Miss.	F13	121	-	1900-58	9,000	June 22, 1947	20.6	30,000	3.3
2777.3	Senatobia Creek near Senatobia, Miss.	G15	82	-	1943-58	13,300	Sept. 19, 1958	17.90	19,400	1.9
2796	Arkabutla Creek near Arkabutla, Miss.	G15	97	-	1947-58	11,000	Feb. 13, 1948	22.26	16,500	1.4

2885	Yalobusha River at Graysport, Miss.	Bl6	607	-	1940-49	17,700	17,000	Feb. 13, 1948	28.25	46,800	77.1	2.8
2890	Skuna River at Bruce, Miss.....	Bl6	254	-	1948-58	9,700	9,700	Mar. 21, 1955	24.11	61,400	242	6.3
2895	Skuna River near Coffeeville, Miss.	Bl6	435	-	1928-49	14,600	13,600	Mar. 23, 1944	23.22	44,000	101	3.2
2896	Askamore Creek near Charleston, Miss.	Dl4	31.0	-	1941-42, 1947-48, 1952-58	9,900	8,200	Apr. 4, 1957	16.10	12,200	394	1.5
2895	Thompson Creek at McCarley, Miss....	Bl6	14.4	-	1950-58	2,660	1,520	Apr. 12, 1955	14.05	3,980	276	2.6
2897	Big Sand Creek at Carrollton, Miss.	Dl4	74.1	-	1937-58	15,900	14,700	Apr. 11, 1955	25.75	22,500	304	1.5
2898	Big Sand Creek at Valley Hill, Miss.	Dl4	110	-	1947-58	16,200	19,100	Apr. 11, 1947	21.91	33,000	300	1.7
2895	Snflower River at Sunflower, Miss.	Cl1*	767	-	1935-58	5,850	5,100	May 5, 1958	28.31	9,300	12.1	1.8
2895.7	Quiver River near Dadds ville, Miss.	Cl1*	292	-	1928-58	2,770	2,380	Mar. 30, 1944	26.2	6,730	25.3	2.9
2897.7	Deer Creek near Hollandale, Miss....	Cl1*	98	-	1946-58	2,590	794	May 6, 1958	18.18	1,000	10.2	1.3
Four Mile Bayou basin												
2890.1	Durden Creek near Vicksburg, Miss..	Dl4	5.50	-	1935, 1941-46, 1948-58, 1955-58	1,620	-	Nov. 18, 1948	11.36.55	4,570	831	-
Big Black River basin												
2891.8	Big Black River near Kilmichael, Miss.	Bl6	549	-	1937-58	16,000	15,800	Mar. 29, 1951	17.23	37,300	67.9	2.4
2893.3	Zilpna Creek near Kosciusko, Miss..	Bl6	90.0	-	1953-58	5,490	5,000	Apr. 13, 1955	27.49	16,000	178	3.2
2893.5	Big Black River at West, Miss.....	B	985	-	1937-58	21,000	-	Mar. 30, 1951	24.09	47,000	47.7	2.2
2895	Big Black River at Pickens, Miss....	B	1,460	-	1932-1958	19,500	-	Dec. 28, 1926	23.70	49,400	33.8	2.5
2895.3	Doaks Creek near Canton, Miss.....	Bl6	161	-	1937-58	5,360	7,200	Mar. 29, 1951	16.46	12,600	78.3	1.8
2895.6	Big Creek near Watson, Miss.....	Bl6	24.2	-	1948-58	1,860	2,160	Apr. 29, 1953	16.04	7,300	302.3	3.4
2896.2	Little Bogie near Canton, Miss.....	Bl6	154.4	-	1948-58	2,250	2,180	Apr. 29, 1953	19.0	8,800	361	4.0
2896.3	Barren River near Canton, Miss.....	Bl6	154	-	1950-58	6,500	7,000	Apr. 30, 1953	19.49	9,400	81.0	1.3
2897.3	Big Black River near Bentonia, Miss.	B	2,340	-	1929-58	27,000	-	May 23, 1930	34.7	66,500	28.4	2.5
2898.5	Bogue Chitto near Flora, Miss.....	Bl3	127	-	1938-58	8,820	9,500	Apr. 30, 1953	20.88	165,000	165	2.2
2900	Big Black River near Bovina, Miss..	B	2,810	-	1936-58	25,600	-	Apr. 1, 1951	-	58,600	20.9	2.3
Bayou Pierre basin												
2905	Bayou Pierre near Carpenter, Miss..	Dl3	371	-	1858-1958	21,000	18,600	June 3, 1953	31	24,400	65.8	1.3
2906.6	Bayou Pierre near Port Gibson, Miss.	Dl3	678	-	1945-58	23,300	27,000	May 19, 1953	25.95	25,600	37.8	1.9
St. Catherine Creek basin												
2909	St. Catherine Creek near Natchez, Miss.	Dl4	53	-	1950-58	14,700	11,700	May 17, 1953	33.80	31,000	585	2.6
Homochitto River basin												
2910	Homochitto River at Eddiceton, Miss.	Dl5	180	-	1939-58	18,500	17,700	Mar. 29, 1959	-	30,900	172	1.7
2912.5	McCall Creek near Lucien, Miss.....	Dl5	60	-	1952-58	7,500	8,600	May 2, 1950	15.74	8,450	141	1.0
2915	Homochitto River near Bude, Miss....	Dl5	399	-	1942-50	30,200	30,000	Jan. 6, 1950	89.44	49,400	124	1.6

See footnote at end of table.

Table 1.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydrologic area	Contributing and drainage area (sq mi)	Elevation (feet)	Period of known floods (water years)	Station Q2.33 (cfs)	Areal Q2.33 (cfs)	Date	Maximum stage and discharge		
									Gage height (feet)	Discharge	Ratio to areal Q2.33
										Cfs	Per sq mi
Homochitto River basin--Continued											
2925	Homochitto River at Rosetta, Miss.	D	750	-	1949-58	30,800	-	Mar. 31, 1949	37.80	59,400	-
2940	Second Creek at Sibley, Miss.	D14	55.3	-	1952-58	12,700	12,000	May 3, 1953	35.03	22,500	79.2
2945	Homochitto River near Doloroso, Miss.	D	1,120	-	1938, 1940-46, 1949-58	34,000	-	May 19, 1953	35.0	79,000	407.1
Buffalo River basin											
2950	Buffalo River near Woodville, Miss.	D14	182	-	1942-58	23,000	27,000	Mar. 2, 1948	16.2	39,900	219
Red River basin											
2955	Tierra Blanca Creek at reservoir, near Umbarger, Tex.	A21	b575	-	1937-54	2,700	4,750	June 6, 1941	-	11,300	19.7
2980	North Tule Draw at reservoir, near Tulla, Tex.	A21	b65	-	1941-58	1,290	1,140	May 15, 1951	-	5,430	85.5
2985	Prairie Dog Town Fork Red River near Brice, Tex.	A20	bl,493	-	1906-51 1939-44, 1950-51	19,800	17,500	Oct. 4, 1941	14.8	42,100	28.2
2995	Prairie Dog Town Fork Red River near Estelline, Tex.	A20	b2,524	-	1908-47 1924-25, 1938-47	21,500	26,100	May 1908	5.18	-	-
3005	Salt Fork Red River at Mangum, Okla.	A20	bl,357	-	1958-58	17,500	16,000	June 16, 1938	8.86	56,000	22.2
3015	North Fork Red River near Carter, Okla.	A21	bl,938	-	1945-58	10,200	11,000	May 19, 1957	14.7	72,000	53.1
3035	Elm Fork of North Fork Red River near Mangum, Okla.	A20	838	-	1905-47 1905-8, 1930-31, 1938-47	11,800	12,500	May 12, 1947	11.95	25,300	13.1
3045	Elk Creek near Hobart, Okla.	A21	549	-	1905-58	4,420	4,600	Oct. 4, 1955	16.4	30,600	36.5
3050	North Fork Red River near Headrick, Okla.	A21	b3,845	-	1905-7, 1935, 1938-58	14,400	16,500	Oct. 4, 1955	13.52	22,400	40.8
3055	Otter Creek at Snyder Lake near Mountain Park, Okla.	A20	132	-	1903-7, 1932-58	3,860	2,760	June 6, 1953	16.1	85,000	22.1
3075	Quittaque Creek near Quittaque, Tex.	A20	b35	-	1946-58	1,070	1,030	June 28, 1955	19.50	14,200	108
3080	Pease River near Crowell, Tex.	A20	b2,478	-	1891-1947 1924-47	39,100	25,500	Aug. 4, 1957	8.62	6,060	173
3110	Cache Creek near Walter, Okla.	A20	675	-	1906-58	8,920	9,500	June 6, 1941	19.6	108,000	42.8
3115	Deep Red Run near Randlett, Okla.	A20	617	-	1950-58	7,180	8,000	May 18, 1951	11.88	28,200	41.8
3130	Little Beaver Creek near Duncan, Okla.	E7	158	-	1949-58	12,000	5,150	May 25, 1957	29.72	20,300	3.0
3135	Beaver Creek near Waurika, Okla.	E7	563	-	1889-1958	12,000	13,300	May 18, 1951	127.10	32,300	32.9
3145	Little Wichita River near Archer City, Tex.	E21	481	-	1930-56 1932-56	3,500	4,240	June 18, 1950	19.74	47,500	501
								Oct. 31, 1941	-	65,300	116
									28	17,900	37.2

Table 2.-Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations

No.	Gaging station	Flood region and hydrologic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Date	Maximum stage and discharge		
						Gage height (feet)	Cfs	Cfs per sq mi
Mississippi River main stem								
100	Mississippi River at St. Louis, Mo.	-	701,000	1844-1958	June 27, 1844	41.32	1,300,000	1.85
Meramec River basin								
180	Big River near De Soto, Mo.	El	718	1915-58	August 1915	29.4	70,500	98.2
Mississippi River main stem								
205	Mississippi River at Chester, Ill.	-	712,600	1844-1958	June 30, 1844	39.8	1,350,000	1.89
220	Mississippi River at Thebes, Ill.	-	717,200	1844-1958	July 4, 1844	42.53	1,375,000	1.92
232	Mississippi River at Columbus, Ky.	-	921,900	1844-1958	Jan. 25, 1937	54.54	-	-
242	Mississippi River at Hickman, Ky.	-	922,500	1927-58	Feb. 1, 1937	51.5	2,010,000	2.18
Obion River basin								
248	South Fork Obion River near Kenton, Tenn.	F8	760	1939-58	Feb. 3, 1956	22.5	-	-
251	Rutherford Fork Obion River near Kenton, Tenn.	F8	271	1939-58	Feb. 1, 1956	17.5	-	-
256	North Fork Obion River near River, Tenn.	F8	520	1939-58	Nov. 19, 1937	16.5	-	-
263	Obion River near Bogota, Tenn.	F8	2,020	1937-58	Feb. 4-9, 1937	31.15	-	-
281	South Fork Forked Deer River near Halls, Tenn.	F8	1,112	1939-58	Nov. 22, 1937	25.40	47,700	23.6
282	South Fork Forked Deer River at Yellow Bluff near Fowlkes, Tenn.	F8	1,144	1939-58	Jan. 12-13, 1946	14.20	26,900	24.2
				1939-58	Jan. 13, 1946	26.80	-	-
Mississippi River main stem								
292.2	Mississippi River at Fulton, Tenn.	-	928,600	1880-1958	Feb. 9, 1937	47.25	-	-
Hatchie River basin								
292.7	Hatchie River near Walnut, Miss.	F4	270	1947-58	Mar. 22, 1955	30.7	23,200	85.9
294.3	Hatchie River at Serles, Tenn.	F4	1,160	1941-58	Feb. 14, 1948	30.2	-	-
Mississippi River main stem								
320	Mississippi River at Memphis, Tenn.	-	932,800	1872-1958	Feb. 8, 1937	448.69	bl. 980,000	2.12
St. Francis River basin								
395	St. Francis River at Wappapello, Mo.	B2	1,311	1941-58	Apr. 16, 1945	25.80	22,300	17.0
465	Big Lake Outlet near Manila, Ark.	D5	2,000	1927-33	April 1927	20.3	16,900	8.45
476	Tyronza River near Tyronza, Ark.	D5	301	1937-58	Feb. 16, 1950	31.61	5,660	18.8

Mississippi River main stem															
479.7	Mississippi River at Helena, Ark.	-	941,800	1828-1958	Apr. 23, 1912 Feb. 12, 1937	2,041,000	60.21	2.17							
White River basin															
480	West Fork White River at Greenland, Ark.	A9	83	1946-58	May 24, 1946 Apr. 3, 1957	13.71	27,700	-							
495	White River near Rogers, Ark.	-	1,020	1892-1958	May 12, 1945	52.9	100,000	334							
500	White River at Beaver, Ark.	-	1,258	1898-1958	May 12, 1945	42.33	105,000	98.0							
530	White River near Reeds Spring, Mo.	-	3,617	1927-52	Apr. 16, 1945	47.00	196,000	84.8							
535	White River near Branson, Mo.	-	4,544	1898-1958	Apr. 16, 1927	45.36	212,000	54.2							
550	White River near Flippin, Ark.	-	6,067	1927-1958	Apr. 16, 1927	41	240,000	46.7							
560	Buffalo River near St. Joe, Ark.	A9	825	1915-58	August 1915	50.5	100,000	39.6							
600	North Fork River at Norfork Dam, near Norfork, Ark.	A7	1,806	1940-58 1945-58	Apr. 15, 1945 Apr. 16, 1945	41.00	100,000	121							
605	White River at Calico Rock, Ark.	-	9,965	1905-58	Jan. 31, 1916	51.9	350,000	11.6							
610	White River at Batesville, Ark.	-	11,062	1904-58	Feb. 1, 1916	31.9	382,000	35.1							
745	White River at Newport, Ark.	-	19,812	1886-1958	Apr. 17, 1927	-	387,000	19.5							
748.5	White River near Augusta, Ark.	-	20,473	1933-58	Apr. 19, 1945	35.9	-	-							
767.5	White River at Georgetown, Ark.	-	22,350	1913-58	Feb. 1, 1949	40.83	-	-							
769	White River at Des Arc, Ark.	-	23,111	1933-58	Feb. 2, 1949	32.8	-	-							
770	White River at De Valls Bluff, Ark.	-	23,431	1927-58	Apr. 23, 1927	37.3	-	-							
778	White River at Clarendon, Ark.	-	25,497	1949-58 1885-1958	Feb. 3, 1949 Apr. 23, 1927	34.6 43.3	220,000 395,000	9.39 15.5							
Arkansas River basin															
820	Lake Fork above Sugar Loaf Reservoir, Colo.	G24	18	1946-58	June 28, 1957	5.22	610	33.9							
825	Lake Fork below Sugar Loaf Reservoir, Colo.	G24	26	1946-52	May 22, 1948	2.66	354	13.6							
845	Lake Creek above Twin Lakes Reservoir, Colo.	G24	75	1946-58	June 8, 1947	-	2,580	34.4							
855	Lake Creek below Twin Lakes Reservoir, Colo.	G24	107	1946-53	June 22, 1947	-	1,420	13.3							
860	Arkansas River at Granite, Colo.	-	427	1897, 1910-58	June 17, 1950	5.65	-	-							
970	Clear Creek below Clear Creek Reservoir, Colo.	G24	62	1946-53	June 28, 1957	7.20	5,360	12.6							
900	Chalk Creek (upper station) near St. Elmo, Colo.	G25	48	1914-19	June 21, 1947	3.95	454	7.32							
905	Chalk Creek near St. Elmo, Colo.	G25	83	1911-15	June 10, 1918	3.40	575	12.0							
915	Arkansas River at Salida, Colo.	-	1,218	1895-1903, 1910-58	June 6-7, 1912 June 29, 1957	2.30 6.82	635 9,220	7.65 7.57							
920	South Arkansas River at Poncha, Colo.	G25	140	1910-58	July 5, 1911	4.2	1,110	7.93							
930	Poncha Creek at Poncha, Colo.	G25	56	1912-17	May 27, 1912	3.2	307	5.48							
935	South Arkansas River near Salida, Colo.	G25	208	1922-23, 1929-40	July 17, 1923	3.90	1,220	5.87							
945	Arkansas River at Parkdale, Colo.	-	2,556	1946-55	June 22, 1947	9.02	5,880	2.30							
950	Grape Creek near Westcliffe, Colo.	A23	320	1925-58	Apr. 23, 1942	5.26	1,960	6.13							
960	Arkansas River at Canon City, Colo.	-	3,117	1889-1958	Aug. 2, 1921	10.7	19,000	6.10							
965	Oil Creek near Canon City, Colo.	A23	432	1949-53, 1955	July 11, 1951	9.25	4,260	9.86							
970	Arkansas River at Portland, Colo.	-	4,024	1939-52	June 5, 1949	12.18	21,100	5.24							
995	Arkansas River near Pueblo, Colo.	-	4,686	1864-1958	June 3, 1921	24.66	103,000	22.0							

See footnote at end of table.

Table 2.--Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi.)	Period of known floods (water years)	Maximum stage and discharge			
					Date	Gage height (feet)	Discharge	
							Cfs	Cfs per sq mi.
Arkansas River basin--Continued								
1040	Monument Creek at Pikeview, Colo.....	A23	203	1939-49	Apr. 23, 1942	3.86	-	-
1070	St. Charles River at San Isabel, Colo.....	E24	18.8	1937-41	May 11, 1947	-	1,190	5.86
1095	Arkansas River near Avondale, Colo.....	-	6,327	1939-51	May 27, 1941	-	189	10.1
1105	Chico Creek near North Avondale, Colo.....	E24	864	1941-46	Apr. 24, 1942	-	13,900	2.20
1120	Huerfano River near Badito, Colo.....	E25	499	1942-46	June 13, 1948	8.83	-	-
1125	Huerfano River at Badito, Colo.....	E25	532	1923, 1938-41, 1947-55	Aug. 27, 1941	7.55	13,000	15.0
1135	Huerfano River near Mustang, Colo.....	E25	803	1942-47	Aug. 14, 1945	9.89	8,480	17.0
1145	Cucharas River near La Veta, Colo.....	E25	75	1923-34	July 15, Aug. 1, 1923	9.20	5,510	10.4
1170	Arkansas River near Nepesta, Colo.....	-	69,291	1903-58	Aug. 14, 1942	9.60	26,000	32.4
1175	Arkansas River at Nepesta, Colo.....	-	69,406	1903-58	Aug. 22, 1923	3.10	-	-
1205	Arkansas River near Rocky Ford, Colo.....	-	111,032	1898-1936	May 22, 1926	-	698	9.31
1230	Arkansas River at La Junta, Colo.....	-	112,095	1898-1903	June 4, 1921	-	180,000	19.4
		-	113,976	1894, 1903, 1912-58	June 4, 1921	-	180,000	19.1
		-	113,976	1894, 1903, 1912-58	June 10, 1903	8.00	27,500	2.49
		-	113,976	1894, 1903, 1912-58	June 4, 1921	18.4	200,000	16.5
1285	Purgatoire River at Las Animas, Colo.....	E24	3,503	1922-31, 1949-58	May 20, 1955	15.03	44,000	31.15
1305	Arkansas River below John Martin Reservoir, Colo..	-	118,132	1938-58	May 20, 1955	15.00	70,000	2.00
1330	Arkansas River at Lamar, Colo.....	-	118,830	1913-58	Apr. 24, 1942	10.46	40,000	2.21
1355	Arkansas River at Holly, Colo.....	-	123,425	1908-53	June 5, 1942	-	130,000	6.90
1360	Wild Horse Creek at Holly, Colo.....	E22	272	1923-34, 1939-50	Oct. 20, 1908	-	110,000	4.70
1375	Arkansas River near Coolidge, Kans.....	-	225,702	1903-58	June 5, 1949	8.0	1,690	6.21
1380	Arkansas River at Syracuse, Kans.....	-	225,906	1903-58	May 15, 1951	10.67	60,000	2.53
1390	Arkansas River at Garden City, Kans.....	-	224,703	1923-58	Oct. 20, 1908	11.7	130,000	5.44
1395	Arkansas River at Dodge City, Kans.....	-	225,017	1903-6, 1909-58	May 16, 1951	9.57	33,500	1.36
		-	225,017	1903-6, 1909-58	Oct. 21, 1908	13.35	-	-
		-	225,406	1903-6, 1909-58	Apr. 28, 1942	-	21,000	.84
1400	Arkansas River near Kingsley, Kans.....	-	225,406	1942-58	May 19, 1951	11.20	11,700	.46
1405	Arkansas River at Larned, Kans.....	-	226,017	1923-40	Aug. 25, 1923	9.5	14,300	.55
1413	Arkansas River at Great Bend, Kans.....	-	228,354	1941-58	May 1, 1942	-	20,200	.71
1428	Arkansas River at Hutchinson, Kans.....	-	231,635	1895-1905, 1921-58	July 30, 1958	11.47	-	-
		-	231,635	1895-1905, 1921-58	July 29, 1895	6.25	20,000	.63
1434	Arkansas River near Wichita, Kans.....	-	231,886	1921-34	June 16, 1921	16.52	-	-
1443	Arkansas River at Wichita, Kans.....	-	233,157	1877-1958	Aug. 18, 1927	18.0	12,000	.38
		-	233,157	1877-1958	May 18, 1877	17.3	-	-
		-	233,157	1898-1958	July 8, 1904	-	39,000	1.18

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1465	Arkansas River at Arkansas City, Kans.	-	c36,106	1877-1958	June 10, 1923	28.43	103,000	2.85
1505	Salt Fork Arkansas River near Jet, Okla.	E21	c3,194	1938-58	May 19, 1938	8.80	25,900	8.11
1520	Arkansas River at Ralston, Okla.	-	c46,850	1915-58	June 11, 1923	23.0	200,000	4.27
1540	Cimarron River near Folsom, N. Mex.	E21	c840	1928-33	May 17, 1928	-	4,300	5.12
1544	Carriazo Creek near Kenton, Okla.	E21	111	1953-58	July 6, 1958	12.22	15,600	141
1554	Cimarron River near Boise City, Okla.	E21	c2,023	1914-42	May 1, 1914	17.23	-	-
1565	Cimarron River near Santa, Kans.	E22	c3,922	1938-42	Apr. 20, 1942	11.90	80,000	39.5
1570	Cimarron River near Mocane, Okla.	E22	c4,305	1939-47	Apr. 21, 1942	22.0	69,000	17.6
1595	Bluff Creek above Lake Hefner, near Oklahoma City, Okla.	E21	1.82	1914-58	May 17, 1951	9.94	53,400	12.4
1598	Cottonwood Creek at Guthrie, Okla.	E21	370	1951-58	June 16, 1955	4.95	1,070	660
1635	Cimarron River at Oilton, Okla.	E17	c13,743	1889-1958	May 19, 1949	d929.6	-	-
1645	Arkansas River at Tulsa, Okla.	-	c62,074	1908-45	October 1908	21.3	-	-
1707	Verdigria River near Liberty, Kans.	E19	3,023	1935-45	June 21, 1935	16.8	72,300	5.26
1715	Verdigria River near Segeyah, Okla.	E19	4,402	1905-58	June 13, 1923	19.8	24,000	3.93
1745	Caney River at Bartlesville, Okla.	E19	1,392	1895-1903	May 24, 1903	37.5	48,000	15.9
1780	Bird Creek near Owasso, Okla.	E17	1,022	1904-45	May 21, 1943	51.54	138,000	33.3
1855	Stahl Creek near Miller, Mo.	A7	3.86	1916-58	Oct. 3, 1926	41.80	-	-
1886	Neosho River near Wyandotte, Okla.	A7	8,792	1950-58	July 21, 1950	35.62	26,400	19.0
1905	Neosho River near Langley, Okla.	A	10,335	1908-38	Oct. 25, 1908	34.0	19,700	19.3
1915	Neosho River near Chouteau, Okla.	A	11,546	1929-32, 1935-38	Mar. 29, 1938	e26.2	-	-
1935	Neosho River below Fort Gibson Reservoir, near Fort Gibson, Okla.	A	12,495	1951-58	July 7, 1958	6.40	1,010	262
1945	Arkansas River near Muskogee, Okla.	-	c84,133	1951-58	December 1955	34.0	-	-
1946	Arkansas River at Webbers Falls, Okla.	-	c84,508	1895-1939	May 22, 1943	39.0	300,000	29.0
2010	Raton Creek at Raton, N. Mex.	E24	14.4	1895-1988	May 20, 1943	45.5	400,000	38.0
2080	Cimarron Creek below Eagle Nest Dam, N. Mex.	E26	167	1927-58	June 14, 1955	2.79	205	1.23
2085	Cimarron Creek at Ute Park, N. Mex.	E26	260	1950-58	May 10, 1916	-	700	2.69
2070	Cimarron Creek near Cimarron, N. Mex.	E26	294	1910-18, 1922-1924-50	June 6, 1958	3.10	580	1.97
2115	Canadian River near Taylor Springs, N. Mex.	-	2,853	1950-58	Apr. 23, 1942	24.17	37,400	13.1
2137	Canadian River tributary near Mills, N. Mex.	E27	4.2	1940-58	Apr. 23, 1957	3.99	918	2.19
2140	Canadian River near Roy, N. Mex.	-	c3,959	1954-58	Apr. 23, 1942	14.22	63,800	16.1
2145	Rio Agua Negra near Holman, N. Mex.	E25	57	1936-58	July 22, 1954	6.10	4,700	82.5
2170	Coyote Creek below Black Lake, N. Mex.	E25	48	1954-58	June 6, 1958	4.70	913	19.0
2209	Dog Creek near Shomaker, N. Mex.	-	c5,712	1904-58	Sept. 25, 1955	9.92	1,530	137
2215	Canadian River near Sanchez, N. Mex.	-	-	1904-58	Sept. 30, 1904	-	(f)	-
2220	Canadian River near Bell Ranch, N. Mex.	-	c5,900	1936-58	Sept. 2, 1942	19.3	87,800	15.4
2245	Canadian River below Conchas Dam, N. Mex.	-	c6,984	1916, 1928-39	June 3, 1937	15.8	47,800	8.10
2260	Ute Creek near Bueyeros, N. Mex.	E27	c458	1936-39, 1943-58	June 3, 1937	12.8	73,000	10.5
2270	Canadian River at Logan, N. Mex.	-	c10,031	1949-54	Aug. 16, 1953	11.07	39,000	85.2
2270.5	Plaza Larga Creek tributary near Ragland, N. Mex.	E27	.5	1904-58	Sept. 30, 1904	36.5	278,000	27.7
				1952-58	July 16, 1958	12.70	1,170	2,340

See footnotes at end of table.

Table 2.--Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydrologic area	Contributing drainage (sq mi)	Period of known floods (water years)	Date	Maximum stage and discharge		
						Gage height (feet)	Discharge	Cfs per sq mi
Arkansas River basin--Continued								
22275	Canadian River near Amarillo, Tex.....	-	c15,376	1914-58 1924-25, 1938-58	May 1914 July 25, 1941	24.0 15.70	- 135,000	- 8.78
22280	Canadian River near Canadian, Tex.....	-	c18,178	1904-58 1938-58	Oct. 2, 1904 Sept. 23, 1941	20.0 9.80	- 122,000	- 6.7
22285	Canadian River at Bridgeport, Okla.....	-	c20,428	1914-58 1945-58	May 3, 1914 June 23, 1948	19.4 14.60	- 150,000	- 7.34
22290	Canadian River near Newcastle, Okla.....	-	c20,962	1904-58 1939-45	Oct. 3, 1904 May 4, 1941	18.5 9.2	- 200,000	- 9.54
2315	Canadian River at Calvin, Okla.....	-	c23,151	1904-58	Aug. 7, 1906 May 11, 1950	21.0 -	- 174,000	- 7.52
2370	Wolf Creek near Fort Supply, Okla.....	E21	c1,498	1938-58	June 24, 1939 Aug. 8, 1940	- 5.80	14,200 -	9.48 -
2410	North Canadian River below Lake Overholser, near Oklahoma City, Okla.....	E	c8,323	1921-58 1953-58	Oct. 1923 Oct. 5, 1955	30.9 12.44	- 5,790	- 11.8
2415	North Canadian River near Oklahoma City, Okla.....	E	c8,455	1932-53	June 3, 1932	-	100,000	36.8
2440	Deep Fork near Dewar, Okla.....	E17	2,307	1908-55	October, 1908	29.0	85,000	7.42
2450	Canadian River near Whitefield, Okla.....	-	c37,876	1898-1958	May 10, 1943	25.5	281,000	86.7
2460	Sans Bois Creek near Keota, Okla.....	A2	346	1938-42 1938-43	Feb. 18, 1938 May 11, 1943	26.1 27.9	- -	- -
2465	Arkansas River near Sallisaw, Okla.....	-	c125,516	1927-58 1948-58	May 11, 1943 May 27, 1957	37.9 34.80	- 544,000	- 4.33
2490	Poteau River at Poteau, Okla.....	B2	1,240	1923-45	June 12, 1943	39.0	100,000	80.6
2494.5	Arkansas River at Fort Smith, Ark.....	-	c127,731	1833-1958	May 12, 1943	41.7	-	-
2505	Arkansas River at Van Buren, Ark.....	-	c128,162	1833-1958	May 12, 1943	-	850,000	6.63
2524	Arkansas River at Ozark, Ark.....	-	c129,556	1927-58	Apr. 16, 1945	38.10	-	-
2580	Arkansas River at Dardanelle, Ark.....	-	c131,466	1887-1958	May 13, 1943	38.4	-	-
2608	Arkansas River near Morrilton, Ark.....	-	c133,239	1927-58	Apr. 19, 1927	42.0	683,000	5.20
2635	Arkansas River at Little Rock, Ark.....	-	c135,960	1833-1958	June 27, 1943	34.6	-	-
2637	Arkansas River at Pine Bluff, Ark.....	-	c136,524	1928-58	May 28, 1943	30.05	536,000	3.94
2639.2	Bayou Meto near North Little Rock, Ark.....	D7	988	1892-1958	May 28, 1943	33.78	b553,000	4.05
2640	Bayou Meto near Lonoke, Ark.....	D11	195	1948-57 1937-58	May 2, 1954 January 1937	27.1 22.9	- -	- -
Mississippi River main stem								
2655	Mississippi River at Arkansas City, Ark.....	-	1,130,700	1880-1958	Apr. 20, 1927 May 1927	60.4 -	- 62,472,000	- 2.19
Yazoo River basin								
2682	Floe Creek near Etta, Miss.....	F13	9.09	1952-58	Nov. 15, 1957	12.62	5,220	574

Yazoo River basin

Table 2.--Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Maximum stage and discharge		
					Date	Gage height (feet)	Discharge Cfs per sq mi
Yazoo River basin--Continued							
2882	Sunflower River near Lombardy, Miss.	C11	492	1947-58	May 3, 1958	41.30	-
2886.1	Sunflower River near Moorhead, Miss.	-	(h)	1949-58	May 11-12, 1958	36.52	-
2886.5	Bogue Phalia near Leland, Miss.	-	(h)	1946-58	Jan. 12, 1946	28.0	8,500
2886.6	Bogue Phalia cut-off near Leland, Miss.	-	(h)	1946-58	Jan. 12, 1946	27.7	-
2886.8	Sunflower River at Little Callao Landing, Miss.	-	2,287	1948-58	May 11, 1958	36.87	23,000
2887	Sunflower River near Anguilla, Miss.	-	(h)	1949-58	May 11, 1958	48.16	-
2887.2	Sunflower River at Holly Bluff, Miss.	-	(h)	1948-58	May 5-6, 1927	110.5	-
2888	Yazoo River at Redwood, Miss.	-	12,603	1911-58	May 4, 1927	107.9	-
2888.8	Steele Bayou near Rolling Fork, Miss.	-	(h)	1947-55	Feb. 22-25, 1948	24.20	-
2889.3	Muddy Bayou at Eagle Lake, Miss.	-	(h)	1947-53	Mar. 1, 1950	30.98	-
Mississippi River main stem							
2890	Mississippi River near Vicksburg, Miss.	-	1,144,500	1828-1958	May 1, 1927	458.4	2,278,000
Big Black River basin							
2891.7	Mulberry Creek at Kilmichael, Miss.	-	(h)	1946-58	May 29, 1951	16.45	15,000
2895.6	Bear Creek at Highway 51 near Canton, Miss.	RI6	86	1951-58	Apr. 30, 1953	4222.22	7,300
2896.1	Bachelor Creek at Canton, Miss.	RI6	3.11	1953-58	Apr. 29, 1953	17.78	991
2900.05	Clear Creek near Bovina, Miss.	RI3	36	1927-58	Feb. 17, 1927	32.0	-
2902	Big Black River near Hankinson, Miss.	D	3,319	1953-58	Apr. 29, 1953	27.24	9,330
				1937-46	Feb. 21-22, 1937	47.2	-
Red River basin							
2975	Prairie Dog Town Fork Red River near Canyon, Tex.	A21	c711	1904-51	May 16, 1951	20.31	15,200
3000	Salt Fork Red River near Wellington, Tex.	A20	c1,013	1939-58	May 16, 1957	19.00	146,000
3020	North Fork Red River near Granite, Okla.	A21	c2,095	1904-7, 1928-32, 1935-44	May 18, 1935	9.8	28,000
3030	North Fork Red River below Altus Dam, near Lugert, Okla.	A21	c2,116	1928-32, 1951-58	May 18, 1951	12.70	16,100
3065	Other Creek at Mountain Park, Okla.	A20	164	1946-51	June 3, 1949	18.30	4,800
3125	Wichita River at Wichita Falls, Tex.	A20	3,140	1900-58	June 8, 1915	21	50,000
3150	Little Wichita River near Henrietta, Tex.	E21	1,037	1908-58	1908	-	-
3155	Red River near Terrell, Okla.	-	c22,787	1953-58	May 2, 1957	18.36	6,390
3160	Red River near Gainesville, Tex.	-	c24,846	1891-1958	June 8, 1941	28.12	197,000
3165	Washita River near Cheyenne, Okla.	-	794	1936-58	May 21, 1951	26.53	168,000
3245	Barnitz Creek near Arapaho, Okla.	E21	243	1894-1958	Apr. 29, 1954	15.24	6,776
				1946-58	Apr. 8, 1947	20.8	69,800
					May 16, 1951	-	7,700
							31.7

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3250	Washita River near Clinton, Okla.....	-	1,977	1934-58	Apr. 3-4, 1934	33.9	-	66,800	33.8
3255	Washita River at Carnegie, Okla.....	-	3,129	1935-58	May 16, 1935	31.09	-	-	33.8
3265	Washita River at Anadarko, Okla.....	-	3,656	1935-58	May 23, 1935	29	-	50,000	16.0
3275	Little Washita River at Minnehah, Okla.....	E7	227	1934-58	May 18, 1935	26.21	-	29,000	7.93
3280	Washita River near Tabler, Okla.....	-	4,706	1936-37	May 25, 1935	26.8	-	36,000	189
3285	Washita River near Pauls Valley, Okla.....	-	5,330	1947-58	May 16, 1947	22.20	-	53,600	11.4
3295	Rush Creek near Wayaville, Okla.....	E7	206	1952-58	Apr. 7, 1927	29.9	-	35,800	6.72
3310	Washita River near Durwood, Okla.....	-	7,202	1908-58	May 18, 1957	27.34	-	38,500	187
3320	Red River near Colbert, Okla.....	-	c33,841	1954-58	May 18, 1957	23.62	-	98,000	13.6
3355	Red River at Arthur City, Tex.....	-	c38,595	1908-58	May 19, 1957	42.30	-	201,000	5.94
3370	Red River at Index, Ark.....	-	c42,494	1837-1958	May 26, 1908	45.5	-	400,000	10.4
3385	Little River below Lukfata Creek, near Idabel, Okla.....	D2	1,226	1924-58	May 21, 1935	31.8	-	297,000	6.99
3407	Red River near White Cliffs, Ark.....	D2	3,471	1891-1958	May 28, 1908	43.2	-	86,000	70.1
3415	Red River at Fulton, Ark.....	-	c46,444	1918-58	Feb. 23, 1938	34.25	-	-	-
3420	Red River at Garland, Ark.....	-	c46,694	1938-58	February 1938	39.7	-	-	-
3423.5	McKinney Bayou near Garland, Ark.....	-	169	1905-58	Apr. 1, 1945	33.5	-	338,000	7.28
3430	North Sulphur River near Cooper, Tex.....	-	276	1876-1958	Feb. 24, 1938	-	-	327,000	7.00
3435	Whiteoak Creek near Talco, Tex.....	B7	494	1885-1958	Apr. 2, 1945	37.4	-	-	-
3443.5	Red River at Springbank, Ark.....	-	c50,967	1940-58	Apr. 3, 1945	36.87	-	-	-
3485	Black Bayou near Houston, La.....	B12	231	1915-58	July 2, 1940	22.0	-	-	-
3481	McGinn Creek near Shreveport, La.....	B7	13.8	1950-58	May 2, 1944	26.6	-	42,800	155
3485	Red River at Shreveport, La.....	-	c54,677	1870-1958	Apr. 29, 1953	25.86	-	-	-
3487.4	Bayou Dorchet near Cotton Valley, La.....	B6	818	1950-58	Mar. 31, 1945	25.3	-	26,600	53.8
3487.6	Black Bayou at Leton, La.....	B6	49.8	1866-1958	Apr. 28, 1958	19.52	-	-	-
3489	Brushy Creek near Horkman, La.....	B6	16.1	1940-51	Apr. 3-4, 1945	43.7	-	-	-
3492	Clark Bayou near Haughton, La.....	B6	35.1	1954-58	May 24, 1955	13.4	-	3,980	17.2
3493	Shell Bayou near Shreveport, La.....	B6	(h)	1949-1958	May 24, 1955	43.82	-	-	-
3493.5	Alligator Bayou near Shreveport, La.....	B6	(h)	1873-1958	May 24, 1955	45.9	-	303,000	5.54
3497	Bayou Bodeau near Bellevue, La.....	B6	693	1950-58	Apr. 7, 1945	-	-	-	-
3497.1	Bayou Bodeau near Hodges Camp near Bellevue, La.....	B6	704	1950-58	Apr. 29, 1958	46.74	-	-	-
3498.5	Red Chute Bayou near Shreveport, La.....	-	(h)	1954-58	Apr. 26, 1958	49.34	-	-	-
3500	Loggy Bayou near Minock, La.....	-	2,628	1951-58	May 24, 1955	13.42	-	2,400	149
3505	Red River at Coushatta, La.....	-	c57,426	1951-58	May 24, 1955	11.26	-	-	-
3506	Bayou Pierre at Ochley Drive, Shreveport, La.....	B12	5.7	1933-58	July 26, 1933	d167.0	-	-	-
3507.3	Bayou Pierre at 70th St., Shreveport, La.....	B12	8.5	1933-58	July 26, 1933	14.8	-	-	-
3509.5	Bayou Pierre near Gayles, La.....	B12	44	1930-42	Jan. 4, 1930	20.8	-	-	-
				1933-52	Jan. 4, 1930	14.4	-	-	-
				1933-58	Mar. 7-8, 1945	33.1	-	-	-
				1940-58	July 26, 1933	-	-	3,980	-
				1943-58	July 13, 1940	-	-	-	-
				1949-58	Apr. 8, 1945	50.20	-	32,600	12.4
				1889-94	May 4, 1958	847.83	-	275,000	4.79
				1939-52	Apr. 7, 1945	39.9	-	-	-
				1944-49	Oct. 5, 1945	20.9	-	-	-
				1944-54	Apr. 28, 1953	15.2	-	-	-
				1933-58	August 1933	28.2	-	-	-

See footnotes at end of table.

Table 2.--Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region including hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Maximum stage and discharge		
					Date	Gage height (feet)	Discharge Cfs per sq mi
Red River basin--Continued							
3515.6	Cypress (Wallace) Bayou near Frierson, La.....	Bl2	268	1933-55	1933	53.7	-
3516	Bayou Pierre near Grand Bayou, La.....	Bl2	674	1939, 1947-55	Apr. 9, 1938	43.4	16.3
3517	Bayou Pierre at Evelyn, La.....	Bl2	707	1933-57	August 1933	35.4	-
3517.45	Bayou Pierre near Hanna, La.....	Bl2	729	1950-58	May 20, 1953	46.11	-
3517.5	Bayou Pierre near Lake End, La.....	Bl2	739	1933-52	Apr. 13, 1945	36.4	-
3517.55	Bayou Pierre at Powhatan, La.....	Bl2	879	1933-58	Apr. 13, 1945	47.2	-
3519.2	Bayou Pierre near Natchitoches, La.....	Bl2	1,122	1947-51	Feb. 22-23, 1950	33.3	-
3519.3	Red River at Grand Ecure, La.....	Bl2	c58,639	1914-58	May 7, 1957	46.59	-
3522	Black Lake Bayou near Minden, La.....	B6	38.6	1951-58	Apr. 10, 1945	44.7	4.77
3523	Black Lake Bayou near Gibsland, La.....	B6	46.1	1950-58	Apr. 28, 1957	17.74	-
3523.5	Leathermans Creek near Gibsland, La.....	B6	57	1950-58	Sept. 21, 1958	46.74	-
3524	Keplers Creek near Sparta, La.....	B6	21.1	1954-58	June 3, 1950	47.70	-
3527	Castor Creek at Castor, La.....	B6	27.9	1954-58	Apr. 6, 1956	44.45	-
3530	Saline Bayou near Clarence, La.....	B6	1,382	1945-58	May 24, 1955	48.70	-
3547	Kisatchie Bayou at Cypress, La.....	Bl6	360	1950-58	Apr. 11, 1945	43.60	-
3549	Cane River near Galbraith, La.....	Bl6	687	1938-52	Apr. 17, 1945	d40.49	10.3
3549.1	Red River at Colfax, La.....	Bl6	729	1945-58	Apr. 17, 1945	34.9	-
3549.5	Bayou Jean de Jean at Hot Wells, La.....	Bl6	c60,924	1946-58	Apr. 16-18, 1945	105	-
3550.5	Bayou Rapides near McWitt, La.....	Bl6	(h) 41.0	1947-55	May 23, 1953	49.9	-
3554.7	Bayou Rapides at Alexandria, La.....	-	(h) 554	1947-52	May 18, 1953	51.4	-
3554.8	Red River at Alexandria, La.....	-	c61,564	1950-58	Feb. 14, 1950	d85.4	-
3555	Red River at Alexandria, La.....	-	c61,689	1849-1958	May 21, 1953	d78.32	-
3556	Red River at Moncla, La.....	-	c61,794	1935-58	Apr. 17, 1945	45.23	3.78
3556.1	Red River at Barbin Landing, La.....	-	c61,794	1938-42	June 2, 1935	47.0	-
3580	Ouachita River near Hot Springs, Ark.....	D9	1,405	1923-42, 1945	May 10-13, 1942	-	2.72
3587	Caddo River at Greenwood, Ark.....	D9	1,192	1923-30	Feb. 1, 1932	66.9	-
3597	Ozan Creek near McCaskill, Ark.....	D9	148	1939-58	May 16, 1925	43.9	102
3612	Terre Noire Creek east of Gardon, Ark.....	D2	260	1940-58	Mar. 30, 1945	27.0	339
3618	Ouachita River at lock and dam No. 8, Champagnolle Landing, Ark.....	D2	6,569	1910-58	Mar. 3, 1958	22.85	-
3624	Hurricane Creek near Sheridan, Ark.....	D2	270	1938-40, 1947-58	May 8, 1958	40.4	-
3634	Saline River near Warren, Ark.....	D7	2,476	1927-40, 1929-31, 1938-40, 1912-58	Feb. 13, 1950	15.4	-
3640	Ouachita River at lock and dam No. 6, near Felsen-thal, Ark.....	-	10,787	1919-58	Apr. 27, 1927	28.0	-
3640.8	Ouachita River at lock and dam No. 5, at Sterling-ton, La.....	-	12,954	1919-58	June 28, 1938	25.90	24.8
3645.5					Apr. 12, 1945	44.2	-
					Apr. 12-13, 1945	48.2	-

3647.5	Bayou DeLoutre near DeLoutre, La.....	B6	302	1949-58	Apr. 28, 1958	498.55	-
3648	Bayou D'Arbonne at Homer, La.....	B8	30.0	1954-58	Apr. 29, 1958	47.75	-
3649	Big Creek near Vienna, La.....	B8	68.9	1954-58	May 14, 1954	47.74	-
3651	Cypress Creek near Unionville, La.....	B8	63.3	1954-58	June 1, 1957	-	3,280
3653	Middle Fork Bayou D'Arbonne near Colquitt, La.....	B6	43.9	1954-58	July 3, 1955	43.52	47.6
3654	Bayou D'Arbonne near Farmerville, La.....	B6	1,470	1926-58	Apr. 26, 1958	49.68	-
3655	Stowe Creek near Farmerville, La.....	B8	29.0	1954-58	Apr. 29, 1958	e45.71	66.4
3670	Ouachita River at Monroe, La.....	-	15,298	1874-1958	Apr. 6, 1956	46.38	45.6
3670.5	Ouachita River at lock and dam No. 4, at Monroe, La.....	-	15,319	1912-58	Feb. 2-4, 1932	-	101,000
3673	North Cheniere Creek at Cheniere, La.....	B8	38.0	1954-58	May 23, 1958	50.45	-
3676	Cypress Creek near Vixen, La.....	B8	16	1954-58	Mar. 21, 1955	51.18	-
3676.5	Ouachita River at lock and dam No. 3, near Riverton, La.....	-	15,632	1913-58	Apr. 30, 1958	45.89	-
3676.8	Boeuf River near Eudora, Ark.....	-	(h)	1939-58	May 15-17, 1927	57.0	-
3677	Boeuf River near Kilbourne, La.....	-	(h)	1947-58	Mar. 22, 1955	21.52	-
3678	Boeuf River near Oak Grove, La.....	-	(h)	1947-58	Sept. 22, 1958	22.8	14,600
3679.5	Boeuf River near Oak Ridge, La.....	-	(h)	1931-58	Feb. 14-15, 1948	489.6	-
3680	Boeuf River near Girard, La.....	-	(h)	1926-58	May 5, 1958	-	21,500
3681	Boeuf River near Alto, La.....	-	(h)	1926-58	December 1931	d81.4	23,300
3681.5	Lyon Bayou at Forest, La.....	C11	9.79	1926-58	May 7, 1927	129.5	-
3685	Big Coteau Bayou near Oak Grove, La.....	-	(h)	1954-58	Dec. 26, 1931	19.6	4,400
3685.2	Big Creek at Holly Ridge, La.....	C11	171	1941-58	May 6-7, 1958	28.14	-
3685.4	Big Creek near Mangham, La.....	C11	345	1941-58	Mar. 21, 1955	47.30	-
3685.8	Big Creek near Sligo, La.....	C11	437	1941-58	Apr. 12, 1947	8.2	-
3686	Bayou Lafourche cut-off near Oak Ridge, La.....	-	(h)	1942-58	Mar. 22, 1955	d94.13	2,050
3688	Bayou Gallion north of Oak Ridge, La.....	-	(h)	1942-58	Apr. 12-13, 1947	10.6	-
3689	Little Bayou Boeuf near Collinston, La.....	-	(h)	1950-58	Apr. 12-13, 1947	24.5	-
3690	Bayou Lafourche near Crew Lake, La.....	-	(h)	1932-58	Apr. 26, 1945	25.5	-
3690.5	Bayou Lafourche near Alto, La.....	-	(h)	1939-42, 1946-58	Jan. 24, 1946	79.5	-
3691	Bayou Lafourche cut-off near Columbia, La.....	-	(h)	1951-58	May 3, 1956	-	22,200
3693.2	Ouachita River at Stafford Point Landing, La.....	-	18,610	1954-58	Apr. 12, 1947	13.8	-
3693.3	Black Bayou near Sicily Island, La.....	C11	6.5	1954-58	Apr. 15, 1955	45.01	-
3693.4	Ouachita River at lock and dam No. 2, at Harrisonburg, La.....	-	18,793	1909-58	May 2, 1958	a27.50	26,800
3693.8	Tensas Bayou near Transylvania, La.....	-	(h)	1941-58	Apr. 23, 1947	d63.8	-
3694	Tensas Bayou near Alsatie, La.....	-	(h)	1947-58	May 30, 1958	d59.62	-
3695	Tensas River at Tendam, La.....	-	(h)	1927-58	Mar. 8, 1950	d59.2	-
3696	Tensas River near Tendam, La.....	-	(h)	1936-58	Apr. 13, 1955	43.83	-
3696.2	Alligator Bayou near Tallulah, La.....	-	(h)	1947-58	May 17-19, 1927	67.2	-
3696.4	Bayou Vidal near Quimby, La.....	C11	28	1954-58	Feb. 11, 1946	17.5	-
3696.4	Bayou Vidal near Quimby, La.....	C11	160	1954-58	May 2, 1958	-	1,600
3697	Bayou Vidal near Quimby, La.....	-	(h)	1947-58	Nov. 20, 1948	d80.4	-
3698	Tensas River near Tendam, La.....	-	(h)	1927-58	Nov. 15, 1927	134.02	-
3698.2	Alligator Bayou near Tallulah, La.....	-	(h)	1936-58	Nov. 19, 1948	e24.78	4,610
3698.4	Bayou Vidal near Quimby, La.....	-	(h)	1947-58	Mar. 30, 1951	d68.2	-
3698.4	Bayou Vidal near Quimby, La.....	-	(h)	1947-58	Nov. 19, 1957	43.07	-
3698.4	Bayou Vidal near Quimby, La.....	-	(h)	1954-58	Feb. 11, 1956	45.53	-

See footnotes at end of table.

Table 2.--Maximum stages and discharges at gaging stations not used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region and hydro-logic area	Contributing drainage area (sq mi)	Period of known floods (water years)	Date	Maximum stage and discharge	
						Gage height (feet)	Discharge Cfs per sq mi
Red River basin--Continued							
3696.45	Texas River at Newlight, La.....	-	(h)	1942-58	Apr. 28, May 2, 1945	36.3	-
3696.8	Bayou Macon at Eudora, Ark.....	-	(h)	1931-58	May 22, 1958	27.43	-
3697.2	Bayou Macon near Oak Grove, La.....	-	(h)	1947-58	Apr. 11, 1947	24.7	5,100
3698.3	Bayou Macon near Floyd, La.....	-	(h)	1951-58	Apr. 30, 1958	21.88	-
3700	Bayou Macon near Delhi, La.....	-	(h)	1882-95, 1926-58	Apr. 1882	137.5	-
3701	Bayou Macon at Warsaw Bridge, near Delhi, La.....	-	(h)	1939-42, 1947-58	May 19, 1958	469.76	-
3701.3	Texas River at Kirks Ferry Landing, La.....	-	(h)	1947-58	Mar. 6-8, 1950	458.1	-
3701.8	Texas River at Clayton, La.....	-	(h)	1917-58	May 17-18, 1927	157.3	-
3702	Castor Creek at Chatham, La.....	B8	60.0	1950-58	May 17, 1953	46.09	-
3703	Edwards Branch at Chatham, La.....	B8	11.3	1950-58	July 23, 1958	45.30	-
3706	Beaucoup Creek near Cotton Plant, La.....	B8	127.3	1951-58	May 17, 1953	13.18	-
3706.5	Flat Creek near Sikes, La.....	B8	41.5	1951-58	May 17, 1953	12.56	-
3707	Beach Creek near Olla, La.....	B8	58.0	1954-58	Sept. 21, 1958	44.46	-
3707.5	Big Chickasaw Creek near Olla, La.....	B8	86.0	1954-58	May 1, 1954	41.08	-
3708	Castor Creek at Tullios, La.....	B8	923	1951-58	May 28, 1951	27.20	-
3718	Big Creek near Dodson, La.....	B8	81.0	1954-58	July 23, 1958	47.97	96.3
3721	Port de Luce Creek at Winnfield, La.....	B8	31.0	1951-58	July 22, 1958	17.29	273
3721.9	Little River at Rochelle, La.....	B8	1,871	1939-58	May 19, 1953	50.9	-
3723	Bear Creek near Packton, La.....	B8	11	1954-58	July 22, 1958	48.33	-
3731	Big Creek at Fishville, La.....	B8	665	1886-1958	Apr. 29, 1953	16.45	-
3732.6	Black River at Jonesville, La.....	-	(h)	1927-58	May 17-18, 1927	64.1	-
3732.7	Black River near Acme, La.....	-	(h)	1924-58	May 14-17, 1927	62.7	-
Little Bayou Sara basin							
3733	Little Bayou Sara near Turnbull, La.....	B16	22.3	1949-58	Apr. 12, 1955	16.96	-
Thompson Creek basin							
3736	Thompson Creek at Jackson, La.....	B16	166	1949-58	Apr. 13, 1955	43.03	-
3737	Thompson Creek near Starnill, La.....	B16	249	1949-58	May 18, 1953	46.10	-
3738	Alexander Creek near St. Francisville, La.....	B16	23.9	1953-58	May 18, 1953	14.18	-
Bayou Baton Rouge basin							
3739	Bayou Baton Rouge above Baker, La.....	B16	14.2	1953-58	May 18, 1953	22.64	-
Mississippi River Delta							
3747	Tohefuncha River near Franklinton, La.....	B16	53.1	1949-58	May 3, 1953	45.48	-
3750.5	Tohefuncha River near Covington, La.....	B16	145	1951-58	May 3, 1953	20.47	-
3753	Tangipahoa River near Kentwood, La.....	B8	237	1951-58	Mar. 28, 1951	14.08	-
3754.3	Tangipahoa River near Amite, La.....	B8	482	1949-58	May 4, 1949	45.26	-
3756	Washley Creek near Robert, La.....	B8	25.3	1951-58	May 3, 1953	13.25	-
3759.6	Tickfaw River at Montpelier, La.....	B8	220	1951-58	May 3, 1953	d103.93	-

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3763	Pickfaw River near Springfield, La.....	B3	487	1948-58	Mar. 6, 1949	4.2
3764	Fonchatoula Creek at La Gabany, La.....	B3	13.8	1951-58	Mar. 19, 1951	11.63
3765	Fonchatoula Creek east of Hammond, La.....	B3	(h)	1948-58	May 5, 1953	437.86
3766	Fonchatoula Creek south of Hammond, La.....	B3	(h)	1948-58	June 7, 1950	417.37
3767	Yellow Water River Canal near Hammond, La.....	B3	(h)	1948-58	June 7, 1950	445.82
3768	Yellow Water River Canal near Baptist, La.....	B3	(h)	1948-58	June 7, 1950	436.10
3769	Amite River at Grangeville, La.....	B16	741	1951-58	Apr. 14, 1955	16.71
3770	Amite River near Magnolia, La.....	B16	884	1949-58	Apr. 15, 1955	448.26
3771	Comite River near Clinton, La.....	B16	88.0	1949-58	Apr. 13-14, 1955	14.88
3772	Comite River near Zachary, La.....	B16	228	1951-58	May 18, 1953	24.52
3773	Coleville Creek at Livingston, La.....	B3	20.7	1951-58	May 4, 1953	11.86
3774	West Coleville Creek near Walker, La.....	B3	22.4	1951-58	Jan. 16, 1954	6.99
3775	West Coleville Creek near Walker, La.....	B3	29.5	1951-58	May 18, 1953	10.00
3776	Bayou Cocodrie near Dossman, La.....	B16	72.1	1954-58	May 18, 1953	12.50
3777	Bayou Cocodrie near Dossman, La.....	B16	(h)	1954-58	May 20, 1955	450.7
3778	Bayou Cocodrie at St. Landry, La.....	B16	(h)	1947-58	May 20, 1953	448.8
3779	Bayou Cocodrie near Whiteville, La.....	B16	(h)	1940-42, 1946-58	May 20, 1953	442.3
3780	Bayou Beauf at Twin Bridge, La.....	B16	(h)	1941, 1946-58	May 18, 1953	474.6
3781	Bayou Beauf near Lamourie, La.....	B16	(h)	1938-58	May 18-19, 1953	472.4
3782	Bayou Beauf near Lecompte, La.....	B16	(h)	1950-58	May 18-19, 1953	471.8
3783	Bayou Beauf near Lecompte, La.....	B16	(h)	1940-42, 1946-54	May 18, 1953	468.9
3784	Bayou Beauf at Lyles, La.....	B16	(h)	1940, 1947-58	Apr. 5, 1952	444.83
3785	Bayou Courtaubeau at Washington, La.....	B16	715	1938-49	May 22, 1953	168.8
3786	Bayou Lamourie at Lamourie, La.....	B16	(h)	1949-58	Apr. 9, 1949	21.04
3787	Chatlin Lake Canal near Lecompte, La.....	B16	75.9	1943-53	May 18, 1953	19.51
3788	Coulee des Grues near Marksville, La.....	B16	(h)	1943-58	May 1, 1954	459.7
3789	Three Prong Lake at Belledeau, La.....	B16	(h)	1945-58	Apr. 25, 1945	456.2
3790	Bayou du Lac near Hesser, La.....	B16	(h)	1947-58	May 20-21, 1953	454.4
3791	West Protection Levee borrow pit channel near Palmetto, La.....	B16	(h)	1937-58	May 21-22, 1953	435.2
3792	Bayou Courtaubeau at Port Barre, La.....	B16	(h)	1937-58	May 18, 1953	435.2
3793	West Protection Levee borrow pit at Henderson Landing, La.....	B16	(h)	1935-49	Aug. 10, 1940	126.4
3794	Bayou Teche at Arnaudville, La.....	B16	1,531	1935-58	Mar. 11, 1952	418.4
3795	Bayou Teche at Keystone lock, near St. Martinsville, La.....	B16	(h)	1944-58	May 24, 1953	424.27
3796	Vermilion River at Tontons Bridge, La.....	B16	(h)	1914-58	May 27, 1927	423.5
3797	Vermilion River at Long Bridge, La.....	B16	(h)	1948-58	May 19, 1953	421.1
3798	Vermilion River at Ruth Canal, La.....	B16	(h)	1938-58	Aug. 15, 1940	419.6
3799	Vermilion River at Lafayette, La.....	B16	(h)	1938-49, 1952-58	August 1940	420.2
3800	Bayou Ile des Cannes near Lafayette, La.....	B16	(h)	1942-58	Mar. 13, 1947	14.7
3801	Vermilion River at Landry Bridge near Milton, La.....	B16	30	1953-58	Apr. 15, 1955	11.46
3802	Vermilion River at Landry Bridge near Milton, La.....	B16	(h)	1942-51	Mar. 13, 1947	14.5
3803	Vermilion River at Abbeville Pumping Plant, near Abbeville, La.....	B16	(h)	1932-58	Aug. 9, 1940	13.5

g If flow had been confined between levees.

b Not necessarily maximum during the period.

Does not include noncontributing drainage area.

and Elevation above mean sea level.
e Occurred on following day

Probably exceeded 100,000

h Indeterminate.

1 Affected by over

j Elevation above mean Gulf level.
k Affected by overflow through levee crevasse

[illegible]

FLOODS IN LOWER MISSISSIPPI RIVER BASIN

Table 3.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations

Flood region, hydro-logic area	Stream and place of determination	Drainage area (sq mi)	Peak discharge		
			Date	Cfs	Cfs per sq mi
Meramec River basin					
B1	Flat Creek at Union, Mo.....	6.68	July 25-26, 1948	6,680	1,000
B1	Brush Creek at Pacific, Mo.....	7.84	June 15, 1957	8,220	1,048
B1	Clear Creek tributary near Pacific, Mo..	1.31	June 15, 1957	206	1,573
B1	Fox Creek near Pacific, Mo.....	1.65	June 15, 1957	1,420	861
B1	Fox Creek at Allenton, Mo.....	15.8	June 15, 1957	21,200	1,342
B1	Fountain Farm Branch near Potosi, Mo....	2.14	June 30, 1957	1,890	883
Plattin Creek basin					
B1	Marphy Branch near Crystal City, Mo.....	0.45	June 8, 1957	947	2,104
Apple Creek basin					
B1	Hoebs Branch near Uniontown, Mo.....	1.66	Jan. 21, 1958	1,400	843
Headwater diversion channel basin					
B1	Sunnybrook Creek at Lutesville, Mo.....	0.52	June 30, 1957	440	846
St. Francis River basin					
B2	Wolf Creek near Farmington, Mo.....	40.3	June 30, 1957	9,870	245
B2	Barnes Creek near Fredericktown, Mo.....	4.03	May 21, 1957	5,550	1,377
B2	Clark Creek at Patterson, Mo.....	37.5	Mar. 20, 1955	11,200	299
D5	Delaware Creek tributary near Bloomfield, Mo.	.42	June 29, 1957	628	1,495
White River basin					
A2	Osage Creek at Osage, Ark.....	45.4	May 7, 1961	34,100	751
A2	Osage Creek near Berryville, Ark.....	164	May 7, 1961	40,000	244
A2	Long Creek at Alpena, Ark.....	67.3	May 7, 1961	30,000	446
A7	Ingenthron Hollow near Forsyth, Mo.....	.646	May 6, 1960	1,190	1,842
A7	Cedar Hollow at Bradleyville, Mo.....	.83	May 6, 1960	1,160	1,398
A2	Yandell Branch near Kirbyville, Mo.....	.327	May 6, 1960	291	890
A7	Gray Branch at Luttie, Mo.....	.27	May 14, 1956	246	911
A2	West Fork Crooked Creek near Harrison, Ark.	20.1	May 7, 1961	22,900	1,140
A2	Crooked Creek at Harrison, Ark.....	73	May 7, 1961	54,100	741
A2	Hussar Creek at Bellefonte, Ark.....	5.7	May 7, 1961	4,460	782
B2	Pike Creek tributary near Poplar Bluff, Mo.	.28	Nov. 7, 1957	211	754
A3	Sycamore Creek near Winona, Mo.....	.88	May 11, 1957	360	409
B2	North Frong Little Black River at Hunter, Mo.	1.23	Nov. 16, 1958	626	509
A3	Adams Branch near West Plains, Mo.....	2.27	July 12, 1958	1,040	458
A6	Williams Spring Branch near Alton, Mo...	4.24	Nov. 16, 1958	1,350	318
Arkansas River basin					
G24	Cottonwood Creek near Buena Vista, Colo.	37	May 30, 1890	164	4.43
A25	Texas Creek at Texas Creek, Colo.....	144	July 10, 1923	2,800	19.4
A25	Grape Creek near Canon City, Colo.....	481	July 21, 1925	14,500	30.1
A25	Wilson Creek near Canon City, Colo.....	61.3	July 4, 1944	16,800	274
A25	Wilson Creek near mouth, near Canon City, Colo.	68.0	July 4, 1944	20,600	303
A25	Chandler Creek near Florence, Colo.....	13.6	June 3, 1921	1,610	118
A25	Coal Creek at Florence, Colo.....	22.3	June 3, 1921	3,720	167
A25	Eightmile Creek near Florence, Colo.....	65	June 3, 1921	10,000	154
A25	Brush Hollow Creek near Portland, Colo..	21.9	June 3, 1921	5,320	243
A25	Beaver Creek near Hobson, Colo.....	205	June 5, 1912	153,000	746
A24	Rush Creek near Swallows, Colo.....	19.6	June 3, 1921	4,670	238
A24	Turkey Creek near Swallows, Colo.....	125	June 3, 1921	9,000	72.0
A24	Osteen Arroyo near Swallows, Colo.....	7.8	June 3, 1921	9,060	1,160
A24	Cameron Arroyo near Livesey, Colo.....	7.3	June 3, 1921	13,900	1,900
A24	Pecks Creek near Livesey, Colo.....	34.4	June 3, 1921	19,400	564
A24	Rock Creek near Livesey, Colo.....	59	June 3, 1921	53,900	914
A24	Unnamed Arroyo No. 1 near Livesey, Colo.	15.2	June 3, 1921	9,400	616
A24	Boggs Creek near Livesey, Colo.....	24.9	June 3, 1921	14,500	582
A24	Unnamed Arroyo No. 2 near Pueblo, Colo..	.6	June 3, 1921	633	1,060
A24	Blue Ribbon Creek near Pueblo, Colo.....	6.7	June 3, 1921	9,130	1,360
A24	Dry Creek at Pueblo, Colo.....	86	June 3, 1921	24,400	284
A24	Fountain Creek near Colorado Springs, Colo.	102	July 5, 1958	752	7.37
A24	Templeton Gap near Colorado Springs, Colo.	7.1	May 27, 1922	6,120	862
A24	Monument Creek at Colorado Springs, Colo.	238	May 30, 1935	50,000	210
A24	Fountain Creek above Cheyenne Creek, at Colorado Springs, Colo.	385	May 30, 1935	55,000	143
A24	Hogans Gulch near Eden, Colo.....	6.1	Aug. 7, 1904	9,640	1,580
E24	Salt Creek near Pueblo, Colo.....	45	June 4, 1921	32,100	713
E24	St. Charles River at Burnt Mill, Colo...	166	July 22, 1925	21,800	131
E24	Muddy Creek near Pueblo, Colo.....	42.5	May 19, 1955	3,650	85.9
E24	St. Charles River at mouth, near Pueblo, Colo.	482	June 4, 1921	56,000	116

FLOOD-FREQUENCY ANALYSIS

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Table 3.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations--Continued

Flood region, hydro-logic area	Stream and place of determination	Drainage area (sq mi)	Peak discharge		
			Date	Cfs	Cfs per sq mi
Arkansas River basin--Continued					
E24	Sixmile Creek near Avondale, Colo.....	45	June 25, 1945	1,180	26.2
E25	Huerfano River near Nepesta, Colo.....	1,875	Aug. 1, 1923	19,400	10.3
E27	Apishapa River at Aguilar, Colo.....	149	Aug. 10, 1938	5,200	34.9
E24	Crooked Arroyo near La Junta, Colo.....	87	July 12, 1953	24,300	279
E27	Purgatoire River above Lorencito canyon, near Weston, Colo.....	381	May 19, 1955	1,790	4.70
E27	Zarcillo Canyon near Segundo, Colo.....	36.4	May 19, 1955	1,460	40.1
E27	Burro Canyon at Madrid, Colo.....	28.3	July 22, 1925	23,600	834
E27	Reilly Canyon at Cokedale, Colo.....	36.7	May 19, 1955	2,800	76.3
E27	Long Canyon near Sopris, Colo.....	104	May 19, 1955	9,650	92.8
E27	Purgatoire River at Lopez Diversion Dam, Colo.....	691	May 19, 1955	19,800	28.7
E27	Raton Creek at upper U.S. Highways 85 and 87, Colo.....	5.27	May 19, 1955	402	76.3
E27	Joe Creek near Morley, Colo.....	4.54	May 19, 1955	642	141
E27	Raton Creek at Starkville, Colo.....	60.5	May 19, 1955	9,400	155
E27	Purgatoire River at Jansen, Colo.....	766	May 19, 1955	26,400	34.5
E27	Colorado Canyon near Jansen, Colo.....	9.68	July or August 1954	3,100	314
E27	Grasmack Arroyo near Trinidad, Colo.....	3.6	May 19, 1955	820	228
E27	Gray Creek near Trinidad, Colo.....	16.0	May 19, 1955	1,960	122
E27	Purgatoire River near Hoehne, Colo.....	857	May 19, 1955	35,000	40.8
E27	Purgatoire River at U.S. Highway 350 Bridge, Colo.....	1,015	May 19, 1955	37,900	37.3
E27	Frijole Creek near Alfalfa, Colo.....	80	July 22, 1954	13,500	169
E27	Unnamed draw No. 1 near Alfalfa, Colo.....	.84	July 22, 1954	447	532
E27	Unnamed draw No. 2 near Alfalfa, Colo.....	1.49	July 22, 1954	1,130	758
E27	San Francisco Creek near Alfalfa, Colo.....	160	July 22, 1954	26,300	164
E27	Trinchera Creek near Trinchera, Colo.....	129	July 22, 1954	25,100	195
E27	Alkali Arroyo near Trinchera, Colo.....	34.5	July 22, 1954	15,500	449
E24	Mud Creek near Caddoa, Colo.....	200	Aug. 19, 1956	33,800	169
-	Arkansas River at Amity Canal headgate, near Prowers, Colo.....	19,050	June 5, 1921	170,000	8.92
E22	Clay Creek near Lamar, Colo.....	228	May 15, 1951	27,500	121
E22	Big Sandy at Ramah, Colo.....	82.7	Aug. 5, 1954	44,500	538
E22	Wolf Creek near Granada, Colo.....	116	May 13, 1958	17,100	147
E22	Granada Creek near Granada, Colo.....	52.6	July 11, 1935	31,000	589
E22	Two Buttes Creek near Holly, Colo.....	817	October 1908	35,000	42.8
E22	Walnut Creek at Albert, Kans.....	1,410	Sept. 22, 1959	12,700	9.0
E22	Rattlesnake Creek tributary near Bucklin, Kans.....	1.2	May 3, 1958	703	586
E20	West Branch Walnut River at El Dorado, Kans.....	75	May 27, 1953	52,400	699
E20	Walnut River near El Dorado, Kans.....	364	May 27, 1953	60,000	165
E17	Ranch Creek near Hallett, Okla.....	17.1	Sept. 4, 1940	32,400	1,890
E21	Dry Cimarron River at Polson, N. Mex.....	73	May 19, 1955	4,500	61.6
E21	Cimarron River tributary (No. 3) near Kenton, Okla.....	4.9	July 6, 1958	2,410	492
E21	Carrizozo Creek tributary near Kenton, Okla.....	.15	July 6, 1958	307	2,047
E21	Long Creek near Freedom, Okla.....	42	May 16, 1957	17,300	412
E21	Eagle Chief Creek near Carmen, Okla.....	306	May 16, 1957	31,800	104
E21	Kingfisher Creek near Kingfisher, Okla.....	322	June 23, 1948	55,000	171
E21	South Boggy Creek at Enid, Okla.....	3.66	May 16, 1957	3,750	1,020
E17	Lagoon Creek near Jennings, Okla.....	47	Sept. 4, 1940	45,600	928
E17	Polecat Creek near Sapulpa, Okla.....	325	May 9, 1943	61,000	188
E19	Panther Creek near Bartlesville, Okla.....	7.5	May 19, 1943	5,500	733
E19	Verdigris River near Madison, Kans.....	181	July 11, 1951	128,000	707
E18	Cottonwood River at Emporia, Kans.....	1,840	July 11, 1951	337,000	183
E18	Rock Creek at Burlington, Kans.....	8.8	July 1951	9,560	1,090
E18	Neosho River near Oswego, Kans.....	5,190	July 14, 1951	395,000	76.1
E18	Hudson Creek near Narcissa, Okla.....	13.4	May 18, 1943	15,000	1,120
A7	Buffalo Creek near Tiff City, Mo.....	82	May 18, 1943	23,000	280
A7	Spavinaw Creek near Spavinaw, Okla.....	400	Apr. 19, 1941	86,400	216
A7	Spring Creek near Locust Grove, Okla.....	116	May 17, 1943	26,000	224
A9	Illinois River near Prairie Grove, Ark.....	53	May 6, 1960	39,800	751
A10	Wild Cat Creek near Tontitown, Ark.....	13.2	July 25, 1960	10,500	795
E24	Chicorica Creek above Maloya Dam, N. Mex.....	9.3	May 18, 1955	2,450	263
E26	Cimarron Creek tributary near Cimarron, N. Mex.....	.05	June 5, 1958	337	6,740
E26	Cimarron Creek tributary in Cimarron, N. Mex.....	1.44	June 5, 1958	1,870	1,300
E25	Ocate Creek at Colmor, N. Mex.....	-	July 4, 1951	25,000	-
E27	Trementina Creek at Trementina, N. Mex.....	65	Aug. 24, 1959	2,770	42.6
E27	Pajarito Creek at Newkirk, N. Mex.....	35	July 5, 1960	2,670	76.3
E27	Arroyo Laguna tributary near Montoya, N. Mex.....	3.4	July 5, 1960	2,660	782
E27	Blanco Creek tributary at Palomas, N. Mex.....	2.90	July 5, 1960	1,540	531
E27	Wynn Creek near Gallegos, N. Mex.....	3	July 8, 1960	3,060	1,020
E27	Carros Creek near Gallegos, N. Mex.....	9.4	July 8, 1960	2,590	276
E27	Ute Creek near Gladstone, N. Mex.....	256	Aug. 16, 1953	10,600	41.4
E27	Arroyo del Alamo near Mosquero, N. Mex.....	27.4	May 16, 1954	3,440	126

FLOODS IN LOWER MISSISSIPPI RIVER BASIN

Table 3.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations--Continued

Flood region, hydro-logic area	Stream and place of determination	Drainage area (sq mi)	Peak discharge		
			Date	Cfs	Cfs per sq mi
Arkansas River basin--Continued					
E27	Ute Creek tributary near Gallegos, N. Mex.	0.6	Aug. 9, 1960	668	1,113
E21	Rana Canyon near Porter, N. Mex.....	10	July 16, 1958	2,910	291
E21	Mustang Creek near Perico, Tex.....	396	May 31, 1937	39,800	101
E21	Red Deer Creek near Pampa, Tex.....	3.4	May 16, 1961	3,430	1,010
E21	Bluff Creek near Miami, Tex.....	24.7	June 5, 1951	10,900	441
E21	Red Deer Creek tributary near Miami, Tex.	1.0	June 5, 1951	1,610	1,610
E21	Deer Creek near Custer, Okla.....	90.2	May 16, 1951	46,400	514
E21	Deer Creek tributary No. 1 near Custer City, Okla.	6.74	May 16, 1951	7,030	1,040
E21	Little Deer Creek near Thomas, Okla.....	4.96	May 16, 1951	6,230	1,230
E21	Deer Creek at Hydro, Okla.....	280	June 22, 1948	31,000	111
E21	Deer Creek tributary near Hydro, Okla.....	4.46	June 22, 1948	8,500	1,910
E21	Lariat Creek tributary near Geary, Okla.	.84	June 22, 1948	2,100	2,500
E21	Lariat Creek near Geary, Okla.....	14.0	June 22, 1948	19,000	1,360
E21	Carrizo Creek near Clayton, N. Mex.....	305	May 28, 1957	29,500	96.7
E21	Perico Creek tributary at Clayton, N. Mex.	4.9	Sept. 9, 1960	1,600	327
E21	Sandy Arroyo near Clayton, N. Mex.....	42	June 1953	10,300	245
E21	Palo Duro Creek at Hansford, Tex.....	440	June 4, 1936	18,100	41.1
E21	Hackberry Creek near Hardesty, Okla.....	116	May 16, 1955	22,100	191
E21	Four Mile Creek near El Reno, Okla.....	8.51	Nov. 19, 1953	6,390	751
E17	East Fork Big Creek (Tiger Creek) near Bowlegs, Okla.	.89	Apr. 14, 1945	3,000	3,370
E17	Wewoka Creek at Lima, Okla.....	75	Apr. 14, 1945	88,000	1,170
E17	Coon Creek near Wewoka, Okla.....	10	Apr. 14, 1945	11,000	1,100
E17	Dry Creek near Davenport, Okla.....	144	May 1943	20,000	139
E17	Deep Fork near Stroud, Okla.....	1,093	May 18, 1943	42,000	38.4
B2	Mill Creek at Fort Smith, Ark.....	10.4	Oct. 27, 1951	3,630	349
B9	Lee Creek at Natural Dam, Ark.....	168	May 6, 1960	86,700	516
D9	Mill Creek near Boles, Ark.....	55.0	May 20, 1960	16,700	304
D7	Tarr Creek near Redfield, Ark.....	3.4	June 27, 1960	2,930	862
Yazoo River basin					
B16	Red Rock Branch near Pontotoc, Miss.....	0.487	Mar. 21, 1955	360	739
B16	Cracker ditch near Pontotoc, Miss.....	.234	Mar. 21, 1955	209	893
F13	Dry Traywick Branch near Oxford, Miss.....	.27	May 27, 1954	403	1,490
D14	Flowers Creek near Eureka Springs, Miss.....	2.59	May 27, 1954	3,280	1,270
D14	Rowsey Creek near Eureka Springs, Miss.....	1.00	May 27, 1954	1,390	1,390
D14	Long Creek near Eureka Springs, Miss.....	12.8	May 27, 1954	19,500	1,520
D14	Caney Creek near Eureka Springs, Miss.....	4.85	May 27, 1954	14,700	3,030
D14	Anthony ditch near Eureka Springs, Miss.....	.27	May 27, 1954	500	1,850
D14	Long Creek near Pope, Miss.....	30.8	May 27, 1954	31,900	1,040
D14	Woodruff Creek near Eureka Springs, Miss.	.79	May 28, 1954	800	1,010
B16	Snake Creek near Coffeeville, Miss.....	.398	July 1, 1957	372	935
B16	Golden ditch near Coffeeville, Miss.....	.197	July 1, 1957	165	858
B16	Caney Creek near Coffeeville, Miss.....	1.97	July 1, 1957	1,560	792
B16	Tributary to Moreland Creek near Coffeeville, Miss.	.515	June 11, 1959	1,370	2,660
B16	Turkey Creek near Coffeeville, Miss.....	70.2	July 1, 1957	27,300	389
B16	Cypress Creek near Coffeeville, Miss.....	22.3	July 1, 1957	10,900	489
B16	Perry Creek near Torrance, Miss.....	21.2	Mar. 21, 1955	15,000	708
D14	Lost Dog Branch near Grenada, Miss.....	.032	Mar. 21, 1955	34.4	1,080
D14	Cane Creek near Holcomb, Miss.....	25.6	Sept. 20, 1958	16,000	625
Homochitto River basin					
D14	Foster Creek at Crosby, Miss.....	31.2	Sept. 22, 1958	27,000	865
D14	Observers Draw near Doloroso, Miss.....	.222	Apr. 12, 1955	387	1,740
Buffalo River basin					
D14	Browns Creek near Wilkinson, Miss.....	0.895	Apr. 12, 1955	1,030	1,150
Thompson Creek basin					
D14	Moore's Branch near Woodville, Miss.....	0.214	Apr. 12, 1955	416	1,940
Red River basin					
A21	Prairie Dog Town Fork River near Canyon, Tex.	743	May 16, 1951	18,500	24.9
A20	Lake Creek near Lelia Lake, Tex.....	48.6	June 15, 1938	40,800	840
A20	Lake Creek near Headly, Tex.....	68.5	June 15, 1938	64,700	945
A21	McClellan Creek near Alanreed, Tex.....	62.4	May 16, 1951	8,720	140
A21	McClellan Creek at reservoir near Alanreed, Tex.	86	May 16, 1951	10,100	117
A21	McClellan Creek at Beaver Dam bridge, near Alanreed, Tex.	90	June 8, 1937	11,900	132
A21	Hackberry Creek tributary No. 1 at Wheeler, Tex.	2.0	June 5, 1951	1,460	730
A21	Hackberry Creek tributary No. 2 at Wheeler, Tex.	1.2	June 5, 1951	2,340	1,950

Table 3.--Peak discharge at miscellaneous sites and unusual floods at short-term gaging stations--Continued

Flood region, hydrologic area	Stream and place of determination	Drainage area (sq mi)	Peak discharge		
			Date	Cfs	Cfs per sq mi.
Red River basin--Continued					
A21	Hackberry Creek tributary No. 3 near Wheeler, Tex.	2.4	June 5, 1951	2,920	1,220
A21	Hackberry Creek near Wheeler, Tex.....	12.1	June 5, 1951	5,560	460
E7	Willow Creek at Duncan, Okla.....	3.87	May 10, 1950	5,890	1,520
E7	Cow Creek near Comanche, Okla.....	64.8	May 10, 1950	43,200	667
E7	Cow Creek at Waurika, Okla.....	191	May 19, 1955	29,500	154
E21	North Fork Little Wichita River near Archer City, Tex.	222	Sept.10, 1929	4,950	22.3
E7	Walnut Creek near Lone Grove, Okla.....	133	May 17, 1957	63,000	474
E21	Rush Creek near Reydon, Okla.....	69.6	Apr. 29, 1954	53,700	772
E21	Dry Creek near Clinton, Okla.....	10.3	Oct. 4, 1955	8,170	793
E21	Beaver Creek tributary near Arapaho, Okla.	.81	May 16, 1951	1,590	1,960
E20	Rainy Mountain Creek near Mountain View, Okla.	316	May 18, 1949	38,000	120
D9	Hot Springs Creek at Hot Springs, Ark...	5.81	Feb. 15, 1956	4,350	749
D9	Guilpa Creek near Hot Springs, Ark.....	50	Feb. 15, 1956	21,100	422
D9	South Fork Saline River near Hot Springs, Ark.	12.9	Dec. 3, 1952	11,100	860
D2	Lost Creek near Sheridan, Ark.....	82	June 27, 1960	16,000	195
D2	West Fork Big Creek at Sheridan, Ark....	5.8	June 27, 1960	3,720	641
D2	Hurricane Creek near Sheridan, Ark.....	205	June 27, 1960	52,300	255
B6	Corney Bayou near Three Creeks, Ark.....	180	Apr. 27, 1958	35,800	199
B6	Three Creek near Three Creeks, Ark.....	46	Apr. 26, 1958	11,300	246
Mississippi River Delta					
B16	Sandy Draw near Centerville, Miss.....	0.285	Apr. 12, 1955	467	1,640

METHOD

Methods used in the preparation of this report have been developed by engineers of the U.S. Geological Survey and are based on a continuing study over a period of years. Procedures used in computing flood-frequency data are outlined by Dalrymple (1960).

These procedures serve to define flood-frequency relations at a point on a stream (a gaging station), and by combining a number of these point relations they are used to define a regional frequency relation which may be applied over a broad area. By use of data collected on streams with drainage areas of various sizes in the lower Mississippi River basin, two basic relations were defined: (1) a curve showing the relation between the ratio of a given flood to the mean annual flood and the frequency of the given flood, and (2) a curve showing the relation between the mean annual flood and drainage area.

FLOOD FREQUENCY AT A GAGING STATION

A flood-frequency curve based on records collected at one gaging station represents what has happened at that site during a specific period in the past. It might be a poor basis for predicting flood events in the future if the past record is not typical. A frequency curve based on regional characteristics is considered more reliable than one based on flood experiences at a particular site. Exceptions would be stations on large streams with floodflow characteristics radically different from those of smaller tributary streams. However, in order to derive a regional frequency curve, it is first necessary to draw frequency curves for individual gaging stations.

TYPES OF FLOOD SERIES

Flood data for a gaging station may be analyzed either as an annual-flood series or as a partial-duration series. In the annual-flood series only the highest peak discharge in each water year (October 1 to September 30) is used. The partial-duration series includes all peaks above a selected base.

The annual-flood series was used in this analysis. Langbein (1949) has shown that the two methods give practically the same results for recurrence intervals of 10 years or more. The following table shows comparative values of recurrence intervals by the two methods.

Recurrence interval, in years

<i>Annual-flood series</i>	<i>Partial-duration series</i>	<i>Annual-flood series</i>	<i>Partial-duration series</i>
1.16-----	0.5	10.5-----	10
1.58-----	1.0	20.5-----	20
2.00-----	1.45	50.5-----	50
2.54-----	2.0	100.5-----	100
5.52-----	5.0		

Recurrence intervals for partial-duration series may be computed from curves based on annual series by use of the relation expressed in the foregoing table. There is a distinction in meaning of "recurrence interval" between the two series. In the annual-flood series, recurrence interval is the average interval of time within which a flood equal to or greater than a given magnitude will occur once as an annual maximum. In the partial-duration series, the recurrence interval is the average interval of time between floods of a given magnitude without regard to their relationship to the year or any other period of time.

FLOOD-FREQUENCY CURVES

Methods of plotting data and fitting frequency graphs at a gaging station have been explained in other publications, notably Dalrymple (1960) and Searcy (1955), and will not be covered in detail in this report.

Recurrence interval for each annual flood is computed by the formula $T = (n + 1)/m$, where T is the recurrence interval in years, n is the number of years of record, and m is the order number, beginning with the largest flood as 1.

Annual-flood data are plotted on a special form based on the theory of extreme values (Powell, 1943). This form has the advantage of tending to make the frequency curve for many sites plot as a straight line. After plotting the data, a curve is fitted to the points by inspection. As most streamflow records are relatively short, this method is preferable to analytic curve fitting. Reliable historical data are used as an aid in defining the upper end of the curve.

REGIONAL FLOOD FREQUENCY

A flood-frequency curve for a single site for a specific period of time cannot be used as a reliable means of defining frequency relations on nearby ungaged streams or other points on the same stream. The use of such a frequency curve is questionable, even for the site for which it was drawn, because the period of peak-flow records may not be typical of a long-term period.

The disadvantages of areal application of individual flood-frequency curves led to the development of methods of combining flood data for individual sites and relating flood-frequency functions to measurable characteristics of drainage basins. In order to combine flood records at different sites, the records should be taken from a region having homogeneous floodflow characteristics and should represent the same period of time.

Flood-frequency curves are combined in two ways. First, the records are combined on the basis of similarity of slope of the individual frequency graphs. This step defines a composite dimensionless fre-

quency curve representing the ratio of the flood of any frequency to an index flood (the mean annual flood). The second step is to define a curve of relation between the drainage-basin characteristics and the mean annual flood to enable the mean annual flood to be predicted at any point in the area. A flood-frequency curve for any site, gaged or ungaged, can be drawn by use of these curves.

MEAN ANNUAL FLOOD

The mean annual flood for a gaging station is, by definition, a flood having a recurrence interval of 2.33 years in the annual-flood series. The mean annual flood has been found to be a good index of the geographical variation of floodflow.

ADJUSTMENT TO BASE PERIOD

In order that the mean annual floods at the various gaging stations be comparable, records should be adjusted to the same time period.

On the basis of records available, the following base periods were selected: 1939-58, 1929-58, and 1921-58. When records for a given station did not extend over the respective base period, annual peaks for that station were correlated with annual peaks for nearby long-period stations in order to assign order numbers to the actual peaks of record. Mean annual floods were adjusted to the long-term period (1921-58) on basis of geographical correlation between long- and short-term records.

TEST FOR HOMOGENEITY

Before combining a group of station records, a homogeneity test was made to insure that all stations selected for a region have similar flood-frequency characteristics. The test is used to determine whether the slopes of the individual curves differ more than might be expected in random sampling.

The slope of the frequency curve used in the homogeneity test is expressed by the ratio of the 10-year flood to the mean annual flood. This ratio is used because both the 10-year and the mean annual flood may be determined with reasonable accuracy for gaging stations with relatively short periods of record.

COMPOSITE FREQUENCY CURVES

The lower Mississippi River basin was divided into seven homogeneous regions (A-G) on the basis of the homogeneity test. Station records were combined within each region to define dimensionless composite frequency curves. These curves represent the ratio of the flood of any frequency to the mean annual flood and are shown on figure 2. Curves for all regions were adjusted to the period 1921-58 except for region C where there were no stations for the long-term period. The composite curve in region C was adjusted to the period 1929-58.

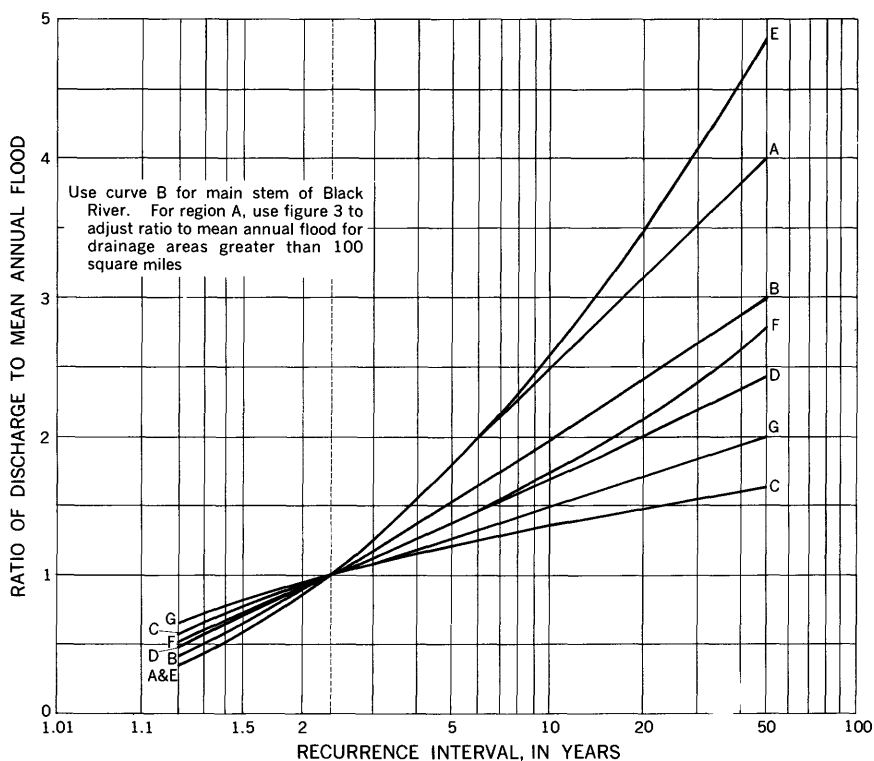


FIGURE 2.—Frequency of annual floods.

Flood-frequency studies by some investigators indicate that the slope of a frequency curve is affected by the size of the drainage area, with curves for smaller drainage areas having steeper slopes than those for larger areas. This effect was investigated for each of the seven frequency regions. The flood ratios for the various flood levels were plotted against the drainage area. The effect of drainage area on slope of the frequency curve proved to be significant only in region A.

A family of curves was drawn for region A to show the adjustment which is applicable at the various flood levels for drainage areas greater than 100 square miles. These curves are shown on figure 3.

MEAN ANNUAL FLOOD RELATION

After having derived composite frequency curves which define dimensionless ratios to the mean annual flood for floods of other recurrence intervals, the next step is to relate the mean annual flood to measurable characteristics of the drainage basin.

The important physical characteristics of a drainage basin that affect the magnitude of the mean annual flood, excluding climatic fac-

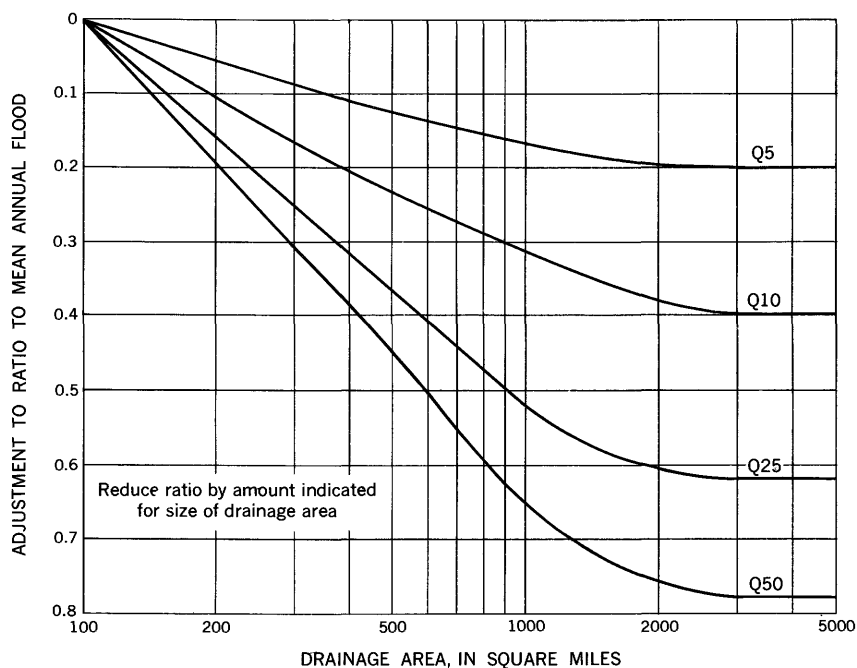


FIGURE 3.—Adjustment to ratio to mean annual flood for region A on basis of drainage area.

tors, are size, topography, shape, and floodwater storage. The most important and most readily measurable of these factors is size of drainage area. The effect of topography may be measured in terms of land and stream slope and elevation. Slopes cannot be accurately determined because a large part of the area is inadequately covered by reliable topographic maps. Storage undoubtedly has an important effect but cannot be measured directly.

Initially, the mean annual flood was correlated graphically with drainage area. On the basis of this correlation many hydrologic areas were defined. It was found that by introducing elevation as a factor in the high mountainous areas of Colorado and New Mexico, better correlation was obtained and some of the hydrologic areas could be combined. A total of 27 hydrologic areas were defined and are outlined on plate 1.

An attempt was made to improve the correlation in the various hydrologic areas by using shape as a factor. Shape is represented as a ratio of drainage-basin length to width. A slight trend was noted in several areas, but a material improvement was made only in area 11. This area lies along the lower Mississippi River and is characterized by an extremely wide range in basin shapes, from long sinuous basins paralleling the Mississippi River to relatively short, wide tribu-

tary basins. The drainage-basin length is defined as the distance, in miles, from the point of determination to the drainage-basin divide. This distance is measured along the meander of the stream channel. The width is computed by dividing the drainage area, in square miles, by the length, in miles.

Mean-annual-flood relation curves for each of the 27 hydrologic areas are shown in figures 4-7.

An elevation adjustment curve (fig. 8) is applicable in areas 23-27 if the elevation at the point of determination is greater than 4,000 feet.

In area 11, values of mean annual floods must be corrected by use of a shape adjustment curve (fig. 9).

APPLICATION OF FLOOD-FREQUENCY DATA

Procedures for determining the magnitude of floods having recurrence intervals 1.2 to 50 years are outlined in this section. Mean-annual-flood curves shown in figures 4-7 indicate the range of drainage-area sizes for which the mean annual flood is defined in each hydrologic area. For example, in figure 4, the mean annual flood is defined between 10 and 3,000 square miles in hydrologic area 4, whereas it is defined between 100 and 5,000 square miles in area 1. Neither the mean-annual-flood curves nor the ratio curves should be extrapolated beyond the limits shown.

REGIONAL APPLICATION

The magnitude of floods for selected recurrence intervals may be determined for most streams in the lower Mississippi River basin by the following procedure:

1. Determine the size of the contributing drainage area above the site. Noncontributing areas must be deducted from the total area.
2. Determine the flood-frequency region and hydrologic area in which the site is located (pl. 1).
3. Determine the mean annual flood for the site from the appropriate hydrologic-area curve, figures 4-7. If the site is in hydrologic areas 23-27, determine the elevation of the site; if more than 4,000 feet, adjust the mean-annual-flood figures as determined previously by use of the elevation-adjustment curve (fig. 8). If the site is in hydrologic area 11, compute the L/W ratio and adjust the mean-annual-flood figure by use of the shape adjustment curve (fig. 9).
4. Determine the ratio to mean annual flood for the selected recurrence interval (fig. 2). If the point of determination lies within region A and the drainage area is more than 100 square miles, adjust the ratio by use of figure 3.
5. Multiply the ratio to mean annual flood (step 4) by the mean annual flood (step 3).

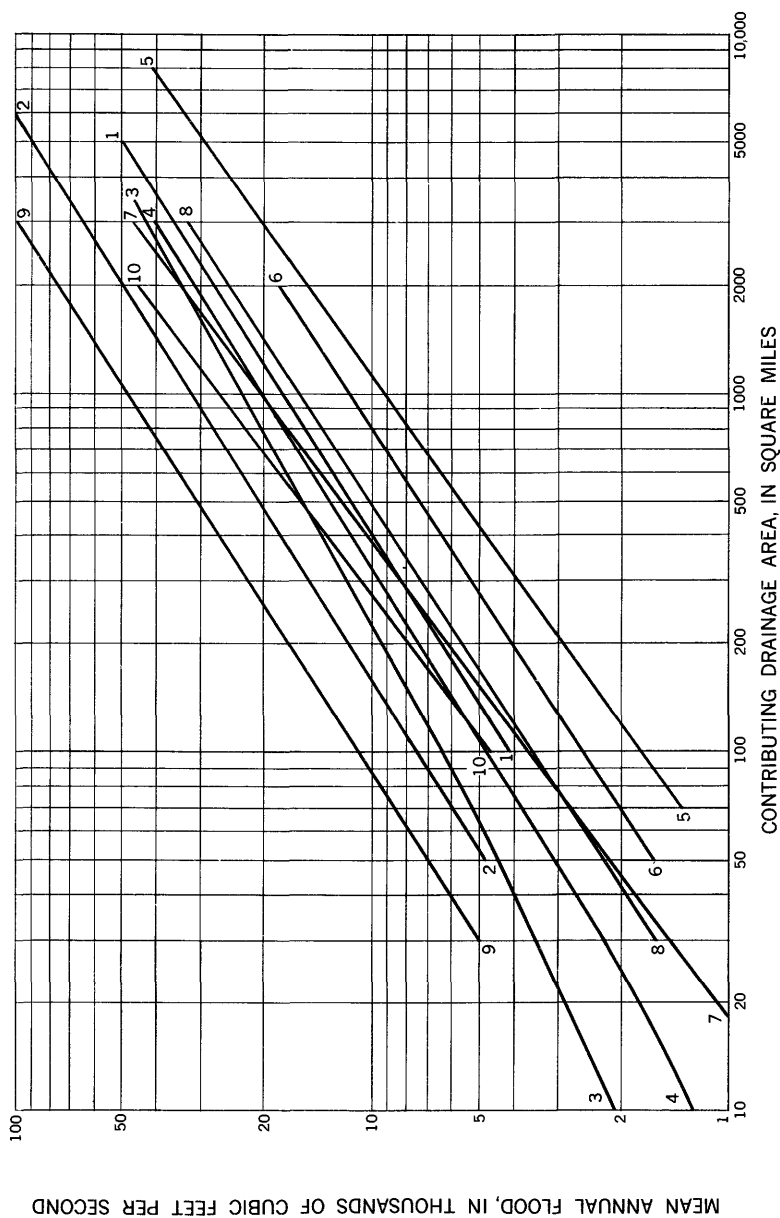


FIGURE 4.—Variation of mean annual flood with contributing drainage area in hydrologic areas 1-10. Use figure 10 for main stem of Black River below Mckenzie Creek and Neesho River below Spring River. Use figure 17 for main stem of Ouachita River below Snackover Creek. Use figure 12 for main stem of White River below War Eagle Creek. Use figure 15 for main stem of Washita River. Use figure 10 for main stem of Cypress Creek and Twelvemile Bayou below Boggy Creek.

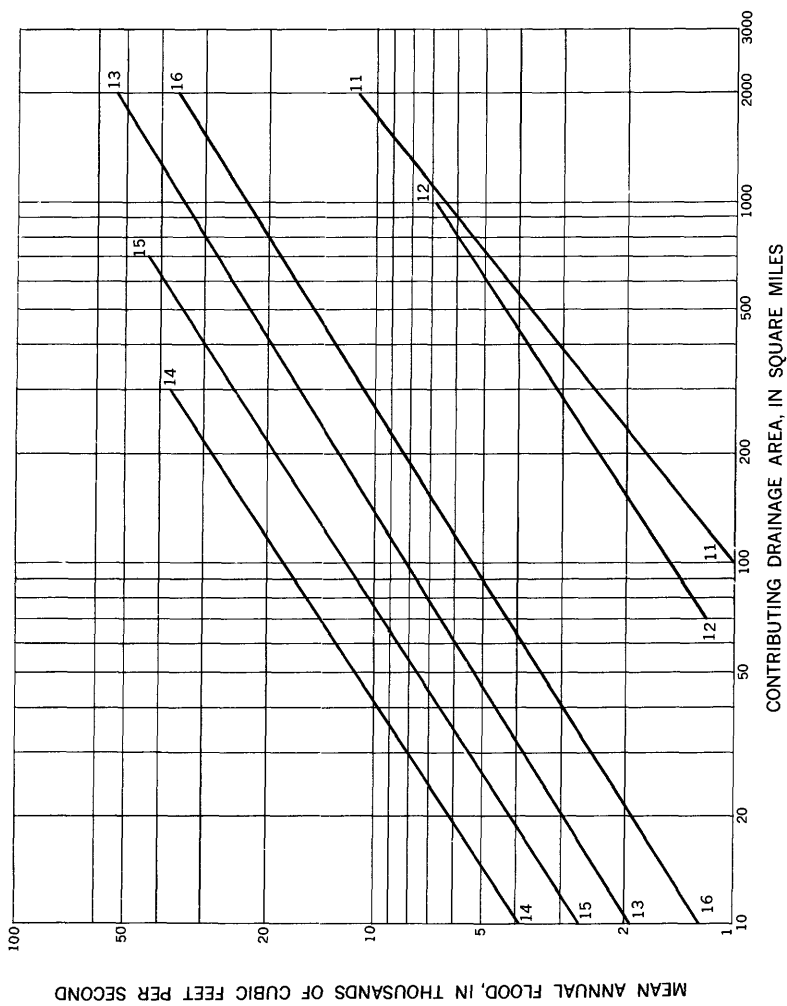


FIGURE 6.—Variation of mean annual flood with contributing drainage area in hydrologic areas 11-16. Use figure 11 for main stem of Big Black River below Jordan Creek and Homolito River below Middle Fork. Use figure 18 for main stem of Yalobusha River below Cane Creek. Use shape-adjustment coefficient in area 11 (see fig. 9).

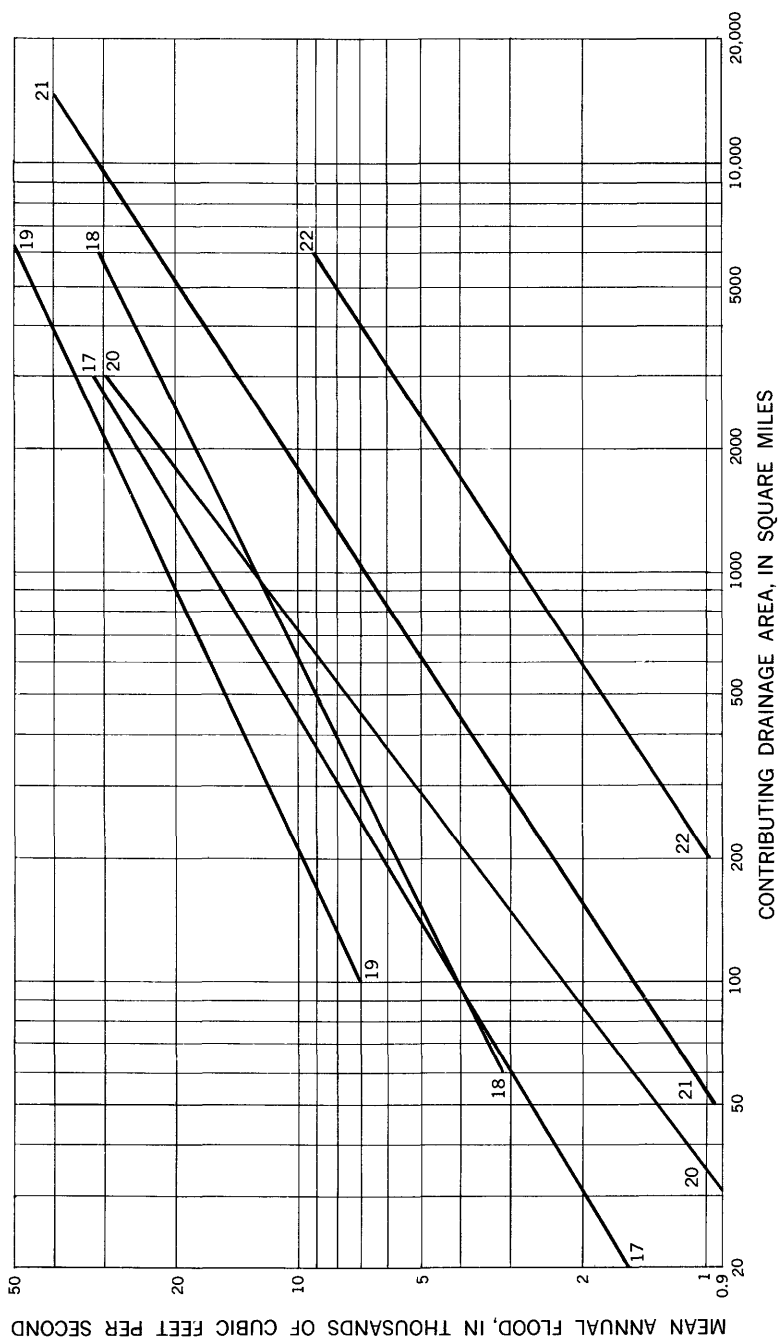


FIGURE 9.—Variation of mean annual flood with contributing drainage area in hydrologic areas 17-22. Use figure 10 for main stem of North Canadian River. Use figure 16 for main stem of Canadian River below Cimarron Creek. Curve for area 21 is also applicable for Cimarron River below Stillwater Creek.

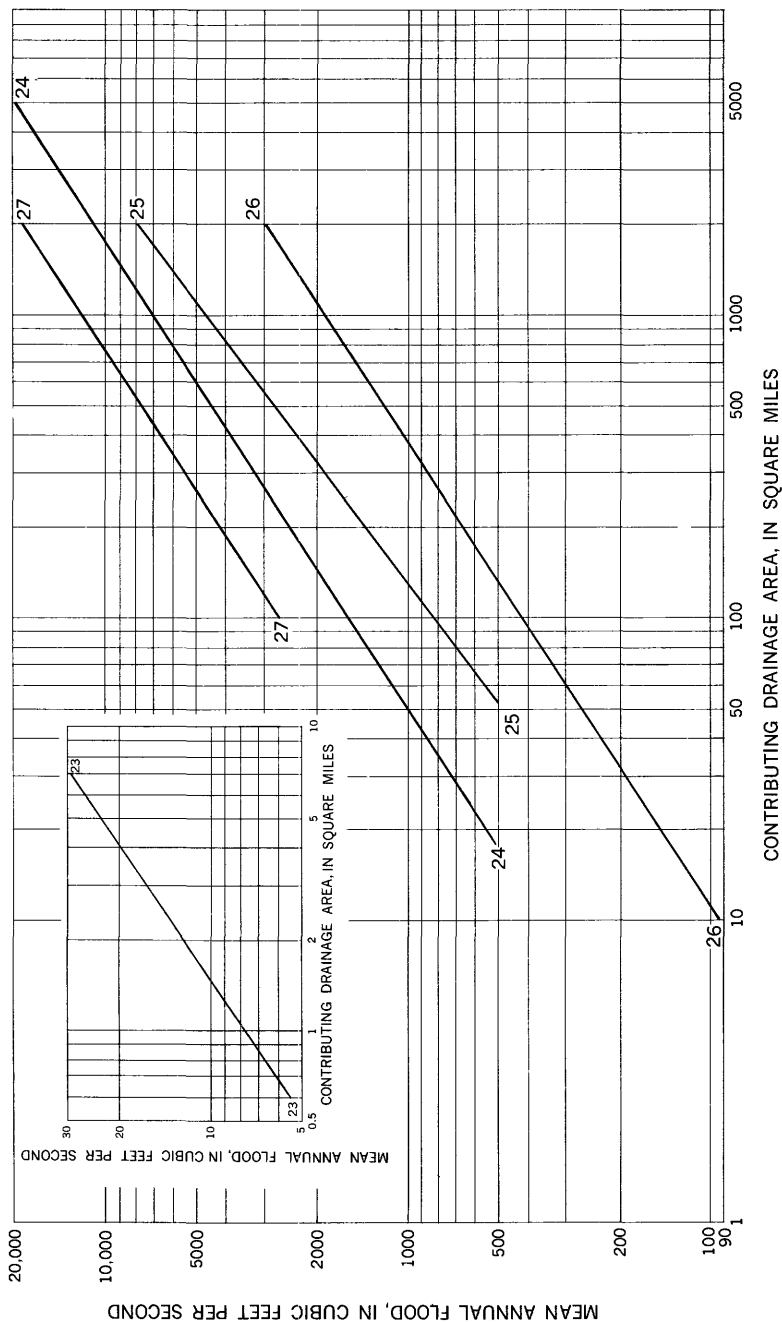


FIGURE 7.—Variation of mean annual flood with contributing drainage area in hydrologic areas 23-27. Use elevation coefficient in areas 23-27, if elevation is above 4,000 feet. See figure 8. Use figure 16 for main stem of Canadian River below Cimarron Creek.

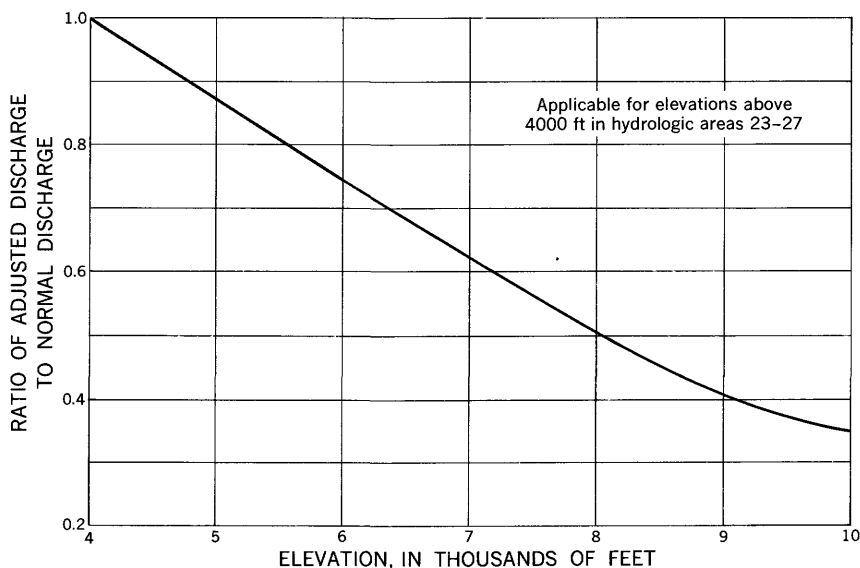


FIGURE 8.—Elevation adjustment curve for hydrologic areas 23-27.

SPECIAL APPLICATION

Some streams do not lend themselves readily to regional analysis. These are generally large streams that traverse more than one hydrologic area or flood-frequency region. They may be placed in two categories: (1) those streams for which a composite frequency curve (fig. 2) is applicable but for which mean-annual-flood curves are not, and (2) those for which neither composite frequency curves nor mean-annual-flood curves are applicable.

For the first group, individual curves showing the variation of mean annual flood with drainage area were drawn for each stream and are shown in figures 10 and 11.

Streams in the first group given special treatment are main stems of: Black River below McKenzie Creek, Neosho River below Spring River, Cypress Creek and Twelvemile Bayou below Boggy Creek, Big Black River below Jordan Creek and Homochitto River below Middle Fork.

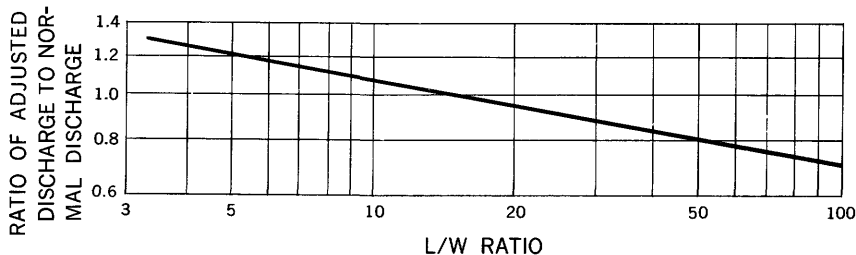


FIGURE 9.—Shape adjustment curve for hydrologic area 11.

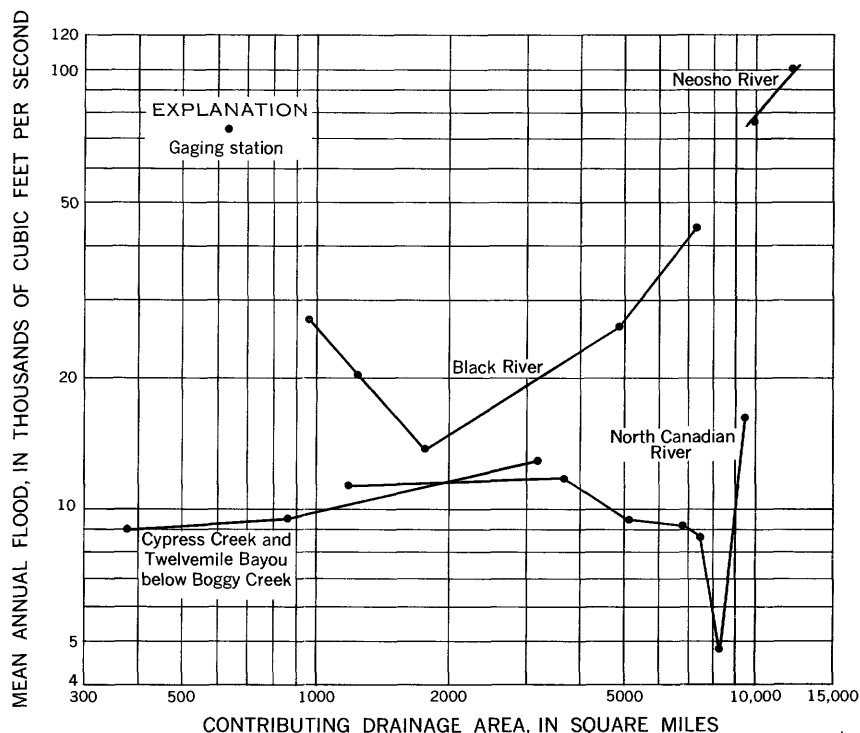


FIGURE 10.—Variation of mean annual flood with contributing drainage area on the main stems of Black River below McKenzie Creek, Neosho River below Spring River, Cypress Creek and Twelvemile Bayou below Boggy Creek, and North Canadian River.

Flood magnitudes at sites below points indicated on these streams may be determined as outlined under "regional application" except that the value of the mean annual flood is determined from figures 10 or 11.

For the second group, families of curves were drawn showing the relation of selected flood frequencies to drainage area or, for the

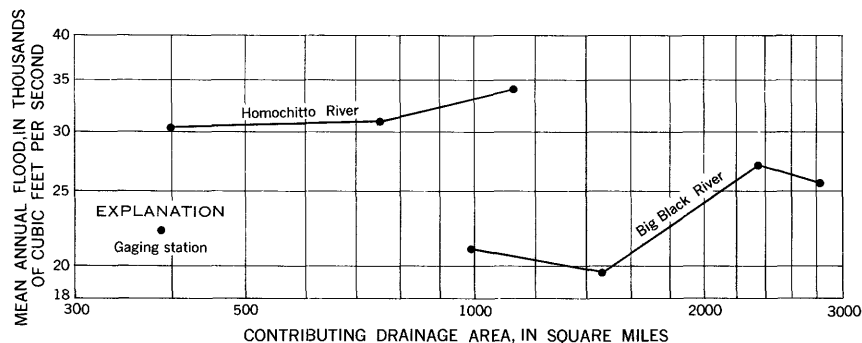


FIGURE 11.—Variation of mean annual flood with contributing drainage area on main stems of Big Black River below Jordan Creek and Homochitto River below Middle Fork.

Arkansas and the Canadian Rivers, distance above mouth. The curves are shown in figures 12-18.

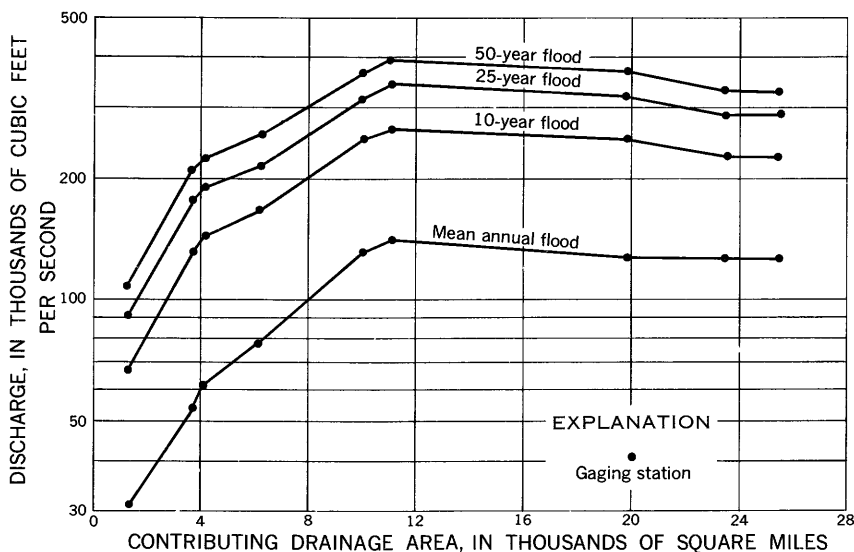


FIGURE 12.—Relation of selected flood frequencies to contributing drainage area, White River main stem below War Eagle Creek.

Streams in the second group given special treatment are main stems of: White River below War Eagle Creek, Arkansas River, Red River, Washita River, Canadian River below Cimarron Creek, Ouachita River below Smackover Creek, and Yalobusha River below Cane Creek.

Flood magnitudes for selected recurrence intervals at sites on these rivers may be taken directly from the family of curves after first determining the drainage area above the site or the distance upstream from the mouth.

MISSISSIPPI RIVER

A separate analysis was made for the Mississippi River below St. Louis, Mo. Two composite flood-frequency curves defining the ratio to mean annual flood for selected recurrence intervals from 1.1 to 100 years were defined. These curves are shown in figure 19. One curve is applicable above the mouth of the Ohio River and the other below. Another curve (fig. 20) was drawn showing the variation of mean annual flood with distance above Head of Passes, La. The magnitude of floods of selected recurrence intervals may be determined by using the curves in figures 19 and 20.

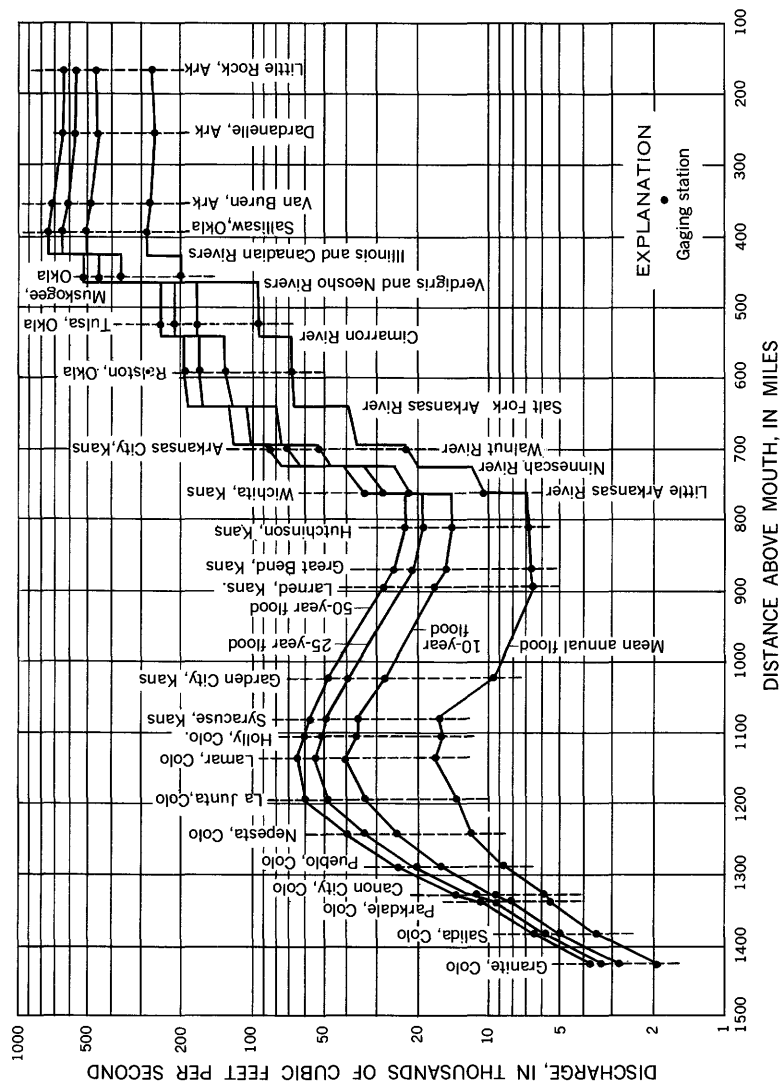


FIGURE 13.—Relation of selected flood frequencies to distances above mouth, Arkansas River main stem.

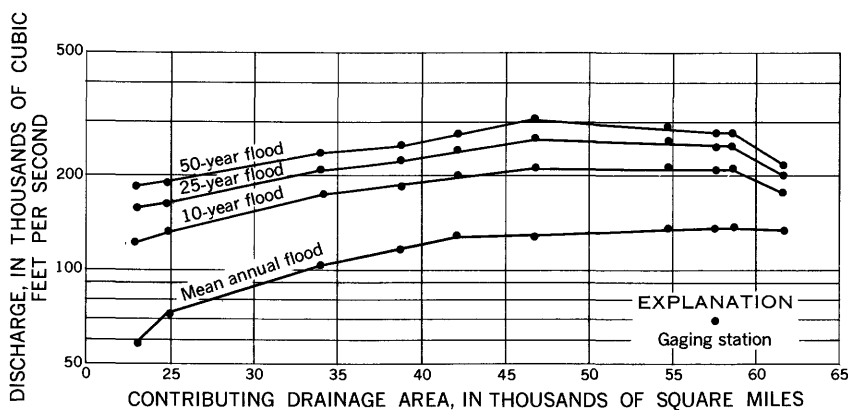


FIGURE 14.—Relation of selected flood frequencies to contributing drainage area, Red River main stem.

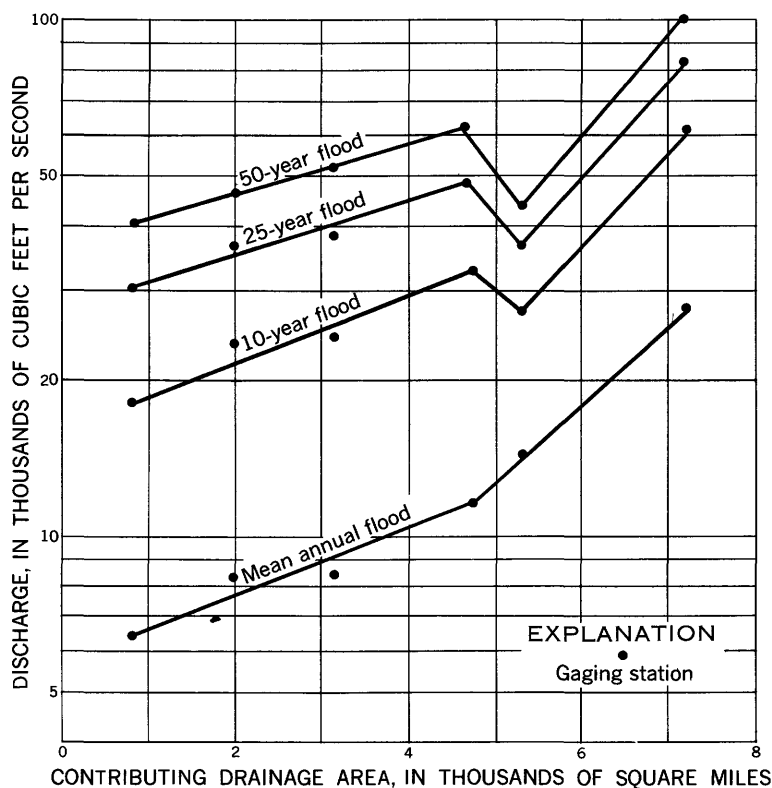


FIGURE 15.—Relation of selected frequencies to contributing drainage area, Washita River main stem.

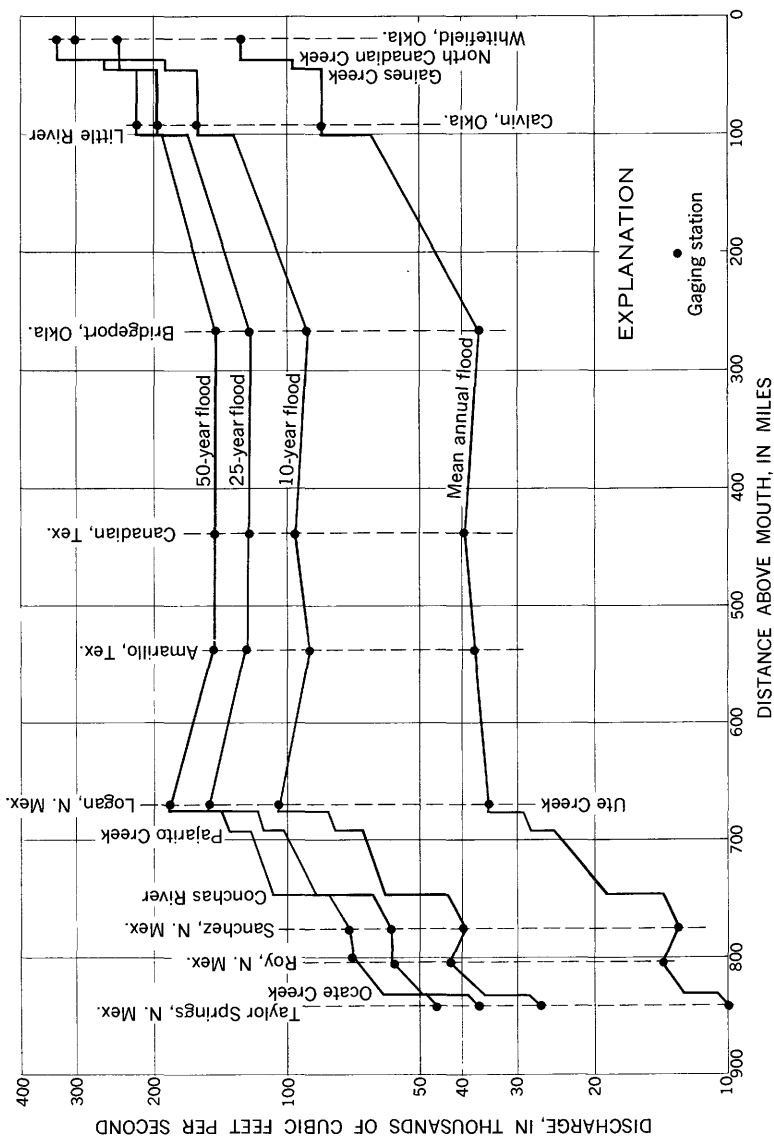


FIGURE 16.—Relation of selected flood frequencies to distance above mouth, Canadian River, main stem below Cimarron Creek.

LIMITATIONS

Methods outlined in this report can be used to predict the most probable value of flood magnitudes for selected recurrence intervals expected to occur on the average over a long period of time. This study does

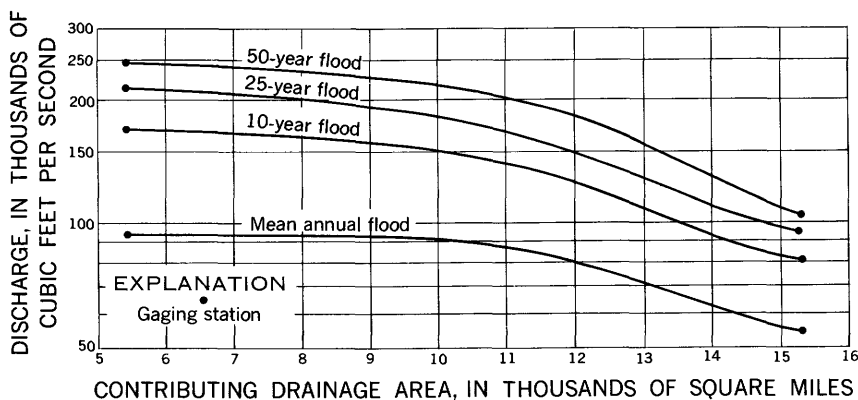


FIGURE 17.—Relation of selected flood frequencies to contributing drainage area, Ouachita River, main stem below Smackover Creek.

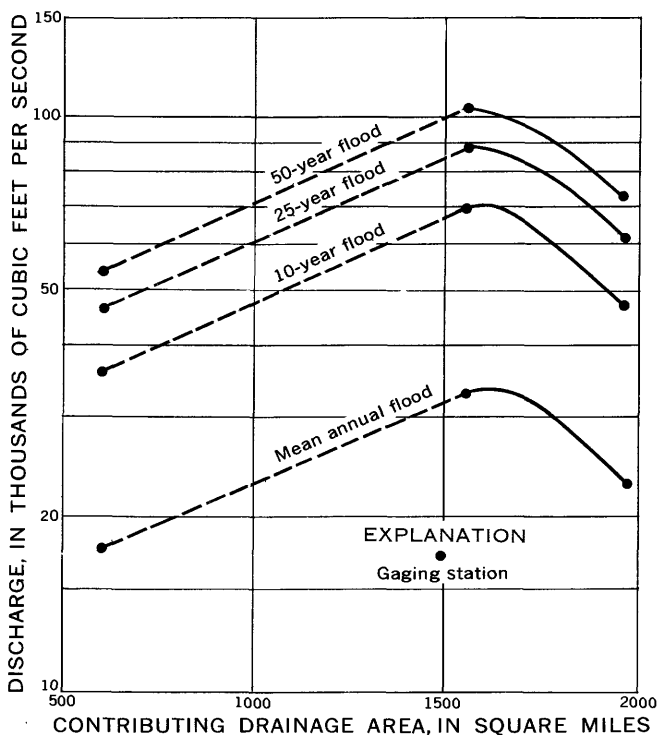


FIGURE 18.—Relation of selected flood frequencies to contributing drainage area, Yalobusha River, main stem below Cane Creek.

not indicate that a flood having a specific recurrence interval will occur on schedule at regular time intervals and cannot be used to predict the date of occurrence. It is possible that several major floods may occur within a period of a few years. On the other hand, several years may pass without experiencing a major flood.

Flood-frequency relations defined in this report are based on the natural flow of streams in the report area, except for the main stems of the Mississippi and the Arkansas Rivers, and are not applicable to streams whose floodflows are materially altered by manmade changes. Curves presented are based on all available flood data through the 1958 water year. Extrapolation beyond the limits indicated by these curves is not advised. Composite frequency curves (fig. 2) should not be used for recurrence intervals greater than 50 years nor should curves

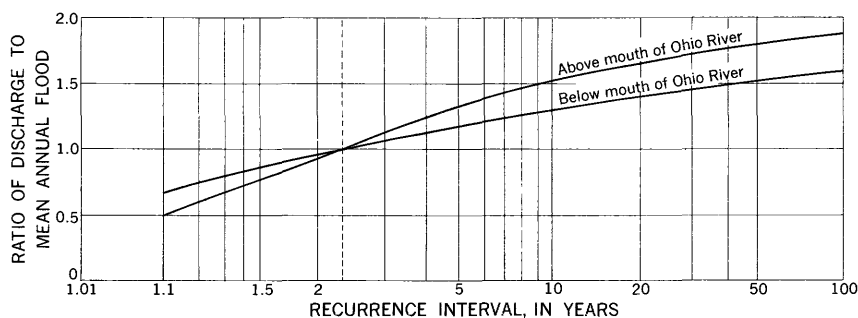


FIGURE 19.—Frequency of annual floods, Mississippi River main stem below St. Louis, Mo., period 1900-58.

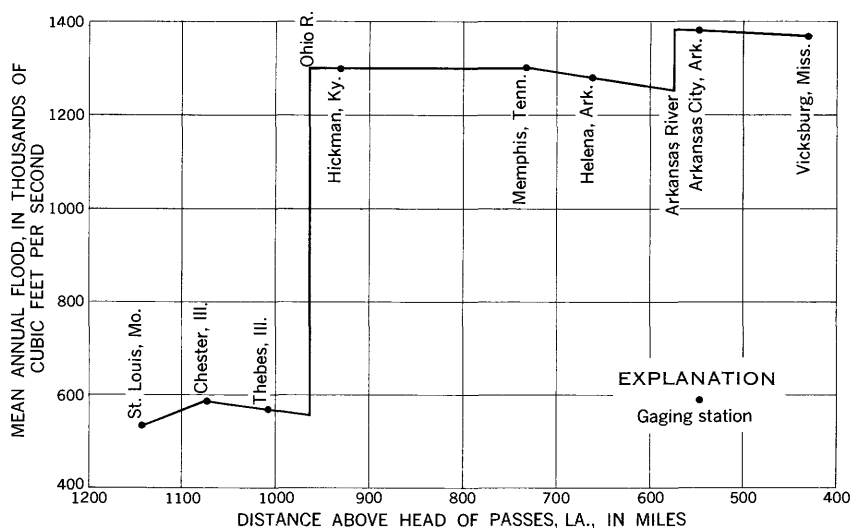


FIGURE 20.—Variation of mean annual flood with distance above Head of Passes, La., Mississippi River.

showing relation of drainage area to mean annual flood be extended above or below the limits shown.

Floodflows for the main stem of the Mississippi River have been affected by many manmade changes during a long period of years. It is not feasible to evaluate the effect of these changes, and relations have been developed on the basis of existing flows with no attempt made to adjust to natural flows. Composite frequency curves for this river are extended to show a recurrence interval of 100 years.

Frequency relations for the main stem of the Arkansas River are for natural conditions except that no attempt was made to adjust for the effects of diversions for irrigation and storage in small reservoirs in Colorado. These effects changed very little during the report period (1921-58). Frequency relations were adjusted for the effect of storage in John Martin Reservoir on Arkansas River at Caddo, Colo. (storage began in 1943), and for major reservoirs on tributary streams below the mouth of Verdigris River near Muskogee, Okla.

There is a great need for better definition of frequency relations for small drainage areas. Many gaging stations have been installed on small streams in the lower Mississippi River basin in recent years. These gages, with a few exceptions, have not been in operation long enough to be of much use in this study. Data collected at these sites can be used at a later date in order to define frequency relations more adequately for small areas.

GAGING-STATION RECORDS

This section contains a description of all gaging stations for which flood data are given in this report. A tabulation of all floods above a selected base is shown for most stations. Only the annual floods are listed for some stations.

Station records are presented in downstream order corresponding to the system used in other U.S. Geological Survey Water-Supply Papers since 1951. Reference numbers used are the same as those used since 1958 in U.S. Geological Survey Water-Supply Papers. The prefix 7 has been omitted from the station numbers.

The peaks are arranged by water year unless otherwise noted. The water year begins October 1 and ends September 30 and is identified by the calendar year in which it ends. Thus, a peak which occurred in December 1942 would be listed in the 1943 water year.

Both peak stages and peak discharges are usually listed, but rarely only peak discharges are given. Only peak stages are shown for stations where the stage-discharge relation has not been defined. In the flat delta country in the eastern part of the report area, peak stages are often as important as peak discharges. The date indicates the day

on which the peak discharge occurred. If the peak stage occurred on a different date, this fact is indicated by a footnote.

Peak discharges, unless otherwise noted, are the instantaneous peaks in cubic feet per second (cfs). Some records, usually those furnished by other agencies, consist of only maximum daily discharges which are listed in lieu of instantaneous peaks, with appropriate explanation in the footnotes.

Underlines in the tables of peak stages and discharges have the following significance:

1. Line in "water year" column means a discontinuous record.
2. Line beginning at "date" column and continuing through "discharge" column means a change in site and datum.
3. Line in "date" and "discharge" column means a change in site without a change in datum.
4. Line in "gage height" column means a change in datum only.
5. No underlines are used for changes in site or datum if records have been adjusted to present conditions.

Depressions or closed basins in some parts of the Interior Plains region do not permit direct surface runoff to defined streams. Such areas have been deducted from the total drainage area above a gaging station to determine the area which contributes directly to surface runoff. Both total and contributing areas are given under "drainage area" in the station description. The contributing drainage area is used in flood-frequency analysis. The bankfull stage has been noted in most station descriptions. This is the stage at which one or both banks are overtopped in the vicinity of the gage and is sometimes referred to as flood stage.

Gaging-station records of less than 5 years in length or records on irrigation or diversion ditches are not included in this report.

An explanation of methods used in computation of streamflow data is given in each water-supply paper of the annual series of reports of the U.S. Geological Survey entitled "Surface Water Supply of the United States." Additional information may be found in standard texts and in Corbett and others (1943).

100. Mississippi River at St. Louis, Mo.

Location.--Lat 38°37'44", long 90°10'47", on downstream side of center pier of Eads Bridge at St. Louis, 15 miles downstream from Missouri River, 19.2 miles upstream from Meramec River, and at mile 180.0 above Ohio River.

Drainage area.--701,000 sq mi, approximately.

Gage.--Nonrecording Corps of Engineers gages prior to May 5, 1934; recording thereafter. Prior to 1934, at site 0.4 mile downstream at present datum. Datum of gage is 379.94 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Continually shifting, defined by frequent current-meter measurements.

Bankfull stage.--30 ft.

Historical data.--Flood in April 1785 may have reached a stage of 42.0 ft.

Remarks.--Records prior to January 1928 furnished by Corps of Engineers; January 1928 to March 1933 furnished by Mississippi River Commission. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin and by many reservoirs and diversions for irrigation in Missouri River basin. Discharges prior to the 1933 water year are maximum daily discharges. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1844	June 27, 1844	41.32	21,300,000	1900	Mar. 16, 1900	23.53	366,500
1861	May 15, 1861	25.47	466,000	1901	Apr. 18, 1901	22.58	343,400
1862	Apr. 26, 1862	31.45	712,200	1902	July 26, 1902	26.89	475,300
1863	Mar. 4, 9, 1863	18.02	252,000	1903	June 10, 11, 1903	b38.00	1,019,000
1864	May 14, 1864	20.33	309,500	1904	Apr. 29, 1904	33.60	777,600
1865	July 28, 1865	26.81	512,800	1905	Sept. 21, 1905	30.20	613,200
1866	Apr. 25, 1866	26.77	512,800	1906	Apr. 15, 1906	26.20	449,400
1867	May 1, 1867	28.21	568,400	1907	July 25, 26, 1907	28.00	a519,000
1868	May 14, 15, 1868	24.19	420,800	1908	June 20, 1908	34.95	850,000
1869	July 24, 1869	29.31	615,200	1909	July 15, 16, 1909	35.25	a860,600
1870	Apr. 16, 1870	26.21	491,200	1910	Jan. 13, 1910	25.2	416,400
1871	Mar. 17, 1871	21.82	347,800	1911	Feb. 23, 1911	19.90	283,000
1872	June 12, 14, 1872	23.00	383,000	1912	Apr. 5, 6, 1912	b50.80	640,800
1873	Apr. 11, 1873	25.45	462,400	1913	Apr. 16, 17, 1913	27.20	487,000
1874	June 19, 20, 1874	18.40	261,200	1914	June 21, 1914	20.40	293,800
1875	Aug. 3, 1875	29.80	637,200	1915	June 24, 1915	31.60	678,200
1876	May 10, 12, 1876	b32.00	741,000	1916	Jan. 31, Feb. 1	31.40	676,100
1877	June 14, 1877	26.60	505,600	1917	June 14, 1917	32.90	743,400
1878	June 15, 1878	25.75	476,800	1918	June 12, 1918	20.80	324,100
1879	July 3, 1879	21.15	332,200	1919	May 11, 1919	26.90	514,700
1880	July 12, 1880	25.50	466,000	1920	Apr. 24, May 22	28.0	554,000
1881	May 5, 6, 1881	b33.65	822,000	1921	May 14, 1921	23.0	397,000
1882	July 5, 1882	32.39	739,200	1922	Apr. 20, 1922	33.95	785,900
1883	June 25, 26, 1883	b34.80	862,800	1923	June 17, 1923	20.7	341,200
1884	Apr. 9, 10, 1884	28.10	543,600	1924	July 2, 3, 1924	26.3	494,900
1885	June 17, 1885	27.10	503,500	1925	June 25, 1925	19.9	325,800
1886	May 13, 1886	27.00	499,500	1926	Sept. 29, 1926	24.5	438,000
1887	Apr. 3, 1887	20.65	307,600	1927	Apr. 26, 1927	36.1	889,300
1888	June 4, 1888	29.38	598,600	1928	June 22, 1928	27.6	552,000
1889	June 1, 1889	24.62	416,200	1929	Apr. 25, 1929	b54.6	739,000
1890	July 1, 1890	20.60	307,600	1930	June 21, 1930	19.6	310,000
1891	July 4, 1891	23.7	368,300	1931	June 15, 1931	13.3	200,000
1892	May 19, 1892	36.0	926,500	1932	Dec. 1, 1931	22.11	356,000
1893	May 3, 1893	31.60	700,000	1933	May 17, 1933	27.0	434,000
1894	May 11, 1894	23.4	379,600	1934	Apr. 24, 1934	9.0	136,000
1895	July 8, 1895	17.0	229,000	1935	June 7, 1935	b33.52	649,000
1896	May 26, 28, 1896	27.70	507,000	1936	Mar. 1, 1936	21.18	336,000
1897	May 2, 1897	30.9	645,400	1937	May 5, 1937	23.76	374,000
1898	May 23, 1898	27.20	487,000	1938	May 27, 1938	26.57	434,000
1899	Apr. 27, 1899	25.68	432,400	1939	Apr. 20, 1939	30.13	529,000

a Computed by Corps of Engineers.

b Occurred at different time than peak discharge.

Peak stages and discharges of Mississippi River at St. Louis, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 14, 1940	13.37	188,000	1950	May 14, 1950	27.02	466,000
1941	Apr. 22, 1941	26.15	451,000	1951	July 21, 1951	b40.28	782,000
1942	June 30, 1942	34.48	666,000	1952	Apr. 29, 30, 1952	b33.83	684,000
1943	May 24, 1943	38.94	840,000	1953	Apr. 4, 1953	22.57	369,000
1944	Apr. 30, 1944	39.14	844,000	1954	June 6, 1954	18.65	292,000
1945	Apr. 21-23, 1945	c35.30	610,000	1955	Feb. 23, 1955	18.62	312,000
1946	Jan. 13, 1946	28.00	502,000	1956	Oct. 8, 1955	14.68	230,000
1947	July 1, 2, 1947	b40.26	783,000	1957	May 27, 1957	22.91	342,000
1948	Mar. 27, 1948	34.63	633,000	1958	July 24, 1958	29.40	504,000
1949	Mar. 11, 1949	24.41	425,000				

b Occurred at different time than peak discharge.

c Occurred June 13, 1945.

MERAMEC RIVER BASIN

115. Green Acre Branch near Rolla, Mo.

Location.--Lat 37°54'50", long 91°43'35", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.37 N., R.7 W., on left bank 35 ft upstream from double concrete-box culvert under State Highway 72, 0.4 mile upstream from mouth, and 3 miles southeast of Rolla.

Drainage area.--0.622 sq mi.

Gage.--Recording gage and concrete control. Datum of gage is 958.82 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 290 cfs, and by slope-area measurements at 426 and 1,900 cfs.

Bankfull stage.--3 ft.

Remarks.--Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 23, 1949	2.02	53	1954	May 28, 1954	2.49	100
	Feb. 3, 1949	1.98	50		May 31, 1954	2.30	78
	Feb. 14, 1949	2.48	99		June 2, 1954	3.36	247
	July 16, 1949	3.23	210		June 9, 1954	4.96	821
	Sept. 12, 1949	2.28	76		July 24, 1954	2.83	144
	Sept. 18, 1949	2.24	72		Aug. 7, 1954	2.22	70
1950	Oct. 5, 1949	2.27	76	1955	Oct. 11, 1954	3.06	183
	Oct. 11, 1949	3.06	183		Mar. 15, 1955	2.81	142
	Oct. 20, 1949	2.44	94		Mar. 20, 1955	2.59	112
	Oct. 21, 1949	2.62	116		May 12, 1955	3.70	337
	Jan. 2, 1950	2.12	61		May 28, 1955	2.51	102
	Jan. 3, 1950	3.22	215		June 5, 1955	2.24	72
	Jan. 13, 1950	2.96	165		Sept. 22, 1955	2.93	160
	Feb. 12, 1950	2.06	56	1956	May 26, 1956	3.19	209
	Apr. 3, 1950	2.67	122		May 30, 1956	4.03	444
	May 19, 1950	2.86	149		June 24, 1956	3.02	176
	May 29, 1950	3.98	426		July 5, 1956	3.72	343
	June 9, 1950	6.85	1,900	1957	May 17, 1957	3.18	207
	Aug. 13, 1950	2.12	61		May 21, 1957	3.44	267
	Aug. 28, 1950	2.07	57		May 22, 1957	3.18	207
1951	Nov. 7, 1950	2.04	55		May 25, 1957	3.59	306
	May 22, 1950	2.64	118		May 29, 1957	2.87	150
	June 12, 1951	2.40	90		May 31, 1957	2.85	148
	June 30, 1951	3.65	323		June 24, 1957	2.95	164
	July 9, 1951	2.95	164		July 27, 1957	2.98	169
	July 12, 1951	2.92	158		Aug. 16, 1957	2.6	113
	Aug. 9, 1951	3.94	413	1958	June 10, 1958	3.54	293
1952	Mar. 10, 1952	1.94	46.9		July 16, 1958	2.80	140
1953	Apr. 23, 1953	4.39	577		July 17, 1958	4.22	513
	June 26, 1953	2.18	67		July 30, 1958	2.83	144
1954	May 22, 1954	2.97	167		July 31, 1958	2.69	125
					Aug. 1, 1958	2.61	114

MERAMEC RIVER BASIN

120. Behnke Branch near Rolla, Mo.

Location.--Lat 37°56'05", long 91°42'35", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.37 N., R.7 W., on right bank 300 ft upstream from county highway bridge, a quarter of a mile upstream from mouth, and 3 $\frac{1}{2}$ miles southeast of Rolla.

Drainage area.--1.05 sq mi.

Gage.--Recording. Datum of gage is 928.73 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 250 cfs and by slope-area measurements at 389 and 1,190 cfs.

Bankfull stage.--3 ft.

Remarks.--Base for partial-duration series, 90 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Feb. 14, 1949	1.95	182	1955	Feb. 19, 1955	1.72	94
	July 16, 1949	1.80	119		Mar. 15, 1955	2.03	222
					Mar. 20, 1955	1.99	201
1950	Oct. 5, 1949	1.75	104		May 12, 1955	2.31	389
	Oct. 11, 1949	2.18	304		May 28, 1955	1.92	168
	Oct. 21, 1949	1.93	173		June 5, 1955	1.87	147
	Jan. 3, 1950	2.22	229		June 11, 1955	1.94	178
	Jan. 13, 1950	2.08	248		July 7, 1955	1.92	168
	Apr. 3, 1950	1.83	131		Sept. 22, 1955	2.10	258
	May 19, 1950	2.10	258				
	May 29, 1950	2.31	389	1956	May 26, 1956	2.13	275
	June 9, 1950	3.36	1,190		May 30, 1956	2.28	369
	Aug. 14, 1950	2.08	248		June 24, 1956	2.24	342
					July 3, 1956	2.22	329
1951	May 22, 1951	1.72	94				
	June 30, 1951	2.16	293	1957	May 17, 1957	2.20	316
	July 9, 1951	2.02	216		May 21, 1957	2.24	342
	July 12, 1951	2.04	227		May 22, 1957	2.15	287
	Aug. 9, 1951	2.28	369		May 25, 1957	2.16	293
1952	Mar. 10, 1952	1.70	88		May 29, 1957	2.08	248
					May 31, 1957	2.03	222
1953	Apr. 23, 1953	2.11	264		June 29, 1957	2.01	211
1954	June 2, 1954	2.12	270	1958	June 10, 1958	2.29	375
	June 9, 1954	2.94	847		July 16, 1958	2.00	206
					July 17, 1958	2.94	847
					July 30, 1958	1.92	168
1955	Oct. 11, 1954	2.11	264		July 31, 1958	1.92	168

120.5. Dry Fork near St. James, Mo.

Location.--Lat 37°57'55", long 91°34'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.38 N., R.6 W., on upstream side of bridge on State Highway 68, 2 miles southeast of St. James and 5.5 miles upstream from Meramec River.

Drainage area.--370 sq mi.

Gage.--Nonrecording. Prior to Dec. 9, 1948, at site 300 ft upstream at same datum. Datum of gage is 787.24 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--15 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 9, 1944	11.55	3,890	1947	Apr. 25, 1947	17.14	12,200
1945	June 8, 1945	19.37	18,800	1948	July 7, 1948	16.1	10,600
				1949	Feb. 15, 1949	13.0	6,300
1946	Aug. 15, 1946	21.7	28,000	1950	Jan. 3, 1950	17.0	12,300

130. Meramec River near Steelville, Mo.

Location.--Lat 37°59'55", long 91°21'40", in NE $\frac{1}{4}$ sec.21, T.38 N., R.4 W., on downstream side of first pier from left end of St. Louis-San Francisco Railway bridge, 400 ft upstream from highway bridge, 0.8 mile upstream from Whittenburg Creek, and 1 $\frac{1}{2}$ miles north of Steelville.

Drainage area.--781 sq mi.

Gage.--Nonrecording prior to May 23, 1934; recording thereafter. Prior to Dec. 21, 1922, at site 1 mile upstream at datum 5.8 ft higher. Datum of present gage is 681.68 ft above mean sea level, datum of 1929. Peak gage heights for period prior to Dec. 21, 1922, computed from plotted U. S. Weather Bureau readings and transferred to present site by comparative gage readings.

Stage-discharge relation.--Defined by current-meter measurements below 46,000 cfs; shifts in relation occur.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 9,200 cfs.

MERAMEC RIVER BASIN

Peak stages and discharges of Meramec River near Steelville, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Aug. 20, 1915	26.5	a60,000	1938	May 24, 1938	14.14	14,700
1917	Apr. 8, 1917	6.65	5,180	1939	Mar. 11, 1939	10.94	9,500
1918	Apr. 25, 1918	18.7	33,400	1939	Apr. 17, 1939	17.67	25,100
	Apr. 28, 1918	10.7	9,480		May 2, 1940	10.53	8,900
	May 12, 1918	16.3	24,600	1941	Apr. 20, 1941	16.92	22,600
				1942	June 14, 1942	14.28	15,800
1919	June 4, 1919	10.9	9,790	1942	June 21, 1942	13.04	13,000
					June 26, 1942	11.19	9,970
1920	Oct. 27, 1919	24.1	55,000	1943	Dec. 28, 1942	22.00	36,100
	Nov. 1, 1919	11.5	10,700		May 12, 1943	14.64	14,500
	Mar. 26, 1920	15.9	23,200		May 20, 1943	17.56	21,500
	May 13, 1920	12.1	12,000				
	May 20, 1920	11.0	9,790	1944	May 10, 1944	10.02	7,190
	Sept. 11, 1920	12.5	12,900	1945	Mar. 3, 1945	13.23	11,900
1921	Mar. 28, 1921	16.7	26,000		Mar. 7, 1945	15.47	16,500
	Apr. 23, 1921	11.8	11,300		Mar. 31, 1945	14.70	14,800
	Apr. 26, 1921	15.6	22,200		Apr. 3, 1945	13.47	12,500
1922	Nov. 19, 1921	14.4	18,300		Apr. 15, 1945	21.96	36,200
	Mar. 15, 1922	12.5	12,900		May 30, 1945	12.08	10,000
	Mar. 31, 1922	15.4	21,600		June 9, 1945	24.30	47,000
	Apr. 17, 1922	17.5	29,000	1946	Feb. 14, 1946	17.10	20,300
	Apr. 28, 1922	12.4	12,700		Aug. 15, 1946	16.77	19,500
1923	June 16, 1923	12.26	11,800	1947	Nov. 11, 1946	14.38	14,200
1924	May 29, 1924	12.43	11,900		Apr. 25, 1947	20.35	30,100
	Aug. 12, 1924	12.40	11,900	1948	July 7, 1948	12.47	10,700
1925	Dec. 19, 1924	10.00	9,120	1949	Jan. 19, 1949	13.01	11,600
1926	Nov. 8, 1925	8.50	7,270		Feb. 16, 1949	16.68	19,300
1927	Apr. 1, 1927	19.40	36,000	1950	Oct. 7, 1949	13.74	12,900
	Apr. 8, 1927	12.20	12,100		Oct. 12, 1949	13.21	11,900
	Apr. 15, 1927	13.25	14,800		Oct. 22, 1949	15.17	15,800
	May 25, 1927	18.95	34,400		Jan. 4, 1950	18.74	24,900
	June 2, 1927	18.80	33,600		Jan. 14, 1950	14.48	14,600
	June 4, 1927	13.01	14,200		May 11, 1950	15.90	17,700
1928	Dec. 14, 1927	10.96	9,900	1951	Feb. 19, 1951	13.59	12,700
	Apr. 6, 1928	15.97	23,600		July 1, 1951	15.57	17,000
	June 10, 1928	17.90	30,300		July 11, 1951	13.46	12,500
1929	May 7, 1929	14.25	17,600		July 14, 1951	20.43	30,100
1930	Jan. 15, 1930	14.34	18,000	1952	Apr. 13, 1952	11.59	9,210
	Feb. 26, 1930	13.60	15,900	1953	May 4, 1953	8.39	5,160
1931	June 10, 1931	3.53	1,930	1954	June 10, 1954	9.40	6,210
1932	Jan. 23, 1932	4.00	2,460	1955	Mar. 21, 1955	12.60	10,800
1933	Apr. 16, 1933	15.60	18,000	1956	May 31, 1956	9.76	6,640
	May 14, 1933	17.50	23,800	1957	Apr. 5, 1957	13.12	12,100
1934	Sept. 14, 1934	14.34	15,100		Apr. 28, 1957	12.76	11,600
1935	Mar. 12, 1935	19.53	31,500		May 18, 1957	12.70	11,400
	June 21, 1935	20.31	34,600		May 24, 1957	17.36	21,400
	June 26, 1935	23.39	47,800		May 26, 1957	12.62	11,300
1936	Nov. 11, 1935	9.96	8,160	1958	Dec. 18, 1957	14.60	14,800
1937	May 3, 1937	14.15	14,900		Mar. 25, 1958	15.88	17,700
1938	Feb. 18, 1938	13.84	14,100		July 17, 1958	13.37	12,600

a Annual peak only.

145. Meramec River near Sullivan, Mo.

Location.--Lat 38°09'30", long 91°06'30", in SE¹NE¹ sec.35, T.40 N., R.2 W., on right bank at upstream side of Sappington Bridge, 3 $\frac{1}{2}$ miles downstream from Brazil Creek and 4 miles southeast of Sullivan.

Drainage area.--1,475 sq mi.

Gage.--Nonrecording prior to Oct. 20, 1952; recording thereafter. Datum of gage is 581.82 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 71,000 cfs; shifts in relation occur.

Bankfull stage.--19 ft.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	33.5	890,000	1945	Apr. 3, 1945	17.40	20,000
1922	Nov. 19, 1921	16.05	16,500		Apr. 15, 1945	26.15	45,000
	Mar. 16, 1922	14.20	12,600		Apr. 30, 1945	14.28	12,800
	Mar. 31, 1922	16.60	18,000		June 9, 1945	32.00	77,300
	Apr. 17, 1922	16.80	18,400	1946	Feb. 14, 1946	19.08	23,900
	Apr. 29, 1922	13.90	12,000		Aug. 16, 1946	16.40	17,500
1923	Mar. 13, 1923	14.00	12,200	1947	Nov. 10, 1946	16.00	16,500
	Mar. 16, 1923	14.15	12,600		Apr. 26, 1947	24.80	40,500
	May 17, 1923	13.80	11,800	1948	Jan. 2, 1948	14.60	13,200
	June 17, 1923	13.90	12,000		July 8, 1948	13.00	10,100
1924	Apr. 9, 1924	17.25	19,400	1949	Jan. 19, 1949	15.60	15,300
	May 30, 1924	17.10	19,200		Jan. 25, 1949	15.30	14,700
1925	Dec. 20, 1924	16.00	16,500		Jan. 28, 1949	13.80	11,600
1926	Nov. 8, 1925	14.60	13,400		Feb. 15, 1949	20.30	27,000
1927	Mar. 20, 1927	13.70	11,600		Mar. 19, 1949	13.30	10,600
	Apr. 2, 1927	22.80	35,000	1950	Oct. 7, 1949	15.05	14,000
	Apr. 9, 1927	15.30	14,900		Oct. 13, 1949	14.40	12,800
	Apr. 16, 1927	18.80	23,700		Oct. 23, 1949	16.54	17,400
	May 26, 1927	21.90	32,400		Dec. 22, 1949	13.63	11,200
	June 2, 1927	22.89	35,300		Jan. 4, 1950	25.50	42,800
	June 5, 1927	14.60	13,400		Jan. 14, 1950	17.05	18,600
1928	Nov. 8, 1927	15.20	14,700		May 11, 1950	16.64	22,600
	Dec. 1, 1927	14.70	13,600	1951	Feb. 19, 1951	17.22	19,100
	Dec. 14, 1927	17.30	19,700		Mar. 12, 1951	13.94	11,800
	Apr. 6, 1928	19.80	26,400		July 2, 1951	16.73	17,900
	Apr. 23, 1928	13.20	10,600		July 14, 1951	21.30	29,800
	June 11, 1928	20.30	27,800	1952	Apr. 5, 1952	13.90	11,800
	June 14, 1928	14.30	12,800		Apr. 13, 1952	15.00	14,000
	June 21, 1928	13.80	11,800	1953	Mar. 4, 1953	12.05	8,590
	June 29, 1928	13.60	11,400	1954	June 10, 1954	11.70	8,190
1929	Apr. 10, 1929	16.50	17,700	1955	Feb. 21, 1955	13.14	11,200
	May 3, 1929	13.80	11,800		Mar. 21, 1955	15.58	16,100
	May 7, 1929	18.20	22,000	1956	May 16, 1956	11.00	8,060
	May 15, 1929	15.20	14,700	1957	Feb. 27, 1957	14.70	14,300
1930	Jan. 14, 1930	18.20	22,000		Mar. 25, 1957	13.58	12,100
	Feb. 27, 1930	16.70	18,200		Apr. 4, 1957	18.85	23,600
	Mar. 8, 1930	15.20	14,700		Apr. 22, 1957	17.22	19,800
1931	Apr. 27, 1931	5.56	2,300		Apr. 27, 1957	17.42	20,300
1932	Nov. 20, 1931	7.75	3,800		May 18, 1957	17.22	19,800
1933	Apr. 16, 1933	19.60	25,900		May 23, 1957	21.73	31,200
	May 14, 1933	22.00	32,700		June 30, 1957	22.61	33,700
1944	May 4, 1944	17.0	19,000	1958	Dec. 18, 1957	16.95	19,400
1945	Mar. 3, 1945	15.80	16,000		Mar. 10, 1958	12.40	10,000
	Mar. 7, 1945	18.35	22,600		Mar. 25, 1958	18.86	23,900
	Mar. 31, 1945	21.30	30,700		July 18, 1958	16.57	18,500

a Annual peak only.

MERAMEC RIVER BASIN

150. Bourbeuse River near St. James, Mo.

Location.--Lat 38°02'00", long 91°38'45", in NW $\frac{1}{4}$ sec.12, T.38 N., R.7 W., on left bank 735 ft upstream from bridge on State Highway 68 and 3 miles north-west of St. James.

Drainage area.--21.3 sq mi.

Gage.--Recording. Datum of gage is 899.46 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,200 cfs.

Bankfull stage.--8 ft.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	June 20, 1948	8.80	a4,100	1951	July 11, 1951	7.43	1,880
					Aug. 9, 1951	8.04	2,780
1949	Feb. 14, 1949	8.35	3,260	1952	Dec. 14, 1951	7.53	2,020
	Aug. 19, 1949	7.76	2,300				
	Sept. 12, 1949	9.28	4,890	1953	Apr. 23, 1953	9.12	4,540
	Sept. 12, 1949	9.01	4,370				
1950	Oct. 4, 1949	10.07	6,240	1954	May 22, 1954	7.43	1,880
	Oct. 5, 1949	8.68	3,860		June 9, 1954	9.82	5,790
	Oct. 11, 1949	10.73	7,580				
	Oct. 11, 1949	11.08	8,250	1955	Mar. 20, 1955	7.86	2,460
	Oct. 20, 1949	8.95	4,280				
	Oct. 21, 1949	8.25	3,100	1956	July 3, 1956	6.74	1,130
	Jan. 3, 1950	9.25	4,800				
	Jan. 13, 1950	8.80	4,030	1957	Mar. 24, 1957	8.15	2,940
	Apr. 3, 1950	7.65	2,160		May 17, 1957	9.38	5,070
	Apr. 4, 1950	7.68	2,230		May 18, 1957	9.23	4,800
	May 10, 1950	7.61	2,080		May 21, 1957	10.09	6,330
	May 19, 1950	9.16	4,620		May 22, 1957	8.50	3,520
	May 29, 1950	8.40	3,350		May 25, 1957	8.40	3,350
1951	Mar. 10, 1951	7.27	1,640	1958	Dec. 16, 1957	8.12	2,860
	Apr. 21, 1951	7.92	2,540		July 17, 1958	7.85	2,460
	June 30, 1951	8.37	3,260		July 31, 1958	8.39	3,350
					Aug. 1, 1958	7.67	2,160

a Annual peak only.

155. Lanes Fork near Vichy, Mo.

Location.--Lat 36°06'15", long 91°42'45", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.39 N., R.7 W., at bridge on State Highway 68, 1 $\frac{1}{4}$ miles downstream from Bailey Creek, 2 $\frac{1}{2}$ miles east of Vichy, and 9 miles upstream from mouth.

Drainage area.--24.1 sq mi.

Gage.--Nonrecording prior to Jan. 12, 1950; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements below 7,100 cfs.

Bankfull stage.--8 ft.

Remarks.--Base for partial duration series, 1,500 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges of Lanes Fork near Vichy, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 9, 1944	8.3	3,700	1953	Apr. 23, 1953	4.82	1,290
1945	June 7, 1945	12.0	9,400	1954	May 22, 1954	6.55	2,660
1948	July 12, 1948	8.5	4,490	1955	Mar. 20, 1955	5.79	2,010
1949	Feb. 16, 1949	6.6	2,660		June 11, 1955	5.95	2,170
1950	Oct. 4, 1949	10.5	7,120		July 24, 1955	5.13	1,520
1951	Mar 10, 1951	5.32	1,630	1956	July 3, 1956	5.67	1,890
	May 22, 1951	6.02	2,170	1957	Mar. 24, 1957	6.75	2,840
	June 30, 1951	6.57	2,660		Apr. 3, 1957	5.30	1,630
	July 11, 1951	5.30	1,630		May 17, 1957	11.70	8,920
	July 13, 1951	5.97	2,170		May 21, 1957	8.65	4,600
	Aug. 9, 1951	7.97	3,960		May 23, 1957	10.10	6,530
	Aug. 27, 1951	6.67	2,750		June 28, 1957	6.86	2,920
	Aug. 28, 1951	5.49	1,780	1958	Mar. 8, 1958	5.05	1,460
1952	Oct. 22, 1951	5.57	1,820		July 31, 1958	7.70	3,660
					Aug. 1, 1958	7.78	3,760

160. Bourbeuse River near Spring Bluff, Mo.

Location.--Lat 38°18'40", long 91°16'45", in NE $\frac{1}{4}$ sec. 8, T.41 N., R.3 W., on downstream side of highway bridge, 1 mile downstream from Boone Creek, 3.5 miles northwest of Spring Bluff, and 9.5 miles northwest of Sullivan.

Drainage area.--608 sq mi.

Gage.--Nonrecording. Datum of gage is 626.34 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 31,000 cfs.

Bankfull stage.--27.5 ft.

Remarks.--Station operated to obtain flows above 1,000 cfs only. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	35.7	a60,000	1950	May 11, 1950	22.3	11,600
1944	Apr. 11, 1944	21.3	10,200		May 20, 1950	25.65	17,300
	Apr. 23, 1944	21.4	10,400		May 27, 1950	21.28	10,200
	May 10, 1944	23.63	13,700	1951	Mar. 12, 1951	22.57	12,100
1945	Mar. 3, 1945	23.6	13,700		July 14, 1951	29.49	25,800
	Mar. 7, 1945	22.1	11,300		Aug. 28, 1951	22.98	12,700
	Mar. 31, 1945	25.1	16,400	1952	Apr. 5, 1952	20.48	9,200
	Apr. 3, 1945	24.9	16,000	1953	Mar. 4, 1953	18.79	7,300
	Apr. 15, 1945	22.5	11,900	1954	June 10, 1954	18.47	7,000
	June 9, 1945	31.0	31,500	1955	Feb. 21, 1955	20.10	9,100
1946	Feb. 14, 1946	22.87	12,500	1956	May 31, 1956	20.75	9,800
1947	Apr. 26, 1947	31.40	33,300	1957	Feb. 27, 1957	25.53	17,100
1948	Jan. 2, 1948	21.91	11,100		Mar. 26, 1957	24.07	14,600
	July 20, 1948	22.16	11,500		May 18, 1957	27.99	22,000
	July 26, 1948	24.35	15,100		May 23, 1957	30.26	28,600
1949	Feb. 16, 1949	21.91	11,100		June 15, 1957	31.79	35,100
1950	Oct. 7, 1949	24.8	15,800		June 28, 1957	24.62	15,500
	Oct. 12, 1949	30.34	28,600		June 30, 1957	34.71	50,700
	Oct. 21, 1949	23.05	12,900	1958	Mar. 9, 1958	21.21	10,200
	Jan. 4, 1950	28.0	22,000		Mar. 25, 1958	21.91	11,100
	Jan. 14, 1950	23.3	15,200				
	Apr. 5, 1950	22.55	12,100				

a Annual peak only.

165. Bourbeuse River at Union, Mo.

Location.--Lat 38°26'45", long 90°59'30", in SW $\frac{1}{4}$ sec.26, T.43 N., R.1 W., on right bank on downstream side of bridge pier on U. S. Highway 50, 800 ft upstream from Flat Creek, half a mile east of Union, and 7 miles upstream from Birch Creek. Records include flow of Flat Creek.

Drainage area.--808 sq mi, including that of Flat Creek.

Gage.--Nonrecording prior to June 12, 1944, at various sites nearby; recording thereafter. Prior to Oct. 1, 1948, at datum 3.00 ft higher. Datum of present gage is 488.58 ft above mean sea level, datum of 1929. Gage heights given herein converted to present datum.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation due largely to gravel removal from control occur frequently. Discharges of the 1897 and 1915 floods determined from extension of rating curve for main channel based on measurements made since 1921 and study of overflow areas in vicinity of gaging station.

Bankfull stage.--15 ft.

Remarks.--Peaks for period prior to June 7, 1921, computed from plotted U. S. Weather Bureau readings. Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1897	-	27.15	a44,500	1938	June 13, 1938	23.23	28,200
1915	Aug. 22, 1915	28.5	a50,000	1939	Apr. 19, 1939	16.58	12,200
1916	February 1916	21.0	a21,100	1940	Feb. 29, 1940	9.45	3,700
1917	Apr. 30, 1917	14.0	8,840	1941	Apr. 21, 1941	20.09	18,700
1918	Apr. 30, 1918	18.7	15,700	1942	June 23, 1942	17.60	13,700
1919	Mar. 18, 1919	14.2	9,090		June 28, 1942	21.0	21,100
1920	Oct. 30, 1919	22.3	25,100	1943	Dec. 29, 1942	22.0	24,100
	Nov. 2, 1919	16.5	12,100		May 13, 1943	17.04	12,800
	May 22, 1920	18.7	15,700		May 20, 1943	19.60	17,600
1921	Mar. 29, 1921	17.3	13,200	1944	May 11, 1944	16.0	11,400
	Apr. 28, 1921	18.1	14,600	1945	Apr. 2, 1945	17.80	14,700
1922	Apr. 2, 1922	17.70	14,600		Apr. 4, 1945	17.10	13,600
	Apr. 19, 1922	16.94	13,100		Apr. 16, 1945	16.20	12,100
1923	Mar. 17, 1923	14.10	8,930		June 10, 1945	23.10	28,500
1924	Dec. 15, 1923	16.64	12,600	1946	Feb. 16, 1946	15.46	11,100
	May 31, 1924	17.16	13,700	1947	Apr. 27, 1947	22.1	25,100
1925	Dec. 21, 1924	15.40	10,700	1948	July 28, 1948	14.89	10,500
1926	Nov. 10, 1925	16.14	11,800	1949	Feb. 17, 1949	14.82	10,400
1927	Mar. 22, 1927	17.65	13,300	1950	Oct. 8, 1949	15.85	12,500
	Apr. 3, 1927	22.10	22,500		Oct. 14, 1949	20.05	20,200
1928	Dec. 3, 1927	17.27	12,900		Oct. 23, 1949	15.82	12,500
	Apr. 7, 1928	20.00	17,100		Jan. 8, 1950	19.39	18,900
1929	Mar. 18, 1929	16.78	12,200		Jan. 15, 1950	15.62	12,200
	May 21, 1929	16.90	12,400		Apr. 6, 1950	15.35	12,000
1930	Jan. 16, 1930	17.00	12,500		May 22, 1950	16.08	12,900
1931	May 21, 1931	12.20	6,650	1951	July 15, 1951	19.79	19,800
1932	Jan. 3, 1932	13.80	8,540	1952	Apr. 6, 1952	13.20	8,970
1933	May 16, 1933	20.55	18,300	1953	Mar. 5, 1953	11.85	7,330
1934	Sept. 16, 1934	17.10	12,600	1954	June 11, 1954	10.76	6,250
1935	Mar. 13, 1935	17.90	13,800	1955	Feb. 22, 1955	12.14	7,670
	June 23, 1935	19.00	15,400	1956	June 2, 1956	12.98	8,730
	June 29, 1935	16.60	12,000	1957	Mar. 1, 1957	17.16	15,100
1936	Apr. 7, 1936	11.90	6,290		Mar. 27, 1957	15.97	13,000
1937	May 5, 1937	17.78	13,600		May 20, 1957	17.72	16,000
	June 12, 1937	18.42	14,500		May 24, 1957	20.46	22,100
1938	Feb. 20, 1938	17.00	12,800		June 15, 1957	21.28	24,100
					July 1, 1957	24.44	33,100
				1958	Mar. 26, 1958	14.96	11,000

a Annual peak only.

170. Meramec River at Robertsville, Mo.

Location.--Lat 38°25'40", long 90°49'35", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.32, T.43 N., R.2 E., at county highway bridge, 1 mile northwest of Robertsville and $1\frac{1}{4}$ miles upstream from Calvey Creek.

Drainage area.--2,673 sq mi.

Gage.--Recording gage to Sept. 30, 1951 (discontinued). Datum of gage is 448.24 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 97,000 cfs.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 20,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	36.1	a125,000	1945	June 10, 1945	34.0	102,000
1940	May 3, 1940	12.49	11,100	1946	Feb. 16, 1946	23.22	33,600
1941	Apr. 22, 1941	25.20	39,400	1947	Nov. 12, 1946 Apr. 27, 1947	18.36 28.95	21,700 59,100
1942	June 1, 1942 June 16, 1942 June 28, 1942	19.68 19.21 24.20	24,500 23,400 34,600	1948	Jan. 3, 1948	16.30	17,700
1943	Dec. 30, 1942 May 13, 1943 May 20, 1943 June 9, 1943	30.12 22.70 26.50 19.20	65,600 32,100 45,600 23,400	1949	Feb. 17, 1949	22.80	32,400
1944	May 11, 1944	17.10	19,200	1950	Oct. 14, 1949 Oct. 24, 1949 Jan. 6, 1950 Jan. 16, 1950 Apr. 4, 1950 May 13, 1950	20.50 20.36 29.17 21.80 17.48 22.68	26,400 26,200 60,400 29,700 20,000 32,400
1945	Mar. 5, 1945 Mar. 9, 1945 Apr. 2, 1945 Apr. 4, 1945 Apr. 16, 1945	20.08 21.78 26.12 22.62 29.22	25,400 29,700 43,800 31,900 60,200	1951	Feb. 21, 1951 Mar. 14, 1951 July 3, 1951 July 16, 1951	21.00 18.22 18.23 26.38	27,600 21,300 21,300 45,200

a Annual peak only.

180. Big River near DeSoto, Mo.

Location.--Lat 38°07'20", long 90°40'30", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.39 N., R.3 E., near right bank on downstream side of pier of Mammoth Bridge, 300 ft upstream from Mammoth Creek, $1\frac{1}{2}$ miles downstream from Mineral Fork, and $6\frac{1}{2}$ miles west of DeSoto. Records include flow of Mammoth Creek.

Drainage area.--718 sq mi, including that of Mammoth Creek.

Gage.--Recording. Datum of gage is 538.79 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Discharge of the flood in August 1915 determined from extension of rating curve above 37,000 cfs.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 10,000 cfs.

MERAMEC RIVER BASIN

Peak stages and discharges of Big River near DeSoto, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	29.4	a70,500	1954	June 9, 1954	15.20	10,700
1949	Feb. 15, 1949	19.9	a21,300	1955	Mar. 21, 1955	17.03	13,300
1950	Oct. 6, 1949	15.37	11,000	1956	May 16, 1956	12.20	7,200
	Jan. 4, 1950	23.91	36,600		Feb. 27, 1957	16.74	12,800
	Jan. 13, 1950	16.77	13,400	1957	Mar. 25, 1957	13.15	16,900
	Feb. 13, 1950	14.40	10,000		Apr. 3, 1957	21.46	27,400
	May 10, 1950	16.32	12,800		Apr. 22, 1957	14.92	10,200
	Aug. 13, 1950	15.61	11,700		Apr. 28, 1957	16.82	13,500
	Aug. 15, 1950	16.16	12,600		May 17, 1957	16.60	13,100
	Sept. 2, 1950	16.17	12,600		May 20, 1957	15.87	11,700
					May 23, 1957	19.04	19,200
					June 30, 1957	27.15	55,800
					July 29, 1957	18.79	18,600
1951	Feb. 18, 1951	17.76	15,100	1958	Dec. 18, 1957	17.56	15,400
	Feb. 21, 1951	15.73	11,100		Mar. 24, 1958	17.48	15,100
	July 13, 1951	23.78	36,200		July 19, 1958	15.18	10,600
1952	Apr. 4, 1952	15.40	10,600				
	Apr. 13, 1952	15.17	10,300				
1953	Mar. 4, 1953	15.71	11,100				

a Annual peak only.

185. Big River at Byrnesville, Mo.

Location.--Lat 38°21'45", long 90°39'05", in SE¼ sec.12, T.42 N., R.3 E., at county highway bridge at Byrnesville, 4 miles upstream from Head Creek.

Drainage area.--917 sq mi.

Gage.--Nonrecording prior to Mar. 9, 1940; recording thereafter. Datum of gage is 433.69 ft above mean sea level, datum of 1929. Since Aug. 22, 1945, auxiliary wire-weight gage 4 miles downstream.

Stage-discharge relation.--Defined by current-meter measurements. Occasional backwater from Meramec River; slope used as a factor since 1945. Discharge for flood of Aug. 21, 1915, from slope-area measurement.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Aug. 21, 1915	30.2	a80,000	1931	Apr. 21, 1931	10.10	3,940
1923	Mar. 13, 1923	17.30	11,000	1932	Aug. 13, 1932	13.35	7,000
	May 17, 1923	17.40	11,100		Apr. 17, 1933	21.57	18,900
1924	Apr. 10, 1924	17.10	10,800	1933	May 15, 1933	21.70	19,200
1925	Dec. 20, 1924	12.58	6,200		May 16, 1934	13.70	7,080
1926	Nov. 9, 1925	18.97	13,100	1935	Mar. 12, 1935	24.65	28,800
1927	Apr. 2, 1927	22.63	21,900		June 12, 1935	18.62	12,700
	Apr. 16, 1927	19.82	14,800		June 22, 1935	20.35	15,800
	May 26, 1927	18.47	12,400	1936	Nov. 11, 1935	15.97	9,600
	June 3, 1927	17.98	11,800		Jan. 16, 1937	20.06	17,300
1928	Dec. 2, 1927	17.41	11,100	1937	Mar. 4, 1937	19.00	14,400
	Dec. 15, 1927	17.60	11,400		Feb. 19, 1938	22.53	24,600
	Apr. 7, 1928	17.38	11,100	1938	Mar. 17, 1938	19.05	14,400
	June 11, 1928	18.84	12,800		Mar. 31, 1938	19.70	16,200
	June 22, 1928	18.65	12,600		May 24, 1938	20.70	19,000
	June 30, 1928	17.66	11,500		June 11, 1938	20.15	17,600
1929	May 7, 1929	18.62	12,700	1939	Apr. 18, 1939	22.30	24,000
	May 15, 1929	20.00	15,200		May 2, 1940	14.81	7,540
1930	Jan. 15, 1930	21.00	17,400	1940			

a Annual peak only.

Peak stages and discharges of Big River at Byrnesville, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 19, 1941	16.15	9,150	1950	Jan. 14, 1950	18.54	13,400
1942	June 26, 1942	18.42	13,000		Apr. 4, 1950	18.09	12,500
					May 12, 1950	18.34	12,600
1943	Dec. 28, 1942	22.27	24,000	1951	Feb. 20, 1951	18.82	14,100
	May 12, 1943	22.57	25,000		July 14, 1951	23.48	30,500
	May 19, 1943	18.43	13,000				
1944	Apr. 24, 1944	18.30	12,800	1952	Apr. 14, 1952	17.37	10,500
1945	Mar. 4, 1945	18.57	13,500	1953	Mar. 5, 1953	16.97	10,200
	Mar. 7, 1945	20.84	19,300	1954	June 10, 1954	16.93	10,000
	Apr. 1, 1945	23.4	28,300				
	Apr. 16, 1945	22.17	23,600	1955	Mar. 22, 1955	18.20	12,700
	June 10, 1945	22.12	17,500				
1946	Feb. 15, 1946	21.57	21,800	1956	May 17, 1956	13.59	6,640
	May 2, 1946	19.02	14,200				
	May 18, 1946	17.91	11,300	1957	Feb. 28, 1957	18.00	12,300
					Mar. 26, 1957	19.76	17,600
1947	Apr. 26, 1947	23.5	28,000		Apr. 5, 1957	22.85	30,100
	July 2, 1947	19.56	15,800		Apr. 29, 1957	18.95	14,000
1948	Jan. 3, 1948	18.6	13,100		May 24, 1957	20.29	20,000
	May 18, 1948	18.83	13,700		June 15, 1957	20.50	13,100
1949	Jan. 20, 1949	18.82	13,300		July 1, 1957	26.41	42,100
	Jan. 26, 1949	20.31	18,600	1958	Dec. 19, 1957	18.55	13,300
	Feb. 16, 1949	20.39	18,700		Mar. 26, 1958	19.18	15,500
					July 19, 1958	19.06	12,900
1950	Jan. 5, 1950	25.23	36,900				

190. Meramec River near Eureka, Mo.

Location.--Lat 38°30'20", long 90°35'30", in SE $\frac{1}{4}$ sec.32, T.44 N., R.4 E., at bridge on U. S. Highway 66, 2 miles east of Eureka and 3 miles downstream from Big River.

Drainage area.--3,788 sq mi.

Gage.--Nonrecording prior to Sept. 22, 1937; recording thereafter. Prior to July 22, 1906, at site 200 ft upstream at different datum; Oct. 6, 1921, to Jan. 16, 1933, at site 200 ft upstream at datum 1.04 ft higher. Datum of present gage is 406.18 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 116,000 cfs and by slope-area measurement at 175,000 cfs.

Bankfull stage.--22 ft.

Remarks.--Base for partial-duration series, 32,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Mar. 28, 1904	36.2	68,100	1927	Apr. 3, 1927	29.47	64,000
	Apr. 27, 1904	28.7	48,600		Apr. 11, 1927	21.54	34,400
1905	Sept. 20, 1905	29.7	51,200		Apr. 17, 1927	25.21	44,200
					May 27, 1927	21.12	33,400
1915	Aug. 22, 1915	39.2	a175,000		June 4, 1927	22.80	37,400
1916	Feb. 1, 1916	36.0	a113,000	1928	Apr. 8, 9, 1928	23.80	39,800
					June 11, 1928	20.78	32,700
1922	Apr. 19, 1922	24.45	38,600		June 21, 1928	21.07	33,400
1923	Mar. 17, 1923	16.95	24,800	1929	May 15, 1929	21.10	33,400
1924	May 30, 1924	20.50	31,000	1930	Jan. 16, 1930	24.41	42,200
1925	Dec. 22, 1924	14.60	20,100	1931	May 22, 1931	6.10	6,420
1926	Nov. 10, 1925	17.18	24,800	1932	Jan. 3, 1932	8.35	9,540
					Aug. 14, 1932	8.35	9,540

a Annual peak only.

MERAMEC RIVER BASIN

Peak stages and discharges of Meramec River near Eureka, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Apr. 18, 1933	21.82	35,700	1946	Feb. 16, 1946	23.52	40,300
	May 17, 1933	30.72	63,400				
1934	Sept. 18, 1934	17.91	27,100	1947	Apr. 27, 1947	31.15	66,400
1935	Mar. 14, 1935	30.89	62,200	1948	Jan. 3, 1948	17.00	25,000
	June 24, 1935	26.32	48,400	1949	Jan. 27, 1949	20.30	32,200
	June 29, 1935	23.04	39,400		Feb. 17, 1949	21.80	35,900
1936	Nov. 12, 1935	13.22	17,400	1950	Jan. 6, 1950	33.01	79,700
1937	May 6, 1937	21.56	35,700		Jan. 18, 1950	20.53	32,500
					May 13, 1950	21.28	34,600
1938	Feb. 20, 1938	25.10	45,000	1951	Feb. 21, 1951	21.33	34,600
	May 25, 1938	23.11	39,700		July 15, 1951	27.08	50,700
	June 12, 1938	25.47	46,100	1952	Apr. 14, 1952	16.99	25,500
1939	Apr. 19, 1939	26.95	61,600	1953	Mar. 6, 1953	15.00	21,800
1940	June 29, 1940	11.41	14,800	1954	June 10, 1954	11.54	15,600
1941	Apr. 22, 1941	22.07	38,000	1955	Mar. 23, 1955	17.84	28,100
1942	June 28, 1942	21.90	37,400	1956	June 2, 1956	11.50	15,600
1943	Dec. 30, 1942	31.78	69,600	1957	Mar. 27, 1957	20.58	34,600
	May 13, 1943	24.29	42,800		Apr. 6, 1957	24.19	44,400
	May 21, 1943	27.70	52,400		Apr. 30, 1957	21.88	38,000
1944	Apr. 25, 1944	17.26	26,100		May 25, 1957	29.45	59,600
1945	Mar. 8, 1945	22.38	37,400		June 15, 1957	31.19	66,000
	Apr. 2, 1945	28.98	57,100		July 2, 1957	35.77	99,500
	Apr. 17, 1945	32.13	72,500	1958	Mar. 26, 1958	20.26	35,800
	June 11, 1945	36.94	120,000		July 19, 1958	19.13	32,800

MISSISSIPPI RIVER MAIN STEM

205. Mississippi River at Chester, Ill.

Location.--Lat 37°54'00", long 89°49'50", in SW $\frac{1}{4}$ sec.24, T.7 S., R.7 W., third principal meridian, on left bank 0.4 mile downstream from highway bridge at Chester, 8.3 miles downstream from Kaskaskia River, and at mile 109.5 above Ohio River.

Drainage area.--712,600 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 341.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Continually shifting, defined by frequent current-meter measurements.

Bankfull stage.--27 ft.

Remarks.--Records prior to July 1942 furnished by Mississippi River Commission. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River basin, and by many reservoirs and diversions for irrigation in Missouri River basin. Discharges prior to the 1942 water year are maximum daily discharges. Only annual peaks are shown.

Peak stages and discharges of Mississippi River at Chester, Ill.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1844	June 30, 1844	39.8	a1,350,000	1942	July 1, 1942	34.0	603,000
1926	Sept. 30, 1926	23.8	501,000	1943	May 24, 1943	38.08	e873,000
1927	Apr. 27, 1927	34.4	1,060,000	1944	May 2, 1944	37.4	842,000
1928	June 23, 1928	28.0	626,000	1945	Apr. 2, 1945	f34.4	716,000
1929	Apr. 29, 1929	b33.3	878,000	1946	Jan. 13, 14, 1946	27.5	502,000
1930	June 21, 22, 1930	19.7	342,000	1947	July 3, 1947	b38.17	886,000
1931	June 16, 1931	14.4	221,000	1948	Mar. 28, 1948	32.8	668,000
1932	Dec. 1, 1931	23.3	451,000	1949	Apr. 3, 4, 1949	24.7	426,000
1933	May 18, 1933	28.9	500,000	1950	May 15, 1950	27.6	476,000
1934	Apr. 25, 1934	10.2	137,000	1951	July 22, 1951	b39.3	795,000
1935	June 10, 1935	b33.4	665,000	1952	Apr. 30, 1952	b34.4	685,000
1936	Mar. 1, 1936	20.8	326,000	1953	Apr. 5, 1953	22.2	378,000
1937	May 6, 7, 1937	24.6	422,000	1954	June 7, 1954	18.8	289,000
1938	May 28, 1938	27.1	540,000	1955	Feb. 23, 1955	19.5	332,000
1939	Apr. 21, 1939	30.6	618,000	1956	Oct. 9, 1955	14.9	221,000
1940	Apr. 21, 1940	c13.6	d193,000	1957	May 28, 1957	25.6	426,000
1941	Apr. 24, 1941	b26.9	d455,000	1958	July 25, 1958	29.3	510,000

a Computed by Corps of Engineers, date approximate.

b Occurred at different time than peak discharge.

c Occurred June 15, 1940.

d Computed on basis of records for stations at St. Louis, Mo., and Thebes, Ill.

e Does not include flow bypassing gage through levee breaks upstream.

f Occurred June 14, 1945.

HEADWATER DIVERSION CHANNEL BASIN

(CASTOR AND WHITEWATER RIVERS)

210. Castor River at Zalma, Mo.

Location.--Lat 37°08'45", long 90°04'30", in SE $\frac{1}{4}$ sec. 29, T. 29 N., R. 9 E., at bridge on State Highway 51 in Zalma, $2\frac{1}{2}$ miles downstream from Perkins Creek.

Drainage area.--423 sq mi.

Gage.--Nonrecording prior to June 9, 1953; recording thereafter. Prior to Oct. 1, 1925, at site 500 ft upstream at datum 49.82 ft lower; Oct. 1, 1925, to Nov. 12, 1930, at site 500 ft upstream at datum 0.18 ft higher. Datum of present gage is 350.38 ft above mean sea level, datum of 1929. Since Dec. 18, 1949, auxiliary staff gage 6 miles downstream. Gage heights given herein converted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 25,000 cfs. Slope used as a factor since 1949.

Bankfull stage.--19 ft.

Remarks.--Peaks for period prior to Sept. 12, 1921, computed from plotted Little River Drainage District gage readings. Work on Headwater Diversion Channel completed about March 1919. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	May 17, 1920	26.1	17,400	1926	Feb. 26, 1926	20.3	5,920
1921	Apr. 27, 1921	22.4	7,660	1927	Apr. 1, 1927	24.0	10,600
1922	Nov. 20, 1921	24.0	10,600		Apr. 16, 1927	24.6	12,100
	Apr. 1, 1922	23.6	9,720		June 2, 1927	23.6	9,720
1923	Feb. 2, 1923	24.0	10,600	1928	Dec. 14, 1927	26.5	19,400
1924	May 30, 1924	24.6	3,160		June 14, 1928	23.6	9,720
1925	June 14, 1925	23.3	2,670		June 21, 1928	24.9	13,000
				1929	June 14, 1929	22.0	7,250

HEADWATER DIVERSION CHANNEL BASIN

Peak stages and discharges of Castor River at Zalma, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 14, 1930	23.7	9,940	1945	Apr. 15, 1945	25.20	18,550
1931	Mar. 8, 1931	16.10	3,800		June 9, 1945	26.04	24,100
1932	Jan. 17, 1932	20.22	5,920		June 18, 1945	23.40	9,600
1933	Dec. 25, 1932	22.82	8,180	1946	Feb. 14, 1946	24.30	13,550
	Jan. 23, 1933	23.63	9,720		May 2, 1946	23.98	12,050
	Apr. 16, 1933	24.30	11,400		May 17, 1946	24.5	14,600
	May 12, 1933	23.45	9,300	1947	Apr. 26, 1947	18.8	4,990
	May 14, 1933	25.86	16,600	1948	Jan. 1, 1948	27.8	38,400
1934	Mar. 27, 1934	12.78	2,560	1949	Jan. 19, 1949	22.6	8,530
1935	Mar. 11, 1935	28.20	40,000		Jan. 24, 1949	28.1	40,100
1936	Nov. 16, 1935	9.64	1,610		Mar. 27, 1949	24.0	13,100
1937	Jan. 14, 1937	27.67	40,400	1950	Jan. 4, 1950	26.4	27,400
1938	Feb. 19, 1938	23.72	14,900		Feb. 13, 1950	26.6	28,800
1939	Mar. 6, 1939	23.35	10,950		Apr. 4, 1950	24.8	17,100
	Apr. 17, 1939	24.17	14,600	1951	Feb. 21, 1951	23.20	9,950
1940	Apr. 20, 1940	22.10	7,730	1952	Nov. 25, 1951	23.50	11,000
1941	Jan. 2, 1941	12.3	2,480		Mar. 12, 1952	23.50	11,000
1942	Apr. 9, 1942	23.20	10,200	1953	Mar. 4, 1953	18.3	4,900
1943	Dec. 28, 1942	22.45	8,150	1954	May 3, 1954	20.44	6,290
	May 11, 1943	26.60	31,600	1955	Mar. 21, 1955	25.10	18,800
1944	Apr. 24, 1944	23.60	11,700	1956	Feb. 19, 1956	19.79	5,490
1945	Feb. 27, 1945	25.85	22,600	1957	Apr. 4, 1957	26.53	28,100
	Mar. 7, 1945	25.00	17,350		May 20, 1957	23.30	10,300
	Mar. 20, 1945	22.80	8,150		May 23, 1957	26.27	26,700
	Mar. 26, 1945	22.95	8,550		July 1, 1957	26.07	25,300
	Mar. 31, 1945	24.30	13,550	1958	Nov. 19, 1957	23.17	9,950
					Dec. 20, 1957	23.78	12,200
					Mar. 25, 1958	24.90	17,600

MISSISSIPPI RIVER MAIN STEM

220. Mississippi River at Thebes, Ill.
(Published as "at Cape Girardeau, Mo." prior to 1941)

Location.--Lat 37°13'00", long 89°27'50", in NW¼ sec.17, T.15 S., R.3 W., on downstream side of railroad bridge at Thebes, 5.0 miles downstream from headwater diversion channel and at mile 43.7 above Ohio River.

Drainage area.--717,200 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 21, 1934, and Apr. 5, 1941, to Sept. 30, 1943; recording Dec. 22, 1934, to Apr. 4, 1941, and since Oct. 1, 1943. Prior to Apr. 5, 1941, at site 8.2 miles upstream at datum 304.65 ft higher than present gage; Apr. 5, 1941, to Sept. 30, 1944, at present site and at datum 300.00 ft higher than present datum. Gage heights given herein beginning with 1941 converted to present datum which is at mean sea level, datum of 1929. Since Oct. 1, 1943, former gage at Cape Girardeau used as auxiliary gage; previously, various auxiliary gages used.

Stage-discharge relation.--Affected by backwater from Ohio River. Fall between auxiliary and reference gage used as a factor in computing discharge. Frequent current-meter measurements necessary to define relationship.

Bankfull stage.--333 ft.

Remarks.--Natural flow of stream affected by many reservoirs and navigation dams in Upper Mississippi River basin, and by many reservoirs and diversions for irrigation in Missouri River basin. Only annual peaks are shown.

Peak stages and discharges of Mississippi River at Thebes, Ill.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1844	July 4, 1844	a42.53	a1,375,000	1946	Jan. 14, 1946	b333.68	506,000
1933	May 18, 19, 1933	b34.4	525,000	1947	July 6, 1947	b340.08	837,000
1934	Apr. 27, 1934	14.4	140,000	1948	Mar. 28, 1948	b336.97	676,000
1935	June 10, 1935	b36.26	623,000	1949	Apr. 4, 1949	b331.35	447,000
				1950	May 15, 1950	b332.29	491,000
1936	Mar. 2, 1936	25.19	318,000	1951	July 24, 1951	b339.91	805,000
1937	May 7, 1937	30.36	420,000	1952	May 2, 1952	b337.36	685,000
1938	May 28, 1938	31.0	c552,000	1953	Apr. 6, 1953	326.66	382,000
1939	Apr. 21, 1939	35.8	c637,000	1954	June 7, 1954	322.25	292,000
1940	Apr. 21, 1940	19.64	199,000	1955	Feb. 25, 1955	324.39	329,000
1941	Apr. 24, 1941	329.11	469,000	1956	Oct. 9, 1955	318.48	220,000
1942	June 30, 1942	b335.65	615,000	1957	May 23, 1957	b331.62	463,000
1943	May 27, 1943	340.28	895,000	1958	July 25, 1958	b333.87	534,000
1944	May 6, 1944	339.05	812,000				
1945	Apr. 2, 1945	b337.90	702,000				

a Computed by Corps of Engineers.

b Occurred at different time than peak discharge.

c Computed on basis of records at Chester, Ill.

MAYFIELD CREEK BASIN

225. Perry Creek near Mayfield, Ky.

Location.--Lat 36°40'45", long 88°37'57", on right bank at downstream side of bridge on State Highway 303, 1.8 miles upstream from mouth and 3.5 miles south of city limits of Mayfield, Graves County.

Drainage area.--1.72 sq mi.

Gage.--Recording. Datum of gage is 478.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 420 cfs for periods Nov. 7, 1952, to Sept. 30, 1955, and since Jan. 23, 1957; below 660 cfs for period Oct. 1, 1955, to Jan. 22, 1957.

Remarks.--Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	March 1952	a10.3	-	1956	Feb. 1, 1956	4.86	283
1953	Dec. 4, 1952	5.17	436		Feb. 2, 1956	6.00	440
	Mar. 3, 1953	6.82	780		May 15, 1956	4.75	270
	Mar. 14, 1953	6.11	624	1957	Jan. 22, 1957	7.66	707
	May 14, 1953	5.40	480		Apr. 4, 1957	6.02	602
	May 18, 1953	5.63	526		May 22, 1957	6.42	692
1954	Jan. 20, 1954	5.60	520		June 1, 1957	5.41	482
1955	Feb. 27, 1955	5.32	464		June 9, 1957	5.51	502
	Feb. 28, 1955	5.40	480		Aug. 14, 1957	5.09	421
	Mar. 20, 1955	7.12	846	1958	Nov. 13, 1957	5.38	476
	July 20, 1955	6.83	783		Nov. 18, 1957	6.74	763
	July 23, 1955	5.11	425				

a Annual peak only.

230. Mayfield Creek at Lovelaceville, Ky.

Location.--Lat 36°57'09" long 88°49'30", near right bank on downstream side of pier of bridge on U. S. Highway 62, 400 ft south of Ballard-Carlisle County line, 1.2 miles south of Lovelaceville, and 4 miles upstream from Wilson Creek.

Drainage area.--211 sq mi.

Gage.--Nonrecording prior to July 6, 1937; recording thereafter. Datum of gage is 326.22 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 9,300 cfs and extended above on basis of slope-area measurement at 19,800 cfs.

Bankfull stage.--16 ft.

Historical data.--1937 flood is highest flood known since 1926, from information by local residents.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	January 1937	21.1	19,800	1949	Feb. 15, 1949	19.37	10,900
1938	Aug. 1, 1938	17.9	7,140		Mar. 27, 1949	17.35	6,000
1939	Jan. 31, 1939	17.1	5,420	1950	Dec. 13, 1949	16.55	4,580
	Feb. 3, 1939	17.35	6,080		Jan. 4, 1950	18.19	7,780
	Feb. 10, 1939	16.2	4,090		Jan. 11, 1950	16.48	4,470
	Mar. 5, 1939	17.2	5,670		Jan. 13, 1950	17.34	5,980
	Apr. 6, 1939	16.6	4,520		Feb. 13, 1950	19.11	10,000
	Apr. 18, 1939	17.6	6,830		Mar. 27, 1950	17.03	5,380
					Sept. 1, 1950	16.48	4,470
1940	Feb. 19, 1940	16.8	4,800	1951	Nov. 20, 1950	16.98	4,180
	Apr. 19, 1940	16.58	4,500		Jan. 4, 1951	16.88	4,070
	May 1, 1940	16.15	4,040		Jan. 15, 1951	18.50	8,300
1941	Jan. 24, 1941	11.29	2,060		Feb. 20, 1951	17.15	4,420
					Mar. 19, 1951	16.92	4,110
1942	Feb. 17, 1942	16.13	4,030	1952	Jan. 2, 1952	17.93	6,590
	Apr. 10, 1942	17.31	5,940		Jan. 4, 1952	17.64	5,720
1943	Mar. 20, 1943	16.64	4,520		Mar. 10, 1952	18.20	7,400
	May 11, 1943	18.34	8,160		Mar. 22, 1952	17.34	4,830
1944	Apr. 11, 1944	17.0	5,190	1953	Mar. 5, 1953	17.79	6,170
					May 19, 1953	17.14	4,400
1945	Feb. 21, 1945	16.56	4,290	1954	May 7, 1954	16.10	3,480
	Mar. 31, 1945	16.90	4,650				
	Apr. 2, 1945	17.9	7,160	1955	Mar. 22, 1955	17.75	6,050
	Apr. 15, 1945	17.62	6,220		Apr. 24, 1955	16.95	4,050
	June 11, 1945	17.36	4,980				
1946	Jan. 9, 1946	17.74	7,160	1956	Feb. 3, 1956	17.27	4,620
	Feb. 14, 1946	17.43	6,220		Feb. 19, 1956	17.43	5,090
	May 25, 1946	17.52	6,220	1957	Apr. 5, 1957	17.43	4,700
1947	Jan. 3, 1947	17.0	5,190		May 23, 1957	18.13	6,060
1948	Mar. 27, 1948	17.00	5,190	1958	Nov. 15, 1957	18.33	6,490
	Apr. 13, 1948	16.20	4,090		Nov. 19, 1947	19.64	11,200
					Dec. 8, 1957	17.13	4,570
1949	Dec. 17, 1948	17.53	6,360		Dec. 20, 1957	17.02	4,470
	Jan. 24, 1949	17.77	6,870		Jan. 21, 1958	17.08	4,520
	Jan. 28, 1949	16.40	4,320		Mar. 24, 1958	18.05	5,900

a Annual peak only.

232. Mississippi River at Columbus, Ky.

Location.--Lat 36°45'55", long 89°06'47", on left bank about 1,400 ft upstream from Ferry Landing at Columbus, Hickman County, 13 miles downstream from Mayfield Creek, and at mile 947.3.

Drainage area.--921,900 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 266.59 ft above mean sea level, datum of 1929. 1885-1902 gage at Belmont, Mo., opposite Columbus, at same datum.

Stage-discharge relation.--Defined by current-meter measurements. Water-surface slope is a factor. Shifts have occurred.

Bankfull stage.--40 ft.

Remarks.--Records furnished by Mississippi River Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1844	July 1844	42.0	-	1918	Feb. 25, 1918	37.7	1,001,000
1858	June 17, 18, 1858	a42.9	1,403,000	1919	Mar. 24, 1919	44.68	1,488,000
				1920	Mar. 31, Apr. 1,	47.05	1,408,000
1880	-	39.47	-	1921	Apr. 3, 1921	36.1	935,000
1882	Feb. 22, 1882	a45.10	b1,603,000	1922	Apr. 26, 1922	49.0	1,508,000
1883	Feb. 26, 1883	45.58	-	1923	Mar. 22, 1923	43.1	1,255,000
1884	Feb. 23, 24, 1884	45.37	-	1924	Jan. 14, 1924	40.55	1,122,000
1885	Jan. 28, 1885	36.40	-	1925	Feb. 26, 1925	35.1	896,000
1886	Apr. 19, 1886	44.88	-	1926	Dec. 31, 1925	41.0	1,001,000
1887	Mar. 10, 11, 1887	43.30	-	1927	Apr. 16, 1927	51.0	-
1888	Apr. 6, 1888	41.35	-	1928	July 5, 6, 1928	42.9	1,236,000
1889	June 24, 1889	31.71	-	1929	May 19, 1929	49.3	1,642,000
1890	Apr. 6, 1890	43.33	-	1930	Jan. 19, 1930	41.73	-
1891	Mar. 1, 1891	a41.30	1,381,000	1931	Apr. 12, 1931	32.9	-
1892	Apr. 30, 1892	a43.14	1,401,000	1932	Feb. 15, 1932	46.38	-
1893	May 8, 1893	a43.80	1,537,000	1933	May 21, 1933	48.7	-
1894	Feb. 16, 1894	34.15	-	1934	Mar. 15, 1934	39.1	-
1895	Jan. 22, 1895	30.40	-	1935	Mar. 22, 23, 1935	47.3	-
1896	Apr. 14, 1896	a35.85	944,000	1936	Apr. 15-17, 1936	49.6	-
1897	Mar. 28-30, 1897	45.08	-	1937	Jan. 25, 1937	54.54	-
1898	Apr. 2, 1898	a43.98	b1,511,000	1938	Apr. 16, 1938	42.9	-
1899	Apr. 4, 1899	42.0	-	1939	Mar. 18, 19, 1939	48.4	-
1900	Mar. 17, 1900	36.93	996,000	1940	May 3, 1940	42.34	-
1901	May 1, 1901	39.83	1,183,000	1941	Apr. 26, 1941	29.7	-
1902	Mar. 17, 1902	38.6	1,099,000	1942	Mar. 25, 1942	41.15	-
1903	Mar. 16, 17, 1903	a44.5	1,483,000	1943	May 30, 1943	50.14	-
1904	Apr. 5, 1904	43.91	1,502,000	1944	Apr. 29, 1944	48.51	-
1905	May 24, 1905	35.8	935,000	1945	Mar. 11, 1945	50.72	-
1906	Apr. 10, 1906	42.39	1,366,000	1946	Jan. 17, 1946	49.3	-
1907	Jan. 27, 1907	44.68	1,531,000	1947	Apr. 20, 1947	45.0	-
1908	Mar. 18, 19, 1908	41.9	1,331,000	1948	Apr. 2, 3, 1948	48.95	-
1909	Mar. 17, 1909	43.7	1,465,000	1949	Jan. 31, 1949	47.55	-
1910	Mar. 15, 1910	39.52	1,161,000	1950	Feb. 15, 1950	52.73	-
1911	Apr. 21, 1911	41.87	1,329,000	1951	Feb. 26, 1951	46.5	-
1912	Apr. 2, 1912	a49.0	2,015,000	1952	Mar. 27, 28, 1952	48.0	-
1913	Apr. 9, 1913	a49.3	2,015,000	1953	May 21, 1953	35.75	-
1914	Apr. 10, 1914	38.6	1,099,000	1954	Jan. 27, 28, 1954	28.96	-
1915	Feb. 12, 1915	42.05	1,542,000	1955	Mar. 28, 29, 1955	47.05	-
1916	Feb. 3, 1916	a48.55	1,775,000	1956	Feb. 27, 28, 1956	40.96	-
1917	Apr. 5, 1917	45.75	1,428,000	1957	Feb. 12, 13, 1957	43.0	-
				1958	July 26, 1958	42.15	-

a Occurred on different day than peak discharge.

b Might have been higher during period of no record.

OBION CREEK BASIN

235. Obion Creek at Pryorsburg, Ky.

Location.--Lat 36°41'10", long 88°43'35", on right bank at downstream side of bridge on U. S. Highway 45, 0.5 mile southwest of Pryorsburg, Graves County, and 3.1 miles upstream from Cane Creek.

Drainage area.--36.3 sq mi.

Gage.--Recording. Prior to Dec. 2, 1954, at about same site but upstream from former bridge at same datum. Datum at gage is 393.55 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,100 cfs.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Feb. 14, 1949	13.0	-	1956	Feb. 2, 1956	9.78	2,170
1952	Dec. 3, 1951	10.43	2,240	1956	Feb. 18, 1956	10.08	2,440
	Dec. 25, 1951	9.85	2,010		Mar. 14, 1956	9.82	2,210
	Mar. 10, 1952	11.05	2,520				
	Mar. 22, 1952	11.50	2,750	1957	Jan. 22, 1957	10.67	3,030
1953	Mar. 3, 1953	10.73	2,360		Apr. 4, 1957	10.61	2,970
	Mar. 18, 1953	10.06	2,090		May 23, 1957	10.63	2,990
					June 10, 1957	11.46	3,900
1954	July 23, 1954	9.60	1,910	1958	Nov. 13, 1957	10.88	3,260
					Nov. 18, 1957	12.60	5,330
1955	Mar. 21, 1955	10.11	2,110		Dec. 7, 1957	10.65	3,010
					Dec. 16, 1957	9.79	2,180
1956	Jan. 29, 1956	9.56	2,000		Mar. 23, 1958	9.56	2,000

a Annual peak only.

BAYOU DU CHIEN BASIN

240. Bayou du Chien near Clinton, Ky.

(Published as "Bayou de Chien" prior to October 1954)

Location.--Lat 36°37'43", long 88°57'50", on left bank at upstream side of bridge on U. S. Highway 51, 1.1 miles upstream from Cane Creek, 3½ miles southeast of Clinton, Hickman County, and 13½ miles upstream from mouth.

Drainage area.--68.5 sq mi.

Gage.--Nonrecording prior to Aug. 2, 1951; recording thereafter. Datum of gage is 307.71 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 4,100 cfs, extended above by logarithmic plotting.

Bankfull stage.--11 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Mar. 13, 1940	13.4	3,000	1945	Feb. 21, 1945	12.8	2,180
	Apr. 17, 1940	13.0	2,500		Mar. 30, 1945	12.7	2,000
	June 28, 1940	12.6	2,130		Apr. 2, 1945	13.8	2,500
1941	Jan. 24, 1941	10.1	1,010		May 8, 1945	12.7	2,080
					June 9, 1945	13.9	3,840
1942	Feb. 17, 1942	12.6	2,130	1946	Jan. 9, 1946	13.1	2,540
	Mar. 13, 1942	12.5	2,050		Feb. 14, 1946	12.8	2,180
	Apr. 9, 1942	13.2	2,730		May 25, 1946	13.2	2,680
1943	May 11, 1943	12.9	2,400	1947	Nov. 26, 1946	12.85	2,240
1944	Feb. 28, 1944	13.3	2,860		Jan. 3, 1947	13.2	2,680
	May 24, 1944	13.0	2,500		Apr. 11, 1947	13.1	2,540

Peak stages and discharges of Bayou du Chien near Clinton, Ky.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 27, 1948	12.7	1,800	1953	Mar. 4, 1953	13.75	2,990
1949	Dec. 16, 1948	13.2	2,440	1954	Mar. 24, 1954	12.34	1,160
	Feb. 14, 1949	14.16	4,360	1955	Mar. 21, 1955	13.00	1,800
	Mar. 27, 1949	12.9	2,020				
1950	Dec. 12, 1949	12.9	2,020	1956	Feb. 2, 1956	13.42	2,340
	Jan. 3, 1950	13.3	2,600	1956	Feb. 18, 1956	14.01	3,630
	Feb. 13, 1950	13.5	2,500				
	Mar. 28, 1950	13.1	2,290	1957	Jan. 23, 1957	13.31	2,080
	Aug. 31, 1950	14.3	4,760		Apr. 4, 1957	13.83	3,170
					May 23, 1957	14.29	4,330
1951	Jan. 11, 1951	14.06	4,490	1958	Nov. 14, 1957	13.88	3,290
	Jan. 15, 1951	15.00	6,880		Nov. 18, 1957	14.89	6,470
	Mar. 18, 1951	13.45	3,070		Dec. 7, 1957	13.44	2,330
1952	Mar. 11, 1952	13.92	3,390		Mar. 24, 1958	13.47	2,390
	Mar. 22, 1952	14.02	3,650				

MISSISSIPPI RIVER MAIN STEM

242. Mississippi River at Hickman, Ky.

Location.--Lat 36°34'22", long 89°11'56", on left bank near upstream end of sea wall at Hickman, Fulton County, half a mile downstream from Bayou du Chien and Obion Creek and at mile 932.1.

Drainage area.--922,500 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 264.92 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements throughout. Slope is a factor. Shifts have occurred.

Bankfull stage.--35 ft.

Remarks.--Records furnished by Mississippi River Commission. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 6, 1927	48.3	1,626,000	1944	Apr. 28, 1944	45.15	1,383,000
1930	Jan. 19, 1930	38.4	1,130,000	1945	Mar. 11, Apr. 4	47.33	1,470,000
1931	Dec. 21, 1930	33.9	934,000	1946	Jan. 17, 1946	45.8	1,449,000
1932	Feb. 14, 1932	43.2	1,209,000	1947	Apr. 17, 1947	41.65	1,136,000
1933	Apr. 5, 1933	45.6	1,353,000	1948	Apr. 3, 1948	45.6	1,342,000
1934	Mar. 15, 16, 1934	35.9	902,000	1949	Jan. 31, 1949	44.45	1,296,000
1935	Mar. 21, 1935	44.06	1,173,000	1950	Feb. 14, 1950	49.0	1,578,000
1936	Apr. 16, 17, 1936	46.3	1,407,000	1951	Feb. 26, 1951	43.1	1,175,000
1937	Feb. 1, 1937	51.5	2,010,000	1952	Mar. 26, 1952	44.9	1,222,000
1938	Apr. 16, 1938	39.3	1,023,000	1953	May 21, 1953	32.55	786,000
1939	Mar. 18, 1939	44.8	1,323,000	1954	Jan. 27, 28, 1954	25.33	592,000
1940	May 4, 1940	38.84	1,034,000	1955	Mar. 27, 1955	43.90	1,270,000
1941	Apr. 26, 1941	26.15	630,000	1956	Feb. 26, 1956	37.61	968,000
1942	Mar. 27, 1942	37.85	997,000	1957	Feb. 12, 1957	39.55	1,052,000
1943	May 29, 1943	46.7	1,486,000	1958	July 26, 1958	38.5	1,013,000

a Possibly exceeded Apr. 21, 22, 1927.

b Includes discharge through New Madrid floodway.

Note.--Peak gage height frequently occurs on different day than peak discharge.

245. South Fork Obion River near Greenfield, Tenn.

Location.--Lat 36°07'05", long 88°48'39", on left bank 75 ft downstream from bridge on U. S. Highway 45E, 1.1 miles downstream from Mosley Branch, 2.5 miles south of Greenfield, Weakley County, and 9.7 miles upstream from Middle Fork.

Drainage area.--431 sq mi.

Gage.--Nonrecording prior to June 22, 1939; recording thereafter. Datum of gage is 300.37 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs for flood of Jan. 22, 1937. Channel changes have caused progressive decrease in conveyance at high stages resulting in lower discharges for equivalent stages. Stage-discharge relation from 1950-55 defined by current-meter measurements below 8,600 cfs and extended above.

Bankfull-stage.--13 ft.

Remarks.--Channel is a dredged canal. Base for partial-duration series, 2,600 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 10, 1930	15.52	12,800	1949	Nov. 8, 1948	15.03	4,630
1931	Mar. 28, 1931	12.16	2,470		Nov. 22, 1948	15.16	5,520
1932	Jan. 15, 1932	15.3	11,900		Jan. 29, 1949	15.30	6,550
1933	Jan. 22, 1933	13.95	6,400		Mar. 21, 1949	14.70	2,830
1934	Dec. 20, 1933	13.54	4,480		Mar. 26, 1949	14.90	3,800
1935	Jan. 21, 1935	17.1	21,100	1950	Dec. 13, 1949	17.00	20,000
1936	Mar. 28, 1936	14.40	8,040		Jan. 6 or 7, 1950	-	6,000
1937	Jan. 22, 1937	17.82	25,600		Jan. 13, 1950	14.82	4,000
1938	June 2, 1938	14.40	7,060		Feb. 2, 1950	15.98	11,000
1939	Feb. 5, 1939	14.80	7,940		Mar. 15, 1950	14.75	3,650
	Mar. 7, 1939	13.70	3,290		May 9, 1950	14.79	3,850
	Apr. 1, 1939	14.00	4,120	1951	Nov. 23, 1950	14.87	3,280
	Apr. 17, 1939	13.60	3,060		Dec. 7, 1950	15.01	4,260
	June 17, 1939	13.50	2,860		Jan. 5, 1951	15.68	8,860
1940	Mar. 4, 1940	13.20	2,280		Jan. 14, 1951	16.13	12,200
1941	Apr. 20, 1941	11.40	1,220		Feb. 10, 1951	14.84	3,220
1942	Mar. 17, 1942	13.78	2,920		Feb. 20, 1951	14.90	3,550
	Apr. 11, 1942	15.65	12,600		Apr. 24, 1951	14.91	3,620
1943	Dec. 31, 1942	13.95	3,500	1952	Nov. 27, 1951	15.06	4,520
	Mar. 16, 1943	14.19	4,580		Dec. 11, 1951	15.15	5,150
	Mar. 21, 1943	15.13	9,670		Dec. 20, 1951	14.93	3,610
	May 24, 1943	14.70	7,160		Dec. 25, 1951	14.87	3,220
1944	Feb. 29, 1944	13.92	3,200		Feb. 17, 1952	14.82	2,920
	Mar. 23, 1944	14.12	4,050		Mar. 13, 1952	15.12	4,940
	Apr. 13, 1944	14.31	5,000		Mar. 25, 1952	15.02	4,240
1945	Dec. 28, 1944	14.49	4,400	1953	Mar. 5, 1953	15.32	6,340
	Jan. 2, 1945	14.95	6,720		Mar. 22, 1953	14.99	4,030
	Feb. 21, 1945	13.97	2,600		Mar. 25, 1953	15.00	4,100
	Apr. 5, 1945	14.05	2,820		Apr. 4, 1953	14.90	3,400
	June 11, 1945	14.94	6,670		May 19, 1953	15.88	10,300
1946	Nov. 13, 1945	14.34	3,760	1954	Jan. 16, 1954	15.26	5,920
	Jan. 10, 1946	15.53	10,900		Jan. 23, 1954	15.28	6,060
	Mar. 28, 1946	15.30	9,600	1955	Mar. 23, 1955	15.73	8,640
	July 11, 1946	14.05	2,820		Apr. 15, 1955	14.97	3,480
1947	Jan. 4, 1947	15.16	8,320	1956	Jan. 31, 1956	16.98	17,500
	Jan. 20, 1947	14.21	2,740		Feb. 18, 1956	16.00	8,700
	May 20, 1947	14.24	2,840		Mar. 17, 1956	14.79	3,070
1948	Feb. 15, 1948	15.23	6,020		Apr. 14, 1956	14.75	2,950
				1957	Feb. 1, 1957	15.75	6,550
					Apr. 7, 1957	15.22	3,600
					May 26, 1957	-	3,000
					June 5, 1957	15.01	2,640
					July 4, 1957	15.32	4,100
				1958	Nov. 18, 1957	16.74	14,900
					Dec. 10, 1957	15.27	3,850
					Dec. 22, 1957	15.14	3,200
					Mar. 26, 1958	15.18	3,400
					May 5, 1958	15.23	3,650

248. South Fork Obion River near Kenton, Tenn.

Location.--Lat 36°14'45", long 88°58'28", at highway bridge 4.5 miles northeast of Kenton, Obion County, and 10 miles west of Sharon, Weakley County, Tenn.

Drainage area.--760 sq mi.

Gage.--Nonrecording. Datum of gage is 271.84 ft above mean Gulf level.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	January 1937	26.2	-	1949	Dec. 19, 1948	18.8	-
1939	Feb. 6, 1939	19.6	-	1950	Feb. 3, 1950	20.0	-
1940	Apr. 21, 1940	17.4	-	1951	Jan. 16-17, 1951	20.2	-
1941	Jan. 27, 1941	15.1	-	1952	Nov. 27-28, 1951	18.9	-
1942	Apr. 12, 1942	20.0	-	1953	May 19-20, 1953	20.4	-
1943	Mar. 22, 1943	19.6	-	1954	Jan. 16, Jan. 23-25	18.6	-
1944	Apr. 13, 1944	18.0	-	1955	Mar. 23-24, 1955	19.8	-
1945	June 10, 1945	20.5	-	1956	Feb. 3, 1956	22.5	-
1946	Jan. 11, 1946	20.1	-	1957	Oct. 4, 1956	17.4	-
1948	Feb. 16-17, 1948	18.6	-	1958	Mar. 26, 27, 1958	19.2	-

250. Rutherford Fork Obion River near Bradford, Tenn.

Location.--Lat 36°03'10", long 88°52'42", on left bank 10 ft downstream from bridge on Stage Highway 54, 2.0 miles upstream from Camp Creek, 4 miles south-west of Bradford, Gibson County, and 17½ miles upstream from mouth.

Drainage area.--203 sq mi.

Gage.--Nonrecording prior to May 1, 1939; recording thereafter. Prior to May 1, 1939, at site 0.8 mile downstream at different datum. Datum of present gage is 316.54 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 4,700 cfs at former site and below 4,500 cfs at present site.

Bankfull stage.--15 ft.

Remarks.--Channel is a dredged canal. Base for partial-duration series, 2,800 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 9, 1930	15.10	7,650	1939	Apr. 17, 1939	16.8	4,260
1931	Mar. 27, 1931	8.98	1,770		May 22, 1939	14.82	3,510
1932	Jan. 30, 1932	17.8	6,240		May 27, 1939	15.16	3,460
1933	Mar. 19, 1933	15.70	5,870		June 11, 1939	15.92	3,730
1934	Mar. 24, 1934	15.86	5,800		June 18, 1939	16.00	3,770
1935	Jan. 21, 1935	19.12	8,460	1940	Mar. 3, 1940	14.82	3,040
1936	Mar. 27, 1936	15.68	5,800		May 1, 1940	14.40	2,890
1937	Jan. 22, 1937	20.06	9,730	1941	Apr. 20, 1941	8.73	1,190
1938	Feb. 19, 1938	17.02	4,690	1942	Apr. 10, 1942	17.74	5,780
1939	Jan. 29, 1939	16.6	4,110	1943	Dec. 27, 1942	15.56	4,160
	Feb. 3, 1939	17.26	4,680		Mar. 13, 1943	15.66	4,220
	Feb. 15, 1939	15.10	3,290		Mar. 19, 1943	17.40	5,560
	Mar. 5, 1939	16.9	4,340		Apr. 23, 1943	14.17	3,360
	Mar. 30, 1939	16.25	3,840		May 25, 1943	17.00	5,200
	Apr. 6, 1939	15.3	3,380	1944	Feb. 17, 1944	15.43	3,790
					Feb. 29, 1944	14.40	3,200
					Apr. 11, 1944	16.60	4,680
					Apr. 26, 1944	14.21	3,100
					Sept. 29, 1944	15.06	3,610

OBION RIVER BASIN

Peak stages and discharges of Rutherford Fork Obion River
near Bradford, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Dec. 27, 1944	14.06	2,920	1950	July 26, 1950	17.00	3,400
	Jan. 1, 1945	16.42	4,380				
	Jan. 6, 1945	15.34	3,640	1951	Jan. 5, 1951	17.36	3,760
	Jan. 7, 1945	15.58	3,830		Jan. 14, 1951	18.4	4,800
	Feb. 17, 1945	16.60	4,530		July 12, 1951	16.61	3,040
	Mar. 20, 1945	15.78	3,760				
	Apr. 2, 1945	16.16	4,040	1952	Nov. 24, 1951	16.44	2,900
	June 6, 1945	14.58	3,010		Mar. 11, 1952	17.11	3,510
	June 10, 1945	17.50	5,100				
	June 17, 1945	17.00	4,680	1953	Mar. 5, 1953	16.85	3,260
1946	Nov. 11, 1945	15.72	2,880		Mar. 18, 1953	-	-
	Jan. 9, 1946	18.47	4,900		Mar. 23, 1953	16.64	3,070
	Feb. 6, 1946	15.82	2,940		Apr. 1, 1953	16.35	2,840
	Feb. 13, 1946	15.65	2,830		May 18, 1953	18.15	4,550
	May 27, 1946	18.47	4,900	1954	Jan. 22, 1954	16.80	3,210
1947	Jan. 3, 1947	17.05	3,760	1955	Mar. 23, 1955	17.62	4,530
1948	Feb. 15, 1948	17.24	3,820		Apr. 13, 1955	16.20	2,810
1949	Jan. 29, 1949	17.49	4,040	1956	Jan. 30, 1956	20.47	8,860
	June 17, 1949	16.63	3,270		Feb. 18, 1956	18.07	4,970
1950	Dec. 13, 1949	18.5	4,900	1957	Jan. 29, 1957	16.78	3,400
	Jan. 5, 1950	16.5	3,000		Apr. 4, 1957	16.60	3,200
	Jan. 10 or 11, 1950	17.2	3,600		May 23, 1957	16.64	3,240
	Feb. 1, 1950	18.36	4,760		June 5, 1957	16.79	3,410

251. Rutherford Fork Obion River near Kenton, Tenn.

Location.--Lat 36°12'14", long 88°59'55", on right bank 0.7 mile east of Kenton, Obion County.Drainage area.--271 sq mi.Gage.--Nonrecording. Datum of gage is 284.73 ft above mean Gulf level.Bankfull stage.--14 ft.Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 17, 1939	14.1	-	1949	Jan. 28, 1949	14.4	-
1940	Feb. 18, 1940	14.0	-	1950	Feb. 2, 1950	16.4	-
1941	July 4, 1941	13.8	-	1951	Jan. 15, 1951	16.2	-
1942	Apr. 11, 1942	14.1	-	1952	Mar. 22, 1952	14.65	-
1943	Dec. 28, 1942	13.9	-	1953	Mar. 25, 1953	14.8	-
1944	Apr. 12, 1944	14.3	-	1954	June 3, 1954	13.25	-
1945	June 8, 1945	13.8	-	1955	Apr. 14, 1955	15.5	-
1946	Jan. 10, 11, 1946	14.3	-	1956	Feb. 1, 1956	17.5	-
1947	Jan. 4, 1947	14.2	-	1957	Jan. 29, 1957	14.7	-
1948	Feb. 3, 1948	14.3	-	1958	Nov. 18, 1957	15.6	-

254. North Fork Obion River at U. S. Highway 45E, near Martin, Tenn.

Location.--Lat 36°24'20", long 88°51'20", on left bank at bridge on U. S. Highway 45E, 1.3 miles south of McConnell and 4 miles north of Martin, Weakley County.

Drainage area.--375 sq mi.

Gage.--Nonrecording prior to 1949; recording thereafter. Datum of gage is 303.35 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs.

Bankfull stage.--18 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 4,400 cfs. Prior to 1949, mean daily discharges are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Jan. 30, 1939	-	5,860	1949	Nov. 19, 1948	-	6,650
	Feb. 10, 1939	-	5,530		Dec. 17, 1948	-	7,380
	Feb. 15, 1939	-	4,880		Dec. 26, 1948	-	6,560
	Feb. 20, 1939	-	4,550		Dec. 29, 1948	-	6,070
	Feb. 28, 1939	-	4,880		Jan. 17, 1949	-	5,030
	Mar. 5, 1939	-	6,260		Jan. 19, 1949	-	6,240
	Mar. 30, 1939	-	5,600		Jan. 22, 1949	-	5,500
	Apr. 6, 1939	-	6,320		Jan. 28, 1949	-	6,730
	Apr. 17, 1939	-	6,730		Feb. 15, 1949	-	7,880
1940	Jan. 14, 1940	-	4,680		Mar. 10, 1949	-	4,420
	Feb. 18, 1940	-	5,730		Mar. 28, 1949	-	7,140
	Mar. 3, 1940	-	5,460		Apr. 13, 1949	-	6,650
	Apr. 19, 1940	-	5,460		July 17, 1949	-	6,650
	May 1, 1940	-	5,140	1950	Oct. 7, 1949	18.70	6,970
1941	July 4, 1941	-	2,270		Dec. 13, 1949	19.40	7,550
1942	Feb. 17, 1942	-	5,380		Jan. 13, 1950	18.88	7,140
	Mar. 9, 1942	-	5,310		Jan. 27, 1950	18.56	6,860
	Mar. 14, 1942	-	5,310		Feb. 2, 1950	19.50	7,630
	Apr. 9, 1942	-	6,720		Feb. 14, 1950	19.25	7,420
1943	Dec. 28, 1942	-	5,440		Feb. 22, 1950	17.90	6,320
	Mar. 13, 1943	-	6,290		Mar. 1, 1950	16.1	4,880
	Mar. 20, 1943	-	6,570		Mar. 13, 1950	18.25	6,600
1944	Feb. 29, 1944	-	6,400		Mar. 28, 1950	18.40	6,730
	Apr. 11, 1944	-	6,560		Apr. 4, 1950	18.50	6,810
	May 6, 1944	-	6,730		May 2, 1950	15.6	4,500
1945	Dec. 31, 1944	-	4,420		May 8, 1950	18.3	6,650
	Feb. 22, 1945	-	6,240		June 21, 1950	16.8	5,420
	Feb. 27, 1945	-	6,240		July 4, 1950	18.50	6,810
	May 17, 1945	-	6,070		July 24, 1950	18.95	7,180
	May 20, 1945	-	6,890		Aug. 15, 1950	17.20	5,740
	Apr. 2, 1945	-	6,890		Aug. 25, 1950	16.55	5,230
	May 10, 1945	-	5,740		Sept. 4, 1950	18.80	7,060
	June 8, 1945	-	6,890	1951	Nov. 2, 1950	18.75	7,020
1946	Nov. 13, 1945	-	6,890		Dec. 3, 1950	18.05	6,440
	Jan. 7, 1946	-	6,070		Dec. 6, 1950	17.6	6,070
	Jan. 11, 1946	-	6,240		Jan. 15, 1951	20.75	10,400
	Mar. 16, 1946	-	5,660	1952	Dec. 27, 1951	18.9	4,500
	Mar. 27, 1946	-	6,240		Mar. 12, 1952	19.90	6,780
1947	Dec. 13, 1946	-	5,350		Mar. 22, 1952	22.20	21,900
	Dec. 29, 1946	-	5,030	1953	Mar. 16, 1953	19.25	5,140
	Jan. 3, 1947	-	9,440		May 18, 1953	20.18	7,710
	May 21, 1947	-	5,350	1954	Mar. 25, 1954	19.20	4,940
1948	Feb. 14, 1948	-	6,650	1955	Mar. 22, 1955	19.07	4,670
	Feb. 26, 1948	-	4,800	1956	Feb. 2, 1956	19.88	7,190
	Mar. 2, 1948	-	6,400		Feb. 18, 1956	21.40	12,300
	Mar. 16, 1948	-	6,730	1957	Jan. 30, 1957	19.52	5,780
	Mar. 23, 1948	-	4,960		Apr. 5, 1957	19.42	5,660
	Mar. 31, 1948	-	5,190		May 24, 1957	20.20	6,800
	Apr. 13, 1948	-	6,400	1958	Nov. 19, 1957	23.05	30,300
1949	Nov. 6, 1948	-	6,810		Dec. 21, 1957	19.51	5,090
					Mar. 25, 1958	19.50	5,870

255. North Fork Obion River near Union City, Tenn.

Location.--Lat 36°24'00", long 88°59'45", on downstream side of right pier of bridge on State Highway 22, 4 miles southeast of Union City, Obion County, 4½ miles upstream from Hoosier Creek, and 11 miles upstream from confluence with South Fork.

Drainage area.--490 sq mi, approximately.

Gage.--Nonrecording prior to May 20, 1939; recording thereafter. Datum of gage is 286.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 31,000 cfs and extended above.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 4,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 10, 1930	19.70	20,300	1945	Mar. 18, 1945	17.33	5,320
1931	Mar. 28, 1931	10.2	1,770		Apr. 2, 1945	18.72	11,000
1932	Jan. 17, 1932	17.6	9,870		May 10, 1945	17.72	6,600
1933	Dec. 31, 1932	18.10	11,300		June 8, 1945	19.07	13,000
1934	Dec. 19, 1933	16.40	6,920	1946	Jan. 9, 1946	18.30	9,150
1935	Jan. 22, 1935	19.20	20,300		Feb. 12, 13	17.83	7,200
1936	Apr. 6, 1936	12.20	2,160		Mar. 27, 1946	17.37	5,320
1937	Jan. 22, 1937	22.0	49,200		May 25, 1946	17.70	6,600
1938	Feb. 19, 1938	17.4	8,480	1947	Jan. 3, 1947	17.85	7,200
1939	Jan. 5, 1939	16.4	5,600		Apr. 11, 1947	17.37	5,400
	Jan. 30, 1939	17.3	7,250	1948	Feb. 14, 1948	17.28	5,080
	Feb. 3, 1939	16.8	5,600		Mar. 16, 1948	17.65	6,400
	Feb. 10, 1939	16.4	4,550		Apr. 14, 1948	17.03	4,290
	Feb. 15, 1939	16.6	5,020	1949	Nov. 7, 1948	17.28	5,080
	Feb. 20, 1939	16.8	5,600		Nov. 21, 1948	18.26	6,500
	Feb. 27, 1939	16.9	5,900		Dec. 16, 1948	18.13	8,380
	Mar. 30, 1939	16.85	5,750		Dec. 25, 1948	17.46	5,710
	Apr. 7, 1939	16.80	5,600		Dec. 29, 1948	17.00	4,200
	Apr. 17, 1939	18.10	10,400		Jan. 28, 1949	17.64	6,360
	June 18, 1939	16.92	5,900		Feb. 15, 1949	18.67	10,800
1940	Feb. 18, 1940	17.16	6,720		Mar. 27, 1949	18.15	8,480
	Mar. 3, 1940	16.44	4,450		Apr. 13, 1949	17.31	5,180
	Apr. 12, 1940	16.87	5,480		July 17, 1949	17.18	4,320
	Apr. 19, 1940	17.08	6,350	1950	Oct. 6, 1949	17.86	6,440
	May 1, 1940	16.42	4,350		Dec. 13, 1949	18.10	7,400
1941	July 4, 1941	15.00	2,720		Jan. 5, 1950	18.50	9,150
1942	Jan. 1, 1942	16.38	4,350		Jan. 14, 1950	18.18	7,720
	Jan. 28, 1942	16.35	4,200		Jan. 27, 1950	17.57	5,400
	Feb. 17, 1942	17.63	8,550		Feb. 1, 1950	18.06	7,240
	Mar. 9, 1942	17.06	6,180		Feb. 13, 1950	18.58	9,510
	Mar. 14, 1942	16.78	5,300		Mar. 28, 1950	17.46	5,010
	Apr. 9, 1942	18.27	11,200		Apr. 4, 1950	17.31	4,530
1943	Dec. 28, 1942	17.00	6,000		July 5, 1950	17.46	5,010
	Mar. 13, 1943	17.42	7,550		July 26, 1950	17.55	5,320
	Mar. 20, 1943	18.06	10,400	1951	Sept. 1, 1950	17.48	5,080
1944	Feb. 29, 1944	17.40	7,550		Nov. 21, 1950	17.90	6,600
	Mar. 20, 1944	16.48	4,500		Jan. 4, 1951	17.46	5,010
	Apr. 11, 1944	17.77	8,950		Jan. 11, 1951	17.15	4,050
	May 7, 1944	17.48	7,950		Jan. 15, 1951	19.37	13,800
1945	Feb. 22, 1945	17.60	6,200	1952	Feb. 8, 1951	17.42	4,870
					Feb. 21, 1951	17.59	5,460
					Mar. 20, 1951	17.31	4,530
					Dec. 9, 1951	17.31	4,080
					Dec. 22, 1952	17.39	4,320
					Dec. 26, 1952	17.50	4,700
					Jan. 5, 1952	17.47	4,600
					Mar. 11, 1952	18.40	8,200
					Mar. 23, 1952	20.59	24,900

Peak stages and discharges of North Fork Obion River
near Union City, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Feb. 13, 1953	17.4	4,350	1957	Feb. 2, 1957	18.38	6,420
	Mar. 4, 1953	17.66	5,260		Apr. 4, 1957	18.29	6,060
	Mar. 18, 1953	18.09	6,860		May 23, 1957	19.10	9,900
	May 19, 1953	18.67	9,500		June 5, 1957	17.74	4,320
					July 1, 1957	17.76	4,380
1954	Mar. 26, 1954	17.77	5,100	1958	Nov. 19, 1957	21.59	40,000
1955	Mar. 22, 1955	17.95	5,650		Dec. 7, 1957	18.41	6,540
	Apr. 14, 1955	17.37	4,240		Dec. 22, 1957	18.13	5,500
1956	Feb. 2, 1956	19.06	11,000		Jan. 21, 1958	17.64	4,020
	Feb. 19, 1956	19.71	14,900		Mar. 24, 1958	18.55	7,120
					May 5, 1958	17.83	4,590

256. North Fork Obion River near Rives, Tenn.

Location.--Lat 36°22'05", long 89°02'08", on right bank at highway bridge, 1 mile east of Rives, Obion County.

Drainage area.--520 sq mi.

Gage.--Nonrecording. Datum of gage is 283.63 ft above mean Gulf level.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 17, 1939	13.7		1949	Mar. 27, 1949	13.7	
1940	Apr. 19, 20, 1940	13.6		1950	Jan. 3, Feb. 14	13.8	
1941	July 13, 1941	12.5		1951	Jan. 16, 1951	14.55	
1942	Apr. 10, 1942	13.70		1952	Mar. 23, 1952	15.6	
1943	Mar. 20, 1943	12.90		1953	Mar. 19, 1953	14.90	
1944	Apr. 12, 1944	13.40		1954	Mar. 26, 1954	14.15	
1945	Apr. 2, 1945	13.80		1955	Mar. 22, 1955	13.8	
1946	Feb. 14, 1946	14.00		1956	Feb. 19, 1956	14.75	
1947	Jan. 3, 1947	13.00		1957	May 24, 1957	14.3	
1948	Mar. 18, 1948	13.3		1958	Nov. 19, 1957	16.5	

260. Obion River at Obion, Tenn.

Location.--Lat 36°15'05", long 89°11'33", on right bank 20 ft downstream from bridge on U. S. Highway 51, upstream from Richland Creek, 0.6 mile south of Obion County, and 14½ miles downstream from confluence of North and South Forks.

Drainage area.--1,880 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 3, 1939; recording thereafter. Prior to Oct. 1, 1932, at datum 10 ft lower. Datum of present gage is 261.23 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 90,000 cfs and extended above. Affected by backwater from return of over-bank storage on rises above 14 ft and by high stages on the Mississippi River.

Bankfull stage.--14 ft.

Remarks.--Base for partial-duration series, 10,000 cfs. Only annual peaks are shown prior to 1939.

OBION RIVER BASIN

Peak stages and discharges of Obion River at Obion, Tenn.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 11, 1930	31.9	47,000	1949	Nov. 10, 1948	16.14	12,600
1931	Apr. 2, 1931	22.4	2,570		Nov. 24, 1948	15.75	10,900
1932	Jan. 18, 1932	29.80	33,900		Dec. 19, 1948	16.68	15,200
1933	May 15, 1933	18.27	25,700		Dec. 29, 1948	15.74	10,800
1934	Dec. 21, 1933	17.02	20,700		Jan. 29, 1949	17.12	17,400
1935	Jan. 23, 1935	21.96	46,500		Feb. 17, 1949	16.88	16,200
1936	Apr. 1, 1936	14.10	6,250		Mar. 29, 1949	16.82	15,900
1937	Jan. 24, 1937	25.4	99,500	1950	Dec. 16, 1949	18.50	25,800
1938	Feb. 21, 1938	17.04	17,200		Jan. 6, 1950	a18.05	23,100
1939	Feb. 7, 1939	18.00	24,400		Feb. 4, 1950	18.63	26,700
	Feb. 17, 1939	15.7	12,500		Feb. 14, 1950	a18.03	20,400
	Feb. 23, 1939	15.4	11,000		Mar. 16, 1950	15.53	11,000
	Mar. 7, 1939	16.4	15,600		Mar. 30, 1950	15.28	10,800
	Apr. 2, 1939	15.4	11,000		Apr. 5, 1950	15.55	11,100
	Apr. 8, 1939	15.65	11,800		May 11, 1950	15.45	10,600
	Apr. 19, 1939	16.65	16,600		July 26, 1950	15.56	11,100
	June 21, 1939	15.3	10,600		Sept. 6, 1950	a16.25	12,500
1940	Feb. 21, 1940	15.72	11,100	1951	Nov. 24, 1950	15.88	12,500
	Apr. 21, 1940	15.72	11,100		Dec. 7, 1950	15.24	10,000
1941	July 14, 1941	9.84	2,370		Jan. 8, 1951	16.56	15,500
1942	Apr. 13, 1942	17.70	22,600		Jan. 17, 1951	20.20	37,100
1943	Mar. 22, 1943	17.68	22,600		Feb. 10, 1951	15.52	11,000
1944	Mar. 3, 1944	15.77	13,200		Feb. 22, 1951	16.30	14,700
	Apr. 13, 1944	16.57	16,900	1952	Nov. 28, 1951	15.84	13,300
1945	Jan. 4-5, 1945	16.00	12,000		Dec. 12, 1951	16.05	14,300
	Jan. 10, 1945	15.75	11,100		Dec. 28, 1951	16.17	14,800
	Feb. 24, 1945	16.20	12,900		Jan. 7, 1952	15.87	13,400
	Apr. 3, 1945	17.83	21,100		Mar. 14, 1952	16.70	17,600
	May 12, 1945	15.82	11,100		Mar. 24, 1952	18.57	27,800
	June 11, 1945	19.14	29,000	1953	Mar. 8, 1953	16.18	12,800
1946	Jan. 13, 1946	18.57	25,200		Mar. 19, 1953	16.68	15,200
	Feb. 9, 1946	16.25	12,900		Mar. 25, 1953	16.36	13,600
	Feb. 15, 1946	16.40	13,800		Mar. 21, 1953	16.65	26,100
	Mar. 30, 1946	16.85	15,800	1954	Jan. 25, 1954	15.73	9,880
1947	Jan. 7, 1947	17.11	17,400	1955	Mar. 25, 1955	17.53	19,000
1948	Feb. 17, 1948	16.74	17,600		Apr. 17, 1955	15.83	10,300
	Mar. 5, 1948	15.41	11,400	1956	Feb. 3, 1956	20.56	40,100
	Mar. 20, 1948	15.23	10,600		Feb. 20, 1956	20.16	36,900
	Mar. 25, 1948	15.29	10,900	1957	Feb. 3, 1957	18.54	25,000
					Apr. 8, 1957	16.24	15,100
					May 25, 1957	18.55	25,100
					June 8, 1957	15.90	10,900
					July 2, 1957	16.81	15,400
				1958	Nov. 20, 1957	22.25	53,600
					Dec. 11, 1957	16.89	17,300
					Mar. 26, 1958	16.84	17,000
					May 7, 1957	16.54	15,200

a Occurred on following day.

263. Obion River near Bogota, Tenn.

Location.--Lat 36°08'12", long 89°25'44", on downstream side of bridge on State Highway 78, 2½ miles south of Bogota, Dyer County, and at mile 36.7.

Drainage area.--2,020 sq mi, approximately.

Gage.--Nonrecording prior to Nov. 8, 1948 at site a quarter of a mile upstream; recording thereafter at present site. Prior to 1953 datum of gage was mean Gulf level. Present datum of gage is 248.87 ft above mean Gulf level. Stages adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and is fairly stable except when affected by backwater from the Mississippi River.

Bankfull-stage.--13 ft.

Historical data.--Maximum stage of 31.15 ft Feb. 4-9, 1937, caused principally by backwater from the Mississippi River. An outstanding flood occurred in late January 1937.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 9,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Feb. 4-9, 1937	31.15	-	1949	Dec. 22, 1948	19.18	14,100
1939	Feb. 9, 1939	22.1	25,000		Feb. 1, 1949	21.88	21,200
	Feb. 24, 1939	-	23,100		Feb. 20, 1949	21.0	11,500
	Mar. 10, 1939	-	21,500		Mar. 31, 1949	20.9	21,200
	Mar. 20, 1939	-	21,100	1950	Dec. 19, 1949	22.36	25,400
	Apr. 11, 1939	-	13,300		Jan. 9, 1950	22.6	26,600
	Apr. 28, 1939	-	19,700		Feb. 4, 1950	a23.45	31,700
1940	Feb. 24, 1940	-	10,200		Feb. 17, 1950	23.4	26,600
	Apr. 25, 1940	17.0	10,600		Mar. 19, 1950	17.7	11,400
1941	July 14, 1941	7.7	2,610		July 30, 1950	17.2	11,300
					Sept. 10, 1950	18.9	15,300
1942	Apr. 15, 1942	21.0	21,400	1951	Jan. 18, 1951	-	37,900
					Feb. 25, 1951	20.5	17,700
1943	Mar. 23, 1943	a21.8	24,200	1952	Dec. 14, 1951	18.88	12,900
	June 2, 1943	-	16,400		Jan. 9, 1952	19.08	11,800
1944	Mar. 5, 1944	-	12,200		Mar. 16, 1952	20.8	18,900
	Apr. 16, 1944	19.58	16,500		Mar. 25, 1952	23.07	21,600
	May 11, 1944	-	12,800	1953	Mar. 11, 1953	-	11,500
1945	Jan. 8, 1945	-	12,400		Mar. 23, 1953	-	15,900
	Jan. 11, 1945	-	12,400		May 22, 1953	22.8	25,500
	Feb. 27, 1945	-	13,300	1954	Jan. 28, 1954	16.5	9,330
	Apr. 4, 1945	-	25,700				
	May 15, 1945	-	12,200		Mar. 26, 1955	a21.53	22,800
	June 13, 1945	23.2	30,800				
1946	Nov. 22, 1945	-	12,200	1956	Feb. 5, 1956	b24.00	33,100
	Jan. 15, 1946	22.7	23,900	1957	Feb. 4, 1957	22.30	22,600
	Feb. 17, 1946	-	15,100		Apr. 11, 1957	19.22	12,800
	Apr. 2, 1946	-	15,800		May 26, 1957	22.55	24,400
1947	Jan. 9, 1947	20.6	18,500		July 5, 1957	19.42	10,900
				1958	Nov. 22, 1957	25.40	47,700
1948	Feb. 19, 1948	19.7	15,100		Dec. 13, 1957	19.78	15,300
					Dec. 26, 1957	20.10	14,600
1949	Nov. 14, 1948	16.71	10,300				

a Occurred on following day.

b Occurred Feb. 22, 1956.

265. Reelfoot Creek near Samburg, Tenn.

Location.--Lat 36°26'32", long 89°17'50", on left bank 80 ft downstream from bridge on State Highway 22, 1.1 miles downstream from North Reelfoot Creek, 4 miles upstream from mouth, 5 miles northeast of Samburg, Obion County, and 14 miles west of Union City.

Drainage area.--110 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 6, 1951; recording thereafter. Datum of gage is 286.29 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs and extended above.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 3, 1951	11.4	2,200	1956	Feb. 18, 1956	13.31	4,740
	Jan. 14, 1951	12.90	4,130		Mar. 14, 1956	11.60	2,330
	Feb. 7, 1951	11.43	2,230	1957	Jan. 22, 1957	12.31	2,710
	Feb. 20, 1951	11.42	2,220		Jan. 28, 1957	11.84	2,100
	June 30, 1951	11.55	2,360		Apr. 4, 1957	12.67	3,220
1952	Dec. 25, 1951	11.45	2,250		May 14, 1957	11.84	2,100
	Jan. 4, 1952	11.32	2,120		May 19, 1957	11.94	2,200
	Mar. 10, 1952	12.36	3,350		May 22, 1957	14.42	5,970
	Mar. 22, 1952	12.0	2,880		June 30, 1957	12.58	3,090
1953	Mar. 18, 1953	12.10	3,010	1958	Nov. 8, 1957	12.12	2,460
	May 14, 1953	11.23	2,030		Nov. 13, 1957	13.58	4,590
1954	Mar. 24, 1954	11.77	2,600		Nov. 18, 1957	14.83	6,690
					Dec. 7, 1957	13.20	4,000
1955	Mar. 21, 1955	11.21	2,010		Dec. 17, 1957	12.29	2,690
	Apr. 13, 1955	11.71	2,530		Jan. 21, 1958	12.22	2,590
1956	Jan. 29, 1956	12.41	3,420		Mar. 24, 1958	13.09	3,840
	Feb. 2, 1956	12.60	3,690		May 2, 1958	12.06	2,380
					May 5, 1958	11.99	2,230

275. South Fork Forked Deer River at Jackson, Tenn.

Location.--Lat 35°35'38", long 88°48'52", on right bank 20 ft downstream from bridge on U. S. Highway 45, 0.3 mile south of city limits of Jackson, Madison County, and half a mile downstream from Meridian Creek.

Drainage area.--574 sq mi.

Gage.--Nonrecording prior to Feb. 3, 1939; recording thereafter. Datum of gage is 330.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and extended above.

Bankfull stage.--13 ft.

Remarks.--The channel is a dredged canal. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 9, 10, 1930	19.10	16,500	1936	July 5, 1936	15.90	7,110
1931	Aug. 8, 1931	15.00	4,930	1937	Jan. 23, 1937	19.02	14,800
1932	Jan. 14, 1932	19.8	19,800	1938	Jan. 24, 1938	17.48	9,670
1933	Apr. 2, 1933	16.76	8,570	1939	Jan. 30, 1939	15.2	5,230
1934	Dec. 19, 1933	16.90	9,050		Feb. 4, 1939	17.36	9,410
					Feb. 10, 1939	15.22	5,230
					Feb. 16, 1939	15.20	5,230
					June 18, 1939	17.14	8,690
1935	Jan. 21, 1935	24.00	43,600				

Peak stages and discharges of South Fork Forked Deer River
at Jackson, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Feb. 19, 1940	14.75	4,630	1950	Jan. 7, 1950	17.79	8,470
1941	Dec. 16, 1940	11.63	2,440		Jan. 11, 1950	18.09	9,520
1942	Mar. 14, 1942	15.90	5,920		Feb. 1, 1950	19.73	16,100
	Mar. 17, 1942	16.00	6,140		Feb. 15, 1950	16.44	5,340
	Apr. 10, 1942	18.65	12,800		Mar. 14, 1950	16.71	5,850
1943	Mar. 14, 1943	15.80	5,700	1951	Jan. 4, 1951	17.73	8,390
1944	Feb. 10, 1944	16.50	6,000		Jan. 16, 1951	16.96	6,150
	Feb. 18, 1944	16.60	6,260		Apr. 23, 1951	17.52	7,760
	Apr. 25, 1944	16.49	6,000	1952	Dec. 15, 1951	17.87	8,740
1945	Jan. 1, 1945	18.20	9,900		Mar. 4, 1952	16.36	5,020
	Mar. 1, 1945	16.98	6,250		Mar. 11, 1952	16.39	5,060
1946	Nov. 4, 1945	16.82	5,800	1953	Feb. 12, 1953	17.23	6,500
	Jan. 9, 1946	22.83	33,500		May 20, 1953	17.30	7,100
	Mar. 27, 1946	16.86	5,880	1954	Jan. 17, 1954	17.04	5,640
1947	Dec. 30, 1946	16.45	5,140		Jan. 22, 1954	18.81	10,800
	Jan. 4, 1947	17.86	8,780	1955	Mar. 23, 1955	18.54	9,840
1948	Feb. 14, 1948	20.42	19,500	1956	Jan. 30, 1956	17.40	6,220
1949	Nov. 20, 1948	17.79	8,570		Feb. 5, 1956	17.80	7,420
	Dec. 17, 1948	17.38	7,340		Feb. 19, 1956	18.63	10,100
	June 16, 1949	17.14	6,620	1957	Jan. 25, 1957	17.22	5,580
	June 22, 1949	17.48	7,640		Jan. 30, 1957	17.93	7,270
1950	Dec. 14, 1949	17.78	8,430		Apr. 6, 1957	17.93	7,240
				1958	Nov. 19, 1957	18.06	7,480

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

Location.--Lat 35°51'43", long 89°20'52", on left bank 20 ft downstream from county highway bridge, 0.8 mile west of Chestnut Bluff, Crockett County, 1.1 miles upstream from Halls Creek, 1.2 miles downstream from Black Creek, 2.9 miles east of Halls, 3.1 miles downstream from bridge on Stage Highway 88, and 16 miles upstream from confluence with North Fork.

Drainage area.--1,100 sq mi, approximately, including Halls Creek. Prior to Oct. 1, 1949, 1,080 sq mi, excluding Halls Creek.

Gage.--Nonrecording prior to July 20, 1939; recording thereafter. Datum of gage, 256.71 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs and extended above.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 4,200. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 11, 1930	20.20	24,700	1939	Feb. 4, 1939	18.84	12,500
1931	Mar. 3, 1931	15.20	4,230		Mar. 5, 1939	17.05	5,260
1932	Jan. 17, 1932	19.90	21,500		Apr. 1, 1939	17.00	5,760
1933	Apr. 6, 1933	17.40	7,950		Apr. 8, 1939	16.50	4,620
1934	Dec. 21-22, 1934	17.90	8,440		Apr. 19, 1939	17.5	7,220
1935	Jan. 22, 1935	22.3	45,000		May 24, 1939	16.6	4,430
1936	Mar. 30-31, 1936	16.21	5,020		June 23, 1939	17.75	8,250
1937	Jan. 24-25, 1937	21.33	31,600	1940	Feb. 22, 1940	16.35	4,000
1938	Jan. 24, 1938	18.75	12,500	1941	Jan. 26, 1941	13.80	1,530
				1942	Mar. 20, 1942	16.93	5,200
					Apr. 13, 1942	18.34	11,400
				1943	Jan. 1, 1943	16.53	6,070
					Mar. 16, 1943	17.3	8,100

Peak stages and discharges of South Fork Forked Deer River
at Chestnut Bluff, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Mar. 20, 1943	18.59	13,600	1950	Feb. 2, 1950	20.96	28,000
1944	Feb. 17, 1944	18.01	10,400		Feb. 15, 1950	18.14	8,470
	Feb. 28, 1944	17.10	6,050		Mar. 15, 1950	17.84	7,380
	Mar. 23, 1944	16.81	5,150		Aug. 28, 1950	18.50	7,300
	Apr. 5, 1944	16.68	4,900		Aug. 31, 1950	17.90	5,600
	Apr. 12, 1944	17.88	9,900	1951	Dec. 9, 1950	17.43	4,560
	Apr. 30, 1944	17.25	6,680		Jan. 15, 1951	20.57	17,200
1945	Jan. 3, 1945	19.00	13,400		Feb. 13, 1951	17.76	6,230
	Feb. 22, 1945	17.18	5,730		Feb. 20, 1951	17.83	6,440
	Mar. 5, 1945	18.08	9,050		Apr. 27, 1951	17.99	6,960
	Mar. 26, 1945	16.84	4,770	1952	Nov. 24, 1951	17.44	5,130
	Mar. 31, 1945	17.15	5,580		Dec. 18, 1951	18.95	11,000
	Apr. 3, 1945	17.74	7,600		Feb. 4, 1952	17.30	6,250
	June 20, 1945	16.94	5,020		Mar. 10, 1952	18.56	9,140
1946	Nov. 6, 1945	17.96	7,400	1953	Feb. 20, 1953	17.82	6,320
	Nov. 13, 1945	18.20	8,600		Mar. 6, 1953	17.83	6,350
	Jan. 12, 1946	21.22	30,400		Mar. 18, 1953	18.04	7,100
	Feb. 15, 1946	18.05	8,820		Mar. 22, 1953	17.81	6,280
	Mar. 31, 1946	18.22	9,500		Mar. 31, 1953	17.83	6,350
1947	Jan. 4, 1947	19.16	11,200		May 6, 1953	18.13	7,440
	Jan. 22, 1947	17.96	6,380		May 11, 1953	18.13	7,440
	Apr. 18, 1947	16.82	4,450		May 18, 1953	21.34	30,600
1948	Feb. 8, 1948	16.92	4,200	1954	Jan. 22, 1954	19.68	13,500
	Feb. 18, 1948	20.08	17,000		Jan. 26, 1954	19.37	11,800
	Mar. 2, 1948	17.94	6,790	1955	Mar. 23, 1955	19.42	12,100
	Mar. 22, 1948	17.53	5,580		Apr. 13, 1955	18.33	6,890
	Apr. 13, 1948	17.18	4,710	1956	Jan. 31, 1956	21.27	26,200
1949	Nov. 25, 1948	18.28	7,560		Feb. 20, 1956	19.24	10,400
	Dec. 19, 1948	17.96	6,500		Apr. 12, 1956	17.59	5,200
	Jan. 7, 1949	18.10	7,280	1957	Feb. 1, 1957	19.90	14,200
	Jan. 29, 1949	19.51	13,500		Feb. 19, 1957	17.33	4,300
	Apr. 2, 1949	17.79	5,680		Apr. 11, 1957	18.03	6,030
	June 18, 1949	18.14	7,350		May 25, 1957	17.80	5,430
1950	Dec. 14, 1949	19.67	15,600		June 2, 1957	17.73	5,250
	Jan. 7, 1950	18.85	11,400		July 2, 1957	18.30	6,800
	Jan. 13, 1950	19.98	17,400				

281. South Fork Forked Deer River near Halls, Tenn.

Location.--Lat 35°55'45", long 89°23'25", on downstream side of right bank pier of Illinois Central Railroad bridge, 4 miles north of Halls, Lauderdale County, and at mile 11.3.

Drainage area.--1,112 sq mi.

Gage.--Nonrecording prior to Aug. 19, 1948; recording thereafter. Datum of gage is 259.54 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 19,000 cfs and extended above. Stage-discharge relation is fairly stable except during periods of backwater from the Mississippi River.

Bankfull stage.--8 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 2,500 cfs. Only annual peaks are shown prior to 1946.

Peak stages and discharges of South Fork Forked Deer River near Halls, Tenn.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	-	14.0	-	1950	Mar. 27, 1950	9.55	4,010
1939	Feb. 10, 1939	-	10,000		May 7, 1950	9.77	4,490
1940	Apr. 2, 1940	-	2,500		July 26, 1950	9.48	4,730
					Aug. 29, 1950	10.67	9,180
1942	Apr. 13, 1942	11.2	-	1951	Nov. 24, 1950	9.88	4,080
1943	Sept. 9, 1943	-	1,780		Dec. 11, 1950	10.04	4,930
1944	Feb. 22, 1944	-	9,040		Jan. 16, 1951	12.2	16,500
1945	Jan. 3, 1945	11.80	-		Feb. 14, 1951	10.36	5,890
					Mar. 24, 1951	9.45	3,610
1946	Jan. 12, 13, 1946	14.20	26,900		Apr. 3, 1951	9.64	3,870
	Feb. 16, 1946	10.90	9,470		Apr. 28, 1951	10.58	8,050
	Mar. 20, 1946	9.30	3,430		June 9, 1951	9.41	3,450
	Mar. 31, 1946	11.00	9,900	1952	Dec. 21, 1951	11.36	9,930
	July 15, 16, 1946	9.00	2,500		Jan. 7, 1952	9.74	3,520
1947	Nov. 15, 16, 1946	9.50	4,050		Feb. 4, 1952	10.42	5,850
	Jan. 5, 1947	11.50	12,400		Feb. 20, 1952	10.05	4,540
	Jan. 23, 1947	10.70	8,180		Mar. 12, 1952	10.85	8,590
	Feb. 5, 1947	8.80	2,500		Apr. 6, 1952	9.46	3,710
	Mar. 11-14, 1947	9.20	3,430		Sept. 2, 1952	9.15	3,070
	Apr. 17, 18, 1947	9.80	3,740	1953	Feb. 18, 1953	10.50	5,250
	May 26, 1947	9.60	3,740		Mar. 7, 1953	10.46	5,070
1948	Nov. 6, 1947	9.10	2,810		Mar. 20, 1953	10.53	6,520
	Nov. 19, 20, 1947	8.90	2,420		May 19, 1953	12.92	18,700
	Jan. 7-9, 1948	12.0	14,600	1954	Dec. 6, 1953	9.95	3,700
	Mar. 21, 1948	9.5	3,070		Jan. 24, 1954	11.88	12,200
	Mar. 23, 24, 1948	10.0	4,200		Feb. 27, 1954	9.93	3,740
	Apr. 15, 16, 1948	9.7	3,960		May 5, 1954	9.47	3,500
1949	Nov. 5, 1948	9.27	2,710	1955	Feb. 5, 1955	9.94	4,210
	Nov. 10, 1948	9.62	3,270		Feb. 21, 1955	9.73	2,890
	Nov. 26, 1948	10.60	7,260		Mar. 1, 1955	10.00	2,920
	Dec. 20, 1948	10.32	5,930		Mar. 24, 1955	11.70	12,300
	Jan. 8, 1949	10.38	6,270		June 1, 1955	10.00	3,820
	Jan. 29, 30, 1949	11.40	10,300	1956	Feb. 2, 1956	13.10	16,500
	Apr. 2, 1949	10.26	5,860		Mar. 21, 1956	10.07	3,040
	June 19, 1949	10.60	7,380		Apr. 15, 1956	10.65	5,640
1950	Dec. 15, 1949	11.58	10,600	1957	Feb. 1, 1957	12.22	12,800
	Jan. 13, 1950	11.90	13,500		Apr. 12, 1957	10.84	5,900
	Feb. 4, 1950	12.66	19,400		June 2, 1957	10.84	5,520
	Mar. 18, 1950	10.52	7,280	1958	Nov. 18, 1957	12.95	16,400
					May 3, 1958	11.02	5,380

282. South Fork Forked Deer River at Yellow Bluff, near Fowlkes, Tenn.

Location.--Lat 35°58'32", long 89°24'08", at bridge on county highway, 1 mile northwest of Fowlkes, Dyer County.

Drainage area.--1,144 sq mi.

Gage.--Nonrecording. Datum of gage is 243.44 ft above mean Gulf level.

Stage-discharge relation.--Not defined.

Bankfull stage.--17 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of South Fork Forked Deer River at Yellow Bluff, near Fowlkes, Tenn.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	-	29.8	-	1948	Feb. 19, 1948	23.9	-
1939	Feb. 6, 1939	23.8	-	1949	Jan. 31, 1949	23.1	-
1940	Feb. 24, 1940	19.2	-	1950	Feb. 4, 1950	24.9	-
1941	Aug. 19, 1941	17.6	-	1951	Jan. 16, 1951	24.0	-
1942	Apr. 14, 1942	23.1	-	1952	Dec. 23, 1951	23.4	-
1943	Mar. 21, 1943	23.50	-	1953	May 19, 1953	24.9	-
1944	Apr. 14, 1944	22.50	-	1954	Jan. 24, 1954	23.1	-
1945	Jan. 4, 1945	23.80	-	1955	Apr. 16, 1955	21.7	-
1946	Jan. 13, 1946	26.60	-	1956	Feb. 2, 1956	25.20	-
1947	Jan. 6, 1947	22.8	-	1957	Nov. 21, 1956	13.2	-
				1958	Nov. 19, 1957	24.7	-

285. North Fork Forked Deer River at Trenton, Tenn.

Location.--Lat 35°58'49", long 88°55'35", on downstream side of right bank pier of bridge on State Highways 77 and 104, 0.8 mile east of Trenton, Gibson County, 1 mile downstream from Thompson Levee Creek, and 16.5 miles upstream from Middle Fork.

Drainage area.--71.3 sq mi.

Gage.--Nonrecording. Datum of gage is 303.51 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,600 cfs and extended above.

Bankfull stage.--9 ft.

Historical data.--Maximum stage known, 14 ft, from information by local residents.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 3, 1951	11.48	4,240	1955	Mar. 21, 1955	11.25	3,400
	Jan. 14, 1951	12.16	6,540		Apr. 6, 1955	10.63	1,700
	Feb. 7, 1951	10.56	1,980		Apr. 13, 1955	10.65	1,740
	Apr. 22, 1951	10.31	1,580				
1952	Nov. 24, 1952	10.90	2,700	1956	Jan. 30, 1956	13.39	11,800
	Dec. 9, 1952	10.26	1,500		Feb. 2, 1956	10.83	2,180
	Dec. 21, 1952	10.28	1,530		Feb. 18, 1956	11.30	3,550
	Mar. 11, 1952	11.56	3,880		Mar. 14, 1956	10.58	1,610
1953	Feb. 11, 1953	10.55	1,960	1957	Jan. 29, 1957	11.08	2,900
	Mar. 4, 1953	10.62	2,090		Feb. 1, 1957	10.53	1,530
	Mar. 18, 1953	10.68	2,210		Apr. 4, 1957	10.80	2,100
	Mar. 23, 1953	10.61	2,070		May 23, 1957	10.8	2,000
	Apr. 1, 1953	10.45	1,790		June 5, 1957	11.1	3,000
	May 5, 1953	10.58	1,680	1958	Nov. 8, 1957	11.44	2,280
	May 17, 1953	11.62	4,660		Nov. 14, 1957	11.15	1,640
1954	Jan. 15, 1954	10.66	2,100		Nov. 18, 1957	11.95	3,760
	Jan. 21, 1954	11.14	3,220		Dec. 8, 1957	11.43	2,240
	June 3, 1954	10.25	1,540		Dec. 20, 1957	11.21	1,750
1955	Mar. 18, 1955	10.68	1,680		Mar. 24, 1958	11.20	1,730
					May 3, 1958	11.17	1,680

290. Middle Fork Forked Deer River near Alamo, Tenn.

Location.--Lat 35°51'00", long 89°04'00", on right bank 30 ft downstream from bridge on State Highway 54, 3 miles upstream from Buck Creek, 5 miles north of Alamo, Crockett County, and 13 miles upstream from mouth.

Drainage area.--410 sq mi, approximately.

Gage.--Nonrecording prior to June 12, 1939; recording thereafter. Datum of gage is 288.34 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--The high-water relation is subject to considerable shifting. Extended above 8,000 cfs on basis of contracted-opening measurement at 34,300 cfs.

Bankfull stage.--13 ft.

Remarks.--Base for partial-duration series, 5,500 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 8, 1930	13.94	10,000	1946	Nov. 4, 1945	13.98	6,960
1931	Aug. 8, 9, 1931	11.80	3,500		Nov. 11, 1945	14.06	7,520
1932	Jan. 29, 1932	14.00	10,500		Jan. 9, 1946	14.55	11,300
1933	Mar. 19, 1933	13.80	9,530		Feb. 14, 1946	13.80	5,800
1934	Dec. 20, 1933	13.34	7,430		Mar. 26, 1946	14.20	8,500
1935	Jan. 21, 1935	15.46	19,500	1947	Jan. 3, 1947	14.10	7,800
1936	Mar. 27, 1936	13.10	6,710		Jan. 16, 1947	13.80	5,800
1937	Jan. 23, 1937	15.00	15,000		Apr. 12, 1947	13.80	5,800
1938	Jan. 22, 1938	14.00	9,000	1948	Feb. 14, 1948	14.18	6,620
1939	Jan. 4, 1939	13.90	8,400	1949	Jan. 28, 1949	14.27	7,430
	Jan. 30, 1939	14.00	9,000		June 16, 1949	15.04	14,400
	Feb. 3, 1939	14.00	9,000	1950	Dec. 13, 1949	14.87	12,800
	Feb. 15, 1939	14.00	9,000		Feb. 1, 1950	14.83	12,500
	Feb. 20, 1939	13.50	6,400	1951	Jan. 4, 1951	14.33	7,270
	Mar. 29, 1939	14.47	12,000		Jan. 15, 1951	14.58	9,520
	Apr. 6, 1939	13.45	6,150	1952	Mar. 11, 1952	14.27	6,730
	Apr. 17, 1939	13.65	7,150	1953	Feb. 12, 1953	14.18	5,940
	May 22, 1939	14.00	9,000		Mar. 5, 1953	14.20	6,100
	June 18, 1939	13.92	8,400		Mar. 19, 1953	14.16	5,780
					Mar. 23, 1953	14.19	6,020
					May 18, 1953	14.63	9,970
1940	Mar. 30, 1940	12.41	3,460	1954	Jan. 15, 1954	14.5	6,500
1941	Apr. 20, 1941	8.56	1,530		Jan. 22, 1954	14.40	5,830
1942	Apr. 10, 1942	14.44	10,300	1955	Mar. 22, 1955	14.61	7,340
1943	Dec. 28, 1942	13.73	6,550	1956	Jan. 30, 1956	16.70	34,300
	Mar. 13, 1943	13.67	6,060		Feb. 19, 1956	14.40	7,000
	Mar. 19, 1943	14.27	9,180	1957	Feb. 2, 1957	14.47	7,520
1944	Feb. 18, 1944	13.93	6,600		Feb. 17, 1957	14.25	6,000
	Mar. 20, 1944	13.87	6,120	1958	Nov. 8, 1957	-	(a)
1945	Jan. 2, 1945	14.10	7,000		Nov. 19, 1957	b14.67	5,980
					Dec. 7, 1957	-	(a)
					Dec. 20, 1957	-	(a)

a Gage height and discharge unknown; above base.

b Observed.

OBION RIVER BASIN

291. North Fork Forked Deer River at Dyersburg, Tenn.

Location.--Lat 36°01'49", long 89°23'13", attached to platform handrail of electric powerplant gatehouse near downstream side of bridge on U. S. Highway 51, at mile 6.4.

Drainage area.--867 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. Prior to Dec. 18, 1941, datum of gage was mean Gulf level. Present datum of gage is 245.00 ft above mean Gulf level. All stages have been adjusted to present datum.

Stage-discharge relation.--Practically permanent channel. Stage-discharge relation varies with backwater effect from the Obion and Mississippi Rivers and is defined by many high-stage current-meter measurements, the greatest being 21,800 cfs.

Bankfull stage.--14 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 6,900 cfs. Only annual peak stages are shown prior to 1944.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	April 1913	29.6	-	1950	Dec. 15, 1949	b24.83	13,600
1937	January 1937	30.9	-		Jan. 7, 1950	24.12	12,800
1939	Feb. 6, 1939	24.6	-		Feb. 3, 1950	25.52	15,300
1940	Feb. 24, 1940	18.4	-		Feb. 15, 1950	23.97	9,390
1941	Jan. 25, 1941	12.9	-		Mar. 17, 1950	22.19	7,040
1942	Apr. 13, 1942	23.35	-		July 29, 1950	21.64	6,460
1943	Mar. 21, 22, 1943	24.7	-		Sept. 6, 1950	22.32	8,480
1944	Apr. 12, 1944	a23.00	8,760	1951	Jan. 8, 1951	22.63	9,020
1945	Jan. 4, 1945	24.2	-		Jan. 16, 1951	26.52	20,400
	June 12, 1945	23.75	8,670	1952	Mar. 14, 1952	22.82	7,020
1946	Jan. 13, 1946	25.15	-		Mar. 23, 1952	22.30	7,070
	Feb. 14, 1946	22.30	6,900	1953	Mar. 23, 1953	23.01	8,350
1947	Jan. 6, 1947	23.6	10,400		May 20, 1953	26.30	20,200
1948	Feb. 16, 1948	b23.56	9,270	1954	Jan. 25, 1954	23.35	8,960
1949	Jan. 30, 1949	23.79	8,850	1955	Mar. 24, 1955	24.00	11,500
	Mar. 29, 1949	22.44	7,550	1956	Feb. 3, 1956	27.77	21,600
	June 20, 1949	22.98	8,850		Feb. 19, 1956	26.00	12,500
				1957	Feb. 3, 1957	24.50	11,200
					Apr. 8, 1957	22.73	7,120
					May 26, 1957	23.55	11,700
					July 6, 1957	22.22	6,400
				1958	Nov. 20, 1957	27.82	22,400

a Occurred on Apr. 14, 1944.

b Occurred on following day.

292.2. Mississippi River at Fulton, Tenn.

Location--Lat 35°37'01", long 89°53'11", on left bank at end of road and ferry landing at Fulton, Tipton County, at mile 780.9.

Drainage area--928,600 sq mi.

Gage--Nonrecording. Datum of gage is 208.57 ft above mean sea level, datum of 1929, or 208.74 ft above mean Gulf level.

Stage-discharge relation--Not defined.

Bankfull stage--34 ft.

Remarks--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1880	Mar. 26, 1880	34.18	-	1920	Apr. 5, 1920	37.23	-
1881	Apr. 26, 1881	34.29	-	1921	Apr. 6, 1921	26.53	-
1882	Mar. 1, 2, 1882	36.69	-	1922	Mar. 31, 1922	39.1	-
1883	Mar. 2, 1883	36.29	-	1923	Mar. 27, 1923	32.7	-
1884	Feb. 24, 1884	35.70	-	1924	Jan.19,20, 1924	30.23	-
1885	Jan. 28, 1885	29.92	-	1925	Mar. 2, 1925	25.3	-
1886	Apr. 22, 1886	35.37	-	1926	Apr.17-21, 1926	26.8	-
1887	Mar. 12, 1887	34.61	-	1927	Apr. 24, 1927	42.25	-
1888	Apr. 10, 1888	33.61	-	1928	July 9, 1928	31.74	-
1889	June 26, 1889	25.68	-	1929	May 23-27, 1929	38.0	-
1890	Mar. 22, 1890	34.9	-	1930	Jan.21,22, 1930	30.9	-
1891	Mar.13,14, 1891	33.9	-	1931	Apr.14,15, 1931	22.1	-
1892	Apr. 30, 1892	34.27	-	1932	Feb. 19, 1932	34.72	-
1893	May 15, 1893	34.63	-	1933	Apr. 9, 1933	36.56	-
1894	Feb.18,19, 1894	27.75	-	1934	Mar. 18, 1934	27.22	-
1895	Jan. 24, 1895	23.08	-	1935	Mar. 27, 1935	34.83	-
1896	Apr. 15, 1896	28.07	-	1936	Apr. 19, 1936	37.16	-
1897	Mar. 23, 1897	37.47	-	1937	Feb. 9, 1937	47.25	-
1898	Apr. 10, 1898	36.3	-	1938	Apr. 19, 1938	30.7	-
1899	Apr. 7, 1899	34.9	-	1939	Mar. 23, 1939	35.7	-
1900	Mar. 19, 1900	28.15	-	1940	May 6, 1940	29.47	-
1901	May 6, 1901	30.6	-	1941	Apr.27,28, 1941	19.2	-
1902	Mar. 20, 1902	28.55	-	1942	Mar. 27, 1942	28.66	-
1903	Mar. 19, 1903	40.15	-	1943	June 3, 1943	36.24	-
1904	Apr. 10, 1904	37.4	-	1944	May 4, 1944	35.5	-
1905	Mar. 20, 1905	27.41	-	1945	Apr. 7, 1945	37.85	-
1906	Apr. 15, 1906	35.3	-	1946	Jan. 22, 1946	35.35	-
1907	Feb. 2, 1907	38.35	-	1947	Apr.23,24, 1947	31.2	-
1908	Mar. 23, 1908	33.25	-	1948	Apr. 6, 7, 1948	34.48	-
1909	Mar.21,22, 1909	35.5	-	1949	Feb. 5, 1949	33.18	-
1910	Mar. 17, 1910	30.0	-	1950	Feb. 19, 1950	38.37	-
1911	Apr. 25, 1911	32.94	-	1951	Mar. 2, 3, 1951	31.6	-
1912	Apr. 9, 1912	43.32	-	1952	Mar.30,31, 1952	33.7	-
1913	Apr. 9, 1913	44.07	-	1953	May 23, 1953	23.5	-
1914	Apr.13,14, 1914	28.9	-	1954	Jan. 29, 1954	17.6	-
1915	Feb.16,17, 1915	32.58	-	1955	Mar.31, Apr.2	32.75	-
1916	Feb. 7, 8, 1916	40.2	-	1956	Feb. 29, 1956	27.35	-
1917	Apr. 9, 1917	37.1	-	1957	Feb. 16, 1957	28.67	-
1918	Feb. 4, 1918	34.14	-	1958	May 15,16, July 30	26.85	-
1919	Mar. 28, 1919	34.8	-				

HATCHIE RIVER BASIN

292.7. Hatchie River near Walnut, Miss.

Location.--Lat 34°56'36", long 88°47'10", at U. S. Highway 72, 6½ miles east of Walnut, Tippah County, and at mile 185.

Drainage area.--270 sq mi.

Gage.--Nonrecording prior to 1949, recording thereafter. Datum of gage is 372.79 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 22,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 3,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 4, 1947	a23.4	3,940	1952	Dec. 16, 1951 Jan. 29, 1952	23.37 23.85	3,900 4,430
1948	Feb.13-14, 1948	a29.0	12,450	1953	Feb. 12, 1953 July 23, 1953	25.85 30.40	6,360 21,700
1949	Nov. 20, 1948 Nov. 27, 1948 Dec. 4, 1948 Jan. 5, 1949 Mar. 28, 1949 Apr. 14, 1949	a30.0 a25.2 a26.8 24.5 24.6 23.2	14,000 6,550 9,080 5,450 5,610 3,690	1954	Jan. 23, 1954	22.48	2,550
1950	Jan. 7, 1950 Jan. 14, 1950 Feb. 15, 1950 Mar. 14, 1950 Sept. 2, 1950	23.8 23.05 23.05 23.98 22.85	4,430 3,510 3,510 4,650 3,300	1955	Mar. 22, 1955 Apr. 14, 1955	30.7 24.20	23,200 4,850
1951	Jan. 5, 1951 Feb. 1, 1951 Mar. 29, 1951	24.95 23.0 26.75	6,140 3,450 9,000	1956	Jan. 30, 1956 Feb. 5, 1956	23.52 24.93	4,320 6,120
				1957	Feb. 2, 1957 Apr. 5, 1957	27.10 26.63	10,100 8,400
				1958	Nov. 15, 1957	25.86	6,810

a 8 a.m. readings.

292.75. Hatchie River near Pocahontas, Tenn.

Location.--35°02'27", long 88°47'14", at McNairy County highway bridge, 1.3 miles southeast of Pocahontas, Hardeman County, and at mile 178.

Drainage area.--270 sq mi.

Gage.--Nonrecording. Datum of gage is 354.37 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,800 cfs and extended above.

Bankfull stage.--18 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 3,000 cfs. Only annual peak stages are shown subsequent to 1952.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Jan. 3, 1941	15.3	1,340	1946	Nov. 23, 1945 Jan. 9, 1946 Feb. 11, 1946 Mar. 30, 1946	23.90 26.7 23.50 18.90	9,260 14,440 8,700 3,150
1942	Feb. 26, 1942 Apr. 11, 1942	19.10 19.50	3,340 3,760	1947	Jan. 4, 1947 Apr. 14, 1947	21.0 19.5	5,430 3,760
1943	Dec. 30, 1942 Mar. 15, 1943	20.20 19.70	4,510 3,970	1948	Feb. 14, 1948 Feb. 29, 1948	29.4 18.9	21,860 3,150
1944	Feb.11-12, 1944 Feb. 29, 1944 Mar. 30, 1944	19.20 19.40 23.80	3,450 3,660 9,120	1949	Nov. 21, 1948 Dec. 1, 1948 Jan. 6, 1949	25.0 19.6 22.3	10,900 3,860 7,090
1945	Jan. 2, 1945 Mar. 6, 1945	24.70 19.90	10,450 4,180				

Peak stages and discharges of Hatchie River near Pocahtontas, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 24-25, 1949	19.1	3,340	1952	Dec. 17, 1951	20.5	4,860
	Mar. 29, 1949	21.5	6,060		Jan. 30, 1952	20.4	4,740
1950	Jan. 8, 1950	21.2	5,680		Mar. 13, 1952	19.1	3,340
	Jan. 15, 1950	20.8	5,200	1953	Feb. 13, 1953	25.40	-
	Feb. 4, 1950	19.3	3,550		Feb. 22, 1954	19.7	-
	Feb. 16, 1950	20.7	5,080	1954	Mar. 23, 1955	27.2	-
	Mar. 15, 1950	20.7	5,080		Feb. 5, 1956	23.6	-
	Sept. 5, 1950	19.8	4,070	1957	Feb. 2, 1957	25.7	-
1951	Jan. 6, 1951	21.8	6,450		May 3, 1958	19.8	-
	Feb. 9, 1951	20.0	4,280				
	Feb. 23, 1951	19.7	5,970				
	Mar. 30, 1951	22.9	7,870				

293. Tuscumbia River Canal near Corinth, Miss.

Location.--Lat 34°55'51", long 88°35'58", 4 miles west of Corinth, Alcorn County.

Drainage area.--277 sq mi.

Gage.--Recording. Datum of gage is 380.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 25,000 cfs and extended above.

Bankfull stage.--12 ft.

Remarks.--Records furnished by Corps of Engineers.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 6, 1950	12.9	8,760	1953	May 17, 1953	11.9	4,730
	Feb. 15, 1950	12.7	7,810		Jan. 23, 1954	12.15	4,640
	Mar. 13-14, 1950	12.3	5,930	1955	Mar. 22, 1955	15.70	27,100
	Sept. 3, 1950	12.95	9,230		Apr. 14, 1955	12.40	6,380
1951	Jan. 4, 1951	13.7	12,660	1956	Jan. 30, 1956	13.00	8,650
	Feb. 8, 1951	12.2	5,470		Feb. 4, 1956	13.02	9,170
	Feb. 21, 1951	12.4	6,400		Feb. 19, 1956	12.58	6,720
	Mar. 29, 1951	14.2	15,190	1957	Feb. 1, 1957	14.10	13,300
1952	Dec. 16, 1951	12.45	6,630		Apr. 4, 1957	12.60	4,840
	Jan. 28, 1952	12.65	7,570	1958	Nov. 15, 1957	13.60	10,800
1953	Feb. 12, 1953	13.05	10,400		May 1, 1958	12.55	5,990
	Feb. 22, 1953	12.00	4,920				
	Mar. 4, 1953	12.0	5,740				
	Apr. 7, 1953	11.94	4,640				

294. Hatchie River at Pocahtontas, Tenn.

Location.--Lat 35°03'24", long 88°48'05", at bridge on State Highway 57, half a mile northeast of Pocahtontas, Hardeman County, and at mile 176.

Drainage area.--820 sq mi.

Gage.--Nonrecording prior to 1948; recording thereafter. Datum of gage is 348.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by discharge measurements below 34,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 8,000 cfs.

HATCHIE RIVER BASIN

Peak stages and discharges of Hatchie River at Pocahontas, Tenn.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 11, 1942	-	9,020	1950	Sept. 5, 1950	-	11,500
1943	Dec. 30, 1942	-	10,500		Sept. 6, 1950	23.80	9,510
	Mar. 15, 1943	-	9,650	1951	Jan. 6, 1951	25.80	15,640
1944	Feb. 12, 1944	-	8,600		Feb. 10, 1951	23.84	9,600
	Feb. 29, Mar. 1, 1944	-	9,230		Feb. 23, 1951	23.30	8,410
	Mar. 30, 1944	-	22,900		Mar. 31, 1951	26.16	16,900
1945	Jan. 1, 1945	-	26,100	1952	Dec. 17, 1951	24.27	10,800
	Mar. 6, 1945	-	9,650	1953	Jan. 30, 1953	24.05	10,100
1946	Nov. 23, 1945	-	24,100		Feb. 14, 1953	26.50	18,100
	Jan. 9, 1946	-	34,400		May 20, 1953	24.85	9,620
	Feb. 11, 1946	-	18,800	1954	Jan. 25, 1954	22.83	7,110
1947	Jan. 5, 1947	-	12,100	1955	Mar. 23, 1955	30.42	33,700
1948	Feb. 14, 1948	-	47,600		Apr. 15, 1955	24.32	11,300
1949	Nov. 21, 1948	-	25,300	1956	Feb. 5, 1956	27.38	17,800
	Jan. 6, 1949	-	17,000		Feb. 7, 1956	-	13,600
	Mar. 29, 1949	-	11,780	1957	Feb. 2, 1957	29.37	25,500
1950	Jan. 15, 1950	24.80	12,390		Apr. 6, 1957	26.86	18,300
	Feb. 4, 1950	23.30	8,410	1958	Nov. 17, 1957	25.60	12,400
	Feb. 16, 1950	24.48	11,170		May 3, 1958	23.73	8,630
	Mar. 15, 1950	24.35	11,170				

Note.--Prior to 1950, mean daily discharges are shown.

294.3. Hatchie River at Serles, Tenn.

Location.--Lat 35°10'42", long 88°51'16", at Gulf, Mobile & Ohio Railway bridge at Serles, Hardeman County, at mile 158.

Drainage area.--1,161 sq mi.

Gage.--Nonrecording. Datum of gage is 334.55 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Jan. 5, 1941	21.1	-	1951	Jan. 7, Apr. 1, 1951	25.8	-
1942	Feb. 28, 1942	23.90	-	1952	Dec. 26, 1951	26.6	-
1943	Dec. 31, 1942	25.10	-	1953	Feb. 14, 1953	26.00	-
1944	Mar. 30, 1944	27.30	-	1954	Jan. 26, 27, 1954	23.90	-
1945	Jan. 2, 1945	27.60	-	1955	Mar. 24, 1955	27.7	-
1946	Jan. 9, 1946	28.90	-	1956	Feb. 6, 1956	26.60	-
1947	Jan. 5, 1947	25.50	-	1957	Feb. 3, 1957	27.50	-
1948	Feb. 14, 1948	30.2	-	1958	May 3, 1958	25.0	-
1949	Nov. 22, 1948	27.0	-				
1950	Jan. 15, 16, 1950	25.7	-				

295. Hatchie River at Bolivar, Tenn.

Location.--Lat 35°16'40", long 88°58'30", on right bank at downstream side of bridge on State Highway 18, 250 ft upstream from Illinois Central Railroad bridge, 2,000 ft downstream from Spring Creek, and 1.5 miles northeast of Bolivar, Hardeman County.

Drainage area.--1,430 sq mi, approximately.

Gage.--Nonrecording prior to Feb. 6, 1939; recording thereafter. Datum of gage is 323.86 ft above mean Gulf level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and extended above.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 8,500 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 9, 1930	16.18	16,800	1948	Feb. 15, 1948	21.53	56,300
1931	Aug. 8, 11, 12, 1931	14.9	8,860		Feb. 26, 1948	16.01	13,700
1932	Jan. 14, 1932	19.65	39,700		Mar. 3, 1948	16.02	13,800
1933	Feb. 20, 1933	17.98	27,800		Apr. 8, 1948	14.99	8,760
1934	Mar. 6, 1934	15.78	13,600	1949	Nov. 19, 1948	16.02	14,100
1935	Jan. 20, 1935	20.00	43,400		Nov. 23, 1948	17.91	27,100
1936	Apr. 13, 1936	14.92	8,900		Jan. 7, 1949	17.35	23,000
1937	Jan. 4, 1937	18.00	27,300		Jan. 28, 1949	15.81	13,000
1938	Jan. 27, 1938	15.95	12,900		Mar. 31, 1949	16.39	16,300
1939	Feb. 9, 1939	15.73	12,100		June 15, 1949	14.94	9,070
	Feb. 15, 1939	15.40	10,100	1950	Dec. 13, 1949	14.83	8,670
	Feb. 20, 1939	15.88	13,400		Jan. 10, 1950	16.83	19,300
	May 28, 1939	15.41	10,100		Feb. 2, 1950	16.07	14,400
	June 12, 1939	15.17	8,870		Feb. 18, 1950	15.81	13,000
	June 18, 1939	16.10	14,700		Mar. 17, 1950	15.79	12,800
1940	Apr. 24, 1940	14.69	7,600		Sept. 8, 1950	14.96	9,150
1941	Dec. 23, 1940	12.76	4,340	1951	Jan. 8, 1951	16.32	15,900
1942	Apr. 9, 1942	15.78	12,700		Jan. 14, 1951	16.18	15,100
1943	Jan. 1, 1943	15.47	10,400		Feb. 8, 1951	15.91	13,500
	Mar. 17, 1943	15.66	11,700		Feb. 25, 1951	15.00	9,300
1944	Feb. 20, 1944	15.15	8,700		Apr. 2, 1951	16.53	17,200
	Feb. 24, 1944	15.57	11,100	1952	Dec. 17, 1951	16.07	14,400
	Mar. 2, 1944	15.80	12,700		Feb. 3, 1952	15.50	11,400
	Mar. 31, 1944	18.20	29,400		Mar. 5, 1952	14.86	8,780
	Apr. 9, 1944	15.58	11,400	1953	Feb. 15, 1953	17.01	20,500
	Apr. 23, 1944	15.38	10,100		Feb. 21, 1953	15.55	10,900
1945	Jan. 3, 1945	18.54	31,200		Mar. 7, 1953	15.45	10,500
	Feb. 23, 1945	15.35	9,380		May 5, 1953	16.99	20,300
	Feb. 28, 1945	15.81	12,200		May 19, 1953	17.30	22,600
	Mar. 5, 1945	15.59	10,900		July 26, 1953	15.21	9,580
1946	Nov. 29, 1945	18.23	29,300	1954	Jan. 20, 1954	15.36	10,400
	Jan. 9, 1946	20.76	50,000		Feb. 17, 1954	15.07	9,250
	Feb. 12, 1946	17.83	26,300	1955	Mar. 25, 1955	18.98	33,100
	Mar. 29, 1946	16.16	14,700		Apr. 17, 1955	15.74	11,500
1947	Jan. 6, 1947	16.23	15,200	1956	Feb. 6, 1956	18.17	24,700
	Apr. 16, 1947	15.36	9,680		Feb. 18, 1956	15.66	11,200
				1957	Feb. 3, 1957	19.19	33,900
					Apr. 7, 1957	17.40	19,800
				1958	Nov. 19, 1957	17.37	19,400
					May 4, 1958	15.84	11,000
					May 10, 1958	15.75	10,600
					Sept. 21, 1958	15.61	10,000

HATCHIE RIVER BASIN

300. Hatchie River near Stanton, Tenn.

Location.--Lat 35°31'22", long 89°20'57", near right bank on downstream end of pier of bridge on U. S. Highways 70 and 79, 2.9 miles downstream from Louisville and Nashville Railroad bridge, 4.6 miles northeast of Stanton, Haywood County, and 7 miles upstream from Big Muddy Creek.

Drainage area.--1,940 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 7, 1939; recording thereafter. Datum of gage is 267.34 ft above mean Gulf level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and extended above.

Bankfull stage.--15 ft.

Remarks.--The stream channel in this reach is a broad swamp. Base for partial-duration series, 12,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 9, 1930	18.85	36,400	1946	Jan. 11, 1946	19.72	48,500
1931	Aug. 16, 1931	15.6	10,800		Feb. 14, 1946	18.02	27,000
1932	Jan. 17, 1932	19.40	46,200		Mar. 31, 1946	16.11	12,000
1933	Feb. 21, 1933	17.96	30,100	1947	Jan. 9, 1947	16.32	13,500
1934	Mar. 9, 1934	16.20	12,900	1948	Feb. 17, 1948	19.83	51,700
1935	Jan. 22, 1935	20.35	59,000		Feb. 28, 29, 1948	16.32	13,700
1936	Mar. 28, 1936	16.02	11,700		Mar. 3, 1948	16.45	14,600
1937	Jan. 25, 1937	19.50	46,800	1949	Nov. 25, 1948	17.51	22,900
1938	Jan. 31, 1938	16.30	13,000		Jan. 9, 10, 1949	16.97	18,700
1939	Feb. 3, 1939	17.10	22,000		Jan. 27, 1949	16.78	17,300
	Feb. 10, 1939	16.9	20,300		Apr. 2, 1949	16.38	14,500
	Feb. 15, 1939	16.2	14,700	1950	Jan. 12, 1950	17.78	25,600
	Feb. 21, 1939	16.3	15,500		Feb. 1, 1950	18.07	28,800
	Apr. 17, 1939	16.05	13,200		Feb. 14, 1950	16.20	12,800
	June 20, 1939	16.40	16,300	1951	Jan. 11, 1951	16.54	15,200
1940	Apr. 29, 1940	15.32	8,500		Jan. 15, 1951	17.56	23,400
1941	Dec. 30, 1940	12.86	3,220		(b)	16.45	14,600
1942	Apr. 11, 1942	16.78	19,500		Apr. 4, 1951	16.51	15,000
1943	Jan. 5, 1943	15.85	12,200	1952	Dec. 15, 1951	17.00	18,700
	Mar. 19, 1943	16.59	17,900		Jan. 4, 1952	16.27	13,800
1944	Feb. 18, 1944	16.54	15,500		Mar. 11, 1952	16.30	14,000
	Feb. 27, 1944	16.22	12,700	1953	Feb. 18, 1953	16.62	16,000
	Apr. 3, 1944	17.94	28,900		Mar. 4, 1953	16.10	12,800
	Apr. 11, 1944	16.70	16,800		May 6-14, 1953	-	(c)
1945	Jan. 5, 1945	18.06	28,000		May 21, 1953	17.01	18,800
	Feb. 28, 1945	16.90	17,700	1954	Jan. 23, 1954	16.74	16,900
1946	Nov. 27, 1945	18.03	27,000	1955	Mar. 27, 1955	18.05	28,600
				1956	Feb. 9, 1956	17.67	26,200
				1957	Feb. 6, 1957	18.46	34,200
				1958	Nov. 20, 1957	17.35	21,800

a Occurred Mar. 7-8, 1931.

b Occurred sometime between Jan. 29 and Feb. 15, 1951.

c Peak discharge above base probably occurred during this period.

300.5. Hatchie River at Rialto, Tenn.

Location.--Lat 35°38'14", long 89°36'34", on downstream side of bridge on U. S. Highway 51, at mile 34.0

Drainage area.--2,233 sq mi.

Gage.--Nonrecording at site 1 mile upstream prior to Aug. 2, 1949; recording at present site thereafter. Prior to 1953, datum of gage was mean Gulf level or 0.3 ft below mean sea level, datum of 1929. Datum of present gage is 239.96 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs. Affected by backwater from the Mississippi River at times.

Bankfull stage.--12 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 22-23, 25	a23.54	-	1949	Apr. 4, 1949	256.15	14,600
1939	Feb. 5, 1939	258.2	33,200		Apr. 11, 1949	256.15	14,600
	Feb. 12, 1939	257.3	23,600	1950	Jan. 13, 1950	257.70	28,000
	Feb. 28, 1939	254.8	11,100		Feb. 2, 1950	258.7	38,500
	Mar. 2, 1939	255.0	11,700		Feb. 15, 1950	255.29	17,800
	Apr. 19, 1939	256.2	17,000		Mar. 15, 1950	254.28	11,900
	June 20, 1939	256.6	19,400		Mar. 21, 1950	254.10	12,300
1940	Feb. 22, 1940	253.9	9,420		Sept. 9, 1950	253.12	11,300
1941	Jan. 2, 1941	250.1	3,240	1951	Jan. 15, 1951	257.5	28,800
	Jan. 17-18, 1941	250.1	3,240		Feb. 10, 1951	255.13	17,800
1942	Mar. 15-16, 1942	254.40	10,400		Apr. 6, 1951	254.74	18,000
	Apr. 12, 1942	256.90	b19,900	1952	Dec. 18, 1951	255.76	16,600
1943	Mar. 20-21, 1943	257.3	21,400		Feb. 5, 6, 1952	254.76	15,200
1944	Feb. 20, 1944	256.3	16,800		Mar. 13, 1952	254.9	15,800
	Feb. 29, 1944	255.8	14,900	1953	Feb. 20, 1953	15.14	17,200
	Apr. 3, 1944	258.18	b28,300		Mar. 5, 1953	14.76	14,800
	May 4, 1944	254.90	11,900		May 9, 1953	15.15	16,800
1945	Jan. 7, 1945	259.9	34,700		May 18, 1953	16.9	26,300
	Mar. 2, 1945	257.2	20,500	1954	Jan. 24, 1954	15.73	19,500
	Apr. 3, 1945	256.4	17,200		Feb. 24, 1954	13.90	11,900
1946	Nov. 29, 1945	258.4	26,200	1955	Mar. 29, 1955	17.00	28,600
	Jan. 13, 1946	262.9	55,700		Apr. 8, 1955	13.47	11,100
	Mar. 28, 1946	255.9	15,300		Apr. 15, 1955	14.25	13,300
1947	Jan. 11, 1947	255.8	12,900		Apr. 23, 1955	14.43	14,100
	Jan. 18, 1947	255.8	11,000	1956	Jan. 30, 1956	14.50	14,400
1948	Feb. 19, 1948	262.8	b52,300		Feb. 10, 1956	16.65	24,500
	Mar. 4, 1948	256.75	19,600	1957	Feb. 1, 1957	16.50	21,600
1949	Nov. 27, 1948	257.85	23,000		Feb. 8, 1957	17.93	30,200
	Dec. 18, 1948	255.35	11,100		Apr. 12, 1957	15.45	18,800
	Jan. 11, 1949	257.10	20,400	1958	Nov. 22, 1957	16.50	22,800
	Jan. 29, 1949	257.8	25,000		Dec. 9, 1957	14.35	13,100
					May 11, 1958	14.80	14,800

a At present datum.

b Instantaneous maximum.

Note.--Mean daily discharges and gage heights are shown prior to 1950 unless noted.

LOOSA HATCHIE RIVER BASIN

302.8. Loosahatchie River at Brunswick, Tenn.

Location.--Lat 35°16'53", long 89°45'56", at Brunswick-Bolton bridge over dredged channel, 1 mile north of Brunswick, Shelby County, and at mile 26.8.

Drainage area.--506 sq mi.

Gage.--Nonrecording prior to Dec. 20, 1941; recording thereafter. Prior to Oct. 15, 1955, at site 500 ft upstream at present datum. Datum of gage is 227.63 ft above mean Gulf level or 227.25 ft above mean sea level, datum of 1929, adjustment of 1958.

Stage-discharge relation.--Defined by current-meter measurements below 40,000 cfs and extended above.

Bankfull stage.--21 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	January 1935	28.5	-	1948	Feb. 5-6, 1948	21.90	10,600
1939	Jan. 30, 1939	-	11,000		Feb. 13, 1948	24.88	31,200
	Feb. 4, 1939	23.7	21,300		Mar. 3, 1948	22.72	13,200
	Feb. 10, 1939	-	11,200		Mar. 23, 1948	22.25	11,400
	Apr. 17, 1939	-	13,800		Apr. 1, 1948	22.30	10,600
1940	Feb. 18, 1940	21.8	7,190		Apr. 14, 1948	22.25	11,900
	Jan. 24, 1941	13.5	2,240	1949	Nov. 20, 1948	22.90	18,100
1941	Jan. 24, 1941	13.5	2,240		Dec. 17, 1948	22.65	15,400
1942	Apr. 10, 1942	24.40	29,900		Jan. 6, 1949	22.98	12,200
	Dec. 28, 1942	22.60	14,200		Jan. 28, 1949	23.35	14,600
1943	Mar. 13, 1943	23.16	15,500	1950	Dec. 13, 1949	24.02	17,300
	Feb. 10, 1944	23.32	18,200		Jan. 4, 1950	22.68	10,100
1944	Feb. 18, 1944	22.73	14,800		Jan. 6, 1950	23.00	11,400
	Mar. 29, 1944	22.50	13,200		Jan. 11, 1950	24.20	19,900
	Apr. 9, 1944	23.42	19,400		Feb. 1, 1950	25.00	26,600
	May 5, 1944	22.02	11,100		Feb. 14, 1950	23.58	14,800
	Dec. 26, 1944	23.16	18,200		Mar. 14, 1950	23.02	11,500
1945	Jan. 1, 1945	24.04	23,100		Aug. 26, 1950	23.46	14,000
	Feb. 18, 1945	22.00	12,600	1951	Jan. 15, 1951	24.70	23,300
	Feb. 21, 1945	22.48	13,700		Feb. 8, 1951	22.98	14,700
	Feb. 28, 1945	22.87	15,200	1952	Mar. 12, 1952	23.08	10,800
	Mar. 4, 1945	22.32	12,400	1953	Feb. 12, 1953	23.42	12,200
	Apr. 3, 1945	23.58	20,600		May 18, 1953	23.70	17,500
	Nov. 11, 1945	22.78	15,400	1954	Jan. 16, 1954	23.30	11,600
	Jan. 9, 1946	25.92	39,700		Jan. 22, 1954	23.4	12,100
1946	Feb. 11, 1946	22.30	10,600	1955	Mar. 22, 1955	24.20	17,400
	Mar. 17, 1946	22.25	11,200	1956	Feb. 18, 1956	23.55	13,000
	Mar. 27, 1946	23.03	14,400	1957	Jan. 29, 1957	24.00	14,600
	Dec. 30, 1946	22.80	13,200		Apr. 5, 1957	22.80	10,700
1947	Jan. 3, 1947	23.42	17,100	1958	Nov. 20, 1957	23.62	12,800
	Jan. 16, 1947	22.26	10,400		Dec. 8, 1957	23.12	10,000
	June 23, 1947	24.15	21,200				

a Occurred on following day.

305. Wolf River at Rossville, Tenn.

Location.--Lat 35°03'15", long 89°32'30". on left bank 40 ft downstream from county highway bridge, 0.4 mile upstream from Hurricane Creek, half a mile north of Rossville, Fayette County, 3½ miles downstream from Grissum Creek, and at mile 60.

Drainage area.--503 sq mi. Mostly river bottom swamp land.

Gage.--Nonrecording prior to June 13, 1939; recording thereafter. Datum of gage is 300.74 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs, and extended above on basis of records for Corps of Engineer station at Raleigh.

Bankfull stage.--9 ft.

Remarks.--Base for partial-duration series, 2,600 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 9, 1930	11.32	16,400	1946	Nov. 21, 1945	11.22	11,400
1931	Aug. 11, 1931	8.4	2,950		Nov. 24, 1945	10.15	6,260
1932	Jan. 14, 1932	11.24	15,200		Dec. 25, 1945	9.18	2,630
1933	Mar. 20, 1933	10.60	12,100		Jan. 8, 1946	13.38	31,000
1934	Dec. 19, 1933	10.84	13,200		Feb. 10, 1946	10.83	9,550
1935	Jan. 20, 1935	13.75	40,000		Mar. 7, 1946	9.32	3,100
1936	Mar. 28, 1936	8.90	2,850		Mar. 27, 1946	10.52	7,810
1937	Jan. 23, 1937	10.78	12,000		Mar. 29, 1946	11.16	11,200
1938	Jan. 24, 1938	10.20	7,590	1947	Jan. 5, 1947	9.68	4,410
1939	Jan. 31, 1939	9.7	5,030		Apr. 14, 1947	9.35	3,210
	Feb. 3, 1939	10.70	10,400		May 25, 1947	9.36	3,250
	Feb. 16, 1939	9.66	4,870		June 21, 1947	9.38	3,320
	Mar. 1, 1939	9.22	3,220		June 23, 1947	10.09	6,010
	Mar. 30, 1939	9.48	4,150	1948	Jan. 3, 1948	10.33	7,040
	Apr. 18, 1939	9.80	5,460		Feb. 14, 1948	12.43	19,100
	May 22, 1939	9.50	4,230		Feb. 26, 1948	11.24	11,700
	May 30, 1939	9.45	3,850		Mar. 2, 1948	9.79	4,810
	June 18, 1939	10.53	9,230		Apr. 15, 1948	9.81	4,890
1940	Apr. 30, 1940	8.79	2,070	1949	Nov. 6, 1948	10.00	5,650
1941	Aug. 29, 1941	8.58	1,740		Nov. 20, 1948	10.73	14,600
1942	Feb. 25, 1942	9.12	2,890		Jan. 6, 1949	10.67	8,640
	Mar. 18, 1942	9.12	2,950		Jan. 22, 1949	9.64	4,210
	Apr. 9, 1942	12.23	19,900		Jan. 28, 1949	9.50	3,650
1943	Dec. 28-30, 1942	9.54	4,390		Mar. 27, 1949	10.47	7,670
	Mar. 13, 1943	10.80	11,000		Apr. 14, 1949	9.71	4,490
	Mar. 29, 1943	9.10	3,180		June 15, 1949	11.64	14,000
1944	Feb. 9, 1944	10.32	7,810		June 24, 1949	9.65	4,250
	Feb. 20, 1944	9.30	3,720	1950	Dec. 13, 1949	10.66	7,720
	Feb. 23, 1944	9.46	4,320		Jan. 6, 1950	10.96	9,200
	Feb. 27, 1944	9.35	3,900		Jan. 11, 1950	10.08	5,320
	Feb. 29, 1944	9.07	2,910		Jan. 15, 1950	10.35	6,400
	Mar. 29, 1944	11.10	11,900		Feb. 1, 1950	10.69	7,860
	Apr. 9, 1944	10.21	7,350		Feb. 14, 1950	10.09	5,360
	Apr. 12, 1944	9.48	4,390		Mar. 3, 1950	9.32	2,660
	Apr. 24, 1944	10.05	6,700		Mar. 14, 1950	10.52	7,090
	Apr. 27, 1944	9.13	3,120		Aug. 27, 1950	9.65	3,680
1945	Dec. 28, 1944	9.38	3,820	1951	Nov. 10, 1950	9.40	2,900
	Jan. 2, 1945	11.05	11,600		Dec. 6, 1950	10.39	6,560
	Feb. 18, 1945	9.24	3,300		Jan. 4, 1951	11.09	9,850
	Feb. 21, 1945	9.72	5,220		Jan. 14, 1951	11.39	11,400
	Feb. 27, 1945	10.94	11,100		Feb. 8, 1951	9.88	4,520
	Mar. 4, 1945	9.57	4,590		Mar. 31, 1951	9.63	3,600
	Mar. 21, 1945	9.38	3,920		Apr. 22, 1951	9.61	3,540
	Apr. 2, 1945	9.77	5,430	1952	Nov. 14, 1951	10.20	5,140
					Dec. 9, 1951	9.73	3,690
					Dec. 15, 1951	10.17	5,040
					Jan. 29, 1952	10.46	6,010
					Feb. 5, 1952	9.91	4,230
					Mar. 4, 1952	10.15	4,980
					Mar. 11, 1952	10.34	5,600
					Mar. 23, 1952	9.53	3,090
				1953	Feb. 12, 1953	10.62	6,940

Peak stages and discharges of Wolf River at Rossville, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Feb. 23, 1953	9.54	3,220	1955	Mar. 22, 1955	11.89	12,300
	Mar. 6, 1953	9.49	3,070		Apr. 7, 1955	10.51	5,940
	Mar. 24, 1953	9.73	3,770		Apr. 14, 1955	11.33	9,530
	Apr. 9, 1953	9.59	3,360	1956	Feb. 4, 1956	11.75	11,600
	May 1, 1953	9.50	3,100				
	May 6, 1953	11.65	12,300	1957	Jan. 22, 1957	10.91	7,040
	May 12, 1953	9.87	4,170		Feb. 2, 1957	11.8	11,800
	May 15, 1953	10.17	5,100		Apr. 6, 1957	10.53	5,700
	May 17, 1953	10.96	8,600		June 5, 1957	9.88	3,640
	May 19, 1953	11.74	12,800				
	July 24, 1953	9.88	4,230	1958	Nov. 16, 1957	11.08	7,610
1954	Jan. 16, 1954	10.09	4,450		Nov. 19, 1957	10.62	5,680
	Jan. 22, 1954	10.50	6,000		Dec. 8, 1957	10.03	3,640
	Feb. 17, 1954	11.58	11,800		May 2, 1958	9.91	3,280
	Feb. 26, 1954	10.28	5,130		May 10, 1958	11.24	8,400
					Sept. 22, 1958	11.05	7,480

317. Wolf River at Raleigh, Tenn.

Location.--Lat 35°12'08", long 89°55'24", on downstream side of Austin Peay Highway bridge at Raleigh, Shelby County, at mile 16.9.

Drainage area.--765 sq mi.

Gage.--Nonrecording in present vicinity prior to July 22, 1949; recording thereafter. Datum of gage is 217.51 ft above mean Gulf level, or 217.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 37,000 cfs. Affected by backwater from extremely high Mississippi River stages.

Bankfull stage.--12 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Jan. 20, 1935	23.72	-	1946	Nov. 23, 1945	15.35	11,600
1937	Jan. 22-23, 1937	-	27,000	1946	Jan. 9, 1946	20.40	41,400
	Feb. 9-10, 1937	18.2	-	1946	Feb. 12, 1946	15.50	12,300
1938	Jan. 26, 1938	14.6	9,970	1946	Mar. 31, 1946	15.35	11,800
	Feb. 19, 1938	-	9,970	1947	Dec. 30, 1946	14.15	7,140
	Apr. 22, 1938	-	7,880	1947	Jan. 3, 1947	14.55	8,290
1939	Jan. 30-31, 1939	-	5,360	1948	Feb. 15, 1948	18.0	27,000
	Feb. 4, 1939	15.9	15,700		Feb. 28, 1948	15.85	14,600
	Feb. 10, 1939	-	10,000		Mar. 3, 1948	14.72	8,930
	Feb. 16, 1939	-	5,540	1949	Jan. 8, 1949	14.60	12,000
	Apr. 18, 1939	-	6,530		Jan. 27, 1949	14.35	9,810
	June 21, 1939	-	6,240		Mar. 28, 1949	14.82	12,800
1940	Feb. 19, 1940	11.7	2,430		Apr. 13, 1949	14.15	9,280
1941	Apr. 24, 1941	9.86	1,920		June 17, 1949	16.0	15,100
1942	Mar. 14, 1942	13.76	5,830	1950	Dec. 15, 1949	14.52	8,100
	Apr. 11, 1942	17.8	24,300		Jan. 11, 1950	16.20	13,000
1943	Mar. 15, 1943	15.65	12,900		Feb. 2, 1950	16.54	15,200
					Feb. 13, 1950	15.08	9,030
1944	Feb. 11, 1944	14.15	7,330		Mar. 15, 1950	14.85	8,250
	Mar. 31, 1944	15.60	13,900		Aug. 26, 1950	13.45	5,460
	Apr. 9, 1944	14.60	8,905		Sept. 1, 1950	13.37	5,550
	Apr. 26, 1944	13.70	5,945	1951	Dec. 7, 1950	15.47	9,290
1945	Jan. 1, 1945	-	17,300		Jan. 6, 1951	15.17	9,050
	Jan. 2, 1945	16.2	-		Jan. 15, 1951	16.50	14,200
	Feb. 22, 1945	13.62	5,435		Feb. 9, 1951	14.08	5,940
	Mar. 1, 1945	15.32	12,100	1952	Nov. 18, 1951	13.70	5,050
	Apr. 2, 1945	14.38	8,100		Dec. 15, 1951	14.60	7,330
					Feb. 5, 1952	14.35	6,650
					Mar. 6, 1952	13.76	5,640

Peak stages and discharges of Wolf River at Raleigh, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Mar. 12, 1952	14.45	6,880	1955	Apr. 6, 1955	14.6	7,620
1953	Feb. 12, 1953	13.95	5,460		Apr. 16, 1955	14.9	9,910
	Mar. 23, 1953	14.15	5,660		Apr. 21, 1955	13.5	5,410
	Apr. 30, 1953	13.95	5,760	1956	Feb. 5, 1956	15.75	14,000
	May 8, 1953	15.80	13,500		Feb. 18, 1956	13.85	5,780
	May 18, 1953	16.3	15,000	1957	Feb. 3, 1957	15.70	12,500
1954	Jan. 16, 1954	14.50	6,550		Apr. 8, 1957	13.70	5,520
	Jan. 22, 1954	15.10	8,180	1958	Nov. 19, 1957	15.80	12,700
	Feb. 19, 1954	15.15	10,900		Dec. 8, 1957	13.42	5,490
1955	Mar. 23, 1955	16.3	14,100		May 11, 1958	15.15	10,700

MISSISSIPPI RIVER MAIN STEM

320. Mississippi River at Memphis, Tenn.

Location.--Lat 35°07'37", long 90°04'25", on left bank 50 ft downstream from Harahan bridge at Memphis, Shelby County, 1½ miles downstream from Wolf River, 1.3 miles downstream from Beale Street gage, 70 miles upstream from St. Francis River and at mile 731.5.

Drainage area.--932,800 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 16, 1934, at site 1.3 miles upstream (Beale Street gage) and Apr. 16 to Dec. 21, 1934, in present vicinity; recording thereafter. All gages at datum 183.91 ft above mean sea level, datum of 1929, 184.21 ft above mean Gulf level (1912 Mississippi River Commission), and 190.86 ft on Memphis datum (1881 Mississippi River Commission). To adjust gage heights obtained at present site to those obtained at Beale Street, add 0.3 ft for each 10-foot increment of stage.

Stage-discharge relation.--Defined by current-meter measurements below 2,000,000 cfs. (Frequent measurements since 1932 and occasional measurements from 1882-1904).

Bankfull stage.--34 ft.

Remarks.--Natural flow of stream affected by many reservoirs and navigation dams. Records of peaks prior to 1935 from reports of Mississippi River Commission. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1872	Apr. 24, 1872	31.5	-	1894	Feb. 19, 20, 1894	29.0	-
1873	Mar. 3, 1873	32.5	-	1895	Jan. 23, 24, 1895	24.05	-
1874	Mar. 2, 1874	34.0	-	1896	Apr. 15, 16, 1896	29.4	-
1875	Aug. 15-17, 1875	33.05	-		Mar. 20, 1897	37.66	-
1876	Apr. 8, 9, 1876	34.08	-		Apr. 10, 1898	37.22	-
	Apr. 29, 1877	32.05	-		Apr. 1-11, 1899	35.2	-
1877	May 2, 1878	29.1	-		Mar. 19, 1900	29.47	-
1878	Jan. 29, 1879	28.1	-	1901	May 6, 1901	32.12	-
1879	Mar. 24-29, 1880	33.4	-		Mar. 21, 1902	30.9	-
1880	Apr. 27, 28, 1881	33.3	-		Mar. 20, 1903	40.1	-
	Mar. 6, 9, 1882	35.15	-		Apr. 11, 1904	39.2	-
1881	Mar. 6-8, 1883	34.75	-		Mar. 21, 1905	28.93	-
1882	Mar. 1-3, 1884	34.15	-	1906	Apr. 15, 1906	37.07	-
1883	Jan. 28, 1885	29.25	-		Feb. 3, 1907	40.3	-
1886	Apr. 28, 1886	34.8	-		Mar. 24, 25, 1908	35.55	-
	Mar. 9, 10, 1887	35.3	-		Mar. 22, 1909	38.6	-
1887	Apr. 11, 12, 1888	34.2	-		Mar. 19, 1910	33.12	-
1888	June 26, 27, 1889	26.6	-	1911	Apr. 25, 26, 1911	36.42	-
1889	Mar. 20, 1890	35.6	1,345,000		Apr. 6, 1912	45.23	-
1891	Mar. 10, 1891	34.9	1,289,000		Apr. 9, 1913	46.55	-
	May 2, 3, 1892	34.6	-		Apr. 15, 1914	32.63	-
1892	May 15, 16, 1893	35.2	-		Feb. 17, 18, 1915	36.08	-

a Occurred on different day than peak discharge.

MISSISSIPPI RIVER MAIN STEM

Peak stages and discharges of Mississippi River
at Memphis, Tenn.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Feb. 9, 1916	43.4	-	1938	Apr. 20, 1938	32.97	971,000
1917	Apr. 10, 1917	40.38	-	1939	Feb. 28, Mar. 1	a37.76	1,280,000
1918	Mar. 1, 2, 1918	30.0	-	1940	May 6, 1940	a31.7	962,000
1919	Mar. 29, 1919	37.3	-				
1920	Apr. 5, 1920	40.3	-	1941	Apr. 28, 1941	20.64	595,000
1921	Apr. 8, 1921	29.9	-	1942	Mar. 27, 28, 1942	30.20	987,000
1922	Apr. 1, 2, 1922	42.5	-	1943	June 3, 4, 1943	a37.75	1,384,000
1923	Mar. 27, 1923	36.3	-	1944	May 5, 1944	37.11	1,289,000
1924	Jan. 18-20, 1924	34.1	-	1945	Mar. 24, 1945	a39.26	1,446,000
1925	Mar. 3, 1925	29.0	-				
1926	Apr. 19, 20, 1926	31.0	-	1946	Jan. 20, 1946	a36.14	1,410,000
1927	Apr. 23-25, 1927	45.8	bl,744,000	1947	Apr. 23, 24, 1947	a32.12	1,128,000
1928	July 10, 1928	35.8	-	1948	Apr. 8, 1948	36.49	1,310,000
1929	May 22-28, 1929	41.5	-	1949	Feb. 4, 1949	a35.20	1,271,000
1930	Jan. 22, 23, 1930	34.7	-	1950	Jan. 24, 1950	a40.50	1,568,000
1931	Apr. 15, 1931	24.4	-	1951	Mar. 3, 1951	35.32	1,217,000
1932	Feb. 19, 1932	38.7	1,308,000	1952	Apr. 1, 1952	37.12	1,323,000
1933	Apr. 9, 1933	a40.4	1,416,000	1953	May 24, 1953	25.93	843,000
1934	Mar. 19, 1934	29.98	839,000	1954	Jan. 29, 30, 1954	a19.17	630,000
1935	Mar. 28, 1935	37.2	1,190,000	1955	Apr. 1, 2, 1955	a35.47	1,247,000
1936	Apr. 21, 1936	39.33	1,340,000	1956	Feb. 28, 29, 1956	a29.37	1,012,000
1937	Feb. 8, 1937	a48.69	1,980,000	1957	Feb. 16, 1957	31.16	1,060,000
				1958	July 31, 1958	a29.88	967,000

a Occurred on different day than peak discharge.

b Does not include flow around levees.

ST. FRANCIS RIVER BASIN

375. St. Francis River near Patterson, Mo.

Location.--Lat 37°11'40", long 90°30'10", in NE¼ sec. 16, T. 29 N., R. 5 E., at bridge on State Highway 34, 1 mile upstream from Clark Creek and 3 miles east of Patterson.

Drainage area.--956 sq mi.

Gage.--Nonrecording prior to Apr. 12, 1939, and Sept. 6, 1956, to Sept. 26, 1958. Recording Apr. 13, 1939, to Sept. 5, 1956, and since Sept. 27, 1958. Prior to Oct. 1, 1938, at datum 2.00 ft higher. Datum of present gage is 370.45 ft above mean sea level, datum of 1929. Gage heights given herein converted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs; shifts in relation occur.

Bankfull stage.--16 ft.

Remarks.--Occasional backwater from Wappapello Reservoir since Apr. 1, 1941. Base for partial-duration series, 21,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	33.8	a100,000	1925	Apr. 18, 1925	10.85	6,890
1921	-	22.0	a36,600	1926	Nov. 8, 1925	22.50	38,200
1922	Nov. 19, 1921	22.0	36,600		Feb. 25, 1926	17.90	23,300
	Mar. 31, 1922	18.95	26,700	1927	Apr. 1, 1927	26.70	50,000
1923	Feb. 1, 1923	21.20	34,000		Apr. 14, 1927	27.00	51,000
	Mar. 16, 1923	21.38	34,600		May 25, 1927	21.60	33,000
	May 16, 1923	19.40	28,000		June 1, 1927	20.60	30,200
1924	May 29, 1924	15.50	16,600	1928	Dec. 14, 1927	27.20	51,700
					Apr. 6, 1928	21.98	34,300

a Annual peak only.

Peak stages and discharges of St. Francis River near Patterson, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	June 9, 1928	22.25	34,900	1944	Apr. 23, 1944	19.05	20,600
	June 13, 1928	22.80	36,900				
	June 21, 1928	25.60	46,100				
1929	Jan. 25, 1929	20.80	30,500	1945	Feb. 26, 1945	24.60	(b)
	Apr. 9, 1929	19.30	26,000		Mar. 6, 1945	21.79	(b)
	May 6, 1929	20.80	30,500		Mar. 20, 1945	20.10	(b)
	May 13, 1929	21.60	33,000		Mar. 26, 1945	21.17	(b)
					Mar. 31, 1945	27.26	(b)
					Apr. 14, 1945	31.00	(b)
1930	Jan. 13, 1930	21.70	33,200		June 9, 1945	29.20	a64,900
				1946	Oct. 22, 1945	22.30	31,100
1931	Mar. 7, 1931	15.52	15,300		Feb. 14, 1946	25.00	42,500
					May 1, 1946	23.80	37,000
1932	Dec. 30, 1931	15.86	16,300		May 16, 1946	23.40	35,300
					May 25, 1946	22.80	32,900
1933	Dec. 24, 1932	19.75	27,500	1947	Apr. 25, 1947	23.30	34,900
	Jan. 22, 1933	17.80	21,500				
	Apr. 16, 1933	25.07	44,400	1948	Jan. 1, 1948	24.86	41,800
	May 14, 1933	28.80	57,400				
1934	Apr. 7, 1934	13.2	10,200	1949	Jan. 25, 1949	28.20	59,000
					Feb. 15, 1949	20.20	24,100
1935	Mar. 11, 1935	30.70	79,200	1950	Oct. 22, 1949	21.76	29,300
	May 5, 1935	20.70	30,200		Jan. 4, 1950	26.37	53,400
	May 20, 1935	21.40	32,400		Jan. 14, 1950	18.28	21,300
	June 21, 1935	21.50	32,700		Feb. 13, 1950	24.00	41,700
					Apr. 3, 1950	19.25	23,800
					May 10, 1950	23.80	40,900
1936	Nov. 10, 1935	12.75	9,600	1951	Feb. 7, 1951	19.40	24,400
					Feb. 21, 1951	19.46	24,800
				1952	Nov. 23, 1951	19.29	24,100
1937	Nov. 3, 1936	19.45	26,300		Mar. 11, 1952	19.20	23,800
	Dec. 31, 1936	19.50	26,600	1953	Mar. 4, 1953	17.87	20,300
	Jan. 8, 1937	20.00	29,100				
	Jan. 15, 1937	26.50	55,200				
1938	Feb. 18, 1938	22.65	37,300	1954	May 2, 1954	20.1	26,700
	Mar. 29, 1938	18.70	24,100		June 8, 1954	19.85	25,700
	Mar. 31, 1938	20.00	28,100				
				1955	Mar. 21, 1955	21.3	30,900
1939	Jan. 30, 1939	19.01	25,000				
	Feb. 28, 1939	17.97	22,000	1956	May 16, 1956	16.56	17,200
	Mar. 5, 1939	21.90	34,600				
	Apr. 6, 1939	20.80	30,700	1957	Apr. 4, 1957	27.05	57,500
	Apr. 17, 1939	21.48	33,200		May 23, 1957	23.00	36,500
					June 30, 1957	28.50	66,500
1940	Apr. 19, 1940	17.92	21,700	1958	Dec. 18, 1957	20.00	25,000
					Mar. 24, 1958	22.14	36,500
1941	Jan. 2, 1941	14.40	12,600		July 19, 1958	18.80	23,700
1942	Nov. 1, 1941	20.40	25,800				
1943	Dec. 28, 1942	22.87	33,300				
	May 11, 1943	29.70	68,100				

a Annual peak only.

b Peak discharge indeterminate, affected by backwater from Wappapello Reservoir.

395. St. Francis River at Wappapello, Mo.

Location.--Lat 36°55'41", long 90°15'55", in NW¼SE¼ sec.2, T.26 N., R.7 E., on right bank at downstream side of highway bridge, 0.5 mile southeast of Wappapello and 1.25 miles downstream from Wappapello Dam.

Drainage area.--1,311 sq mi.

Gage.--Nonrecording prior to Oct. 14, 1940; recording thereafter. Datum of gage is 325.15 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Bankfull stage.--22 ft.

Remarks.--Records furnished by Corps of Engineers. Flow regulated by Wappapello Reservoir (capacity at spillway crest, 625,000 acre-ft). Only annual peaks are shown.

ST. FRANCIS RIVER BASIN

Peak stages and discharges of St. Francis River at Wappapello, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Jan. 5, 1941	10.76	3,320	1950	Jan. 18, 1950	22.42	10,500
1942	Nov. 2, 1941	19.65	7,640				
1943	Dec. 30, 1942	21.81	9,270	1951	Feb. 23, 1951	21.75	9,990
1944	Mar. 3, 1944	11.21	3,320	1952	Nov. 26, 1951	21.49	9,410
1945	Apr. 16, 1945	25.60	22,300	1953	Mar. 6, 1953	17.22	6,060
				1954	June 11, 1954	18.67	7,190
1946	Feb. 15-17, May 18	a22.60	10,600	1955	Mar. 22, 1955	21.04	9,850
1947	Apr. 26, 1947	b21.98	10,000				
1948	Jan. 3, 1948	21.35	10,000	1956	Feb. 19, 1956	17.00	6,130
1949	Feb. 4, 1949	22.46	10,900	1957	Apr. 11, 1957	22.15	10,300
				1958	Mar. 27, 1958	c21.37	10,200

a Occurred Feb. 16, 1946.

b Occurred on following day.

c Occurred Mar. 30, 1958.

401. St. Francis River at St. Francis, Ark.

Location.--Lat 36°27'21", long 90°08'13", in sec.18, T.21 N., R.9 E., at bridge on U. S. Highway 62 at St. Francis, 229 miles above mouth.

Drainage area.--1,781 sq mi.

Gage.--Nonrecording prior to Aug. 1, 1946; recording thereafter. Datum of gage is 270.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--19 ft.

Remarks.--Records furnished by Corps of Engineers. Flow regulated by Wappapello Reservoir since Apr. 1, 1941 (capacity at spillway crest, 625,000 acre-ft); flood records affected since that date. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1916	February 1916	23.16	-	1938	Apr. 4, 1938	b23.6	18,600
1917	Apr. 9, 1917	20.5	-	1939	Apr. 23, 1939	22.7	14,900
1918	May 18, 1918	22.1	-	1940	Apr. 24, 1940	c21.0	9,720
1919	Nov. 11, 1919	20.6	-				
1920	May 25, 1920	22.6	-	1941	Nov. 13, 1941	17.9	4,820
				1942	Apr. 15, 1942	20.2	8,930
1921	Nov. 27, 1921	23.3	-	1943	Jan. 5, 1943	19.6	7,460
1922	Apr. 6, 1922	23.6	-	1944	Apr. 12, 1944	19.6	7,600
1923	May 21, 1923	25.1	-	1945	Apr. 20, 1945	23.5	20,500
1924	June 6, 1924	18.3	-				
1925	Nov. 14, 1925	22.9	-	1946	May 27-29, 1946	21.65	13,000
				1947	May 3, 1947	c20.53	8,950
1926	Mar. 5, 1926	20.3	-	1948	Jan. 12, 1948	d20.31	9,560
1927	Apr. 18, 1927	26.6	-	1949	Feb. 15, 1949	22.82	17,000
1928	June 26, 1928	26.7	-	1950	Jan. 14, 1950	23.42	20,000
1929	May 19, 1929	25.2	-				
1930	Jan. 18, 1930	26.5	33,100	1951	Feb. 25, 1951	-	12,000
				1952	Mar. 19, 1952	20.7	10,500
1931	Mar. 15, 1931	19.4	6,540	1953	Mar. 23, 1953	19.1	6,250
1932	Jan. 23, 1932	a21.6	11,200	1954	June 19, 1954	17.25	5,210
1933	May 18, 1933	27.1	31,000	1955	Mar. 29, 1955	20.6	8,700
1934	Apr. 3, 1934	18.5	5,350				
1935	Mar. 15, 1935	28.2	39,200	1956	Feb. 26, 1956	18.65	6,330
				1957	May 27, 1957	23.00	17,300
1936	Nov. 12, 1936	19.2	6,190	1958	Mar. 29, 1958	21.85	12,900
1937	Jan. 19, 1937	26.7	28,600				

a Maximum crest stage. Maximum stage occurred Dec. 31 on rise that crested Jan. 3, 1933.

b Occurred Feb. 24, 1938.

c Occurred on following day.

d Occurred Jan. 10, 1948.

404.5. St. Francis River at Lake City, Ark.

Location.--Lat 35°49'10", long 90°25'48", in SE $\frac{1}{4}$ sec.22, T.14 N., R.6 E., at bridge on State Highway 18 at Lake City, at mile 173.6.

Drainage area.--2,385 sq mi.

Gage.--Nonrecording prior to Sept. 1, 1948; recording thereafter. Datum of gage is 217.69 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Records furnished by Corps of Engineers. Flow regulated by Wappapello Reservoir since Apr. 1, 1941 (capacity below spillway crest, 625,000 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1917	Apr. 13-17, 1917	8.9	-	1938	Apr. 9, 10, 1938	10.7	16,100
1918	May 14, 15, 1918	9.2	-	1939	Mar. 15, 16, 1939	10.1	14,000
1919	Jan. 3, 1919	9.8	-	1940	Apr. 30, May 2	8.7	9,470
1920	June 2-4, 1920	9.1	-	1941	Nov. 20, 21, 1941	6.5	4,440
1921	May 12, 1921	9.3	-	1942	Feb. 20, 1942	8.7	10,300
1922	Apr. 12-14, 1922	9.6	-	1943	May 17, 18, 1943	7.5	7,080
1923	May 17, 1923	10.1	-	1944	Apr. 13, 1944	8.9	10,900
1924	Jan. 1, 1924	7.7	-	1945	Apr. 24, 25, 1945	11.9	21,300
1925	Oct. 27-29, 1925	9.1	-	1946	May 27, 28, 1946	10.0	18,000
1926	Mar. 12, 13, 1926	8.2	-	1947	May 10, 11, 1947	8.1	9,260
1927	Apr. 16, 1927	10.5	-	1948	Jan. 16, 17, 1948	8.6	10,100
1928	June 24, 1928	10.7	-	1949	Jan. 31, 1949	11.24	19,400
1929	May 18, 19, 1929	10.0	-	1950	Jan. 14, 1950	12.98	25,700
1930	Jan. 15, 1930	11.1	-	1951	Dec. 9, 1951	10.85	17,800
1931	Mar. 22, 1931	7.0	5,280	1952	Jan. 5, 1952	10.9	18,600
1932	Jan. 19, 1932	10.5	15,400	1953	Mar. 19, 1953	9.9	15,200
1933	May 25, 1933	10.9	16,800	1954	May 4, 1954	6.95	5,730
1934	Mar. 28, 1934	9.4	11,900	1955	Apr. 6, 1955	8.76	10,600
1935	Mar. 23, 1935	12.0	20,900	1956	Feb. 19, 1956	10.25	15,500
1936	Nov. 6, 7, 1936	7.0	5,380	1957	Nov. 20, 1957	12.95	24,200
1937	Jan. 22-24, 1937	13.3	36,700	1958	Apr. 4, 1958	10.15	15,900

a Occurred on Jan. 17, 1950.

410. Little River ditch 81 near Kennett, Mo.

Location.--Lat 36°14'10", long 89°58'55", in NE $\frac{1}{4}$ sec.4, T.18 N., R.10 E., at bridge on State Highway 84, about 4 miles east of Kennett.

Drainage area.--111 sq mi.

Gage.--Nonrecording. Datum of gage is 241.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Bankfull stage.--10 ft.

Remarks.--Records not comparable with those of station at Kirk, 1921-26, because of additional ditch construction. Only annual peaks are shown.

Peak stages and discharges of Little River ditch 81 near Kennett, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 21, 1927	15.11	a2,760	1943	May 12, 1943	9.3	1,380
1928	June 30, 1928	13.06	2,710	1944	Apr. 13, 1944	10.36	1,950
1929	Feb. 27, 1929	10.88	2,000	1945	June 18, 1945	12.18	2,620
1930	Jan. 10, 14, 1930	11.38	1,770	1946	Jan. 9, 1946	10.15	1,890
1931	Mar. 8, 1931	4.48	303	1947	Apr. 12, 1947	6.3	805
1932	Jan. 18, 1932	9.80	1,370	1948	Mar. 27, 1948	8.5	1,400
1933	Jan. 1, 1933	10.34	1,380	1949	Jan. 28, 1949	11.26	2,300
1934	Mar. 27, 1934	10.28	1,490	1950	Feb. 16, 1950	11.90	2,440
1935	Mar. 15, 1935	12.11	2,610	1951	Feb. 21, 1951	11.21	2,200
1936	Apr. 7, 1936	5.27	386	1952	Jan. 5, 1952	11.44	2,230
1937	Jan. 26, 1937	12.53	2,310	1953	Mar. 18, 1953	8.38	1,310
1938	Feb. 18, 1938	11.46	1,960	1954	Jan. 21, 1954	b5.45	548
1939	Apr. 18, 1939	10.36	1,600	1955	Mar. 21, 1955	9.2	1,550
1940	Apr. 20, 1940	7.10	837	1956	Feb. 18, 1956	10.84	2,060
1941	Jan. 25, 1941	4.57	330	1957	July 2, 1957	11.50	2,300
1942	Apr. 9, 1942	10.1	1,850	1958	Nov. 19, 1957	11.86	2,440

a Includes some flow from levee break on St. Francis River.

b Observed.

420. Little River ditch 1 near Kennett, Mo.

Location.--Lat 36°14'10", long 89°58'50", in NE $\frac{1}{4}$ sec.4, T.18 N., R.10 E., at bridge on State Highway 84, about 4 miles east of Kennett.

Drainage area.--235 sq mi.

Gage.--Nonrecording. Datum of gage is 241.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements; large shifts occur frequently.

Bankfull stage.--13 ft.

Remarks.--Records not comparable with those of station at Kirk, 1921-26, because of additional ditch construction. A spillway 6.3 miles upstream diverted water at high stages from ditches 66, 66-A, and 251 to ditch 1. This spillway was washed out and closed April 1951. Crests have been adjusted where necessary for spillway diversion with data supplied by the Little River Drainage District. Ditch 1 near Kennett has no connection with ditch 1 near Morehouse. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 25, 1927	16.56	a7,520	1943	May 12, 1943	11.6	3,550
1928	June 24, 1928	10.34	2,990	1944	Apr. 14, 1944	12.8	5,010
1929	Feb. 27, 1929	11.63	4,010	1945	June 15, 1945	16.41	b6,730
1930	Jan. 15, 1930	13.24	5,040	1946	Jan. 10, 1946	12.26	b4,460
1931	Mar. 9, 1931	5.05	545	1947	Apr. 12, 1947	7.4	2,250
1932	Jan. 18, 1932	10.95	3,510	1948	Mar. 27, 1948	11.10	4,130
1933	May 16, 1933	11.16	3,040	1949	Feb. 16-18, 1949	15.68	b5,740
1934	Mar. 27, 1934	12.37	2,810	1950	Jan. 14, 1950	16.57	b7,360
1935	Mar. 17, 1935	16.22	4,800	1951	Jan. 16, 1951	14.60	b5,840
1936	Apr. 7, 1936	8.32	1,180	1952	Jan. 5, 1952	14.50	5,900
1937	Jan. 25, 1937	16.80	7,260	1953	Mar. 19, 1953	9.70	3,020
1938	Feb. 19, 1938	12.65	3,840	1954	Jan. 21, 1954	7.12	1,860
1939	Apr. 18, 1939	12.22	b3,700	1955	Mar. 21, 1955	11.1	3,840
1940	Apr. 21, 1940	7.08	2,310	1956	Feb. 18, 1956	11.97	4,330
1941	Jan. 25, 1941	3.7	582	1957	May 25, 1957	14.77	5,200
1942	Apr. 10, 1942	10.8	4,080	1958	Mar. 25, 1958	16.65	6,250

a Includes some inflow from levee breaks on St. Francis River.

b Adjusted for inflow from ditches 66, 66-A, and 251.

425. Little River ditch 251 near Lilbourn, Mo.

Location.--Lat 36°33'20", long 89°40'10", on line between secs.8 and 17, T.22 N., R.13 E., at bridge on U. S. Highway 62, 3.7 miles southwest of Lilbourn and 4 miles northwest of Marston.

Drainage area.--235 sq mi.

Gage.--Nonrecording. Datum of gage is 263.46 ft above mean sea level, datum of 1929 (levels by State Highway Department).

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Bankfull stage.--14 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 1945	15.6	3,200	1952	Jan. 4, 1952	13.37	2,780
1946	May 27, 1946	13.35	2,500	1953	Mar. 17, 1953	10.6	1,950
1947	Apr. 11, 1947	9.10	1,300	1954	Jan. 20, 1954	7.20	994
1948	Mar. 27, 1948	12.0	2,100	1955	Mar. 21, 1955	11.6	2,240
1949	Jan. 28, 1949	14.68	3,120	1956	Feb. 18, 1956	12.06	2,390
1950	Feb. 15, 1950	15.16	3,210	1957	May 23, 1957	14.15	2,970
1951	Feb. 21, 1951	13.55	2,700	1958	Nov. 18, 1957	14.72	3,150

430. Castor River at Aquilla, Mo.

Location.--Lat 36°57'10", long 89°54'25", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.27 N., R.10 E., at bridge on State Highway 25, half a mile north of Aquilla and 4 miles north of Bloomfield.

Drainage area.--175 sq mi.

Gage.--Nonrecording. Datum of gage is 317.11 ft above mean sea level (levels by State Highway Department).

Stage-discharge relation.--Defined by current-meter measurements; large shifts in relation occur frequently.

Bankfull stage.--13 ft.

Remarks.--Entire flow from headwaters of Castor River is diverted 22 miles above station to Headwater diversion channel. See Castor River at Zalma for records of flow above diversion. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 1, 1945	14.2	3,600	1952	Mar. 11, 1952	12.20	1,960
1946	May 3, 1946	11.02	2,000	1953	Mar. 22, 1953	10.69	1,500
1947	Apr. 11, 1947	8.65	1,560	1954	May 3, 1954	8.0	810
1948	Jan. 1, 1948	10.95	2,220	1955	Mar. 22, 1955	11.46	1,730
1949	Jan. 25, 1949	12.75	3,000	1956	Feb. 18, 1956	10.97	1,580
1950	Jan. 4, 1950	13.45	3,430	1957	May 23, 1957	14.00	4,100
1951	Jan. 15, 1951	11.56	1,760	1958	Mar. 24, 1958	13.25	2,980

435. Little River ditch 1 near Morehouse, Mo.

Location.--Lat 36°50'05", long 89°43'50", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.25 N., R.12 E., at bridge on U. S. Highway 60, $\frac{1}{2}$ miles downstream from Little River ditch 39 and 2 miles west of Morehouse.

Drainage area.--450 sq mi.

Gage.--Nonrecording. Datum of gage is 280.76 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements; large shift in relation occurred during summer of 1947 due to channel enlargement.

Bankfull stage.--13 ft.

Remarks.--This ditch has no connection with ditch 1 near Kennett. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 1945	19.85	5,830	1952	Mar. 11, 1952	16.50	7,020
1946	May 3, 1946	17.2	4,600	1953	Mar. 23, 1953	13.15	4,540
1947	Apr. 12, 1947	13.92	3,230	1954	May 3, 1954	7.60	1,300
1948	Jan. 2, 1948	13.6	4,760	1955	Mar. 21, 1955	15.6	6,170
1949	Jan. 25, 1949	15.35	6,270	1956	Feb. 18, 1956	14.27	5,340
1950	Jan.13,16, 1950	16.30	6,920	1957	May 26, 1957	16.35	6,250
1951	Jan. 15, 1951	14.60	5,570	1958	Mar. 25, 1958	18.26	7,660

440. Little River ditch 251 near Kennett, Mo.

(Includes records for ditches 66 and 66-A published separately in annual water-supply papers)

Location.--Lat 36°14'10", long 89°58'40", in NW $\frac{1}{4}$ sec.3, T.18 N., R.10 E., at bridge on State Highway 84, about 4 miles east of Kennett.

Drainage area.--883 sq mi, including that of Little River ditches 66 and 66-A.

Gage.--Nonrecording. Datum of gage is 241.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Bankfull stage.--15 ft.

Remarks.--Ditch 251 completed after November 1926. At high stages a spillway 6.3 miles upstream diverted water from ditches 66, 66-A, and 251 into ditch 1. This spillway was washed out and closed April 1951. Crests have been corrected where necessary for spillway diversion with data supplied by the Little River Drainage District. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 25, 1927	17.67	12,500	1943	May 14, 1943	14.9	6,830
1928	June 24, 1928	14.95	9,040	1944	Apr. 13, 1944	15.6	8,470
1929	Feb. 28, 1929	15.37	9,500	1945	June 13, 1945	17.71	a11,000
1930	Jan.14,15, 1930	16.41	11,000	1946	Jan. 11, 1946	17.0	a10,200
1931	Mar. 9, 1931	10.12	4,110	1947	Apr. 12, 1947	13.7	6,110
1932	Jan. 18, 1932	14.50	8,250	1948	Mar. 28, 1948	15.36	a7,900
1933	May 16, 1933	15.18	8,190	1949	Jan. 28, 1949	18.75	a12,700
1934	Mar. 28, 1934	13.66	6,260	1950	Jan. 16, 1950	18.17	a11,700
1935	Mar. 16, 1935	16.40	8,960	1951	Feb. 22, 1951	18.80	a12,100
1936	Apr. 8, 1936	11.28	4,190	1952	Jan. 6, 1952	19.60	11,000
1937	Jan. 25, 1937	18.20	12,700	1953	Mar. 24, 1953	13.07	4,990
1938	Feb. 20, 1938	15.76	9,280	1954	June 11, 1954	9.10	2,500
1939	Mar. 7, 1939	15.59	a9,130	1955	Mar. 23, 1955	17.1	8,350
1940	Apr. 21, 1940	13.35	6,980	1956	Feb. 19, 1956	17.00	8,290
1941	Jan. 26, 1941	7.75	2,240	1957	May 26, 1957	b21.70	11,700
1942	Apr. 10, 1942	15.3	8,480	1958	Nov. 20, 1957	21.18	13,100

a Corrected for diversion into ditch 1.

b Occurred May 24, 1957.

460. Little River ditch 259 near Kennett, Mo.

Location.--Lat 36°14'10", long 89°58'35", in NW $\frac{1}{4}$ sec.3, T.18 N., R.10 E., at bridge on State Highway 84, about 4 miles east of Kennett.

Drainage area.--89.0 sq mi.

Gage.--Nonrecording. Datum of gage is 241.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements, large shifts in relation occur frequently.

Bankfull stage.--10 ft.

Remarks.--Ditch completed after November 1926. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 29, 1927	15.57	4,140	1943	Mar. 20, 1943	9.3	962
1928	June 24, 1928	8.15	966	1944	Apr. 12, 1944	11.27	1,540
1929	Feb. 26, 1929	9.43	1,330	1945	June 12-15, 1945	11.6	1,890
1930	Jan. 14, 1930	11.04	1,820				
1931	Apr. 27, 1931	4.50	212	1946	Jan. 11, 1946	10.98	1,730
1932	Jan. 17, 1932	9.82	1,350	1947	Apr. 11, 1947	8.95	1,200
1933	Apr. 23, 1933	10.72	1,360	1948	Mar. 23, 1948	9.45	1,360
1934	Mar. 29, 1934	11.38	1,160	1949	Mar. 27, 1949	10.78	1,470
1935	Mar. 15, 1935	11.30	1,150	1950	Feb. 15, 16, 1950	11.73	2,370
1936	July 3, 1936	7.72	454	1951	Feb. 22, 23, 1951	11.37	2,110
1937	Jan. 23, 1937	12.23	3,420	1952	Mar. 11, 1952	11.95	2,670
1938	Feb. 19, 1938	11.10	1,940	1953	Mar. 18, 1953	6.37	1,080
1939	Feb. 3, 1939	10.63	1,780	1954	May 29, 1954	7.0	1,120
1940	Apr. 20, 1940	7.84	1,110	1955	May 29, 1955	9.1	2,000
1941	Jan. 24, 1941	4.3	355	1956	Feb. 18, 1956	10.95	3,080
1942	Apr. 10, 1942	10.69	1,720	1957	July 4, 1957	11.81	2,920
				1958	Nov. 20, 1957	11.40	2,720

a Includes some overflow from levee breaks on Mississippi River.

465. Big Lake Outlet near Manila, Ark.

Location.--Lat 35°51'00", long 90°07'40", in SE $\frac{1}{4}$ sec.9, T.14 N., R.9 E., at bridge on State Highway 18, 3 miles southeast of Manila.

Drainage area.--2,000 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 223.44 ft above mean sea level (unadjusted).

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs.

Bankfull stage.--10 ft.

Remarks.--Flow is affected by natural regulation by Big Lake just upstream from gage. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	20.3	16,900	1931	Mar. 14, 15, 1931	8.60	2,650
1928	July 4, 5, 1928	19.7	15,700	1932	Jan. 26, 27, 1932	18.0	12,600
1929	Mar. 6, 1929	16.90	10,600	1933	May 21, 22, 1933	16.8	12,800
1930	Jan. 16, 1930	19.85	15,900				

a Occurred July 5, 1928.

ST. FRANCIS RIVER BASIN

466. Right Hand Chute Little River at Rivervale, Ark.

Location.--Lat 35°40'20", long 90°20'12", in SW $\frac{1}{4}$ sec.10, T.12 N., R.7 E., at floodway bridge at Rivervale.Drainage area.--2,113 sq mi.Gage.--Nonrecording prior to Oct. 6, 1949; recording thereafter. Datum of gage is 213.15 ft above mean sea level, datum of 1929.Stage-discharge relation.--Defined by current-meter measurements.Bankfull stage.--8 ft.Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar.12,13, 1939	11.2	-	1949	Feb. 2, 1949	12.6	23,100
1940	Apr.28,29, 1940	7.85	-	1950	Feb. 20, 1950	b13.57	29,200
1941	Feb. 1, 2, 1941	a4.85	-	1951	Jan. 22, 1951	10.6	14,900
1942	Apr.18,19, 1942	8.45	-	1952	Jan. 10, 1952	11.82	20,600
1943	May 21-24, 1943	8.4	-	1953	Mar. 27, 1953	c9.27	8,540
1944	Apr.20,21, 1944	10.0	-	1954	May 8, 1954	5.0	2,680
1945	June 22,23, 1945	12.9	23,000	1955	Mar.29,30, 1955	8.7	6,340
1946	Jan. 18, 1946	9.65	11,000	1956	Feb. 24, 1956	10.7	9,340
1947	Apr.19,20, 1947	7.8	5,800	1957	Nov. 23, 1957	13.55	31,400
1948	Apr. 5, 1948	9.45	8,030	1958	Mar. 30, 1958	11.20	18,700

a Maximum crest stage; maximum stage occurred Dec. 31 on a rise that crested in January 1942.

b Occurred Jan. 19, 1950.

c Occurred on the following day.

470. St. Francis River floodway near Marked Tree, Ark.

Location.--Lat 35°36', long 90°27', in SE $\frac{1}{4}$ sec.10, T.11 N., R.6 E., at dam of Poinsett County Drainage District 7, 3 miles north of Marked Tree.Drainage area.--Indeterminate. Total drainage area of St. Francis River and St. Francis River floodway, 5,258 sq mi.Gage.--Nonrecording. Datum of gage is 198.71 ft above Memphis datum or 192.08 ft above mean sea level (Morgan Engineering Co. bench mark).Stage-discharge relation.--Defined by current-meter measurements below 47,000 cfs.Remarks.--Flow diverted from St. Francis River bypasses Marked Tree and returns to St. Francis River immediately below Parkin. Some regulation by Wappapello Reservoir since 1941 (capacity, 625,000 acre-ft). Discharges tabulated below are combined flows of St. Francis River floodway near Marked Tree and St. Francis River at Marked Tree. Only annual maximum daily discharges are shown.

Maximum daily discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 26, 1935	-	40,400	1947	Apr. 21, 1947	-	11,500
1936	Apr. 20, 1936	-	4,980	1948	Apr. 4, 1948	-	15,600
1937	Jan. 27, 1937	-	a58,000	1949	Feb. 4, 1949	-	36,700
1938	Mar. 2, 3, 1938	-	24,000	1950	Jan. 19, 1950	-	51,800
1939	Mar. 16, 1939	-	23,400	1951	Mar. 1, 1951	-	23,700
1940	May 3, 1940	-	15,400	1952	Jan. 11, 1952	-	29,200
1941	Feb. 6, 1941	-	4,870	1953	Mar. 23, 1953	-	19,000
1942	Apr.21,22, 1942	-	14,300	1954	May 8, 1954	-	6,460
1943	May 25, 1943	-	11,700	1955	Apr. 7, 1955	-	16,400
1944	Apr. 22, 1944	-	19,700	1956	Feb. 25, 1956	-	20,100
1945	June 22, 1945	-	40,400	1957	June 2, 1957	-	39,900
1946	June 4, 1946	-	19,100	1958	Nov. 24, 1957	-	49,600

a Includes 4,700 cfs through 2 levee breaks above station estimated on basis of records for St. Francis Bay at Riverfront.

475. St. Francis River at Marked Tree, Ark.

Location.--Lat 35°31'58", long 90°25'25", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.11 N., R.6 E., near left bank on downstream side of pier of bridge on U. S. Highway 63 at Marked Tree, 4.8 miles downstream from Little River and 7 miles downstream from dam of Poinsett County Drainage District 7.

Drainage area.--Indeterminate. Total drainage area of St. Francis River and St. Francis River floodway, 5,258 sq mi.

Gages.--Nonrecording prior to Jan. 18, 1935; recording thereafter. Auxiliary nonrecording gage Dec. 23, 1934, to Feb. 18, 1941, and recording gage thereafter at site 3 miles upstream. All gages at datum 196.44 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,100 cfs. Affected by variable slope.

Bankfull stage.--17 ft.

Remarks.--Floodflow diverted through St. Francis River floodway at dam of Poinsett County Drainage District 7 and bypassed to vicinity of Parkin. Flow partly regulated by Wappapello Reservoir since April 1941 and by siphons at dam of Poinsett County Drainage District 7. See table given on preceding page for combined annual maximum daily discharges of river and floodway.

476. Tyronza River near Tyronza, Ark.

Location.--Lat 35°30'18", long 90°22'48", in SE $\frac{1}{4}$ sec.7, T.10 N., R.7 E., at bridge on U. S. Highway 63, 2 miles northwest of Tyronza.

Drainage area.--301 sq mi.

Gage.--Nonrecording prior to Aug. 16, 1948; recording thereafter. Prior to Jan. 1, 1953, datum of gage was at mean Gulf level or 0.30 ft below mean sea level. Present datum of gage is 183.87 ft above mean sea level, datum of 1929. All stages adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements. Affected by backwater from St. Francis River at times.

Bankfull stage.--27 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1937	-	28.2	-	1948	Mar. 3, 1948	25.7	-
1939	Feb. 5, 1939	29.9	-	1949	Jan. 28, 1949	a29.2	4,040
1940	Apr. 20, 1940	18.0	-	1950	Feb. 16, 1950	31.61	5,660
1941	Jan. 25, 1941	13.7	-	1951	July 6, 1951	b31.2	4,080
1942	Apr. 10, 1942	25.9	-	1952	Mar. 12, 1952	28.68	3,860
1943	Mar. 22, 1943	23.5	-	1953	May 20, 1953	31.45	5,240
1944	Feb. 19, 1944	25.88	-	1954	Jan. 17, 1954	28.5	3,370
1945	Apr. 3, 1945	29.6	-	1955	Apr. 14, 1955	29.1	4,470
1946	Jan. 12, 1946	29.6	-	1956	Jan. 31, 1956	c29.42	4,040
1947	June 24, 1947	24.8	-	1957	Nov. 20, 1957	b30.80	4,080
				1958	May 4, 1958	b29.10	4,510

a Occurred Jan. 17, 1949.

b Occurred on following day.

c Occurred Feb. 20, 1956.

ST..FRANCIS RIVER BASIN

478. St. Francis River at Parkin, Ark.

Location.--Lat 35°16'12", long 90°35'00", in SE $\frac{1}{4}$ sec.32, T.8 N., R.5 E., at Missouri Pacific Railroad bridge $1\frac{1}{2}$ miles west of Parkin and 2.9 miles downstream from Tyrnza River.

Drainage area.--Indeterminate. Total drainage area of St. Francis River and St. Francis Bay, 6,475 sq mi.

Gage.--Nonrecording prior to Sept. 10, 1948; recording thereafter. Datum of gage is 175.26 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Affected by backwater from St. Francis Bay.

Bankfull stage.--30 ft.

Historical data.--Gage-height records date back to 1893, but, due to levee construction, are not comparable to stages experienced since 1928.

Remarks.--The greater portion of St. Francis River floodflow is diverted through St. Francis River floodway and St. Francis Bay and returns to St. Francis River below Parkin.

Discharges tabulated below are combined flows of St. Francis River at Parkin and St. Francis Bay at Riverfront (see station below) and are published by Corps of Engineers as "St. Francis River near Wittsburg." Records furnished by Corps of Engineers. Only annual maximum daily discharges are shown.

Maximum daily discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1928	July 15, 1928	-	28,900	1944	Apr. 24, 1944	-	22,700
1929	May 30, 1929	-	22,900	1945	June 27, 1945	-	44,500
1930	Feb. 8, 1930	-	36,300				
				1946	Jan. 17, 1946	-	26,600
1931	Dec. 17, 1931	-	12,700	1947	May 22, 1947	-	14,300
1932	Feb. 3, 1932	-	32,600	1948	Apr. 15, 1948	-	23,200
1933	June 2, 1933	-	26,500	1949	Feb. 8, 1949	-	37,600
1934	Apr. 4, 1934	-	21,100	1950	Jan. 21, 1950	-	53,400
1935	Mar. 30, 1935	-	37,300				
				1951	Dec. 15, 1951	-	28,500
1936	Dec. 9, 1936	-	8,070	1952	Jan. 16, 1952	-	31,100
1937	Feb. 2, 1937	-	74,100	1953	Mar. 24, 1953	-	28,000
1938	Mar. 7, 1938	-	26,100	1954	Jan. 22, 1954	-	10,900
1939	Feb. 21, 1939	-	26,400	1955	Apr. 15, 1955	-	24,900
1940	May 6, 1940	-	14,700				
				1956	Feb. 24, 1956	-	27,900
1941	Jan. 26, 1941	-	5,340	1957	Nov. 27, 1957	-	45,200
1942	Apr. 12, 1942	-	17,800	1958	Apr. 7, 1958	-	31,500
1943	June 1-2, 1943	-	11,700				

479. St. Francis Bay at Riverfront, Ark.

Location.--Lat 35°15'34", long 90°40'46", in W $\frac{1}{2}$ sec.4, T.7 N., R.4 E., at bridge on U. S. Highway 64 at Riverfront, 0.6 mile upstream from mouth and 7 miles west of Parkin.

Drainage area.--Indeterminate. Total drainage area of St. Francis River and St. Francis Bay, 6,475 sq mi.

Gage.--Nonrecording prior to Aug. 20, 1948; recording thereafter. Datum of gage is 171.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Affected by backwater from St. Francis River.

Bankfull stage.--30 ft.

Remarks.--See St. Francis River at Parkin.

479.5. L'Anguille River at Palestine, Ark.

Location.--Lat 34°58'20", long 90°53'10", in NW $\frac{1}{4}$ sec.10, T.4 N., R.2 E., at bridge on U. S. Highway 70, 1 mile east of Palestine.

Drainage area.--807 sq mi.

Gage.--Nonrecording prior to Nov. 1, 1949; recording thereafter. Prior to Jan. 1, 1952, datum of gage was at mean Gulf level, or 0.32 ft below mean sea level. Present datum of gage is 166.68 ft above mean sea level, datum of 1929. All stages adjusted to present datum.

Stage-discharge relation.--Defined below 13,700 cfs and extended above by logarithmic plotting. Affected by backwater from the Mississippi River at times.

Bankfull stage.--22 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	Apr. 13, 14, 1933	28.8	-	1947	May 26, 27, 1947	22.9	-
1935	Apr. 1, 2, 1935	27.45	-	1948	Mar. 3, Apr. 13	25.4	-
1936	Apr. 23, 24, 1936	28.87	-	1949	Jan. 29, 1949	26.6	13,500
1937	Feb. 13, 1937	39.7	-	1950	Jan. 14, 1950	a30.92	12,400
1939	Mar. 3, 4, 1939	26.8	-	1951	Jan. 18, 1951	24.7	9,000
1942	Dec. 31, 1942	20.9	-	1952	Mar. 14, 1952	b24.65	6,430
1943	June 8, 1943	26.08	-	1953	May 20, 1953	27.55	15,600
1944	May 7, 8, 1944	25.2	-	1954	Jan. 24, 1954	23.9	5,800
1945	Apr. 3, 1945	29.6	-	1955	May 29, 1955	24.55	8,150
1946	Jan. 12, 1946	26.75	-	1956	Feb. 20, 1956	25.7	11,000
				1957	Nov. 20, 1957	27.65	15,300
				1958	May 11, 1958	26.35	12,500

a Occurred Feb. 3, 1950.

b Occurred Apr. 4, 1952.

MISSISSIPPI RIVER MAIN STEM

479.7. Mississippi River at Helena, Ark.

Location.--Lat 34°31'26", long 90°35'02", on right bank at Helena, Phillips County, 10 miles downstream from St. Francis River and at mile 659.9.

Drainage area.--941,800 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 141.88 ft above mean sea level, datum of 1929, or 141.81 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 2,014,000 cfs. Occasional measurements since 1882 and frequent measurements since 1928.

Bankfull stage.--41 ft.

Remarks.--Natural flow of stream affected by many reservoirs and navigation dams. Records from publications of Mississippi River Commission and Memphis District, Corps of Engineers. Only annual peaks are shown.

MISSISSIPPI RIVER MAIN STEM

Peak stages and discharges of Mississippi River at Helena, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1828	-	43.11	-	1908	Mar. 23, 1908	a45.2	1,356,000
1844	-	42.21	-	1909	Mar. 23, 1909	a47.65	1,429,000
1849	-	42.81	-	1910	Mar. 21, 1910	40.7	-
1850	May 1, 1850	42.81	-	1911	Apr. 28, 29, 1911	44.56	-
1851	-	39.81	-	1912	Apr. 23, 1912	a54.3	2,041,000
1858	July 2-6, 1858	44.61	-	1913	Apr. 22, 1913	55.2	1,805,000
1859	Mar. 22, 1859	43.61	-	1914	Apr. 17, 1914	39.43	-
1862	-	46.4	-	1915	Feb. 20, 1915	43.55	-
1865	-	44.4	-	1916	Feb. 10, 1916	a53.4	1,565,000
1867	-	45.82	-	1917	Apr. 13, 1917	a49.9	1,474,000
1872	Apr. 26, 1872	39.03	-	1918	Mar. 2, 3, 1918	37.49	-
1873	Mar. 6, 1873	40.0	-	1919	Apr. 1, 1919	46.2	-
1874	May 11, 1874	45.82	-	1920	Apr. 5, 1920	a50.1	1,535,000
1875	Apr. 12-14, 1875	42.4	-	1921	Apr. 9, 10, 1921	38.65	-
1876	Apr. 18, 19, 1876	44.85	-	1922	Apr. 3, 4, 1922	a53.1	1,612,000
1877	Apr. 30, May 1	41.8	-	1923	Mar. 30, Apr. 1	45.5	-
1878	May 3, 4, 1878	38.75	-	1924	Jan. 21, 22, 1924	42.2	-
1879	Jan. 31, 1879	37.25	-	1925	Mar. 4, 1925	35.1	-
1880	Mar. 31, 1880	43.7	-	1926	Apr. 23, 24, 1926	38.3	-
1881	May 14, 1881	43.74	-	1927	Apr. 29, 1927	a56.75	b1,756,000
1882	Mar. 8, 1882	a47.2	1,558,000	1928	July 12, 13, 1928	45.7	1,242,000
1883	Mar. 8, 9, 1883	46.9	-	1929	May 27, 1929	a52.62	1,584,000
1884	Mar. 6, 1884	47.0	-	1930	Jan. 25, 1930	43.86	1,133,000
1885	Jan. 28, 1885	a40.7	1,021,000	1931	Apr. 16, 1931	a30.3	685,000
1886	Apr. 30, 1886	48.1	-	1932	Feb. 20, 1932	a49.2	1,287,000
1887	Mar. 21, 22, 1887	46.4	-	1933	Apr. 12, 1933	a50.62	1,264,000
1888	Apr. 14, 15, 1888	42.8	-	1934	Mar. 18, 1934	a36.77	866,000
1889	June 28, 1889	34.1	-	1935	Mar. 28, Apr. 1	a48.94	1,192,000
1890	Mar. 29, 30, 1890	47.72	-	1936	Apr. 23, 1936	a50.64	1,369,000
1891	Mar. 21, 1891	a44.7	1,455,000	1937	Feb. 12, 1937	a60.21	1,968,000
1892	May 11, 1892	45.73	1,326,000	1938	Apr. 23, 1938	43.55	1,028,000
1893	May 23, 1893	a47.92	1,594,000	1939	Mar. 27, 1939	a48.2	1,309,000
1894	Feb. 21, 1894	38.07	-	1940	May 9, 1940	40.51	993,000
1895	Mar. 30, 31, 1895	31.3	-	1941	Apr. 29, 1941	27.0	587,000
1896	Apr. 17, 1896	38.42	-	1942	Mar. 30, 1942	a38.22	990,000
1897	Apr. 4, 1897	51.75	-	1943	June 7, 8, 1943	a46.89	1,298,000
1898	Apr. 14, 15, 1898	a49.11	1,405,000	1944	May 10, 1944	a45.95	1,361,000
1899	Apr. 12-15, 1899	46.75	-	1945	Apr. 12, 1945	a49.27	1,442,000
1900	Mar. 21, 1900	38.25	-	1946	Jan. 23, 1946	a44.2	1,333,000
1901	May 8, 9, 1901	41.45	-	1947	Apr. 25, 1947	a40.38	1,103,000
1902	Mar. 23, 24, 1902	39.58	-	1948	Apr. 6, 1948	a45.3	1,296,000
1903	Mar. 25, 1903	a51.0	1,558,000	1949	Feb. 6, 7, 1949	a43.9	1,284,000
1904	Apr. 14, 1904	a47.62	1,412,000	1950	Feb. 23, 1950	a50.28	1,643,000
1905	May 29, 1905	37.77	-	1951	Mar. 5, 1951	a43.35	1,176,000
1906	Apr. 18, 1906	a47.05	1,259,000	1952	Apr. 3, 1952	45.46	1,366,000
1907	Feb. 3, 1907	a50.39	1,691,000	1953	May 25, 1953	34.97	866,000
				1954	Jan. 30, 31, 1954	26.25	622,000
				1955	Apr. 4, 1955	44.12	1,298,000
				1956	Mar. 2, 1956	38.1	1,019,000
				1957	Feb. 17, 1957	a39.05	1,027,000
				1958	May 16, 1958	a39.02	1,021,000

a Occurred on different day than peak discharge.

b Does not include flow around levees.

Note.--Daily discharges computed from 1928 to date. Peaks prior to this date are results of discharge measurements made during periods of maximum stage.

480. West Fork White River at Greenland, Ark.

Location.--Lat 35°59', long 94°10', in NW $\frac{1}{4}$ sec.16, T.15 N., R.30 W., near left bank on downstream side of pier of bridge on U. S. Highway 71, 1 mile south of Greenland, 5 $\frac{1}{2}$ miles upstream from small tributary, and 10.5 miles upstream from mouth.

Drainage area.--83 sq mi.

Gage.--Recording. Datum of gage is 1,233.00 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended above on basis of an area-velocity study.

Bankfull stage.--9 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Feb. 13, 1946	9.66	6,410	1953	Mar. 14, 1953	9.50	9,800
	May 24, 1946	13.71	23,400		Mar 17, 1953	6.95	4,750
1947					May 12, 1953	7.50	5,560
	Nov. 6, 1946	9.09	5,080	1954	May 2, 1954	5.98	3,270
	Nov. 9, 1946	9.28	5,500				
	Dec. 10, 1946	8.65	4,150	1955	Dec. 27, 1954	6.56	4,140
	Apr. 10, 1947	7.86	3,170		Feb. 19, 1955	8.20	6,790
	June 1, 1947	9.76	6,660		Mar. 20, 1955	7.40	5,390
1948	Aug. 11, 1948	10.60	11,800		Apr. 21, 1955	8.35	7,180
	Aug. 14, 1948	12.10	18,600		May 21, 1955	6.38	3,840
1949	Jan. 24, 1949	9.16	8,050		May 26, 1955	6.43	3,840
	Jan. 27, 1949	6.58	3,390		June 15, 1955	8.03	6,420
	Feb. 14, 1949	9.05	7,570	1956	Apr. 29, 1956	7.70	5,530
	June 13, 1949	10.64	12,100		May 15, 1956	10.00	10,800
				1957	Feb. 5, 1957	7.32	4,430
1950	Jan. 4, 1950	6.62	3,540		Apr. 3, 1957	13.54	27,700
	Jan. 13, 1950	8.54	6,920		Apr. 26, 1957	6.59	3,360
	Feb. 12, 1950	7.06	4,290		May 17, 1957	9.52	8,700
	May 11, 1950	9.71	9,900		May 22, 1957	13.47	27,700
	July 18, 1950	6.60	3,750		May 25, 1957	7.62	4,940
	July 22, 1950	6.98	4,380	1958	July 12, 1958	9.75	9,420
1951	Feb. 20, 1951	8.72	7,410		July 26, 1958	6.66	3,430
1952	Apr. 12, 1952	6.08	3,600				
	May 23, 1952	7.60	5,700				

485. West Fork White River near Fayetteville, Ark.

Location.--Lat 36°03', long 94°07', in NE $\frac{1}{4}$ sec.24, T.16 N., R.30 W., at bridge on State Highway 16, 3 miles southeast of Fayetteville and 3 $\frac{1}{2}$ miles upstream from mouth.

Drainage area.--118 sq mi.

Gage.--Recording. Datum of gage is 1,158.06 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,600 cfs and extended above by slope-area and contracted-opening measurements at 26,500, 36,000, and 53,000 cfs.

Bankfull stage.--13 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges of West Fork White River near Fayetteville, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 15, 1938	13.62	5,780	1943	Nov. 7, 1942	14.34	6,050
	Feb. 18, 1938	16.18	9,010		Dec. 27, 1942	19.03	25,500
	May 23, 1938	15.20	7,530		May 10, 1943	19.71	36,000
1939	Feb. 19, 1939	12.75	5,080	1944	Apr. 8, 1944	16.33	9,210
1940	Sept. 24, 1940	11.61	4,100		Apr. 10, 1944	15.11	7,150
					June 14, 1944	18.16	17,000
1941	Jan. 1, 1941	15.83	8,900	1945	Feb. 21, 1945	15.78	8,290
	Apr. 19, 1941	19.10	26,500		Feb. 26, 1945	14.06	5,870
1942	Oct. 16, 1941	13.60	5,780		Mar. 19, 1945	17.05	10,900
					Mar. 30, 1945	14.43	6,230
					Apr. 14, 1945	21.50	53,000
					June 10, 1945	17.66	13,700
	Oct. 31, 1941	12.80	5,080				
	Apr. 8, 1942	13.12	5,340				

490. War Eagle Creek near Hindsville, Ark.

Location.--Lat 36°12'10", long 93°51'30", in NE $\frac{1}{4}$ sec. 28, T.18 N., R.27 W., on right bank at downstream side of bridge on State Highway 45, 4 miles downstream from Poyner Hollow Creek and 4 miles north of Hindsville.

Drainage area.--262 sq mi.

Gage.--Recording. Datum of gage is 1,172.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 28,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 10, 1943	28.1	a50,000	1957	Feb. 5, 1957	10.51	6,500
1953	Mar. 14, 1953	12.98	9,260	Mar. 24, 1957	9.86	5,940	
	Mar. 18, 1953	11.98	8,020	Apr. 3, 1957	23.86	34,600	
	May 13, 1953	12.91	9,770	Apr. 26, 1957	14.38	11,200	
				May 14, 1957	11.10	7,080	
1954	May 2, 1954	7.47	3,810	May 17, 1957	19.65	21,200	
				May 23, 1957	23.30	32,300	
1955	Dec. 28, 1954	11.38	7,380	May 25, 1957	12.39	8,480	
	Feb. 20, 1955	10.00	6,030	May 30, 1957	9.16	5,310	
	Mar. 21, 1955	14.56	11,900	June 2, 1957	11.06	7,080	
				June 18, 1957	10.13	6,120	
1956	Apr. 29, 1956	14.16	11,100	1958	Mar. 9, 1958	9.80	5,140
	May 15, 1956	14.84	12,300	July 25, 1958	10.14	5,450	
				Aug. 2, 1958	15.04	12,200	

a Annual peak only, approximately.

495. White River near Rogers, Ark.

Location.--Lat 36°20', long 94°01', in E $\frac{1}{2}$ sec. 12, T.19 N., R.29 W., on right bank at downstream side of pier of bridge on State Highway 12, 2.2 miles upstream from Prairie Creek, 6 miles east of Rogers, and at mile 643.2.

Drainage area.--1,020 sq mi.

Gage.--Recording. Datum of gage is 1,006.47 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 67,000 cfs.

Bankfull stage.--31 ft.

Historical data.--Flood in May 1943 was highest known since at least 1892, from information by local residents.

Remarks.--Base for partial-duration series, 18,000 cfs.

Peak stages and discharges of White River near Rogers, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 1943	52.9	a100,000	1955	Mar. 21, 1955	25.42	24,500
1945	April 1945	50.4	a89,000	1956	Apr. 30, 1956 May 16, 1956	21.85 29.58	19,600 32,200
1953	Mar. 15, 1953 Mar. 18, 1953 May 13, 1953	27.04 23.77 27.34	27,800 22,700 28,300	1957	Apr. 4, 1957 Apr. 27, 1957 May 18, 1957 May 24, 1957 May 26, 1957	43.73 23.42 30.70 42.66 25.61	65,700 22,000 34,300 62,700 25,600
1954	May 3, 1954	16.58	11,600				
1955	Dec. 29, 1954 Feb. 21, 1955	21.72 22.93	18,600 20,400	1958	Aug. 3, 1958	22.08	20,100

a Annual peak only.

500. White River at Beaver, Ark.

Location.--Lat 36°28'20", long 93°45'55", in NE $\frac{1}{4}$ sec.20, T.21 N., R.26 W., on upstream side of Missouri & North Arkansas Railway bridge, a quarter of a mile east of Beaver, 2 $\frac{3}{4}$ miles upstream from Leatherwood Creek, and at mile 595.5.

Drainage area.--1,238 sq mi.

Gage.--Nonrecording. Datum of gage is 883.04 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 90,000 cfs.

Bankfull stage.--30 ft.

Remarks.--Peaks for period 1921-23 computed from plotted Empire District Electric Co. gage readings at site 1,500 ft upstream revised to read same as present gage. Base for partial-duration series, 22,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	-	40	a94,000	1933	Dec. 25, 1932 May 15, 1933 Sept. 5, 1933	20.46 27.70 18.89	27,200 42,200 23,700
1910	May 17, 1910	17.35	a21,500	1934	Oct. 23, 1933	14.83	16,500
1922	Apr. 6, 1922	10.50	9,400	1935	Mar. 13, 1935 June 4, 1935 June 9, 1935 June 19, 1935	22.74 23.73 21.70 27.55	32,300 34,800 29,900 41,100
1923	Feb. 2, 1923	21.08	28,200	1936	Dec. 8, 1935	12.32	12,000
1924	May 1, 1924	18.35	23,500	1937	Jan. 16, 1937	18.58	23,400
1925	Dec. 20, 1924	18.12	22,900	1938	Feb. 19, 1938 May 24, 1938	26.80 19.82	40,300 25,700
1926	Oct. 11, 1925	12.3	b12,300	1939	Apr. 18, 1939	16.70	19,700
1927	Jan. 25, 1927 Apr. 16, 1927 Apr. 20, 1927	21.70 37.0 25.10	29,400 80,200 36,300	1940	Apr. 13, 1940	16.00	18,400
1928	Oct. 2, 1927 Oct. 4, 1927 Dec. 15, 1927 Apr. 7, 1928 Apr. 22, 1928 June 14, 1928 June 22, 1928	25.65 26.85 30.60 22.10 26.50 23.73 18.78	39,700 43,000 48,900 30,800 42,200 34,800 23,500	1941	Jan. 3, 1941 Apr. 20, 1941	19.44 26.3	24,800 39,500
1929	Jan. 26, 1929 Apr. 10, 1929 May 10, 1929 July 9, 1929	23.85 19.01 20.99 22.00	33,900 23,900 28,300 30,600	1942	Nov. 1, 1941 Apr. 10, 1942	20.5 20.35	27,200 27,000
1930	May 12, 1930	19.15	24,500	1943	Dec. 29, 1942 May 12, 1943	31.95 42.53	59,500 105,000
1931	Feb. 10, 1931	19.69	25,100	1944	June 16, 1944	22.3	31,300
1932	Jan. 18, 1932	16.15	19,100	1945	Feb. 23, 1945 Feb. 28, 1945 Mar. 4, 1945	23.00 21.40 19.96	33,000 29,200 26,100

a Annual peak only.

b Maximum crest discharge; maximum discharge, 19,300 cfs at 12 p.m. Sept. 30, 1926, rising stage.

Peak stages and discharges of White River at Beaver, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Mar. 20, 1945	28.25	47,100	1950	Aug. 7, 1950	20.1	26,300
	Apr. 1, 1945	22.65	32,000	1951	Feb. 20, 1951	27.75	45,900
	Apr. 16, 1945	40.9	98,200		Mar. 12, 1952	18.58	23,100
	May 17, 1945	18.38	22,600	1952	Apr. 14, 1952	19.10	24,100
	June 12, 1945	29.75	52,000		Mar. 16, 1953	21.10	25,900
1946	Feb. 15, 1946	22.55	32,000	1953	May 14, 1953	21.65	27,100
	May 26, 1946	32.50	61,400	1954	May 4, 1954	13.8	12,100
1947	Nov. 11, 1946	20.60	27,400		Mar. 22, 1955	20.20	23,900
	Dec. 12, 1946	20.97	28,300	1955	May 17, 1956	23.7	31,800
1948	Aug. 16, 1948	24.52	36,800		Apr. 5, 1957	33.50	61,600
1949	Jan. 26, 1949	26.3	41,600	1957	Apr. 28, 1957	19.3	22,000
	Feb. 16, 1949	28.5	48,000		May 19, 1957	24.5	34,400
1950	Jan. 6, 1950	19.9	25,900		May 25, 1957	33.0	59,700
	Jan. 15, 1950	21.0	28,300	1958	Aug. 3, 1958	16.72	17,700
	Feb. 14, 1950	20.1	26,300				
	May 12, 1950	31.95	59,500				
	July 20, 1950	21.3	29,000				

505. Kings River near Berryville, Ark.

Location.--Lat 36°25'30", long 93°37'20", in E½ sec.3, T.20 N., R.25 W., on right bank at downstream side of highway bridge, 1¼ miles downstream from Bee Creek, 2¼ miles upstream from Clabber Creek, and 5¼ miles northwest of Berryville.

Drainage area.--532 sq mi.

Gage.--Nonrecording Apr. 4 to July 11, 1939, and Oct. 1, 1951, to Oct. 22, 1952; recording July 12, 1939, to Sept. 30, 1951, and since Oct. 23, 1952. Prior to Oct. 1, 1951, at site 5 miles upstream at datum 27.71 ft higher. Present datum is 963.10 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs.

Bankfull stage.--28 ft; 16 ft at former site and datum.

Remarks.--Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 14, 1927	a38.0	b62,000	1945	June 11, 1945	17.98	19,400
1939	Apr. 17, 1939	17.0	19,000	1946	Jan. 9, 1946	15.44	14,300
	May 12, 1939	13.3	11,300		Feb. 13, 1946	17.53	18,300
1940	Apr. 11, 1940	13.93	12,400		May 25, 1946	17.82	18,900
1941	Jan. 1, 1941	13.01	10,100	1947	Nov. 10, 1946	13.25	10,700
	Apr. 19, 1941	20.18	25,600		Dec. 12, 1946	15.64	15,500
1942	Oct. 31, 1941	15.30	14,000		May 14, 1947	10.60	8,000
	Apr. 9, 1942	13.16	10,400	1948	Jan. 1, 1948	9.55	6,210
1943	Dec. 27, 1942	24.48	39,900		Jan. 25, 1949	18.24	20,600
	May 10, 1943	30.20	59,000	1949	Jan. 28, 1949	12.40	9,980
1944	Feb. 29, 1944	12.22	8,840		Feb. 14, 1949	20.65	26,200
	June 15, 1944	13.23	10,400	1950	Jan. 4, 1950	17.48	19,100
1945	Feb. 21, 1945	18.68	20,500		Jan. 13, 1950	a16.1	11,200
	Feb. 26, 1945	16.40	15,300		Feb. 13, 1950	16.00	16,200
	Mar. 3, 1945	13.88	11,000		May 10, 1950	24.32	39,400
	Mar. 19, 1945	22.35	32,100		May 21, 1950	a13.2	8,180
	Mar. 31, 1945	16.74	15,900		July 19, 1950	15.60	15,500
	Apr. 2, 1945	21.16	27,900	1951	Feb. 18, 1951	20.40	25,900
	Apr. 14, 1945	26.90	50,000	1952	Mar. 11, 1952	18.24	13,700
	May 16, 1945	12.75	10,000		Apr. 12, 1952	17.43	12,700

a Present site and datum.

b Annual peak only.

Peak stages and discharges of Kings River near Berryville, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1953	Mar. 15, 1953	13.68	8,680	1957	Feb. 26, 1957	13.68	8,180	
	Mar. 18, 1953	14.99	9,980		Apr. 4, 1957	33.28	46,300	
	May 13, 1953	17.50	12,800		Apr. 27, 1957	17.53	13,000	
1954	May 3, 1954	7.01	2,760		May 18, 1957	22.40	21,300	
					May 23, 1957	29.85	36,800	
1955	Mar. 21, 1955	16.80	12,000		May 25, 1957	20.99	18,800	
	May 21, 1955	17.07	12,300		June 2, 1957	15.35	10,400	
1956	Apr. 29, 1956	20.32	17,500	1958	June 9, 1957	19.05	15,300	
					May 15, 1956	20.50	17,900	Mar. 9, 1958
					Mar. 24, 1958	13.83	8,780	
					Aug. 2, 1958	13.44	8,380	

510. James River below Battlefield, Mo.
(Published as "near Battlefield" prior to June 1929)

Location.--Lat 37°05'30", long 93°12'25", in NE $\frac{1}{4}$ sec.32, T.28 N., R.22 W., at Blue Spring Highway bridge, 1.6 miles southwest of Battlefield and 3 miles upstream from Wilson Creek.

Drainage area.--328 sq mi; 303 sq mi prior to May 13, 1929.

Gage.--Nonrecording. Feb. 17, 1926, to May 13, 1929, at site 3 miles upstream at datum about 10 ft higher. May 13, 1929, to Jan. 7, 1932, at last used site and datum. Altitude of gage at last used site is 1,090 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 8,800 cfs.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Sept. 30, 1926	6.30	1,920	1928	Apr. 22, 1928	11.3	8,010
1927	Mar. 31, 1927	14.3	13,300		June 9, 1928	15.80	16,200
	Apr. 9, 1927	10.70	7,020		June 13, 1928	9.00	4,450
	Apr. 15, 1927	15.00	14,600		June 28, 1928	16.10	16,800
	Apr. 19, 1927	10.50	6,700	1929	Apr. 9, 1929	11.20	8,010
	June 21, 1927	9.40	5,010		May 13, 1929	9.60	5,450
	Aug. 8, 1927	12.0	9,200		May 28, 1929	10.04	5,450
	Aug. 17, 1927	10.7	7,020	1930	Jan. 14, 1930	9.82	4,630
1928	Nov. 15, 1927	11.5	8,350				
	Dec. 14, 1927	11.6	8,520	1931	Aug. 6, 1931	10.50	5,350
	Apr. 6, 1928	14.3	13,300				

520. Wilson Creek near Springfield, Mo.

Location.--Lat 37°11'35", long 93°20'20", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.29 N., R.22 W., three-quarters of a mile downstream from Jordan Creek and 2 miles southwest of Springfield.

Drainage area.--19.4 sq mi.

Gage.--Recording. Datum of gage is 1,196.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 900 cfs and extended to 2,440 cfs on basis of area-velocity studies.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 400 cfs.

Peak stages and discharges of Wilson Creek near Springfield, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 27, 1932	7.62	a2,440	1936	Sept. 28, 1936	3.77	398
1933	Dec. 23, 1932	4.12	520	1937	Oct. 6, 1936	4.00	480
	Apr. 15, 1933	4.12	520		Oct. 25, 1936	4.30	580
	May 13, 1933	4.69	732		Nov. 2, 1936	4.60	692
	July 8, 1933	5.07	922		Jan. 8, 1937	3.90	452
	Sept. 2, 1933	3.98	488		Jan. 14, 1937	4.55	692
1934	June 15, 1934	3.82	424		Jan. 30, 1937	4.10	512
1935	Mar. 11, 1935	4.58	692		Apr. 29, 1937	4.64	692
	Mar. 15, 1935	4.50	654		May 21, 1937	4.10	512
	May 29, 1935	4.46	654		June 2, 1937	5.04	858
	June 2, 1935	4.27	580		June 9, 1937	4.90	806
	June 7, 1935	5.13	882		June 14, 1937	6.87	1,880
	June 14, 1935	5.40	1,000		July 19, 1937	3.95	480
	June 16, 1935	5.57	1,080		Sept. 5, 1937	4.20	544
	July 2, 1935	4.12	512	1938	Jan. 20, 1938	3.80	424
	Aug. 12, 1935	3.85	424		Feb. 18, 1938	3.90	452
	Aug. 27, 1935	4.65	692		May 6, 1938	4.10	512
					May 23, 1938	3.95	480
					June 16, 1938	5.35	980

a Annual peak only.

525. James River at Galena, Mo.

Location.--Lat 36°48'20", long 93°27'50", in NW¹ sec. 7, T.24 N., R.23 W., at bridge on State Highways 13 and 44 in Galena, half a mile upstream from Bailey Creek and 42.3 miles above mouth.

Drainage area.--987 sq mi.

Gage.--Nonrecording prior to July 22, 1939; recording thereafter. Prior to Dec. 11, 1927, at site 500 ft downstream at datum 1.48 ft higher; Dec. 11, 1927, to Sept. 30, 1953, at present site at datum 2.00 ft higher. Datum of present gage is 921.37 ft above mean sea level, datum of 1929. Gage heights given herein converted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Remarks.--Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Apr. 1, 1922	10.3	7,220	1930	Jan. 14, 1930	10.68	9,760
1923	Mar. 12, 1923	11.9	9,940	1931	Aug. 6, 1931	14.55	17,500
1924	July 12, 1924	15.5	15,600	1932	June 28, 1932	11.50	11,000
	Aug. 11, 1924	15.2	15,000		Dec. 24, 1932	15.20	18,700
1925	Dec. 19, 1924	16.7	18,000	1933	Apr. 16, 1933	13.20	14,600
1926	Sept. 30, 1926	9.8	5,700		May 14, 1933	22.08	34,200
				1934	Apr. 6, 1934	4.77	2,130
1927	Apr. 1, 1927	20.4	25,500	1935	Mar. 11, 1935	27.05	50,200
	Apr. 10, 1927	18.6	21,700		June 3, 1935	14.83	17,900
	Apr. 15, 1927	27.1	41,900		June 7, 1935	14.81	17,900
	Apr. 19, 1927	17.1	18,700		June 18, 1935	17.00	22,800
	May 9, 1927	14.4	13,000	1936	Sept. 23, 1936	10.85	10,300
	Aug. 9, 1927	18.1	20,600				
	Aug. 16, 1927	17.9	20,400	1937	Jan. 9, 1937	14.54	13,200
				1937	Jan. 15, 1937	16.80	17,900
1928	Nov. 15, 1927	15.2	14,800		Jan. 31, 1937	14.90	14,000
	Apr. 7, 1928	19.78	24,200		June 14, 1937	15.40	15,000
	June 10, 1928	21.94	28,900	1938	Feb. 19, 1938	16.08	16,400
	June 21, 1928	16.68	17,700		Feb. 20, 1939	13.0	10,700
	June 29, 1928	20.72	26,100				
1929	Apr. 9, 1929	14.30	16,800				
	May 13, 1929	12.74	13,600				

Peak stages and discharges of James River at Galena, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 12, 1940	14.44	13,100	1950	Oct. 22, 1949	20.65	31,600
1941	Apr. 17, 1941	15.50	14,300		Jan. 4, 1950	12.8	13,200
	Apr. 20, 1941	28.87	49,900		Jan. 14, 1950	15.0	17,500
					May 11, 1950	18.4	25,600
1942	Oct. 31, 1941	17.54	18,100	1951	Feb. 19, 1951	14.59	16,700
	Apr. 9, 1942	14.20	12,000		June 23, 1951	14.86	17,400
	June 18, 1942	15.10	13,600		July 1, 1951	18.90	26,900
					July 5, 1951	19.95	29,900
1943	Dec. 28, 1942	23.26	33,500	1952	Feb. 2, 1952	16.62	16,800
	May 11, 1943	25.39	39,600				
	May 20, 1943	29.82	52,700	1953	Mar. 15, 1953	8.87	4,900
1944	Apr. 11, 1944	15.48	14,400	1954	May 3, 1954	8.87	4,900
1945	Feb. 22, 1945	14.70	16,800	1955	Feb. 20, 1955	16.40	16,400
	Mar. 3, 1945	17.80	24,100	1956	May 15, 1956	20.98	27,200
	Mar. 7, 1945	17.29	22,800				
	Apr. 3, 1945	19.55	28,900	1957	Apr. 4, 1957	19.20	22,600
	Apr. 15, 1945	23.87	41,000		May 24, 1957	20.36	25,600
1946	Feb. 14, 1946	15.07	17,600		May 26, 1957	18.90	21,900
1947	Apr. 25, 1947	23.65	40,100		June 3, 1957	15.00	13,800
1948	June 19, 1948	15.30	18,100	1958	Dec. 18, 1957	21.46	28,600
1949	Feb. 16, 1949	13.6	14,700		Mar. 24, 1958	17.37	19,500
					July 8, 1958	14.96	13,800
					July 18, 1958	16.80	17,200

530. White River near Reeds Spring, Mo.

Location.--Lat 36°37'20", long 93°25'20", in NE $\frac{1}{4}$ sec. 9, T.22 N., R.23 W., at bridge on State Highway 13, $5\frac{1}{2}$ miles downstream from James River, 12 miles south of Reeds Spring, and at mile 543.8.

Drainage area.--3,617 sq mi.

Gage.--Nonrecording prior to Dec. 17, 1938, May 11 to Oct. 1, 1943, and Mar. 11, 1945, to Feb. 14, 1947; recording Dec. 18, 1938, to May 10, 1943 (destroyed by flood), Oct. 2, 1943, to Mar. 10, 1945 (destroyed by flood), and Feb. 15, 1947, to Sept. 30, 1952. Datum of gage is 739.00 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 175,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 30,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 15, 1927	46.8	a195,000	1944	Apr. 11, 1944	15.33	30,100
1938	Feb. 18, 1938	31.0	95,100	1945	Feb. 23, 1945	20.09	46,500
	Mar. 30, 1938	15.3	31,300		Feb. 28, 1945	17.57	38,000
	May 24, 1938	19.9	47,400		Mar. 4, 1945	23.52	58,200
1939	Feb. 21, 1939	15.03	30,300		Mar. 21, 1945	26.25	68,400
	Apr. 18, 1939	18.55	42,700		Apr. 2, 1945	25.60	66,000
	May 13, 1939	19.74	46,700		Apr. 16, 1945	47.00	196,000
1940	Apr. 13, 1940	15.57	32,300		May 17, 1945	17.8	38,700
					June 12, 1945	27.75	75,000
1941	Apr. 16, 1941	19.2	44,800	1946	Feb. 15, 1946	20.95	49,600
	Apr. 20, 1941	34.8	107,000		May 27, 1946	26.94	71,200
1942	Nov. 1, 1941	22.35	53,900	1947	Dec. 12, 1946	21.2	50,300
	Apr. 10, 1942	19.1	42,200		Apr. 26, 1947	20.9	49,300
1943	Oct. 31, 1942	15.50	30,800	1948	Aug. 17, 1948	16.57	34,800
	Dec. 28, 1942	32.15	94,300	1949	Jan. 27, 1949	21.5	51,300
	May 11, 1943	44.9	183,000		Feb. 16, 1949	26.56	70,000
	May 20, 1943	30.05	84,200				

a Annual peak only.

WHITE RIVER BASIN

Peak stages and discharges of White River near
Reeds Spring, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 5, 1950	17.62	38,000	1951	Feb. 21, 1951	27.80	75,000
	Jan. 15, 1950	20.00	46,200		July 2, 1951	18.76	42,100
	Feb. 14, 1950	18.04	39,400		July 5, 1951	18.71	41,800
	May 12, 1950	38.65	135,000	1952	Mar. 12, 1952	15.90	32,600
	July 20, 1950	15.56	31,700		Apr. 14, 1952	17.09	36,400

535. White River near Branson, Mo.
(Published as "at Forsyth" prior to 1953)

Location.--Lat 36°36', long 93°17', in NE $\frac{1}{4}$ sec.22, T.22 N., R.22 W., on left bank 1.4 miles downstream from Long Creek, 5 miles southwest of Branson, 7.4 miles upstream from Missouri Pacific Railroad Co. bridge, and at mile 527.8.

Drainage area.--4,022 sq mi; 4,544 sq miles prior to Oct. 1, 1952.

Gage.--Recording. Prior to Oct. 1, 1952, at site 24 miles downstream at datum 55.36 ft lower. Datum of present gage is 696.00 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Bankfull stage.--35 ft.

Remarks.--Flow completely regulated by Table Rock Reservoir since Sept. 9, 1956. Base for partial-duration series, 36,000 cfs "at Forsyth", 33,000 cfs "near Branson."

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	-	38.80	a160,000	1945	Feb. 22, 1945	18.83	51,300
1927	Apr. 16, 1927	45.36	a212,000	Mar. 1, 1945	16.38	41,200	
1930	May 12, 1930	14.50	31,100	Mar. 4, 1945	21.05	61,300	
1931	Feb. 11, 1931	14.50	31,100	Mar. 21, 1945	23.36	71,600	
1932	Jan. 17, 1932	15.70	35,500	Apr. 2, 1945	26.92	88,600	
				Apr. 16, 1945	43.77	209,000	
1933	Dec. 25, 1932	19.18	47,400	May 18, 1945	16.00	39,500	
	May 15, 1933	29.3	84,600	June 13, 1945	23.83	73,800	
1934	Apr. 7, 1934	11.25	21,300	1946	Feb. 15, 1946	18.63	50,500
				May 27, 1946	22.90	69,800	
1935	Mar. 11, 1935	35.23	127,000	1947	Nov. 6, 1946	17.80	47,500
	Mar. 25, 1935	18.57	50,700	Nov. 10, 1946	16.50	42,400	
	June 4, 1935	23.10	68,700	Dec. 12, 1946	20.46	59,200	
	June 8, 1935	23.68	71,100	Apr. 26, 1947	18.40	50,100	
	June 19, 1935	26.31	81,600	1948	June 19, 1948	17.43	46,100
1936	Sept. 29, 1936	12.53	28,100	1949	Jan. 27, 1949	22.0	65,700
				Feb. 17, 1949	23.37	72,000	
1937	Jan. 16, 1937	18.49	50,600	1950	Jan. 5, 1950	16.28	41,500
	Feb. 1, 1937	15.18	37,900	Jan. 15, 1950	18.17	49,400	
1938	Feb. 18, 1938	29.84	110,000	Feb. 14, 1950	16.66	43,200	
	Mar. 29, 1938	15.22	37,600	May 12, 1950	38.75	161,000	
	May 24, 1938	17.93	49,800	1951	Feb. 20, 1951	25.64	82,400
1939	Apr. 19, 1939	16.19	42,000	July 2, 1951	16.88	44,000	
	May 13, 1939	18.63	54,100	July 4, 1951	17.10	44,800	
1940	Apr. 12, 1940	16.32	42,500	1952	Mar. 12, 1952	14.22	36,100
				Apr. 14, 1952	15.07	40,100	
1941	Apr. 16, 1941	20.17	56,900	1953	Mar. 16, 1953	21.22	32,600
	Apr. 20, 1941	30.57	106,000	1954	May 4, 1954	15.18	17,800
1942	Nov. 1, 1941	20.00	56,000	1955	Dec. 30, 1954	21.91	35,500
	Apr. 11, 1942	17.15	44,000	Feb. 21, 1955	22.24	36,400	
1943	Dec. 29, 1942	28.45	96,000	1956	May 16, 1956	36.9	89,100
	May 12, 1943	42.0	193,000	1957	June 10-11, 1957	18.53	25,900
	May 20, 1943	28.68	97,500	1958	May 16, 1958	12.50	10,600
1944	Mar. 22, 1944	14.76	34,600				

a Annual peak only.

550. White River near Flippin, Ark.

Location.--Lat 36°18'50", long 92°33'20", in NE $\frac{1}{4}$ sec.10, T.19 N., R.15 W., on right bank 1.3 miles upstream from Hightower Creek, 3 miles northeast of Flippin, 11.5 miles downstream from Bull Shoals Dam, 11.8 miles upstream from Crooked Creek, and at mile 406.7.

Drainage area.--6,067 sq mi.

Gage.--Nonrecording prior to Dec. 21, 1938, at site 1.1 miles upstream at datum 1.52 ft higher; recording thereafter at present site and datum. Datum of present gage is 419.66 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 217,000 cfs.

Bankfull stage.--36 ft.

Remarks.--Flow completely regulated since July 23, 1951, by Bull Shoals Reservoir (capacity, 5,408,000 acre-ft). Base for partial-duration series, 34,000 cfs. Only annual peaks are shown since 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 16, 1927	41	a240,000	1942	Oct. 18, 1941	16.74	42,400
1929	Jan. 27, 1929	20.2	52,500	1942	Nov. 1, 1941	21.54	65,300
	Apr. 11, 1929	22.6	64,400		Apr. 11, 1942	18.30	49,300
	Apr. 17, 1929	17.0	37,500				
	Apr. 22, 1929	17.2	38,200	1943	Dec. 27, 1942	23.91	79,200
	May 9, 1929	23.8	70,400		Dec. 30, 1942	28.72	110,000
	May 14, 1929	20.2	52,500		May 12, 1943	39.06	201,000
	May 28, 1929	18.4	45,800		May 21, 1943	29.89	118,000
	June 8, 1929	17.0	37,500				
1930	Jan. 15, 1930	19.69	50,100	1944	Mar. 2, 1944	14.71	34,200
	May 13, 1930	16.9	36,900		Mar. 23, 1944	15.58	37,900
					Apr. 12, 1944	14.75	34,600
1931	Feb. 12, 1931	16.3	34,600	1945	Feb. 21, 1945	22.75	73,500
	Aug. 7, 1931	17.3	38,800		Feb. 26, 1945	24.13	80,500
					Mar. 22, 1945	24.03	80,000
1932	Jan. 17, 1932	18.9	46,100		Apr. 5, 1945	28.56	108,000
	Jan. 25, 1932	18.2	42,800		Apr. 17, 1945	39.82	215,000
					June 14, 1945	24.68	83,900
1933	Dec. 26, 1932	21.5	58,900	1946	Jan. 9, 1946	16.75	43,900
	Jan. 22, 1933	17.0	37,500		Feb. 16, 1946	19.62	57,200
	Apr. 18, 1933	19.0	46,500		May 16, 1946	21.83	68,300
	May 16, 1933	32.3	116,000		May 28, 1946	22.90	74,000
1934	Mar. 29, 1934	13.52	23,500	1947	Nov. 7, 1946	18.10	50,000
1935	Mar. 12, 1935	38.1	164,000		Nov. 10, 1946	22.82	73,500
	Mar. 25, 1935	22.7	64,900		Dec. 13, 1946	22.13	69,800
	June 5, 1935	25.2	78,000		Apr. 12, 1947	15.58	38,500
	June 9, 1935	26.8	86,900		Apr. 27, 1947	19.01	54,300
	June 19, 1935	29.3	102,000	1948	Mar. 2, 1948	15.58	38,500
1936	Sept. 29, 30, 1936	14.73	27,500		Mar. 27, 1948	14.82	35,000
					June 19, 1948	20.57	62,200
1937	Jan. 10, 1937	17.3	38,700	1949	Jan. 25, 1949	21.10	64,700
	Jan. 17, 1937	21.54	58,900		Jan. 28, 1949	24.89	85,000
	Feb. 2, 1937	18.7	45,300		Feb. 18, 1949	23.79	78,900
	June 11, 1937	17.0	37,500	1950	Jan. 4, 1950	22.23	70,400
1938	Jan. 27, 1938	17.4	37,200		Jan. 16, 1950	18.98	54,300
	Feb. 19, 1938	34.1	134,000		Feb. 15, 1950	17.63	47,800
	Mar. 30, 1938	19.3	46,300		May 13, 1950	36.82	178,000
	May 13, 1938	19.0	44,800				
	May 24, 1938	22.2	61,000	1951	Feb. 23, 24, 1951	16.54	43,900
1939	Nov. 7, 1938	16.8	34,500	1952	Apr. 25, 1952	11.70	21,500
	Apr. 19, 1939	17.44	44,200				
	May 14, 1939	20.12	54,700	1953	May 3, 1953	13.52	27,500
	May 27, 1939	20.14	54,700	1954	Apr. 22, 1954	8.06	10,500
	July 3, 1939	20.61	56,600				
1940	Apr. 11, 1940	20.33	57,800	1955	July 1, 1955	12.68	24,800
1941	Jan. 4, 1941	14.70	34,200	1956	Sept. 12, 1956	8.32	11,100
	Apr. 17, 1941	22.20	69,200				
	Apr. 21, 1941	29.60	115,000	1957	July 25, 1957	13.30	27,200
				1958	Oct. 3, 1957	12.30	24,400

a Annual peak only, furnished by Corps of Engineers.

WHITE RIVER BASIN

560. Buffalo River near St. Joe, Ark.

Location.--Lat 35°59', long 92°45', in SW $\frac{1}{4}$ sec.36, T.16 N., R.17 W., near right bank on downstream side of pier of bridge on U. S. Highway 65, $1\frac{1}{4}$ miles downstream from Mill Creek, 4 miles upstream from Bear Creek, and $4\frac{1}{2}$ miles south-east of St. Joe.

Drainage area.--825 sq mi.

Gage.--Nonrecording prior to Mar. 1, 1940; recording thereafter. Prior to Oct. 1, 1939, at site 4.5 miles downstream at datum 15.27 ft lower (stages published by U. S. Weather Bureau as "at Gilbert"). Datum of present gage is 560.35 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 69,000 cfs and extended above by logarithmic plotting. Not defined at Gilbert site.

Bankfull stage.--25 ft.

Historical data.--Maximum stage known, 50.5 ft in August 1915 (present site and datum), from information by Corps of Engineers; 54.0 ft (former site and datum), from information by U. S. Weather Bureau.

Remarks.--Gage-height records prior to October 1939 furnished by U. S. Weather Bureau. Base for partial-duration series, 13,000 cfs. Only annual peak stages prior to 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	54.0	-	1947	Nov. 10, 1946	18.57	25,600
1927	Apr. 14, 1927	40.0	-		Dec. 12, 1946	22.92	37,500
1928	Dec. 13, 1927	39.0	-		Apr. 11, 1947	15.00	17,200
1929	Jan. 25, 1929	23.5	-	1948	Jan. 1, 1948	19.34	27,300
1930	May 10, 1930	24.4	-	1949	Jan. 24, 1949	38.80	91,100
1931	Feb. 9, 1931	18.8	-		Jan. 27, 1949	16.65	20,300
1932	July 6, 1932	13.5	-		Feb. 14, 1949	24.75	43,500
1933	May 14, 1933	28.8	-	1950	Jan. 4, 1950	25.58	46,200
1936	Dec. 7, 1935	11.6	-		Jan. 13, 1950	15.45	18,000
1937	Jan. 4, 1937	17.0	-		Feb. 12, 1950	24.06	41,300
1938	Feb. 18, 1938	28.0	-		May 12, 1950	22.40	36,000
1939	Apr. 17, 1939	29.0	-		June 3, 1950	14.50	16,000
					July 19, 1950	16.03	19,400
1940	Apr. 11, 1940	13.79	13,000	1951	Feb. 20, 1951	27.57	50,900
1941	Jan. 1, 1941	13.70	12,800	1952	Nov. 24, 1951	18.80	26,000
1942	Oct. 16, 1941	17.08	22,100		Mar. 11, 1952	21.87	34,300
	Oct. 31, 1941	20.80	32,000		Apr. 12, 1952	22.30	35,400
	Apr. 8, 1942	17.58	23,400		May 23, 1952	17.57	23,000
1943	Dec. 27, 1942	31.0	64,800	1953	Nov. 25, 1952	19.60	28,100
	May 10, 1943	39.7	96,900		Mar. 14, 1953	16.67	19,900
1944	Feb. 28, 1944	15.95	19,300		Mar. 18, 1953	20.63	29,400
1945	Feb. 21, 1945	25.60	42,500		Apr. 24, 1953	14.35	15,100
	Feb. 26, 1945	19.04	26,400		May 13, 1953	20.18	28,300
	Mar. 3, 1945	20.00	29,100	1954	Apr. 16, 1954	14.50	15,300
	Mar. 6, 1945	14.08	14,600		May 2, 1954	22.70	35,200
	Mar. 19, 1945	25.70	46,500	1955	Feb. 20, 1955	15.72	17,800
	Mar. 25, 1945	17.00	20,900		Mar. 21, 1955	25.11	42,200
	Mar. 30, 1945	30.30	63,300		Apr. 21, 1955	14.92	16,100
	Apr. 2, 1945	24.00	41,000		May 21, 1955	19.02	25,300
	Apr. 15, 1945	41.00	100,000	1956	Feb. 2, 1956	16.10	18,700
	May 15, 1945	16.08	18,600		Feb. 18, 1956	15.82	18,000
	June 11, 1945	32.80	73,100		May 15, 1956	15.00	15,900
1946	Jan. 9, 1946	19.42	27,900	1957	Apr. 4, 1957	31.30	62,600
	Feb. 13, 1946	23.90	40,600		Apr. 30, 1957	18.10	23,100
	May 16, 1946	16.90	21,700		May 14, 1957	16.80	20,200
	May 25, 1946	25.65	46,200		May 17, 1957	16.92	20,400
					May 23, 1957	27.40	49,500
				1958	Mar. 9, 1958	16.70	19,900
					Mar. 23, 1958	14.56	15,500
					May 9, 1958	15.50	17,400
					Aug. 2, 1958	16.35	19,300

570. Buffalo River near Rush, Ark.

Location.--Lat 36°07', long 92°33', in NE $\frac{1}{4}$ sec.15, T.17 N., R.15 W., 0.8 mile upstream from Rush Creek, 1.5 miles southeast of Rush, and 24.3 miles upstream from mouth.

Drainage area.--1,091 sq mi.

Gage.--Nonrecording prior to Jan. 27, 1939, at site 0.6 mile downstream at present datum; recording thereafter at present site and datum. Datum of present gage is 451.98 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 120,000 cfs and extended above on basis of slope-area measurement at 164,000 cfs.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Aug. 19, 1951	45.5	a164,000	1942	Apr. 9, 1942	14.86	23,100
1927	Apr. 14, 1927	35.9	a110,000	1943	Dec. 27, 1942 May 11, 1943	27.24 37.38	62,200 120,000
1929	Jan. 25, 1929	22.2	50,100	1944	Feb. 29, 1944	12.96	20,200
	Feb. 26, 1929	14.4	26,300		1945	Feb. 21, 1945	21.82
	Apr. 9, 1929	14.5	26,600	Feb. 27, 1945		17.28	30,800
	Apr. 21, 1929	15.0	28,000	Mar. 3, 1945		16.98	29,900
	May 9, 1929	15.0	28,000	Mar. 19, 1945		22.66	48,400
July 8, 1929	15.0	28,000	Mar. 30, 1945	27.68		66,700	
1930	Jan. 13, 1930	13.7	24,400	Apr. 2, 1945	20.86	42,400	
	Feb. 4, 1930	10.2	15,100	Apr. 15, 1945	38.86	121,000	
	May 11, 1930	22.7	51,800	May 16, 1945	12.74	18,800	
1931	Feb. 9, 1931	15.2	28,600	June 11, 1945	31.10	81,800	
	May 26, 1931	11.5	18,500	June 17, 1945	10.47	14,100	
1932	Feb. 17, 1932	10.0	15,200	1946	Jan. 9, 1946	17.72	33,700
	July 6, 1932	9.9	14,900		Feb. 14, 1946	20.90	44,000
1933	Dec. 24, 1932	10.5	16,700		May 16, 1946	13.98	22,800
	May 14, 1933	23.9	56,000		May 25, 1946	20.80	43,600
1934	Mar. 26, 1934	12.38	22,600	1947	Nov. 10, 1946	13.49	21,500
1935	Mar. 11, 1935	24.5	58,300		Dec. 12, 1946	19.23	38,400
	Mar. 22, 1935	12.6	21,200		Apr. 11, 1947	11.90	17,600
	May 5, 1935	22.0	53,900	1948	Jan. 1, 1948	15.00	25,600
	May 15, 1935	10.2	14,700		1949	Jan. 24, 1949	37.06
	June 3, 1935	12.8	21,800	Jan. 28, 1949		14.36	23,700
June 7, 1935	11.7	18,700	Feb. 14, 1949	21.74		46,700	
June 17, 1935	21.3	51,100	1950	Jan. 4, 1950	21.66	46,700	
1936	Dec. 7, 1935	9.7		13,500	Jan. 14, 1950	12.06	18,000
1937	Oct. 26, 1936	10.9		16,500	Feb. 13, 1950	20.32	42,000
	Jan. 15, 1937	16.9		35,000	Apr. 4, 1950	10.35	14,000
	May 2, 1937	14.8		28,000	May 12, 1950	18.67	36,800
1938	Jan. 24, 1938	14.0	25,400	June 3, 1950	12.07	18,000	
	Feb. 15, 1938	17.6	37,400	July 19, 1950	11.32	16,100	
	Feb. 18, 1938	26.4	65,800	1951	Feb. 20, 1951	24.35	56,000
	Mar. 29, 1938	14.4	26,700		Apr. 22, 1951	10.61	14,500
	Apr. 16, 1938	12.5	21,000	1952	Nov. 24, 1951	16.13	28,800
May 23, 1938	11.2	17,300	Mar. 11, 1952		20.08	41,300	
1939	Jan. 30, 1939	11.34	17,300		Apr. 12, 1952	19.40	39,100
	Feb. 20, 1939	12.08	19,300		May 24, 1952	14.06	23,100
	Mar. 5, 1939	12.41	20,100	1953	Nov. 25, 1952	16.52	30,000
	Apr. 17, 1939	26.46	58,900		Mar. 15, 1953	13.60	21,700
	May 27, 1939	19.05	37,700		Mar. 18, 1953	17.41	32,800
1940	Apr. 12, 1940	9.98	14,000		Apr. 25, 1953	10.86	15,200
1941	Jan. 2, 1941	9.97	14,000	May 13, 1953	16.36	29,700	
1942	Oct. 17, 1941	14.13	21,200	1954	Apr. 16, 1954	10.48	14,300
	Oct. 31, 1941	18.33	32,500		May 2, 1954	18.83	37,200
				1955	Feb. 20, 1955	12.22	18,200

a Annual peaks only, furnished by Corps of Engineers.

WHITE RIVER BASIN

Peak stages and discharges of Buffalo River near Rush, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Mar. 21, 1955	21.23	45,000	1957	Apr. 30, 1957	14.60	24,400
	Apr. 21, 1955	11.62	16,800		May 14, 1957	12.78	20,900
	May 21, 1955	16.48	30,000		May 18, 1957	12.98	20,200
1956	Feb. 2, 1956	12.87	19,900		May 23, 1957	23.66	53,600
	Feb. 18, 1956	13.70	22,000		June 9, 1957	12.40	18,700
	May 16, 1956	11.01	15,400	1958	Mar. 9, 1958	13.14	21,300
1957	Apr. 4, 1957	28.30	67,000		Mar. 24, 1958	11.93	18,300
	Apr. 28, 1957	13.10	20,400		May 10, 1958	12.84	20,500
					Aug. 2, 1958	11.93	18,300

575. North Fork River near Tecumseh, Mo.

Location.--Lat 36°37'22", long 92°14'53", in NE1/4 sec.35, T.23 N., R.12 W., on right bank 3.2 miles downstream from Spring Creek and 3½ miles northeast of Tecumseh.

Drainage area.--561 sq mi.

Gage.--Nonrecording prior to May 11, 1945, at datum 0.22 ft lower; recording since May 12, 1945, at present datum. Datum of present gage is 584.67 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Gage heights given herein converted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 22,000 cfs.

Bankfull stage.--14 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 21, 1945	9.0	9,590	1950	Jan. 13, 1950	9.30	9,590
	Feb. 26, 1945	13.2	17,700		Feb. 13, 1950	7.69	6,790
	Mar. 6, 1945	6.6	5,400		Apr. 4, 1950	6.91	5,500
	Mar. 19, 1945	8.0	7,610		May 10, 1950	12.80	16,300
	Mar. 30, 1945	10.7	12,800		June 10, 1950	6.64	5,050
	Apr. 2, 1945	8.1	7,790	1951	Feb. 11, 1951	7.47	6,450
	Apr. 15, 1945	16.7	25,100		July 11, 1951	7.30	6,130
	May 10, 1945	7.2	6,400	1952	Nov. 24, 1951	7.94	7,130
	June 9, 1945	6.38	5,400		Mar. 11, 1952	9.17	9,410
	June 11, 1945	8.75	9,590		Apr. 12, 1952	9.74	10,300
	June 17, 1945	10.60	12,900	1953	Apr. 18, 1953	5.83	3,920
1946	Feb. 14, 1946	12.22	15,100		Mar. 24, 1954	5.67	3,790
	Mar. 6, 1946	7.60	6,620	1955	Mar. 21, 1955	16.95	25,100
	May 16, 1946	11.23	13,100		May 15, 1956	15.65	22,100
	May 25, 1946	9.81	10,500	1957	Apr. 4, 1957	13.10	16,900
1947	Nov. 10, 1946	9.94	10,700		Apr. 27, 1957	8.13	7,470
	Dec. 12, 1946	7.79	6,790		May 19, 1957	6.83	5,350
	Apr. 25, 1947	8.22	7,640		May 23, 1957	13.60	17,900
1948	Jan. 1, 1948	7.25	5,970		May 25, 1957	8.48	8,150
	June 18, 1948	7.46	6,450	1958	Dec. 18, 1957	6.60	5,050
1949	Jan. 19, 1949	7.4	6,290		Mar. 24, 1958	9.45	9,770
	Jan. 24, 1949	14.9	20,600		July 12, 1958	10.15	11,200
	Jan. 28, 1949	8.76	8,690		July 17, 1958	9.66	10,300
	Feb. 15, 1949	11.9	14,500				
	June 11, 1949	8.44	7,980				
	July 7, 1949	8.83	8,690				
1950	Jan. 4, 1950	18.05	27,400				

580. Bryant Creek near Tecumseh, Mo.

Location.--Lat 36°37'35", long 92°18'25", in E $\frac{1}{2}$ sec.32, T.23 N., R.12 W., three-quarters of a mile downstream from Pine Creek, 3 miles northwest of Tecumseh, and 5 miles upstream from mouth.

Drainage area.--570 sq mi.

Gage.--Nonrecording prior to July 30, 1945; recording thereafter. Datum of gage is 573.15 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 21, 1945	15.50	16,200	1950	May 12, 1950	14.99	15,000
	Feb. 26, 1945	15.80	17,000		Aug. 8, 1950	12.9	9,960
	Mar. 6, 1945	10.85	6,230		Aug. 28, 1950	10.96	6,500
	Mar. 19, 1945	11.45	7,110	1951	Feb. 19, 1951	10.99	6,500
	Mar. 31, 1945	11.00	6,500		July 1, 1951	13.22	10,700
	Apr. 2, 1945	11.40	7,110		July 4, 1951	11.66	7,590
	Apr.14,15, 1945	18.00	22,600		July 11, 1951	11.45	7,110
	May 10, 1945	10.75	6,100	1952	Mar. 11, 1952	12.45	8,840
	June 11, 1945	11.20	6,800		Apr. 12, 1952	12.10	8,280
	June 17, 1945	14.50	15,000	1953	Mar. 18, 1953	7.89	3,490
1946	Feb. 14, 1946	15.86	17,200		Mar. 24, 1954	8.72	4,140
	May 16, 1946	14.21	13,900	1955	Mar. 21, 1955	16.71	19,200
1947	Nov. 10, 1946	16.17	18,000		May 15, 1956	19.64	26,800
	Dec. 12, 1946	10.76	6,230	1957	Apr. 4, 1957	14.20	13,100
	Apr. 25, 1947	11.19	6,800		May 23, 1957	15.65	16,500
1948	June 19, 1948	11.00	6,500		May 25, 1957	14.30	13,300
	Jan. 25, 1949	14.3	14,200		June 2, 1957	10.70	6,310
1949	Jan. 28, 1949	12.55	9,260		June 5, 1957	10.80	6,420
	Feb. 15, 1949	14.75	16,000	1958	Mar. 24, 1958	12.95	10,200
	July 8, 1949	11.2	6,800		May 30, 1958	13.75	12,100
	July 10, 1949	10.88	6,360		July 12, 1958	12.78	9,760
	Jan. 4, 1950	19.50	26,500		July 17, 1958	12.26	8,700
1950	Jan. 13, 1950	12.87	9,960				
	Feb. 13, 1950	12.29	8,640				
	Apr. 4, 1950	10.80	6,230				

585. North Fork River at Tecumseh, Mo.

(Published as "North Fork of White River" prior to 1940)

Location.--Lat 36°36'16", long 92°17'19", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.22 N., R.12 W., at bridge on U. S. Highway 160 at Tecumseh, half a mile downstream from Bryant Creek, 3 miles upstream from Lick Creek, and 9 miles upstream from Missouri-Arkansas border.

Drainage area.--1,157 sq mi.

Gage.--Nonrecording prior to May 31, 1940; recording June 1, 1940, to Feb. 28, 1945. Prior to June 29, 1924, at site 200 ft downstream at different datum. Datum of present gage is 547.75 ft above mean sea level, datum of 1929. Gage heights given herein converted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 48,000 cfs and extended above by logarithmic plotting. Shifts in relation occur.

Bankfull stage.--24 ft.

Remarks.--Station discontinued because of backwater from Norfolk Dam. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges of North Fork River at Tecumseh, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	July 1905	31.6	a85,000	1933	May 14, 1933	15.70	25,200
1915	August 1915	31.0	a80,000	1934	Mar. 28, 1934	2.44	1,850
1922	Mar. 31, 1922	7.1	8,180	1935	Mar. 11, 1935	20.53	39,900
1923	Feb. 1, 1923	18.6	34,400		June 3, 1935	10.99	15,300
	Mar. 16, 1923	8.4	10,500		June 18, 1935	8.95	12,000
1924	June 11, 1924	20.0	38,300	1936	Sept. 24, 1936	4.75	5,300
1925	Dec. 19, 1924	10.50	14,600	1937	Jan. 15, 1937	10.33	14,100
					May 2, 1937	9.06	12,200
1926	Oct. 17, 1925	5.70	5,980		June 10, 1937	10.60	14,600
1927	Apr. 1, 1927	10.36	14,300	1938	Feb. 18, 1938	16.80	28,600
	Apr. 14, 1927	20.80	41,300		Mar. 29, 1938	8.86	11,600
	Apr. 19, 1927	15.31	24,200		May 23, 1938	14.00	21,400
	May 6, 1927	8.73	11,500	1939	Apr. 17, 1939	12.6	19,200
	June 21, 1927	12.90	18,800				
	Aug. 15, 1927	11.39	16,000	1940	Apr. 11, 1940	8.9	13,800
1928	Nov. 8, 1927	8.97	12,000	1941	Apr. 16, 1941	10.95	18,700
	Dec. 14, 1927	16.20	26,600	1942	Oct. 18, 1941	9.25	15,000
	Apr. 6, 1928	8.70	11,500				
	Apr. 21, 1928	10.30	14,100				
	June 9, 1928	11.48	16,200	1943	Oct. 31, 1941	12.4	22,500
	June 13, 1928	24.00	53,000				
1929	Jan. 25, 1929	9.10	12,200	Dec. 27, 1942	22.28	51,000	
1930	Jan. 14, 1930	8.50	11,200	Dec. 29, 1942	11.90	21,300	
				May 11, 1943	22.86	52,900	
				May 18, 1943	21.67	48,700	
1931	Feb. 9, 1931	4.30	4,550		May 20, 1943	13.23	24,800
					June 23, 1943	8.50	13,200
1932	Jan. 17, 23, 1932	4.18	4,250	1944	Apr. 11, 1944	3.82	3,830

a Annual peak only.

590. North Fork River near Henderson, Ark.
(Published as "North Fork of White River" prior to 1940)

Location.--Lat 36°22', long 92°14', in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.20 N., R.12 W., half a mile downstream from Bennetts Bayou, half a mile east of Henderson, 8 $\frac{1}{4}$ miles northeast of Mountain Home, and 15 miles upstream from Norfork Dam.

Drainage area.--1,612 sq mi.

Gage.--Nonrecording prior to Jan. 14, 1939; recording Jan. 14, 1939, to June 25, 1943. Nonrecording gage was at site a quarter of a mile downstream at datum 2.00 ft lower. Datum of last used gage was 432.67 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 36,000 cfs. Maximum discharge for flood of May 11, 1943, furnished by Corps of Engineers, computed on basis of records for station at Tecumseh, Mo., and unit hydrograph method for ungaged area.

Remarks.--Station discontinued as a result of backwater from Norfork Dam. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges of North Fork River near Henderson, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	July 10, 1919	7.2	-	1937	Apr. 24, 1937	10.5	16,200
1915	August 1915	29.5	-		May 2, 1937	11.8	19,500
					June 10, 1937	10.8	17,000
1929	Jan. 24, 1929	17.0	33,700	1938	Jan. 24, 1938	7.6	10,300
	Feb. 25, 1929	9.7	14,200		Feb. 18, 1938	19.0	39,800
	Apr. 8, 1929	12.0	20,000		Mar. 29, 1938	13.85	24,800
	Apr. 14, 1929	7.9	10,100		Apr. 16, 1938	9.8	14,500
	May 8, 1929	13.0	22,600		May 13, 1938	8.5	11,400
	May 28, 1929	8.0	10,300		May 24, 1938	14.8	27,500
1930	Oct. 31, 1929	10.0	15,000		May 29, 1938	7.6	10,300
	Jan. 13, 1930	12.2	20,600	1939	Nov. 8, 1938	8.5	11,400
1931	Oct. 7, 1930	10.4	16,000		Jan. 30, 1939	9.27	16,200
	Nov. 19, 1930	7.7	10,500		Feb. 20, 1939	7.42	11,800
	Feb. 7, 1931	9.3	13,300		Mar. 4, 1939	10.97	20,300
1932	Jan. 23, 1932	6.72	7,930		Apr. 17, 1939	18.20	38,300
1933	Dec. 30, 1932	8.5	11,400		July 3, 1939	9.62	16,900
	Apr. 16, 1933	8.5	11,400	1940	Apr. 11, 1940	15.22	30,600
	May 14, 1933	14.6	26,900	1941	Apr. 4, 1941	8.43	14,100
1934	Apr. 6, 1934	5.70	6,000		Apr. 17, 1941	9.66	17,200
1935	Mar. 11, 1935	22.2	50,400	1942	Oct. 17, 1941	9.36	16,200
	Nov. 2, 1935	13.5	24,000		Oct. 31, 1941	13.64	26,500
	June 7, 1935	11.2	18,000		Nov. 4, 1941	6.92	10,500
	June 17, 1935	11.4	18,500		Apr. 8, 1942	12.36	23,500
1936	Dec. 7, 1935	7.56	10,300		May 19, 1942	7.92	12,700
1937	Nov. 3, 1936	7.5	10,000		June 18, 1942	8.57	14,400
	Jan. 14, 1937	18.7	38,900	1943	Nov. 17, 1942	7.89	12,700
					Nov. 21, 1942	7.89	12,700
					Dec. 27, 1942	22.36	50,200
					May 11, 1943	-	61,000

600. North Fork River at Norfork Dam, near Norfork, Ark.

Location.--Lat 36°15', long 92°14' in SE $\frac{1}{4}$ sec. 2, T.18 N., R.12 W., at Norfork Dam 4.3 miles northeast of Norfork.

Drainage area.--1,806 sq mi.

Gage.--Recording. Datum of gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Discharge computed from powerplant records, flow through flood-control conduits, and flow over spillway.

Remarks.--Flood flow regulated by Norfork Dam (capacity, 1,983,000 acre-ft). Records furnished by Corps of Engineers and reviewed by Geological Survey. Only annual maximum daily discharges are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 16, 1945		21,000	1952	Mar. 18, 1952		10,400
1946	Mar. 17, 1946		8,400	1953	May 28, 1953		8,780
1947	May 18, 20, 1947		4,260	1954	Apr. 30, 1954		2,980
1948	Mar. 23, 1948		4,730	1955	Sept. 16, 1955		2,600
1949	February 1949		11,200	1956	Mar. 23, 1956		2,660
1950	Apr. 10, 1950		10,200	1957	Aug. 15, 1957		5,900
1951	July 31, 1951		5,450	1958	July 19, 1958		7,590

605. White River at Calico Rock, Ark.

Location.--Lat 36°07', long 92°09', in SW $\frac{1}{4}$ sec.23, T.17 N., R.11 W., on left bank at Calico Rock, just upstream from Calico Creek, $\frac{3}{4}$ miles downstream from Cataract Creek, 6 miles upstream from Piney Creek, and at mile 359.1.

Drainage area.--9,965 sq mi.

Gage.--Nonrecording prior to Aug. 14, 1940, at datum 1.07 ft higher; recording thereafter at present datum. Jan. 27 to Aug. 13, 1940, at site 500 ft downstream. Datum of present gage is 317.38 ft above mean sea level, datum of 1929. All stages have been adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 290,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--37 ft.

Remarks.--Peak gage heights for 1904-39 computed from plotted U. S. Weather Bureau readings adjusted to present datum. Floodflow regulated to some extent since June 1943 by Norfolk Reservoir on North Fork River (capacity, 1,983,000 acre-ft) and severely regulated since July 1951 by Bull Shoals Reservoir on White River (capacity, 5,408,000 acre-ft). Base for partial-duration series, 60,000 cfs. Only annual peaks are shown prior to 1940 and subsequent to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Aug. 1, 1905	31.0	146,000	1932	Jan. 23, 1932	17.8	64,700
1906	Mar. 27, 1906	34.0	166,000	1933	May 16, 1933	37.4	193,000
1907	May 7, 1907	42.5	239,000	1934	Mar. 27, 1934	14.2	45,300
1908	May 15, 1908	30.6	143,000	1935	Mar. 12, 1935	42.8	242,000
1909	Mar. 9, 1909	22.0	89,000	1936	Sept. 29, 1936	14.5	46,800
1910	June 10, 1910	14.3	45,800	1937	Jan. 15, 1937	28.4	128,000
1911	Aug. 15, 1911	26.6	117,000	1938	Feb. 19, 1938	43.5	250,000
1912	Apr. 27, 1912	27.7	123,000	1939	Apr. 17, 1939	31.5	149,000
1913	Jan. 24, 1913	15.6	52,600	1940	Apr. 12, 1940	23.05	95,000
1914	Apr. 29, 1914	19.6	74,600	1941	Apr. 22, 1941	26.85	118,000
1915	Aug. 21, 1915	49.5	318,000	1942	Oct. 18, 1941	21.78	88,500
1916	Jan. 31, 1916	51.9	350,000		Nov. 1, 1941	27.40	122,000
1917	Apr. 2, 1917	24.2	102,000		Apr. 10, 1942	19.30	74,300
1918	May 12, 1918	36.0	182,000	1943	Dec. 28, 1942	28.64	125,000
1919	June 3, 1919	19.0	71,300		May 12, 1943	46.50	269,000
1920	Mar. 26, 1920	31.6	150,000		May 21, 1943	29.52	131,000
1921	Apr. 27, 1921	36.2	183,000	1944	Feb. 29, 1944	15.23	48,900
1922	Apr. 11, 1922	15.6	52,600	1945	Feb. 22, 1945	27.21	120,000
1923	Feb. 2, 1923	28.3	127,000		Feb. 27, 1945	26.85	119,000
1924	June 12, 1924	27.0	119,000		Mar. 20, 1945	27.97	125,000
1925	Apr. 28, 1925	21.5	86,000		Mar. 31, 1945	29.46	135,000
1926	Oct. 9, 1925	18.0	65,800		Apr. 3, 1945	32.97	160,000
1927	Apr. 15, 1927	50.5	332,000		Apr. 16, 1945	48.84	310,000
1928	Dec. 14, 1927	40.5	220,000		June 12, 1945	33.43	162,000
1929	Jan. 25, 1929	28.2	126,000	1946	Jan. 9, 1946	21.77	91,800
1930	May 11, 1930	23.2	96,200		Feb. 14, 1946	24.05	106,000
1931	Feb. 9, 1931	18.0	65,800		May 16, 1946	24.61	110,000
					May 26, 1946	22.06	93,700
				1947	Nov. 11, 1946	21.41	89,200
					Dec. 13, 1946	24.94	112,000
					Apr. 28, 1947	16.80	61,400
				1948	June 20, 1948	17.49	65,400
				1949	Jan. 25, 1949	37.14	190,000
					Jan. 28, 1949	27.86	124,000
					Feb. 16, 1949	24.14	102,000

Peak stages and discharges of White River at Calico Rock, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 5, 1950	26.29	121,000	1954	May 3, 1954	13.25	42,400
	Jan. 16, 1950	18.56	71,900				
	Feb. 13, 1950	22.63	96,900	1955	Mar. 21, 1955	14.90	51,100
	May 13, 1950	38.25	211,000				
1951	Feb. 21, 1951	24.56	110,000	1956	Feb. 18, 1956	11.27	33,400
1952	Mar. 11, 1952	17.66	66,600	1957	Apr. 4, 1957	24.05	106,000
1953	Mar. 18, 1953	14.07	46,900	1958	May 10, 1958	12.73	40,000

610. White River at Batesville, Ark.

Location.--Lat 35°45'37", long 91°38'28", in NE $\frac{1}{4}$ sec.21, T.13 N., R.6 W., on left bank at downstream side of bridge on State Highway 11 at Batesville, 0.3 mile upstream from lock and dam 1, 0.6 mile downstream from Polk Bayou, and at mile 300.1.

Drainage area.--11,062 sq mi.

Gage.--Nonrecording prior to Jan. 28, 1939, at site 0.3 mile downstream at present datum; recording thereafter at present site. Datum of gage is 237.72 ft above mean sea level, datum of 1929. All gage heights adjusted to present site.

Stage-discharge relation.--Defined by current-meter measurements below 290,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--16 ft.

Remarks.--Peak gage heights for 1904-38 computed from plotted Corps of Engineers readings. For regulation, see remarks for station at Calico Rock. Base for partial-duration series, 75,000 cfs. Only annual peaks are shown prior to 1938 and subsequent to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Mar. 27, 1904	24.9	220,000	1922	Mar. 31, 1922	15.7	74,900
1905	Aug. 2, 1905	20.8	141,000	1923	Feb. 3, 1923	21.5	153,000
1906	Mar. 28, 1906	23.9	199,000	1924	June 13, 1924	19.5	120,000
1907	May 8, 1907	26.7	259,000	1925	Apr. 29, 1925	16.8	87,200
1908	May 16, 1908	22.1	164,000	1926	Oct. 17, 1925	16.6	85,200
1909	Mar. 10, 1909	17.5	94,600	1927	Apr. 15, 1927	31.4	369,000
1910	June 10, 1910	13.7	51,500	1928	Dec. 15, 1927	26.0	244,000
1911	Aug. 15, 1911	20.2	130,000	1929	Jan. 26, 1929	20.4	134,000
1912	Apr. 27, 1912	20.1	129,000	1930	May 12, 1930	18.4	105,000
1913	Jan. 12, 1913	15.1	67,600	1931	Feb. 9, 1931	16.2	81,100
1914	Apr. 29, 1914	16.3	82,200	1932	Jan. 24, 1932	15.9	77,500
1915	Aug. 22, 1915	31.6	373,000	1933	May 17, 1933	24.9	220,000
1916	Feb. 1, 1916	31.9	382,000	1934	Mar. 26, 1934	15.0	66,400
1917	Apr. 2, 1917	18.7	108,000	1935	Mar. 13, 1935	27.0	266,000
1918	May 13, 1918	24.9	220,000	1936	Dec. 8, 1935	13.7	51,500
1919	June 3, 1919	16.5	84,200	1937	Jan. 16, 1937	20.4	134,000
1920	Mar. 27, 1920	22.7	175,000	1938	Feb. 19, 1938	27.4	260,000
1921	Apr. 27, 1921	25.1	224,000		Mar. 30, 1938	20.2	130,000
					May 24, 1938	18.6	107,000

WHITE RIVER BASIN

Peak stages and discharges of White River at Batesville, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 5, 1939	15.81	76,200	1947	Nov. 11, 1946	16.81	89,800
	Apr. 18, 1939	21.65	165,000		Dec. 13, 1946	19.12	114,000
	May 28, 1939	17.95	100,000	1948	June 20, 1948	15.27	73,900
1940	Apr. 12, 1940	16.66	93,600	1949	Jan. 26, 1949	25.72	236,000
1941	Apr. 22, 1941	19.24	114,000		Feb. 16, 1949	18.79	107,000
1942	Oct. 18, 1941	16.65	85,200	1950	Jan. 5, 1950	19.50	119,000
	Nov. 2, 1941	20.00	122,000		Jan. 17, 1950	15.70	78,800
	Apr. 10, 1942	16.34	82,200		Feb. 14, 1950	17.92	99,000
1943	Dec. 29, 1942	25.81	213,000		May 13, 14, 1950	24.77	216,000
	May 21, 1943	28.01	281,000		June 3, 1950	16.06	82,300
	May 22, 1943	21.04	131,000	1951	Feb. 21, 1951	18.80	107,000
1944	Mar. 1, 1944	13.96	54,800	1952	Mar. 12, 1952	15.62	77,700
1945	Feb. 22, 1945	a19.69	121,000	1953	Mar. 18, 1953	14.48	63,500
	Feb. 27, 1945	20.41	131,000	1954	May 2, 1954	13.20	47,900
	Mar. 21, 1945	20.58	134,000	1955	Mar. 22, 1955	14.14	58,500
	Mar. 30, 1945	a22.07	160,000	1956	Feb. 18, 1956	12.95	45,700
	Apr. 4, 1945	23.06	177,000	1957	Apr. 4, 1957	19.82	124,000
	Apr. 16, 1945	29.43	324,000	1958	May 9, 1958	13.87	56,100
	June 12, 1945	23.63	189,000				
	June 17, 1945	21.40	148,000				
1946	Jan. 10, 1946	17.24	93,000				
	Feb. 14, 1946	a18.52	106,000				
	May 17, 1946	18.06	101,000				
	May 26, 1946	17.54	95,000				

a Occurred on following day.

Note.--Peak stage frequently occurs at different time than peak discharge.

615. Black River near Annapolis, Mo.

Location.--Lat 37°20'10", long 90°47'15", in SW $\frac{1}{4}$ sec.25, T.31 N., R.2 E., 0.4 mile downstream from Mayberry Branch, 7 miles southwest of Annapolis, 11 miles downstream from East Fork, and at mile 278.5.

Drainage area.--484 sq mi.

Gage.--Recording. Datum of gage is 569.72 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Aug. 21, 1942, at site 415 ft upstream at same datum.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs.

Remarks.--Gage-height record prior to Oct. 1, 1939, furnished by Corps of Engineers. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 17, 1939	17.4	a32,500	1945	Apr. 14, 1945	17.7	35,600
1940	Apr. 19, 1940	8.51	6,920		June 8, 1945	20.1	45,400
1941	Apr. 17, 1941	10.14	9,330		June 10, 1945	20.1	45,400
1942	Oct. 31, 1941	9.60	8,240	1946	Jan. 9, 1946	9.40	9,680
	Jan. 31, 1942	10.27	9,560		Feb. 13, 1946	16.67	31,700
1943	Oct. 30, 1942	9.15	7,740		Mar. 6, 1946	9.90	9,900
	Dec. 27, 1942	17.60	33,400		May 1, 1946	10.4	11,200
	May 11, 1943	18.9	37,900		May 16, 1946	12.6	17,700
	May 18, 1943	10.1	9,520		May 25, 1946	15.6	27,600
1944	Apr. 23, 1944	10.13	9,520	1947	Apr. 25, 1947	15.22	26,200
	May 3, 1944	11.58	13,400		June 27, 1947	12.30	16,700
1945	Mar. 31, 1945	16.6	31,300	1948	Jan. 1, 1948	13.72	21,200
				1949	Jan. 19, 1949	11.6	14,600
					Jan. 24, 1949	17.15	33,600

a Annual peak only.

Peak stages and discharges of Black River near Annapolis, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 28, 1949	9.03	7,820	1953	Mar. 4, 1953	9.20	8,240
	Feb. 15, 1949	12.66	18,000		June 8, 1954	9.15	8,240
1950	Oct. 21, 1949	9.55	9,160	1955	Mar. 21, 1955	11.56	14,600
	Jan. 4, 1950	17.63	35,200		May 15, 1956	12.76	18,300
	Jan. 12, 1950	9.66	9,400	1957	Mar. 25, 1957	8.60	7,010
	Feb. 13, 1950	9.61	9,160		Apr. 4, 1957	19.30	42,100
	May 10, 1950	12.38	17,000		Apr. 22, 1957	11.94	15,500
	June 10, 1950	8.57	7,080		Apr. 27, 1957	12.70	18,000
1951	Feb. 7, 1951	8.95	7,820		May 19, 1957	11.62	14,600
	Feb. 19, 1951	11.22	13,400		May 23, 1957	15.75	28,300
	June 24, 1951	9.57	9,160		May 25, 1957	9.69	9,400
	June 30, 1951	11.82	15,200		June 30, 1957	11.45	14,000
	July 10, 1951	11.22	13,400		July 2, 1957	12.47	17,400
	July 13, 1951	12.99	19,000	1958	Dec. 17, 1957	17.45	34,400
1952	Nov. 12, 1951	9.13	8,020		Mar. 24, 1958	13.36	20,200
	Mar. 11, 1952	10.84	12,300		July 17, 1958	8.87	7,600
	Apr. 4, 1952	9.13	8,020				
	Apr. 13, 1952	9.34	8,460				

625. Black River at Leeper, Mo.

Location.--Lat 37°04'45", long 90°42'50", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.28 N., R.3 E., at bridge on State Highway 34, half a mile northwest of Leeper, 2 miles downstream from McKenzie Creek, 6 miles downstream from Clearwater Dam, and at mile 251.0.

Drainage area.--957 sq mi.

Gage.--Nonrecording prior to Oct. 21, 1937, and Jan. 22 to Apr. 6, 1942; recording Oct. 22, 1937, to Jan. 21, 1942, and since Apr. 7, 1942. Prior to Apr. 7, 1942, gages at site 1,900 ft downstream at datum 3.85 ft lower. Datum of present gage is 428.51 ft above mean sea level, datum of 1929. Gage heights given herein converted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs.

Bankfull stage.--11 ft.

Remarks.--Flow regulated since June 3, 1948, by Clearwater Reservoir (capacity, 413,700 acre-ft). Base for partial-duration series, 9,000 cfs. Only annual peaks are shown subsequent to 1947.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1904	March 1904	22.3	a125,000	1928	Dec. 14, 1927	13.10	36,900	
1915	August 1915	18.8	a90,000	1929	Apr. 6, 1928	8.64	13,500	
					Apr. 22, 1928	7.33	9,050	
1922	Nov. 19, 1921	11.1	24,000		June 10, 1928	13.00	36,200	
					June 13, 1928	13.20	37,700	
					June 17, 1928	7.68	10,200	
					June 21, 1928	11.90	29,000	
1923	Mar. 31, 1922	10.0	20,700		1930	Jan. 25, 1929	9.50	18,100
						Apr. 10, 1929	9.20	15,640
						May 7, 1929	10.30	21,000
						May 13, 1929	13.10	36,900
1924	Apr. 18, 1922	7.74	10,400			June 13, 1929	7.95	11,200
					1931	Jan. 14, 1930	9.10	18,500
						Mar. 8, 1931	6.10	6,000
	Apr. 28, 1922	7.46			9,460	1932	Jan. 23, 1932	5.90
1925	Feb. 1, 1923	9.90	19,600	1933	Apr. 16, 1933	14.55	49,200	
					May 14, 1933	17.5	78,400	
				1934	Aug. 22, 1934	5.50	4,280	
					1926	Mar. 12, 1923	8.22	12,030
1927	Mar. 16, 1923	10.50	21,900					
1927	May 16, 1923	10.48	21,870					
1927	June 12, 1924	6.72	7,250					
1925	Dec. 20, 1924	4.63	2,520					
1926	Nov. 8, 1925	8.90	14,600					
1927	Apr. 1, 1927	13.75	42,400					
				1933	Apr. 15, 1927	13.90	44,100	
					May 14, 1933	17.5	78,400	
				1934	Apr. 20, 1927	9.00	14,900	
May 25, 1927	12.65	33,400						
	June 1, 1927	13.45	40,000					

a Annual peak only.

Peak stages and discharges of Black River at Leeper, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 11, 1935	16.9	72,300	1945	June 10, 1945	16.08	52,200
	June 21, 1935	9.65	17,900		June 17, 1945	8.16	11,200
1936	Nov. 5, 1935	7.15	8,660	1946	Jan. 9, 1946	8.45	11,900
1937	Oct. 9, 1936	8.00	10,800		Feb. 14, 1946	14.35	40,400
	Jan. 8, 1937	7.75	9,820		Mar. 7, 1946	8.10	11,900
	Jan. 15, 1937	11.85	28,400		May 1, 1946	8.95	14,700
1938	Feb. 18, 1938	13.0	36,200		May 17, 1946	11.10	23,300
	May 24, 1938	8.25	11,500		May 25, 1946	14.7	42,400
1939	Mar. 6, 1939	8.54	12,500	1947	Apr. 11, 1947	7.8	10,200
	Apr. 17, 1939	12.60	35,400		Apr. 25, 1947	13.27	34,000
1940	Apr. 20, 1940	8.05	10,800		June 28, 1947	11.45	25,200
1941	Apr. 18, 1941	7.10	8,000	1948	Jan. 2, 1948	8.65	12,600
1942	Nov. 1, 1941	8.37	12,000	1949	Jan. 24, 1949	6.90	7,470
	Jan. 31, 1942	7.98	10,300	1950	Apr. 3, 1950	7.22	8,250
1943	Dec. 28, 1942	14.32	47,200	1951	Feb. 20, 1951	6.09	5,560
	May 11, 1943	16.36	54,400	1952	Dec. 6, 1951	5.64	4,200
	May 19, 1943	8.76	13,600	1953	Mar. 10, 1953	5.51	3,950
1944	Apr. 23, 1944	9.04	14,400	1954	Feb. 18, 1954	5.31	3,630
	May 4, 1944	8.40	12,100	1955	Mar. 20, 1955	8.40	11,400
1945	Feb. 22, 1945	9.08	14,300	1956	May 22, 23, 1956	5.53	3,200
	Feb. 26, 1945	12.16	28,200	1957	May 23, 1957	8.10	10,400
	Mar. 7, 1945	10.85	21,500	1958	Dec. 19, 1957	5.91	4,470
	Mar. 31, 1945	13.86	37,400				
	Apr. 14, 1945	15.10	45,100				
	June 8, 1945	17.08	59,700				

630. Black River at Poplar Bluff, Mo.

Location.--Lat 36°45'35", long 90°23'15", in SW¼NW¼ sec.2, T.24 N., R.6 E., 1,500 ft upstream from bridge on U. S. Highway 60 in Poplar Bluff, ¾ miles downstream from Indian Creek, and at mile 211.2.

Drainage area.--1,245 sq mi.

Gage.--Nonrecording prior to June 8, 1955; recording thereafter. Prior to July 17, 1935, at site 300 ft downstream at datum 1.89 ft higher. July 17, 1935, to Sept. 30, 1940, at present site at datum 2.00 ft higher. Datum of present gage is 317.88 ft above mean sea level, datum of 1929. Gage heights given herein converted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 44,000 cfs; shifts in relation occur. Stage-discharge relation affected by right-bank levee constructed 1906-10 and left-bank levee constructed 1918-22.

Bankfull stage.--16 ft.

Remarks.--Flow regulated since June 3, 1948, by Clearwater Reservoir (capacity, 413,700 acre-ft). Peaks prior to Oct. 1, 1936, and Oct. 1, 1937, to Sept. 30, 1939, computed from plotted U. S. Weather Bureau gage readings. Base for partial-duration series, 6,000 cfs. Only annual peaks are shown subsequent to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	March 1904	-	a100,000	1924	May 31, 1924	14.8	5,000
1915	August 1915	a21.1	-	1925	June 14, 1925	15.9	6,420
1923	Jan. 21, 1923	16.3	7,260	1926	Oct. 18, 1925	15.8	6,250
	Feb. 3, 1923	19.3	23,900		Nov. 10, 1925	17.5	11,700
	Mar. 17, 1923	18.5	17,700	1927	Jan. 23, 1927	18.0	14,500
	May 6, 1923	17.1	9,900		Mar. 19, 1927	17.2	10,300
	May 17, 1923	19.2	23,100				

a Annual peak only, estimated.

Peak stages and discharges of Black River at Poplar Bluff, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 2, 1927	19.8	28,100	1942	Nov. 3, 1941	17.58	8,520
	Apr. 16, 1927	20.3	32,500		Feb. 2, 1942	16.26	6,770
	May 10, 1927	16.7	8,420		Apr. 10, 1942	17.3	8,290
	May 27, 1927	19.3	23,900				
	June 3, 1927	20.0	29,800	1943	Dec. 29, 1942	19.56	21,500
1928	Dec. 15, 1927	20.1	30,700		May 12, 1943	20.77	52,600
	Apr. 8, 1928	18.5	17,700		May 21, 1943	17.53	8,770
	Apr. 23, 1928	17.9	13,900	1944	Apr. 25, 1944	17.40	8,520
	June 15, 1928	19.9	29,000		May 5, 1944	15.68	6,190
	June 23, 1928	19.8	28,100				
1929	Jan. 27, 1929	18.5	17,700	1945	Feb. 24, 1945	16.00	6,260
	Apr. 11, 1929	18.0	14,500		Feb. 28, 1945	19.70	27,000
	May 15, 1929	20.2	31,600		Mar. 8, 1945	18.82	14,800
	June 15, 1929	17.2	10,300		Mar. 21, 1945	17.18	8,080
1930	Jan. 16, 1930	19.3	23,900		Apr. 1, 1945	19.85	28,800
1931	Mar. 9, 1931	14.6	4,820		Apr. 16, 1945	20.54	43,400
1932	Jan. 24, 1932	14.6	4,820		June 10, 1945	20.80	50,800
1933	Dec. 31, 1932	16.6	8,100		June 19, 1945	17.78	9,670
	Jan. 23, 1933	16.8	8,760	1946	Jan. 11, 1946	16.73	7,210
	Apr. 17, 1933	19.5	25,600		Feb. 15, 1946	19.53	23,500
	May 16, 1933	20.6	35,300		May 3, 1946	17.77	9,670
1934	Mar. 27, 1934	10.0	2,880		May 18, 1946	18.21	11,200
1935	Mar. 12, 1935	21.1	40,200		May 26, 1946	20.02	32,600
	May 6, 1935	15.7	6,090	1947	Apr. 13, 1947	16.29	6,620
	June 23, 1935	17.7	12,700		Apr. 27, 1947	18.81	14,800
1936	Apr. 6, 1936	12.6	3,796		June 29, 1947	16.25	6,490
1937	Oct. 11, 1936	16.2	7,020	1948	Jan. 3, 1948	18.09	10,800
	Jan. 10, 1937	17.2	10,300		Jan. 25, 1949	18.85	14,800
	Jan. 16, 1937	19.66	27,300	1950	Feb. 14, June 5	17.9	10,000
	May 4, 1937	16.51	7,800	1951	Feb. 21, 1951	16.81	6,060
1938	Feb. 20, 1938	19.42	24,800	1952	Nov. 25, 1951	16.66	7,210
	Mar. 31, 1938	17.81	13,300	1953	Mar. 29, 1953	11.50	3,630
	May 26, 1938	15.9	6,420	1954	May 9, 1954	9.49	2,840
1939	Feb. 1, 1939	16.3	7,260	1955	Mar. 22, 1955	16.85	7,370
	Mar. 7, 1939	17.9	13,900	1956	Feb. 18, 1956	12.92	4,400
	Apr. 19, 1939	19.4	24,800	1957	Apr. 5, 1957	18.59	14,300
1940	Apr. 21, 1940	17.8	10,300	1958	Mar. 25, 1958	17.81	10,200
1941	Apr. 19, 1941	13.6	4,880				

640. Black River near Corning, Ark.

Location.--Lat 36°24'05", long 90°32'30", near center of sec.4, T.20 N., R.5 E., on left bank at downstream side of bridge on U. S. Highway 62, 2½ miles east of Corning, 13.9 miles downstream from Cane Creek, and at mile 152.2.

Drainage area.--1,749 sq mi.

Gage.--Nonrecording prior to Nov. 5, 1953; recording thereafter. Datum of gage is 272.90 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs. Affected by variable slope.

Bankfull stage.--10 ft.

Remarks.--Flow partly regulated since June 3, 1948, by Clearwater Reservoir 105 miles upstream. Peak stages prior to 1939 furnished by Corps of Engineers. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges of Black River near Corning, Ark.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	-	13.3	18,900	1945	Mar. 4, 1945	13.70	21,900
1916	-	13.9	23,400		Apr. 5, 1945	14.12	24,900
1919	Dec. 6, 1919	11.7	7,750		Apr. 19, 1945	15.02	31,900
1920	May 20, 1920	11.6	7,210		May 12, 1945	11.61	7,210
1921	May 1, 1921	12.4	12,300		June 13, 1945	16.92	48,600
1922	Apr. 5, 1922	12.5	13,000	1946	Jan. 15, 1946	11.72	7,750
1923	May 21, 1923	12.5	13,000		Feb. 19, 1946	12.82	15,200
1924	June 4, 1924	10.8	4,430		May 7, 1946	12.20	11,600
1925	Nov. 10, 1925	11.5	6,710		May 30, 1946	13.08	17,400
1926	Jan. 16, 1926	10.8	4,430	1947	Apr. 14, 1947	11.38	7,000
1927	Apr. 18, 1927	14.4	27,200		May 1, 1947	12.03	10,500
1928	June 18, 1928	13.1	17,400	1948	Jan. 8-9, 1948	12.19	11,200
1929	May 19, 1929	12.7	14,400		Apr. 2, 1948	11.27	6,590
1930	Jan. 20, 1930	13.0	16,600		Apr. 16, 1948	11.63	7,910
1931	Mar. 10, 1931	11.2	5,480	1949	Jan. 29, 1949	13.78	22,800
1932	Jan. 20, 1932	11.8	8,350		Feb. 17, 1949	12.45	12,500
1933	May 19, 1933	13.8	22,600		Mar. 12, 13, 1949	11.47	6,710
1934	Mar. 30, 1934	11.1	5,160		Mar. 29-30, 1949	11.83	8,500
1935	Mar. 15, 1935	14.2	25,600	1950	Oct. 15, 1949	11.30	6,200
1936	Apr. 9, 1936	11.1	5,160		Jan. 8, 1950	13.15	18,600
1937	Jan. 19, 1937	14.1	24,900		Jan. 29, 1950	11.94	9,550
1938	Feb. 23, 1938	13.6	21,200		Feb. 17, 1950	12.65	14,100
Water year					Feb. 25, 1950	11.31	6,200
1939	Feb. 5, 1939	12.06	9,900		Mar. 30, 1950	11.92	9,550
	Mar. 10, 1939	12.48	12,600		Apr. 7, 1950	11.74	8,350
	Apr. 22, 1939	13.15	18,000		May 3, 1950	11.09	5,340
1940	Apr. 22-26, 1940	11.62	6,900		May 15, 1950	11.95	10,200
1941	Jan. 7, 1941	9.00	2,800	1951	Jan. 18, 1951	11.79	8,330
1942	Feb. 6-8, 1942	11.24	5,120		Feb. 24, 1951	12.02	10,200
	Apr. 12-14, 1942	12.09	9,900		Mar. 14, 1951	11.56	7,800
1943	Jan. 3, 1943	12.56	13,200		July 3, 1951	11.66	8,350
	May 15-16, 1943	15.2	30,800	1952	Nov. 28, 1951	12.27	12,000
1944	Apr. 14-15, 1944	11.88	8,620		Jan. 8, 1952	11.80	8,950
	Apr. 29, 1944	11.44	6,030		Feb. 6, 1952	11.12	5,340
					Mar. 14, 1952	12.20	11,400
					Mar. 25, 1952	11.71	8,350
					Apr. 16, 1952	11.66	8,350
				1953	Mar. 20, 1953	11.07	5,340
				1954	Mar. 28, 1954	8.76	2,630
				1955	Mar. 25, 1955	11.98	8,950
				1956	Feb. 21, 1956	11.60	7,210
				1957	Apr. 8, 1957	13.54	18,700
					May 27, 1957	13.34	17,200
					July 4, 1957	12.27	10,100
				1958	Nov. 18, 1957	12.37	10,600
					Dec. 23, 1957	11.65	7,010
					Jan. 24, 1958	11.20	5,220
					Mar. 28, 1958	13.03	15,000
					May 7-8, 1958	12.50	13,000

a Occurred on following day.

Note.--Peak stage frequently occurs at different time than peak discharge. Calendar year basis prior to 1939; water year thereafter.

645. Big Creek near Yukon, Mo.

Location.--Lat 37°14'00", long 91°51'00", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.5, T.29 N., R.8 W., on downstream side of right pier of bridge on State Highway 137, 3 miles south of Yukon.

Drainage area.--8.36 sq mi.

Gage.--Recording. Datum of gage is 1,194.81 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,900 cfs, and extended above on basis of contracted-opening measurement at 4,860 cfs.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 4, 1950	3.36	1,120	1954	Mar. 25, 1954	2.68	462
	Jan. 13, 1950	3.84	1,980	1955	Feb. 20, 1955	2.99	672
	Apr. 2, 1950	3.14	820		Mar. 20, 1955	3.20	895
	May 7, 1950	3.27	990	1956	May 15, 1956	6.15	4,860
	May 10, 1950	4.35	3,120				
	May 11, 1950	3.32	1,060	1957	Apr. 3, 1957	3.32	1,080
	June 10, 1950	2.90	565		Apr. 20, 1957	3.28	1,030
1951	Feb. 18, 1951	2.90	620		Apr. 26, 1957	3.15	883
	Feb. 20, 1951	2.87	600		May 18, 1957	3.60	1,430
	Apr. 6, 1951	3.28	1,000		May 22, 1957	3.40	1,120
	June 29, 1951	3.70	1,170		May 25, 1957	3.40	1,120
	June 30, 1951	4.28	2,950		May 31, 1957	3.12	802
	July 10, 1951	3.60	1,530	1958	Dec. 17, 1957	4.07	2,480
					Mar. 22, 1958	2.70	540
1952	Oct. 22, 1951	3.00	690		July 17, 1958	3.38	1,150
	Oct. 27, 1951	3.37	1,140		July 31, 1958	3.13	811
	Mar. 10, 1952	3.07	699		Sept. 10, 1958	3.05	728
	Apr. 12, 1952	2.82	568		Sept. 16, 1958	3.24	1,090
1953	Mar. 3, 1953	2.70	475				

660. Jacks Fork at Eminence, Mo.

Location.--Lat 37°09'15", long 91°21'30", in W $\frac{1}{2}$ sec.26, T.29 N., R.4 W., at bridge on State Highway 19 at Eminence, $1\frac{1}{2}$ miles downstream from Mahans Creek and 8.0 miles upstream from mouth.

Drainage area.--398 sq mi.

Gage.--Nonrecording. Prior to July 27, 1934, at site 1,400 ft upstream at datum 2.11 ft higher. Datum of present gage is 617.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs; shifts in relation occur.

Bankfull stage.--28 ft.

Remarks.--Base for partial-duration series, 3,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Nov. 19, 1921	7.65	7,240	1925	Apr. 28, 1925	6.10	5,070
	Mar. 31, 1922	7.07	6,300	1926	Oct. 17, 1925	5.65	4,270
	Apr. 11, 1922	5.90	4,240				
1923	Jan. 21, 1923	6.30	4,890	1927	Apr. 1, 1927	6.63	5,920
	Feb. 1, 1923	10.00	12,200		Apr. 14, 1927	8.46	9,350
	Mar. 12, 1923	6.12	5,070		Apr. 19, 1927	9.69	9,730
	Mar. 16, 1923	7.83	8,040		May 6, 1927	7.40	7,520
	May 16, 1923	7.10	6,780		May 25, 1927	6.69	6,090
	June 13, 1923	6.75	6,260		June 2, 1927	8.80	10,900
					Aug. 15, 1927	5.50	4,110
1924	June 21, 1924	4.69	2,970				

Peak stages and discharges of Jacks Fork at Eminence, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	Dec. 14, 1927	11.00	14,200	1945	June 17, 1945	10.60	13,600
	Apr. 6, 1928	8.81	9,920	1946	Feb. 13, 1946	11.7	16,700
	June 9, 1928	8.98	10,300		Mar. 6, 1946	7.93	7,050
	June 13, 1928	16.24	40,000		May 16, 1946	7.03	5,310
1929	June 21, 1928	6.50	4,700		May 25, 1946	10.20	12,460
	Jan. 25, 1929	8.60	8,360	1947	Aug. 14, 1946	11.50	16,400
	May 9, 1929	6.12	4,060		Nov. 10, 1946	9.1	9,640
	May 14, 1929	7.30	5,980		Apr. 25, 1947	9.0	9,400
1930	June 13, 1929	7.30	5,980	1948	Jan. 1, 1948	8.25	7,670
	Jan. 14, 1930	7.70	7,420		June 19, 1948	8.85	8,960
1931	Feb. 26, 1930	6.05	3,920	1949	Jan. 19, 1949	9.1	9,640
	Oct. 8, 1930	4.80	2,740		Jan. 24, 1949	13.85	24,600
1932	Jan. 16, 1932	4.70	2,610		Jan. 28, 1949	7.5	6,250
	Apr. 15, 1933	9.70	12,700		Feb. 15, 1949	10.85	14,200
1933	May 14, 1933	11.50	17,000		Mar. 27, 1949	6.5	4,490
	Sept. 15, 1934	4.60	1,270		May 24, 1949	7.8	6,850
1935	Mar. 11, 1935	14.26	26,700		June 13, 1949	9.55	10,900
	June 3, 1935	9.98	11,800		July 8, 1949	8.5	8,300
1936	Nov. 10, 1935	5.67	2,620	1950	Dec. 22, 1949	6.1	3,900
	Jan. 8, 1937	7.22	5,220		Jan. 4, 1950	13.2	22,300
1937	Jan. 15, 1937	8.34	7,590		Jan. 13, 1950	7.0	5,800
	May 2, 1937	8.37	7,820		Feb. 13, 1950	7.0	5,800
	Feb. 18, 1938	10.56	13,600		Apr. 3, 1950	8.8	9,340
1938	Mar. 29, 1938	8.00	7,100		May 10, 1950	14.5	27,500
	May 23, 1938	11.03	14,800		May 20, 1950	5.9	4,000
	Jan. 30, 1939	7.39	6,060	1951	June 10, 1950	5.9	4,000
1939	Apr. 6, 1939	6.75	4,960		Feb. 19, 1951	8.5	8,650
	Apr. 17, 1939	11.1	15,100		Feb. 21, 1951	7.15	6,160
	Apr. 12, 1940	6.5	4,450		Mar. 12, 1951	6.6	5,120
1941	Jan. 2, 1941	4.6	1,860		July 1, 1951	7.0	5,800
	Oct. 18, 1941	6.53	4,450		July 10, 1951	9.0	9,860
1942	Oct. 31, 1941	8.6	8,050	1952	Nov. 13, 1951	6.28	4,630
	Apr. 9, 1942	7.59	5,970		Nov. 24, 1951	6.46	4,950
	May 31, 1942	6.70	4,480		Mar. 11, 1952	8.59	8,870
	June 18, 1942	6.60	4,330		Apr. 5, 1952	6.36	4,790
	Dec. 27, 1942	14.50	27,500	1953	Apr. 13, 1952	8.17	8,030
1943	May 11, 1943	12.60	20,000		Mar. 4, 1953	6.00	4,150
	May 20, 1943	8.09	6,960	1954	May 28, 1954	5.5	3,400
	May 3, 1944	5.26	2,570		Feb. 20, 1955	6.8	5,460
1945	Feb. 22, 1945	6.92	4,790	1955	Mar. 21, 1955	12.60	20,500
	Feb. 26, 1945	11.36	16,100	1956	May 15, 1956	13.85	24,800
	Mar. 6, 1945	7.02	5,310		Apr. 4, 1957	12.70	21,600
	Mar. 31, 1945	10.95	14,800		Apr. 22, 1957	6.95	5,900
	Apr. 2, 1945	7.56	6,450		Apr. 27, 1957	8.58	9,340
1946	Apr. 14, 1945	11.5	16,400		May 19, 1957	7.12	6,100
	June 10, 1945	7.47	6,250		May 23, 1957	12.00	19,200
1947	Mar. 24, 1948	8.85	8,960	1958	Mar. 24, 1958	10.00	13,000
	Jan. 1, 1948	8.25	7,670		May 5, 1958	5.92	4,000
	June 19, 1948	8.85	8,960		July 17, 1958	9.60	11,900
	Jan. 19, 1949	9.1	9,640				
	Jan. 24, 1949	13.85	24,600				

665. Current River near Eminence, Mo.

Location.--Lat 37°11'00", long 91°15'30", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.29 N., R.3 W., 1 mile downstream from Jacks Fork, 8 miles northeast of Eminence, and at mile 123.0.

Drainage area.--1,272 sq mi.

Gage.--Nonrecording prior to Dec. 8, 1934; recording thereafter. Prior to Oct. 20, 1921, at site 1,200 ft upstream at different datum. Datum of present gage is 568.82 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 48,000 cfs.

Historical data.--Floodmark for flood in March 1904 was 36 ft above water surface at a point 1 mile upstream from present gage at the time gage in use prior to Oct. 20, 1921, read 1.65 ft.

Remarks.--Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1922	Nov. 19, 1921	14.2	25,800	1941	Apr. 17, 1941	5.11	4,210	
	Mar. 31, 1922	11.5	17,800	1942	Nov. 1, 1941	9.70	11,100	
	Apr. 17, 1922	11.0	16,400					
1923	Feb. 1, 1923	13.4	23,700	1943	Dec. 27, 1942	26.97	75,100	
	Mar. 16, 1923	13.5	24,000	May 11, 1943	21.49	48,800		
	May 16, 1923	12.5	21,200	May 19, 1943	14.56	23,400		
1924	June 21, 1924	6.4	6,920	1944	Apr. 23, 1944	9.97	11,400	
1925	Apr. 28, 1925	7.0	8,000	1945	Feb. 22, 1945	13.20	19,800	
1926	Oct. 17, 1925	8.3	10,700		Feb. 26, 1945	14.59	23,700	
					Mar. 7, 1945	12.40	17,700	
1927	Apr. 1, 1927	14.1	25,100		Mar. 31, 1945	16.25	28,800	
	Apr. 15, 1927	16.0	39,000		Apr. 2, 1945	12.35	17,700	
	Apr. 19, 1927	12.1	19,500		Apr. 14, 1945	21.23	47,600	
	May 25, 1927	12.0	19,000		June 10, 1945	14.30	22,800	
	June 2, 1927	20.0	43,800		June 17, 1945	13.46	20,600	
1928	Dec. 14, 1927	15.5	27,900	1946	Feb. 14, 1946	18.96	39,800	
	June 9, 1928	24.3	59,400		Mar. 6, 1946	11.67	16,300	
	June 13, 1928	21.0	46,900		May 16, 1946	10.89	14,300	
1929	Jan. 25, 1929	10.3	13,600		May 25, 1946	20.20	44,300	
	May 13, 1929	13.8	21,200	Aug. 14, 1946	23.95	60,200		
	June 13, 1929	9.8	12,500	1947	Nov. 10, 1946	12.00	17,000	
1930	Jan. 14, 1930	10.2	13,600		Apr. 25, 1947	14.7	25,300	
				1931	Mar. 8, 1931	6.6	6,250	1948
1932	Jan. 23, 1932	5.7	4,850					1949
				1933	Apr. 16, 1933	17.9	35,900	
May 14, 1933	21.4	48,300	Feb. 15, 1949					
1934	Sept. 15, 1934	5.47	4,760		June 13, 1949	10.6	13,800	
					July 8, 1949	11.10	15,000	
1935	Mar. 11, 1935	24.35	59,600	1950	Jan. 4, 1950	22.35	53,000	
	June 3, 1935	12.62	19,500		Jan. 14, 1950	12.95	20,700	
	June 26, 1935	11.50	16,700		Apr. 3, 1950	13.23	21,300	
1936	Nov. 10, 1935	7.27	7,860		May 10, 1950	20.6	47,300	
					May 12, 1950	12.80	20,100	
1937	Jan. 15, 1937	13.05	20,500		June 10, 1950	13.00	20,700	
					May 3, 1937	13.35	21,600	1951
1938	Feb. 18, 1938	16.48	31,200		July 1, 1951	13.47	22,200	
					Mar. 29, 1938	10.16	13,700	
1939	May 23, 1938	14.84	25,700	July 13, 1951	14.50	25,300		
	July 17, 1938	10.75	15,000	1952	Nov. 24, 1951	9.70	12,500	
1940	Apr. 17, 1939	19.43	41,100		Mar. 11, 1952	12.37	19,000	
					Apr. 13, 1952	12.92	20,400	
1940	Apr. 17, 1940	8.64	9,790		1953	Mar. 4, 1953	7.29	7,790
					1954	May 28, 1954	7.00	7,250

Peak stages and discharges of Current River near Eminence, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Mar. 21, 1955	17.30	35,000	1957	May 11, 1957	9.62	12,300
1956	May 15, 1956	23.27	58,400		May 19, 1957	10.55	14,500
1957	Apr. 4, 1957	20.97	48,900		May 23, 1957	17.32	35,000
	Apr. 22, 1957	13.47	22,200		May 26, 1957	12.70	19,900
	Apr. 27, 1957	13.05	20,700	1958	Dec. 17, 1957	13.30	21,600
					Mar. 24, 1958	15.91	30,100

670. Current River at Van Buren, Mo.

Location.--Lat 36°59'30", long 91°00'55", in NE 1/4 sec. 25, T.27 N., R.1 W., at downstream side of bridge on U. S. Highway 60 in Van Buren, 0.4 mile downstream from Pike Creek, 4.7 miles upstream from Big Spring, and at mile 90.4.

Drainage area.--1,667 sq mi.

Gage.--Nonrecording prior to Oct. 19, 1934; recording thereafter. Prior to Sept. 1, 1926, at site 100 ft downstream at different datum; Sept. 1, 1926, to Oct. 1, 1939, at present site at datum 3.00 ft higher. Datum of present gage is 442.78 ft above mean sea level, datum of 1929. Gage heights given herein converted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 62,000 cfs; shifts in relation occur.

Bankfull stage.--20 ft.

Historical data.--Flood of Mar. 26, 1904, reached a stage of 29.0 ft and that of Aug. 21, 1915, a stage of 25.9 ft as determined by State Highway Commission from several reliable high-water marks in vicinity of gage. Investigations by J. C. Lester, Project Engineer, State Highway Commission, led to the conclusion that the discharge of the flood in 1904 was less than that in 1915. At points upstream and downstream from the gage, the 1904 flood crest was the lower of the two floods.

Remarks.--Peak discharges prior to June 1, 1921, from records of Prof. T. J. Rodhouse, University of Missouri (based on stages measured from a reference point). Base for partial-duration series, 14,000 cfs. Only annual peaks are shown prior to 1922.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Mar. 26, 1904	29.0	-	1925	Apr. 29, 1925	8.2	5,800
1913	Mar. 26, 1913	-	11,500	1926	Oct. 17, 1925	9.67	9,500
1914	Apr. 29, 1914	-	36,000	1927	Apr. 1, 1927	14.48	27,400
1915	Aug. 21, 1915	25.9	125,000		Apr. 15, 1927	16.10	34,500
1916	Jan. 31, 1916	-	85,000		May 26, 1927	13.02	21,200
1917	Apr. 8, 1917	-	11,800		June 2, 1927	16.22	35,000
1918	May 12, 1918	-	29,000	1928	Dec. 14, 1927	15.34	31,000
1919	June 4, 1919	-	16,000		Apr. 7, 1928	12.56	19,400
1920	Mar. 26, 1920	-	22,900		Apr. 22, 1928	12.25	18,300
1921	Apr. 28, 1921	-	22,200		June 10, 1928	19.45	49,300
1922	Nov. 20, 1921	13.2	22,100		June 13, 1928	18.59	45,700
	Apr. 1, 1922	12.0	17,600		June 22, 1928	12.40	18,800
	Apr. 18, 1922	11.5	15,600	1929	Jan. 25, 1929	11.12	14,100
1923	Feb. 2, 1923	13.2	21,800		Apr. 10, 1929	11.29	14,800
	Mar. 17, 1923	13.0	21,000		May 7, 1929	12.20	18,100
	May 17, 1923	12.8	20,200		May 9, 1929	11.08	14,100
1924	May 31, 1924	9.7	9,500		May 13, 1929	13.48	23,100
					June 13, 1929	12.21	18,100
				1930	Jan. 15, 1930	13.32	22,300
				1931	Mar. 8, 1931	9.80	11,000
				1932	Jan. 23, 1932	8.76	7,560

Peak stages and discharges of Current River at Van Buren, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Apr. 16, 1933	17.01	40,900	1947	Nov. 11, 1946	14.42	29,000
	May 14, 1933	19.7	56,000		Apr. 26, 1947	14.53	29,500
1934	Sept. 15, 1934	8.12	5,720	1948	Jan. 2, 1948	12.52	19,900
1935	Mar. 11, 1935	22.84	86,600	1949	Jan. 19, 1949	12.6	20,700
	June 3, 1935	12.53	19,200		Jan. 25, 1949	19.26	59,200
	June 27, 1935	11.50	15,500		Jan. 28, 1949	11.7	17,300
					Feb. 16, 1949	14.9	31,600
1936	Nov. 11, 1935	8.23	6,800	1950	Jan. 5, 1950	19.90	61,500
1937	Jan. 15, 1937	13.00	25,100		Jan. 14, 1950	12.75	21,600
	May 3, 1937	12.86	24,500		Feb. 13, 1950	10.79	15,600
1938	Feb. 19, 1938	15.66	37,700		Apr. 4, 1950	13.95	26,800
	May 24, 1938	13.38	26,820		May 11, 1950	19.26	56,900
	July 18, 1938	11.36	17,900		June 11, 1950	13.31	23,900
1939	Apr. 18, 1939	17.09	45,400	1951	Feb. 19, 1951	12.95	22,700
					July 1, 1951	11.92	18,600
1940	Apr. 19, 1940	9.57	12,000		July 11, 1951	13.42	24,300
					July 14, 1951	13.17	23,500
1941	Apr. 18, 1941	6.47	4,700	1952	Nov. 24, 1951	11.28	16,600
1942	Nov. 1, 1941	10.38	14,800		Mar. 12, 1952	12.44	20,400
					Apr. 13, 1952	12.44	20,400
1943	Dec. 28, 1942	21.66	77,000	1953	Mar. 4, 1953	8.34	8,240
	May 11, 1943	19.01	57,100				
	May 19, 1943	13.57	25,100	1954	May 2, 1954	9.28	10,600
1944	Apr. 23, 1944	13.11	22,800	1955	Mar. 21, 1955	15.56	34,300
1945	Feb. 22, 1945	12.72	21,200	1956	May 16, 1956	19.34	56,900
	Feb. 26, 1945	14.82	31,100				
	Mar. 7, 1945	12.69	21,100	1957	Apr. 4, 1957	19.12	51,000
	Mar. 31, 1945	16.30	39,500		Apr. 22, 1957	13.30	23,100
	Apr. 15, 1945	19.5	60,600		Apr. 28, 1957	13.15	22,700
	June 10, 1945	13.73	25,600		May 11, 1957	11.86	18,000
	June 18, 1945	13.56	25,100		May 20, 1957	10.70	14,200
					May 24, 1957	16.45	36,600
1946	Feb. 14, 1946	17.14	44,400	1958	Dec. 18, 1957	12.97	21,900
	Mar. 7, 1946	11.66	17,300		Mar. 24, 1958	16.40	36,600
	May 17, 1946	11.16	15,300				
	May 26, 1946	18.26	52,300				
	Aug. 15, 1946	20.74	69,400				

680. Current River at Doniphan, Mo.

Location.--Lat 36°37'25", long 90°50'55", in NW $\frac{1}{4}$ sec. 27, T.23 N., R.2 E., half a mile upstream from U. S. Highway 160, 1 mile west of Doniphan, $2\frac{1}{2}$ miles upstream from Briar Creek, and at mile 51.3.

Drainage area.--2,038 sq mi.

Gage.--Nonrecording prior to July 2, 1936; recording thereafter. Prior to May 22, 1928, at site 2,700 ft downstream at datum 0.06 ft higher; May 22, 1928, to Sept. 30, 1929, at site 2,800 ft downstream at datum 0.07 ft lower; Oct. 1, 1929, to Sept. 30, 1932, at site 2,800 ft downstream at datum 1.07 ft lower; Oct. 1, 1932, to July 2, 1936, at site 2,800 ft downstream at datum 3.07 ft lower. Datum of present gage is 322.21 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs.

Bankfull stage.--12 ft.

Remarks.--Peaks for 1919-21 computed from plotted Corps of Engineer gage readings. Base for partial-duration series, 14,000 cfs.

WHITE RIVER BASIN

Peak stages and discharges of Current River at Doniphan, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	March 1904	23.4	130,000	1940	Apr. 20, 1940	9.02	12,500
1915	August 1915	22.2	105,000	1941	Jan. 3, 1941	5.00	5,110
1919	June 5, 1919	10.0	19,400	1942	Nov. 2, 1941	9.89	15,400
1920	Mar. 27, 1920	10.1	19,700		Apr. 9, 1942	9.80	15,100
1921	Mar. 26, 1921	9.8	18,800	1943	Dec. 29, 1942	19.13	63,600
	Apr. 27, 1921	14.3	35,400		May 12, 1943	18.06	55,400
1922	Nov. 21, 1921	11.10	21,000		May 20, 1943	12.65	24,100
	Apr. 1, 1922	11.50	22,000	1944	Apr. 24, 1944	11.70	20,300
1923	Feb. 3, 1923	13.00	29,600	1945	Feb. 27, 1945	15.11	35,200
	Mar. 17, 1923	11.02	20,800		Mar. 8, 1945	11.92	21,000
	May 17, 1923	11.22	21,300		Apr. 1, 1945	15.65	38,000
1924	May 31, 1924	5.48	8,300		Apr. 16, 1945	19.05	62,800
1925	June 13, 1925	4.50	6,540		June 11, 1945	14.10	30,200
1926	Oct. 18, 1925	6.50	10,300		June 19, 1945	13.40	27,000
1927	Apr. 7, 1927	12.55	28,600	1946	Feb. 15, 1946	15.70	38,600
	Apr. 15, 1927	17.30	48,800		Mar. 8, 1946	9.75	15,600
	Apr. 20, 1927	12.58	28,600		May 19, 1946	9.3	14,300
	May 27, 1927	9.45	17,600		May 26, 1946	16.71	44,900
	June 2, 1927	15.98	43,000		Aug. 16, 1946	17.46	50,600
1928	Dec. 15, 1927	14.80	37,600	1947	Nov. 12, 1946	11.80	20,600
	Apr. 7, 1928	9.35	17,600		Apr. 27, 1947	13.2	26,800
	Apr. 23, 1928	10.33	20,400	1948	Jan. 2, 1948	11.50	20,600
	June 10, 1928	15.94	42,600	1949	Jan. 20, 1949	10.8	18,400
	June 14, 1928	15.98	43,000		Jan. 26, 1949	18.3	57,000
	June 23, 1928	10.42	20,700		Jan. 29, 1949	10.8	18,400
1929	Jan. 26, 1929	9.55	18,200		Feb. 16, 1949	13.5	28,000
	Apr. 11, 1929	8.84	16,000		Mar. 27, 1949	9.3	14,700
	May 8, 1929	9.60	18,200	1950	Jan. 5, 1950	18.0	54,600
	May 14, 1929	12.40	27,800		Jan. 15, 1950	10.82	18,400
	June 14, 1929	8.60	15,500		Feb. 15, 1950	9.2	14,500
1930	Jan. 15, 1930	12.10	25,500		Apr. 5, 1950	14.7	33,500
1931	Mar. 9, 1931	6.95	9,500		May 11, 1950	18.2	56,200
1932	Jan. 24, 1932	6.41	8,300		June 12, 1950	11.3	20,000
1933	Jan. 22, 1933	11.20	14,500	1951	Feb. 20, 1951	12.11	23,700
	Apr. 17, 1933	17.65	35,200		July 2, 1951	10.20	17,700
	May 15, 1933	19.93	49,000		July 11, 1951	12.26	24,400
1934	Sept. 16, 1934	6.63	6,210		July 15, 1951	10.90	19,700
1935	Mar. 12, 1935	23.89	94,400	1952	Nov. 25, 1951	10.46	18,600
	June 4, 1935	13.47	20,200		Apr. 12, 1952	11.73	22,200
1936	Nov. 11, 1936	7.45	7,400		Apr. 14, 1952	11.22	20,600
1937	Jan. 14, 1937	16.28	48,400	1953	Mar. 5, 1953	6.23	8,530
	May 4, 1937	12.28	22,400	1954	May 3, 1954	6.68	9,530
1938	Feb. 19, 1938	15.72	43,100	1955	Mar. 22, 1955	13.88	30,900
	Mar. 31, 1938	10.26	15,500	1956	May 16, 1956	17.17	49,000
	May 25, 1938	11.74	20,100	1957	Apr. 5, 1957	17.98	54,600
1939	Mar. 5, 1939	10.10	14,900		Apr. 23, 1957	12.20	24,000
	Apr. 18, 1939	16.41	49,300		Apr. 29, 1957	12.55	25,500
					May 12, 1957	9.50	15,900
					May 24, 1957	15.20	37,000
				1958	Dec. 19, 1957	10.80	19,400
					Mar. 25, 1958	15.72	39,600
					May 5, 1958	10.66	19,100

a Annual peak only.

685. Little Black River near Fairdealing, Mo.

Location.--Lat 36°39'40", long 90°34'25", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.23 N., R.5 E., at bridge on State Highway 14, 2 $\frac{1}{2}$ miles downstream from Beaverdam Creek and 2 $\frac{1}{2}$ miles east of Fairdealing.

Drainage area.--187 sq mi.

Gage.--Nonrecording Feb. 27, 1936, to Sept. 30, 1942. Prior to Oct. 1, 1939, at site 100 ft upstream at datum 1.5 ft higher. Datum of last used gage is 297.15 ft above mean sea level, datum of 1929. Gage heights given herein converted to last used gage.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs.

Bankfull stage.--13 ft.

Remarks.--Peaks for period prior to Oct. 1, 1939, computed from plotted Corps of Engineers gage readings. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Apr. 6, 1936	18.6	5,230	1939	Jan. 30, 1939	19.5	6,750
	Sept. 2, 1936	19.5	6,750		Mar. 5, 1939	19.1	6,070
1937	Nov. 3, 1936	19.3	6,410		Apr. 17, 1939	19.9	7,470
		18.9	5,730	1940	Apr. 12, 1940	18.12	4,220
	Dec. 31, 1936	22.5	13,600		Jan. 25, 1941	9.7	825
	Jan. 15, 1937			1942	Apr. 9, 1942	20.0	6,270
1938	Feb. 18, 1938	21.4	10,400				
	Mar. 29, 1938	20.3	8,190				

690. Black River at Pocahontas, Ark.

Location.--Lat 36°15', long 90°58', in SW $\frac{1}{4}$ sec.27, T.19 N., R.1 E., at bridge on U. S. Highway 67 at Pocahontas, 1.6 miles downstream from Fourche Creek, 6.1 miles downstream from Current River, 18.1 miles upstream from Spring River, and at mile 90.1.

Drainage area.--4,843 sq mi.

Gage.--Nonrecording prior to July 29, 1940; recording thereafter. Prior to July 15, 1937, at site 0.3 mile upstream at present datum. Datum of gage is 242.43 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 56,000 cfs.

Bankfull stage.--18 ft.

Remarks.--Records for Jan. 1, 1936, to July 14, 1937, computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 17, 1927	25.9	a80,000	1941	Jan. 25, 1941	b8.92	7,270
1937	Jan.21,22, 1937	24.0	31,600	1942	Nov. 5, 1941	15.86	12,800
	May 8, 1937	16.6	13,800		Apr. 16, 1942	19.60	18,600
1938	Feb. 25, 1938	21.92	30,100	1943	Jan. 2, 1943	20.36	21,600
	Apr. 5, 6, 1938	21.54	27,300		May 18, 1943	22.46	39,500
1939	Feb. 11, 1939	17.87	15,200	1944	Apr.26,27, 1944	19.07	17,300
	Mar. 12, 1939	20.63	22,200		Mar. 7, 1945	22.45	38,500
	Apr. 24, 1939	21.15	28,000	1945	Apr. 6, 1945	23.04	44,700
1940	Apr. 24, 1940	17.85	15,000		Apr. 20, 1945	23.60	51,400

a Annual peak only.

b Occurred at different time than peak discharge.

Peak stages and discharges of Black River at Pocahtontas, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 17, 1945	24.32	59,600	1952	Dec. 1, 1951	20.78	23,600
1946	Jan. 12, 1946	16.90	13,100		Jan. 6, 1952	18.00	15,500
	Feb. 23, 1946	20.40	22,500		Mar. 18, 1952	20.27	21,100
	May 29, 1946	21.66	30,300		Apr. 18, 1952	19.04	17,400
1947	May 1, 1947	17.16	14,700	1953	Mar. 24, 1953	17.37	14,500
1948	Jan. 5, 1948	c17.51	15,800	1954	May 4, 1954	12.68	10,200
	Apr. 14, 1948	c16.34	14,800	1955	Mar. 26, 1955	18.38	16,200
1949	Jan. 29, 1949	24.07	53,800	1956	May 20, 1956	16.68	13,700
	Feb. 19, 1949	21.88	31,800	1957	Apr. 9, 1957	22.42	34,800
	Apr. 1, 1949	19.66	19,800		May 1, 1957	21.25	25,900
1950	Jan. 11, 1950	22.92	39,100		May 29, 1957	23.34	42,800
	Feb. 18, 1950	21.58	28,600		July 8, 1957	15.55	12,500
	Apr. 8, 1950	20.43	21,600	1958	Nov. 22, 1957	19.38	18,300
	May 15, 1950	21.46	27,900		Dec. 21, 1957	c15.70	12,800
1951	Jan. 17, 1951	15.20	12,100		Mar. 29, 30, 1958	22.13	32,400
	Feb. 25, 1951	20.83	23,600		May 10, 11, 1958	21.33	26,600
	Mar. 18, 1951	17.88	15,300				
	July 17, 1951	19.52	18,600				

c Occurred on following day.

695. Spring River at Imboden, Ark.

Location.--Lat 36°12', long 91°10', in NE $\frac{1}{4}$ sec.15, T.18 N., R.2 W., at bridge on U. S. Highway 62 at Imboden, 3.9 miles downstream from Janes Creek, 8.5 miles upstream from Eleven Point River, and 12.1 miles upstream from mouth.

Drainage area.--1,162 sq mi.

Gage.--Nonrecording prior to Feb. 9, 1939; recording thereafter. Datum of gage is 254.07 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and extended above by logarithmic plotting and area-velocity study.

Bankfull stage.--16 ft.

Remarks.--Records for Feb. 21, 1936, to July 17, 1937, furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	a32.1	125,000	1944	Apr. 11, 1944	19.13	16,100
1937	Jan. 15, 1937	22.3	b31,800		Apr. 23, 1944	19.12	16,100
					May 3, 1944	19.08	16,100
1938	Feb. 15, 1938	16.60	10,500	1945	Feb. 22, 1945	20.02	19,600
	Feb. 18, 1938	23.97	42,200		Feb. 27, 1945	23.05	36,000
	Mar. 29, 1938	23.7	40,200		Mar. 3, 1945	17.32	11,500
	Apr. 16, 1938	19.9	19,200		Mar. 9, 1945	20.98	24,600
1939	Jan. 30, 1939	18.5	14,200		Mar. 31, 1945	24.87	48,300
	Mar. 5, 1939	22.40	32,400		Apr. 15, 1945	23.70	40,200
	Apr. 6, 1939	15.70	9,440		May 10, 1945	21.38	26,800
	Apr. 17, 1939	22.25	31,200		June 9, 1945	19.06	16,100
					June 11, 1945	23.21	37,200
1940	Apr. 12, 1940	17.86	13,100		June 18, 1945	19.04	15,800
					Sept. 25, 1945	17.46	11,900
1941	Jan. 24, 1941	9.87	4,680	1946	Jan. 9, 1946	20.95	24,600
1942	Oct. 31, 1941	19.09	17,800		Feb. 14, 1946	22.16	31,600
	Apr. 8, 1942	23.10	36,600		Mar. 6, 1946	22.16	31,600
	May 4, 1942	18.60	15,500		May 1, 1946	17.38	11,700
	Aug. 23, 1942	15.89	9,690		May 16, 1946	16.00	9,750
1943	Dec. 27, 1942	24.10	42,800		May 25, 1946	19.46	17,500
	May 11, 1943	26.10	57,300		June 1, 1946	16.81	10,800
				1947	Dec. 10, 1946	14.54	8,290

a Annual peak only; computed from information furnished by Corps of Engineers.

b Annual peak only.

Peak stages and discharges of Spring River at Imboden, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Jan. 1, 1948	19.10	16,100	1952	Nov. 24, 1951	22.43	32,400
	June 19, 1948	17.87	12,700		Jan. 4, 1952	19.30	16,800
1949	Jan. 19, 1949	20.21	20,500		Mar. 11, 1952	22.24	31,200
	Jan. 24, 1949	28.42	78,500		Apr. 13, 1952	15.79	9,860
	Jan. 28, 1949	18.20	13,400	1953	Mar. 18, 1953	18.16	13,400
	Feb. 14, 1949	24.68	46,900		May 3, 1954	17.82	12,500
	Mar. 27, 1949	19.54	17,500	1954	Mar. 21, 1955	18.49	14,200
	July 8, 1949	21.85	29,000		Feb. 18, 1956	16.50	10,600
1950	Dec. 12, 1949	15.52	9,240	1957	Jan. 22, 1957	15.96	10,100
	Jan. 4, 1950	25.08	49,800		Apr. 4, 1957	25.74	54,200
	Jan. 10, 1950	17.84	12,500		Apr. 22, 1957	16.45	10,500
	Jan. 13, 1950	19.28	16,800		Apr. 28, 1957	19.07	16,100
	Jan. 16, 1950	17.59	12,100		May 23, 1957	24.18	43,500
	Jan. 26, 1950	16.27	10,100	1958	Nov. 13, 1957	17.44	11,800
	Feb. 13, 1950	22.48	33,000		Nov. 18, 1957	17.70	12,300
	May 12, 1950	18.85	15,100		Mar. 24, 1958	19.04	15,800
	June 4, 1950	18.10	13,100		May 3, 1958	16.12	10,200
	Jan. 14, 1951	16.57	10,500		May 5, 1958	22.10	30,600
1951	Feb. 20, 1951	21.27	26,200				
	Apr. 21, 1951	16.95	12,300				
	July 4, 1951	16.00	10,600				
	July 11, 1951	15.34	9,860				

705. Eleven Point River near Thomasville, Mo.

Location.--Lat 36°47'05", long 91°29'30", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.24 N., R.5 W., on left bank attached to bluff at end of Grandpappy Ridge, 500 ft upstream from Posy Spring, $\frac{1}{2}$ miles downstream from Barren Fork, and $\frac{1}{2}$ miles east of Thomasville.

Drainage area.--361 sq mi.

Gage.--Recording. Altitude of gage is 610 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 2,400 cfs, and by slope-area measurements at 6,850 and 16,900 cfs.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Feb. 18, 1951	9.93	3,790	1955	Mar. 21, 1955	13.8	6,850
	Feb. 20, 1951	8.33	2,740		May 15, 1956	11.10	4,640
	July 10, 1951	10.60	4,280	1957	Apr. 3, 1957	17.95	16,900
1952	Oct. 23, 1951	7.68	2,370		Apr. 22, 1957	8.96	3,110
	Nov. 24, 1951	11.75	5,170		Apr. 25, 1957	7.70	2,260
	Mar. 10, 1952	9.63	3,580		Apr. 27, 1957	7.78	2,320
	Apr. 13, 1952	7.30	2,130		May 22, 1957	8.25	2,580
1953	Apr. 18, 1953	6.30	1,660		May 23, 1957	11.26	4,800
					May 25, 1957	7.68	2,260
1954	Mar. 24, 1954	8.36	2,800	1958	Mar. 24, 1958	10.42	4,140
	Apr. 15, 1954	11.85	5,170		May 5, 1958	12.32	5,560
	May 2, 1954	12.15	5,480		July 12, 1958	7.26	2,130
1955	Feb. 20, 1955	7.10	2,010		July 17, 1958	7.85	2,430

WHITE RIVER BASIN

715. Eleven Point River near Bardley, Mo.

Location.--Lat 36°38'55", long 91°12'03", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.23 N., R.2 W., at bridge on U. S. Highway 160, 7 miles southwest of Bardley and $7\frac{1}{2}$ miles upstream from Fredericks Fork.

Drainage area.--793 sq mi.

Gage.--Nonrecording prior to Oct. 20, 1939; recording thereafter. Datum of gage is 410.84 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 25,000 cfs.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Aug. 20, 1915	19.7	a44,000	1942	Oct. 31, 1941	10.1	9,830
1922	Mar. 31, 1922	10.0	7,560		Apr. 8, 1942	7.7	5,750
1923	Feb. 2, 1923	10.1	7,600		May 31, 1942	15.7	28,300
	Mar. 12, 1923	7.2	4,400	1943	Nov. 18, 1942	6.86	4,620
	Mar. 16, 1923	10.6	9,450		Nov. 22, 1942	6.56	4,230
	May 15, 1923	8.8	6,120		Dec. 29, 1942	14.10	22,200
	June 11, 1923	8.1	5,350		May 11, 1943	15.18	25,800
1924	Aug. 10, 1924	3.9	1,680	1944	Apr. 23, 1944	8.36	6,840
1925	June 13, 1925	7.2	4,400		May 3, 1944	8.12	6,360
1926	Nov. 8, 1925	5.1	2,490	1945	Feb. 27, 1945	-	b15,000
1927	Apr. 14, 1927	18.7	40,000		Mar. 3, 1945	-	b4,000
	Apr. 19, 1927	11.6	11,400		Mar. 7, 1945	-	b7,200
	May 5, 1927	10.0	8,640		Mar. 20, 1945	-	b6,900
	June 1, 1927	10.2	8,960		Mar. 31, 1945	15.5	27,200
	June 21, 1927	8.2	6,040		Apr. 15, 1945	13.6	20,360
1928	Dec. 14, 1927	15.0	18,700		June 11, 1945	10.01	9,600
	Apr. 6, 1928	11.6	11,400		June 18, 1945	8.32	6,680
	Apr. 21, 1928	9.3	7,560	1946	Jan. 9, 1946	7.30	5,280
	June 13, 1928	15.6	27,200		Feb. 14, 1946	10.88	11,400
	June 21, 1928	7.8	5,560		Mar. 6, 1946	8.21	6,570
1929	Jan. 25, 1929	9.5	8,000		May 17, 1946	7.07	5,010
	Feb. 26, 1929	6.9	4,480		May 25, 1946	9.30	8,330
	Apr. 9, 1929	7.3	4,960		Aug. 14, 1946	7.42	5,420
1930	Jan. 13, 1930	8.0	5,800	1947	Dec. 12, 1946	5.50	3,100
1931	Aug. 6, 1931	5.2	2,640	1948	Jan. 1, 1948	7.75	5,980
1932	Jan.23,24, 1932	3.6	1,280		June 19, 1948	9.54	8,680
1933	Apr. 16, 1933	10.9	10,100	1949	Jan. 18, 1949	6.9	4,750
	May 14, 1933	9.5	8,000		Jan. 24, 1949	16.7	33,200
1934	Sept.15, 1934	3.5	1,190		Jan. 28, 1949	8.3	6,700
1935	Mar. 12, 1935	13.7	20,200		Feb. 14, 1949	7.1	5,010
	June 3, 1935	9.5	7,840		Feb. 16, 1949	8.6	7,180
	June 17, 1935	7.8	5,560	1950	Jan. 4, 1950	12.80	16,200
1936	Dec. 8, 1935	3.1	900		Feb. 13, 1950	8.67	7,340
1937	Jan. 14, 1937	13.9	20,900		May 11, 1950	9.55	8,860
1938	Feb. 19, 1938	10.0	9,100		May 30, 1950	7.22	5,140
	Mar. 29, 1938	9.3	7,640		June 3, 1950	8.20	6,570
	May 24, 1938	8.1	5,880	1951	Feb. 21, 1951	8.50	7,020
1939	Mar. 5, 1939	8.4	6,670		July 11, 1951	8.00	6,270
	Apr. 17, 1939	13.9	20,900	1952	Nov. 24, 1951	9.66	9,040
1940	Apr. 12, 1940	8.3	6,530		Mar. 11, 1952	9.16	8,160
1941	Apr. 4, 1941	3.4	976		Apr. 13, 1952	6.41	4,120
				1953	Apr. 18, 1953	4.90	2,530
				1954	Apr. 16, 1954	8.66	7,340
					May 2, 1954	10.60	10,800
				1955	Mar. 21, 1955	11.23	12,000
				1956	May 16, 1956	7.37	5,420

a Annual peak only.

b Estimated on basis of records for station near Ravendon Springs, Ark.

Peak stages and discharges of Eleven Point River near Bardley, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Apr. 4, 1957	15.76	28,600	1957	May 25, 1957	8.60	7,180
	Apr. 22, 1957	6.64	4,360				
	Apr. 28, 1957	8.25	6,570		Mar. 24, 1958	10.15	9,980
	May 11, 1957	7.80	5,980		May 3, 1958	6.64	4,360
	May 23, 1957	10.38	10,400		May 5, 1958	10.35	10,400

720. Eleven Point River near Ravenden Springs, Ark.
(Published as "near Eleven Point" prior to Oct. 1949)

Location.--Lat 36°21', long 91°07', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.20 N., R.1 W., on left bank at downstream side of bridge on State Highway 90, 4 $\frac{1}{2}$ miles downstream from small tributary, 6 $\frac{1}{4}$ miles northeast of Ravenden Springs, and 21 miles upstream from mouth.

Drainage area.--1,123 sq mi.

Gage.--Nonrecording prior to Dec. 11, 1938; recording thereafter. Prior to Nov. 21, 1938, at datum 0.04 ft higher. Datum of present gage is 291.98 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended above on basis of velocity-area studies for the main channel and slope-area measurements of overbank flow.

Bankfull stage.--14 ft.

Remarks.--Records for period 1929-33 and 1935-38 collected and computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Jan. 14, 1930	13.01	9,460	1945	May 10, 1945	14.78	12,600
1931	Mar. 7, 1931	10.0	5,680	June 9, 1945	15.70	14,900	
				June 11, 1945	17.10	19,500	
1932	Jan. 17, 1932	11.65	7,160	June 17, 1945	12.90	8,860	
1933	Dec. 24, 1932	12.0	7,540	1946	Jan. 9, 1946	12.70	8,550
	Dec. 30, 1932	13.0	9,020		Feb. 14, 1946	15.81	15,200
	Jan. 22, 1933	12.7	8,550		Mar. 7, 1946	12.78	8,700
	Apr. 16, 1933	14.3	11,400		May 26, 1946	12.74	8,550
	May 15, 1933	14.92	12,800	1947	Apr. 11, 1947	8.65	4,340
1936	Apr. 6, 1936	11.6	7,160	1948	Jan. 1, 1948	12.30	7,960
1939	Jan. 30, 1939 Mar. 5, 1939 Apr. 18, 1939	11.70	7,270	June 19, 1948	12.20	7,820	
		16.12	16,100	1949	Jan. 19, 1949	12.94	8,860
		16.55	17,800		Jan. 25, 1949	20.21	34,000
1940	Apr. 12, 1940	11.38	6,770		Feb. 14, 1949	16.69	18,100
					Mar. 27, 1949	13.81	10,400
				1941	Sept. 3, 1941	9.63	5,120
Jan. 10, 1950	12.12	7,680					
1942	Nov. 1, 1941 Apr. 8, 1942 May 4, 1942 June 1, 1942	13.40	10,500	Jan. 13, 1950	12.60	8,400	
		16.31	16,700	Jan. 16, 1950	12.44	8,100	
		11.12	6,440	Feb. 13, 1950	16.10	16,100	
		18.04	23,000	May 12, 1950	14.00	10,800	
1943	Dec 28, 1942 May 11, 1943	17.63	21,400	May 31, 1950	12.41	8,100	
		18.97	26,900	June 4, 1950	14.20	11,200	
1944	Apr. 11, 1944 Apr. 23, 1944 May 4, 1944	11.62	6,550	1951	Jan. 14, 1951	10.84	6,130
		14.03	10,800		Feb. 20, 1951	13.92	10,600
		11.02	6,330		July 11, 1951	11.33	6,660
1945	Feb. 22, 1945 Feb. 27, 1945 Mar. 3, 1945 Mar. 7, 1945 Mar. 19, 1945 Mar. 31, 1945 Apr. 2, 1945 Apr. 16, 1945	11.18	6,550	1952	Nov. 25, 1951	13.56	10,000
		18.60	25,400		Jan. 4, 1952	11.84	7,280
		11.36	6,780		Mar. 12, 1952	14.43	11,600
		12.86	8,860	1953	Mar. 18, 1953	9.87	5,340
		14.38	11,600				
		18.84	26,200	1954	Apr. 8, 1954	10.95	6,330
		14.90	12,800		May 3, 1954	12.30	7,960
		17.56	21,400	1955	Mar. 22, 1955	14.58	12,000

Peak stages and discharges of Eleven Point River near Ravenden Springs, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Feb. 18, 1956	8.99	4,640	1957	May 26, 1957	12.69	8,550
1957	Apr. 5, 1957	18.80	26,400	1958	Mar. 24, 1958	14.46	11,800
	Apr. 28, 1957	13.10	9,180		May 3, 1958	11.10	6,440
	May 12, 1957	10.86	6,230		May 5, 1958	16.24	16,400
	May 23, 1957	18.19	23,800				

725. Black River at Black Rock, Ark.

Location.--Lat 36°06'15", long 91°05'50", in NW $\frac{1}{4}$ sec.21, T.17 N., R.1 W., on right bank 900 ft downstream from St. Louis-San Francisco Railway Co. bridge at Black Rock and 3.7 miles downstream from Spring River.

Drainage area.--7,323 sq mi.

Gage.--Nonrecording. Prior to Aug. 1, 1946, at site 900 ft upstream at same datum. Datum of gage is 229.56 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 100,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--20 ft.

Remarks.--Peak gage heights for 1904-29, 1932-39 computed from plotted U. S. Weather Bureau gage readings. Discharge records for 1940-55 furnished by Corps of Engineers and reviewed by Geological Survey. Some regulation since June 3, 1948, by Clearwater Reservoir (effect on peak discharge slight). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 8, 1905	22.9	37,500	1932	Jan. 18, 1932	19.6	23,300
1906	Jan. 23, 1906	24.5	51,700	1933	May 22, 1933	23.1	38,900
1907	Jan. 4, 1907	26.0	69,000	1934	Mar. 27, 1934	19.3	22,800
1908	May 7, 1908	23.4	41,400	1935	Mar. 12, 1935	26.7	78,300
1909	Mar. 10, 1909	25.0	56,900	1936	Apr. 6, 1936	16.4	18,500
1910	Apr. 18, 1910	17.0	19,300	1937	Jan. 16, 1937	26.2	71,700
1911	Aug. 16, 1911	19.1	22,500	1938	Feb. 19, 1938	25.5	63,000
1912	Apr. 28, 1912	23.5	42,200	1939	Apr. 18, 1939	24.8	54,800
1913	Jan. 12, 1913	24.4	50,700	1940	May 1, 1940	18.2	22,800
1914	Apr. 30, 1914	21.6	28,800	1941	Jan. 25, 1941	10.0	11,800
1915	Aug. 21, 1915	31.9	160,000	1942	Apr. 10, 1942	23.0	37,300
1916	Jan. 31, 1916	26.5	75,600	1943	May 12, 1943	26.2	68,200
1917	Apr. 3, 1917	24.6	52,700	1944	Apr. 24, 1944	22.0	31,200
1918	May 14, 1918	25.9	67,800	1945	Mar. 31, 1945	27.2	87,400
1919	Dec. 14, 1918	19.9	23,800	1946	June 1, 1946	23.6	42,000
1920	Mar. 27, 1920	21.1	26,800	1947	Apr. 11, 1947	a16.0	21,200
1921	Apr. 28, 1921	25.7	65,300	1948	Jan. 2, 1948	b19.8	29,500
1922	Apr. 9, 1922	23.4	41,400	1949	Jan. 25, 1949	28.5	103,000
1923	May 16, 1923	24.3	49,600	1950	Jan. 5, 1950	25.9	67,800
1924	May 30, 1924	14.3	15,800	1951	Feb. 22, 1951	23.1	38,800
1925	June 15, 1925	12.1	13,300	1952	(c)	23.3	40,600
1926	Oct. 18, 1925	20.8	26,000	1953	Mar. 18, 1953	d20.0	30,100
1927	Apr. 15, 1927	30.3	132,000	1954	May 3, 1954	d17.6	24,900
1928	June 14, 1928	26.2	71,700	1955	Mar. 21, 1955	e19.5	26,200
1929	Jan. 26, 1929	24.7	53,800	1956	Feb. 18, 1956	d17.6	25,700
1930	Jan. 15, 1930	23.6	43,000	1957	Apr. 5, 1957	26.9	77,800
1931	Mar. 8, 1931	18.0	20,600	1958	May 6, 1958	24.5	50,200

a Occurred Dec. 13, 1946.

b Occurred at different time than peak discharge.

c Nov. 27, 1951, Mar. 12, 1952.

d Occurred on following day.

e Occurred Mar. 23, 1955.

730. Strawberry River near Evening Shade, Ark.

Location.--Lat 36°06', long 91°36', in NE¹ sec.27, T.17 N., R.6 W., at bridge on State Highway 11, 2 miles north of Evening Shade and 6.3 miles upstream from Piney Fork.

Drainage area.--225 sq mi.

Gage.--Nonrecording prior to July 23, 1939, recording thereafter. Datum of gage is 406.56 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--9 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 17, 1939	19.78	8,750	1950	Jan. 4, 1950	21.82	13,800
1940	Apr. 11, 1940	15.42	4,650		Jan. 13, 1950	17.40	6,480
					Jan. 26, 1950	15.35	4,700
1941	Jan. 24, 1941	13.43	3,080		Feb. 13, 1950	17.93	6,980
					May 30, 1950	14.93	4,300
1942	Oct. 31, 1941	17.21	6,100		June 30, 1950	18.85	8,090
	Mar. 8, 1942	16.89	5,810	1951	Jan. 14, 1951	15.19	4,540
	Apr. 8, 1942	19.18	8,120		Feb. 20, 1951	18.44	7,570
	Apr. 23, 1942	15.74	4,750		Apr. 21, 1951	14.80	4,220
1943	Dec. 27, 1942	20.84	11,300		June 20, 1951	15.01	4,380
	May 11, 1943	24.55	22,700		July 4, 1951	18.77	8,090
1944	Feb. 28, 1944	15.56	4,520		July 10, 1951	15.62	4,860
	Apr. 11, 1944	16.90	5,580		Aug. 18, 1951	16.65	5,720
	Apr. 23, 1944	15.82	4,670	1952	Nov. 6, 1951	14.36	4,060
	May 3, 1944	18.50	7,290		Nov. 24, 1951	20.36	10,900
1945	Feb. 21, 1945	18.67	7,540		Jan. 4, 1952	17.36	6,920
	Feb. 27, 1945	19.23	8,240		Mar. 11, 1952	18.52	8,200
	Mar. 31, 1945	22.46	15,900		Apr. 12, 1952	14.67	4,310
	Apr. 2, 1945	19.17	8,240	1953	Nov. 25, 1952	15.48	5,030
	Apr. 15, 1945	20.72	11,100		Dec. 4, 1952	14.70	4,310
	June 11, 1945	20.44	10,400		Mar. 14, 1953	15.95	5,480
1946	Jan. 9, 1946	18.32	7,040		Mar. 18, 1953	17.04	6,480
	Feb. 14, 1946	20.18	9,970		Mar. 22, 1953	15.86	5,390
	Mar. 6, 1946	21.07	12,000	1954	Jan. 20, 1954	14.40	4,060
	Apr. 30, 1946	19.26	8,400		May 3, 1954	15.38	4,940
	May 25, 1946	16.60	5,320	1955	Mar. 20, 1955	16.82	6,280
1947	Dec. 10, 1946	17.63	6,260		May 20, 1955	18.16	7,840
	May 20, 1947	16.38	5,160	1956	Feb. 18, 1956	15.62	5,120
1948	Jan. 1, 1948	16.91	5,580		June 25, 1956	15.86	5,410
	Feb. 25, 1948	15.09	4,140	1957	Jan. 22, 1957	14.38	4,120
	June 18, 1948	17.33	5,960		Apr. 4, 1957	21.80	14,700
	June 27, 1948	14.98	4,060		Apr. 22, 1957	16.34	5,800
1949	Jan. 18, 1949	18.17	7,310		Apr. 28, 1957	16.82	6,300
	Jan. 24, 1949	26.59	31,000		May 23, 1957	19.03	9,000
	Jan. 27, 1949	15.77	5,020	1958	Nov. 13, 1957	15.56	5,380
	Feb. 14, 1949	19.94	9,760		Nov. 18, 1957	16.72	6,570
	Mar. 26, 1949	18.64	7,830		Mar. 24, 1958	16.25	6,020
	July 7, 1949	20.49	10,800		Apr. 3, 1958	14.95	4,780
1950	Dec. 11, 1949	15.76	5,020		May 5, 1958	22.02	15,200

735. Piney Fork Strawberry River at Evening Shade, Ark.

Location.--Lat 36°05', long 91°37', in NE $\frac{1}{4}$ sec.34, T.17 N., R.6 W., 20 ft upstream from bridge on State Highway 11, three-quarters of a mile north of Evening Shade and 5.8 miles upstream from mouth.

Drainage area.--99 sq mi.

Gage.--Nonrecording prior to Oct. 5, 1945; recording thereafter. Datum of gage is 420.62 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--12 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 16, 1939	14.4	5,740	1949	July 8, 1949	14.80	5,810
1940	Apr. 19, 1940	8.5	1,900	1950	Jan. 4, 1950	15.45	6,310
1941	Nov. 11, 1940	7.26	1,220		Jan. 10, 1950	9.67	2,640
1942	Jan. 1, 1942	9.60	2,490		Jan. 13, 1950	11.14	3,420
	Apr. 8, 1942	14.74	6,000		Jan. 15, 1950	8.58	2,040
	Apr. 28, 1942	12.86	4,540		Jan. 26, 1950	9.64	2,590
1943	Dec. 27, 1942	16.60	7,720		Feb. 1, 1950	9.21	2,370
	May 11, 1943	19.96	11,300		Feb. 13, 1950	13.34	4,740
1944	Feb. 28, 1944	9.86	2,650		June 3, 1950	17.77	8,700
	Apr. 11, 1944	11.68	3,680	1951	Jan. 14, 1951	9.70	2,640
	Apr. 23, 1944	10.95	3,230		Feb. 20, 1951	12.90	4,480
	May 3, 1944	10.88	3,180		Apr. 21, 1951	10.10	2,860
1945	Feb. 21, 1945	12.16	4,020		June 20, 1951	8.58	2,040
	Feb. 27, 1945	10.02	2,700		July 4, 1951	8.99	2,260
	Mar. 3, 1945	9.27	2,330		Aug. 18, 1951	8.57	2,040
	Mar. 6, 1945	10.18	2,810		Sept. 13, 1951	8.76	2,150
	Mar. 19, 1945	10.74	3,070	1952	Nov. 6, 1951	9.17	2,370
	Mar. 30, 1945	18.00	9,100		Nov. 24, 1951	12.40	4,170
	Apr. 2, 1945	15.56	6,790		Jan. 4, 1952	12.10	3,980
	Apr. 15, 1945	18.50	9,650		Mar. 10, 1952	10.98	3,360
	June 11, 1945	16.87	8,000		Apr. 12, 1952	9.56	2,590
	June 17, 1945	16.64	7,720	1953	Dec. 4, 1952	9.82	2,700
	Sept. 25, 1945	11.63	3,610		Mar. 14, 1953	9.37	2,480
1946	Jan. 9, 1946	12.64	4,320		Mar. 18, 1953	11.70	3,750
	Feb. 14, 1946	12.89	4,540	1954	Sept. 30, 1954	8.27	1,720
	Mar. 6, 1946	17.84	8,900	1955	Mar. 21, 1955	9.92	2,760
	Mar. 16, 1946	9.32	2,330		May 20, 1955	9.64	2,590
	Apr. 30, 1946	13.98	5,410	1956	Feb. 18, 1956	10.69	2,950
	May 25, 1946	11.79	3,740		June 25, 1956	9.99	2,530
1947	Dec. 10, 1946	11.39	3,490	1957	Jan. 22, 1957	9.89	2,470
	May 21, 1947	14.00	5,200		Apr. 4, 1957	18.64	9,620
1948	Jan. 1, 1948	9.52	2,540		Apr. 22, 1957	12.59	4,200
	June 18, 1948	11.60	3,700		Apr. 27, 1957	11.00	3,140
	June 27, 1948	9.48	2,540		May 23, 1957	13.88	5,140
	July 7, 1948	8.92	2,210	1958	Nov. 13, 1957	10.24	2,650
1949	Jan. 18, 1949	11.49	3,640		Nov. 18, 1957	13.95	5,220
	Jan. 24, 1949	23.42	17,500		Mar. 24, 1958	9.02	2,020
	Jan. 27, 1949	10.07	2,860		Apr. 3, 1958	10.09	2,640
	Feb. 14, 1949	10.39	3,030		May 3, 1958	9.54	2,300
	Mar. 26, 1949	12.47	4,230		May 5, 1958	14.60	5,680
					May 9, 1958	9.70	2,400

740. Strawberry River near Poughkeepsie, Ark.

Location.--Lat 36°07', long 91°27', in NW $\frac{1}{4}$ sec.19, T.17 N., R.4 W., on right bank at downstream side of bridge on State Highway 58, half a mile downstream from Hurricane Creek and $2\frac{1}{2}$ miles northeast of Poughkeepsie.

Drainage area.--476 sq mi.

Gage.--Nonrecording prior to Dec. 11, 1938; recording thereafter. Datum of gage is 298.07 ft above mean sea level (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs and by slope-area measurement at 52,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Oct. 25, 1936	18.3	14,600	1948	Jan. 1, 1948	16.67	9,820
	Dec. 30, 1936	16.5	10,900		June 18, 1948	17.79	12,100
	Jan. 14, 1937	16.8	11,500		June 27, 1948	15.06	7,530
	Jan. 22, 1937	15.8	9,670	1949	Jan. 18, 1949	18.27	13,500
	June 15, 1937	14.3	7,450		Jan. 24, 1949	29.30	52,500
1938	Oct. 4, 1937	21.4	26,900		Feb. 15, 1949	17.84	12,600
	Feb. 15, 1938	17.6	13,000		Mar. 26, 1949	18.72	14,700
	Feb. 18, 1938	23.6	31,600		July 8, 1949	22.88	27,500
	Mar. 29, 1938	22.0	25,300	1950	Jan. 4, 1950	21.41	22,800
	Apr. 16, 1938	18.1	14,100		Jan. 10, 1950	16.68	9,820
	June 19, 1938	21.9	28,800		Jan. 13, 1950	18.55	14,400
1939	Jan. 29, 1939	16.73	11,300		Jan. 26, 1950	14.73	7,080
	Mar. 5, 1939	18.36	14,800		Feb. 1, 1950	15.40	7,920
	Apr. 16, 1939	19.5	17,600		Feb. 13, 1950	20.53	20,100
	July 3, 1939	15.96	10,000		June 4, 1950	19.23	16,200
1940	Apr. 19, 1940	12.43	5,230	1951	Jan. 14, 1951	16.40	9,340
1941	Jan. 24, 1941	10.9	3,850		Feb. 20, 1951	19.56	17,400
1942	Oct. 31, 1941	15.30	8,100		Apr. 21, 1951	15.80	8,440
	Mar. 8, 1942	14.84	7,350		July 4, 1951	16.77	9,980
	Apr. 8, 1942	21.25	22,700	1952	Nov. 25, 1951	19.64	17,400
	Apr. 28, 1942	16.17	9,600		Jan. 4, 1952	19.04	15,600
1943	Dec. 27, 1942	18.10	13,800		Mar. 11, 1952	19.33	16,500
	May 11, 1943	24.60	32,900		Apr. 12, 1952	15.87	8,570
1944	Feb. 28, 1944	16.14	9,400	1953	Dec. 4, 1952	16.23	9,020
	Apr. 11, 1944	17.40	12,200		Mar. 18, 1953	18.07	12,900
	Apr. 23, 1944	16.98	11,300	1954	May 2, 1954	13.83	6,200
	May 3, 1944	16.99	11,300		Mar. 21, 1955	16.16	9,020
1945	Feb. 27, 1945	18.33	13,500	1955	May 20, 1955	17.77	12,100
	Mar. 19, 1945	17.99	12,600	1956	Feb. 18, 1956	17.15	10,800
	Mar. 30, 1945	21.34	22,500		June 25, 1956	15.30	7,790
	Apr. 1, 1945	19.46	17,100		Jan. 22, 1957	15.63	8,180
	Apr. 15, 1945	22.24	25,200		Apr. 4, 1957	24.36	32,700
	June 11, 1945	22.62	26,500		Apr. 22, 1957	16.49	9,500
1946	Jan. 8, 1946	19.06	15,900		Apr. 28, 1957	18.72	14,700
	Feb. 13, 1946	18.88	15,300		May 23, 1957	18.82	15,000
	Mar. 6, 1946	20.25	19,200	1958	Nov. 13, 1957	17.92	12,400
	May 1, 1946	19.20	16,200		Nov. 18, 1957	18.80	15,000
	May 25, 1946	18.19	13,200		Mar. 24, 1958	15.06	7,530
1947	Dec. 10, 1946	16.94	10,100		May 3, 1958	14.71	7,100
	May 21, 1947	16.64	9,680		May 5, 1958	20.44	19,800

745. White River at Newport, Ark.
(Published as "near Newport" 1927-31)

Location.--Lat 35°36'20", long 91°17'20", in NE $\frac{1}{4}$ sec.10, T.11 N., R.3 W., at bridge on U. S. Highway 67 at Newport, 7.2 miles downstream from Black River, and at mile 257.6.

Drainage area.--19,812 sq mi.

Gage.--Nonrecording prior to Aug. 14, 1953; recording thereafter. October 1927 to September 1931, 2.8 miles upstream at datum 2.30 ft lower. Datum of present gage is 194.09 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 341,000 cfs at present site and below 162,000 cfs at former site.

Bankfull stage.--26 ft.

Remarks.--Records of peak stage 1885-1927 and 1932-37 furnished by U. S. Weather Bureau. Discharge records 1938-58 furnished by Corps of Engineers and reviewed by Geological Survey. Floodflow regulated to some extent since June 1943 by Norfolk Reservoir on North Fork River, since 1948 by Clearwater Reservoir on Black River, and since July 1951 by Bull Shoals Reservoir on White River. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1886	May 12, 1886	24.0	66,500	1923	Feb. 5, 1923	29.5	130,000
1887	May 8, 1887	24.5	69,500	1924	June 14, 1924	25.4	75,500
1888	May 23, 1888	26.1	80,900	1925	May 1, 1925	21.8	55,100
1889	Mar. 28, 1889	23.0	61,000				
1890	Mar. 14, 1890	33.0	235,000	1926	Oct. 19, 1925	26.1	80,900
				1927	Apr. 17, 1927	35.6	387,000
1891	Apr. 26, 1891	23.8	65,400	1928	June 15, 1928	33.1	172,000
1892	May 21, 1892	29.6	132,000	1929	May 12, 13, 1929	30.0	108,000
1893	May 5, 1893	30.7	153,000	1930	Jan. 17, 1930	30.3	112,000
1894	May 11, 1894	28.0	102,000				
1895	July 11, 1895	19.6	45,900	1931	Feb. 13, 1931	23.6	64,200
				1932	Jan. 26, 1932	26.7	86,300
1896	Dec. 24, 1895	28.8	116,000	1933	May 19, 1933	32.1	199,000
1897	Jan. 7, Mar. 22	27.9	101,000	1934	Mar. 29, 1934	25.7	77,800
1898	May 8, 1898	32.1	199,000	1935	Mar. 14, 1935	33.7	270,000
1899	May 13, 1899	28.0	102,000				
1900	Mar. 3, 1900	18.5	41,800	1936	Dec. 9, 1935	18.0	40,000
				1937	Jan. 18, 19, 1937	30.7	158,000
1901	Mar. 15, 1901	23.5	63,800	1938	Feb. 20, 1938	33.4	259,000
1902	Mar. 2, 1902	18.1	40,400	1939	Apr. 20, 1939	30.3	144,000
1903	Mar. 12, 13, 1903	28.7	114,000	1940	Apr. 14, 1940	a24.4	75,200
1904	Mar. 29, 1904	28.9	117,000				
1905	May 26, 1905	28.2	105,000	1941	Apr. 23, 1941	a27.25	106,000
				1942	Nov. 5, 1941	28.1	102,000
1906	Mar. 29, 1906	30.5	152,000	1943	May 14, 1943	34.68	304,000
1907	May 11, 1907	30.7	158,000	1944	Mar. 3, 1944	b23.0	60,700
1908	May 1908	29.4	127,000	1945	Apr. 17, 1945	a35.9	343,000
1909	Mar. 14, 1909	26.0	80,000				
1910	June 13, 1910	20.5	49,500	1946	May 30, 1946	30.0	125,000
				1947	Dec. 16, 1946	28.2	100,000
1911	Aug. 17, 1911	24.8	71,300	1948	June 21, 1948	a23.3	66,200
1912	May 2, 1912	29.4	127,000	1949	Jan. 28, 1949	c34.0	260,000
1913	Jan. 26, 1913	26.0	80,000	1950	May 15, 1950	32.1	194,000
1914	May 1, 1914	23.1	61,600				
1915	Aug. 24, 1915	33.9	280,000	1951	Feb. 23, 1951	28.5	104,000
				1952	Apr. 15, 1952	25.6	75,200
1916	Feb. 1, 1916	34.3	303,000	1953	Mar. 20, 1953	24.4	66,300
1917	Apr. 6, 1917	24.9	71,900	1954	May 3, 1954	a19.49	48,000
1918	May 15, 1918	32.3	207,000	1955	Mar. 22, 1955	a21.70	54,800
1919	June 5, 1919	23.4	63,200				
1920	Mar. 29, 1920	29.3	125,000	1956	Feb. 19, 1956	a22.10	55,300
				1957	Apr. 6, 1957	d28.25	101,000
1921	Apr. 30, 1921	31.3	174,000	1958	May 11, 1958	27.54	92,800
1922	Apr. 14, 1922	26.2	81,800				

a Occurred on following day.

b Occurred Apr. 15, 1944.

c Occurred Jan. 24, 1949.

d Occurred Apr. 6-7, 1957.

Note.--Discharges 1886-1927 and 1932-37 computed on basis of measurements made prior to construction of levees in 1940.

748.5. White River near Augusta, Ark.

Location.--Lat 35°17'23", long 91°23'38", in sec.26, T.8 N., R.4 W., at bridge on U. S. Highway 64, 2 miles northwest of Augusta and at mile 206.2.

Drainage area.--20,473 sq mi.

Gage.--Nonrecording. Datum of gage is 169.85 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--32 ft.

Remarks.--Records furnished by Corps of Engineers. For regulation, see Remarks for station at Newport. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	May 21, 1933	36.5	-	1946	May 31, 1946	34.89	-
1935	Mar. 16, 1935	38.9	-	1947	Apr. 17, 1947	31.84	-
				1948	Mar. 7, 1948	32.22	-
1937	Jan.23-25, 1937	36.6	-	1949	Jan. 30, 1949	39.33	-
1938	Feb. 23, 1938	39.27	-	1950	May 17,18, 1950	36.5	-
1939	Apr. 22, 1939	34.9	-				
1940	Apr. 18, 1940	32.23	-	1951	Feb. 26, 1951	34.02	-
				1952	Apr. 17, 1952	32.58	-
1941	Nov. 7, 1941	33.37	-	1953	Mar.22,23, 1953	32.5	-
1942	Apr. 18, 1942	33.66	-	1954	May 6, 1954	29.98	-
1943	May 16, 1943	39.84	-	1955	Mar. 25, 1955	31.33	-
1944	Apr. 17, 1944	31.93	-				
1945	Apr. 19, 1945	40.83	-	1956	Feb. 21, 1956	31.99	-
				1957	May 3, 1957	34.05	-
				1958	May 13, 1958	33.4	-

750. Middle Fork Little Red River at Shirley, Ark.

Location.--Lat 35°39', long 92°18', in SW $\frac{1}{4}$ sec.20, T.12 N., R.12 W., on right bank half a mile downstream from Sugar Camp (or Weavers) Creek and 1 mile east of Shirley.

Drainage area.--294 sq mi.

Gage.--Nonrecording prior to June 6, 1939; recording thereafter. Prior to July 16, 1952, 70 ft upstream at same datum. Datum of present gage is 483.12 ft above mean sea level, datum of 1929. Recording gage at former site located on downstream side of railroad pier and subject to considerable drawdown. All crest stages subject to drawdown adjusted to nonrecording gage by stage-relation curve.

Stage-discharge relation.--Defined by current-meter measurements below 59,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--19 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs.

WHITE RIVER BASIN

Peak stages and discharges of Middle Fork Little Red River at Shirley, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 10, 1935	27.3	a61,000	1950	Feb. 1, 1950	13.94	6,920
1939	Apr. 17, 1939	19.5	16,800		Feb. 13, 1950	15.90	10,400
1940	Apr. 19, 1940	11.40	3,480		May 12, 1950	13.43	6,120
1941	Jan. 1, 1941	14.22	7,770		June 5, 1950	21.73	27,900
	Sept. 25, 1941	13.76	7,140		July 18, 1950	13.97	6,920
1942	Oct. 17, 1941	17.36	13,200	1951	Aug. 28, 1950	18.56	16,500
	Oct. 31, 1941	19.95	18,900		Jan. 3, 1951	15.20	9,080
	Dec. 23, 1941	13.09	6,050		Feb. 20, 1951	19.73	20,000
	Mar. 8, 1942	14.53	8,250		Apr. 21, 1951	16.43	11,400
	Apr. 8, 1942	19.55	17,900		July 4, 1951	14.23	7,440
	May 20, 1942	14.32	7,930	1952	Nov. 1, 1951	14.89	8,520
1943	Nov. 7, 1942	14.98	9,080		Nov. 6, 1951	15.00	8,700
	Dec. 27, 1942	23.08	34,000		Nov. 24, 1951	18.62	16,500
	Apr. 11, 1943	15.68	10,200		Jan. 4, 1952	15.12	8,880
	May 11, 1943	27.15	60,700		Mar. 10, 1952	18.38	15,900
1944	Feb. 28, 1944	16.28	11,300		Apr. 12, 1952	18.16	15,300
	Apr. 31, 1944	13.74	6,970	1953	Apr. 22, 1952	16.30	11,200
	Apr. 23, 1944	21.28	24,700		May 23, 1952	14.57	7,980
	May 3, 1944	13.73	6,970		Nov. 25, 1952	21.26	27,900
1945	Feb. 21, 1945	22.10	28,500		Dec. 4, 1952	14.55	8,160
	Mar. 3, 1945	19.27	17,500		Jan. 23, 1953	14.84	8,520
	Mar. 30, 1945	24.60	43,200		Mar. 4, 1953	13.44	6,120
	Apr. 15, 1945	19.91	19,200		Mar. 14, 1953	16.88	12,600
	June 10, 1945	23.40	35,800		Mar. 18, 1953	19.17	18,900
1946	Jan. 5, 1946	14.04	7,350		Apr. 24, 1953	15.00	8,880
	Jan. 9, 1946	20.28	21,300	1954	May 13, 1953	15.03	8,880
	Feb. 13, 1946	21.45	25,500		Jan. 20, 1954	14.40	7,260
	Mar. 6, 1946	17.48	13,700		May 2, 1954	21.13	29,000
	May 2, 1946	14.74	8,400	1955	Feb. 20, 1955	16.4	11,600
	May 23, 1946	15.37	9,550		Mar. 18, 1955	13.76	6,760
1947	Dec. 10, 1946	19.58	19,000		Mar. 21, 1955	20.25	22,800
	Apr. 8, 1947	13.14	6,000		Apr. 21, 1955	20.04	22,000
	Apr. 11, 1947	17.12	12,800		May 21, 1955	18.16	15,900
	May 13, 1947	14.01	7,350		June 6, 1955	13.42	6,120
1948	Jan. 1, 1948	19.47	18,800		July 18, 1955	15.33	9,420
	Mar. 2, 1948	14.59	8,250	1956	Feb. 2, 1956	17.95	15,300
1949	Dec. 15, 1948	14.95	8,700		Feb. 8, 1956	14.53	7,980
	Jan. 4, 1949	13.44	6,120		Feb. 18, 1956	17.82	14,800
	Jan. 18, 1949	17.67	14,000	1957	Jan. 22, 1957	18.97	18,200
	Jan. 24, 1949	31.0	101,000		Feb. 25, 1957	17.38	13,800
	Jan. 27, 1949	16.49	11,600		Apr. 3, 1957	23.49	37,800
	Feb. 14, 1949	17.03	12,600		Apr. 21, 1957	17.12	13,000
	Mar. 26, 1949	14.97	8,700		Apr. 25, 1957	14.34	7,620
1950	Oct. 22, 1949	15.91	10,400		May 23, 1957	15.76	10,400
	Jan. 4, 1950	21.73	27,900	1958	Aug. 13, 1957	26.03	51,700
	Jan. 13, 1950	16.27	11,200		Nov. 13, 1957	17.20	13,300
	Jan. 26, 1950	13.55	6,280		Nov. 18, 1957	17.39	13,800
					Mar. 9, 1958	15.62	10,000
					Mar. 23, 1958	15.85	10,400
					May 3, 1958	14.98	8,880
					May 9, 1958	17.89	15,000

a Annual peak only.

755. South Fork Little Red River near Clinton, Ark.

Location.--Lat 35°34', long 92°23', in NE $\frac{1}{4}$ sec. 29, T.11 N., R.13 W., on left bank $\frac{1}{4}$ miles downstream from Pedee Creek, $\frac{1}{2}$ miles southeast of Clinton, and 6 miles downstream from Archey Fork.

Drainage area.--316 sq mi.

Gage.--Nonrecording prior to July 14, 1939; recording thereafter. Datum of gage is 430.02 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 42,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Maximum stage known prior to Jan. 24, 1949, 25.2 ft, date unknown, from information by local residents.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 17, 1939	21.1	31,300	1950	Jan. 13, 1950	16.66	16,500
1940	May 1, 1940	10.67	5,770		Feb. 1, 1950	12.70	8,790
1941	May 7, 1941	11.4	6,820		Feb. 13, 1950	13.51	10,200
1942	Oct. 17, 1941	16.30	16,200		May 12, 1950	11.87	7,700
	Oct. 31, 1941	18.40	20,800		Aug. 25, 1950	12.00	7,700
	Dec. 23, 1941	11.37	7,350		Aug. 29, 1950	12.73	8,790
	Apr. 8, 1942	17.66	19,200	1951	Jan. 3, 1951	13.86	10,800
	Apr. 26, 1942	12.65	9,220		Feb. 20, 1951	14.25	11,400
1943	Dec. 27, 1942	20.58	29,300	1952	Nov. 1, 1951	12.55	8,620
	Apr. 12, 1943	16.25	16,600		Nov. 6, 1951	14.14	11,200
	May 11, 1943	24.27	43,800		Nov. 24, 1951	14.40	11,800
1944	Feb. 9, 1944	11.60	7,130		Jan. 4, 1952	14.10	11,200
	Feb. 28, 1944	13.84	10,200		Mar. 11, 1952	16.27	16,800
	Apr. 8, 1944	19.20	24,200		Apr. 12, 1952	15.62	15,300
	Apr. 23, 1944	21.01	30,900		Apr. 22, 1952	16.03	16,100
	May 3, 1944	11.61	7,130	1953	Nov. 25, 1952	19.55	25,500
1945	Feb. 17, 1945	14.00	12,000		Dec. 4, 1952	14.01	12,000
	Feb. 21, 1945	20.28	28,100		Jan. 23, 1953	12.09	8,480
	Mar. 3, 1945	17.97	20,700		Mar. 14, 1953	14.34	12,600
	Mar. 19, 1945	13.29	10,700		Mar. 18, 1953	17.70	20,000
	Mar. 30, 1945	23.36	43,100		Apr. 24, 1953	12.99	10,200
	Apr. 2, 1945	16.42	17,000		May 13, 1953	11.49	7,520
	Apr. 15, 1945	13.89	11,800	1954	May 2, 1954	18.43	19,800
	June 11, 1945	20.43	28,500	1955	Feb. 20, 1955	13.99	12,000
	June 17, 1945	11.34	7,220		Mar. 18, 1955	11.46	7,520
1946	Jan. 9, 1946	18.04	20,700		Mar. 21, 1955	17.44	19,300
	Feb. 13, 1946	20.1	27,300		Apr. 21, 1955	15.30	14,700
	Mar. 6, 1946	14.62	13,200		May 21, 1955	13.27	10,700
	May 2, 1946	12.72	9,600	1956	Feb. 2, 1956	16.06	16,300
	May 23, 1946	14.00	12,000		Feb. 8, 1956	12.34	8,860
1947	Dec. 12, 1946	18.00	20,700		Feb. 18, 1956	15.08	14,300
1948	Jan. 1, 1948	16.24	16,600	1957	Jan. 22, 1957	19.44	21,000
	Mar. 2, 1948	13.48	11,100		Feb. 25, 1957	14.76	12,800
1949	Dec. 15, 1948	13.80	11,600		Apr. 3, 1957	24.26	41,300
	Jan. 18, 1949	16.15	15,400		Apr. 21, 1957	14.90	13,000
	Jan. 24, 1949	26.55	54,900		May 23, 1957	15.36	14,000
	Jan. 27, 1949	13.96	11,000		Aug. 13, 1957	28.16	59,500
	Feb. 14, 1949	12.25	8,000		Sept. 1, 1957	14.39	11,900
	Mar. 26, 1949	12.97	9,300	1958	Oct. 23, 1957	12.07	7,760
1950	Oct. 5, 1949	14.96	12,900		Nov. 13, 1957	17.48	18,800
	Oct. 22, 1949	14.40	11,800		Nov. 18, 1957	17.84	19,500
	Dec. 11, 1949	12.26	8,150		Mar. 8, 1958	12.76	8,880
	Jan. 4, 1950	17.83	19,400		Mar. 24, 1958	13.87	10,900
					May 2, 1958	14.37	13,000
					May 5, 1958	12.78	9,960
					May 9, 1958	12.09	8,720

a Not a complete year, annual peak only.

WHITE RIVER BASIN

760. Little Red River near Heber Springs, Ark.

Location.--Lat 35°32', long 92°00', in NE $\frac{1}{4}$ sec.6, T.10 N., R.9 W., on left bank $\frac{2\frac{1}{2}}$ miles downstream from Peter Creek and 3 miles northeast of town of Heber Springs.

Drainage area.--1,141 sq mi.

Gage.--Nonrecording prior to Dec. 15, 1938, at site half a mile upstream at datum 1.06 ft lower; recording thereafter at present site and datum. Datum of present gage is 271.81 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Records since July 1935 furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 26,000 cfs. Only annual peaks are shown prior to 1937.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	44.00	78,900	1946	Feb. 14, 1946	33.90	58,800
1928	Apr. 6, 1928	42.35	74,400		Mar. 6, 1946	30.95	48,500
1929	Feb. 26, 1929	29.10	41,100		May 3, 1946	26.97	37,800
1930	May 11, 1930	38.90	65,200		May 24, 1946	25.22	35,300
1931	Oct. 8, 1930	24.45	28,500	1947	Dec. 12, 1946	29.30	43,800
1932	Jan. 6, 1932	31.3	47,400	1948	Jan. 1, 1948	27.66	39,600
1933	May 16, 1933	38.0	62,900		Mar. 12, 1948	22.33	26,300
1934	Mar. 26, 1934	31.86	49,100	1949	Dec. 16, 1948	24.34	31,100
1935	May 5, 1935	42.0	73,300		Jan. 19, 1949	27.80	39,900
1937	Jan. 15, 1937	29.9	41,800		Jan. 25, 1949	46.53	117,000
	Jan. 22, 1937	24.5	27,600		Jan. 28, 1949	24.76	32,300
	May 2, 1937	25.3	29,500		Feb. 14, 1949	23.68	29,700
1938	Jan. 24, 1938	26.4	32,300		Mar. 27, 1949	27.53	39,100
	Feb. 18, 1938	41.9	73,100	1950	Oct. 6, 1949	24.82	30,500
	Mar. 30, 1938	39.0	70,200		Jan. 5, 1950	32.51	53,700
	Apr. 16, 1938	28.5	37,800		Jan. 14, 1950	26.76	41,900
1939	Jan. 30, 1939	25.19	36,100		Feb. 13, 1950	26.88	36,200
	Apr. 17, 1939	36.83	72,800		June 4, 1950	24.18	29,000
	May 27, 1939	25.40	36,600	1951	Jan. 14, 1951	25.06	31,300
1940	May 1, 1940	17.55	17,300		Feb. 21, 1951	27.67	38,600
1941	Jan. 2, 1941	16.60	15,300	1952	Nov. 6, 1951	23.08	26,400
1942	Oct. 18, 1941	24.38	33,800		Nov. 24, 1951	27.37	37,700
	Nov. 1, 1941	29.00	46,700		Jan. 4, 1952	26.24	34,200
	Apr. 9, 1942	32.37	57,900		Mar. 11, 1952	28.18	40,100
1943	Dec. 28, 1942	32.32	51,000		Apr. 13, 1952	26.55	35,400
	Apr. 12, 1943	24.53	31,400		Apr. 23, 1952	24.85	30,500
	May 11, 1943	43.95	99,100	1953	Nov. 26, 1952	30.56	47,500
1944	Feb. 29, 1944	23.31	28,800		Dec. 4, 1952	25.43	32,100
	Apr. 11, 1944	25.93	34,500		Mar. 15, 1953	23.16	26,600
	Apr. 23, 1944	33.08	53,600		Mar. 18, 1953	31.15	49,400
	May 3, 1944	22.86	28,000	1954	May 3, 1954	29.76	45,000
1945	Feb. 22, 1945	35.09	65,900	1955	Mar. 21, 1955	28.37	40,700
	Feb. 27, 1945	26.58	37,500		Apr. 21, 1955	27.37	37,700
	Mar. 3, 1945	28.33	42,500	1956	Feb. 2, 1956	27.70	38,600
	Mar. 20, 1945	25.83	35,200		Feb. 18, 1956	28.37	40,700
	Mar. 31, 1945	42.47	96,200	1957	Jan. 23, 1957	30.29	46,600
	Apr. 2, 1945	30.37	49,200		Apr. 4, 1957	44.23	96,500
	Apr. 16, 1945	27.90	41,300		Apr. 22, 1957	23.26	27,300
	June 11, 1945	40.77	88,900		Apr. 28, 1957	23.62	28,000
	June 18, 1945	24.39	31,400		May 24, 1957	29.11	42,800
1946	Jan. 9, 1946	31.17	49,400		Aug. 14, 1957	40.84	87,500
				1958	Nov. 14, 1957	29.49	44,000
					Nov. 18, 1957	30.30	46,600
					Mar. 24, 1958	24.70	30,400
					May 3, 1958	30.85	48,200
					May 10, 1958	23.72	28,200

767.5. White River at Georgetown, Ark.

Location.--Lat 35°07'45", long 91°27'00", in sec.20, T.6 N., R.4 W., on right bank at Georgetown, 9.2 miles downstream from Little Red River and at mile 173.2.

Drainage area.--22,330 sq mi.

Gage.--Nonrecording. Prior to August 1949, at site 1.0 miles downstream at present datum. Datum of gage is 170.17 ft above mean sea level.

Stage-discharge relation.--Not defined.

Bankfull stage.--21 ft.

Remarks.--Records furnished by U. S. Weather Bureau. For regulation see Remarks for station at Newport. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Jan. 19, 1913	24.1	-	1936	Dec. 10, 1935	19.5	-
1914	May 8-11, 1914	22.3	-	1937	Jan.24,25, 1937	30.3	-
1915	Aug.27,28, 1915	26.2	-	1938	Feb. 24, 1938	31.5	-
				1939	Apr. 24, 1939	27.0	-
1916	Feb. 3, 4, 1916	27.5	-	1940	Apr. 22, 1940	22.7	-
1917	Apr. 12, 1917	22.2	-				
1918	May 20, 1918	28.2	-	1941	Apr. 28, 1941	22.6	-
1919	Jan. 3, 4, 1919	22.3	-	1942	Apr. 17, 1942	24.8	-
1920	Apr. 2, 1920	25.5	-	1943	May 18, 1943	31.4	-
				1944	Apr. 27, 1944	22.7	-
1921	May 3, 1921	28.0	-	1945	Apr. 4, 1945	32.0	-
1922	Apr.6-9, 11, 15	23.9	-				
1923	May 31, 1923	25.9	-	1946	June 1, 2, 1946	27.4	-
1924	June 18-20, 1924	22.0	-	1947	Dec.19,20, 1946	24.5	-
1925	May 5, 6, 1925	18.2	-	1948	Mar. 8, 9, 1948	22.9	-
				1949	Feb. 1, 1949	32.8	-
1926	Oct.23,24, 1925	23.3	-	1950	Jan. 19, 1950	29.1	-
1927	Apr. 17, 1927	30.4	-				
1928	June 27, 1928	29.9	-	1951	Feb. 28, Mar. 2	24.7	-
1929	May 16, 1929	26.6	-	1952	Apr. 26, 1952	23.2	-
1930	Jan.20,21, 1930	26.8	-	1953	Mar. 24, 1953	23.3	-
				1954	May 6, 1954	20.0	-
1931	Feb.19-21, 1931	21.7	-	1955	Mar. 25, 1955	21.0	-
1932	Jan.29,30, 1932	25.0	-				
1933	May 23, 1933	28.4	-	1956	Feb. 22, 1956	22.8	-
1934	Mar. 31, 1934	24.5	-	1957	May 4, 1957	27.0	-
1935	Mar. 18, 1935	31.3	-	1958	May 13, 1958	25.1	-

769. White River at Des Arc, Ark.

Location.--Lat 34°58'36", long 91°29'33", in SE $\frac{1}{4}$ sec.11, T.4 N., R.5 W., on right bank at Des Arc, 2.0 miles downstream from Bayou Des Arc and at mile 147.3.

Drainage area.--23,111 sq mi.

Gage.--Nonrecording. Datum of gage is 159.87 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--24 ft.

Remarks.--Records furnished by Corps of Engineers. For regulation see Remarks for station at Newport. Only annual peak stages are shown.

WHITE RIVER BASIN

Peak stages and discharges of White River at Des Arc, Ark.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	May 24, 25, 1933	32.0	-	1946	June 2, 3, 1946	30.0	-
1935	Mar. 19, 1935	35.0	-	1947	Apr. 22, 1947	22.8	-
1937	Jan. 24, 1937	35.15	-	1948	Mar. 7, 1948	25.15	-
1938	Feb. 24, 1938	34.7	-	1949	Feb. 2, 1949	37.3	-
1939	Apr. 25, 26, 1939	30.2	-	1950	Jan. 20, 1950	32.9	-
1940	Apr. 25, 1940	24.8	-	1951	Mar. 2, 1951	27.9	-
1941	Nov. 12, 1941	26.2	-	1952	Apr. 27, 28, 1952	25.9	-
1942	Apr. 19, 1942	27.8	-	1953	Mar. 25, 1953	26.6	-
1943	May 20, 1943	34.9	-	1954	May 7, 1954	22.55	-
1944	May 8, 1944	24.9	-	1955	Mar. 27, 28, 1955	22.9	-
1945	Apr. 4, 1945	35.6	-	1956	Feb. 23, 1956	25.46	-
				1957	May 3-5, 1957	30.20	-
				1958	May 14, 1958	28.3	-

770. White River at DeValls Bluff, Ark.

Location.--Lat 34°47', long 91°27', in SW $\frac{1}{4}$ sec. 17, T.2 N., R.4 W., on downstream side of bridge on U. S. Highway 70, 1 mile northeast of DeValls Bluff, 7.5 miles downstream from Wattensaw Bayou, 24.1 miles upstream from Cache River and at mile 125.3.

Drainage area.--23,431 sq mi.

Gage.--Recording. Datum of gage is 152.93 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 220,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Maximum stage known, 34.6 ft Apr. 23, 1927, from information by U. S. Weather Bureau.

Remarks.--Records prior to 1945 not listed because a large portion of flood-flow above station overflowed into Cache River. Station was not operated 1945-49. For regulation, see Remarks for station at Newport. Base for partial-duration series, 53,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Feb. 3, 1949	31.35	a220,000	1954	May 7, 8, 1954	22.08	58,100
1950	Jan. 20, 21, 1950	28.42	154,000	1955	Mar. 27-29, 1955	22.42	58,000
	Feb. 21, 1950	27.06	129,000	1956	Feb. 24, 1956	24.17	77,400
	May 22, 1950	27.28	135,000	1957	May 4, 5, 1957	27.47	117,000
1951	Mar. 3, 1951	25.07	94,900		May 31, 1957	26.79	107,000
	July 19-24, 1951	21.80	54,900		Aug. 20, 1957	23.35	63,400
1952	Dec. 8-10, 1952	24.02	82,000	1958	Nov. 23, 1957	25.67	91,500
	Jan. 10-12, 1952	23.64	76,400		Apr. 10, 1958	23.37	68,400
	Apr. 27-29, 1952	23.65	82,000		May 15, 1958	26.06	101,000
1953	Mar. 25, 26, 1953	24.02	82,000				
	May 19, 1953	23.27	72,500				

a Annual peak only, furnished by Corps of Engineers.

775. Cache River at Patterson, Ark.
(Prior to 1920, published by Weather Bureau as "at Jelks")

Location.--Lat 35°15'30", long 91°14'40", in S½ sec.6, T.7 N., R.2 W., at bridge on U. S. Highway 64 at Patterson, 9.5 miles upstream from Maple Slough.

Drainage area.--1,041 sq mi.

Gage.--Nonrecording prior to Oct. 6, 1949; recording thereafter. January 1937 to Dec. 31, 1950, datum of gage at mean Gulf level, or 0.24 ft below mean sea level, datum of 1929. Datum of present gage is 182.96 ft above mean sea level, datum of 1929. All stages adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs.

Bankfull stage.--9 ft.

Remarks.--Records since January 1937 furnished by Corps of Engineers. Gage-height records July 1916 to December 1931 from publications of U. S. Weather Bureau. Maximum stage of Apr. 19, 1927, caused by break in White River levee. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1916	January 1916	13.0		1940	Apr. 21, 1940	9.95	5,380
1917	Apr. 20-22, 1917	9.5	-				
1918	May 24, 25, 1918	9.8	-	1941	Feb. 3, 1941	8.7	a2,820
1919	Jan. 2, 3, 1919	11.1	-	1942	Apr. 14, 1942	b10.15	6,200
1920	Jan. 25, 1920	10.3	-	1943	May 16, 1943	10.3	6,060
				1944	Apr. 13, 16, 17	9.7	4,760
1921	Apr. 18, May 12-15	9.7	5,100	1945	Apr. 21, 1945	12.1	10,200
1922	Apr. 1, 1922	10.3	6,600				
1923	Feb. 3, 4, 1923	10.8	8,000	1946	May 27, 28, 1946	10.3	6,020
1924	June 6, 1924	9.7	5,100	1947	Apr. 17, 18, 1947	9.5	4,360
1925	Oct. 22, 1925	10.5	7,200	1948	Mar. 6, 1948	9.85	5,560
				1949	Jan. 31, 1949	11.3	10,400
1926	Feb. 1, 2, 1926	9.9	a5,600	1950	Feb. 15, 1950	11.65	11,600
1927	Apr. 19, 1927	16.1	24,500				
1928	June 27, 28, 1928	11.8	12,100	1951	Dec. 11, 1951	10.0	7,550
1929	May 16, 1929	10.3	6,340	1952	Jan. 8, 1952	10.4	8,550
1930	Jan. 15, 1930	11.5	10,800	1953	Mar. 24, 1953	10.65	8,640
				1954	May 4, 1954	c8.85	3,880
1931	Feb. 19-22, 1931	8.7	2,400	1955	Mar. 24, 1955	9.76	5,720
1937	Jan. 24, 1937	13.2	13,200	1956	Feb. 19, 20, 1956	10.98	9,250
1938	Feb. 24, 1938	11.9	10,100	1957	May 25, 1957	d12.00	11,200
1939	Feb. 7, 1939	10.9	7,320	1958	May 11, 1958	10.60	8,590

a Maximum peak discharge. Maximum discharge occurred Dec. 31 on a rise that crested in the following calendar year.

b Occurred Apr. 15, 16, 1942.

c Occurred Jan. 28, 1954.

d Occurred Nov. 22, 1957.

777. Bayou DeView at Morton, Ark.

Location.--Lat 35°15'07", long 91°06'37", near corner of secs.4, 5, 8 and 9, T.7 N., R.1 W., at bridge on U. S. Highway 64, 1 mile west of Morton.

Drainage area.--422 sq mi.

Gage.--Nonrecording prior to Nov. 8, 1949; recording thereafter. Prior to Jan. 1, 1952, at datum 0.26 ft below mean sea level. Datum of present gage is 187.71 ft above mean sea level. All gage heights adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 4,900 cfs and extended above by logarithmic plotting.

Bankfull stage.--16 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

WHITE RIVER BASIN

Peak stages and discharges of Bayou DeVew at Morton, Ark.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	Apr. 5, 1933	16.0	-	1946	Jan. 15-20, 1946	16.5	3,780
1935	Mar. 24, 1935	15.88	-	1947	Apr. 13-15, 1947	16.2	2,800
1937	Jan. 26, 1937	18.57	-	1948	Mar. 4-8, 1948	16.5	3,510
1939	Feb. 10, 1939	16.8	4,150	1949	Mar. 30, 1949	a16.8	4,430
1940	Apr. 21, 1940	16.0	2,870	1950	Jan. 17, 1950	17.16	5,300
1941	Dec. 29, 1941	15.5	2,040	1951	Jan. 17, 1951	a17.18	3,010
1942	Apr. 14, 1942	a16.2	3,480	1952	Jan. 13, 1952	17.53	4,100
1943	Mar. 20-22, 1943	16.0	2,790	1953	May 20, 1953	17.68	3,940
1944	Apr. 13, 1944	16.7	3,710	1954	Jan. 21, 1954	a17.33	2,700
1945	June 21, 22, 1945	16.6	3,800	1955	Mar. 28, 1955	17.49	2,820
				1956	Feb. 25, 1956	17.92	6,340
				1957	Nov. 23, 1957	18.23	6,700
				1958	May 13, 1958	17.55	4,350

a Peak stage occurred on different date than peak discharge.

778. White River at Clarendon, Ark.

Location.--Lat 34°41'08", long 91°18'55", in W $\frac{1}{2}$ sec. 22, T.1 N., R.3 W., on St. Louis Southwestern Railroad bridge at Clarendon, 1.1 miles downstream from Cache River and at mile 100.1.

Drainage area.--25,497 sq mi.

Gage.--Nonrecording. Datum of gage is 139.91 ft above mean sea level or 140.02 ft above mean Gulf level.

Stage-discharge relation.--Defined by current-meter measurements below 297,000 cfs.

Bankfull stage.--23 ft.

Remarks.--Records furnished by Corps of Engineers. Floodflows regulated to some extent since June 1943. See Remarks for station at Newport. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1885	Jan. 8, 1885	33.58	-	1911	Apr. 27, 1911	29.02	-
1886	May 4, 1886	29.2	-	1912	Apr. 14, 1912	32.6	-
1887	Mar. 22, 1887	27.9	-	1913	Apr. 15, 1913	30.35	-
1888	Apr. 8, 9, 1888	25.7	-	1914	May 15, 1914	27.0	-
1889	Apr. 11, 1889	29.1	-	1915	Sept. 2, 1915	33.02	-
1890	Mar. 20, 1890	36.63	-	1916	Feb. 7, 1916	38.43	-
1891	Mar. 19, 1891	29.1	-	1917	Apr. 20, 1917	27.57	-
1892	May 27, 28, 1892	32.65	-	1918	May 27, 28, 1918	30.4	-
1893	May 11, 1893	33.95	-	1919	Jan. 8, 9, 1919	28.5	-
1894	Feb. 20, 1894	30.8	-	1920	Apr. 9, 1920	29.6	-
1895	July 24-26, 1895	24.2	-	1921	May 10, 1921	30.75	-
1896	Jan. 5, 6, 1896	28.2	-	1922	Apr. 18, 1922	30.72	-
1897	Apr. 14, 1897	32.4	-	1923	June 3, 4, 1923	30.36	-
1898	Apr. 5, 1898	35.47	-	1924	June 23, 24, 1924	26.95	-
1899	May 21, 1899	29.55	-	Water year			
1900	Mar. 16, 1900	25.45	-				
1901	Mar. 26, 1901	26.75	-	1925	Mar. 3-5, 1925	22.5	-
1902	Dec 30, 1902	28.3	-	1926	Oct. 28, 1925	28.35	-
1903	Mar. 20, 1903	32.63	-	1927	Apr. 23, 1927	43.3	395,000
1904	Apr. 8, 1904	29.6	-	1928	June 30, 1928	a34.9	230,000
1905	June 3, 1905	29.9	-	1929	May 24, 25, 1929	b31.3	156,000
1906	Apr. 6, 1906	33.1	-	1930	Jan. 23, 24, 1930	30.98	135,000
1907	May 18, 1907	34.2	-	1931	Feb. 26, 1931	26.95	56,900
1908	May 25, 1908	30.7	-	1932	Jan. 30 to Feb. 1	b50.38	105,000
1909	Mar. 21, 22, 1909	28.9	-	1933	May 27, 28, 1933	b50.97	124,000
1910	Oct. 18, 1910	25.77	-	1934	Apr. 5, 1934	b29.78	106,000

a Occurred on following day.

b Occurred on different date than peak discharge.

Note.--Calendar year basis prior to 1925; water year thereafter.

Peak stages and discharges of White River at Clarendon, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 25, 26, 1935	33.7	179,000	1947	Dec. 24, 25, 1946	28.6	89,200
1936	Dec. 18, 1935	23.0	34,200	1948	Mar. 10, 1948	a28.55	75,400
1937	Jan. 27, 1937	b35.75	215,000	1949	Feb. 4, 5, 1949	b35.32	211,000
1938	Feb. 28, 1938	a35.05	203,000	1950	Jan. 21, 1950	b33.55	157,000
1939	Apr. 28, 29, 1939	b30.75	119,000	1951	Mar. 4-6, 1951	b29.95	104,000
1940	Apr. 28-30, 1940	27.75	67,800	1952	Jan. 15, 1952	b28.85	83,500
1941	May 3, 4, 1941	b26.10	50,400	1953	Mar. 28, 1953	29.31	92,100
1942	Apr. 22, 1942	b29.28	94,200	1954	May 11, 1954	26.07	54,700
1943	May 27-29, 1943	b33.25	147,000	1955	Apr. 2, 1955	27.0	62,200
1944	May 9-10, 1944	b27.80	69,800	1956	Feb. 26, 1956	29.05	80,700
1945	Apr. 23, 1945	a39.10	299,000	1957	May 6, 7, 1957	31.20	120,000
1946	June 4-6, 1946	31.40	132,000	1958	May 16, 1958	30.50	115,400

a Occurred on following day.

b Occurred on different date than peak discharge.

780. Lagrue Bayou near Stuttgart, Ark.

Location.--Lat 34°31'55", long 91°21'20", in NW $\frac{1}{4}$ sec. 17, T.2 S., R.3 W., on downstream side of bridge on State Highway 146, 7 $\frac{1}{2}$ miles downstream from small tributary, 11 miles east of Stuttgart, and 24 miles upstream from Little Lagrue Bayou.

Drainage area.--175 sq mi.

Gage.--Nonrecording prior to Sept. 13, 1940; recording thereafter. Datum of gage is 175.14 ft above mean Gulf level (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 3,000 cfs and extended above on basis of velocity-area studies.

Bankfull stage.--10 ft.

Remarks.--Flow affected by diversions for irrigation of rice fields and return flow from irrigated areas. Peak discharge not seriously affected. Gage was discontinued Sept. 30, 1954, due to backwater from local dam. Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 5, 1936	11.40	1,210	1946	Oct. 3, 1945	13.36	2,390
1937	Jan. 24, 1937	16.9	6,580		Nov. 12, 1945	14.01	3,090
1938	Jan. 25, 1938	14.74	3,860		Jan. 9, 1946	14.66	3,860
	Feb. 21, 1938	14.10	3,200		Feb. 12, 1946	12.59	1,790
	Apr. 11, 1938	10.78	1,030		Mar. 30, 1946	13.34	2,390
1939	Feb. 4, 1939	14.95	4,210		May 5, 1946	11.44	1,140
	Apr. 21, 1939	12.35	1,460		May 26, 1946	14.01	3,090
1940	Feb. 22, 1940	10.71	850	1947	Jan. 21, 22, 1947	10.97	960
1941	Apr. 25, 26, 1941	9.44	592	1948	Nov. 16, 1947	11.42	1,110
1942	Apr. 13, 1942	13.28	2,340		Jan. 4, 1948	10.90	925
	Apr. 29, 1942	11.73	1,180		Feb. 14, 1948	14.83	3,970
1943	Jan. 1, 1943	11.71	1,180		Mar. 3, 1948	13.85	2,870
	Mar. 16, 1943	12.94	1,930		Mar. 25, 1948	13.90	2,980
1944	Mar. 31, 1944	12.63	1,740		Apr. 16, 1948	11.69	1,260
	Apr. 13, 1944	12.02	1,410		June 20, 1948	12.68	1,860
	May 7, 1944	11.11	995	1949	Nov. 25, 1948	11.20	1,030
1945	Jan. 1, 1945	14.22	3,310		Jan. 8, 1949	12.23	1,560
	Feb. 23, 1945	12.41	1,650		Jan. 28, 29, 1949	14.45	3,530
	Mar. 3, 1945	12.94	2,000		Mar. 12, 1949	11.42	1,240
	Mar. 27, 1945	11.18	1,030		Mar. 29, 1949	12.86	2,120
	Apr. 4, 1945	13.87	2,980	1950	Oct. 8, 1949	12.52	1,410
	May 19, 1945	11.36	1,110		Oct. 27, 1949	11.08	1,020
	June 20, 1945	12.24	1,530		Dec. 19, 1949	12.25	1,530
					Jan. 6, 1950	12.91	2,000
					Jan. 14, 1950	14.00	3,090
					Feb. 4, 1950	13.53	2,540
					Feb. 16, 1950	13.03	2,080

Peak stages and discharges of Lagrue Bayou near Stuttgart, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Mar. 15, 1950	12.32	1,590	1952	Mar. 14, 1952	11.12	1,000
	Mar. 31, 1950	11.32	1,090				
	May 10, 1950	13.64	2,650	1953	Feb. 4, 1953	11.88	1,360
	Aug. 28, 1950	12.66	1,860		Feb. 14, 1953	12.35	1,620
1951	Jan. 15, 1951	14.36	3,530		Mar. 24, 1953	12.24	1,560
	Feb. 10, 1951	11.69	1,260		Apr. 9, 1953	10.88	925
	Feb. 23, 1951	11.08	1,020		May 17, 1953	14.17	3,310
				1954	Jan. 17, 1954	12.33	1,620
1952	Dec. 14, 1951	12.10	1,410		Jan. 27, 1954	12.11	1,470
	Feb. 24, 1952	11.75	1,240		Feb. 22, 1954	12.31	1,590

ARKANSAS RIVER BASIN

795. East Fork Arkansas River near Leadville, Colo.

Location.--Lat 39°15'50", long 106°20'10", in sec.16, T.9 S., R.80 W., at highway bridge 600 ft upstream from confluence with Tennessee Fork and 3 miles northwest of Leadville.

Drainage area.--50 sq mi.

Gage.--Nonrecording. Prior to June 5, 1911, staff gages at different datums. Altitude of last used gage was 9,700 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 300 cfs.

Remarks.--Continuous diversion of 2 cfs (which may be increased to 3 cfs during winter) above the station by the Leadville Water Co. Diversion would not substantially affect maximum flows. Peaks are principally due to snowmelt. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	June 2, 1890	-	505	1918	June 12, 1918	1.95	772
				1919	June 1,2,3, 1919	0.90	155
1912	June 7, 1912	-	290	1920	May 31, 1920	1.63	521
1914	June 1,2, 1914	1.5	430	1921	June 15, 1921	2.03	794
1915	June 11, 1915	1.2	235	1922	May 28,30, 1922	1.46	409
				1923	June 21, 1923	1.60	460
1916	June 12, 1916	1.3	328	1924	June 14, 1924	1.64	287
1917	June 18,20, 1917	1.45	448				

810. Tennessee Fork near Leadville, Colo.

Location.--Lat 39°15'50", long 106°20'20", in SW¹/₄ sec.16, T.9 S., R.80 W., at highway bridge about a quarter of a mile upstream from confluence with East Fork Arkansas River and 3 miles northwest of Leadville.

Drainage area.--48 sq mi.

Gage.--Nonrecording. Feb. 8, 1911, to Oct. 5, 1914, staff gage at datum 0.40 ft higher than last used gage. Altitude of last used gage was 9,760 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 340 cfs.

Remarks.--Small diversions do not substantially affect maximum flows. Peaks are principally due to snowmelt. Only annual observed peaks are shown.

Peak stages and discharges of Tennessee Fork near Leadville, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	May 27, 1890	-	345	1917	June 23, 1917	1.52	263
1911	June 9, 1911	-	255	1918	June 14, 1918	2.05	450
1912	June 5, 1912	-	425	1919	Aug. 1, 1919	1.10	149
1913	May 25, 1913	1.5	440	1920	May 26, 27, 1920	2.0	430
1914	May 24, 1914	1.6	448	1921	June 14, 1921	2.3	395
1915	June 1, 2, 22, 1915	1.2	177	1922	May 30, 1922	1.56	300
1916	Apr. 27, 1916	1.4	224	1923	June 21, 1923	1.90	399
				1924	June 14, 1924	1.80	327

820. Lake Fork above Sugar Loaf Reservoir, Colo.

Location.--Lat 39°16'10", long 106°23'40", in sec.13, T.9 S., R.81 W., 1,000 ft upstream from high-water line of Sugar Loaf Reservoir and 6 miles west of Leadville.

Drainage area.--18 sq mi.

Gage.--Recording. Altitude of gage is 9,800 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 320 cfs.

Remarks.--No diversion above station. Records include inflow from Fryingpan Creek in Colorado River basin through Busk-Ivanhoe tunnel. Inflow should not substantially affect maximum flows. Base for partial-duration series, 320 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 7, 1946	4.15	402	1952	June 11, 1952	4.91	534
1947	June 9, 1947	4.35	436	1954	May 21, 1954	2.87	223
	June 20, 1947	4.22	413	1955	June 9, 1955	3.39	296
1948	June 3, 1948	4.13	413	1956	May 25, 1956	4.12	404
	June 9, 1948	3.64	a334		June 2, 1956	4.33	441
1949	May 29, 1949	3.82	365	1957	June 9, 1957	-	450
	June 13, 1949	4.45	a473		June 21, 1957	3.98	380
	June 18, 1949	4.50	482		June 28, 1957	5.22	610
1950	June 7, 1950	3.84	368		July 18, 1957	3.61	330
	June 12, 1950	3.64	336	1958	June 2, 1958	3.76	383
	June 18, 1950	3.60	a330		June 6, 1958	4.76	559
1951	May 28, 1951	4.04	400				
	June 21, 1951	4.46	473				

a Mean daily.

825. Lake Fork below Sugar Loaf Reservoir, Colo.

Location.--Lat 39°15'15", long 106°22'15", in NE $\frac{1}{4}$ sec.19, T.9 S., R.80 W., 600 ft downstream from Sugar Loaf Reservoir Dam and 4 miles west of Leadville.

Drainage area.--26 sq mi.

Gage.--Recording gage and sharp-crested weir. Altitude of gage is 9,760 ft (from topographic map).

Stage-discharge relation.--Discharge computed on basis of weir formula.

Remarks.--Flow regulated by Sugar Loaf Reservoir (capacity, 17,400 acre-ft). Water imported above station from Fryingpan Creek in Colorado River basin through Busk-Ivanhoe tunnel. Regulation should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges of Lake Fork below Sugar Loaf Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 19, 1946	2.05	240	1950	Sept. 6, 1950	2.06	242
1947	June 21, 1947	2.78	379				
1948	May 22, 1948	2.66	354	1951	May 29, 1951	2.33	291
1949	June 22, 1949	2.60	342	1952	June 9, 1952	2.52	327

830. Halfmoon Creek near Malta, Colo.

Location.--Lat 39°11'10", long 106°22'55", in sec.18, T.10 S., R.80 W., 8 ft downstream from bridge, 2 miles upstream from mouth, and 3.5 miles southwest of Malta.

Drainage area.--23 sq mi.

Gage.--Recording. Prior to May 13, 1948, at datum 0.18 ft lower than present datum. Altitude of present gage is 9,740 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 210 cfs.

Remarks.--No regulation or diversion above station. Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	June 9, 1947	3.19	240	1953	May 28, 1953	2.76	164
	June 21, 1947	3.46	375		June 14, 1953	3.13	330
	July 2, 1947	3.31	300		June 18, 1953	3.07	284
					June 23, 1953	2.90	189
1948	May 22, 1948	2.87	171	1954	May 21, 1954	2.87	223
	June 3, 1948	2.98	a211				
	June 10, 1948	3.06	242	1955	June 11, 1955	2.82	169
1949	June 16, 1949	3.26	350		June 22, 1955	2.80	160
	June 22, 1949	3.19	305	1956	May 25, 1956	2.85	182
	July 9, 1949	2.97	a203		June 2, 1956	2.92	241
1950	June 6, 1950	2.88	a179		June 11, 1956	2.82	196
	June 17, 1950	3.00	220	1957	June 8, 1957	3.13	288
1951	May 28, 1951	2.80	150		June 20, 1957	2.93	207
	June 20, 1951	2.97	218		June 30, 1957	3.48	450
	June 28, 1951	2.94	a214		July 18, 1957	3.13	284
	July 4, 1951	2.91	a210	1958	May 29, 1958	2.97	220
1952	June 11, 1952	3.07	345		June 7, 1958	3.13	329
	July 5, 1952	2.85	183				

a Mean daily.

845. Lake Creek above Twin Lakes Reservoir, Colo.

Location.--Lat 39°03'45", long 106°24'20", sec.26, T.11 S., R.81 W., 1.5 miles upstream from high-water line of Twin Lakes Reservoir and 2 miles southwest of village of Twin Lakes.

Drainage area.--75 sq mi.

Gage.--Recording. Prior to May 20, 1950, at site 200 ft downstream at different datum. Altitude of present gage is 9,300 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs

Remarks.--No diversion above station. Records include inflow from Roaring Fork in Colorado River basin through Twin Lakes Tunnel. Inflow should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges of Lake Creek above Twin Lakes Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 10, 1946	5.40	2,490	1952	June 10, 1952	5.74	2,330
1947	June 8, 1947	5.35	2,580				
1948	June 15, 1948	4.78	1,740	1954	May 21, 1954	4.22	966
1949	June 22, 1949	4.22	1,110	1955	June 8, 1955	4.58	1,120
1950	June 17, 1950	4.02	932				
				1956	June 1, 1956	5.19	1,900
1951	June 18, 1951	4.90	1,670	1957	June 28, 1957	5.30	2,190
				1958	May 27, 1958	4.80	1,590

855. Lake Creek below Twin Lakes Reservoir, Colo.

Location.--Lat 39°04'50", long 106°18'40", in NE $\frac{1}{4}$ sec.22, T.11 S., R.80 W., 100 ft downstream from Twin Lakes Reservoir Dam and $\frac{3}{2}$ miles northwest of Granite.

Drainage area.--107 sq mi.

Gage.--Recording gage and Parshall flume. Altitude of gage is 9,160 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs.

Remarks.--No diversion above station. Flow regulated by Twin Lakes Reservoir (capacity, 53,260 acre-ft). Records include inflow from Roaring Fork in Colorado River basin through Twin Lakes Tunnel. Regulation should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 18, 1946	5.26	1,340	1950	June 17, 1950	5.65	1,340
1947	June 22, 1947	5.42	1,420				
1948	June 4, 1948	5.29	1,220	1951	July 4, 1951	5.30	1,220
1949	June 30, 1949	4.81	1,070	1952	June 27, 1952	5.37	1,250
				1953	June 13, 1953	4.53	976

860. Arkansas River at Granite, Colo.

Location.--Lat 39°02'35", long 106°15'55", in SW $\frac{1}{4}$ sec.31, T.11 S., R.79 W., at Granite, a short distance from U. S. Highway 24 just upstream from Cache Creek.

Drainage area.--427 sq mi.

Gage.--Nonrecording prior to Apr. 6, 1910, near present site at different datums; recording thereafter. Apr. 6, 1910, to Oct. 25, 1917, at site about 1,000 ft upstream at different datum. Datum of present gage is 8,914.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs.

Remarks.--Divisions above station for irrigation of about 5,150 acres. Sugar Loaf and Twin Lakes Reservoirs (combined capacity, 70,680 acre-ft) are located on tributaries above station. Water imported from Colorado River basin above station by several transmountain diversions. Regulation, diversion, and importation should substantially affect maximum flows.

Records for 1910-12, 1918-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges of Arkansas River at Granite, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1897	June 4, 1897	6.5	2,410	1934	May 31, 1934	3.33	1,02C
1910	May 30, 31, June 1	3.70	1,810	1935	June 14, 1935	4.53	1,700
1911	June 15, 1911	3.98	1,870	1936	June 26, 1936	4.42	1,83C
1912	June 6, 7, 9, 1912	-	2,100	1937	May 30, 1937	3.94	1,82C
1913	June 1, 1913	3.80	1,700	1938	June 6, 1938	5.45	2,32C
1914	June 15, 1914	4.10	2,040	1939	May 20, 1939	4.62	1,70C
1915	June 12, 21, 23	3.68	1,630	1940	June 2, 1940	3.81	1,18C
1916	(a)	3.80	1,660	1941	June 21, 1941	5.98	2,06C
1917	June 19, 1917	4.30	2,540	1942	June 7, 1942	5.94	2,05C
1918	June 11, 1918	4.67	2,630	1943	July 1, 1943	5.50	1,93C
1919	June 30, 1919	3.44	1,230	1944	June 26, 1944	5.38	1,770
1920	June 10, 1920	4.10	1,770	1945	July 25, 1945	5.11	1,510
1921	July 1, 1921	3.80	1,340	1946	June 18, 1946	5.87	2,230
1922	June 14, 1922	3.77	1,680	1947	June 24, 1947	6.24	2,900
1923	June 5, 1923	3.74	1,530	1948	June 6, 1948	5.78	2,300
1924	June 16, 1924	4.57	2,900	1949	June 23, 1949	5.76	2,360
1925	June 21, 1925	3.32	1,160	1950	June 16, 1950	5.60	2,290
1926	June 13, 1926	3.75	1,690	1951	July 5, 1951	5.51	2,000
1927	June 29, 1927	3.99	1,880	1952	June 8, 1952	6.45	2,910
1928	May 31, 1928	3.60	1,470	1953	June 12, 1953	-	2,700
1929	June 10, 1929	3.80	1,650	1954	May 22, 1954	4.97	1,510
1930	June 14, 1930	3.90	1,500	1955	June 25, 1955	4.65	1,250
1931	June 8, 1931	2.97	875	1956	June 3, 1956	6.04	2,490
1932	June 26, 1932	3.93	1,610	1957	June 28, 1957	7.20	5,360
1933	June 5, 1933	4.12	2,110	1958	June 8, 1958	5.73	1,590

a June 11, 12, 14, 15, 16, 17, 1916.

865. Clear Creek above Clear Creek Reservoir, Colo.

Location.--Lat 39°01'05", long 106°16'55", in S $\frac{1}{2}$ sec.12, T.12 S., R.80 W., on left bank 0.5 mile upstream from high-water line of Clear Creek Reservoir and 2 miles southwest of Granite.

Drainage area.--59 sq mi.

Gage.--Recording. Altitude of gage is 8,900 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 530 cfs.

Remarks.--Diversions above station for irrigation of about 250 acres. Diversions should not substantially affect maximum flows. Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 17, 1946	3.61	686	1951	June 19, 1951	4.00	91C
1947	June 8, 1947	3.59	684	1952	June 10, 1952	4.26	1,13C
	June 20, 1947	4.10	1,000		June 16, 1952	4.34	1,07C
	July 2, 1947	3.62	702		July 6, 1952	3.62	551
	July 15, 1947	3.17	456	1954	May 20, 1954	1.98	333
1948	May 24, 1948	3.05	432	1955	June 8, 1955	2.25	521
	June 3, 1948	3.75	a786		June 11, 1955	2.03	425
	June 9, 1948	3.85	846		June 22, 1955	2.17	487
	June 12, 1948	3.83	a828	1956	May 25, 1956	2.00	415
1949	June 18, 1949	4.07	1,040		June 2, 1956	2.79	76C
	June 26, 1949	3.30	a504		June 14, 1956	2.26	522
	July 7, 1949	3.26	482	1957	June 29, 1957	-	a1,30C
1950	June 6, 1950	3.18	406	1958	May 28, 1958	3.19	556
	June 15, 1950	3.58	622		June 6, 1958	3.24	576
1951	May 29, 1951	3.28	456				

a Mean daily.

870. Clear Creek below Clear Creek Reservoir, Colo.

Location.--Lat 39°01'10", long 106°14'30", in SE $\frac{1}{4}$ sec.8, T.12 S., R.79 W., 100 ft downstream from Clear Creek Reservoir Dam, 1,500 ft upstream from mouth, and 2 miles southeast of Granite.

Drainage area.--62 sq mi.

Gage.--Recording gage and wooden control. Altitude of gage is 8,800 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 440 cfs.

Remarks.--Diversions above station for irrigation of about 350 acres. Flow regulated by Clear Creek Reservoir (capacity, 11,210 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 18, 1946	3.70	394	1950	June 2, 1950	3.48	341
1947	June 21, 1947	3.95	454				
1948	May 22, 1948	3.60	370	1951	June 24, 1951	3.79	416
1949	June 20, 1949	3.30	298	1952	July 7, 1952	3.92	447
				1953	June 20, 1953	3.65	382

890. Cottonwood Creek below Hot Springs, near Buena Vista, Colo.

Location.--Lat 38°48'46", long 106°13'18", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.14 S., R.79 W., a quarter of a mile downstream from Cottonwood hot springs, 1 mile downstream from confluence of Middle Cottonwood and South Cottonwood Creeks, 3 miles upstream from North Cottonwood Creek, and 5 $\frac{1}{2}$ miles southwest of Buena Vista.

Drainage area.--65 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1923, near present site at different datum; recording thereafter. Datum of gage is 8,532 ft (river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 690 cfs.

Remarks.--Several small diversions above station for irrigation. Diversions should not substantially affect maximum flows. Peaks are principally due to snowmelt. Base for partial-duration series, 300 cfs. Only annual observed peaks are shown prior to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 3, 4, 5	2.30	300	1950	June 12, 1950	1.97	243
1913	May 31, June 20, 21	1.90	220	1951	June 19, 1951	2.20	335
1914	June 1, 1914	2.70	380	1952	June 11, 1952	2.84	496
1915	June 23, 1915	2.00	398	1953	June 13, 1953	2.68	378
1916	June 20, 1916	2.10	437	1954	May 22, 1954	1.83	150
1917	June 18, 1917	2.2	467	1955	June 9, 1955	2.41	314
1918	June 9, 10, 1918	2.0	467	1956	June 3, 1956	2.7	370
1919	May 27, 28, 29, 30	1.65	240	1957	June 9, 1957	3.04	460
1920	June 12, 1920	1.9	342		June 13, 1957	2.90	395
1921	June 12, 1921	2.1	495		June 20, 1957	3.16	520
1922	June 10, 11, 1922	1.75	328		July 1, 1957	4.52	1,180
1923	June 16, 21, 1923	1.85	372		July 27, 1957	2.92	404
				1958	May 29, 1958	2.84	328
					June 6, 1958	2.95	373

900. Chalk Creek (upper station) near St. Elmo, Colo.

Location.--Lat 38°42'50", long 106°19'00", in sec.27, T.15 S., R.80 W., a quarter of a mile downstream from powerplant of the Tin Cup Gold Dredging Co., a quarter of a mile upstream from Coal Creek, 1 mile downstream from Grizzly Gulch, and $1\frac{1}{4}$ miles east of St. Elmo.

Drainage area.--48 sq mi, approximately.

Gage.--Recording. Altitude of gage is 9,670 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 300 cfs.

Remarks.--No diversions above station for irrigation. Low flow partially regulated by a small reservoir above diversion dam for the powerhouse of the Tin Cup Gold Dredging Co. Regulation should not substantially affect maximum flows. Peaks are principally due to snowmelt. Base for partial-duration series, 350 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	June 1, 1914	3.15	448	1917	June 16, 1917	3.30	545
	June 12, 1914	2.93	370		June 10, 1918	3.40	575
1915	June 19, 1915	2.80	325	1919	May 29, 1919	2.65	350
	June 10, 1916	2.96	393				

905. Chalk Creek near St. Elmo, Colo.

Location.--Lat 38°43', long 106°14', in SW $\frac{1}{4}$ sec.28, T.15 S., R.79 W., at highway bridge just downstream from the cascades of Chalk Creek downstream from intermittent stream entering from the north, 6 miles east of St. Elmo.

Drainage area.--83 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 9,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 460 cfs.

Remarks.--No diversion above station. Peaks are principally due to snowmelt. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 9, 1911	2.20	585	1914	June 2, 15, 1914	2.20	515
1912	June 6, 7, 1912	2.30	635	1915	June 23, 24, 25	2.0	415
1913	June 20, 1913	2.20	500				

910. Chalk Creek near Nathrop, Colo.

Location.--Lat 38°44', long 106°09', in NW $\frac{1}{4}$ sec.19, T.15 S., R.78 W., 200 ft upstream from county highway bridge at Mount Princeton Hot Springs, 4 miles west of Nathrop, and $5\frac{1}{2}$ miles upstream from mouth.

Drainage area.--97 sq mi.

Gage.--Recording. Datum of gage is 8,113 ft (river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 620 cfs.

Remarks.--Several small diversions above station for irrigation. Diversions should not substantially affect maximum flows. Base for partial-duration series, 350 cfs.

Peak stages and discharges of Chalk Creek near Nathrop, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 2, 1950	1.96	370	1953	June 13, 1953	2.40	720
	June 12, 1950	1.93	354		May 22, 1954	1.53	155
1951	May 28, 1951	2.10	448	1955	June 9, 1955	2.02	399
	June 20, 1951	2.09	442		June 3, 1956	2.35	640
1952	June 10, 1952	2.70	1,050				
	July 6, 1952	1.97	362				

915. Arkansas River at Salida, Colo.

Location.--Lat 38°32'45", long 106°00'36", in NE $\frac{1}{4}$ sec.31, T.50 N., R.9 E., 1,500 ft upstream from bridge on State Highway 291 and 2.7 miles upstream from South Arkansas River.

Drainage area.--1,218 sq mi.

Gage.--Nonrecording prior to Nov. 18, 1903; recording thereafter. Prior to Dec. 3, 1936, at site $1\frac{1}{2}$ miles downstream at different datum; Dec. 3, 1936, to Dec. 5, 1957, at present site at datum 1.00 ft higher. Datum of present gage is 7,050.45 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,700 cfs.

Remarks.--Diversions above station for irrigation of about 16,000 acres and return flow from irrigated areas. Natural flow of stream also affected by transmountain diversions and Clear Creek, Sugar Loaf, and Twin Lakes Reservoirs (combined capacity, 81,890 acre-ft). Regulation and diversions should substantially affect maximum flows.

Records for 1928-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	June 15, 1895	3.5	2,370	1930	Aug. 13, 1930	6.68	3,470
1897	May 31, 1897	4.33	3,060	1931	July 17, 1931	5.68	3,300
1899	June 19, 1899	5.9	4,700	1932	Aug. 16, 1932	5.37	2,500
1900	May 31, June 1	5.0	3,630	1933	June 12, 1933	5.88	2,990
1901	May 21, 1901	3.8	4,900	1934	May 11, 1934	4.10	1,600
1902	May 12, 1902	2.20	1,800	1935	July 12, 1935	7.15	4,050
1903	June 18, 1903	4.9	2,640	1936	June 22, 1936	6.90	3,900
1910	June 6, 1910	4.2	2,770	1937	June 26, 1937	3.56	2,400
1911	July 5, 1911	5.15	3,400	1938	July 14, 1938	4.62	3,930
1912	June 7, 1912	5.3	3,580	1939	Aug. 1, 1939	3.60	2,500
1913	June 1, 1913	3.7	1,930	1940	June 3, 1940	2.73	1,510
1914	June 15, 16, 1914	5.6	4,010	1941	June 21, 1941	4.33	3,530
1915	June 23, 1915	4.53	2,750	1942	June 19, 1942	4.60	3,600
1916	June 14, 1916	4.75	3,080	1943	July 1, 1943	4.11	2,920
1917	June 18, 19, 1917	6.1	4,730	1944	June 22, 1944	4.15	2,980
1918	June 13, 14, 1918	6.0	4,840	1945	July 25, 1945	3.88	2,580
1919	May 29, 30, 1919	3.9	2,460	1946	June 17, 1946	4.41	3,160
1920	June 9, 1920	3.65	3,430	1947	June 21, 1947	5.45	4,890
1921	June 12, 1921	5.13	4,000	1948	June 4, 1948	4.91	4,110
1922	June 14, 1922	5.42	2,870	1949	June 19, 1949	4.98	4,390
1923	July 18, 1923	7.1	4,900	1950	June 18, 1950	4.09	2,910
1924	June 16, 1924	7.20	5,100	1951	July 5, 1951	4.02	2,800
1925	June 22, 1925	4.40	1,920	1952	June 8, 1952	5.44	4,760
1926	July 4, 1926	5.60	3,060	1953	June 13, 1953	-	4,400
1927	June 29, 1927	6.51	3,780	1954	May 22, 1954	3.56	1,950
1928	May 31, 1928	5.83	3,070	1955	June 25, 1955	3.57	1,980
1929	Aug. 27, 1929	7.00	3,850	1956	June 3, 1956	4.78	3,740
				1957	June 29, 1957	6.82	9,220
				1958	June 6, 1958	3.77	5,300

920. South Arkansas River at Poncha, Colo.
(Published as "South Fork of Arkansas River" prior to Aug. 17, 1914)

Location.--Lat 38°31', long 106°04', in sec.10, T.49 N., R.8 E., a quarter of a mile upstream from Poncha Creek and half a mile south of Poncha.

Drainage area.--140 sq mi, approximately.

Gage.--Nonrecording. Prior to Aug. 17, 1914, at datum 1.00 ft higher. Altitude of last used gage was 7,470 ft (from nearby line of levels).

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs.

Remarks.--Court decrees for diversion of 136 cfs above station for irrigation. Diversions substantially affect maximum flows. Peaks are principally due to snowmelt. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	July 5, 1911	4.2	1,110	1915	June 12, 1915	3.6	485
1912	June 8, 1912	3.2	755				
1913	June 22, 24, 1913	2.1	419	1916	June 14, 15, 1916	3.2	365
1914	June 1, 2, 1914	3.2	665	1917	June 19, 1917	3.7	449

930. Poncha Creek at Poncha, Colo.

Location.--Lat 38°30', long 106°04', in sec.10, T.49 N., R.8 E., at highway bridge at Poncha, a quarter of a mile upstream from mouth.

Drainage area.--56 sq mi, approximately.

Gage.--Nonrecording. Prior to May 6, 1914, at site 20 ft upstream at datum 1.00 ft higher. Altitude of last used gage was 7,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs.

Remarks.--Small diversions should not affect maximum flows. Peaks are principally due to snowmelt. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 27, 1912	3.2	307	1915	May 18, June 11	3.1	274
1913	May 27, 1913	2.4	200				
1914	June 2, 1914	3.2	298	1916	June 4, 1916	2.9	247
				1917	June 14, 15, 1917	2.9	233

935. South Arkansas River near Salida, Colo.
(Published as "at mouth" prior to 1929)

Location.--Lat 38°31', long 106°00', in sec.5, T.49 N., R.9 E., three-quarters of a mile upstream from mouth and $1\frac{1}{4}$ miles southwest of Salida.

Drainage area.--208 sq mi.

Gage.--Nonrecording prior to June 9, 1929, at site half a mile downstream at different datum; recording thereafter. Altitude of last used gage was 7,040 ft (from nearby line of levels).

Stage-discharge relation.--Defined by current-meter measurements below 180 cfs.

Remarks.--Diversions above station for irrigation of about 8,000 acres. Diversions should substantially affect maximum flows. Records for 1922-23 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges of South Arkansas River near Salida, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 29, 1922	2.25	a315	1934	May 11, 1934	2.62	192
1923	July 17, 1923	3.90	1,220	1935	June 14, 1935	3.83	673
1929	Aug. 31, 1929	3.25	462	1936	May 18, 1936	3.27	393
1930	July 31, 1930	3.08	418	1937	May 16, 1937	2.87	269
1931	July 17, 1931	2.1	93	1938	May 29, 1938	3.27	316
1932	Aug. 16, 1932	2.95	332	1939	May 10, 1939	2.50	120
1933	June 5, 1933	3.08	294	1940	Aug. 22, 1940	2.52	205

a Mean daily.

945. Arkansas River at Parkdale, Colo.

Location.--Lat 38°29'30", long 105°22'10", in NE $\frac{1}{4}$ sec.18, T.18 S., R.71 W., at Parkdale, 300 ft downstream from bridge on U. S. Highway 50 and half a mile upstream from Copper Gulch.

Drainage area.--2,556 sq mi.

Gage.--Recording. Altitude of gage is 5,650 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs.

Remarks.--Diversions above station for irrigation of about 32,000 acres. Regulation by Twin Lakes, Sugar Loaf, and Clear Creek Reservoirs (combined capacity, 81,890 acre-ft). Diversion and regulation should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	July 15, 1946	8.12	4,580	1951	June 19, 1951	6.65	3,150
1947	June 22, 1947	9.02	5,880	1952	June 8, 1952	8.94	5,720
1948	June 12, 1948	8.33	4,870	1953	June 13, 1953	8.35	4,970
1949	June 19, 1949	8.80	5,530	1954	July 14, 1954	6.90	3,230
1950	June 18, 1950	6.86	3,010	1955	Aug. 4, 1955	6.43	2,670

950. Grape Creek near Westcliffe, Colo.

Location.--Lat 38°11', long 105°30', in sec.36, T.21 S., R.73 W., three-quarters of a mile downstream from Taylor Creek and 3 miles northwest of Westcliffe.

Drainage area.--320 sq mi.

Gage.--Recording gage and concrete control. Prior to Aug. 19, 1938, at site 10 ft upstream at same datum. Altitude of gage is 7,720 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 840 cfs.

Remarks.--Diversions above station for irrigation of about 15,000 acres. Diversions should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Aug. 5, 1925	3.1	422	1939	Mar. 25, 1939	1.84	196
1926	June 8, 1926	2.78	425	1940	Sept. 10, 1940	1.52	123
1927	Mar. 29, 1927	3.24	553	1941	June 25, 1941	3.57	658
1928	June 4, 1928	2.58	437	1942	Apr. 23, 1942	5.26	1,960
1930	July 22, 1930	4.60	1,400	1943	Mar. 9, 1943	1.21	182
1932	June 28, 1932	1.81	171	1944	Apr. 13, 1944	4.01	1,280
1933	Apr. 28, 1933	3.12	637	1945	Aug. 7, 1945	3.95	1,250
1934	Apr. 7, 1934	0.96	75	1946	Apr. 15, 1946	1.33	142
1935	June 16, 1935	2.87	328	1947	June 19, 1947	3.72	1,100
1936	Aug. 7, 1936	3.35	710	1948	May 25, 1948	2.35	465
1937	May 30, 1937	2.35	339	1949	July 11, 1949	2.62	562
1938	June 8, 1938	1.97	236	1950	June 3, 1950	0.87	70
				1951	July 23, 1951	1.58	217

Peak stages and discharges of Grape Creek near Westcliffe, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	June 9, 1952	1.70	271	1956	Apr. 19, 1956	1.53	218
1953	July 18, 1953	1.21	138	1957	June 12, 1957	3.98	1,260
1954	Aug. 23, 1954	1.15	119	1958	June 6, 1958	1.46	214
1955	May 20, 1955	2.98	735				

960. Arkansas River at Canon City, Colo.
(Published as "near Canyon" 1900-1906)

Location.--Lat 38°26', long 105°15', in sec.32, T.18 S., R.70 W., in Canon City, just upstream from Sand Creek.

Drainage area.--3,117 sq mi.

Gage.--Nonrecording and recording gages prior to Mar. 27, 1922, at various sites and datums about a quarter of a mile upstream; recording thereafter at present site and datum. Datum of present gage is 5,343.87 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs.

Bankfull stage.--6 ft.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power development, diversions above station for irrigation of about 53,000 acres, and return flow from irrigated areas. Records for 1927-33, furnished by State engineer of Colorado. Only annual peaks are shown; maximums observed prior to 1912.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1889	Aug. 9, 1889	4.6	2,620	1924	June 16, 1924	4.55	5,580
1890	May 27, 1890	5.35	3,500	1925	July 21, 1925	5.70	7,800
1891	June 13, 1891	5.7	4,230	1926	July 21, 1926	4.80	6,460
1892	June 25, 1892	6.0	4,750	1927	June 25, 1927	6.00	7,940
1893	June 18, 1893	6.0	4,750	1928	June 1, 1928	4.58	4,210
1894	June 6, 1894	5.8	4,400	1929	July 17, 1929	5.18	4,800
1895	June 13, 1895	4.7	2,970	1930	Sept. 2, 1930	6.25	9,920
1896	May 30, 1896	4.7	2,970	1931	July 18, 1931	2.56	1,710
1897	June 4, 1897	5.55	3,450	1932	June 26, 1932	3.75	3,850
1898	June 19, 20, 1898	5.2	3,300	1933	Aug. 3, 1933	7.52	12,760
1899	June 19, 1899	6.2	4,500	1934	Aug. 2, 1934	3.05	2,380
1900	May 29, June 1, 2	6.7	4,600	1935	July 11, 1935	5.25	5,990
1901	June 30, 1901	8.0	6,000	1936	July 30, 1936	5.07	6,120
1902	July 17, Aug. 27	4.5	2,300	1937	Aug. 29, 1937	6.35	9,850
1903	June 18, 1903	6.9	5,180	1938	Aug. 11, 1938	5.58	4,810
1904	Aug. 16, 1904	6.9	3,600	1939	May 21, 1939	3.41	2,250
1905	June 10, 1905	7.7	6,700	1940	Sept. 3, 1940	4.78	3,870
1906	June 13, 1906	7.0	5,250	1941	July 13, 1941	8.66	11,800
1907	July 28, 1907	8.0	5,300	1942	Aug. 13, 1942	7.80	8,720
1908	July 31, 1908	6.8	3,750	1943	Aug. 18, 1943	4.62	3,340
1909	Aug. 18, 1909	11.2	12,300	1944	July 4, 1944	8.12	9,020
1910	July 29, 1910	7.2	4,100	1945	July 10, 1945	6.99	7,030
1911	July 6, 1911	7.15	3,490	1946	July 15, 1946	4.51	3,440
1912	June 6, 1912	-	a5,000	1947	June 22, 1947	5.35	5,080
1913	June 19, 1913	-	a3,000	1948	June 12, 1948	5.12	4,960
1914	Aug. 2, 1914	-	a6,500	1949	June 22, 1949	5.15	5,400
1915	June 24, 1915	-	a3,600	1950	July 10, 1950	6.18	7,730
1916	July 31, 1916	8.2	4,030	1951	June 19, July 6	3.81	2,660
1917	July 9, 1917	8.8	5,330	1952	June 8, 1952	5.56	5,330
1918	June 23, 1918	9.2	6,110	1953	June 13, 1953	4.75	4,540
1919	May 29, 1919	-	a3,630	1954	July 15, 1954	3.93	3,050
1920	June 10, 1920	-	a4,700	1955	Aug. 4, 1955	3.54	2,700
1921	Aug. 2, 1921	10.7	19,000	1956	June 3, 1956	4.41	3,960
1922	June 14, 1922	3.35	3,180	1957	June 29, 1957	6.80	10,300
1923	July 13, 1923	5.1	7,200	1958	May 30, 1958	4.86	5,040

a Estimated.

965. Oil Creek near Canon City, Colo.

Location.--Lat 38°27'00", long 105°10'30", in sec.26, T.18 S., R.70 W., 600 ft upstream from bridge on U. S. Highway 50, 1½ miles upstream from mouth, 1.8 miles east of city limits of Canon City, and 5 miles downstream from Wilson Creek.

Drainage area.-- 432 sq mi.

Gage.--Recording. Altitude of gage is 5,330 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 140 cfs and by slope-area measurements at 778, 1,440, and 4,260 cfs.

Remarks.--Diversions above station for irrigation. Diversions should not substantially affect maximum flows. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 6, 1949	-	-	1951	July 30, 1951	3.51	303
	July 7, 1949	3.42	310				
1950	July 12, 1950	4.60	778	1952	Apr. 28, 1952	3.15	140
	July 23, 1950	3.76	408				
				1953	July 9, 1953	3.87	384
1951	July 11, 1951	9.25	4,260		Aug. 2, 1953	4.73	732
				1955	May 19, 1955	5.80	1,440

970. Arkansas River at Portland, Colo.

Location.--Lat 38°23'40", long 105°00'40", in sec.21, T.19 S., R.68 W., at Portland, 400 ft downstream from bridge on State Highway 120 and 1 mile downstream from Hardscrabble Creek.

Drainage area.--4,024 sq mi.

Gage.--Recording. Datum of gage is 5,021.56 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,300 cfs.

Bankfull stage.--10 ft.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 60,000 acres, and return flow from irrigated areas. Diversions and regulation should substantially affect most maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Aug. 19, 1939	5.68	4,290	1946	July 15, 1946	9.57	13,200
1940	Aug. 19, 1940	5.46	3,970	1947	July 8, 1947	9.72	13,500
				1948	May 30, 1948	7.14	8,030
1941	July 1, 1941	7.25	7,580	1949	June 5, 1949	12.18	21,100
1942	Aug. 13, 1942	10.40	16,000	1950	July 23, 1950	6.02	5,340
1943	July 24, 1943	5.33	4,560				
1944	July 5, 1944	8.12	9,720	1951	July 12, 1951	6.19	5,720
1945	Aug. 7, 1945	6.86	7,710		June 16, 1952	5.69	5,080

a Records incomplete but probably maximum for year.

ARKANSAS RIVER BASIN

980. Little Beaver Creek near Pikes Peak, Colo.

Location.--Lat 38°47'40", long 105°01'40", in NW $\frac{1}{4}$ sec.32, T.14 S., R.68 W., 200 ft upstream from mouth, and 3 $\frac{1}{2}$ miles southeast of Pikes Peak.

Drainage area.--1.00 sq mi.

Gage.--Nonrecording. Sharp-crested weir prior to 1931 and Parshall flume thereafter. Altitude of gage is 11,000 ft (from topographic map).

Stage-discharge relation.--Discharge computed by weir formula.

Remarks.--No regulation or diversion above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 9, 1917	-	3.29	1934	May 29,30, 1934	-	0.92
1918	July 25, 1918	-	2.81	1935	June 12,16, 1935	-	4.62
1919	May 26, 27, 1919	-	5.05				
1920	Aug. 22, 1920	-	2.34	1936	Aug. 6, 1936	-	4.68
				1937	June 1, 1937	-	1.48
1921	June 14, 1921	-	5.83	1938	May 29,30, 1938	-	4.37
1922	June 18-20, 1922	-	1.04	1939	June 2-5, 1939	-	1.66
1923	June 3-14, 1923	-	2.50	1940	May 16, 1940	-	.79
1924	June 14, 1924	-	4.15				
1925	(a)	-	.82	1941	June 10, 1941	-	6.03
1926	June 11,12, 1926	-	3.96	1943	June 11, 1943	-	1.57
1927	May 18-30, June 26	-	1.28	1944	June 11, 1944	-	4.50
1928	May 31, 1928	-	2.64	1945	Aug.15,21, 1945	-	4.12
1929	Aug. 4-6, 1929	-	10.3				
1930	July 30,31, 1930	-	1.65	1946	Sept. 9, 1946	-	1.70
				1947	June 6-29, 1947	-	7.41
1931	June 16-18, 30	-	2.06	1948	June 1-6, 1948	-	4.75
1932	June 10,11, 1932	-	1.17	1949	June 26, 1949	-	1.80
1933	June 1-4, 1933	-	6.66	1950	May 29, 1950	-	.61

a Aug. 12, 13, 21, 22, 26-30, 1925.

985. Sackett Creek near Pikes Peak, Colo.

Location.--Lat 38°47'30", long 105°01'20", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.32, T.14 S., R.68 W., 200 ft upstream from mouth and 3 $\frac{1}{2}$ miles southeast of Pikes Peak.

Drainage area.--0.65 sq mi.

Gage.--Nonrecording. Sharp-crested weir prior to 1931 and Parshall flume thereafter. Altitude of gage is 10,900 ft (from topographic map).

Stage-discharge relation.--Discharge determined by weir formula.

Remarks.--No regulation or diversion above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 8, 1917	-	2.96	1929	Aug. 4-6, 1929	-	6.60
1918	June 20, 1918	-	2.34	1930	July 31, 1930	-	1.65
1919	May 17, 1919	-	6.64				
1920	Aug. 21, 1920	-	2.96	1931	June 16, 1931	-	2.00
				1932	(d)	-	.71
1921	June 6, 1921	-	6.64	1933	June 1-7, 1933	-	4.25
1922	(a)	-	.63	1934	May 10-14, 1934	-	1.62
1923	June 3-14, 1923	-	1.53	1935	June 3-5, 1935	-	3.41
1924	(b)	-	3.62				
1925	Aug.26,27, 1925	-	.45	1936	Aug. 7, 1936	-	7.41
				1937	May 23-30, 1937	-	.54
1926	(c)	-	4.32	1938	May 29,30, 1938	-	3.29
1927	May 21-31, 1927	-	.82	1939	June 1, 1939	-	1.03
1928	May 31, June 1-6	-	2.96	1940	May 6-10, 1940	-	1.75

a May 24, 25, 31, June 1-3, 1922.

b May 21-24, 31, June 1, 2, 7-10, 1924.

c May 28-31, June 1-10, 1926.

d June 2, 3, 7-9, 14-17, 29, 1932.

Peak stages and discharges of Sackett Creek near Pikes Peak, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 8, 1941	-	3.41	1946	Aug. 26, 1946	-	1.66
1942	June 19-25, 1942	-	3.46	1947	June 21-30, 1947	-	7.41
1943	Apr. 26, 27, 1943	-	1.57	1948	May 22, 23, 1948	-	2.33
1944	May 31, June 1	-	5.15	1949	June 14, 24, 25	-	.99
1945	May 29, 30, 1945	-	2.03	1950	May 2-4, 16-17	-	.16

995. Arkansas River near Pueblo, Colo.

(Published as "at Pueblo" 1911-33)

Location.--Lat 38°16'00", long 104°39'00", in sec.34, T.20 S., R.65 W., at intake of south-side waterworks, 1 mile upstream from Dry Creek and 2½ miles west of city hall in Pueblo.

Drainage area.--4,686 sq mi.

Gage.--Recording or nonrecording gages prior to May 25, 1925, at various sites and datums about 2½ miles downstream. May 26, 1925, to Mar. 24, 1935, recording gage at present site and datum and since May 25, 1935, recording gages on river and on Parshall flume at north-side waterworks intake. Datum of present gage is 4,689.82 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs and extended on basis of slope-area measurement at 103,000 cfs.

Historical data.--Flood of about June 11, 1864, reached a point near Third and Santa Fe Avenues in Pueblo nearly as high as the 1921 flood, according to information from local residents. Flood of July 26, 1893, reached a stage about 10 ft lower than the 1921 flood (discharge, 20,000 to 25,000 cfs). Flood of May 29-31, 1894, reached a stage 7 ft lower than the 1921 flood (discharge, 39,100 cfs, on basis of slope-area measurement by City engineer of Pueblo).

Remarks.--Records include diversions to north-side waterworks since June 1, 1921. Records prior to this date are comparable to those at present site, as the diversion was considered negligible. Natural flow affected by transmountain diversions, storage reservoirs, power developments, diversions above and below station for irrigation of about 88,000 acres, and return flow from irrigated areas. Diversions and regulation should substantially affect maximum flows. Records for 1911-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	July 31, 1895	5.1	6,100	1921	June 3, 1921	24.66	103,000
1896	Aug. 18, 1896	10	16,500	1922	Aug. 6, 1922	7.95	8,850
1897	June 2, 1897	-	4,300	1923	July 12, 1923	12.55	25,600
1898	July 13, 1898	-	7,500	1924	June 15, 1924	7.86	6,510
1899	Aug. 14, 1899	7.0	8,800	1925	July 3, 1925	4.05	4,930
1900	May 20, June 2	7.0	7,600	1926	June 14, 1926	3.86	4,520
1901	May 21, 1901	9.0	11,100	1927	July 22, 1927	6.40	12,400
1902	Aug. 5, 1902	14.5	30,000	1928	July 21, 1928	5.00	7,800
1903	June 9, 1903	9.0	10,500	1929	July 28, 1929	6.30	10,500
1904	Aug. 15, 1904	7.5	8,500	1930	Aug. 28, 1930	4.61	6,050
1905	Aug. 6, 1905	7.4	8,000	1931	Sept. 1, 1931	3.65	3,560
1906	June 13, 1906	9.0	11,000	1932	June 26, 1932	4.52	4,380
1907	July 28, 1907	6.7	6,600	1933	Aug. 2, 1933	5.65	8,630
1908	Aug. 1, 1908	7.4	7,600	1934	Aug. 3, 1934	4.22	2,580
1909	Aug. 18, 1909	6.6	5,800	1935	May 18, 1935	7.28	9,880
1910	July 29, 1910	8.0	8,400	1936	May 24, 1936	6.46	11,200
1911	May 28, 1911	4.70	3,700	1937	Aug. 29, 1937	6.27	9,300
1912	July 31, 1912	-	10,500	1938	Aug. 26, 1938	6.80	11,200
1913	July 23, 1913	7.30	7,800	1939	June 1, 1939	3.53	2,910
1914	Aug. 3, 1914	7.40	7,500	1940	Aug. 19, 1940	4.46	3,860
1915	June 24, 1915	11.0	17,000	1941	July 19, 1941	5.90	7,560
1916	June 17, 1916	7.9	8,900	1942	June 8, 1942	6.80	10,300
1917	June 19, 1917	7.1	6,800	1943	Aug. 18, 1943	3.82	3,320
1918	June 23, 1918	8.2	9,600	1944	July 5, 1944	5.33	5,980
1919	Sept. 4, 1919	6.8	6,300	1945	Aug. 14, 1945	6.86	9,290
1920	July 18, 1920	8.0	8,500	1946	Aug. 27, 1946	6.00	7,050

Peak stages and discharges of Arkansas River near Pueblo, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	July 9, 1947	6.05	7,280	1953	July 21, 1953	-	6,770
1948	June 13, 1948	7.25	10,900	1954	June 30, 1954	-	10,200
1949	June 6, 1949	7.65	12,800	1955	May 19, 1955	-	11,100
1950	July 26, 1950	6.35	8,700				
				1956	Aug. 1, 1956	-	8,010
1951	Aug. 3, 1951	6.65	9,300	1957	June 29, 1957	-	9,070
1952	June 8, 1952	4.83	4,740	1958	June 5, 1959	-	4,540

1000. North Catamount Creek near Green Mountain Falls, Colo.

Location.--Lat 38°56', long 105°03', in sec.12, T.13 S., R.68 W., a quarter of a mile upstream from confluence with South Catamount Creek and 2 miles west of Green Mountain Falls.

Drainage area.--5.80 sq mi.

Gage.--Nonrecording gage and rectangular weir. Altitude of gage is 9,190 ft (from topographic map).

Stage-discharge relation.--Discharge computed by weir formula.

Remarks.--No regulation or diversion above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 24-27, 1935	-	15.0	1943	May 4,5, 1943	-	11.3
				1944	June 2, 1944	-	18.3
1936	Aug. 6, 1936	-	10.5	1945	Aug. 8, 1945	-	7.56
1937	Oct. 1, 1936	-	3.51				
1938	May 16, 1938	-	15.2	1946	May 13, 1946	-	2.50
1939	May 6, 1939	-	4.74	1947	May 21, 1947	-	30.5
1940	June 2, 1940	-	3.41	1948	May 10, 1948	-	7.81
				1949	May 15, 1949	-	6.57
1941	June 2, 1941	-	14.0	1950	Apr.21-22, 1950	-	1.31
1942	May 1-31, 1942	-	23.1				

1005. South Cascade Creek at Cascade, Colo.

Location.--Lat 38°53'50", long 104°59'20", in NW $\frac{1}{4}$ sec.27, T.13 S., R.68 W., 1,000 ft upstream from mouth and three-quarters of a mile west of Cascade.

Drainage area.--3.41 sq mi.

Gage.--Nonrecording gage and Parshall flume. Altitude of gage is 8,400 ft (from topographic map).

Stage-discharge relation.--Discharge computed on basis of weir formula.

Remarks.--No diversion or regulation above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 26,27, 1935	-	13.5	1943	June 1,2,1943	-	4.40
				1944	May 17, 1944	-	16.1
1936	Aug. 7, 1936	-	28.2	1945	Aug. 12, 1945	-	10.9
1937	June 2, 1937	-	2.99				
1938	May 17,18, 1938	-	8.25	1946	Aug. 23, 1946	-	7.03
1939	June 1, 1939	-	3.81	1947	May 13, 1947	-	14.1
1940	May 30, 1940	-	5.44	1948	May 24, 1948	-	8.12
				1949	June 8, 1949	-	7.39
1941	May 27, 1941	-	20.3	1950	Sept.11, 1950	-	2.34
1942	May 28, 1942	-	20.1				

1010. Lion Creek near Halfway, Colo.

Location.--Lat 38°50'10", long 104°58'40", in NE $\frac{1}{4}$ sec.15, T.14 S., R.68 W., 500 ft upstream from mouth, half a mile southwest of Halfway, and 3 miles west of Manitou.

Drainage area.--2.00 sq mi.

Gage.--Nonrecording gage and sharp-crested weir prior to 1931; Parshall flume thereafter. Altitude of gage is 9,250 ft (from topographic map).

Stage-discharge relation.--Discharge computed on basis of weir formula.

Remarks.--No regulation or diversion above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	May 20, June 2	-	1.98	1934	Oct. 6-21, 1933	-	1.23
1918	Sept. 10, 1918	-	1.90	1935	May 25, 1935	-	5.28
1919	May 6, 1919	-	2.78				
1920	Sept. 20, 1920	-	2.75	1936	May 11, 1936	-	2.38
				1937	Oct. 1, 2, 1936	-	1.70
1921	June 4, 1921	-	11.6	1938	May 14, 1938	-	3.46
1922	Aug. 19, 1922	-	2.75	1939	Oct. 8, 1938	-	2.96
1923	Sept. 19, 1923	-	2.93	1940	Sept. 10, 1940	-	1.57
1924	May 4, 1924	-	2.57				
1925	Sept. 23, 1925	-	1.52	1941	May 24, 1941	-	4.12
				1942	May 13, 1942	-	10.9
1926	May 26, 1926	-	2.93	1943	Oct. 22, 1942	-	1.75
1927	Sept. 18, 1927	-	2.10	1944	May 14, 1944	-	3.76
1928	May 25, 1928	-	3.50	1945	Aug. 14, 1945	-	1.84
1929	Aug. 26, 1929	-	5.31				
1930	Oct. 1, 1930	-	2.75	1946	Oct. 1, 1945	-	1.44
				1947	May 11, 1947	-	5.89
1931	May 23, 24, 1931	-	2.57	1948	Oct. 1, 1947	-	2.63
1932	May 4, 1932	-	1.17	1949	May 14, 1949	-	1.39
1933	May 21, 1933	-	4.74	1950	July 11, 1950	-	.99

1015. Sheep Creek near Halfway, Colo.

Location.--Lat 38°50'30", long 104°58'30", in SW $\frac{1}{4}$ sec.11, T.14 S., R.68 W., 500 ft upstream from mouth, a quarter of a mile west of Halfway, and 3 miles west of Manitou.

Drainage area.--0.73 sq mi.

Gage.--Nonrecording gage and sharp-crested weir prior to 1931; Parshall flume thereafter. Altitude of gage is 9,100 ft (from topographic map).

Stage-discharge relation.--Discharge computed on basis of weir formula.

Remarks.--No regulation or diversion above station. Records furnished by Colorado Springs Water Department. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	May 14, 15, June 2	-	1.45	1934	June 1, 1934	-	1.84
1918	July 19-21, 1918	-	1.24	1935	May 31, 1935	-	2.53
1919	May 8, 1919	-	2.75				
1920	Aug. 20, 1920	-	2.07	1936	Aug. 7, 1936	-	3.18
				1937	Apr. 15, 16, 1937	-	1.23
1921	June 5, 1921	-	12.8	1938	Sept. 3, 1938	-	2.43
1922	Aug. 18, 1922	-	2.49	1939	Apr. 30, May 2, 10	-	1.15
1923	Sept. 21, 1923	-	1.75	1940	Sept. 10, 1940	-	1.07
1924	May 4, 1924	-	2.07				
1925	Aug. 10, 1925	-	0.79	1941	May 25, 1941	-	3.94
				1942	May 12, 1942	-	11.8
1926	May 26, 1926	-	2.92	1943	Aug. 15, 16, 1943	-	1.11
1927	Aug. 9-11, 1927	-	1.90	1944	May 13, 1944	-	4.50
1928	May 25, 1928	-	3.31	1945	Aug. 14, 1945	-	1.39
1929	Aug. 8, 1929	-	5.17				
1930	July 22, 1930	-	1.75	1946	Aug. 23, 1946	-	.84
				1947	May 21, 1947	-	4.62
1931	May 25, 30, 1931	-	1.60	1948	May 25, 1948	-	1.44
1932	May 21, 22, 1932	-	0.64	1949	May 15, 1949	-	1.23
1933	May 22, 1933	-	5.18	1950	July 11, 1950	-	.58

1040. Monument Creek at Pikeview, Colo.

Location.--Lat 38°55'05", long 104°49'05", in sec.18, T.13 S., R.66 W., at Pikeview, 1 mile downstream from Cottonwood Creek.

Drainage area.--203 sq mi.

Gage.--Nonrecording. Datum of gage is 6,203.31 ft above mean sea level, adjustment of 1912.

Stage-discharge relation.--Defined by current-meter measurements below 930 cfs.

Remarks.--Diversions above station for irrigation. Flow regulated by several small reservoirs (total capacity, about 2,700 acre-ft). Diversions and regulation should substantially affect maximum flows. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 30, 1935	14	-	1944	May 14, 1944	3.12	366
				1945	Aug. 5, 1945	3.49	560
1939	Apr. 12, 1939	2.96	262				
1940	June 5, 1940	2.85	215	1946	Aug. 27, 1946	2.50	319
				1947	May 11, 1947	3.70	1,190
1941	May 2, 1941	2.09	190	1948	Oct. 19, 1947	2.99	446
1942	Apr. 23, 1942	3.86	734	1949	June 4, 1949	2.38	290
1943	July 24, 1943	3.65	466				

1060. Fountain Creek near Fountain, Colo.

Location.--Lat 38°36'08", long 104°40'13", in NE $\frac{1}{4}$ sec.4, T.17 S., R.65 W., 250 ft upstream from bridge on county road, 1 $\frac{1}{4}$ miles downstream from Little Fountain Creek, and 5 $\frac{1}{4}$ miles southeast of Fountain.

Drainage area.--676 sq mi.

Gage.--Nonrecording prior to Mar. 2, 1940, at highway bridge 250 ft downstream at same datum; recording thereafter at present site. Datum of gage is 5,341.74 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,000 cfs and extended on basis of slope-area measurement at 22,100 cfs.

Remarks.--Diversions above station for irrigation of about 18,000 acres. Diversions should not substantially affect maximum flows. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Aug. 2, 1939	3.65	1,300	1946	Aug. 26, 1946	6.65	9,550
1940	May 28, 1940	9.19	22,100	1947	July 7, 1947	7.30	7,560
	July 29, 1940	7.93	15,600				
				1948	May 31, 1948	7.82	9,190
1941	May 22, 1941	6.62	9,940		Aug. 4, 1948	7.65	8,420
1942	July 19, 1942	5.44	4,430	1949	June 4, 1949	6.84	5,160
1943	Aug. 5, 1943	5.25	3,400	1950	Sept.10, 1950	6.25	3,380
1944	July 15, 1944	5.22	3,120	1951	Aug. 23, 1951	6.66	4,580
1945	July 10, 1945	6.34	9,100	1952	Aug. 21, 1952	6.88	5,240
	Aug. 5, 1945	7.38	13,900				
				1955	May 18, 1955	6.35	3,480

1065. Fountain Creek at Pueblo, Colo.

Location.--Lat 38°16'20", long 104°35'40", in SW $\frac{1}{4}$ sec.30, T.20 S., R.64 W., at Eighth Street bridge in Pueblo, 2 miles upstream from mouth.

Drainage area.--926 sq mi.

Gage.--Recording or nonrecording prior to Oct. 1, 1925, at several sites within half a mile of present site and at different datums; recording thereafter at present site and datum. Datum of present gage is 4.663.45 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,500 cfs and by slope-area measurements at 34,000 and 35,000 cfs.

Remarks.--Diversion above station for irrigation of about 22,500 acres. Diversions should not substantially affect maximum flows. Records for 1922-25 furnished by State engineer of Colorado. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 4, 1921	-	34,000	1948	June 12, 1948	7.72	9,290
1922	May 28, 1922	5.35	2,600		Aug. 4, 1948	6.28	3,480
	Aug. 7, 1922	6.10	5,140		Aug. 5, 1948	7.37	7,720
					Aug. 14, 1948	6.26	3,440
1924	Oct. 3, 1923	5.80	12,000	1949	June 5, 1949	5.73	1,590
1925	July 19, 1925	2.90	2,500	1950	July 27, 1950	6.07	2,740
	July 22, 1925	2.50	1,910		July 28, 1950	7.80	9,600
					Sept.15, 1950	6.32	4,270
1935	May 30, 1935	-	35,000	1951	July 30, 1951	7.95	11,600
1941	Apr. 29, 1941	4.18	al,150		Aug. 9, 1951	4.51	1,780
					Aug. 23, 1951	4.50	1,750
1942	Oct. 23, 1941	5.40	2,780	1952	Apr. 21, 1952	5.08	2,950
	Apr. 19, 1942	5.45	2,390		Aug. 28, 1952	5.89	5,170
	Apr. 24, 1942	5.18	1,830	1953	Aug. 16, 1953	4.97	3,730
	Apr. 26, 1942	5.25	1,760	1954	May 23, 1954	5.64	5,350
	Aug. 14, 1942	8.05	11,000		June 30, 1954	4.37	2,370
1943	May 22, 1943	4.78	324		Aug. 6, 1954	5.82	5,800
1944	July 10, 1944	5.83	2,690	1955	May 18, 1955	5.53	4,950
	July 18, 1944	7.20	7,280		May 19, 1955	4.94	4,180
	Aug. 4, 1944	8.51	12,900		July 26, 1955	4.19	1,980
	Aug. 26, 1944	5.62	2,060		Aug. 6, 1955	7.90	11,500
	Sept. 4, 1944	5.98	3,020	1956	Aug. 1, 1956	5.23	3,560
1945	July 10, 1945	9.50	17,800		Aug. 3, 1956	5.11	3,280
	Aug. 6, 1945	6.37	4,980		Aug. 18, 1956	5.60	5,250
	Aug. 7, 1945	6.93	6,680	1957	May 8, 1957	4.08	2,330
	Aug. 21, 1945	5.93	2,090		May 11, 1957	4.02	1,820
1946	June 30, 1946	5.80	2,220		May 15, 1957	5.97	6,180
	Aug. 23, 1946	8.00	11,800		June 11, 1957	4.65	1,860
	Aug. 26, 1946	9.00	16,500	1958	Oct. 8, 1957	5.11	3,230
	Aug. 27, 1946	6.00	4,050		May 9, 1958	4.77	2,350
1947	May 11, 1947	5.69	2,470		May 16, 1958	4.71	1,820
	May 16, 1947	5.87	2,040		May 24, 1958	4.88	1,990
	July 8, 1947	6.38	5,880		Aug. 5, 1958	5.75	3,750
	July 17, 1947	6.44	4,040		Aug. 16, 1958	5.66	3,300
1948	May 31, 1948	7.18	6,920				

a Maximum daily.

1070. St. Charles River at San Isabel, Colo.

Location.--Lat 37°58'40", long 105°04'00", in sec.12, T.24 S., R.69 W., half a mile downstream from Beaver Creek, a short distance upstream from Lake Isabel, and three-quarters of a mile southwest of San Isabel.

Drainage area.--18.8 sq mi.

Gage.--Recording gage and sharp-crested weir prior to Oct. 1, 1938, and since May 12, 1941; nonrecording gage Oct. 1, 1938, to May 11, 1941. Altitude of gage is 7,800 ft (from topographic map).

Stage-discharge relation.--Discharge computed on basis of weir formula.

Remarks.--No diversion above station. Records furnished by U. S. Forest Service. Base for partial-duration series, 40 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Apr. 16, 1937	2.58	136	1938	Apr. 20, 1938	2.6	a138
	Apr. 22, 1937	1.95	90				
	Apr. 26, 1937	1.64	69	1939	Apr. 28, 1939	1.53	a63
	May 9, 1937	1.55	64				
	May 30, 1937	1.70	73	1940	Apr. 26, 1940	1.00	a33
	July 1, 1937	1.55	64	1941	May 27, 1941	-	a189

a Annual maximum daily.

1085. St. Charles River near Pueblo, Colo.

Location.--Lat 38°12'20", long 104°31'40", in sec.23, T.21 S., R.64 W., at highway bridge 500 ft downstream from Bessemer ditch siphon, 5 miles upstream from mouth, and 6 miles southeast of city hall in Pueblo.

Drainage area.--468 sq mi.

Gage.--Recording prior to Aug. 21, 1941, and since Dec. 3, 1942; nonrecording Aug. 21, 1941, to Dec. 2, 1942. Prior to Apr. 1, 1942, at site 2 miles downstream at different datum. Altitude of last used gage was 4,690 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs and extended to 16,100 cfs on basis of slope-area measurements at gage heights 6.50, 7.53 and 9.2 ft, and float measurement at gage height 8.52 ft.

Remarks.--Divisions above station for irrigation of about 8,500 acres. Diversions above station to reservoirs for industrial use. Diversions should not substantially affect maximum flows. Records for January 1941 to May 1942, furnished by Bureau of Reclamation. Base for partial-duration series, 3,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 19, 1942	6.46	6,670	1948	June 13, 1948	5.20	4,500
					Aug. 13, 1948	8.52	12,500
1943	Aug. 18, 1943	4.53	3,150	1949	May 15, 1949	4.35	3,320
1944	July 8, 1944	4.72	3,520	1950	July 4, 1950	4.82	3,740
	July 18, 1944	5.58	4,830		July 26, 1950	9.20	16,100
1945	July 10, 1945	6.50	7,000		Sept.10, 1950	5.15	4,400
	Aug. 3, 1945	6.05	6,150	1951	May 21, 1951	4.58	3,300
	Aug. 5, 1945	6.84	7,720		Aug. 3, 1951	6.48	7,350
	Aug. 7, 1945	6.30	6,890				
	Aug. 8, 1945	6.25	6,870	1952	July 30, 1952	4.44	3,430
	Aug. 14, 1945	4.35	3,610		Aug. 29, 1952	4.35	3,270
1946	Aug. 23, 1946	4.67	3,770	1953	Aug. 2, 1953	5.58	5,280
	Aug. 26, 1946	4.78	4,610		Aug. 16, 1953	6.46	7,500
1947	June 19, 1947	7.10	10,800	1955	May 19, 1955	7.53	a20,600

a Annual peak only.

1095. Arkansas River near Avondale, Colo.

Location.--Lat 38°15'00", long 104°24'00", in NW $\frac{1}{4}$ sec.1, T.21 S., R.63 W., half a mile upstream from Sixmile Creek and 2 $\frac{1}{2}$ miles west of Avondale.

Drainage area.--6,327 sq mi.

Gage.--Recording. Datum of gage is 4,508.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,100 cfs.

Bankfull stage.--7 ft.

Remarks.--Natural flow substantially affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 123,000 acres, and return flow from irrigated areas. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 26, 1939	3.01	3,190	1946	Aug. 27, 1946	6.17	6,720
1940	May 29, 1940	4.61	7,180	1947	June 19, 1947	7.96	11,300
				1948	June 13, 1948	6.83	13,100
1941	July 19, 1941	4.35	6,850	1949	June 6, 1949	7.30	9,770
1942	Apr. 24, 1942	7.79	13,900	1950	July 26, 1950	8.26	11,600
1943	Aug. 18, 1943	3.68	3,520				
1944	July 19, 1944	5.32	5,360	1951	Aug. 3, 1951	7.93	10,300
1945	Aug. 15, 1945	6.47	8,050				

1105. Chico Creek near North Avondale, Colo.

Location.--Lat 38°15'50", long 104°22'30", in SE $\frac{1}{4}$ sec.31, T.20 S., R.62 W., 1 mile upstream from mouth and 1 $\frac{1}{2}$ miles west of North Avondale.

Drainage area.--864 sq mi.

Gage.--Recording. Altitude of gage is 4,520 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,900 cfs.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Aug. 27, 1941	7.55	13,000	1944	Aug. 4, 1944	1.60	70
1942	Apr. 19, 1942	1.98	690	1945	July 11, 1945	2.59	550
	Apr. 24, 1942	2.42	852		July 25, 1945	3.20	880
	Aug. 14, 1942	2.33	760		Aug. 6, 1945	5.35	3,700
	Sept. 1, 1942	4.11	3,320	1946	July 1, 1946	2.32	640
1943	Mar. 2, 1943	1.15	36		Aug. 24, 1946	5.77	6,820
					Aug. 27, 1946	5.56	6,620

1110. Huerfano River at Manzanares Crossing, near Redwing, Colo.

Location.--Lat 37°43'40", long 105°21'10", in sec.5, T.27 S., R.71 W., at Manzanares Crossing, a quarter of a mile downstream from Manzanares Creek and 3 $\frac{1}{2}$ miles southwest of Redwing.

Drainage area.--73 sq mi.

Gage.--Recording. Prior to Sept. 8, 1934, at sites about 500 ft upstream at different datums. Sept. 8, 1934, to Mar. 15, 1937, Mar. 16, 1937, to Sept. 30, 1945, and Oct. 1, 1945, to Apr. 25, 1946, at present site at datums 1.36, 0.86, and 0.36 ft higher, respectively, than present datum. Altitude of present gage is 8,150 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 270 cfs and extended on basis of slope-area measurements at 10,200 cfs.

Remarks.--Diversions above station for irrigation of about 1,800 acres. Diversions should not substantially affect maximum flows. Records for 1923-33 furnished by State engineer of Colorado. Base for partial-duration series, 200 cfs.

Peak stages and discharges of Huerfano River at Manzanares Crossing,
near Redwing, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)								
1924	May 19, 1924	1.91	242	1939	Aug. 25, 1939	1.23	153								
	June 15, 1924	1.97	245	1940	Aug. 21, 1940	1.64	291								
1925	July 4, 1925	2.27	295												
1926	May 24, 1926	2.29	267	1941	May 12, 1941	2.00	455								
	June 1, 1926	2.30	270		May 28, 1941	1.57	265								
	July 15, 1926	2.11	207		June 20, 1941	1.68	308								
	1927	Sept.13, 1927	2.25		192	June 25, 1941	1.72	330							
July 30, 1941						2.42	792								
1928	May 29, 1928	2.36	236	1942	May 9, 1942	1.66	495								
1929	July 18, 1929 Aug. 7, 1929 Aug. 21, 1929 Sept.23, 1929	2.50 1.80 1.72 1.69	780 323 351 336		May 11, 1942	1.56	495								
					May 22, 1942	1.48	470								
					May 26, 1942	1.65	511								
				1943	Dec. 9, 1943 June 30, 1943	1.70 1.02	(a) 200								
1930	July 22, 1930	2.10	238												
1931	Sept.15, 1931 Sept.24, 1931	1.55 1.60	209 230	1944	May 15, 1944	1.39	336								
					May 24, 1944	1.18	247								
					May 31, 1944	1.30	331								
1932	May 22, 1932 July 24, 1932 Aug. 11, 1932 Aug. 12, 1932 Aug. 21, 1932	1.72 1.60 1.61 1.97 2.01	251 207 210 327 330		June 10, 1944	1.05	271								
					July 4, 1944	1.30	304								
				1945	July 18, 1945	2.03	780								
								1946	July 19, 1946 Aug. 25, 1946	3.00 2.00	700 230				
												1947	June 19, 1947 July 16, 1947	1.93 2.35	226 380
1948	June 3, 1948 June 19, 1948	1.99 2.09	232 261												
				1950	July 10, 1950	1.54	114								
								1951	Aug. 2, 1951	8.14	10,200				
1952	Aug. 21, 1952	3.79	778												
												1953	May 29, 1953	-	90
				1955	Aug. 19, 1955	2.28	148								
1956	June 3, 1956	-	58												
								1957	June 6, 1957 Aug. 15, 1957 Aug. 17, 1957	2.52 3.45 3.30	234 480 525				
												1958	May 24, 1958	1.52	160
				1938	May 29, 1938 June 13, 1938	1.49 1.57	265 272								

a Backwater from ice.

1120. Huerfano River near Badito, Colo.

Location.--Lat 37°43'45", long 105°01'20", in sec.5, T.27 S., R.68 W., 250 ft upstream from South Oak Creek and 0.4 mile west of Badito.

Drainage area.--499 sq mi.

Gage.--Recording. Prior to June 30, 1942, at site 0.2 mile upstream at different datum. Altitude of gage is 6,500 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 890 cfs and extended on basis of slope-area measurement at 8,480 cfs.

Bankfull stage.--7 ft.

Remarks.--Diversions above station for irrigation of about 15,400 acres. Diversions should substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges of Huerfano River near Badito, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 11, 12, 1942	6.60	1,440	1945	Aug. 14, 1945	9.89	8,480
1943	July 25, 1943	5.65	365	1946	Aug. 28, 1946	7.6	4,080
1944	July 5, 1944	7.90	2,200				

1125. Huerfano River at Badito, Colo.

Location.--Lat 37°43'40", long 105°00'45", in sec.4, T.27 S., R.68 W., at Badito, 300 ft downstream from bridge on State Highway 69 and half a mile downstream from South Oak Creek.

Drainage area.--532 sq mi.

Gage.--Recording Apr. 19, 1923, to Sept. 30, 1925, Dec. 23, 1938, to Aug. 6, 1941, and since Sept. 10, 1946; nonrecording Mar. 6, to Dec. 22, 1938. Apr. 19, 1923, to Aug. 6, 1924, at site 300 ft upstream at different datum. Aug. 7, 1924, to Sept. 30, 1925, at site 500 ft upstream at different datum. Mar. 6, 1938, to Aug. 6, 1941, and Sept. 10, 1946, to Oct. 8, 1948, at site 300 ft upstream at datum 1.90 ft higher. Datum of last used gage was 6,415.20 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 510 cfs and extended above on basis of slope-area measurement at 5,510 cfs.

Historical data.--Flood of July 31, 1945, reached a discharge of 7,400 cfs determined by slope-area measurement, and flood of Aug. 14, 1945, reached a discharge of 8,480 cfs, from records for station near Badito.

Bankfull stage.--13 ft.

Remarks.--Diversion above station for irrigation of about 15,800 acres. Diversions should substantially affect maximum flows. Records for 1923-25 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	July 15, Aug. 1	9.20	5,510	1948	May 31, 1948	8.62	467
1938	Aug. 11, 1938	4.83	689	1949	July 25, 1949	6.62	430
1939	Aug. 2, 1939	9.01	3,150	1950	July 20, 1950	7.66	620
1940	Sept. 21, 1940	7.10	1,310	1951	Aug. 3, 1951	8.78	1,280
1941	May 14, 1941	4.70	745	1952	July 9, 1952	6.22	288
1947	July 9, 1947	11.20	1,620	1953	Aug. 16, 1953	10.32	2,050
				1954	Aug. 6, 1954	9.56	1,520
				1955	May 19, 1955	8.12	670

1135. Huerfano River near Mustang, Colo.

Location.--Lat 37°51', long 104°42', in SW $\frac{1}{4}$ sec.20, T.25 S., R.65 W., 2 $\frac{1}{4}$ miles downstream from Apache Creek and 2 $\frac{1}{2}$ miles southwest of Mustang.

Drainage area.--803 sq mi.

Gage.--Recording. Altitude of gage is 5,500 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 800 cfs and extended on basis of slope-area measurement at 26,000 cfs.

Remarks.--Diversions above station for irrigation of about 20,000 acres. Diversions should substantially affect most maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Aug. 14, 1942	9.60	26,000	1945	Aug. 14, 1945	7.85	19,400
1943	Aug. 16, 1943	3.80	3,200	1946	Aug. 28, 1946	6.61	15,000
1944	July 13, 1944	3.33	1,530	1947	June 19, 1947	3.48	2,660

1140. Cucharas River at Boyd Ranch near La Veta, Colo.

Location.--Lat 37°25', long 105°03', in sec.24, T.30 S., R.69 W., at Boyd Ranch, 6 miles south of La Veta.

Drainage area.--56 sq mi.

Gage.--Recording. Altitude of gage is about 7,800 ft (from base map).

Stage-discharge relation.--Defined by current-meter measurements below 190 cfs.

Remarks.--Diversion above station for irrigation of about 500 acres. Diversion should not substantially affect peak flows. Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 25, 1935	1.85	189	1947	May 10, 1947	3.30	313
	July 12, 1935	1.80	172		June 18, 1947	3.80	417
1936	May 16, 1936	2.40	275	1948	May 25, 1948	2.87	289
1937	Apr. 15, 1937	2.08	198		May 28, 1948	2.50	c207
	May 17, 1937	2.25	219		June 4, 1948	2.30	c173
	June 3, 1937	2.43	291	1949	July 9, 1949	2.40	188
1938	May 29, 1938	-	a170	1950	July 12, 1950	1.28	25
	July 14, 1938	2.03	185	1951	July 30, 1951	1.62	64
1939	June 2, 1939	1.52	92	1952	May 27, 1952	2.24	249
1940	May 21, 1940	1.60	102		June 3, 1952	2.14	c229
1941	May 13, 1941	3.04	315		June 11, 1952	2.35	305
	May 28, 1941	3.0	309	1954	May 23, 1954	1.59	70
	June 18, 1941	2.29	178	1955	May 23, 1955	4.05	444
1942	Apr. 14, 1942	2.19	162		May 31, 1955	3.79	400
	Apr. 23, 1942	3.28	345		June 9, 1955	2.49	188
	May 10, 1942	3.47	394	1956	May 27, 1956	1.58	49
	May 26, 1942	3.20	342	1957	May 20, 1957	2.46	159
1943	May 9, 1943	1.30	57		June 1, 1957	3.65	365
1944	May 15, 1944	3.05	317		June 8, 1957	3.25	288
	May 31, 1944	3.08	322		June 29, 1957	2.65	184
	Sept. 5, 1944	3.77	405		July 9, 1957	2.48	159
1945	Dec. 29, 1944	b3.02	-		July 13, 1957	2.75	200
	May 7, 1944	2.01	131		July 17, 1957	2.49	161
1946	Aug. 22, 1946	2.20	142	1958	Aug. 9, 1957	3.24	281
					May 23, 1958	2.07	202

a Mean daily estimated.

b Backwater from ice.

c Mean daily.

1145. Cucharas River near La Veta, Colo.

Location.--Lat 37°27', long 105°02', in sec.7, T.30 S., R.68 W., 4½ miles south of La Veta.

Drainage area.--75 sq mi, approximately.

Gage.--Nonrecording prior to July 15, 1929; recording thereafter. Prior to May 8, 1923, at site half a mile downstream at different datum; May 9, 1923, to May 18, 1926, at present site at datum 0.33 ft lower. Altitude of present gage is 7,500 ft (estimated from nearby line of levels).

Stage-discharge relation.--Defined by current-meter measurements below 260 cfs.

Remarks.--Diversion above station for irrigation of about 2,000 acres. Diversion should substantially affect maximum flows. Records for 1923-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges of Cucharas River near La Veta, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Aug. 22, 1923	3.10	-	1929	May 23, 1929	2.70	202
1924	May 21, 1924	2.45	481	1930	July 28, 1930	2.47	150
1925	May 12, 1925	0.75	26	1931	May 26, 1931	2.55	188
1926	May 22, 1926	2.60	698	1932	May 23, 1932	2.30	116
1927	June 17-19, 1927	1.90	37	1933	June 13, 1933	2.55	144
1928	May 29, 1928	2.88	280	1934	July 23, 1934	1.95	60

1160. Huerfano River below Huerfano Valley Dam, near Undercliffe, Colo.

Location.--Lat 38°00', long 104°28', in S $\frac{1}{4}$ sec.32, T.23 S., R.63 W., at left end of diversion dam for Huerfano Valley ditch, 8 miles southwest of Undercliffe.

Drainage area.--1,673 sq mi.

Gage.--Recording. Prior to July 26, 1950, at site 0.3 mile downstream at datum 14.27 ft lower; July 26, 1950, to Dec. 15, 1954, at site 0.3 mile downstream at datum 16.27 ft lower. Datum of present gage is 4,886.29 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs at former site. Defined by current-meter measurements below 190 cfs at present site. Maximum discharges determined on basis of computation of peak flow over dam.

Historical data.--Flood of July 5, 1958, is greatest known since at least 1900.

Bankfull stage.--9.1 ft (top of headgate for Huerfano Valley ditch).

Remarks.--Divisions above station for irrigation of about 43,000 acres. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 22, 1940	4.65	3,400	1948	Aug. 13, 1948	5.81	4,770
	Sept. 9, 1940	6.06	6,810	1949	July 30, 1949	5.64	900
1941	June 1, 1941	4.70	2,400	1950	July 26, 1950	13.96	16,700
1942	Apr. 19, 1942	5.43	4,200	1951	July 22, 1951	7.70	6,640
	Apr. 24, 1942	6.57	6,000		Aug. 3, 1951	6.93	5,720
	Apr. 30, 1942	4.58	3,000	1952	Apr. 21, 1952	3.20	3,150
	Aug. 14, 1942	7.00	10,000		Aug. 22, 1952	4.96	4,100
1943	Aug. 16, 1943	3.05	2,400	1953	July 11, 1953	4.87	3,340
1944	June 29, 1944	3.06	1,440		Aug. 16, 1953	5.94	4,530
1945	Aug. 14, 1945	-	(a)		Aug. 17, 1953	6.52	6,000
1946	Oct. 13, 1945	3.68	3,000	1954	June 30, 1954	4.83	2,610
	July 19, 1946	4.99	5,500	1955	May 18, 1955	6.65	4,960
	Aug. 13, 1946	4.38	6,000		May 19, 1955	11.04	11,500
	Aug. 23, 1946	3.67	4,100	1956	July 22, 1956	3.30	1,320
	Aug. 28, 1946	4.91	5,000	1957	May 15, 1957	5.40	3,690
1947	July 21, 1947	4.90	3,800	1958	July 5, 1958	14.5	16,800
1948	June 13, 1948	7.00	5,900				
	Aug. 3, 1948	5.86	4,800				

a Peak discharge was probably between 10,000 and 15,000 cfs.

1170. Arkansas River near Nepesta, Colo.
(Published as "near Boone" July 1 to Oct. 27, 1916, and as "at Nepesta" 1919-20)

Location.--Lat 38°11', long 104°10', in NW¼ sec.31, T.21 S., R.60 W., 100 ft downstream from diversion dam of Oxford Farmers Co. canal and 1¼ miles west of Nepesta.

Drainage area.--9,345 sq mi, of which about 9,291 sq mi contributes directly to surface runoff.

Gage.--Recording or nonrecording prior to June 5, 1921, at various sites within 5 miles upstream and 2 miles downstream from at different datums than present gage. Recording June 5, 1921, to Oct. 1, 1952, at sites on river or river and canal within 300 ft of and at approximately same datum as present gage. Recording since Oct. 1, 1952, on river and on Oxford Farmers Co. canal at described site. Datum of present river gage is 4,378.68 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended to 180,000 cfs on basis of a slope-area measurement of peak flow 9 miles upstream.

Remarks.--Figures herein represent combined discharge of the river below the canal and the Oxford Farmers Co. canal since 1936. Discharge in Oxford Farmers Co. canal was not included prior to this date. Peak flow of stream substantially affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation of about 230,000 acres, and return flow from irrigated areas. Records for 1914-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	June 10, 1903	6.50	19,000	1935	May 31, 1935	6.00	14,700
1912	July 31, Aug. 1	3.80	a5,240	1936	July 28, 1936	6.50	17,200
1914	May 22, 1914	4.10	a7,890	1937	Aug. 31, 1937	5.37	8,060
1915	Aug. 18, 1915	4.35	9,000	1938	Sept. 4, 1938	5.72	9,380
				1939	May 25, 1939	4.71	5,740
1916	Aug. 13, 1916	-	9,500	1940	May 29, 1940	5.25	8,100
1917	June 21, 1917	3.09	a3,220	1941	Aug. 27, 1941	5.85	9,470
1918	July 12, 1918	4.00	a4,600	1942	Apr. 24, 1942	6.29	12,000
1919	Aug. 9, 1919	a5.60	5,470	1943	Aug. 18, 1943	4.55	2,860
1920	Aug. 2, 1920	3.30	a3,720	1944	July 19, 1944	5.80	8,680
1921	June 4, 1921	-	180,000	1945	Aug. 8, 1945	6.20	16,100
1922	Aug. 4, 1922	4.34	8,100	1946	Aug. 27, 1946	6.00	15,800
1923	Aug. 22, 1923	6.87	23,000	1947	June 20, 1947	6.70	14,600
1924	June 15, 1924	3.92	5,740	1948	June 13, 1948	6.57	12,200
1925	July 23, 1925	5.80	17,700	1949	June 6, 1949	6.12	10,500
				1950	July 26, 1950	7.35	12,400
1926	June 14, 1926	3.38	5,360				
1927	Aug. 8, 1927	5.10	11,000	1951	Aug. 3, 1951	7.10	14,700
1928	June 30, 1928	4.25	8,200	1952	Aug. 29, 1952	6.17	6,180
1929	July 25, 1929	4.80	8,950	1953	Aug. 16, 1953	-	11,900
1930	Aug. 28, 1930	4.90	9,510	1954	June 30, 1954	-	12,200
				1955	May 19, 1955	-	40,200
1931	Sept. 2, 1931	3.20	3,000				
1932	July 30, 1932	5.3	11,200	1956	Aug. 1, 1956	-	3,560
1933	July 16, 1933	5.9	12,600	1957	May 16, 1957	-	38,200
1934	July 29, 1934	3.50	4,700	1958	July 5, 1958	7.00	14,800

a Maximum daily.

1175. Arkansas River at Nepesta, Colo.
(Published as "near Nepesta" 1902, 1915-16, 1934-36)

Location.--Lat 38°11'00", long 104°08'30", in sec.32, T.21 S., R.60 W., at highway bridge just downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge at Nepesta.

Drainage area.--9,460 sq mi, approximately, of which about 9,406 sq mi contribute directly to surface runoff.

Gage.--Recording and slope gage at described site Oct. 1, 1919, to June 4, 1921. Altitude of gage is 4,370 ft (from topographic map). Nonrecording gage Sept. 8, 1897, to Dec. 1, 1900, at same site at different datum. May 1, 1901, to Oct. 31, 1902, May 1906 to Nov. 30, 1912, Jan. 1, 1914, to June 30, 1916, Oct. 28, 1916, to Sept. 30, 1919, and June 5, 1921, to Sept. 30, 1936, non-recording or recording gages about $1\frac{1}{2}$ miles upstream at dam and headgate of Oxford Farmers Co. canal at different datum.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended to 180,000 cfs on basis of a slope-area measurement of peak flow 9 miles upstream.

Remarks.--Transmountain diversion, storage reservoirs, diversions for irrigation of about 235,000 acres above station which should substantially affect maximum flows. Records for 1904-9 and 1914-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	July 14, 1898	6.1	4,120	1920	Aug. 2, 1920	3.30	a3,720
1899	Aug. 14, 1899	7.5	6,970				
1900	May 21, 1900	9.0	9,600	1921	June 4, 1921	-	180,000
				1922	Aug. 4, 1922	4.34	8,100
1901	June 1, 1901	5.0	9,800	1923	Aug. 22, 1923	6.87	23,000
1902	Aug. 6, 1902	6.5	13,500	1924	June 15, 1924	3.92	5,740
				1925	July 23, 1925	5.80	17,700
1904	Aug. 17, 1904	3.0	7,500				
1907	July 28, 1907	-	8,200	1926	June 14, 1926	3.38	5,360
1910	Aug. 5, 1910	-	7,200	1927	Aug. 8, 1927	5.10	11,000
1912	July 31, 1912	3.80	a5,240	1928	June 30, 1928	4.25	8,200
1914	May 22, 1914	4.10	a7,890	1929	July 25, 1929	4.80	8,950
1915	Aug. 18, 1915	4.35	9,000	1930	Aug. 28, 1930	4.90	9,510
1916	Aug. 13, 1916	-	9,500	1931	Sept. 2, 1931	3.20	3,000
1917	June 21, 1917	3.09	a3,220	1932	July 30, 1932	5.30	11,200
1918	July 12, 1918	4.00	a4,600	1933	July 16, 1933	5.90	12,600
1919	Aug. 9, 1919	5.60	5,470	1934	July 29, 1934	3.50	4,700
				1935	May 31, 1935	6.00	14,700
				1936	July 28, 1936	6.50	17,200

a Maximum daily.

1180. Apishapa River near Aguilar, Colo.

Location.--Lat 37°22'50", long 104°39'50", in sec.4, T.31 S., R.65 W., 1.4 miles downstream from Mauricio Canyon Creek and $1\frac{1}{2}$ miles southwest of Aguilar.

Drainage area.--126 sq mi.

Gage.--Recording. Prior to Aug. 29, 1943, at site 0.4 mile upstream at datum 28.08 ft higher; Aug. 29, 1943, to July 6, 1944, at site 0.6 mile upstream at datum 42.06 ft higher. Datum of last used gage was 6,408.11 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs and extended on basis of float measurement at 1,580 cfs.

Remarks.--Diversions above station for irrigation of about 1,600 acres. Diversions should not substantially affect maximum flows. Base for partial-duration series, 200 cfs.

Peak stages and discharges of Apishapa River near Aguilar, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 23, 1940	3.23	112	1947	July 16, 1947	2.54	530
1941	May 5, 1941	3.48	270		July 22, 1947	2.85	688
	June 17, 1941	7.50	3,870		July 23, 1947	3.11	836
	July 12, 1941	4.15	360		Aug. 15, 1947	3.73	1,250
	Aug. 27, 1941	4.70	380		Aug. 18, 1947	4.25	1,620
1942	Apr. 23, 1942	7.05	2,300		Aug. 19, 1947	3.48	1,080
	May 5, 1942	5.76	356		Aug. 24, 1947	3.95	1,400
	July 1, 1942	5.56	230		Aug. 25, 1947	3.08	818
	July 31, 1942	5.48	219		Aug. 30, 1947	4.27	1,630
1943	Aug. 16, 1943	13.78	1,600	1948	May 25, 1948	3.14	287
	Aug. 28, 1943	9.76	1,810		July 14, 1948	7.84	4,500
1944					Aug. 14, 1948	2.74	371
	May 31, 1944	3.21	219	1949	June 4, 1949	3.34	441
	July 12, 1944	5.02	2,190		June 9, 1949	3.20	371
	July 15, 1944	4.75	1,990		July 7, 1949	3.02	210
	Aug. 26, 1944	4.03	1,460		July 8, 1949	3.55	395
	Sept. 5, 1944	6.30	3,200		July 14, 1949	3.30	323
					Aug. 12, 1949	3.35	335
1945	Aug. 2, 1945	5.37	2,460		Sept. 4, 1949	6.64	3,470
	Aug. 15, 1945	6.20	3,120		Sept. 8, 1949	3.66	1,200
1946	Sept. 15, 1946	4.05	1,480		Sept. 9, 1949	7.03	3,810
1947				1950	July 4, 1950	3.22	323
	June 18, 1947	2.88	704		July 12, 1950	3.53	448
	July 1, 1947	2.79	655		July 27, 1950	3.28	347
	July 7, 1947	4.29	1,640	1955	May 19, 1955	7.64	4,300

1190. Apishapa River near White Rock, Colo.

Location.--Lat 37°46'10", long 104°07'10", in SE $\frac{1}{4}$ sec. 20, T. 26 S., R. 60 W., about 3 miles upstream from Buffalo Arroyo and 6 miles south of White Rock.

Drainage area.--737 sq mi.

Gage.--Recording. Altitude of gage is 4,790 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs and extended above on basis of slope-area measurement at gage height 3.90 ft.

Remarks.--Diversions above station for irrigation of about 4,000 acres. Diversions should substantially affect maximum flows. Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Aug. 14, 1942	4.25	6,500	1945	July 25, 1945	4.52	8,280
	Sept. 1, 1942	4.01	5,780		Aug. 14, 1945	3.53	4,630
1943	Aug. 17, 1943	3.46	4,180	1946	Sept. 12, 1946	3.62	4,870
	Aug. 25, 1943	3.33	3,840		Aug. 25, 1947	3.46	3,920
1944	July 19, 1944	3.28	3,350				

1195. Apishapa River near Fowler, Colo.

Location.--Lat 38°05'28", long 103°58'52", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.22 S., R.59 W., at county highway bridge 4 miles southeast of Fowler and 5.4 miles upstream from mouth.

Drainage area.--1,125 sq mi.

Gage.--Recording. Prior to Aug. 28, 1923, at site about 3 miles downstream at different datum; Aug. 29, 1923, to Sept. 30, 1925, at present site at different datum. Datum of present gage is 4,317.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,200 cfs and extended to 83,000 cfs on basis of slope-area measurement about 2 miles upstream from present station.

Remarks.--Waste water from Oxford Farmers and Rocky Fork Highline Canals enters river above station. Diversions above station for irrigation of about 4,700 acres. Records for 1922-25 furnished by State engineer of Colorado. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Aug. 2, 1922	13.78	6,430	1947	Aug. 25, 1947	9.69	5,550
1923	Aug. 22, 1923	-	83,000	1948	June 13, 1948	7.55	3,840
1924	Oct. 6, 1923	5.69	1,100		June 20, 1948	9.22	5,900
1925	July 4, 1925	7.10	3,500	1949	June 5, 1949	9.80	5,700
	July 23, 1925	7.30	3,900	1950	July 24, 1950	11.60	4,640
	July 28, 1925	7.30	3,880		July 26, 1950	13.75	6,750
	July 30, 1925	8.30	5,030	1951	June 28, 1951	14.0	7,000
1939	Aug. 20, 1939	8.50	4,700		July 31, 1951	17.70	11,100
1940	July 27, 1940	8.00	4,930		Aug. 3, 1951	14.30	7,330
	Aug. 18, 1940	6.30	3,330	1952	Aug. 5, 1952	8.43	2,520
	Sept. 10, 1940	8.30	5,320	1953	Aug. 17, 1953	12.15	5,310
1941	Aug. 27, 1941	7.85	4,060	1954	Aug. 6, 1954	16.90	14,800
1942	Apr. 23, 1942	8.65	4,850	1955	May 19, 1955	16.70	17,000
	Aug. 14, 1942	9.30	4,800		Aug. 7, 1955	11.60	8,560
	Aug. 15, 1942	16.23	14,700		Aug. 9, 1955	8.33	5,060
	Sept. 1, 1942	10.40	6,880	1956	July 23, 1956	10.40	7,160
1943	Aug. 17, 1943	7.43	2,840		Aug. 19, 1956	7.72	3,770
1944	July 19, 1944	7.65	3,180	1957	June 12, 1957	8.95	5,320
1945	July 11, 1945	9.78	6,080	1958	May 16, 1958	9.50	5,300
	July 26, 1945	9.31	5,370		May 25, 1958	11.05	6,800
	Aug. 9, 1945	7.94	3,750		July 6, 1958	15.55	12,100
	Aug. 15, 1945	13.95	12,000		July 12, 1958	11.55	8,210
1946	July 1, 1946	9.79	5,960		July 22, 1958	6.50	3,140
	Aug. 29, 1946	10.51	6,910		July 25, 1958	11.65	7,850
	Sept. 13, 1946	9.62	5,760		Aug. 21, 1958	8.00	4,200

a Slope-area measurement 2 miles upstream from present site.

1205. Arkansas River near Rocky Ford, Colo.
(Published as "at Rocky Ford" 1897-1900)

Location.--Lat 38°06'10", long 103°44'00", in sec.25, T.22 S., R.57 W., at old ford near site of bridge on State Highway 71, 3½ miles northwest of Rocky Ford.

Drainage area.--11,086 sq mi, of which about 11,032 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Altitude of the gage was 4,200 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 6,700 cfs.

Remarks.--Natural flow substantially affected by transmountain diversions, storage reservoirs, and diversions for irrigation. Records for February 1898, March 1900, and April to December 1901, furnished by State engineer of Colorado. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	July 14, 1898	3.70	4,600	1901	June 1, 2, 1901	4.90	6,220
1899	Aug. 5, 1899	4.80	4,000	1902	Feb. 13, 1902	2.70	1,850
				1903	June 10, 1903	8.00	27,500

1210. Timpas Creek near Rocky Ford, Colo.

Location.--Lat 37°57'20", long 103°43'20", in SW¼ sec.18, T.24 S., R.56 W., at Catline ditch crossing, 7 miles south of Rocky Ford and 9 miles upstream from mouth.

Drainage area.--451 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1925; recording thereafter. Prior to Sept. 30, 1927, at different datum. Altitude of present gage is 4,220 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 300 cfs and extended to 11,200 cfs on basis of slope-area measurements at gage heights 14.25, 14.6, and 16.0 ft.

Bankfull stage.--12 ft.

Historical data.--Flood of July 5, 1958, was highest known since at least 1928.

Remarks.--Small diversions above station for irrigation. Diversions should not substantially affect maximum flows. Records for 1923-27 furnished by State engineer of Colorado. Base for partial-duration series, 1,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 8, 1903	16.0	11,200	1945	Aug. 15, 1945	8.80	4,580
1927	June 11, 1927	8.20	3,490	1946	Sept.13, 1946	4.34	1,510
	July 21, 1927	8.10	3,410	1947	July 8, 1947	3.49	1,060
	July 23, 1927	13.0	7,700				
	July 29, 1927	13.0	7,700	1948	June 20, 1948	6.32	2,710
	Aug. 3, 1927	7.60	3,060				
	Aug. 11, 1927	4.70	1,320	1949	June 4, 1949	4.24	1,300
1942	Apr. 23, 1942	5.34	2,150				
	Aug. 14, 1942	8.42	4,300	1950	July 15, 1949	6.90	3,100
1943	Aug. 20, 1943	3.58	1,110		July 6, 1950	5.80	2,310
					July 20, 1950	4.15	1,250
1944	May 29, 1944	5.77	2,450	July 24, 1950	14.25	9,510	
				1953	July 12, 1953	14.65	10,000
1945	July 11, 1945	5.35	2,150	1956	July 23, 1956	16.73	15,500
	July 26, 1945	7.00	3,230				
	Aug. 3, 1945	-	b4,000	1958	July 5, 1958	19.0	23,000
	Aug. 8, 1945	7.51	3,580				

1230. Arkansas River at La Junta, Colo.
(Published as "near La Junta" 1903)

Location.--Lat 37°59', long 103°31', in sec.2, T.24 S., R.55 W., on downstream side near middle of East Bridge in La Junta, just upstream from King Arroyo.

Drainage area.--12,210 sq mi, of which about 12,095 sq mi contributes directly to surface runoff.

Gage.--Nonrecording Sept. 27, 1893, to Dec. 31, 1895, and Apr. 7, 1903, to Apr. 10, 1912 at several sites within 2 miles of present site at different datums. Recording and nonrecording Apr. 11, 1912, to June 12, 1940 at several sites within 1 mile of present site at different datums. Recording since June 12, 1940, at present site and datum. Datum of present gage is 4,039.60 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 15,000 cfs and extended on basis of slope-area measurement at 200,000 cfs.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 400,000 acres, and return flow from irrigated areas. Diversions for irrigation should substantially affect maximum flows. Records for 1914-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1894	May 31, 1894	-	30,000	1934	Sept. 15, 1934	8.90	12,600
1903	June 11, 1903	7.00	10,300	1935	May 19, 1935	7.32	18,400
1912	July 31, 1912	8.00	21,000	1936	Aug. 8, 1936	-	33,000
1913	June 6, 1913	2.58	704	1937	June 1, 1937	-	21,800
1914	June 16, 1914	7.40	14,200	1938	Sept. 4, 1938	-	13,400
1915	June 4, 1915	4.80	6,940	1939	Aug. 19, 1939	-	6,410
1916	Aug. 22, 1916	5.25	3,930	1940	Sept. 10, 1940	6.70	4,420
1917	June 21, 1917	3.95	1,210	1941	July 19, 1941	6.35	4,080
1918	June 24, 1918	4.30	4,300	1942	Apr. 25, 1942	9.96	34,800
1919	Aug. 9, 1919	4.40	5,000	1943	Oct. 18, 1942	5.50	2,890
1920	July 8, 1920	3.95	1,870	1944	May 28, 1944	7.05	7,730
1921	June 4, 1921	18.4	200,000	1945	Aug. 15, 1945	8.17	12,900
1922	July 2, 1922	4.25	1,670	1946	Aug. 24, 1946	5.79	6,520
1923	Aug. 23, 1923	10.9	60,000	1947	June 21, 1947	7.93	12,800
1924	June 16, 1924	4.0	2,940	1948	June 14, 1948	8.44	15,800
1925	July 23, 1925	5.51	13,200	1949	June 6, 1949	6.63	7,300
1926	June 18, 1926	3.80	2,600	1950	July 26, 1950	8.95	19,500
1927	Aug. 3, 1927	6.35	11,600	1951	July 23, 1951	10.0	27,900
1928	June 2, 1928	6.00	14,500	1952	Apr. 22, 1952	6.47	5,060
1929	Aug. 7, 1929	7.30	17,300	1953	July 12, 1953	10.70	17,700
1930	Aug. 29, 1930	4.86	4,940	1954	Aug. 7, 1954	9.20	9,720
1931	May 29, 1931	3.00	900	1955	May 20, 1955	14.2	50,000
1932	July 31, 1932	5.70	6,200	1956	July 23, 1956	7.50	5,000
1933	May 5, 1933	7.00	18,300	1957	May 16, 1957	10.2	17,500
				1958	July 6, 1958	11.0	20,400

1235. Horse Creek near Sugar City, Colo.

Location.--Lat 38°14'10", long 103°37'40", in sec.12, T.21 S., R.56 W., at bridge on State Highway 96, a quarter of a mile upstream from unnamed tributary and 1.3 miles east of Sugar City.

Drainage area.--1,080 sq mi.

Gage.--Recording. Datum of gage is 4,271.40 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs.

Remarks.--A few small diversions above station for irrigation. Diversions should not substantially affect maximum flows. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges of Horse Creek near Sugar City, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 27, 1940	4.28	1,460	1944	July 19, 1944	4.43	1,780
1941	July 26, 1941	4.73	1,950	1945	Aug. 8, 1945	4.92	2,500
	Sept. 22, 1941	4.25	1,550				
1942	Oct. 23, 1941	6.20	5,400	1946	Aug. 28, 1946	5.37	2,960
	Sept. 2, 1942	4.88	1,730				
1943	Aug. 15, 1943	3.25	438	1947	May 16, 1947	5.15	2,420

1240. Arkansas River at Las Animas, Colo.

Location.--Lat 38°05'08", long 103°12'50", in SW $\frac{1}{4}$ sec. 35, T.22 S., R.52 W., 0.4 mile downstream from bridge on U. S. Highway 50, 1 mile north of Las Animas, and 3 $\frac{1}{2}$ miles upstream from Purgatoire River.

Drainage area.--14,417 sq mi, of which about 13,976 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 3,874.97 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, irrigation of about 412,000 acres, and return flow from irrigated areas. Diversion should substantially affect maximum flows. Records for 1939-49 computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 26, 1939	5.63	4,320	1949	June 5, 1949	7.54	5,380
1940	Sept. 11, 1940	5.61	3,070	1950	July 27, 1950	9.06	8,170
1941	Aug. 27, 1941	7.00	4,010	1951	Aug. 1, 1951	7.89	6,370
1942	Apr. 25, 1942	12.58	23,600	1952	Apr. 22, 1952	5.72	3,060
1943	Oct. 18, 1942	5.50	2,740	1953	July 12, 1953	7.85	6,260
1944	May 28, 1944	8.65	9,280	1954	Aug. 7, 1954	7.48	5,880
1945	Aug. 16, 1945	9.82	8,840	1955	May 20, 1955	15.03	44,000
1946	Aug. 28, 1946	6.72	4,670	1956	July 23, 1956	6.29	3,150
1947	June 21, 1947	10.23	9,580	1957	May 17, 1957	11.78	21,500
1948	June 14, 1948	9.97	8,780	1958	July 6, 1958	11.77	6,280

1245. Purgatoire River at Trinidad, Colo.

(Published as "Purgatory River" 1898-99, 1905-12)

Location.--Lat 37°10'15", long 104°30'31", in NW $\frac{1}{4}$ sec. 13, T.33 S., R.64 W., on railroad bridge at foot of College Street, 590 ft downstream from Animas Street Bridge in Trinidad.

Drainage area.--795 sq mi.

Gage.--Nonrecording prior to Nov. 11, 1921, and since May 29, 1955; recording Nov. 11, 1921, to May 29, 1955. May 1, 1896, to July 31, 1899, at Animas Street Bridge 590 ft upstream at datum 4.7 ft higher. Aug. 25, 1905, to Nov. 30, 1912, at Animas Street Bridge at datum 3.0 ft higher. Apr. 1, 1916, to Nov. 10, 1921, at site 500 ft downstream at datum 2.01 ft higher. Nov. 11, 1921, to Nov. 30, 1922, at site about three-quarters of a mile upstream and Dec. 1, 1922, to Mar. 19, 1934, at site about half a mile upstream at different datums. Mar. 20, 1934, to Dec. 10, 1950, at site 1,400 ft upstream at foot of State Street Bridge at datum 10.00 ft higher. Dec. 11, 1950, to May 29, 1955, at site 90 ft upstream at datum 5.00 ft higher. Datum of present gage is 5,976.76 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,800 cfs and extended on basis of several indirect measurements above and below station.

Historical data.--Flood of Sept. 30, 1904, was greatest known since at least 1859.

Remarks.--Diversions above station for irrigation of about 6,500 acres. Diversions should not substantially affect maximum flows. Records for 1916-33, furnished by State engineer of Colorado. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Purgatoire River at Trinidad, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	Sept. 17, 1896	8.2	10,500	1932	July 23, 1932	5.35	7,600
1897	Aug. 15, 1897	6.0	5,400		Aug. 7, 1932	5.2	7,200
1898	Aug. 6, 1898	7.7	9,500		Aug. 14, 1932	3.7	3,660
					Aug. 21, 1932	4.9	6,400
1899	July 29, 1899	5.6	4,300	1933	June 12, 1933	4.75	5,020
1904	Sept. 30, 1904	16.6	45,400		June 18, 1933	4.19	3,620
1908	July 24, 1908	8.7	5,500		June 20, 1933	4.87	5,320
1909	Sept. 6, 1909	12.3	13,300		July 15, 1933	4.64	4,750
1910	Aug. 16, 1910	8.8	5,700		July 16, 1933	6.01	8,740
1911	July 18, 1911	10.6	9,400		Aug. 1, 1933	7.00	12,200
1912	Oct. 5, 1911	7.6	1,750		Aug. 6, 1933	6.61	10,800
					Aug. 7, 1933	6.56	10,700
1917	Sept. 8, 1917	4.0	2,260		Sept. 11, 1933	6.30	9,750
1922	June 12, 1922	5.35	7,400	1934	July 26, 27, 1934	3.80	1,800
	July 1, 1922	3.37	2,140	1935	July 14, 1935	4.00	2,560
	July 23, 1922	4.90	5,800		Aug. 30, 1935	3.95	2,450
	July 31, 1922	5.05	6,250	1936	July 28, 1936	6.4	8,660
	Sept. 3, 1922	4.75	5,380		July 30, 1936	7.03	10,900
1923	June 7, 1923	3.93	5,910		Aug. 2, 1936	4.10	2,620
	June 20, 1923	4.95	11,400		Aug. 3, 1936	4.28	2,960
	July 10, 1923	4.50	8,410	1937	June 14, 1937	4.40	2,550
	July 16, 1923	4.40	7,920		Aug. 30, 1937	9.48	15,000
	July 17, 1923	3.70	5,030		Sept. 7, 1937	7.20	7,490
	July 18, 1923	3.50	4,330	1938	June 1, 1938	5.95	5,310
	Aug. 7, 1923	3.50	4,740		June 4, 1938	9.50	14,800
	Aug. 8, 1923	4.75	9,650		July 17, 1938	9.40	14,450
	Aug. 12, 1923	5.50	14,100		July 27, 1938	6.10	5,610
	Aug. 17, 1923	3.20	3,460		Aug. 31, 1938	5.00	3,540
	Aug. 21, 1923	3.13	3,260	1939	Oct. 8, 1938	3.61	1,620
	Aug. 23, 1923	4.90	10,500	1940	Sept. 10, 1940	4.49	2,830
	Sept. 1, 1923	3.00	2,540	1941	May 2, 1941	7.43	9,320
	Sept. 14, 1923	3.30	3,260		June 14, 1941	5.10	3,850
	Sept. 18, 1923	3.70	5,030		June 24, 1941	4.30	2,510
1924	Oct. 1, 1923	6.30	19,800		July 24, 1941	5.60	4,500
	Oct. 5, 1923	3.51	3,670		Sept. 23, 1941	6.13	5,430
	July 14, 1924	3.80	4,460	1942	Apr. 23, 1942	14.03	35,000
	Aug. 13, 1924	3.90	5,260		July 20, 1942	4.95	4,650
1925	July 21, 1925	4.50	7,600		Aug. 12, 1942	8.56	12,100
	July 22, 1925	10.3	33,000		Aug. 14, 1942	4.00	3,510
1926	July 26, 1926	3.76	5,290		Aug. 18, 1942	5.52	5,720
1927	July 29, 1927	8.61	20,000		Sept. 1, 1942	4.56	4,290
	Aug. 17, 1927	3.50	3,130	1943	Aug. 4, 1943	3.01	2,160
	Aug. 23, 1927	8.00	19,600		Aug. 17, 1943	5.15	5,180
1928	May 10, 1928	4.35	5,750	1944	May 27, 1944	3.24	2,540
	Aug. 15, 1928	4.38	5,990		June 10, 1944	4.02	3,560
	Aug. 17, 1928	5.70	9,600		July 10, 1944	3.18	2,250
1929	May 30, 1929	5.50	13,200		July 19, 1944	2.98	2,130
	June 24, 1929	3.60	3,990	1945	July 13, 1945	6.30	7,100
	July 24, 1929	3.48	3,900		Aug. 2, 1945	3.60	2,690
	Aug. 6, 1929	4.18	6,420		Aug. 6, 1945	4.10	3,580
	Aug. 25, 1929	4.10	6,500		Aug. 25, 1945	3.45	2,330
	Aug. 28, 1929	3.70	5,090		Sept. 5, 1945	4.85	4,730
1930	July 25, 1930	2.70	2,300	1946	Aug. 28, 1946	3.54	2,740
	July 28, 1930	3.07	3,250		Sept. 7, 1946	3.60	2,690
	July 30, 1930	5.30	12,000	1947	July 7, 1947	3.25	2,060
	July 31, 1930	5.50	13,200		Aug. 24, 1947	5.95	6,620
	Aug. 13, 1930	3.50	4,370	1948	June 19, 1948	7.16	8,450
	Sept. 5, 1930	4.00	5,750		July 14, 1948	4.97	3,780
1931	July 3, 1931	5.40	9,520		Aug. 14, 1948	4.35	2,540
	Aug. 9, 1931	3.10	3,080		Aug. 21, 1948	6.00	5,150
1932	June 26, 1932	4.70	6,000	1949	June 10, 1949	4.08	2,080
	June 29, 1932	4.90	6,400		June 19, 1949	4.60	3,520
	July 2, 1932	3.50	3,320		June 21, 1949	5.50	4,930
					July 1, 1949	4.14	2,560
					July 8, 1949	4.59	3,280

Peak stages and discharges of Purgatoire River at Trinidad, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	July 10, 1949	4.70	3,470	1955	Aug. 11, 1955	6.10	2,040
	July 14, 1949	4.28	2,560		Aug. 15, 1955	10.10	8,600
	July 22, 1949	4.30	2,410		Aug. 21, 1955	9.00	5,610
1950	July 26, 1950	5.69	4,830		Aug. 26, 1955	8.50	3,910
	Aug. 2, 1950	11.64	23,900		Aug. 28, 1955	7.44	2,360
1951	July 22, 1951	4.38	3,530	1956	June 28, 1956	8.38	4,050
	July 24, 1951	4.40	3,570		July 19, 1956	9.50	5,950
1952	Aug. 21, 1952	6.40	9,090		July 31, 1956	8.60	4,420
	Aug. 27, 1952	3.40	2,160		Aug. 2, 1956	9.70	6,290
	Aug. 29, 1952	3.98	3,150		Aug. 19, 1956	8.00	3,400
1953	Aug. 4, 1953	5.25	5,330	1957	June 1, 1957	7.32	2,020
	Sept. 1, 1953	6.10	7,440		July 14, 1957	7.77	2,750
1954	July 22, 1954	6.70	9,300		July 15, 1957	8.20	3,570
	July 23, 1954	4.13	2,860		July 19, 1957	7.43	2,350
	July 25, 1954	3.82	2,290		July 20, 1957	7.37	2,260
	Aug. 5, 1954	6.05	7,350		July 25, 1957	7.44	2,380
	Aug. 6, 1954	4.30	2,630		July 31, 1957	8.60	4,690
	Aug. 7, 1954	5.20	5,220		Aug. 12, 1957	8.30	3,720
	Aug. 16, 1954	5.80	6,700		Aug. 28, 1957	9.41	5,520
1955	May 19, 1955	14.35	28,000		Sept. 2, 1957	8.17	3,260
	July 27, 1955	5.54	2,020	1958	June 5, 1958	8.90	4,400
	Aug. 6, 1955	6.62	3,350		July 7, 1958	8.96	4,340
					July 31, 1958	9.55	5,290
					Aug. 17, 1958	8.05	2,690

1260. Purgatoire River near Alfalfa, Colo.
(Published as "Purgatory River" 1905-7)

Location.--Lat 37°11'30", long 104°07'30", in NW¹ sec.9, T.33 S., R.60 W., 700 ft downstream from San Francisco Creek, 1½ miles southeast of Alfalfa, and 20 miles east of Trinidad.

Drainage area.--1,320 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1907, at site 650 ft downstream at different datum; recording thereafter. Feb. 27, 1924, to Sept. 30, 1928, at site 1 mile downstream at different datum. Oct. 1, 1951, to July 5, 1955, at site 150 ft upstream at datum 3.0 ft higher. Altitude of present gage is 5,280 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 2,700 cfs and extended to 14,900 cfs on basis of five slope-area measurements.

Remarks.--Diversions above station for irrigation of about 29,000 acres. Diversions should not substantially affect maximum flows. Records for 1924-28, furnished by State engineer of Colorado. Base for partial-duration series, 2,000 cfs. Only annual peaks prior to 1952.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Aug. 25, 1905	19.0	15,000	1956	May 23, 1956	19.30	13,000
1906	July 16, 1906	13.1	6,000		July 16, 1956	8.03	2,320
					July 19, 1956	8.00	2,300
1907	June 6, 1907	13.0	5,800		July 22, 1956	7.52	2,010
1925	July 23, 1925	17.25	17,000		July 31, 1956	8.50	2,600
					Aug. 2, 1956	8.92	2,870
1927	Aug. 7, 1927	18.0	19,100		Aug. 18, 1956	10.88	4,400
					Aug. 19, 1956	8.72	2,730
1952	Aug. 19, 1952	6.68	3,320	1957	May 15, 1957	8.49	2,590
	Sept. 13, 1952	6.79	3,440		May 18, 1957	8.92	2,870
					June 1, 1957	12.60	5,790
1953	May 28, 1953	7.32	3,660		July 18, 1957	8.10	2,360
	June 16, 1953	12.75	8,740		July 21, 1957	7.72	2,130
	July 11, 1953	10.35	6,320	1958	May 24, 1958	9.65	3,420
	Aug. 4, 1953	6.56	3,290		June 6, 1958	9.15	3,040
1954	May 23, 1954	5.70	2,700		June 8, 1958	8.10	2,360
	July 22, 1954	27.60	37,800		June 21, 1958	8.72	2,730
					Aug. 1, 1958	11.95	5,260
1955	May 19, 1955	31.9	41,900		Aug. 21, 1958	12.20	5,460

1265. Purgatoire River at Ninemile Dam, near Higbee, Colo.

Location.--Lat 37°44', long 103°29', in NW $\frac{1}{4}$ sec. 7, T.27 S., R.54 W., 850 ft upstream from Ninemile Dam, 4 miles southwest of Higbee, and 5 $\frac{1}{2}$ miles upstream from Smith Canyon.

Drainage area.--2,900 sq mi.

Gage.--Recording. Prior to Oct. 28, 1934, at site 550 ft downstream at datum 0.60 ft higher. Datum of present gage is 4,240.59 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs and extended to 45,000 cfs on basis of slope-area measurement at gage height about 14.3 ft, present datum.

Remarks.--Diversions above station for irrigation of about 32,000 acres. Diversions should not substantially affect maximum flows. Records for 1924-33 furnished by State engineer of Colorado. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	May 21, 1954	3.35	1,850	1937	July 18, 1937	6.00	10,000
					Aug. 31, 1937	4.80	3,920
1925	June 7, 1925	4.90	7,800		Sept. 5, 1937	5.83	8,830
	July 21, 1925	5.05	9,650		Sept. 8, 1937	5.70	7,450
	July 23, 1925	5.55	12,000				
	July 30, 1925	4.50	5,610	1938	May 22, 1938	5.0	4,710
	Aug. 4, 1925	6.00	14,000		June 16, 1938	4.8	3,920
1926	June 26, 1926	4.00	3,560		July 17, 1938	5.2	5,530
	July 11, 1926	4.82	7,320		July 20, 1938	5.5	7,250
1927	July 22, 1927	3.75	3,080		Aug. 11, 1938	5.7	8,050
	July 23, 1927	4.10	4,890		Sept. 1, 1938	4.67	3,430
	July 29, 1927	4.00	4,490		Sept. 13, 1938	4.70	3,540
	July 30, 1927	5.50	11,800	1939	Aug. 20, 1939	4.67	3,430
	July 31, 1927	5.60	12,200				
	Aug. 1, 1927	6.30	15,300	1940	June 10, 1940	5.30	6,750
	Aug. 2, 1927	4.30	5,750		Sept. 10, 1940	5.67	8,570
	Aug. 3, 1927	7.30	19,500				
	Aug. 8, 1927	5.30	10,900	1941	May 2, 1941	7.10	14,400
	Aug. 19, 1927	4.50	6,690		July 4, 1941	4.66	4,510
1929	June 24, 1929	5.00	9,400		Aug. 12, 1941	4.43	3,470
	Aug. 7, 1929	10.4	33,700		Aug. 28, 1941	4.80	4,510
1930	May 15, 1930	4.52	5,470		Sept. 24, 1941	4.85	4,710
1931	Oct. 3, 1930	4.25	4,900	1942	Apr. 20, 1942	7.40	15,400
1932	July 22, 1932	4.25	4,800		Apr. 23, 1942	14.03	43,500
1933	May 4, 1933	3.83	3,860		June 23, 1942	5.65	6,830
	July 17, 1933	4.10	4,940		Aug. 15, 1942	6.70	12,000
	Aug. 1, 1933	3.80	3,750		Sept. 2, 1942	9.04	23,400
	Aug. 29, 1933	4.83	8,560	1943	Oct. 18, 1942	7.48	16,700
	Sept. 12, 1933	4.48	6,750		June 28, 1943	5.60	6,830
	Sept. 13, 1933	4.00	4,530		Aug. 17, 1943	4.70	3,660
1934	July 27, 1934	5.30	10,880	1944	May 28, 1944	7.12	14,100
	Sept. 15, 1934	12.00	45,000		July 19, 1944	5.38	5,720
1935	May 19, 1935	5.89	6,570	1945	July 14, 1945	4.55	3,140
	May 26, 1935	5.17	4,410		Aug. 21, 1945	5.28	5,090
	July 22, 1935	7.86	16,200	1946	June 19, 1946	4.59	1,970
	Aug. 18, 1935	5.68	5,940	1947	July 10, 1947	5.90	7,910
	Aug. 28, 1935	7.32	13,000	1948	June 1, 1948	8.00	18,000
	Sept. 7, 1935	5.53	5,490	1949	June 5, 1949	10.19	26,100
1936	May 24, 1936	6.30	11,200		July 15, 1949	4.52	3,390
	July 29, 1936	5.10	5,110	1950	July 23, 1950	5.36	6,850
	Aug. 7, 1936	6.78	13,100		July 26, 1950	5.43	6,320
1937	June 1, 1937	5.40	6,450		Sept. 13, 1950	5.38	5,790
	June 3, 1937	5.00	4,710	1951	June 15, 1951	4.68	3,650
	June 12, 1937	5.15	5,320		July 12, 1951	6.22	10,800

Peak stages and discharges of Purgatoire River at Ninemile Dam,
near Higbee, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	July 23, 1951	8.51	19,900	1954	Aug. 13, 1954	5.82	9,050
	Aug. 2, 1951	4.79	4,770	1955	May 19, 1955	17.7	80,000
	Aug. 21, 1951	5.90	8,650		May 21, 1955	4.78	5,650
	Aug. 23, 1951	4.52	3,390		May 23, 1955		6,600
1952	July 2, 1952	4.99	4,830	1956	May 24, 1956	9.20	7,920
1953	May 29, 1953	-	-	1957	May 18, 1957	6.00	6,650
	June 17, 1953	-	-		June 2, 1957	5.35	4,430
	July 3, 1953	-	-	1958	May 25, 1958	5.81	5,550
	July 12, 1953	8.93	24,200		June 19, 1958	6.18	7,280
	July 19, 1953	4.90	5,400		July 6, 1958	7.23	11,400
	Aug. 5, 1953	4.33	3,420		July 12, 1958	6.10	7,000
	Aug. 17, 1953	4.43	3,740		Aug. 21, 1958	5.50	4,940
1954	July 23, 1954	14.30	45,000				
	Aug. 7, 1954	6.28	11,100				

1280. Purgatoire River at Highland Dam, near Las Animas, Colo.

Location.--Lat 37°55', long 103°18', in sec.1, T.25 S., R.53 W., 70 ft upstream from diversion dam for Highland ditch and 11 miles southwest of Las Animas.Drainage area.--3,376 sq mi.Gage.--Recording. Altitude of gage is 3,980 ft (from topographic map).Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended to 80,000 cfs on basis of slope-area measurement by the Bureau of Reclamation and office of State Engineer.Remarks.--Diversions above station for irrigation of about 33,000 acres. Diversions should not substantially affect most maximum flows. Records for 1932-33 furnished by State engineer of Colorado. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	July 22, 1932	5.00	4,360	1938	June 17, 1938	5.11	4,500
1933	May 4, 1933	5.60	5,800		July 18, 1938	6.12	7,300
	July 15, 1933	5.20	4,700		July 21, 1938	5.00	4,270
	July 17, 1933	5.00	4,200		Aug. 11, 1938	5.31	5,120
	Aug. 27, 1933	8.00	13,500	1939	Aug. 20, 1939	4.85	3,800
	Aug. 29, 1933	5.30	4,950	1940	June 10, 1940	5.84	5,900
	Sept. 12, 1933	5.50	5,500		Aug. 17, 1940	5.25	4,650
					Sept. 11, 1940	5.75	5,380
1934	July 27, 1934	5.40	5,200	1941	May 3, 1941	9.54	17,000
	Sept. 15, 1934	14.0	43,000		July 4, 1941	5.10	4,050
1935	May 19, 1935	6.7	8,200		Aug. 27, 1941	6.5	7,950
	June 27, 1935	6.0	6,320		Sept. 23, 1941	6.23	7,330
	Aug. 18, 1935	6.0	6,320	1942	Apr. 20, 1942	8.5	20,300
	Aug. 29, 1935	6.2	6,820		Apr. 24, 1942	16.8	60,000
	Sept. 8, 1935	7.0	9,050		June 23, 1942	5.44	4,950
1936	May 8, 1936	6.0	6,320		Aug. 15, 1942	6.58	7,780
	May 24, 1936	5.6	5,310		Sept. 2, 1942	10.46	34,000
	June 11, 1936	5.8	5,810	1943	Oct. 18, 1942	8.08	13,800
	July 29, 1936	6.2	6,840		June 28, 1943	5.48	5,175
	Aug. 7, 1936	7.05	9,200	1944	May 28, 1944	8.95	16,900
1937	June 1, 1937	5.3	5,220		July 20, 1944	5.65	5,520
	July 15, 1937	6.0	7,300		Aug. 27, 1944	5.31	4,620
	July 26, 1937	5.2	4,870				
	Sept. 6, 1937	7.0	10,600				
	Sept. 8, 1937	5.4	5,000				

Peak stages and discharges of Purgatoire River at Highland Dam,
near Las Animas, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 15, 1945	5.55	5,400	1951	July 12, 1951	6.70	8,400
	Aug. 21, 1945	5.78	5,850		July 23, 1951	9.20	17,200
1946	June 19, 1946	5.50	4,800		Aug. 21, 1951	6.20	8,700
				1952	July 3, 1952	6.80	8,700
1947	July 10, 1947	5.32	4,950		1953	July 3, 1953	-
1948	June 1, 1948	8.85	15,100	July 12, 1953		10.33	21,300
				1954	July 23, 1954	14.05	40,300
1949	June 5, 1949	11.5	26,100		Aug. 7, 1954	6.95	10,300
	July 15, 1949	5.42	5,100		Aug. 13, 1954	5.85	6,840
1950	July 19, 1950	6.90	8,850	1955	May 20, 1955	19.30	73,400
	Aug. 29, 1950	6.90	9,000		Aug. 11, 1955	-	-
	Sept. 14, 1950	5.26	4,500		Sept. 11, 1955	5.80	6,300
1951	July 4, 1951	6.20	6,900				

1285. Purgatoire River near Las Animas, Colo.

Location.--Lat 38°02'02", long 103°12'00", in sec.23, T.23 S., R.52 W., at bridge on State Highway 101, 2.8 miles southeast of Las Animas and 4.5 miles upstream from mouth.

Drainage area.--3,503 sq mi.

Gage.--Recording. Apr. 1, 1922, to June 30, 1924, at site about 4 miles downstream at different datum; July 1, 1924, to Sept. 30, 1931, at present site at different datum. Datum of present gage is 3,879.94 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs.

Remarks.--Diversions above station for irrigation of about 36,000 acres. Diversions should not substantially affect most maximum flows. Records for 1922-31 furnished by State engineer of Colorado. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	July 30, 1922	4.0	5,650	1928	June 29, 1928	6.00	11,000
1923	June 8, 1923	5.0	7,170	1929	Aug. 3, 1929	4.80	6,800
	June 17, 1923	8.0	28,400		Aug. 7, 1929	8.3	32,000
	Aug. 5, 1923	5.73	8,340	1930	May 16, 1930	2.38	9,780
	Aug. 13, 1923	7.50	21,500		Aug. 15, 1930	3.00	12,100
	Aug. 17, 1923	7.70	23,500		1931	Oct. 4, 1930	3.30
	Aug. 23, 1923	7.60	22,500	1949		June 6, 1949	9.75
	Sept. 16, 1923	6.75	12,100		1950	June 20, 1950	5.44
1924	Oct. 5, 1923	6.35	8,020			July 10, 1950	5.10
	Oct. 10, 1923	6.00	6,340	July 19, 1950		5.55	7,950
1925	June 7, 1925	5.00	8,500	July 24, 1950		5.45	7,650
	July 21, 1925	5.10	11,400	July 27, 1950		5.65	8,280
	July 23, 1925	4.95	12,000	Aug. 29, 1950	6.50	11,500	
	Aug. 5, 1925	4.80	10,000	Sept. 14, 1950	5.20	6,900	
1926	July 11, 1926	5.00	13,400	Sept. 16, 1950	6.10	10,300	
1927	July 14, 1927	4.42	8,650	1951	June 18, 1951	5.45	6,990
	July 21, 1927	8.80	49,000		July 12, 1951	6.33	10,000
	Aug. 1, 1927	5.30	16,400		July 23, 1951	8.06	17,600
	Aug. 3, 1927	5.50	18,000		Aug. 10, 1951	6.76	13,000
	Aug. 8, 1927	5.60	18,800		Aug. 21, 1951	6.00	8,800
	Aug. 19, 1927	4.40	9,800	1952	July 3, 1952	5.00	5,600
1928	May 11, 1928	7.50	25,000				
	June 2, 1928	5.50	8,200				

Peak stages and discharges of Purgatoire River near Las Animas, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	July 3, 1953	6.18	8,520	1956	June 27, 1956	5.11	10,600
	July 12, 1953	8.80	20,900		July 23, 1956	6.55	10,900
	Aug. 18, 1953	4.70	6,120		Aug. 19, 1956	7.50	14,200
1954	July 23, 1954	11.55	38,800	1957	June 2, 1957	4.75	5,520
	Aug. 7, 1954	6.38	10,500				
	Aug. 13, 1954	-	8,100	1958	May 25, 1958	4.90	6,150
1955	May 20, 1955	15.00	70,000		June 20, 1958	5.43	7,520
	May 24, 1955	2.31	6,550		July 6, 1958	6.17	9,710
	Aug. 7, 1955	2.57	7,850		July 12, 1958	5.13	6,990
	Aug. 11, 1955	4.79	20,500		Sept. 6, 1958	5.05	6,520

1295. Rule Creek near Caddoa, Colo.

Location.--Lat 38°00', long 103°04', in SE $\frac{1}{4}$ sec.36, T.23 S., R.51 W., 5 miles upstream from mouth and 9 miles southwest of Caddoa.

Drainage area.--435 sq mi.

Gage.--Recording. Altitude of gage is 3,890 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended on basis of slope-area measurement at 11,600 cfs.

Remarks.--One small diversion above station for irrigation, and one small storage reservoir above station. Regulation and diversion should not substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Aug. 22, 1941	9.57	1,300	1949	June 5, 1949	20.05	11,600
1942	June 22, 1942	7.19	738				
1943	June 28, 1943	11.30	1,720	1951	Aug. 20, 1951	19.20	9,500
1944	May 28, 1944	5.08	297				
1945	Aug. 15, 1945	9.05	1,110	1955	May 19, 1955	17.15	4,810
1946	Aug. 28, 1946	9.24	1,220	1956	July 19, 1956	12.26	2,300

1305. Arkansas River below John Martin Reservoir, Colo.
(Published as "at Caddoa" 1938-47)

Location.--Lat 38°05'00", long 102°55'10", in NW $\frac{1}{4}$ sec.4, T.23 S., R.49 W., 1 mile upstream from Caddoa Creek, $1\frac{1}{2}$ miles downstream from John Martin Dam, and 3 miles southeast of Hasty.

Drainage area.--18,917 sq mi, of which about 18,132 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Feb. 22, 1940, at site 3 miles upstream at datum 22.83 ft higher; Feb. 22, 1940, to Feb. 4, 1943, at site 700 ft upstream at datum 3.64 ft higher. Datum of present gage is 3,737.40 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended on basis of flow over dam and critical-depth measurement at 40,000 cfs.

Remarks.--Flow regulated by John Martin Reservoir since Dec. 10, 1943 (capacity, 645,500 acre-ft). Diversions above station for irrigation of about 438,000 acres of which some are below gage. Diversions and regulation should substantially affect maximum flows. Prior to 1950, records computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges of Arkansas River below John Martin Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	July 18, 1938	5.85	11,800	1949	Aug. 11, 1949	3.33	1,390
1939	May 26, 1939	4.06	3,150	1950	Apr. 2, 1950	3.09	1,220
1940	Sept. 11, 1940	5.00	6,200	1951	Aug. 30, 1951	3.85	1,810
1941	May 3, 1941	6.40	12,800	1952	May 31, 1952	4.40	2,510
1942	Apr. 24, 1942	10.46	40,000	1953	July 13, 1953	4.03	2,300
1943	Oct. 19, 1942	3.66	5,270	1954	May 24, 1954	3.46	1,630
1944	May 31, 1944	6.17	4,640	1955	July 2, 1955	3.32	1,370
1945	Aug. 9, 1945	3.70	1,920	1956	Aug. 19, 1956	4.35	3,000
1946	Aug. 25, 1946	4.08	2,600	1957	May 16, 1957	3.78	1,860
1947	June 27, 1947	5.91	5,100	1958	Sept. 8, 1958	3.67	1,350
1948	July 14, 1948	3.42	1,440				

1310. Caddoa Creek at Caddoa, Colo.

Location.--Lat 38°03'40", long 102°55'05", in sec.9, T.23 S., R.49 W., 0.3 mile east of Caddoa, 1 mile east of John Martin Dam, and 2 miles upstream from mouth.

Drainage area.--131 sq mi.

Gage.--Recording. Altitude of gage is 3,740 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 110 cfs and extended above on basis of contracted-opening measurements at 6,840 cfs.

Remarks.--No important diversion above station. Base for partial-duration series, 320 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Aug. 14, 1942	4.45	751	1946	Aug. 23, 1946	5.34	1,050
1943	Aug. 15, 1943	2.98	317		Aug. 28, 1946	6.20	1,540
1944	May 28, 1944	3.42	436	1949	June 1949	9.42	a6,840
	Aug. 20, 1944	3.19	340	1956	July 19, 1956	-	b2,090
1945	July 10, 1945	8.20	4,200		Aug. 19, 1956	10.7	b11,800

a Annual peak only.

b By slope-area measurements; supplementary peaks not determined.

1330. Arkansas River at Lamar, Colo.

Location.--Lat 38°06'17", long 102°37'01", in SE $\frac{1}{4}$ sec.30, T.22 S., R.46 W., 150 ft downstream from bridge on U. S. Highways 50 and 287 and 1 mile north of Lamar.

Drainage area.--19,780 sq mi, of which about 18,830 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to June 4, 1941, at site 150 ft upstream at datum 1.00 ft higher; June 4, 1941, to Apr. 3, 1946, at site 650 ft downstream at same datum. Datum of last used gage was 3,603.88 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 10,000 cfs.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversion for irrigation of about 487,000 acres, and return flow from irrigated areas. Storage and diversion should substantially affect maximum flows. Records for 1914-33 furnished by State engineer of Colorado. Only annual peaks are shown.

ARKANSAS RIVER BASIN

Peak stages and discharges of Arkansas River at Lamar, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 7, 1913	4.15	3,200	1936	May 30, 1936	8.90	36,300
1915	Aug. 25, 1915	9.0	25,000	1937	June 1, 1937	6.00	12,100
1919	Aug. 2, 1919	6.2	7,500	1938	Sept. 5, 1938	5.48	8,900
1920	July 8, 1920	8.0	25,000	1939	Feb. 21, 1939	3.63	956
1921	June 5, 1921	-	130,000	1940	June 11, 1940	4.40	4,080
1922	July 31, 1922	4.60	3,250	1941	May 3, 1941	5.90	12,200
1923	June 17, 1923	8.40	30,000	1942	Apr. 24, 1942	8.77	40,000
1924	Oct. 11, 1923	5.75	6,680	1943	Oct. 19, 1942	4.31	5,200
1925	July 24, 1925	7.30	15,800	1944	May 31, 1944	4.17	4,680
1926	July 11, 1926	5.40	5,080	1945	July 10, 1945	4.75	4,780
1927	July 22, 1927	7.92	22,000	1946	May 11, 1946	2.82	1,580
1928	June 4, 1928	6.75	15,300	1947	June 27, 1947	4.48	5,240
1929	Aug. 8, 1929	8.90	45,300	1948	June 20, 1948	2.20	910
1930	Aug. 16, 1930	4.76	6,290	1949	June 5, 1949	7.26	24,900
1931	Oct. 4, 1930	5.55	10,000	1950	June 20, 1950	3.66	2,890
1932	July 31, 1932	4.85	3,800	1951	July 22, 1951	2.74	1,920
1933	May 5, 1933	6.65	16,800	1952	Aug. 29, 1952	1.54	611
1934	Sept. 16, 1934	8.00	34,700	1953	Aug. 2, 1953	3.19	2,450
1935	May 20, 1935	6.40	15,500	1954	July 26, 1954	4.40	4,790
				1955	Aug. 8, 1955	4.67	3,140

1355. Arkansas River at Holly, Colo.

Location.--Lat 38°02'37", long 102°07'09", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.15, T.23 S., R.42 W., 300 ft upstream from bridge on State Highway 89, half a mile upstream from Wild Horse Creek, and half a mile south of Holly.

Drainage area.--25,073 sq mi, of which about 23,425 sq mi contributes directly to surface runoff.

Gage.--Recording or nonrecording prior to Sept. 1, 1921, at site 300 ft downstream; recording thereafter at various sites within 900 ft. Prior to June 7, 1921, at different datum; June 7, 1921, to Apr. 25, 1942, at datum 0.86 ft higher; since Apr. 26, 1942, at datum of last used gage. Datum of last used gage is 3,377.95 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above by logarithmic plotting.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres, and return flow from irrigated areas. Regulation and diversions should substantially affect most maximum flows. Records for 1911-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	June 16, 1908	4.7	6,000	1923	Aug. 24, 1923	7.05	27,200
1909	Oct. 20, 1908	11.0	110,000	1924	Oct. 10, 1924	5.30	8,940
1910	Aug. 1, 1910	6.4	17,500	1925	July 21, 1925	7.00	23,000
1911	July 23, 1911	4.5	5,700	1926	July 12, 1926	3.63	2,200
1917	Aug. 14, 1917	5.2	8,500	1927	July 14, 1927	6.64	19,900
1918	May 31, 1918	4.33	3,900	1928	June 4, 1928	5.80	13,000
1919	Apr. 29, 1919	5.8	12,000	1929	Aug. 8, 1929	5.58	30,300
1920	Aug. 4, 1920	5.4	9,500	1930	Aug. 16, 1930	3.34	3,390
1921	June 5, 1921	10.3	90,000	1931	Oct. 6, 1930	3.92	6,060
1922	Apr. 29, 1922	3.60	2,300	1932	June 5, 1932	4.48	9,500
				1933	Aug. 3, 1933	4.90	8,670

Peak stages and discharges of Arkansas River at Holly, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Sept. 16, 1934	4.50	6,330	1944	June 4, 1944	5.64	5,170
1935	May 27, 1935	5.42	13,200	1945	Aug. 15, 1945	4.46	1,570
1936	May 30, 1936	6.80	22,700	1946	Aug. 29, 1946	4.66	2,100
1937	Sept. 6, 1937	6.26	17,300	1947	June 27, 1947	5.95	4,800
1938	July 19, 1938	5.80	13,100	1948	May 29, 1948	5.03	2,380
1939	May 28, 1939	3.78	750	1949	June 5, 1949	9.39	34,500
1940	Sept. 12, 1940	4.58	1,680	1949	June 21, 1950	5.40	7,420
1941	May 4, 1941	6.58	5,540	1951	May 15, 1951	11.08	59,900
1942	Apr. 25, 1942	11.05	35,800	1952	Aug. 21, 1952	4.00	1,480
1943	Oct. 20, 1942	6.69	5,430	1953	Aug. 20, 1953	5.35	3,070

1360. Wild Horse Creek at Holly, Colo.

(Published as "near Holly" prior to 1928 and as "at mouth near Holly" 1928-33)

Location.--Lat 38°02'45", long 102°07'05", in sec.14, T.23 S., R.42 W., at bridge on State Highway 89, a quarter of a mile southeast of Holly and half a mile upstream from mouth.

Drainage area.--272 sq mi.

Gage.--Recording or nonrecording prior to Apr. 9, 1931, at site 60 ft upstream at different datum; recording thereafter at last used site. Apr. 9, 1931, to Sept. 30, 1935, at datum 1.0 ft higher. Datum of last used gage was 3,380.36 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 220 cfs.

Remarks.--Flow is largely waste water from irrigation ditches. Diversions above station for irrigation of about 60 acres. Flow from waste water should substantially affect most maximum flows. Records for October 1927 to September 1933 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Aug. 8, 1923	3.50	a201	1939	June 12, 1939	3.80	520
1924	Oct. 10, 1923	3.80	a216	1940	May 8, 1940	4.21	624
1925	Nov. 27, 1924	2.66	a108	1941	June 25, 1941	6.30	1,410
1926	June 15, 1926	5.00	450	1942	Oct. 23, 1941	5.31	720
1927	July 10, 28, 1927	3.30	a150	1943	Oct. 13, 1942	4.49	266
1928	May 15, 17, Aug. 5	2.80	a125	1944	July 25, 1944	5.90	725
1929	Aug. 11, 1929	2.97	170	1945	June 26, 1945	5.01	360
1930	May 18, 1930	2.00	a195	1946	Aug. 27, 1946	4.80	251
1931	Oct. 11, 1930	5.80	600	1947	May 18, 1947	5.17	314
1932	June 19, 1932	4.40	150	1948	July 28, 1948	4.06	247
1933	Aug. 27, 1933	7.0	300	1949	June 5, 1949	8.0	1,690
1934	July 7, 1934	4.30	82	1950	Sept. 17, 1950	2.9	395
1935	Aug. 28, 1935	-	c22,000				

a Maximum daily discharge.

c Determined at point 11 miles upstream.

1375. Arkansas River near Coolidge, Kans.

Location--Lat 38°01'33", long 102°01'00", in NW $\frac{1}{4}$ sec.26, T.23 S., R.43 W., on right bank 1,560 ft upstream from county highway bridge, 1 mile south of Coolidge, $1\frac{1}{2}$ miles downstream from Colorado-Kansas State line, and at mile 1,099.5.

Drainage area--25,410 sq mi, of which about 23,702 sq mi contributes directly to surface runoff.

Gage--Nonrecording prior to Oct. 31, 1903; recording Mar. 1 to May 31, 1921, and since Oct. 1, 1950. Prior to Oct. 31, 1903, and Mar. 1 to May 31, 1921, at site 1,560 ft downstream at different datum. Datum of present gage is 3,333.84 ft above mean sea level, datum of 1929.

Stage-discharge relation--Defined by current-meter measurements below 11,000 cfs and extended to 60,000 cfs by logarithmic plotting. Shifts in relation occur.

Remarks--Peak discharges affected by diversions for irrigation and since Jan.1, 1943, by storage in John Martin Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	June 11, 1903	4.5	45,400	1955	May 20, 1955	8.08	13,200
1951	May 15, 1951	10.67	60,000	1956	Aug. 20, 1956	7.40	8,510
1952	Aug. 21, 1952	4.41	2,020	1957	May 16, 1957	8.35	13,400
1953	Aug. 20, 1953	5.39	3,510	1958	May 14, 1958	6.07	4,680
1954	Aug. 7, 1954	7.67	10,900				

1380. Arkansas River at Syracuse, Kans.
(Published as "near Syracuse" 1902-6)

Location--Lat 37°58', long 101°45', in SW $\frac{1}{4}$ sec.18, T.24 S., R.40 W., at bridge on U. S. Highway 270, half a mile south of Syracuse and at mile 1,080.9.

Drainage area--25,763 sq mi, of which about 23,906 sq mi contributes directly to surface runoff.

Gage--Nonrecording prior to July 31, 1906; recording thereafter. Prior to July 31, 1906, at different datum; June 20, 1921, to Sept. 30, 1929, at datum 2.0 ft higher; converted to present datum. Datum of gage is 3,212.32 ft above mean sea level, datum of 1929.

Stage-discharge relation--Defined by current-meter measurements below 53,000 cfs; shifts in relation occur.

Bankfull stage--7 ft.

Historical data--Flood of Oct. 20, 1908, was the greatest known according to the Syracuse Journal of Oct. 23, 1908, which states, "The Arkansas River flood of Oct. 19-20, 1908, has broken all records, and the oldest inhabitant is unable to recall anything equal to it in height--It had reached a depth of 12 feet in the channel, which was 3 feet above the highest record."

Remarks--Peak discharges affected by diversions for irrigation and since Jan.1, 1943, by storage in John Martin Reservoir. Base for partial-duration series, 800 cfs.

Peak stages and discharges of Arkansas River at Syracuse, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 26, 1903	4.2	2,700	1929	Aug. 8, 1929	8.04	37,000
	June 12, 1903	8.3	41,000				
	June 16, 1903	5.8	10,900	1930	Nov. 27, 1929	3.4	840
	Aug. 11, 1903	3.7	1,480		Feb. 6, 1930	3.5	820
1904	May 4, 1904	8.0	32,500		May 18, 1930	3.8	1,020
	May 22, 1904	5.6	9,150		Aug. 16, 1930	5.04	4,030
	June 10, 1904	7.6	27,700		Aug. 30, 1930	4.53	2,580
	June 22, 1904	8.1	33,800		Sept. 11, 1930	3.48	988
	July 12, 1904	4.8	4,950	1931	Oct. 4, 1930	5.44	5,650
	July 26, 1904	5.2	6,800		Oct. 11, 1930	5.09	4,500
	Aug. 2, 1904	5.75	10,100		Nov. 27, 1930	3.60	1,020
	Aug. 7, 1904	4.5	3,750		Mar. 30, 1931	5.50	5,600
	Aug. 18, 1904	6.15	12,900		June 2, 1931	3.70	1,040
	Sept. 4, 1904	5.2	6,800	1932	June 4, 1932	6.44	12,400
1905	Oct. 1, 1904	8.7	43,700		June 13, 1932	3.71	928
	Feb. 24, 1905	4.0	2,500		June 22, 1932	3.93	1,230
	Apr. 3, 1905	5.7	9,800		Aug. 1, 1932	4.18	1,960
	Apr. 25, 1905	8.2	35,400	1933	May 5, 1933	6.46	12,500
	Apr. 28, 1905	7.0	21,500		June 15, 1933	5.12	4,040
	May 13, 1905	4.6	4,150		July 18, 1933	3.84	1,310
	May 25, 1905	6.6	17,200		Aug. 3, 1933	5.70	7,790
	June 8, 1905	5.4	7,900		Aug. 12, 1933	4.22	1,490
	June 29, 1905	5.0	5,800		Aug. 24, 1933	3.93	1,120
	Aug. 2, 1905	6.7	18,200		Aug. 28, 1933	6.56	14,000
	Aug. 28, 1905	3.5	1,500		Sept. 13, 1933	5.71	6,260
	Sept. 8, 1905	3.5	1,500	1934	June 17, 1934	4.10	1,460
1906	July 12, 1906	5.6	a9,600		July 8, 1934	4.48	2,240
1909	Oct. 20, 1908	11.7	b130,000		July 27, 1934	4.43	2,070
1921	June 6, 1921	11.75	b62,000		Sept. 16, 1934	6.52	13,600
1922	Apr. 30, 1922	4.7	700	1935	May 20, 1935	6.62	11,800
1923	May 23, 1923	6.9	10,400		May 28, 1935	7.30	17,400
	June 10, 1923	6.36	8,250		June 1, 1935	6.60	11,600
	June 18, 1923	7.4	14,300		June 20, 1935	3.60	1,380
	July 13, 1923	3.95	980		June 28, 1935	4.70	3,300
	July 18, 1923	4.6	2,090		July 8, 1935	3.87	1,900
	July 28, 1923	5.4	4,010		July 12, 1935	7.38	18,300
	Aug. 3, 1923	5.8	5,520		July 23, 1935	6.06	10,500
	Aug. 14, 1923	5.6	4,750		Aug. 28, 1935	6.55	14,600
	Aug. 19, 1923	6.45	8,690		Sept. 8, 1935	4.21	2,380
	Aug. 23, 1923	7.8	17,400	1936	May 10, 1936	7.11	13,200
	Sept. 20, 1923	5.7	4,570		May 25, 1936	6.50	13,300
1924	Oct. 3, 1923	4.6	1,300		May 31, 1936	8.58	19,400
	Oct. 10, 1923	6.57	8,860		June 14, 1936	3.84	1,290
	Mar. 24, 1924	4.75	1,420		July 31, 1936	7.72	18,900
	Apr. 19, 1924	4.75	1,780		Aug. 9, 1936	8.01	18,400
	June 11, 1924	4.85	2,060	1937	June 2, 1937	6.68	8,700
	June 17, 1924	4.70	1,600		June 9, 1937	3.87	2,020
1925	June 7, 1925	6.50	12,700		Sept. 8, 1937	7.68	17,000
	July 5, 1925	5.24	3,550	1938	Apr. 27, 1938	4.11	2,230
	July 24, 1925	6.70	15,400		May 7, 1938	3.50	1,420
	July 28, 1925	6.60	10,400		May 24, 1938	3.96	1,050
	Aug. 6, 1925	5.70	6,200		May 31, 1938	5.35	5,140
	Aug. 15, 1925	4.15	1,000		June 9, 1938	3.95	2,030
1926	June 19, 1926	4.64	1,600		June 18, 1938	4.95	3,660
	July 12, 1926	4.67	1,480		June 20, 1938	5.56	6,010
1927	July 14, 1927	7.50	13,500		July 19, 1938	6.70	10,500
	July 23, 1927	7.1	12,600		Sept. 5, 1938	7.55	16,000
	Aug. 4, 1927	7.25	11,200		Sept. 13, 1938	5.06	3,980
	Aug. 11, 1927	6.75	9,050	1939	May 3, 1939	3.92	1,160
1928	May 12, 1928	6.00	7,720		May 25, 1939	3.78	982
	June 4, 1928	6.65	10,400	1940	May 29, 1940	3.70	810
	June 12, 1928	6.45	9,280		June 7, 1940	3.87	1,080
	June 30, 1928	5.85	6,240		June 12, 1940	4.70	2,230
					Sept. 13, 1940	4.2	1,680

a Maximum Oct. 1 to Nov. 30, 1905, Apr. 1 to July 31, 1906; probably maximum for year.

b Annual peak only.

Peak stages and discharges of Arkansas River at Syracuse, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 13, 1941	5.36	2,470	1948	July 28, 1948	4.05	980
	May 4, 1941	7.44	7,610		Aug. 14, 1948	3.80	818
	May 25, 1941	4.85	1,840		Sept. 7, 1948	4.62	1,480
	June 2, 1941	4.91	1,910	1949	Apr. 27, 1949	4.10	1,090
	June 9, 1941	5.00	2,020		May 6, 1949	3.94	890
	June 26, 1941	4.48	1,380		June 5, 1949	11.2	38,000
	July 6, 1941	4.56	1,530		June 9, 1949	4.58	2,600
	July 16, 1941	5.08	1,830		Aug. 14, 1949	3.43	1,180
	July 21, 1941	4.86	1,850		Aug. 19, 1949	4.28	2,120
	Aug. 23, 1941	5.00	2,020	1950	Feb. 3, 1950	4.48	2,620
	Aug. 28, 1941	6.02	3,740		June 12, 1950	3.51	1,220
	Sept. 25, 1941	6.22	4,180		June 21, 1950	5.35	4,420
1942	Oct. 25, 1941	7.3	7,130		July 12, 1950	3.99	1,610
	Jan. 22, 1942	4.30	1,320		July 21, 1950	4.02	1,870
	Feb. 23, 1942	3.59	803		Aug. 3, 1950	3.26	1,030
	Mar. 15, 1942	5.22	2,180		Aug. 18, 1950	4.18	2,140
	Apr. 27, 1942	10.46	35,500		Sept. 17, 1950	3.91	1,690
	June 1, 1942	5.58	4,080	1951	May 15, 1951	12.63	54,300
	June 10, 1942	6.76	6,760		May 22, 1951	2.50	1,180
	June 25, 1942	7.20	7,080		May 25, 1951	2.71	1,430
	Aug. 18, 1942	6.60	7,080		June 11, 1951	2.88	1,630
	Sept. 5, 1942	6.20	5,340		June 21, 1951	4.63	5,010
1943	Oct. 19, 1942	5.89	4,170		June 25, 1951	2.90	1,650
	Oct. 28, 1942	4.37	1,450		June 28, 1951	5.11	6,310
	Dec. 21, 1942	4.08	1,110		July 23, 1951	2.56	1,250
	Jan. 1, 1943	4.56	1,700		Aug. 8, 1951	3.60	2,490
	Jan. 6, 1943	4.56	1,700		Aug. 13, 1951	2.49	999
1944	May 2, 1944	4.91	2,050		Sept. 5, 1951	3.34	1,920
	May 31, 1944	6.40	5,280	1952	Aug. 21, 1952	5.25	3,510
	July 20, 1944	5.51	3,100		July 23, 1953	3.82	1,560
	Aug. 18, 1944	3.98	900		Aug. 3, 1953	3.38	1,130
	Sept. 3, 1944	4.09	990		Aug. 6, 1953	4.00	1,750
1945	June 27, 1945	3.88	900	1953	Aug. 21, 1953	5.01	3,160
	July 12, 1945	4.70	1,760		July 27, 1954	5.56	4,320
	Aug. 16, 1945	4.76	1,760		Aug. 7, 1954	7.32	8,200
					Aug. 16, 1954	2.75	898
1946	May 13, 1946	4.15	1,010	1954	May 20, 1955	7.60	8,930
	May 29, 1946	4.39	1,340		July 4, 1955	3.18	1,200
	Aug. 29, 1946	4.98	1,890		Aug. 9, 1955	5.55	4,300
1947	May 30, 1947	5.61	3,220		Aug. 13, 1955	3.58	1,580
	June 16, 1947	4.09	941	1956	July 4, 1956	3.74	1,840
	June 27, 1947	6.39	4,980		July 7, 1956	3.07	1,190
	July 14, 1947	6.56	4,980		July 20, 1956	4.87	3,360
	July 26, 1947	4.85	1,670		Aug. 20, 1956	6.90	7,700
	Aug. 14, 1947	4.49	1,340	1957	May 29, 1957	12.19	13,800
	Aug. 25, 1947	3.94	1,040		May 15, 1958	8.84	5,240
1948	May 24, 1948	5.32	2,400				
	May 29, 1948	5.13	2,310				
	June 21, 1948	4.05	1,050				
	July 18, 1948	4.82	1,890				

c Occurred July 6, 1958.

1390. Arkansas River at Garden City, Kans.

Location.--Lat 37°57', long 100°52', in NW $\frac{1}{4}$ sec.19, T.24 S., R.32 W., at bridge on U. S. Highway 83, half a mile south of Garden City and at mile 1,024.2.

Drainage area.--27,071 sq mi, of which about 24,703 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,824.43 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs; shifts in relation occur.

Flood stage.--6 ft.

Remarks.--Peak discharges affected by diversions for irrigation and since Jan.1, 1943, by storage in John Martin Reservoir. Base for partial-duration series, 550 cfs.

Peak stages and discharges of Arkansas River at Garden City, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 24, 1923	7.15	15,400	1936	May 10, 1936	7.07	8,080
	June 10, 1923	5.76	7,260		May 26, 1936	6.00	4,650
	June 18, 1923	7.86	19,500		May 31, 1936	8.56	16,600
	June 22, 1923	6.56	11,300		June 4, 1936	5.45	3,440
	July 16, 1923	4.00	1,090		July 31, 1936	6.82	7,800
	July 20, 1923	5.84	7,790		Aug. 9, 1936	7.73	11,300
	July 28, 1923	5.12	4,100				
	Aug. 4, 1923	5.30	4,910	1937	June 2, 1937	5.90	5,160
	Aug. 7, 1923	4.55	2,040		Sept. 8, 1937	6.15	5,440
	Aug. 10, 1923	5.65	6,630				
	Aug. 14, 1923	5.70	6,840	1938	June 19, 1938	4.09	1,030
	Aug. 19, 1923	7.43	16,700		June 21, 1938	4.40	1,440
	Aug. 24, 1923	7.82	19,200		July 20, 1938	6.27	4,970
	Sept. 20, 1923	5.25	4,480		Sept. 6, 1938	7.31	9,060
					Sept. 16, 1938	3.70	620
1924	Oct. 13, 1923	5.70	6,570				
	Dec. 19, 1923	4.55	1,320	1939	Mar. 13, 1939	3.58	548
	Mar. 29, 1924	5.03	2,260				
	Apr. 19, 1924	4.90	1,970	1940	July 1, 1940	2.89	77
	Apr. 30, 1924	4.50	1,170				
	June 22, 1924	4.30	800	1941	May 4, 1941	6.30	4,820
1925	July 24, 1925	6.60	11,600		May 28, 1941	4.00	920
	July 29, 1925	5.90	6,700		June 8, 1941	4.89	2,680
	July 31, 1925	5.75	5,620		June 27, 1941	4.02	1,110
	Aug. 7, 1925	5.47	4,380		July 17, 1941	4.5	1,670
					Aug. 30, 1941	4.3	1,340
1926	Feb. 20, 1926	3.73	164		Sept. 26, 1941	4.2	1,190
1927	July 15, 1927	6.57	7,090	1942	Oct. 26, 1941	6.20	6,700
	July 23, 1927	7.71	12,600		Jan. 25, 1942	4.5	1,790
	Aug. 1, 1927	6.58	8,210		Feb. 24, 1942	5.74	4,850
	Aug. 4, 1927	7.60	13,200		Mar. 16, 1942	4.80	2,220
	Aug. 11, 1927	6.50	7,850		Apr. 28, 1942	8.87	31,400
	Aug. 15, 1927	6.75	8,980		May 23, 1942	4.4	1,790
	Aug. 21, 1927	4.88	2,130		June 2, 1942	4.79	2,770
1928	May 13, 1928	5.73	6,820		June 10, 1942	6.35	6,880
	June 4, 1928	7.30	15,000		June 26, 1942	6.65	8,200
	June 12, 1928	6.60	12,300		Aug. 17, 1942	5.97	5,730
	June 23, 1928	4.3	1,510		Sept. 5, 1942	5.43	4,040
	July 1, 1928	5.05	3,770	1943	Oct. 20, 1942	5.53	4,300
1929	Dec. 29, 1928	3.77	742		Jan. 2, 1943	4.67	1,860
	Jan. 2, 1929	3.81	793	1944	May 3, 1944	4.75	1,740
	Mar. 3, 1929	4.00	910		June 1, 1944	6.40	7,530
	Aug. 9, 1929	7.74	21,200		July 25, 1944	4.93	2,370
1930	Nov. 29, 1929	3.60	880	1945	July 13, 1945	4.23	686
1931	Oct. 7, 1930	5.06	4,140	1946	Jan. 2, 1946	4.08	468
	Oct. 12, 1930	5.50	5,410				
	Dec. 1, 1930	3.85	845	1947	Oct. 8, 1946	4.87	758
	Dec. 3, 1930	3.83	819		Nov. 11, 1946	4.55	670
	Apr. 2, 1931	4.58	2,200		Mar. 16, 1947	4.57	686
1932	June 5, 1932	6.03	4,750		May 31, 1947	5.78	3,640
1933	May 6, 1933	6.32	7,700		June 26, 1947	6.16	4,870
	Aug. 4, 1933	3.90	1,110		July 15, 1947	6.22	5,200
	Aug. 29, 1933	7.10	7,700		July 27, 1947	4.7	1,950
	Sept. 14, 1933	5.08	2,830	1948	Mar. 16, 1948	4.49	835
1934	Sept. 17, 1934	5.35	2,660		May 31, 1948	4.26	620
1935	May 21, 1935	7.1	8,200		June 28, 1948	4.00	575
	May 28, 1935	6.7	6,700		July 20, 1948	4.52	688
	June 2, 1935	7.3	9,060		Aug. 15, 1948	4.66	885
	June 29, 1935	3.7	1,130		Sept. 9, 1948	3.93	575
	July 12, 1935	6.95	7,610	1949	Feb. 21, 1949	4.35	725
	July 24, 1935	5.4	3,590		May 8, 1949	4.22	645
	Aug. 29, 1935	5.2	2,680		June 7, 1949	9.42	29,200
					June 13, 1949	4.92	1,970
					Aug. 20, 1949	4.41	1,380

ARKANSAS RIVER BASIN

Peak stages and discharges of Arkansas River at Garden City, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 22, 1950	4.40	1,290	1954	July 29, 1954	4.56	1,190
	July 13, 1950	3.55	370		Aug. 8, 1954	7.26	7,840
	July 31, 1950	4.16	1,100	1955	Apr. 13, 1955	4.72	1,400
	Aug. 5, 1950	5.03	2,170		May 21, 1955	7.64	9,500
	Aug. 7, 1950	4.23	1,190		Aug. 11, 1955	4.58	1,220
	Aug. 13, 1950	3.73	732	1956	May 28, 1956	5.88	3,500
	Aug. 19, 1950	4.40	1,370		Aug. 22, 1956	4.60	1,160
	Sept. 19, 1950	4.18	1,200	1957	May 18, 1957	5.96	4,220
1951	May 16, 1951	9.57	33,500		May 31, 1957	5.76	3,520
	May 21, 1951	5.33	4,040		June 14, 1957	3.94	812
	June 7, 1951	2.85	740		June 24, 1957	5.81	3,620
	June 13, 1951	3.95	1,640	1958	May 16, 1958	5.48	2,700
	June 22, 1951	5.20	3,700		May 18, 1958	4.31	1,300
	June 29, 1951	5.69	5,020		May 24, 1958	4.66	1,610
	Aug. 9, 1951	3.72	1,100		June 2, 1958	3.35	560
	Sept. 7, 1951	4.09	1,260		July 7, 1958	5.54	2,800
					Aug. 2, 1958	3.96	1,050
1952	Jan. 1, 1952	2.98	616				
1953	Aug. 22, 1953	4.99	3,090				

1395. Arkansas River at Dodge City, Kans.

(Published as "near Dodge" 1904-6)

Location.--Lat 37°45', long 100°01', in NE $\frac{1}{4}$ sec.35, T.26 S., R.25 W., at Second Street bridge in Dodge City, at mile 970.2.

Drainage area.--30,600 sq mi, of which about 25,017 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to December 1932 and Sept. 1 to Nov. 5, 1944; recording thereafter. Prior to 1932 at datum about 5 ft higher; gage readings increased 5.0 ft to correspond approximately with those of present gage. Datum of present gage is 2,467.71 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur. Discharge for 1942 is based on subsequent stage-discharge relation and is approximate.

Bankfull stage.--10 ft.

Remarks.--Peak discharges affected somewhat by diversions for irrigation and since Jan. 1, 1943, by storage in John Martin Reservoir. Only annual peak stages for 1909-1932 furnished by U. S. Weather Bureau. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	Mar. 20, 1903	7.35	1,300	1905	June 20, 1905	8.8	4,680
	June 13, 1903	11.25	17,300		July 31, 1905	7.7	1,370
	June 22, 1903	8.70	4,150		Aug. 4, 1905	8.9	4,990
1904	May 5, 1904	8.5	2,650	1906	Apr. 1, 1906	-	750
	May 24, 1904	8.65	4,300		Apr. 24, 1906	7.1	1,130
	June 11, 1904	10.0	9,950		May 2, 1906	7.6	2,000
	June 15, 1904	9.8	8,900		July 18, 1906	10.5	12,700
	June 23, 1904	10.3	11,500	1909	Oct. 21, 1908	13.35	-
	Aug. 22, 1904	8.3	3,250				
1905	Oct. 2, 1904	12.0	16,400		Aug. 2, 1910	10.5	-
	Feb. 27, 1905	7.85	2,530				
	Apr. 4, 1905	9.1	6,150		May 28, 1911	6.2	-
	Apr. 26, 1905	11.5	19,000				
	May 13, 1905	8.8	5,150		Aug. 1, 1912	10.5	-
	May 22, 1905	10.5	12,700				
	May 29, 1905	11.6	19,600		Mar. 6, 1913	6.2	-
	June 9, 1905	9.2	6,500				

Peak stages and discharges of Arkansas River at Dodge City, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 3, 1914	11.7	-	1949	May 16, 1949	4.16	565
1915	Aug. 26, 1915	10.8	-		May 23, 1949	4.91	630
1916	Feb. 16, 1916	8.2	-		June 8, 1949	13.29	16,200
1917	At times	5.0	-		Aug. 21, 1949	4.62	920
1918	At times	5.6	-	1950	Oct. 10, 1949	5.63	1,950
1919	Apr. 30, 1919	7.8	-		July 24, 1950	4.59	828
1920	Jan. 8, 1920	7.6	-		July 27, 1950	9.73	8,060
1921	June 7, 1921	12.0	-		Aug. 2, 1950	4.52	828
1922	Mar. 11, 1922	6.3	-		Aug. 8, 1950	4.94	1,240
1923	Aug. 24, 1923	10.8	-		Aug. 20, 1950	4.87	1,170
1924	Feb. 8, 1924	11.3	-		Aug. 27, 1950	6.73	3,270
1925	July 25, 1925	8.6	-		Aug. 30, 1950	4.72	1,020
1926	Jan. 18-20, 1926	4.9	-		Sept. 16, 1950	4.63	930
1927	Aug. 5, 1927	10.3	-		Sept. 20, 1950	4.60	900
1928	June 5, 1928	9.5	-	1951	Oct. 2, 1950	6.84	3,230
1929	Aug. 9, 1929	9.9	-		Apr. 27, 1951	4.78	906
1930	Dec. 3, 1929	8.5	-		May 16, 1951	7.32	3,710
1931	Oct. 13, 1930	7.3	-		May 18, 1951	12.54	19,700
1932	June 6, 1932	7.3	-		May 22, 1951	9.87	8,620
1942	Apr. 28, 1942	12.75	b21,000		June 9, 1951	5.67	1,550
1945	Feb. 6, 1945	4.87	690		June 13, 1951	5.81	1,690
1946	May 28, 1946	4.56	422		June 21, 1951	5.67	1,550
1947	Oct. 6, 1946	5.69	1,290		June 23, 1951	6.88	3,010
	Nov. 12, 1946	4.93	693		June 30, 1951	7.82	4,450
	Mar. 18, 1947	4.71	590		July 11, 1951	7.10	3,320
	Apr. 9, 1947	4.83	664		July 23, 1951	4.62	600
	May 27, 1947	6.78	2,350		Aug. 10, 1951	4.95	865
	June 5, 1947	9.31	7,200		Sept. 8, 1951	5.36	1,240
	June 29, 1947	7.62	4,050	1952	Jan. 14, 1952	-	a700
	July 16, 1947	7.83	4,630	1953	Aug. 26, 1953	4.05	440
	July 29, 1947	5.10	800	1954	Aug. 10, 1954	5.83	948
1948	Mar. 18, 1948	4.73	610	1955	May 20, 1955	6.74	1,870
1949	Feb. 12, 1949	4.76	630		May 22, 1955	8.43	4,340
	Feb. 18, 1949	4.93	698		June 16, 1955	5.93	1,020
				1956	May 31, 1956	3.74	191
				1957	May 20, 1957	6.82	2,040
					June 1, 1957	5.91	1,070
					June 12, 1957	5.44	730
					June 25, 1957	6.64	1,830
					July 24, 1957	5.25	650
					Sept. 14, 1957	5.23	642
				1958	May 14, 1958	5.62	942
					May 18, 1958	6.42	1,460
					May 25, 1958	5.65	985
					June 24, 1958	4.77	576
					July 5, 1958	4.80	590
					July 9, 1958	6.51	1,530
					July 13, 1958	5.05	702

a Backwater from ice.

b Annual peak only.

1400. Arkansas River near Kinsley, Kans.

Location.--Lat 37°56', long 99°22', on south line sec.26, T.24 S., R.19 W., at bridge on U. S. Highway 50, 2 miles east of Kinsley and at mile 920.3.

Drainage area.--31,066 sq mi, of which about 25,406 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Nov. 9, 1944; recording thereafter. Datum of gage is 2,144.64 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur.

Remarks.--Peak discharges affected somewhat by diversions for irrigation and since Jan. 1, 1943, by storage in John Martin Reservoir. Base for partial-duration series, 500 cfs.

Peak stages and discharges of Arkansas River near Kinsley, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 8, 1945	4.20	350	1951	June 21, 1951	6.78	2,220
1946	Jan. 5, 1946	4.20	352		June 24, 1951	7.13	2,620
1947	Oct. 8, 1946	5.71	1,310		July 1, 1951	9.33	6,310
	Apr. 11, 1947	7.62	3,560		July 11, 1951	8.07	3,930
	May 29, 1947	6.19	1,770		July 26, 1951	4.48	540
	June 6, 1947	8.17	4,490		Aug. 14, 1951	4.55	575
	June 30, 1947	7.52	3,410		Sept. 10, 1951	5.82	1,360
	July 17, 1947	7.97	4,170	1952	Apr. 19, 1952	6.52	1,960
1948	Feb. 28, 1948	6.34	1,850	1953	Jan. 9, 1953	4.30	460
	Mar. 19, 1948	5.01	689	1954	Aug. 14, 1954	4.08	320
	June 28, 1948	4.72	531	1955	May 20, 1955	8.43	4,210
	Aug. 13, 1948	4.74	553		May 22, 1955	8.16	3,760
1949	Feb. 10, 1949	5.44	1,060		May 27, 1955	6.31	1,490
	May 18, 1949	5.17	878		June 3, 1955	6.66	1,920
	May 25, 1949	5.24	920		June 17, 1955	5.10	860
	June 10, 1949	11.09	11,300		June 20, 1955	5.38	1,000
	Sept. 4, 1949	7.14	2,580	1956	Mar. 5, 1956	-	206
1950	Oct. 10, 1949	8.86	5,050	1957	May 21, 1957	5.86	1,190
	July 28, 1950	6.94	2,380		June 3, 1957	4.80	607
	Aug. 3, 1950	4.90	765		June 25, 1957	5.29	810
	Aug. 7, 1950	6.18	1,720		June 27, 1957	6.05	1,280
	Aug. 12, 1950	5.50	1,000		Sept. 15, 1957	5.67	1,100
	Aug. 21, 1950	4.77	715	1958	May 20, 1958	5.42	840
	Aug. 28, 1950	5.87	1,640		May 27, 1958	5.15	730
	Sept. 18, 1950	5.40	1,350		June 18, 1958	5.55	905
	Sept. 21, 1950	4.56	765		June 26, 1958	6.72	1,690
1951	Oct. 3, 1950	5.80	1,500		July 8, 1958	5.47	860
	Feb. 11, 1951	4.62	672		July 11, 1958	5.73	970
	Apr. 28, 1951	5.13	991		July 17, 1958	5.26	754
	May 19, 1951	11.20	11,700		July 22, 1958	4.91	616
	May 23, 1951	11.05	11,100				
	June 11, 1951	5.88	1,400				

a Annual peak only.

1405. Arkansas River at Larned, Kans.

Location.--Lat 38°10', long 99°06', in NE $\frac{1}{4}$ sec. 5, T.22 S., R.16 W., at bridge on State Highway 19 at Larned, about 800 ft upstream from mouth of Pawnee River and at mile 897.4.

Drainage area.--31,750 sq mi, of which about 26,017 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,990.12 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 9,800 cfs and extended to 14,300 cfs by logarithmic plotting. Relation affected at times by backwater from Pawnee River. Shifts in relation occur.

Remarks.--Peak discharges affected somewhat by diversions for irrigation. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 25, 1923	6.25	3,020	1924	Oct. 11, 1923	8.16	8,910
	June 12, 1923	6.98	5,070		Dec. 24, 1923	5.13	970
	June 19, 1923	8.19	9,020		Mar. 27, 1924	6.06	2,510
	June 23, 1923	7.70	7,330		Apr. 29, 1924	6.56	3,240
	July 21, 1923	6.54	4,610	1925	July 26, 1925	6.56	3,920
	Aug. 6, 1923	6.16	3,140		Aug. 2, 1925	6.31	3,320
	Aug. 12, 1923	6.40	3,670		Aug. 10, 1925	5.63	2,060
	Aug. 17, 1923	8.95	12,200	1926	Jan. 31, 1926	4.41	544
	Aug. 20, 1923	8.40	9,800	1927	Apr. 8, 1927	6.75	4,360
	Aug. 25, 1923	9.5	14,300		July 26, 1927	6.95	4,800
	Sept. 21, 1923	7.35	6,220				
1924	Oct. 8, 1923	7.13	5,840				

Peak stages and discharges of Arkansas River at Larned, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Aug. 5, 1927	9.20	13,000	1935	July 16, 1935	3.47	1,130
1928	May 16, 1928	5.58	2,820	1935	Aug. 31, 1935	-	1,200
	June 5, 1928	8.45	11,200	1936	May 12, 1936	5.45	2,690
	June 13, 1928	7.47	7,960		May 29, 1936	4.0	1,430
	July 4, 1928	5.30	1,870		June 3, 1936	7.92	5,980
1929	Aug. 9, 1929	8.47	11,400		Aug. 2, 1936	5.83	3,320
					Aug. 12, 1936	7.74	6,040
1930	Dec. 2, 1929	3.59	760	1937	June 5, 1937	3.64	1,430
	Feb. 8, 1930	3.59	760		June 10, 1937	3.37	886
1931	Oct. 14, 1930	5.29	2,450		July 19, 1937	3.14	702
	Apr. 4, 1931	4.20	1,400		Sept. 12, 1937	3.62	1,480
1932	June 8, 1932	3.85	1,220	1938	May 24, 1938	2.69	624
	June 28, 1932	3.25	571		July 22, 1938	2.43	558
	July 6, 1932	7.02	5,600		Sept. 8, 1938	4.15	1,690
1933	May 8, 1933	5.74	3,580	1939	July 3, 1939	4.76	1,530
	Sept. 3, 1933	4.80	2,680	1940	Mar. 4, 1940	2.60	617
1934	Sept. 1, 1934	3.27	326		Apr. 18, 1940	3.0	810
1935	May 22, 1935	7.5	5,430		May 9, 1940	5.73	3,370
	May 29, 1935	8.5	9,000		May 20, 1940	4.12	990
					June 9, 1940	6.07	2,430

a Backwater from Pawnee River.

1412. Pawnee River near Larned, Kans.

Location.--Lat 38°11', long 99°20', on south line of sec.29, T.21 S., R.18 W., in pool of Moffet Dam, at bridge on U. S. Highway 156, 1 mile west of Sanford, 13 miles west of Larned, and 23.3 miles upstream from mouth.

Drainage area.--2,148 sq mi, of which 2,010 sq mi contributes directly to surface runoff. Drainage area 38 sq mi greater at previous sites.

Gage.--Recording. Prior to May 15, 1933, at site about 1.3 miles downstream at datum 8.33 ft lower; May 16, 1933, to Feb. 17, 1949, at site about 1.4 miles downstream at datum 11.43 ft lower. Datum of present gage is 2,032.73 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected by rate of change in stage. Shifts in relation occur.

Remarks.--Figures shown for flood of May 28, 1935, include flow bypassed in Saw Mill Creek. Peak discharges not appreciably affected by diversions above station. Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Apr. 4, 1925	17.94	2,140	1934	May 26, 1934	14.55	1,200
1926	Sept. 16, 1926	9.08	688		June 19, 1934	15.19	1,330
1927	June 4, 1927	-	2,000		Aug. 26, 1934	13.07	942
1928	July 2, 1928	-	1,770		Aug. 31, 1934	17.44	1,820
1929	May 13, 1929	21.70	3,880	1935	May 15, 1935	15.92	1,480
1930	June 11, 1930	12.2	1,140		May 21, 1935	20.55	2,740
1931	Oct. 7, 1930	13.25	1,230		May 28, 1935	31.96	14,000
	Oct. 16, 1930	13.32	1,240		June 17, 1935	22.37	3,310
	Apr. 15, 1931	16.9	2,040		Aug. 24, 1935	15.65	1,420
1932	July 6, 1932	14.5	1,520		Aug. 31, 1935	16.26	1,570
1933	Apr. 23, 1933	21.7	3,880		Sept. 3, 1935	14.2	1,140
	May 22, 1933	21.76	3,150	1936	May 11, 1936	19.00	2,060
	May 26, 1933	23.37	3,640		May 31, 1936	19.64	2,010
	Aug. 20, 1933	14.30	1,210	1937	July 20, 1937	13.93	1,080
				1938	May 25, 1938	13.14	945
					June 1, 1938	20.0	2,570
					June 18, 1938	16.60	1,660
					June 22, 1938	15.62	1,450

Peak stages and discharges of Pawnee River near Larned, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Sept. 6, 1938	13.10	938	1949	June 6, 1949	11.78	1,130
1939	July 2, 1939	21.70	3,080		June 14, 1949	22.09	4,800
1940	Apr. 17, 1940	16.50	1,190	1950	Oct. 11, 1949	19.03	3,430
	May 20, 1940	21.06	2,480		Aug. 2, 1950	24.15	5,850
	June 9, 1940	29.83	6,960		Aug. 9, 1950	22.08	4,800
	July 5, 1940	14.88	958		Aug. 13, 1950	26.86	8,230
1941	Nov. 1, 1940	15.40	1,060		Aug. 31, 1950	26.63	7,630
	June 11, 1941	15.75	1,230	1951	Oct. 3, 1950	26.17	6,930
	June 30, 1941	16.59	1,380		Apr. 30, 1951	12.62	1,260
1942	Aug. 4, 1942	16.14	1,320		May 18, 1951	20.11	3,900
	Aug. 22, 1942	24.53	4,010		May 23, 1951	26.68	7,790
1943	June 9, 1943	18.08	1,770		June 3, 1951	16.16	2,340
	Sept. 5, 1943	29.07	6,390		June 9, 1951	14.60	1,850
1944	Oct. 25, 1943	15.52	1,240		June 13, 1951	26.06	6,820
	Apr. 12, 1944	18.32	1,830		June 23, 1951	27.54	9,510
	Apr. 24, 1944	16.40	1,410		July 1, 1951	26.98	8,590
	May 4, 1944	20.28	2,350	1952	July 11, 1951	27.52	9,470
	May 15, 1944	19.41	2,100		July 25, 1951	11.57	992
	May 30, 1944	24.62	4,060		Sept. 10, 1951	11.70	1,020
	Aug. 23, 1944	15.82	1,290	1953	Apr. 21, 1952	15.35	2,110
	Aug. 25, 1944	19.79	2,210		Aug. 3, 1953	25.89	6,700
1945	Sept. 30, 1945	13.37	884		Aug. 7, 1953	14.23	1,740
1946	Sept. 8, 1946	22.56	3,140	1954	Apr. 25, 1954	11.40	950
	Sept. 30, 1946	19.09	2,030	1955	May 22, 1955	15.01	2,200
1947	Oct. 10, 1946	30.91	8,610		May 28, 1955	10.78	996
	Oct. 17, 1946	13.85	908		June 18, 1955	19.12	3,670
	Nov. 5, 1946	14.56	1,040	1956	July 7, 1956	13.00	1,100
	Apr. 10, 1947	18.62	1,850	1957	June 15, 1957	12.34	935
	May 19, 1947	17.84	1,660		June 24, 1957	14.95	1,610
	June 7, 1947	17.53	1,590		June 28, 1957	22.82	4,710
1948	June 29, 1948	24.00	3,300		July 28, 1957	15.07	1,640
	July 20, 1948	29.13	5,520		Sept. 16, 1957	18.77	2,910
	Aug. 8, 1948	15.96	1,300	1958	May 17, 1958	15.95	2,330
	Aug. 12, 1948	29.43	5,660		June 27, 1958	16.39	2,490
1949	Feb. 19, 1949	11.55	1,090		July 7, 1958	20.15	4,080
	May 19, 1949	10.96	960		July 20, 1958	19.56	3,800
	May 27, 1949	11.34	1,020		July 28, 1958	28.22	16,300
	May 30, 1949	14.33	1,760		Aug. 2, 1958	13.85	1,600
					Aug. 22, 1958	12.50	1,200

1413. Arkansas River at Great Bend, Kans.

Location.--Lat 38°21', long 98°46', in SE¹ sec. 33, T.19 S., R.13 W., at bridge on U. S. Highway 281, half a mile south of Great Bend, 4½ miles upstream from Walnut Creek, and at mile 873.2.

Drainage area.--34,356 sq mi, of which about 28,354 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,839.82 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Relation affected by breaks in levees at high stages; shifts in relation occur.

Bankfull stage.--9 ft prior to 1923; 8 ft thereafter.

Historical data.--The flood of June 10, 1921, was "2.7 ft above flood stage and about 1.5 ft above the highest previously known in the past 50 years," according to U. S. Weather Bureau Climatological Data of July 1921.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation or by storage in John Martin Reservoir, which began January 1943. Base for partial-duration series, 800 cfs.

Peak stages and discharges of Arkansas River at Great Bend, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	July 26, 1895	a9.8	-	1948	Aug. 9, 1948	5.78	2,000
1912	May 4, 1912	a8.5	-		Aug. 15, 1948	9.60	7,120
1921	June 10, 1921	a11.7	-	1949	Feb. 12, 1949	6.18	2,000
1923	Aug. 26, 1923	a10.8	-		Feb. 20, 1949	5.92	1,910
1924	Oct. 12, 1923	a10.2	-		May 20, 1949	5.77	1,780
1927	Aug. 6, 1927	a9.4	-		May 31, 1949	6.38	2,380
1928	June 6, 1928	a5.7	-		June 6, 1949	7.06	3,080
1929	Aug. 10, 1929	a8.8	-		June 13, 1949	10.14	7,850
1932	July 7, 1932	a8.2	-		Sept. 5, 1949	5.62	1,640
1933	May 28, 1933	a7.3	-	1950	Oct. 11, 1949	8.80	4,720
1935	May 30, 1935	a10.1	-		July 29, 1950	6.78	2,420
1936	June 2, 1936	a9.2	-		Aug. 1, 1950	9.56	6,050
1941	June 11, 1941	7.05	3,120		Aug. 11, 1950	8.65	4,430
	June 29, 1941	8.30	4,720		Aug. 17, 1950	9.96	7,630
	July 27, 1941	4.39	918		Sept. 2, 1950	9.75	7,500
1942	Oct. 29, 1941	6.35	2,400		Sept. 19, 1950	5.13	1,320
	Nov. 19, 1941	4.96	1,150	1951	Oct. 5, 1950	9.53	6,160
	Jan. 28, 1942	4.76	967		Feb. 19, 1951	4.94	1,240
	Mar. 6, 1942	4.7	925		Apr. 29, 1951	5.60	1,770
	Mar. 19, 1942	5.05	1,180		May 22, 1951	10.63	10,400
	May 1, 1942	10.34	20,200		May 25, 1951	11.06	13,900
	June 29, 1942	8.61	5,860		June 4, 1951	6.75	3,280
	Aug. 5, 1942	4.63	1,290		June 9, 1951	6.89	3,460
	Aug. 24, 1942	7.93	4,910		June 15, 1951	9.37	7,540
	Sept. 8, 1942	6.08	2,690		June 25, 1951	10.64	10,600
1943	Oct. 24, 1942	5.76	2,390	1952	July 2, 1951	10.76	11,000
	Nov. 1, 1942	4.60	1,050		July 14, 1951	10.67	12,800
	Dec. 26, 1942	4.56	1,020		July 26, 1951	5.30	1,730
	Jan. 6, 1943	4.90	1,500		Aug. 13, 1951	4.68	1,280
	June 11, 1943	5.00	1,480		Sept. 11, 1951	5.76	2,160
	Sept. 6, 1943	8.28	5,260	1953	Apr. 11, 1952	4.63	934
1944	Oct. 26, 1943	4.38	829		Apr. 20, 1952	6.18	1,940
	Apr. 13, 1944	6.50	2,710		Apr. 22, 1952	6.29	2,030
	Apr. 25, 1944	6.15	2,350		May 4, 1952	4.65	906
	May 4, 1944	9.60	7,120		May 25, 1952	5.08	1,170
	May 16, 1944	6.62	2,840	1954	July 13, 1953	5.01	970
	June 3, 1944	7.96	4,530		Aug. 5, 1953	8.23	4,630
	July 18, 1944	4.74	1,120		Aug. 9, 1953	5.89	1,710
	July 26, 1944	8.10	4,720	1955	Apr. 26, 1954	4.12	622
	Aug. 26, 1944	6.82	3,070		May 21, 1955	6.23	3,040
1945	Oct. 6, 1944	4.26	735		May 23, 1955	7.67	5,190
1946	Sept. 10, 1946	6.85	2,990		June 5, 1955	5.11	1,690
1947	Oct. 2, 1946	5.57	1,770		June 20, 1955	7.02	4,130
	Oct. 11, 1946	9.06	4,800	1956	July 9, 1956	4.56	642
	Oct. 19, 1946	5.12	1,480		May 20, 1957	4.50	872
	Nov. 7, 1946	5.08	1,440		May 22, 1957	4.50	872
	Mar. 2, 1947	4.57	1,040		June 16, 1957	5.04	1,340
	Apr. 11, 1947	8.49	5,310		June 25-26, 1957	5.99	2,430
	May 19, 1947	6.02	1,820		July 1, 1957	8.34	6,920
	June 6, 1947	8.91	5,940		July 24, 1957	4.51	839
	June 22, 1947	4.88	1,240		July 29, 1957	5.62	1,980
	July 1, 1947	7.11	3,170		Sept. 17, 1957	7.63	5,070
	July 17, 1947	7.40	3,410	1958	Mar. 31, 1958	5.25	1,420
1948	Feb. 29, 1948	6.00	2,140		Apr. 4, 1958	4.62	866
	Mar. 20, 1948	5.51	1,600		May 6, 1958	4.69	974
	June 30, 1948	8.33	5,010		May 10, 1958	4.79	1,060
	July 20, 1948	8.95	6,100		May 18, 1958	6.24	2,720
					June 20, 1958	4.62	938
					June 25, 1958	4.74	1,060
					June 28, 1958	6.70	3,360
					July 9, 1958	8.23	5,800
					July 21, 1958	7.17	4,180
					July 24, 1958	6.14	2,590
					July 28, 1958	10.00	10,500
					July 30, 1958	11.47	15,800
					Aug. 23, 1958	4.93	1,240

a From information by U. S. Weather Bureau; adjusted to present datum.

ARKANSAS RIVER BASIN

1428. Arkansas River at Hutchinson, Kans.

Location.--Lat 38°02', long 97°56', in NW¼ sec.24, T.23 S., R.6 W., at highway bridge on South Main Street in Hutchinson, at mile 812.0.

Drainage area.--Prior to July 1929: 37,869 sq mi, of which about 30,930 sq mi contributes directly to surface runoff. Since July 1929: about 38,821 sq mi, of which about 31,635 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage was 1,521.7 ft (unadjusted) above mean sea level (levels by U. S. Weather Bureau). Since Jan. 1, 1927, at datum 3.85 ft lower. Gage heights shown for 1914 and 1921 converted to last used datum.

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs and extended to 20,000 cfs by logarithmic plotting. Shifts in relation occur. Discharges after 1905 based on 9 current-meter measurements by Corps of Engineers and records for stations upstream and downstream.

Bankfull stage.--6 ft, last used datum.

Historical data.--Flood of May 3, 1942, "reached 8.7 feet----0.3 feet higher than previous highwater mark established in 1927," according to the U. S. Weather Bureau Climatological Data of May 1942.

Flood of June 15, 1949, was "8.2 feet---half a foot under the record peak of May 3, 1942," according to U. S. Weather Bureau Climatological Data of June 1949.

Flood of May 27, 1951, "rose to 9.2 feet----, half a foot higher than in May 3, 1942," according to U. S. Weather Bureau Climatological Data of May 1951.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation or by storage in John Martin Reservoir, which began January 1943. Cow Creek entered Arkansas River 7 miles downstream prior to July 1929 and three-quarters of a mile upstream thereafter. Base for partial-duration series, 1,600 cfs. Only annual peaks are shown since 1914, furnished by U. S. Weather Bureau.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	June 19, 1895	3.65	2,400	1905	Oct. 5, 1904	4.95	9,420
	July 8, 1895	4.00	3,300		Apr. 7, 1905	3.9	4,400
	July 18, 1895	4.1	3,600		May 1, 1905	5.65	8,500
	July 29, 1895	6.25	20,000		May 24, 1905	5.6	8,100
	Aug. 8, 1895	5.45	11,000		May 31, 1905	5.65	8,300
1896	July 19, 1896	3.3	1,700		June 11, 1905	4.8	5,500
	July 25, 1896	3.3	1,700		June 16, 1905	4.7	5,300
1897	Aug. 24, 1897	3.1	1,600		Aug. 7, 1905	3.6	2,600
1898	June 2, 1898	3.7	2,450	1914	May 1914	7.0	-
	June 14, 1898	3.9	3,100		June 13, 1921	7.7	9,300
1899	Mar. 8, 1899	3.3	1,740	1927	Aug. 17, 1927	8.4	13,500
	June 12, 1899	4.5	4,560		May 3, 1942	8.7	14,000
	July 22, 1899	4.7	5,450	1942	Apr. 27, 28, 1945	3.9	-
	Aug. 11, 1899	4.25	4,100		Sept. 12, 1946	3.8	-
1900	Apr. 11, 1900	4.9	7,160	1946	June 7, 1947	6.3	8,800
	Apr. 21, 1900	5.3	9,700		July 22, 1948	8.25	13,000
	May 5, 1900	5.5	11,200	1947	June 15, 1949	8.2	13,000
	May 18, 1900	4.75	6,340		Aug. 2, 1950	9.0	17,000
	May 26, 1900	5.35	10,000	1951	July 16, 1951	10.1	18,000
	June 7, 1900	5.6	12,100		Apr. 22, 1952	4.8	-
1901	June 7, 1901	3.8	2,820	1953	Aug. 6, 1953	6.8	9,900
1902	June 2, 1902	4.6	6,160		June 18, 1954	2.5	-
1903	May 30, 1903	3.0	2,000	1955	May 24, 1955	5.0	-
	June 14, 1903	5.3	10,000				
	June 21, 1903	4.6	6,160				
1904	June 4, 1904	4.0	3,800				
	June 13, 1904	4.40	5,800				
	June 16, 1904	4.60	6,300				
	June 25, 1904	4.3	5,400				
	July 6, 1904	5.0	8,800				
	Aug. 24, 1904	3.15	2,350				

1433. Cow Creek near Lyons, Kans.

Location.--Lat 38°18', long 98°11', in SW $\frac{1}{4}$ sec.15, T.20 S., R.8 W., 60 ft upstream from Missouri Pacific Railroad Co. bridge, 400 ft downstream from Little Cow Creek, 3 miles south of Lyons, and 33.0 miles upstream from mouth.

Drainage area.--728 sq mi, of which about 489 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to July 2, 1938; recording thereafter. Datum of gage is 1,628.16 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended to 28,000 cfs on basis of velocity-area studies. Shifts in relation occur.

Bankfull stage.--18 ft.

Historical data.--Maximum stage known, that of July 12, 1929, from information by Missouri Pacific Railroad Co.

Remarks.--Channel improved during 1943-44. Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	July 12, 1929	22.75	28,000	1946	June 19, 1946	6.71	184
1938	June 1, 1938	16.3	1,240	1947	May 28, 1947	16.15	1,220
1939	Aug. 14, 1939	15.83	1,200		June 5, 1947	16.16	1,220
1940	July 4, 1940	18.30	3,000	1948	June 28, 1948	16.92	1,460
1941	Sept. 3, 1941	19.27	6,500		July 12, 1948	16.03	1,250
1942	Oct. 20, 1941	20.49	12,400		July 16, 1948	18.80	5,720
	Apr. 26, 1942	17.28	1,660		July 23, 1948	16.22	1,290
	May 12, 1942	16.28	1,290		Aug. 5, 1948	15.92	1,230
	June 19, 1942	17.48	1,820	1949	June 16, 1949	15.20	1,090
1943	Oct. 5, 1942	16.97	1,430	1950	July 21, 1950	16.96	1,450
1944	Apr. 22, 1944	17.60	1,880		Aug. 1, 1950	19.52	8,200
	May 4, 1944	17.18	1,540		Aug. 6, 1950	16.76	1,380
	Aug. 27, 1944	17.16	1,540		Aug. 16, 1950	17.38	1,680
1945	Apr. 16, 1945	17.62	1,880		Aug. 26, 1950	16.82	1,380
				1951	June 9, 1951	16.36	1,260
					July 13, 1951	19.05	6,300

1434. Arkansas River near Wichita, Kans.

Location.--Lat 37°42'30", long 97°21'50", on line between secs.7 and 18, T.27 S., R.1 E., at Thirteenth Street Bridge in northwest Wichita, $1\frac{1}{2}$ miles above mouth of Little Arkansas River and at mile 764.9.

Drainage area.--39,072 sq mi, of which about 31,886 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 13, 1922, and Oct. 1, 1927, to Mar. 15, 1935; recording Jan. 14, 1922, to Sept. 30, 1927. Datum of gage is 1,288.10 ft above mean sea level, datum of 1929 (levels by city of Wichita).

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Arkansas River near Wichita, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 16, 1921	16.52	7,510	1927	Apr. 11, 1927	11.0	3,120
	July 24, 1921	14.8	5,050		June 24, 1927	11.25	3,440
	July 29, 1921	14.53	4,610		Aug. 8, 1927	12.7	6,050
	Aug. 8, 1921	14.65	4,960		Aug. 18, 1927	14.77	12,000
	Aug. 21, 1921	13.7	3,450		Aug. 27, 1927	11.7	4,070
1922	Mar. 15, 1922	13.88	3,920	1928	Apr. 6, 1928	10.2	2,130
	Apr. 9, 1922	13.98	4,210		June 7, 1928	11.96	5,460
	Apr. 28, 1922	14.56	5,390		June 17, 1928	12.0	5,550
	May 9, 1922	13.5	3,600		July 1, 1928	10.48	2,550
1923	May 27, 1923	13.56	3,300		Aug. 8, 1928	10.8	3,100
	June 4, 1923	14.10	4,720	1929	May 16, 1929	11.71	5,870
	June 10, 1923	15.65	8,510		June 5, 1929	9.90	2,620
	June 22, 1923	13.4	3,920		July 14, 1929	12.48	7,530
	June 25, 1923	13.8	4,560		Aug. 12, 1929	10.8	4,150
	Aug. 14, 1923	11.9	2,290	1930	June 16, 1930	9.92	2,840
	Aug. 18, 1923	12.25	2,820				
	Aug. 21, 1923	13.4	4,640	1931	Apr. 18, 1931	8.60	2,300
	Aug. 28, 1923	14.1	5,840				
	Sept. 2, 1923	14.07	5,750	1932	June 30, 1932	8.01	2,460
	Sept. 23, 1923	13.3	4,240		July 9, 1932	8.15	2,600
1924	Oct. 13, 1923	14.16	5,440	1933	May 29, 1933	7.8	3,600
	Feb. 12, 1924	13.90	4,970		Aug. 27, 1933	8.56	4,880
	Mar. 29, 1924	12.50	2,850		Sept. 2, 1933	7.33	2,180
	May 1, 1924	13.95	5,120				
1925	Apr. 7, Aug. 2	11.56	1,670	1934	Sept. 7, 1934	4.87	547
1926	Mar. 30, 1926	10.35	885				

1442. Little Arkansas River at Valley Center, Kans.

Location.--Lat 37°50', long 97°23', in SW $\frac{1}{4}$ sec.36, T.25 S., R.1 W., at county highway bridge half a mile west of Valley Center and at mile 15.6.

Drainage area.--1,327 sq mi, of which about 1,250 sq mi contributes directly to surface runoff.

Gage.--Nonrecording June 10, 1922, to Feb. 12, 1935, and July 2, 1951, to Feb. 15, 1952; recording Feb. 13, 1935, to July 1, 1951, and since Feb. 16, 1952. June 10, 1922, to Feb. 12, 1935, at site 2 miles downstream at different datum. Datum of gage is 1,327.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 22,000 cfs and by slope-area measurement at 32,000 cfs. Shifts in relation occur.

Historical data.--Flood in 1877, 9 miles upstream, was described by Sedgewick Pantograph newspaper of July 7, 1904, as follows: "Andy Coffman who lives on the other (west) side of river and lived there in 1877 says that the 1904 flood was within 6 inches of the highwater mark of 27 years ago." Annual maximum stages shown for Sedgewick, 9 miles upstream, for 1904, 1916-22, from records of U. S. Weather Bureau, indicate that the flood in 1904 was highest for period 1904-22; discharges defined from subsequent gage height and stage-discharge relations at Valley Center.

Remarks.--Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 6, 1904	25.5	-	1920	July 7, 1920	7.0	-
1916	June 21, 1916	24.0	9,000	1921	June 20, 1921	18.7	5,000
1917	June 2, 1917	17.4	4,000	1922	Apr. 9, 1922	23.5	8,000
1918	June 1, 1918	11.1	-	1923	Nov. 13, 1922	6.3	956
1919	Mar. 16, 1919	23.6	8,000		May 25, 1923	7.6	1,410
					June 10, 1923	18.02	10,500

Peak stages and discharges of Little Arkansas River at Valley Center, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 17, 1923	13.85	5,550	1939	Nov. 4, 1938	12.17	2,520
	Sept. 28, 1923	16.45	7,970		June 29, 1939	13.56	3,220
1924	Oct. 13, 1923	12.5	4,470		Aug. 16, 1939	13.37	3,100
	Mar. 26, 1924	6.1	866	1940	Apr. 18, 1940	7.52	815
	Apr. 30, 1924	16.5	8,100		May 9, 1940	10.46	1,760
	July 15, 1924	7.0	1,250		May 19, 1940	10.02	1,560
1925	May 24, 1925	4.5	516		Sept. 5, 1940	12.15	2,520
1926	Sept. 13, 1926	5.5	745	1941	June 10, 1941	18.94	9,300
					July 3, 1941	17.17	6,840
1927	Oct. 4, 1926	15.3	7,380		Sept. 3, 1941	14.98	4,420
	Oct. 13, 1926	9.8	2,800		Sept. 7, 1941	12.77	2,820
	Nov. 9, 1926	8.5	1,950	1942	Oct. 7, 1941	11.90	2,490
	Apr. 9, 1927	6.6	1,110		Oct. 10, 1941	9.90	1,560
	Apr. 19, 1927	10.0	2,940		Oct. 15, 1941	8.37	1,060
	June 23, 1927	6.7	1,140		Oct. 23, 1941	14.18	4,140
	Aug. 17, 1927	17.0	9,200		Nov. 1, 1941	9.81	1,310
	Aug. 28, 1927	14.2	6,390		Dec. 23, 1941	8.73	1,120
	Sept. 6, 1927	10.0	2,940		Apr. 20, 1942	14.20	4,900
1928	Apr. 6, 1928	12.0	4,500		Apr. 25, 1942	15.05	4,720
	May 5, 1928	5.5	825		Apr. 28, 1942	13.57	3,600
	June 10, 1928	6.25	1,020		May 3, 1942	8.42	1,040
	June 17, 1928	8.90	2,260		May 12, 1942	9.00	1,210
	June 25, 1928	8.0	1,780		June 13, 1942	7.52	815
	July 1, 1928	9.6	2,700		June 20, 1942	12.74	3,180
	July 11, 1928	8.25	1,910		June 22, 1942	10.50	1,770
1929	Nov. 18, 1928	9.6	2,700		June 25, 1942	10.48	1,770
	Nov. 21, 1929	7.2	1,420		July 2, 1942	9.37	1,340
	May 15, 1929	7.9	1,740		Aug. 4, 1942	8.10	955
	June 4, 1929	12.60	4,820		Sept. 7, 1942	13.32	3,390
	June 25, 1929	6.0	900	1943	Oct. 7, 1942	14.88	4,630
	July 12, 1929	16.3	8,410		Oct. 19, 1942	9.56	1,340
	Aug. 13, 1929	11.6	4,260		Dec. 27, 1942	8.20	982
1930	May 8, 1930	10.5	3,280		Feb. 4, 1943	7.93	907
	May 31, 1930	6.2	995		June 10, 1943	10.24	1,680
1931	June 16, 1931	6.5	832		July 19, 1943	15.50	5,170
1932	Nov. 15, 1931	9.5	1,810		Aug. 6, 1943	7.50	815
	Nov. 24, 1931	8.8	1,550	1944	Oct. 24, 1943	9.88	1,620
	May 4, 1932	6.7	1,180		Mar. 16, 1944	13.80	3,950
	May 9, 1932	6.6	1,140		Mar. 22, 1944	16.30	6,200
	June 30, 1932	6.4	1,070		Apr. 12, 1944	19.15	10,900
	July 6, 1932	11.0	3,650		Apr. 23, 1944	21.47	26,300
1933	May 21, 1933	9.1	1,900		Apr. 30, 1944	15.28	5,220
	Aug. 27, 1933	9.4	2,040		May 3, 1944	19.35	11,500
1934	Sept. 29, 1934	5.0	498		May 14, 1944	9.19	1,330
1935	May 14, 1935	8.70	1,340		May 29, 1944	7.84	904
	May 21, 1935	13.92	5,150		July 10, 1944	12.21	2,820
	May 28, 1935	17.05	8,500		July 12, 1944	19.20	10,900
	June 2, 1935	14.75	5,990		Sept. 29, 1944	10.00	1,660
	June 29, 1935	11.58	2,980	1945	Oct. 3, 1944	12.48	3,020
1936	Oct. 21, 1935	8.74	1,380		Oct. 5, 1944	9.46	1,440
1937	Oct. 9, 1936	12.01	2,420		Dec. 5, 1944	19.77	15,300
	Feb. 9, 1937	11.90	2,380		Feb. 26, 1945	7.55	851
	May 27, 1937	6.80	810		Mar. 5, 1945	9.84	1,620
	May 30, 1937	7.05	860		Mar. 18, 1945	11.80	2,570
	June 3, 1937	7.02	854		Mar. 23, 1945	8.67	1,260
	July 18, 1937	10.93	1,930		Apr. 13, 1945	12.52	5,020
	Sept. 9, 1937	10.63	1,810		Apr. 16, 1945	22.05	32,000
1938	May 5, 1938	12.25	2,560		Apr. 26, 1945	12.54	5,020
	May 20, 1938	14.21	3,690		July 19, 1945	8.48	1,140
	May 24, 1938	13.02	2,930		Sept. 25, 1945	11.64	2,450
	May 28, 1938	10.32	1,690		Sept. 29, 1945	21.32	24,500
	June 3, 1938	9.53	1,390	1946	Jan. 5, 1946	9.66	1,520
	June 17, 1938	12.20	2,520		June 20, 1946	10.71	1,980
	June 26, 1938	19.58	10,400	1947	Nov. 7, 1946	8.29	1,010
	July 17, 1938	8.70	1,120		Dec. 13, 1946	11.87	2,630
	Aug. 16, 1938	14.22	3,760		Mar. 14, 1947	14.13	4,190
	Sept. 12, 1938	11.85	2,380		Apr. 11, 1947	16.71	6,650
					Apr. 14, 1947	19.82	15,300
					May 21, 1947	7.01	810
					May 25, 1947	9.28	1,360
					May 30, 1947	11.20	2,230
					June 6, 1947	11.73	2,510
					June 10, 1947	8.95	1,260

Peak stages and discharges of Little Arkansas River at Valley Center, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	June 20, 1947	12.90	3,280	1951	May 12, 1951	9.81	2,590
	June 28, 1947	14.17	4,270		May 17, 1951	20.50	22,400
1948	Dec. 5, 1947	7.89	995	1951	May 23, 1951	16.48	10,200
	Feb. 28, 1948	14.27	4,950		June 9, 1951	13.40	5,840
	Mar. 2, 1948	14.72	5,390		June 24, 1951	11.75	4,180
	Mar. 19, 1948	12.54	3,260		June 30, 1951	18.66	14,800
	June 17, 1948	8.03	1,020		July 3, 1951	16.80	10,800
	June 22, 1948	14.10	4,730		July 13, 1951	19.47	16,900
	June 29, 1948	17.33	8,690		July 24, 1951	10.58	3,290
	July 13, 1948	9.74	1,630		Aug. 9, 1951	6.32	1,120
	July 18, 1948	16.12	7,130		Sept. 6, 1951	9.10	2,350
	July 22, 1948	17.55	9,090		Sept. 13, 1951	8.25	1,900
	Aug. 15, 1948	9.43	1,510		Sept. 24, 1951	16.60	10,400
	Sept. 26, 1948	7.86	970	1952	Oct. 6, 1951	9.80	2,750
1949	Jan. 16, 1949	12.84	3,500		Mar. 10, 1952	9.44	2,520
	Jan. 24, 1949	13.29	3,930		Apr. 20, 1952	5.63	984
	Feb. 13, 1949	13.35	4,020		Apr. 23, 1952	6.71	1,350
	Feb. 18, 1949	12.88	3,800		May 25, 1952	5.32	882
	Feb. 27, 1949	13.02	3,940		June 5, 1952	6.94	1,430
	Apr. 28, 1949	8.51	1,750	1953	July 15, 1953	4.57	643
	May 1, 1949	15.58	7,620				
	May 10, 1949	10.77	2,920	1954	May 3, 1954	6.98	1,440
	May 17, 1949	12.78	4,080				
	May 21, 1949	10.79	2,870	1955	Sept. 29, 1955	12.65	3,560
	May 24, 1949	10.22	2,540				
	June 1, 1949	6.39	872	1956	Oct. 3, 1955	11.27	2,710
	June 7, 1949	8.37	1,660				
	June 9, 1949	9.80	2,330	1957	Mar. 27, 1957	-	801
	June 15, 1949	7.95	1,440		Apr. 6, 1957	-	1,260
	July 11, 1949	7.46	1,270		Apr. 26, 1957	-	1,440
1950					May 14, 1957	-	7,460
	June 3, 1950	8.00	1,480		May 17, 1957	-	19,800
	June 12, 1950	8.93	1,880		May 27, 1957	-	1,370
	July 18, 1950	9.71	2,170		June 4, 1957	-	3,220
	July 20, 1950	10.42	2,580		June 20, 1957	-	1,240
	July 28, 1950	10.00	2,460		June 28, 1957	-	8,440
	July 31, 1950	18.20	13,700	1958	Mar. 10, 1958	-	2,870
	Aug. 5, 1950	14.90	7,530		Mar. 24, 1958	-	2,000
	Aug. 8, 1950	11.85	3,880		Apr. 1, 1958	-	2,400
	Aug. 17, 1950	9.65	2,280		May 6, 1958	-	4,240
	Aug. 29, 1950	8.35	1,700		May 11, 1958	-	888
	Sept. 15, 1950	8.79	2,030		July 4, 1958	-	5,060
	Sept. 18, 1950	6.60	1,080		July 17, 1958	-	11,300
1951	Oct. 4, 1950	6.61	1,000		July 31, 1958	-	3,720
	May 1, 1951	14.10	6,630		Sept. 17, 1958	-	7,570

1443. Arkansas River at Wichita, Kans.

Location.--Lat 37°41', long 97°21', in SE $\frac{1}{4}$ sec. 20, T. 27 S., R. 1 E., at Douglas Avenue bridge in Wichita, half a mile downstream from Little Arkansas River and at mile 762.9.

Drainage area.--40,420 sq mi, of which about 33,157 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 30, 1934; recording thereafter. Datum of gage is 1,280.81 ft above mean sea level, datum of 1929. July 17, 1897, to Dec. 31, 1919, at datum 7.0 ft higher. Gage heights shown herein have been converted to present datum.

Stage-discharge relation.--Defined by current-meter measurements since 1934. Discharges prior to 1934 based on analysis of stage-discharge relation for later periods related to records for nearby stations. Channel degradation of about 10 ft occurred during period 1897-1956. Shifts in relation occur.

Bankfull stage.--9 ft.

Historical data.--"Flood of 1877 was not much worse than the one Wichita is now experiencing," according to Wichita Eagle of July 8, 1904. Flood in 1877 described as "highest water" in Daily River stages published by U. S. Weather Bureau in 1909.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation or by storage in John Martin Reservoir, which began January 1943. Gage heights for period prior to July 1, 1934, furnished by U. S. Weather Bureau. Base for partial-duration series, 3,700 cfs. Only annual peaks are shown prior to 1934.

Peak stages and discharges of Arkansas River at Wichita, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1877	May 18, 1877	18.0	-	1937	(a)	4.2	2,760
1889	June 10, 1889	12.6	-	1938	May 20, 1938	5.50	4,650
1898	June 10, 1898	12.7	6,800		May 24, 1938	5.17	4,160
1899	June 10, 1899	13.3	8,600		June 4, 1938	5.93	5,300
1900	May 28, 1900	14.4	13,000		June 26, 1938	8.20	9,420
1901	Apr. 13, 1901	13.2	8,300		Aug. 17, 1938	5.41	4,520
1902	June 2, 1902	13.4	8,900	1939	June 28, 1939	6.10	5,570
1903	June 1, 1903	14.7	14,500		Aug. 16, 1939	5.70	4,950
1904	July 8, 1904	17.3	39,000	1940	May 12, 1940	5.07	3,690
1905	June 1, 1905	13.1	11,400	1941	June 10, 1941	8.00	9,900
1906	Sept. 20, 1906	11.3	5,800		July 3, 1941	8.20	10,900
1907	Aug. 1, 1907	9.6	2,400	1942	Oct. 24, 1941	7.70	9,820
1908	June 14, 1908	10.9	4,900		Apr. 26, 1942	8.10	10,900
1909	Oct. 24, 1908	11.6	6,700		May 5, 1942	9.60	16,600
1910	Jan. 13, 1910	11.2	10,100		June 20, 1942	8.40	9,570
1911	Feb. 23, 1911	7.5	4,800		Aug. 26, 1942	6.08	4,190
1912	May 7, 1912	8.7	6,700		Sept. 5, 1942	6.60	5,030
1913	Oct. 13, 1912	5.5	2,300	1943	Oct. 5, 1942	7.34	7,460
1914	May 6, 1914	9.7	8,600		July 19, 1943	6.65	6,020
1915	Aug. 29, 1915	10.0	9,200	1944	Mar. 16, 1944	5.98	5,380
1916	June 21, 1916	12.2	14,200		Mar. 22, 1944	6.83	7,310
1917	June 3, 1917	6.3	3,200		Apr. 12, 1944	8.17	10,800
1918	June 9, 1918	4.5	1,400		Apr. 24, 1944	11.70	26,600
1919	Mar. 17, 1919	10.2	9,600		May 4, 1944	9.36	16,700
1920	Feb. 17, 1920	3.0	500		June 2, 1944	5.10	5,460
1921	June 16, 1921	9.4	8,000		July 12, 1944	6.98	8,160
1922	Mar. 15, 1922	10.2	9,600		Aug. 28, 1944	5.34	4,910
1923	June 10, 1923	13.5	18,000	1945	Oct. 3, 1944	4.67	3,900
1924	Apr. 30, 1924	10.9	11,200		Dec. 5, 1944	6.67	7,570
1925	Aug. 3, 1925	4.7	1,600		Mar. 18, 1945	4.80	4,050
1926	Apr. 14, 1926	3.6	800		Apr. 17, 1945	10.32	19,700
1927	Aug. 17, 1927	13.5	21,000		Apr. 27, 1945	5.60	6,320
1928	June 17, 1928	7.9	7,700		Sept. 25, 1945	4.0	3,830
1929	July 15, 1929	9.8	11,700	1946	Sept. 29, 1945	9.15	16,100
1930	May 11, 1930	5.2	3,600		Sept. 12, 1946	2.75	2,200
1931	Apr. 19, 1931	4.4	2,600	1947	Oct. 13, 1946	5.50	5,760
1932	July 9, 1932	5.9	4,500		Mar. 14, 1947	5.05	4,350
1933	Aug. 28, 1933	7.7	7,400		Apr. 11, 1947	6.75	7,780
1934	May 18, 1934	1.72	482		Apr. 14, 1947	8.77	13,200
1935	May 22, 1935	7.62	8,340		May 22, 1947	4.48	4,010
	May 29, 1935	9.24	11,500		May 29, 1947	5.25	5,150
	June 3, 1935	9.67	12,500		June 7, 1947	6.49	8,020
	July 1, 1935	6.13	5,700		June 20, 1947	7.09	9,570
1936	June 4, 1936	5.44	4,350		June 28, 1947	5.49	5,720
				1948	Feb. 28, 1948	5.90	6,350
					Mar. 2, 1948	6.87	8,780
					Mar. 20, 1948	5.62	5,720
					June 23, 1948	6.15	7,280
					June 29, 1948	9.26	14,300
					July 11, 1948	4.05	3,830
					July 23, 1948	11.40	19,200
					Aug. 16, 1948	6.35	7,960
				1949	Jan. 16, 1949	5.36	5,960
					Jan. 24, 1949	6.90	9,150
					Feb. 13, 1949	7.74	11,200
					Feb. 19, 1949	7.43	10,400
					Feb. 27, 1949	7.20	9,910
					May 2, 1949	7.79	11,800
					May 17, 22, 1949	6.82	8,200
					May 24, 1949	6.90	8,420
					May 31, 1949	5.35	5,380
					June 10, 1949	6.84	8,200
					June 18, 1949	8.34	12,500
				1950	Oct. 14, 1949	5.13	4,350
					July 18, 1950	4.87	3,900
					Aug. 1, 1950	10.75	18,200
					Aug. 5, 1950	10.78	18,200
					Aug. 20, 1950	7.98	11,100
					Aug. 30, 1950	6.43	7,360
					Sept. 4, 1950	6.68	7,780

a Occurred Oct. 9, 1936, Feb. 9, July 18, 1937.

ARKANSAS RIVER BASIN

Peak stages and discharges of Arkansas River at Wichita, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept. 16, 1950	5.00	4,350	1954	May 3, 1954	2.21	1,470
	Sept. 18, 1950	4.92	4,200		Sept. 29, 1955	5.14	4,750
1951	Oct. 8, 1950	6.65	8,980	1956	Oct. 3, 1955	9.40	12,300
	May 2, 1951	7.64	11,200		May 14, 1957	-	11,500
	May 12, 1951	4.58	4,110		May 17, 1957	-	30,700
	May 18, 1951	11.86	23,000		June 4, 1957	-	7,710
	May 23, 1951	11.57	22,200		June 18, 1957	-	3,930
	June 10, 1951	8.64	13,900		June 24, 1957	-	3,830
	July 1, 1951	13.38	27,600		June 28, 1957	-	15,200
	July 17, 1951	12.60	25,000		July 1, 1957	-	20,500
	July 24, 1951	6.12	8,600		Sept. 20, 1957	-	6,480
	Aug. 10, 1951	5.50	7,340	1958	Mar. 10, 1958	-	4,330
	Aug. 14, 1951	3.48	3,810		Apr. 2, 1958	-	6,950
	Sept. 6, 1951	6.35	9,080		May 6, 1958	-	6,180
	Sept. 13, 1951	5.29	6,660		July 5, 1958	-	10,400
	Sept. 25, 1951	7.90	12,500		July 17, 1958	-	18,200
1952	Oct. 7, 1951	4.48	5,100		Aug. 1, 1958	-	13,900
	Mar. 10, 1952	4.10	3,900		Sept. 17, 1958	-	11,700
	Apr. 24, 1952	4.92	5,210		Sept. 24, 1958	-	4,120
1953	Aug. 7, 1953	4.98	5,320				

1448. North Fork Minnescah River near Cheney, Kans.

Location.--Lat 37°40', long 97°46', on south line of sec. 28, T. 27 S., R. 4 W., at bridge on U. S. Highway 54, 3 miles northeast of Cheney, 4 miles upstream from Spring Creek, 22 miles west of Wichita, and at mile 8.8.

Drainage area.--930 sq mi, of which about 693 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Nov. 30, 1950; recording thereafter. Datum of gage is 1,336.45 ft above mean sea level (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood in June 1923 was about 4 inches lower than that of Oct. 2, 1953, at site about 6 miles upstream from gage, from information obtained by U. S. Bureau of Reclamation from local resident. Discharge estimated from present rating.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 1923	13.9	13,000	1955	June 18, 1955	9.20	2,770
1950	Aug. 8, 1950	6.99	11,060	1956	Oct. 2, 1955	14.2	14,200
1951	May 17, 1951	12.51	9,030	1957	May 14, 1957	11.52	5,640
	May 23, 1951	13.23	11,200		May 16, 1957	15.09	23,700
	June 7, 1951	10.60	4,750		June 2, 1957	8.62	2,290
	June 23, 1951	10.41	4,460		June 18, 1957	10.43	4,120
	June 26, 1951	11.25	5,720		June 24, 1957	10.39	4,070
	June 30, 1951	12.55	9,150		June 26, 1957	11.54	5,780
	Sept. 5, 1951	14.38	14,800		July 1, 1957	9.93	3,520
	Sept. 13, 1951	10.14	4,080	1958	Mar. 30, 1958	8.94	2,810
1952	Apr. 23, 1952	7.87	1,680		May 4, 1958	8.41	2,300
					Sept. 16, 1958	10.58	4,740
1953	Mar. 14, 1953	5.55	391		Sept. 22, 1958	8.73	2,600
1954	May 24, 1954	7.56	1,440				

a Maximum Aug. 8 to Sept. 30, 1950; probably was exceeded during period of no record.

1452.--South Fork Ninnescah River near Murdock, Kans.

Location.--Lat 37°34', long 97°51', on south line of sec.34, T.28 S., R.5 W., at highway bridge 4 miles southeast of Murdock and at mile 68.0.

Drainage area.--650 sq mi, of which about 543 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 29, 1951; recording thereafter. Datum of gage is 1,357.81 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Aug. 30, 1950	9.60	a6,000	1955	May 26, 1955	7.51	2,270
1951	May 17, 1951	9.76	6,400		June 3, 1955	7.55	2,330
	May 21, 1951	9.20	5,200		June 5, 1955	8.77	4,340
	June 7, 1951	8.16	3,240		June 18, 1955	7.91	2,890
	June 24, 1951	8.01	3,020	1956	Oct. 2, 1955	7.15	1,980
	June 26, 1951	7.77	2,660				
	July 1, 1951	7.82	2,730	1957	May 13, 1957	9.29	6,870
	July 15, 1951	8.15	3,220		May 16, 1957	11.86	23,600
	Sept. 5, 1951	10.03	7,080		June 19, 1957	6.89	2,560
	Sept.13, 1951	7.63	2,440		June 24, 1957	8.99	8,460
1952	Apr. 20, 1952	7.98	2,970		June 26, 1957	11.87	25,900
1953	July 13, 1953	6.46	1,080		July 2, 1957	6.92	2,180
1954	May 27, 1954	8.13	3,200	1958	Sept.16, 1958	8.86	7,040

a Maximum Aug. 9 to Sept. 30, 1950; probably was exceeded during period of no record.

1455. Ninnescah River near Peck, Kans.

Location.--Lat 37°28', long 97°25', in NW¹ sec.10, T.30 S., R.1 W., at highway bridge 3 miles southwest of Peck and at mile 31.6.

Drainage area.--2,129 sq mi, of which about 1,785 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 4, 1939; recording thereafter. Datum of gage is 1,222.38 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Discharge for flood of June 9, 1923, determined from extension of later stage-discharge relation above 33,000 cfs by logarithmic plotting. Shifts in relation occur.

Historical data.--Flood of June 9, 1923, reached a stage of 26.4 ft, from flood-mark remembered by local resident in 1938.

Remarks.--Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 9, 1923	26.4	70,000	1940	May 19, 1940	10.40	5,000
1938	May 6, 1938	12.0	6,610		June 8, 1940	9.25	3,880
	May 20, 1938	15.7	11,100		July 3, 1940	15.77	11,200
	May 24, 1938	12.60	7,270		Sept. 5, 1940	12.80	7,490
	June 26, 1938	11.1	5,700	1941	June 9, 1941	12.28	6,940
	Aug. 16, 1938	12.2	6,830		July 3, 1941	13.70	8,550
1939	Nov. 3, 1938	11.4	6,000	1942	Oct. 24, 1941	13.85	8,910
	June 16, 1939	10.43	5,030		Oct. 26, 1941	13.37	8,310
	June 27, 1939	12.29	6,940		Apr. 26, 1942	14.05	8,910
	Aug. 15, 1939	11.17	5,800		June 19, 1942	14.58	9,680

Peak stages and discharges of Ninescaw River near Peck, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	June 21, 1942	12.89	7,600	1949	May 1, 1949	8.38	3,600
	June 23, 1942	12.7	7,380		May 17, 1949	15.82	13,000
	July 1, 1942	10.9	5,500		May 22, 1949	15.85	13,000
1943	Oct. 6, 1942	11.60	6,200	1950	May 25, 1949	10.36	5,680
	May 19, 1943	9.67	4,330		May 31, 1949	9.14	4,280
1944	Mar. 16, 1944	10.95	5,600		June 6, 1949	14.65	11,300
	Mar. 18, 1944	9.56	4,240	1951	June 11, 1949	9.17	4,380
	Mar. 22, 1944	9.93	4,510		June 14, 1949	11.66	7,310
	Apr. 11, 1944	15.60	10,000		June 19, 1949	13.07	9,240
	Apr. 23, 1944	20.58	24,600		July 13, 1949	8.67	3,880
	Apr. 26, 1944	10.44	5,680	1950	Jan. 2, 1950	9.32	3,950
	May 1, 1944	14.91	11,800		July 16, 1950	11.47	6,250
	May 4, 1944	13.67	10,100		July 18, 1950	11.67	6,490
1945	Oct. 3, 1944	9.61	4,790		July 31, 1950	14.13	9,590
	Dec. 5, 1944	12.30	8,120		Aug. 31, 1950	10.90	5,580
	Mar. 19, 1945	8.56	3,600	1951	Apr. 28, 1951	11.80	6,610
	Apr. 11, 1945	9.50	4,580		May 1, 1951	12.88	7,960
	Apr. 16, 1945	19.90	22,600		May 17, 1951	20.73	25,100
	Apr. 26, 1945	8.76	4,280	1952	May 24, 1951	15.30	11,800
	Sept. 26, 1945	14.35	11,100		June 8, 1951	13.10	8,240
	Sept. 29, 1945	16.35	13,800		June 24, 1951	14.13	9,810
1946	Jan. 5, 1946	8.11	3,320		June 27, 1951	11.85	6,720
1947	Dec. 13, 1946	9.21	4,380	1953	July 1, 1951	14.20	9,920
	Mar. 13, 1947	11.95	7,700		July 23, 1951	10.93	5,820
	Apr. 11, 1947	17.14	14,800		Sept. 6, 1951	19.50	21,400
	Apr. 14, 1947	18.40	18,500	1952	Sept. 13, 1951	12.51	7,510
	May 20, 1947	10.08	5,330		Apr. 23, 1952	9.12	3,860
	May 25, 1947	10.33	5,560		June 5, 1952	9.24	3,970
	May 28, 1947	12.96	9,100	1953	Mar. 31, 1953	9.88	4,540
	June 20, 1947	15.32	12,300	1954	May 28, 1954	12.48	7,480
	June 27, 1947	13.84	10,200		May 26, 1955	10.46	5,110
1948	Feb. 28, 1948	15.82	13,000	1955	June 6, 1955	12.09	7,010
	Mar. 2, 1948	14.20	10,800		June 19, 1955	11.49	6,290
	Mar. 19, 1948	12.40	8,260	1956	Oct. 3, 1955	15.49	12,300
	June 23, 1948	13.12	9,240		Apr. 24, 1957	9.05	3,950
	June 29, 1948	18.28	18,200	1957	May 14, 1957	15.20	12,200
	July 10, 1948	11.25	6,660		May 17, 1957	21.85	38,200
	July 16, 1948	16.64	13,900		June 12, 1957	12.05	7,020
	July 23, 1948	17.12	14,800	1958	June 19, 1957	10.36	5,330
1949	Aug. 15, 1948	14.55	10,900		June 24, 1957	13.91	10,200
	Jan. 16, 1949	13.10	9,240		June 27, 1957	19.56	26,800
	Feb. 12, 1949	a17.89	10,400	1958	July 2, 1957	10.75	5,800
	Feb. 18, 1949	ab16.02	7,570		Mar. 31, 1958	8.82	3,720
	Feb. 24, 1949	12.6	8,540		July 5, 1958	8.82	3,720
	Feb. 25, 1949	8.62	3,800		Sept. 17, 1958	16.51	15,000
	Feb. 27, 1949	8.80	3,990		Sept. 22, 1958	9.42	4,320
	Apr. 10, 1949	9.26	4,480				
	Apr. 27, 1949	10.30	5,560				

a Backwater from ice.

b Occurred Feb. 17.

1465. Arkansas River at Arkansas City, Kans.
(Published as "near Arkansas City" 1903-4)

Location.--Lat 37°03'30", long 97°03'24", in NE $\frac{1}{4}$ sec.35, T.34 S., R.3 E., at bridge on U. S. Highway 166, 0.1 mile downstream from St. Louis and San Francisco Railway Co. bridge, 0.5 mile west of Arkansas City, 5.4 miles upstream from Walnut River, and at mile 701.4.

Drainage area.--43,713 sq mi, of which about 36,106 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 29, 1929; recording thereafter. Prior to July 31, 1906, at site 0.5 mile upstream at different datum. Sept. 10, 1921, to Aug. 28, 1956, at site 0.5 mile upstream at datum 2.97 ft higher (gage heights adjusted to present datum). Datum of present gage is 1,050.04 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 65,000 cfs and extended to 103,000 cfs by logarithmic plotting. Shifts in relation occur.

Historical data.--Flood of June 10, 1923, "according to the recollection of old residents, exceeded the flood of 1877" as reported in U. S. Weather Bureau Climatological Data of June 1923.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation or by storage in John Martin Reservoir, which began January 1943. Base for partial-duration series, 6,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 25, 1903	9.2	10,100	1929	June 8, 1929	18.4	15,800
	June 3, 1903	11.3	16,700		June 24, 1929	19.6	20,200
	June 16, 1903	9.1	9,760		July 10, 1929	16.2	9,200
	June 23, 1903	8.1	6,920		July 16, 1929	16.8	10,800
1904	June 5, 1904	13.4	24,800	1930	May 11, 1930	16.84	11,700
	July 10, 1904	15.2	40,300	1931	June 16, 1931	15.17	7,800
1905	May 3, 1905	9.4	9,900		June 21, 1932	15.19	7,340
	May 26, 1905	8.5	7,960	1933	Aug. 21, 1933	17.25	11,700
	June 2, 1905	9.4	9,900		Aug. 29, 1933	18.14	14,600
	July 5, 1905	8.2	7,330		Sept. 3, 4, 1933	18.81	16,800
1906	Sept. 21, 1906	-	5,000	1934	Apr. 7, 1934	11.74	1,880
1922	Mar. 17, 1922	19.2	16,400		May 15, 1935	15.48	7,270
	Apr. 11, 1922	20.8	22,600	1935	May 23, 1935	19.94	21,400
	May 12, 1922	16.1	7,630		May 31, 1935	21.14	28,300
	May 22, 1922	16.2	7,800		June 5, 1935	20.42	23,200
	July 14, 1922	22.1	28,600		June 12, 1935	15.63	7,510
	July 19, 1922	18.7	14,800		July 17, 1935	16.41	9,170
1923	May 25, 1923	16.6	8,500		July 1, 1935	18.0	13,200
	June 3, 1923	16.9	9,030	1936	June 6, 1936	15.12	6,440
	June 10, 1923	28.43	103,000	1937	May 29, 1937	16.37	9,980
	Sept. 30, 1923	26.02	8,240		June 1, 1937	16.9	11,400
1924	Oct. 15, 1923	16.3	12,800		June 11, 1937	16.15	9,420
	May 2, 1924	21.5	22,400		July 20, 1937	17.03	11,700
1925	Sept. 23, 1925	12.93	2,710	1938	May 6, 1938	15.89	8,860
1926	Sept. 5, 1926	16.31	7,760		May 21, 1938	19.50	19,600
1927	Oct. 4, 1926	23.94	45,300		May 25, 1938	17.6	13,200
	Apr. 9, 1927	22.8	36,300		June 28, 1938	17.4	12,300
	Apr. 20, 1927	19.2	17,100		Aug. 18, 1938	16.92	11,400
	Aug. 4, 1927	19.29	17,600	1939	Nov. 4, 1938	15.7	7,740
	Aug. 20, 1927	20.29	21,600		June 29, 1939	18.19	14,800
1928	Oct. 1, 1927	15.7	7,960		Aug. 17, 1939	15.77	8,300
	Apr. 7, 1928	17.3	12,100	1940	May 20, 1940	15.05	6,760
	June 9, 1928	18.4	15,800		July 5, 1940	16.5	9,700
	June 18, 1928	19.46	19,900		Sept. 5, 1940	16.95	11,400
	June 29, 1928	15.5	7,490	1941	June 11, 1941	18.90	17,200
1929	Nov. 17, 1928	17.1	11,600		July 4, 1941	18.31	15,400
	Apr. 20, 1929	17.4	12,400				
	May 17, 1929	15.4	7,260				

Peak stages and discharges of Arkansas River at Arkansas City, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Oct. 26, 1941	19.45	19,100	1949	June 16, 1949	18.75	17,800
	Apr. 27, 1942	19.76	20,700		June 21, 1949	19.71	20,800
	May 7, 1942	18.37	16,400		July 13, 1949	15.89	9,680
	June 22, 1942	24.83	45,800	1950	June 3, 1950	15.29	8,400
	July 2, 1942	18.02	14,400		July 17, 1950	19.37	20,900
	Sept. 5, 1942	16.45	10,000		July 19, 1950	20.47	24,800
1943	Oct. 6, 1942	17.55	12,800		July 29, 1950	15.23	8,710
	Dec. 26, 1942	15.46	8,020		Aug. 2, 1950	22.74	36,200
	May 19, 1943	17.95	14,100		Aug. 21, 1950	16.77	13,200
1944	Mar. 19, 1944	16.65	11,000		Sept. 1, 1950	16.63	12,900
	Mar. 23, 1944	17.49	13,500	1951	Oct. 9, 1950	15.03	9,080
	Apr. 13, 1944	20.07	23,400		Apr. 29, 1951	15.69	9,790
	Apr. 24, 1944	28.21	73,500		May 2, 1951	20.57	25,300
	May 2, 1944	20.34	24,800		May 19, 1951	26.47	66,000
	June 6, 1944	20.19	23,900		May 23, 1951	21.94	31,800
	June 9, 1944	15.08	7,170		June 9, 1951	20.17	23,800
	July 13, 1944	15.92	9,100		June 25, 1951	21.17	27,900
	Sept. 28, 1944	15.21	6,710		July 1, 1951	24.02	44,400
					July 14, 1951	21.40	29,000
1945	Oct. 4, 1944	16.57	10,600		July 24, 1951	17.31	14,300
	Dec. 7, 1944	19.77	20,700		Aug. 11, 1951	15.10	8,330
	Mar. 20, 1945	15.54	6,710		Sept. 8, 1951	19.27	20,500
	Apr. 12, 1945	16.03	9,350		Sept. 14, 1951	17.43	14,600
	Apr. 18, 1945	24.94	51,600		Sept. 26, 1951	18.27	17,200
	Apr. 29, 1945	17.00	11,600	1952	Oct. 8, 1951	14.68	7,320
	Sept. 30, 1945	21.99	30,500		Mar. 11, 1952	15.09	8,310
1946	Jan. 6, 1946	13.28	3,810		Apr. 22, 1952	14.95	7,970
					Apr. 24, 1952	15.45	9,170
1947	Mar. 14, 1947	17.22	12,200		June 5, 1952	14.70	7,370
	Apr. 15, 1947	23.07	36,000	1953	Apr. 1, 1953	15.69	5,360
	May 15, 1947	15.28	7,580		May 29, 1954	14.10	7,260
	May 21, 1947	17.16	11,700	1954			
	May 25, 1947	17.50	12,400				
	May 29, 1947	17.07	11,500				
	June 8, 1947	15.77	8,440	1955	May 26, 1955	15.92	11,600
	June 22, 1947	17.44	12,900		June 7, 1955	13.70	6,550
	June 29, 1947	17.77	13,700		June 19, 1955	14.54	8,140
1948	Feb. 29, 1948	17.69	13,500	1956	Oct. 4, 1955	19.35	21,500
	Mar. 3, 1948	17.59	13,200				
	Mar. 21, 1948	17.15	12,200	1957	May 18, 1957	25.55	73,100
	June 24, 1948	17.71	13,700		May 25, 1957	13.02	10,000
	July 1, 1948	21.57	29,600		May 30, 1957	11.86	7,320
	July 11, 1948	18.13	15,500		June 3, 1957	12.93	9,820
	July 16, 1948	22.07	32,200		June 12, 1957	15.93	17,400
	July 25, 1948	22.61	35,000		June 20, 1957	12.58	8,400
	Aug. 16, 1948	19.24	19,500		June 25, 1957	14.75	14,000
					June 29, 1957	22.20	41,800
					Sept. 21, 1957	13.14	10,400
				1958	Mar. 11, 1958	12.55	7,110
1949	Jan. 17, 1949	16.87	12,200		Mar. 24, 1958	13.42	9,100
	Jan. 25, 1949	17.44	13,900		Apr. 3, 1958	14.62	12,100
	Feb. 13, 1949	19.45	20,100		May 7, 1958	13.36	8,950
	Feb. 19, 1949	19.23	19,700		July 4, 1958	17.70	22,100
	Feb. 27, 1949	18.69	17,500		July 18, 1958	16.62	18,500
	Apr. 28, 1949	16.04	9,940		Aug. 2, 1958	15.52	14,700
	May 2, 1949	17.37	13,600		Sept. 18, 1958	17.32	20,600
	May 19, 1949	19.39	19,700		Sept. 23, 1958	12.70	7,290
	May 23, 1949	18.95	18,400				
	June 1, 1949	16.84	12,200				
	June 8, 1949	19.70	20,800				

1471. Whitewater River at Augusta, Kans.

Location.--Lat 37°44'20", long 97°00'30", on north line of sec.4, T.27 S., R.4 E., at highway bridge 4 miles northwest of Augusta and 6.6 miles upstream from mouth.

Drainage area.--456 sq mi; 473 sq mi at former site.

Gage.--Recording prior to Apr. 19, 1954, at site 3 miles downstream at datum 1,202.95 ft above mean sea level, datum of 1929; nonrecording thereafter at last used site and datum. Altitude of gage is 1,220 ft (from topographic map).

Auxiliary nonrecording gage on Walnut River at Augusta, Oct. 1, 1952, to Apr. 18, 1954.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected at times by backwater from Walnut River. Slope used as a factor in determining discharge, 1953-55.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 1, 1951	25.58	11,800	1952	Oct. 7, 1951	14.71	2,680
	May 17, 1951	18.39	4,870		Mar. 11, 1952	13.51	2,260
	May 23, 1951	17.50	4,260		May 22, 1952	13.77	2,340
	June 23, 1951	23.25	9,180	1953	Mar. 31, 1953	15.60	3,130
	June 30, 1951	25.78	8,860		May 27, 1953	26.52	27,200
	July 4, 1951	24.03	10,000		Mar. 25, 1954	5.96	348
	July 14, 1951	23.66	9,630	1954	June 18, 1955	14.8	900
	July 23, 1951	19.15	5,420				
	Sept. 6, 1951	14.84	2,750				
	Sept. 13, 1951	14.19	2,490	1955			
	Sept. 25, 1951	21.02	6,970				

1478. Walnut River at Winfield, Kans.

Location.--Lat 37°14', long 97°00', in NE $\frac{1}{4}$ sec.33, T.32 S., R.4 E., at bridge on U. S. Highway 77, 1 mile south of Winfield, 1 mile upstream from Black Crook Creek, and at mile 24.3.

Drainage area.--1,840 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1934; recording thereafter. Datum of gage is 1,082.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Discharge shown for 1898, 1904, and 1915 determined from stage-discharge relation for later periods. Shifts in relation occur.

Bankfull stage.--30 ft.

Historical data.--Flood in 1877 may have been 2 to 3 ft lower than that in July 1904 based on description in Winfield Tribune of June 10, 1904, which reported June 1904 flood "has broken all previous historical records including that of June 1878 (probably May 1877). At that time water ran 3 ft deep at 9th and Loomis while in last week's flood (34.2, June 5, 1904) the water ran over the same intersection which is 4 or 5 ft higher than it was then."

Flood in 1898 was 25 $\frac{1}{2}$ inches lower than that of July 8, 1904, according to Water-Supply Paper 147.

Flood of July 8, 1904, was "Highest water in city's history," according to the Winfield Daily Free Press of July 8, 1904. This flood reached a stage estimated to be 35.2 ft (1 ft higher than June 5, 1904) according to Congressional documents; 74th Cong. 1st Sess. H. Doc. 308, Arkansas River.

Flood of May 22, 1915, was "---3 $\frac{1}{2}$ ft below the 1904 crest" according to the Winfield Evening Free Press of May 22, 1915.

Remarks.--Base for partial-duration series, 9,600 cfs.

Peak stages and discharges of Walnut River at Winfield, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1877	May 1877	32-33	-	1942	June 26, 1942	16.85	10,600
1898	May 4, 1898	33.1	40,000		July 13, 1942	16.3	10,200
					Sept. 6, 1942	21.28	14,800
1904	July 8, 1904	35.2	48,000	1943	Oct. 5, 1942	17.80	11,500
1915	May 22, 1915	31.7	35,000		Oct. 19, 1942	17.35	11,200
1922	Apr. 11, 1922	32.2	28,900		Dec. 27, 1942	24.48	18,000
	May 9, 1922	20.5	10,100		May 20, 1943	33.53	37,600
	May 22, 1922	21.0	10,600		June 23, 1943	17.98	11,700
	July 13, 1922	31.63	26,700	1944	Mar. 20, 1944	29.10	24,400
1923	May 26, 1923	25.2	14,900		Mar. 23, 1944	26.00	19,600
	June 10, 1923	38.7	76,000		Apr. 12, 1944	29.40	25,000
	June 18, 1923	28.2	18,500		Apr. 23, 1944	38.30	105,000
1924	May 1, 1924	19.75	9,570		Apr. 27, 1944	16.57	10,400
1925	May 10, 1925	12.20	4,360		May 1, 1944	24.25	17,700
1926	Sept. 5, 1926	27.45	16,800	1945	Dec. 7, 1944	31.60	30,900
1927	Oct. 4, 1926	34.2	38,700		Apr. 17, 1945	35.93	60,600
	Apr. 2, 1927	24.2	14,000		Apr. 27, 1945	17.3	11,100
	Apr. 8, 1927	30.67	24,000		Sept. 25, 1945	22.12	15,600
	Apr. 16, 1927	21.83	11,400		Sept. 30, 1945	34.83	47,400
	Apr. 20, 1927	33.88	36,900	1946	Jan. 10, 1946	9.62	4,140
	June 20, 1927	19.70	9,810	1947	Mar. 14, 1947	19.70	13,200
	Aug. 19, 1927	27.02	17,000		Apr. 14, 1947	30.88	28,700
	Aug. 29, 1927	21.26	10,800		May 20, 1947	22.00	14,500
1928	Oct. 2, 1927	20.77	10,400		May 25, 1947	17.37	10,300
	June 11, 1928	24.85	14,400	1948	June 30, 1948	22.69	15,200
	June 19, 1928	33.1	32,900		July 16, 1948	22.96	16,500
1929	Nov. 18, 1928	41.0	94,400		July 19, 1948	17.73	11,400
	Jan. 11, 1929	21.78	11,800		July 23, 1948	21.46	15,000
	Apr. 21, 1929	28.23	19,500	1949	Jan. 17, 1949	20.00	12,900
	May 12, 1929	20.72	10,700		Jan. 25, 1949	21.79	14,700
	July 11, 1929	27.88	18,900		Feb. 13, 1949	19.93	12,800
1930	May 11, 1930	21.40	11,400		Feb. 18, 1949	18.02	10,900
1931	June 12, 1931	21.82	11,800		Feb. 27, 1949	17.46	10,700
	June 16, 1931	21.84	11,800		Apr. 28, 1949	16.43	10,300
1932	Nov. 25, 1931	20.6	10,600		May 24, 1949	21.33	14,200
	June 21, 1932	26.08	16,400	1950	June 4, 1950	17.12	9,980
1933	Aug. 21, 1933	29.98	22,800		July 16, 1950	25.25	18,500
1934	May 15, 1934	13.40	5,380		July 18, 1950	16.83	9,680
1935	May 15, 1935	26.25	17,000		July 29, 1950	17.16	10,100
	May 20, 1935	25.85	16,100		Aug. 2, 1950	33.48	31,600
	May 30, 1935	29.51	21,800		Aug. 5, 1950	19.79	12,700
	June 3, 1935	20.95	11,000		Aug. 9, 1950	19.75	12,700
	June 17, 1935	23.20	13,200	1951	May 3, 1951	29.90	25,000
1936	Nov. 27, 1935	15.89	7,130		May 18, 1951	24.55	18,300
1937	Oct. 9, 1936	20.96	12,300		May 22, 1951	26.70	20,800
	May 26, 1937	19.00	10,800		June 7, 1951	21.85	15,200
	June 10, 1937	20.05	11,600		June 25, 1951	28.32	22,900
	July 19, 1937	25.2	16,200		July 1, 1951	37.80	83,000
1938	May 20, 1938	29.7	22,200		July 5, 1951	24.88	18,700
	June 17, 1938	20.0	11,600		July 10, 1951	20.08	13,400
1939	Jan. 27, 1939	22.18	13,400		July 14, 1951	28.15	22,700
1940	Apr. 18, 1940	17.87	11,600		July 24, 1951	18.17	11,500
	May 19, 1940	17.10	10,900		Sept. 14, 1951	21.15	14,500
1941	Apr. 15, 1941	18.89	12,500		Sept. 24, 1951	17.78	11,100
	June 2, 1941	17.41	11,200	1952	Mar. 11, 1952	16.44	10,500
	June 10, 1941	23.14	17,400	1953	May 30, 1953	25.20	21,700
	Sept. 5, 1941	19.3	12,900	1954	May 28, 1954	4.33	462
1942	Apr. 20, 1942	19.72	13,200	1955	June 18, 1955	9.18	3,730
	Apr. 29, 1942	25.23	18,700	1956	Oct. 3, 1955	11.56	5,630
	June 21, 1942	21.8	15,300	1957	May 19, 1957	30.37	30,100
					May 30, 1957	18.06	12,500
					June 13, 1957	21.94	17,400
					June 29, 1957	23.08	19,000
				1958	Mar. 24, 1958	21.05	16,200
					Mar. 31, 1958	16.72	11,000
					July 4, 1958	28.88	27,700
					Sept. 18, 1958	15.69	9,860

1484. Salt Fork Arkansas River near Alva, Okla.

Location.--Lat 36°48'45", long 98°38'50", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.27 N., R.13 W., near left bank on downstream side of pier of bridge on State Highway 14, 1 mile northeast of Alva, 19 miles upstream from Medicine Lodge River, and at mile 126.0.

Drainage area.--1,009 sq mi.

Gage.--Recording. Datum of gage is 1,297.04 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--6 ft.

Historical data.--According to the Atchison, Topeka and Santa Fe Railway Co., a notable flood occurred July 7, 1904, which was 0.8 ft lower than the flood of May 8, 1922, at railway bridge three-quarters of a mile upstream.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Peak stage for 1922 furnished by Corps of Engineers. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 8, 1922	10.3	-	1946	June 18, 1946	6.60	8,330
1938	Apr. 27, 1938	7.51	17,000	1947	Apr. 10, 1947	6.72	8,660
	May 4, 1938	5.70	8,800		Apr. 13, 1947	6.64	8,330
	May 19, 1938	7.95	19,900		June 4, 1947	6.70	8,660
	May 23, 1938	8.42	22,300		June 21, 1947	7.10	10,100
	May 31, 1938	7.00	14,500	1948	June 28, 1948	8.26	12,500
	Aug. 16, 1938	8.90	25,300		Aug. 14, 1948	8.20	15,200
	Sept.13, 1938	5.95	10,000	1949	May 16, 1949	9.43	26,200
1939	June 27, 1939	6.10	9,900		May 19, 1949	7.27	12,300
1940	Aug. 30, 1940	5.98	9,500		June 4, 1949	6.70	9,700
1941	Sept. 1, 1941	6.43	8,150		June 8, 1949	7.00	11,000
1942	Oct. 23, 1941	9.08	27,000		June 13, 1949	7.87	16,000
	Apr. 19, 1942	6.40	8,110		Sept. 4, 1949	7.12	11,500
	Apr. 24, 1942	6.70	8,760		Sept.11, 1949	7.77	15,400
1943	Oct. 3, 1942	7.00	14,000	1950	July 28, 1950	7.65	10,700
1944	Apr. 10, 1944	6.80	13,000		May 17, 1951	7.84	17,500
	Apr. 22, 1944	7.60	13,500		May 22, 1951	6.62	11,000
1945					June 21, 1951	6.52	10,600
	June 26, 1945	7.20	8,900		June 24, 1951	6.88	12,500
	July 10, 1945	6.57	8,240		June 30, 1951	8.52	21,700
	Sept.28, 1945	8.65	16,200	1957	May 16, 1957	10.6	-

1490. Medicine Lodge River near Kiowa, Kans.
(Published as "Medicine River" 1895-96)

Location.--Lat 37°03', long 98°28', in SW $\frac{1}{4}$ sec.36, T.34 S., R.11 W., at bridge on State Highway 14, 200 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge and $1\frac{1}{2}$ miles northeast of Kiowa.

Drainage area.--914 sq mi.

Gage.--Nonrecording prior to Mar. 3, 1938; recording thereafter. May 6, 1895, to Oct. 31, 1896, at site 2 miles upstream at different datum. Feb. 11, 1938, to Sept. 30, 1944, at present site at datum 3.00 ft higher; gage heights 1938-44 converted to last used datum. Datum of last used gage is 1,286.99 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements 1938-55.

Bankfull stage.--10 ft.

Remarks.--Records for 1938-50 furnished by Corps of Engineers. Base for partial-duration series, 3,700 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Medicine Lodge River near Kiowa, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	June 25, 1896	a7.5	-	1946	Apr. 15, 1946	7.80	5,070
1938	May 5, 1938	a11.05	a13,000	1947	Apr. 10, 1947	8.75	7,210
1939	Nov. 3, 1938	7.87	2,740		Apr. 13, 1947	7.60	4,100
1940	June 7, 1940	8.10	5,020		May 20, 1947	7.42	3,700
1941	May 5, 1941	8.40	5,660	1948	Mar. 1, 1948	8.40	5,000
	June 9, 1941	8.72	6,360		June 22, 1948	8.96	6,670
1942	Oct. 22, 1941	11.75	16,000		June 28, 1948	9.54	8,700
	Apr. 19, 1942	8.75	6,600		Aug. 13, 1948	9.50	8,520
	June 29, 1942	9.30	8,070	1949	May 7, 1949	8.63	5,760
1943	Oct. 4, 1942	9.48	8,190		May 17, 1949	9.90	11,100
1944	Apr. 10, 1944	8.62	5,680		May 19, 1949	9.00	6,190
	Apr. 22, 1944	9.52	7,900		May 21, 1949	8.74	5,380
	May 3, 1944	8.24	4,890		June 5, 1949	9.64	8,360
1945	Apr. 15, 1945	8.90	7,700		June 9, 1949	9.06	8,550
	Apr. 21, 1945	8.10	5,340	1950	June 13, 1949	8.75	7,440
	Sept. 22, 1945	8.00	5,110		Sept. 5, 1949	10.19	13,100
	Sept. 24, 1945	9.70	9,510		Sept. 11, 1949	8.54	6,740
	Sept. 28, 1945	9.82	9,600	1957	May 16, 1957	a11.72	-

a Annual peak only.

1495. Salt Fork Arkansas River near Cherokee, Okla.

Location.--Lat 36°49', long 98°19', in SW1/4 sec. 18, T. 27 N., R. 10 W., near right bank at downstream side of piling of abandoned Atchison, Topeka and Santa Fe Railway Co. bridge, 0.7 miles downstream from Medicine Lodge River, 4 miles northeast of Cherokee, and at mile 106.3.

Drainage area.--2,439 sq mi.

Gage.--Nonrecording prior to May 14, 1941; recording thereafter. Datum of gage is 1,155.94 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs and extended above on basis of reservoir inflow computations for flood in October 1941.

Bankfull stage.--9 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 4, 1941	8.24	4,680	1945	Apr. 16, 1945	9.25	7,700
1942	Oct. 23, 1941	11.7	35,000		Apr. 22, 1945	8.71	5,450
	Apr. 19, 1942	10.50	10,800		June 26, 1945	8.98	8,900
	Apr. 25, 1942	9.60	7,320		July 10, 1945	8.82	7,500
	June 30, 1942	9.30	6,560		Sept. 25, 1945	8.60	5,020
1943	Oct. 4, 1942	10.35	10,300		Sept. 28, 1945	10.66	14,000
1944	Apr. 10, 1944	9.81	13,500	1946	Apr. 15, 1946	8.18	5,760
	Apr. 22, 1944	9.95	14,800	1947	Nov. 6, 1946	8.77	5,050
	May 4, 1944	8.87	7,000		Mar. 13, 1947	9.67	8,850
					Apr. 10, 1947	9.65	8,720

Peak stages and discharges of Salt Fork Arkansas River near Cherokee, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 13, 1947	10.70	13,900	1949	May 17, 1949	11.98	32,300
	May 18, 1947	9.40	7,600		May 19, 1949	11.45	18,900
	May 21, 1947	9.48	7,970		May 24, 1949	10.60	9,380
	May 24, 1947	9.32	7,050		June 5, 1949	11.21	16,300
	June 4, 1947	8.83	5,420		June 9, 1949	10.60	9,380
	June 21, 1947	9.79	9,390		June 14, 1949	11.15	15,600
1948	June 28, 1948	11.26	15,300		Sept. 5, 1949	11.0	13,600
	July 16, 1948	9.94	5,230		Sept. 11, 1949	11.35	18,600
	Aug. 15, 1948	11.65	23,300	1950	July 29, 1950	10.60	9,380
1949	Feb. 8, 1949	11.46	7,500		Aug. 1, 1950	10.50	8,580
	May 7, 1949	10.25	6,420	1957	May 17, 1957	113.7	-
	May 14, 1949	9.89	5,070				

a Annual peak only, from floodmark.

1505. Salt Fork Arkansas River near Jet, Okla.

Location.--Lat 36°45', long 98°08', in NE 1/4 sec. 11, T. 26 N., R. 9 W., near center of span on downstream side of county highway bridge, 0.6 mile downstream from Great Salt Plains Dam, 4 miles upstream from Wagon Creek, 6 miles northeast of Jet, and at mile 102.7.

Drainage area.--3,202 sq mi, of which about 3,194 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 17, 1938; recording thereafter. Prior to Mar. 16, 1938, at site 2 1/2 miles upstream at datum 13.46 ft higher; Mar. 17, 1938, to Sept. 30, 1949, at present site at datum 5.00 ft higher. Datum of present gage is 1,092.20 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--13 ft.

Remarks.--Flow regulated since June 1941 by detention storage in Great Salt Plains Reservoir (capacity, 292,400 acre-ft). Records 1937-50 computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 19, 1938	8.80	25,900	1949	May 21, 1949	6.82	8,970
1939	Apr. 5, 1939	5.88	4,920	1950	Aug. 3, 1950	4.44	4,410
1940	May 18, 1940	5.09	2,700	1951	July 2, 1951	11.67	9,650
1941	May 7, 1941	5.74	4,340	1952	Apr. 23, 1952	8.35	3,600
1942	Oct. 25, 1941	7.35	8,300	1953	July 16, 1953	6.21	1,757
1943	Oct. 6, 1942	4.31	2,670	1954	May 26, 1954	6.99	1,470
1944	Apr. 23, 1944	5.62	4,680	1955	June 20, 1955	9.80	4,700
1945	Sept. 30, 1945	5.15	4,640	1956	Oct. 5, 1955	7.19	1,540
1946	Oct. 16, 1945	2.66	999	1957	May 18, 1957	12.13	9,820
1947	Apr. 15, 1947	5.62	5,680	1958	June 28, 1958	9.20	4,490
1948	Aug. 16, 1948	6.01	6,820				

1510. Salt Fork Arkansas River at Tonkawa, Okla.

Location.--Lat 36°40'30", long 97°18'40", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.25 N., R.1 W., near left bank on downstream side of pier of bridge on U. S. Highway 177 in Tonkawa, 4 miles downstream from Thompson Creek, 7.8 miles upstream from Chikaskia River, and at mile 33.8.

Drainage area.--4,528 sq mi, of which about 4,520 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 23, 1939; recording thereafter. Datum of gage is 930.22 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft.

Historical data.--Maximum stage for water year 1904 is from records for a staff gage operated by Geological Survey (datum unknown). The discharge was estimated on basis of a few discharge measurements made during 1904-5 and shape of rating curve used in 1938 and has been shown because it is the third highest flood known.

Remarks.--Some regulation since June 1941 by Great Salt Plains Reservoir on Salt Fork Arkansas River 69.5 miles above station (capacity, 292,400 acre-ft). Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 11, 1904	14.6	25,000	1947	May 16, 1947	18.35	16,000
1923	June 10, 1923	26.8	-	1948	May 10, 1948	16.58	12,700
1935	June 1935	23.0	-		Aug. 15, 1948	17.22	13,300
1936	June 6, 1936	15.53	11,400	1949	Feb. 13, 1949	17.09	13,300
1937	June 10, 1937	16.62	14,000		Mar. 31, 1949	16.60	12,600
	Sept. 9, 1937	16.76	14,500		May 21, 1949	19.33	19,600
1938	May 20, 1938	22.82	40,800		May 29, 1949	16.85	13,000
	May 24, 1938	21.94	34,500		Sept. 6, 1949	16.29	12,100
	June 1, 1938	17.41	16,300	1950	July 30, 1950	14.71	9,650
	Aug. 17, 1938	16.27	13,900	1951	May 19, 1951	17.36	14,300
1939	Apr. 6, 1939	16.08	14,600		May 22, 1951	18.71	17,200
1940	June 10, 1940	8.21	1,620		June 26, 1951	17.43	13,800
1941	June 10, 1941	15.58	12,500		July 2, 1951	20.14	22,600
1942	Oct. 27, 1941	16.06	12,200		July 4, 1951	19.35	19,200
	Apr. 26, 1942	17.70	15,500	1952	Apr. 22, 1952	12.81	6,620
	June 22, 1942	16.69	13,400	1953	July 12, 1953	10.26	3,370
1943	May 20, 1943	17.86	16,500	1954	May 26, 1954	9.93	2,380
1944	Apr. 23, 1944	19.26	22,500	1955	June 19, 1955	16.10	9,470
1945	Dec. 5, 1944	18.05	16,800	1956	Oct. 3, 1955	17.51	12,100
	Apr. 16, 1945	20.06	23,500	1957	Apr. 23, 1957	16.90	11,100
	Sept. 30, 1945	17.35	14,300		May 17, 1957	20.82	19,600
1946	Oct. 17, 1945	7.80	1,080		May 25, 1957	19.70	18,500
					June 25, 1957	21.14	21,200
					July 3, 1957	19.17	17,200
1947	Apr. 14, 1947	18.53	16,600	1958	July 7, 1958	12.72	5,720

1515. Chikaskia River near Corbin, Kans.

Location.--Lat 37°08', long 97°36', on west line of sec.36, T.33 S., R.3 W., at bridge on State Highway 49, 1 mile upstream from Prairie Creek, 3 miles west of Corbin, and at mile 67.5.

Drainage area.--794 sq mi.

Gage.--Nonrecording prior to Mar. 22, 1951; recording thereafter. Datum of gage is 1,108.00 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Approximate discharge for flood of June 9, 1923, determined from logarithmic extension above 35,000 cfs of subsequent stage-discharge relation. Shifts in relation occur.

Historical data.--Flood of June 9, 1923, which destroyed the bridge then at the gage site, reached a stage of 28.0 ft on the apron of a granary located 300 ft left and 200 ft downstream from the gage, from floodmark remembered by local resident in 1950.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 9, 1923	28.0	60,000	1955	May 26, 1955	17.55	18,800
1950	Aug. 30, 1950	11.0	a6,100		June 3, 1955	6.55	1,900
1951	May 1, 1951	10.01	4,910		June 6, 1955	9.71	4,610
	May 17, 1951	22.50	35,100		June 16, 1955	9.10	4,000
	May 22, 1951	12.50	8,100		June 18, 1955	11.20	6,340
	June 7, 1951	14.00	10,700	1956	Oct. 2, 1955	11.76	7,060
	June 11, 1951	6.12	1,810		Oct. 4, 1955	9.71	4,610
	June 16, 1951	6.97	2,390	1957	Apr. 23, 1957	10.74	5,610
	June 24, 1951	15.80	14,500		May 14, 1957	11.00	5,900
	June 30, 1951	8.63	3,600		May 17, 1957	22.31	38,100
	July 14, 1951	16.08	15,100		May 25, 1957	9.65	4,570
	Sept. 6, 1951	6.85	2,380		June 12, 1957	14.28	11,700
	Sept. 12, 1951	6.79	2,290		June 23, 1957	8.05	3,160
1952	June 5, 1952	5.83	1,630		June 27, 1957	15.52	14,300
					July 1, 1957	9.45	4,300
1953	Mar. 31, 1953	7.50	2,760	1958	Mar. 29, 1958	6.79	2,100
	July 12, 1953	6.89	2,530		June 21, 1958	7.71	2,770
	Aug. 3, 1953	9.70	4,600		June 25, 1958	9.71	4,560
1954	May 24, 1954	6.30	1,920		July 5, 1958	6.60	1,980

a Maximum Aug. 9 to Sept. 30; probably was exceeded during period of no record.

1520. Chikaskia River near Blackwell, Okla.

Location.--Lat 36°49', long 97°17', in NW $\frac{1}{4}$ sec.23, T.27 N., R.1 W., near left bank on downstream side of pier of St. Louis-San Francisco Railway Co. bridge at northeast edge of Blackwell, 0.2 mile downstream from Bitter Creek and at mile 28.2.

Drainage area.--1,859 sq mi; 1,711 sq mi at previous site.

Gage.--Nonrecording prior to Jan. 25, 1939; recording thereafter. Prior to Apr. 29, 1938, at site 2 $\frac{1}{4}$ miles upstream at unknown datum; Apr. 29, 1938, to Apr. 16, 1952, at site 0.6 mile upstream at datum 8.06 ft higher. Present datum of gage is 967.41 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 85,000 cfs and extended to 100,000 cfs.

Bankfull stage.--Present site, 26 ft; at site 2 $\frac{1}{4}$ miles upstream, 16 ft; at site 0.6 mile upstream, 20 ft.

Historical data.--Crest stage for flood in 1923 estimated on basis of comparative information during flood in 1942.

Remarks.--Base for partial-duration series, 8,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Chikaskia River near Blackwell, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 10, 1923	34.0	100,000	1948	Aug. 14, 1948	24.28	23,100
1936	June 6, 1936	24.70	10,800	1949	Nov. 2, 1948	17.45	8,970
1937	May 31, 1937	27.09	12,900		Jan. 25, 1949	20.69	13,300
	June 10, 1937	22.32	8,600		Feb. 13, 1949	18.16	9,550
	Sept. 9, 1937	22.30	8,600		Feb. 27, 1949	18.07	9,470
					May 20, 1949	18.65	9,900
1938	May 6, 1938	15.42	9,130		May 25, 1949	19.65	11,100
	May 20, 1938	24.05	26,800		Sept. 6, 1949	19.58	11,100
	May 24, 1938	17.61	10,800		Sept. 12, 1949	19.88	11,600
1939	Nov. 4, 1938	14.25	8,340	1950	Aug. 2, 1950	16.88	8,070
1940	June 9, 1940	10.38	6,040	1951	May 1, 1951	16.35	8,250
1941	Apr. 16, 1941	16.38	8,820		May 18, 1951	26.59	53,000
	June 10, 1941	15.47	8,190		May 23, 1951	21.86	19,100
1942					June 8, 1951	20.79	15,600
	Apr. 26, 1942	17.06	10,100		June 23, 1951	23.78	27,000
	Apr. 28, 1942	14.27	8,190		June 25, 1951	25.89	40,300
	June 22, 1942	27.48	85,000		July 1, 1951	22.47	22,100
1943	May 20, 1943	20.18	12,200		July 15, 1951	26.01	43,700
1944				1952	June 5, 1952	20.90	8,130
	Apr. 11, 1944	20.31	12,400	1953	Aug. 4, 1953	19.65	7,280
	Apr. 23, 1944	27.31	82,000	1954	May 25, 1954	12.33	3,120
	Apr. 27, 1944	15.35	8,840				
	Sept. 29, 1944	17.07	8,500	1955	May 27, 1955	b25.56	39,300
1945					June 19, 1955	b15.30	8,760
	Oct. 3, 1944	20.00	11,800	1956	Oct. 3, 1955	28.19	14,600
	Dec. 5, 1944	24.07	25,800	1957	Apr. 21, 1957	23.80	10,000
	Apr. 12, 1945	17.15	8,830		Apr. 24, 1957	25.28	12,600
	Apr. 17, 1945	25.13	35,800		May 15, 1957	21.74	8,690
	Sept. 29, 1945	24.12	25,800		May 18, 1957	32.56	55,000
1946	Apr. 16, 1946	12.74	a6,200		May 26, 1957	24.97	10,700
1947					June 13, 1957	28.30	14,800
	Apr. 14, 1947	24.86	31,000		June 24, 1957	24.67	11,000
	May 21, 1947	17.96	9,390		June 28, 1957	30.20	20,500
	May 25, 1947	17.28	8,900		July 2, 1957	23.73	10,200
1948				1958	June 26, 1958	23.15	9,050
	June 29, 1948	21.24	13,800				
	July 5, 1948	16.26	8,250				
	July 16, 1948	23.52	20,200				

a Maximum peak discharge; maximum discharge occurred at 12:01 a.m. Oct. 1, stage falling.

b Gage destroyed by storm; gage heights obtained at site and datum used Apr. 29, 1938, to Apr. 16, 1952.

1525. Arkansas River at Ralston, Okla.

Location.--Lat 36°30'10", long 96°43'30", in NW¼ sec.1, T.23 N., R.5 E., near right bank on downstream side of pier of bridge on State Highway 18 at Ralston, 2 miles downstream from Salt Creek, 2 miles upstream from Grayhorse Creek, and at mile 594.0.

Drainage area.--54,465 sq mi, of which about 46,850 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 24, 1939; recording thereafter. Prior to Nov. 14, 1935, at site 1,200 ft upstream at same datum. Datum of gage is 776.80 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Prior to April 1938, defined by 26 current-meter measurements made by Corps of Engineers during 1928-32 below 44,000 cfs and extended to 108,000 cfs by logarithmic plotting; subsequently defined by current-meter measurements to maximum discharge for period of record.

Bankfull stage.--16 ft.

Remarks.--Slight regulation since December 1943 by John Martin Reservoir on Arkansas River (capacity, 662,900 acre-ft) and since June 1941 by Great Salt Plains Reservoir on Salt Fork Arkansas River (capacity, 292,400 acre-ft). Records prior to Mar. 27, 1938, computed on basis of once-daily Weather Bureau gage readings. Records 1948-55 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 30,000 cfs.

Peak stages and discharges of Arkansas River at Ralston, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	-	18.0	-	1943	May 20, 1943	18.12	97,200
1923	May 27, 1923	10.4	32,400	1944	Mar. 23, 1944	11.43	37,900
	June 3, 1923	12.6	48,000		Apr. 12, 1944	15.34	68,400
	June 11, 1923	23.0	200,000		Apr. 25, 1944	22.82	179,000
	June 18, 1923	12.0	43,400		Sept. 29, 1944	10.23	31,300
1924	Oct. 16, 1923	11.8	42,000	1945	Oct. 4, 1944	10.74	34,600
	May 2, 1924	11.7	41,300		Dec. 7, 1944	15.55	76,000
1925	Apr. 27, 1925	6.4	11,300		Mar. 25, 1945	10.82	34,000
1926	Sept. 5, 1926	10.4	32,400		Apr. 13, 1945	11.78	42,700
1927	Oct. 6, 1926	18.7	108,000		Apr. 19, 1945	19.55	124,000
	Apr. 11, 1927	15.4	73,000		June 29, 1945	10.33	34,000
	Apr. 21, 1927	15.7	77,400		July 1, 1945	13.59	57,800
	Aug. 5, 1927	14.5	68,500	1946	Oct. 2, 1945	19.48	110,000
	Aug. 20, 1927	10.9	39,300	1947	Apr. 16, 1947	18.50	114,000
1928	Oct. 3, 1927	13.2	56,800		May 17, 1947	11.87	44,500
	June 12, 1928	13.9	63,100		May 22, 1947	11.24	39,600
	June 21, 1928	15.0	73,000		May 27, 1947	10.56	35,800
1929	Nov. 20, 1928	15.3	76,300	1948	July 1, 1948	13.19	52,800
	Apr. 22, 1929	12.3	49,400		July 18, 1948	14.93	70,200
	Apr. 25, 1929	9.9	32,400		July 26, 1948	11.74	43,100
	May 12, 1929	12.0	47,000		Aug. 17, 1948	12.72	51,800
	May 19, 1929	12.2	48,600	1949	Jan. 18, 1949	10.63	32,400
	June 3, 1929	9.9	32,400		Jan. 25, 1949	12.70	45,900
	June 24, 1929	11.7	44,900		Feb. 14, 1949	14.78	65,400
	July 12, 1929	11.4	42,800		Feb. 20, 1949	11.60	40,600
1930	Apr. 30, 1930	9.8	31,800		Mar. 1, 1949	12.57	50,200
	May 7, 1930	10.2	34,400		Apr. 1, 1949	10.47	33,600
	May 13, 1930	12.1	47,800		May 21, 1949	15.30	70,700
1931	June 14, 1931	9.5	28,200		May 26, 1949	13.68	55,500
1932	June 23, 1932	10.6	33,700	1950	July 18, 1950	15.90	75,300
1933	Aug. 30, 1933	9.3	25,700		Aug. 4, 1950	17.60	92,800
1934	Apr. 8, 1934	6.4	11,700		Aug. 10, 1950	11.12	37,100
1935	May 15, 1935	14.7	65,600	1951	May 3, 1951	14.15	54,200
	May 21, 1935	16.0	77,800		May 20, 1951	19.23	106,000
	June 1, 1935	14.1	60,300		May 24, 1951	17.70	95,500
	June 4, 1935	11.4	39,100		June 10, 1951	14.35	61,200
1936	June 7, 1936	9.9	26,600		June 27, 1951	17.42	91,100
1937	June 11, 1937	13.0	47,500		July 3, 1951	21.45	135,000
1938	May 23, 1938	16.44	75,600		July 16, 1951	20.28	120,000
1939	June 28, 1939	8.48	19,200		Sept. 15, 1951	11.57	36,200
1940	Sept. 5, 1940	10.26	27,800	1952	June 6, 1952	10.48	25,800
1941	Apr. 17, 1941	12.34	41,200	1953	May 31, 1953	8.80	17,500
	June 11, 1941	13.59	51,000	1954	May 2, 1954	9.07	18,700
1942	Oct. 26, 1941	12.89	45,400	1955	May 29, 1955	12.71	36,300
	Apr. 9, 1942	11.21	34,000	1956	Oct. 5, 1956	14.64	49,200
	Apr. 21, 1942	12.94	45,400	1957	Apr. 25, 1957	11.70	33,300
	Apr. 30, 1942	13.04	46,200		May 20, 1957	21.41	120,000
	June 24, 1942	18.54	94,000		May 23, 1957	14.21	51,000
1943	Dec. 28, 1942	10.60	32,200		May 26, 1957	15.13	57,900
					June 1, 1957	12.40	37,900
					June 13, 1957	17.46	77,900
					June 18, 1957	13.41	42,000
					June 26, 1957	15.97	67,900
					July 1, 1957	19.88	112,000
				1958	Mar. 25, 1958	11.24	32,300
					July 7, 1958	14.86	56,800

1530. Black Bear Creek at Pawnee, Okla.

Location.--Lat 36°20'35", long 96°48'00", on east line of SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.22 N., R.5 E., on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 50 ft downstream from Skedee Creek and at mile 23.4.

Drainage area.--576 sq mi.

Gage.--Nonrecording prior to Sept. 20, 1944, and Aug. 27, 1953, to Apr. 29, 1954; recording Sept. 21, 1944, to Aug. 26, 1953, and since Apr. 29, 1954. Datum of gage is 802.73 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--17 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	May 25, 1908	27.30	15,600	1951	July 3, 1951	14.76	4,280
1943	May 19, 1943	28.19	17,800	1952	June 7, 1952	16.18	4,790
1945	Dec. 7, 1944	17.86	6,500	1953	July 14, 1953	10.56	2,610
	Mar. 26, 1945	16.21	5,390	1954	May 2, 1954	11.16	2,810
	Apr. 13, 1945	16.15	5,460				
	Apr. 17, 1945	20.62	8,750				
	June 22, 1945	16.00	5,580	1955	May 11, 1955	16.37	5,130
	June 29, 1945	15.76	5,460	May 22, 1955	21.74	8,640	
	Sept. 30, 1945	28.11	17,500	May 28, 1955	21.78	8,720	
1946	June 29, 1946	15.43	4,900	1956	Oct. 5, 1955	16.96	5,430
1947	Apr. 16, 1947	22.55	9,390	1957	Apr. 20, 1957	20.73	7,680
	May 17, 1947	17.31	5,340		Apr. 23, 1957	16.23	4,930
1948	Aug. 8, 1948	16.45	4,890		May 18, 1957	25.26	12,200
					May 22, 1957	18.10	6,090
					May 27, 1957	18.48	6,370
1949	May 19, 1949	15.37	4,410	June 12, 1957	18.95	6,740	
	May 21, 1949	15.70	4,550	June 25, 1957	22.56	9,720	
	May 27, 1949	16.16	4,790	July 3, 1957	14.28	4,000	
1950	Aug. 3, 1950	13.58	3,830	1958	July 12, 1958	13.97	3,880

1535. Cimarron River near Guy, N. Mex.

Location.--Lat 36°59'15", long 103°25'25", in SE $\frac{1}{4}$ sec.21, T.32 N., R.33 E., 1.5 miles upstream from Baker damsite, 1.7 miles northwest of Valley filling station, 12 miles north of Guy, and 27 miles northwest of Kenton, Okla.

Drainage area.--545 sq mi.

Gage.--Nonrecording prior to May 21, 1942; recording thereafter. Prior to Oct. 1, 1943, at datum 0.44 ft higher. Altitude of present gage is 4,900 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements below 3,000 cfs; extended above on basis of velocity-area study and logarithmic plotting. Relation subject to moderate shifting.

Bankfull stage.--20 ft.

Remarks.--Peak discharges not appreciably affected by several small diversions above station for irrigation of about 6,500 acres. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges of Cimarron River near Guy, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	-	20.0	a8,200	1952	July 12, 1952	7.34	1,640
1942	Sept. 2, 1942	17.68	a7,120		Aug. 22, 1952	8.34	2,060
1943	Oct. 18, 1942	6.35	1,440		Aug. 23, 1952	12.25	3,950
1944	May 28, 1944	10.21	2,960	1953	Aug. 16, 1953	9.87	2,800
1945	Aug. 21, 1945	10.34	3,000		Aug. 17, 1953	8.56	2,190
1946	Aug. 19, 1946	5.50	980	1954	July 22, 1954	18.10	7,060
1947	July 7, 1947	8.51	2,140		July 27, 1954	6.60	1,360
1948	May 31, 1948	9.25	2,500		Aug. 6, 1954	19.83	8,100
	June 1, 1948	8.07	1,960		Aug. 12, 1954	11.33	3,500
	June 13, 1948	11.30	3,500		Sept. 6, 1954	6.12	1,190
	June 20, 1948	10.80	3,250	1955	Oct. 5, 1954	20.5	8,500
	Aug. 4, 1948	10.0	2,850		May 19, 1955	19.1	7,660
	Aug. 7, 1948	15.4	5,550		July 4, 1955	7.8	1,840
	Sept. 7, 1948	17.82	6,880		July 15, 1955	10.0	2,850
1949	June 5, 1949	12.95	4,350		Aug. 11, 1955	11.2	3,450
	Sept. 5, 1949	8.84	2,280	1956	June 27, 1956	14.6	5,200
1950	June 18, 1950	11.15	3,350		July 3, 1956	5.60	1,190
	July 13, 1950	9.43	2,500		July 16, 1956	6.60	1,590
	July 22, 1950	6.12	1,160		Aug. 19, 1956	5.70	1,230
	July 31, 1950	9.25	2,420	1957	July 20, 1957	6.30	1,470
1951	Aug. 23, 1951	6.63	1,330		July 30, 1957	7.19	1,820
					Aug. 22, 1957	5.90	1,270
				1958	July 6, 1958	6.65	1,610

a Annual peak only.

1540. Cimarron River near Folsom, N. Mex.

Location.--Lat 36°56'05", long 103°05'55", in NE¼SW¼ sec.9, T.31 N., R.36 E., 6 miles upstream from Carrizozo Creek, 8 miles west of Kenton, Okla., and 45 miles east of Folsom, N. Mex.

Drainage area.--895 sq mi, of which about 840 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to July 20, 1928, at different datums; recording thereafter. July 20, 1928, to Apr. 10, 1932, at datum 0.61 ft higher. Altitude of present gage is 4,600 ft (from topographic map).

Stage-discharge relation.--Reasonably stable but poorly defined. No discharge measurements above 1,300 cfs except float-area measurement at 4,300 cfs.

Remarks.--Records for 1928-30 were collected by New Mexico State engineer. Peaks for these years are published in WSP 1311. Diversions above station for irrigation of about 6,500 acres probably does not affect peak discharges. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	May 17, 1928	7.5	4,300	1931	Sept. 24, 1931	9.00	3,800
1929	Oct. 15, 1928	7.7	2,600	1932	Aug. 21, 1932	8.65	2,910
1930	July 21, 1930	5.25	950	1933	July 23, 1933	8.12	2,460

ARKANSAS RIVER BASIN

1544. Carrizozo Creek near Kenton, Okla.

Location--Lat 36°52'55", long 103°01'05", in NE $\frac{1}{4}$ sec.31, T.31 N., R.37 E., under bridge on New Mexico State Highway 18, about 4 miles southwest of Kenton, Okla.

Drainage area--111 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by 2 indirect measurements and 1 current-meter measurement. Poorly defined below 4,000 cfs.

Bankfull stage--11 ft.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	-	-	29,160	1956	Aug. 18, 1956	9.52	6,230
1954	August 1954	7.52	3,600	1957	Aug. 18, 1957	7.64	3,750
1955	May 19, 1955	7.35	3,400	1958	July 6, 1958	12.22	15,600

a Result of indirect measurement made in 1956.

1545. Cimarron River near Kenton, Okla.

Location--Lat 36°56', long 102°57', in SE $\frac{1}{4}$ sec.4, T.5 N., R.1 E., near right bank on downstream side of pier of highway bridge, 1.5 miles upstream from Carrizo Creek, 1.7 miles northeast of Kenton, 2.2 miles downstream from Carrizozo Creek, and at mile 594.0.

Drainage area--1,106 sq mi, of which about 1,038 sq mi contributes directly to surface runoff.

Gage--Recording. Datum of gage is 4,267.08 ft above mean sea level, datum of 1929 (levels by State Highway Commission).

Stage-discharge relation--Defined by current-meter measurements below 6,000 cfs and extended above on basis of logarithmic plotting.

Bankfull stage--13 ft.

Historical data--Corps of Engineers report that a major flood occurred in May 1914.

Remarks--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 21, 1951	5.96	2,850	1954	Aug. 13, 1954	10.67	14,100
1952	Aug. 23, 1952	6.12	3,130	1955	Oct. 6, 1954	7.40	5,790
1953	June 29, 1953	7.05	4,630	1956	May 20, 1955	10.02	11,800
	July 3, 1953	6.65	4,000		June 28, 1956	6.32	3,820
	Aug. 17, 1953	8.00	6,610		Aug. 18, 1956	9.35	10,000
1954	July 23, 1954	7.00	4,630	1957	Aug. 18, 1957	7.78	6,780
	Aug. 7, 1954	7.86	6,390	1958	July 6, 1958	13.67	26,500

1550. Cimarron River above Ute Creek, near Boise City, Okla.
(Published as "near Garret" May 1905 to July 1907)

Location.--Lat 36°55', long 102°36', in SE $\frac{1}{4}$ sec.10, T.5 N., R.4 E., on right bank 1,000 ft downstream from Kohler's dam, 1 mile upstream from Cold Springs Creek, 5.5 miles upstream from Ute Creek, 14 miles northwest of Boise City, and at mile 560.0.

Drainage area.--1,955 sq mi, of which about 1,879 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to 1942 at site half a mile upstream at unknown datum; recording thereafter. Datum of last used gage, 3,932.85 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 4,200 cfs and extended to 17,200 cfs on basis of computation of flow over dam. Peak discharge for flood in 1942 from mean of slope-area measurements and logarithmic extension above 41,000 cfs for station at Boise City.

Bankfull stage.--16 ft.

Historical data.--Flood in 1914 was 3 or 4 ft higher than in 1942, from information by local resident. Channel capacity has greatly increased due to erosion since 1914.

Remarks.--Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Sept. 27, 1906	12.25	5,000	1950	June 19, 1950	7.23	8,220
					June 22, 1950	3.79	1,950
1942	Apr. 20, 1942	20.1	80,000		July 13, 1950	4.02	2,200
					July 20, 1950	5.05	3,920
1943	Aug. 6, 1943	6.90	5,000		July 28, 1950	9.66	15,000
	Aug. 26, 1943	5.68	3,920		Aug. 1, 1950	9.49	14,300
					Aug. 14, 1950	4.06	2,310
1944	May 29, 1944	4.77	1,800		Aug. 26, 1950	7.80	9,580
					Aug. 29, 1950	7.26	8,460
1945	May 30, 1945	8.0	8,660				
	Aug. 21, 1945	7.8	7,930	1951	May 15, 1951	10.22	17,200
					May 21, 1951	4.77	3,480
1946	May 28, 1946	8.29	9,130		June 5, 1951	3.58	1,760
	Aug. 15, 1946	8.31	9,150		June 12, 1951	3.73	1,980
					July 12, 1951	5.03	4,190
1947	July 3, 1947	5.00	2,910		Aug. 21, 1951	7.67	9,350
	July 7, 1947	4.82	2,640				
	Aug. 15, 1947	7.09	6,500	1952	Aug. 24, 1952	4.30	2,720
1948	June 1, 1948	5.76	4,060	1953	June 29, 1953	4.60	3,140
	June 21, 1948	5.27	3,260		July 3, 1953	10.16	17,200
	Aug. 4, 1948	4.48	1,760		July 11, 1953	6.03	5,720
	Aug. 7, 1948	7.00	6,040		Aug. 6, 1953	3.50	1,710
	Sept. 8, 1948	9.68	13,000		Aug. 17, 1953	8.14	10,300
1949	June 5, 1949	8.70	10,200	1954	July 23, 1954	8.25	10,600
	July 12, 1949	4.49	2,290		July 28, 1954	4.97	3,780
					Aug. 7, 1954	6.8	7,350
1950	June 17, 1950	4.23	2,580		Aug. 13, 1954	9.61	14,700

1555. Cimarron River near Boise City, Okla.

Location.--Lat 36°55'15", long 102°31'15", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.5 N., R.5 E., on downstream side of central pier of bridge on U. S. Highway 287, 2 miles downstream from Ute Creek, 13 miles north of Boise City, and at mile 551.5.

Drainage area.--2,214 sq mi, of which about 2,023 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 3,859.86 ft above mean sea level (State Highway Commission bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs and extended above on basis of logarithmic plotting and of slope-area measurement of peak flow in 1942 at site 8.5 miles above station.

Bankfull stage.--7 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 1914	a17.23	-	1941	May 2, 1941	7.75	30,600
1938	Sept. 4, 1938	8.0	a39,200		May 23, 1941	7.80	29,600
1939	Oct. 9, 1938	4.04	5,490		June 2, 1941	5.06	8,990
	Jan. 8, 1939	3.16	2,220		June 7, 1941	4.44	4,480
	May 4, 1939	7.10	29,100		June 17, 1941	5.20	4,700
	May 26, 1939	3.28	2,360		June 26, 1941	6.10	8,250
	June 28, 1939	3.50	2,800		July 4, 1941	6.50	11,900
	July 1, 1939	3.55	2,760		July 13, 1941	4.82	3,840
	July 17, 1939	4.35	6,750		July 16, 1941	6.06	8,250
	Aug. 4, 1939	3.91	3,960		July 25, 1941	5.18	5,320
	Aug. 20, 1939	6.00	18,800		Aug. 20, 1941	5.82	6,810
1940	June 10, 1940	6.25	21,000	1942	Sept. 22, 1941	10.00	60,200
	July 5, 1940	4.85	8,760		Oct. 22, 1941	5.80	17,100
	Aug. 8, 1940	4.94	9,950		Apr. 20, 1942	11.90	80,000
	Sept. 4, 1940	6.20	20,500		Apr. 24, 1942	4.39	4,990
1941	Oct. 1, 1940	6.30	17,900		June 22, 1942	6.62	18,000
					July 10, 1942	5.64	3,330
					July 19, 1942	5.90	6,100
					Sept. 2, 1942	6.00	7,750

a Annual peak only.

1565. Cimarron River near Satanta, Kans.

Location.--Lat 37°23'30", long 101°02'50", in SW $\frac{1}{4}$ sec.33, T.30 S., R.34 W., at bridge on State Highway 45, 5 miles southwest of Satanta, 6.1 miles downstream from North Fork, and at mile 431.2.

Drainage area.--7,345 sq mi, of which about 3,922 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,788.35 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 8,200 cfs and extended to 69,000 cfs on basis of velocity-area studies and current-meter measurements below 18,000 cfs for station near Liberal 31 miles downstream. Shifts in relation occur.

Historical data.--Flood in May 1914 was the "highest water ever experienced---in the Cimarron Valley", according to the U. S. Weather Bureau Climatological Data of May 1914.

Flood of Sept. 5, 1938, reached a stage of about 16.1 ft, on basis of comparison with flood of Sept. 24, 1941, at The Atchison, Topeka and Santa Fe Railway Co. bridge about half a mile upstream from gage.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Cimarron River near Satanta, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Sept. 5, 1938	16.1	25,000	1944	May 30, 1944	9.40	2,400
1941	Sept. 24, 1941	20.0	47,000	1945	Aug. 23, 1945	9.50	2,560
1942	Apr. 21, 1942	22.0	69,000	1946	May 29, 1946	11.39	6,360
1943	Oct. 20, 1942	7.21	625	1947	Oct. 7, 1946	9.75	a2,960

a Maximum Oct. 1 to Dec. 31; probably maximum for year.

1568. Cimarron River near Liberal, Kans.

(Published as "at Arkalon" 1895-96, 1905. and "near Arkalon" 1903-4)

Location.--Lat 37°09', long 100°45', in sec.25, T.33 S., R.32 W., at bridge on U. S. Highway 54, 13 miles northeast of Liberal and at mile 400.0.

Drainage area.--8,254 sq mi, of which about 4,107 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 29, 1939, and since May 25, 1941; recording Mar. 1, 1939, to May 24, 1941. Datum of gage is 2,533.69 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Nov. 1, 1905, at site a quarter of a mile upstream at different datum.

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended to 69,000 cfs on basis of velocity-area studies. Shifts in relation occur.

Historical data.--Flood in May 1914 was the "highest water ever experienced--- in the Cimarron Valley," according to the U. S. Weather Bureau Climatological Data of May 1914.

Remarks.--Supplemental peak discharges are shown only during the period when recording gage was operated. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	July 28, 1895	8.7	-	1939	July 23, 1939	7.3	2,070
1896	Apr. 12, 1896	5.0	90	1940	May 8, 1940	7.08	2,500
1905	Oct. 2, 1904	7.0	-	1941	Oct. 3, 1940	7.45	2,740
1938	Sept. 5, 1938	11.0	23,000		May 3, 1941	9.7	25,000
1939	May 5, 1939	8.0	3,650		May 24, 1941	9.0	25,000
	July 2, 1939	8.7	5,350	1942	Sept. 24, 1941	10.5	47,000
					Apr. 21, 1942	12.1	69,000

1570. Cimarron River near Mocane, Okla.

Location.--Lat 36°59', long 100°19' in SW¹/₄ NW¹/₄ sec.24, T.6 N., R.25 E., near right bank on downstream side of county highway bridge, 6½ miles northeast of Mocane, 14.7 miles upstream from Crooked Creek, and at mile 364.1.

Drainage area.--8,670 sq mi, of which about 4,305 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Nov. 9, 1942; recording thereafter. Datum of gage is 2,206.12 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 6,300 cfs and extended above on basis of slope-area measurement at 53,400 cfs.

Bankfull stage.--3 ft.

Historical data.--Local resident stated that flood in 1914 was 2 or 3 ft higher than that in April 1942 which exceeded by half a foot the flood in May 1951.

Remarks.--Diversion above station for irrigation of about 11,000 acres. Base for partial-duration series, 3,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Cimarron River near Mocane, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	-	13.0	-	1951	June 7, 1951	2.71	3,440
1942	April 1942	10.5	-		June 23, 1951	3.25	6,150
1943	Oct. 14, 1942	-	3,000		Aug. 23, 1951	2.88	3,780
1944	May 31, 1944	3.69	2,970	1952	Aug. 23, 1952	2.18	1,080
1945	June 26, 1945	5.12	9,600	1953	Aug. 20, 1953	3.60	4,650
1946	May 30, 1946	3.95	4,050	1954	Aug. 9, 1954	3.60	3,010
1947	Oct. 6, 1946	4.38	5,520		Aug. 15, 1954	3.81	4,300
	Oct. 8, 1946	5.03	8,150	1955	Aug. 14, 1955	4.85	6,920
1948	Aug. 14, 1948	4.60	4,300		May 18, 1955	5.00	7,610
	Sept. 11, 1948	4.69	5,330		May 22, 1955	5.45	11,200
1949	June 4, 1949	5.30	8,200		May 26, 1955	4.24	5,790
	June 7, 1949	5.50	10,500	1956	Aug. 21, 1956	3.40	2,630
	June 13, 1949	4.20	4,440	1957	May 16, 1957	5.06	9,300
1950	July 30, 1950	4.32	3,690		May 29, 1957	4.06	4,520
	Aug. 3, 1950	4.83	6,320		June 1, 1957	3.73	3,130
	Aug. 29, 1950	3.96	4,090		June 24, 1957	4.17	5,020
	Aug. 31, 1950	4.04	4,440		July 25, 1957	4.82	8,100
1951	Oct. 2, 1950	4.22	3,200		Aug. 3, 1957	3.78	3,330
	May 14, 1951	5.07	7,720		Aug. 30, 1957	3.90	3,830
	May 17, 1951	9.94	53,400		Sept. 11, 1957	3.93	3,960
	May 22, 1951	2.75	3,640	1958	June 21, 1958	4.15	4,920
					June 23, 1958	4.73	7,660
					July 8, 1958	6.75	21,300
					Aug. 19, 1958	4.87	8,460

1575. Crooked Creek near Nye, Kans.

Location.--Lat 37°02', long 100°12', at southeast corner of sec.1, T.35 S., R.27 W., at bridge on county road, 6½ miles east of Nye and 14.0 miles upstream from mouth.

Drainage area.--1,157 sq mi, of which about 813 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,163.79 ft above mean sea level (unadjusted).

Stage-discharge relation.--Defined by current-meter measurements below 2,400 cfs and extended to 13,600 cfs on basis of mean of slope-area measurement and of current-meter measurement of 10,000 cfs at site 10 miles above station.

Bankfull stage.--5 ft.

Historical data.--In 1943, resident supplied information to indicate stage had not exceeded 5.5 ft in past 10 years. Flood of May 23, 1951, was reported by resident in 1951 to be maximum known and to exceed that in 1913.

Remarks.--Base for partial-duration series, 1,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Aug. 5, 1943	2.03	118	1948	Aug. 9, 1948	3.89	1,610
1944	Apr. 29, 1944	3.68	1,360		Aug. 14, 1948	5.12	3,330
1945	June 26, Aug. 15	4.65	2,310	1949	Apr. 26, 1949	6.93	7,100
1946	Aug. 27, 1946	4.78	2,530		May 16, 1949	5.28	3,490
1947	Oct. 10, 1946	5.66	3,970		June 4, 1949	6.82	5,970
	Apr. 12, 1947	6.13	4,950		June 9, 1949	4.65	2,150
1948	June 28, 1948	4.18	2,080		June 13, 1949	5.00	3,570
	Aug. 1, 1948	3.72	1,400	1950	Sept. 11, 1949	4.89	1,820
					Oct. 10, 1949	6.20	3,930
					Oct. 12, 1949	6.50	4,660
					July 27, 1950	7.15	6,360

Peak stages and discharges of Crooked Creek near Nye, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 29, 1950	6.70	4,910	1954	July 23, 1954	4.47	1,320
	Aug. 22, 1950	6.08	2,980				
	Aug. 29, 1950	6.28	2,880	1955	May 20, 1955	8.01	13,600
1951	May 14, 1951	6.72	4,370		May 23, 1955	4.25	2,140
	May 18, 1951	7.40	7,400		May 26, 1955	4.07	1,840
	May 23, 1951	7.59	10,000		June 16, 1955	4.21	1,840
	July 2, 1951	5.47	3,070		June 20, 1955	4.56	2,290
	Sept. 5, 1951	4.49	1,550				
1952	Apr. 29, 1952	5.98	3,730	1956	July 3, 1956	4.38	1,640
				1957	May 16, 1957	6.24	4,220
1953	July 11, 1953	5.68	3,210		May 31, 1957	4.92	2,220
	July 23, 1953	5.10	2,370	1958	July 5, 1958	5.01	1,860
					Aug. 20, 1958	7.94	13,200

1580. Cimarron River near Waynoka, Okla.

Location.--Lat 36°30'55", long 98°52'45", near center of sec.35, T.24 N., R.16 W., near right bank on downstream side of bridge on U. S. Highway 281, three-quarters of a mile downstream from Maine Creek, 5 miles south of Waynoka, and at mile 247.0.

Drainage area.--13,334 sq mi, of which about 8,504 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,367.50 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and extended above on basis of contracted-opening measurement at 94,500 cfs.

Bankfull stage.--8 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 1914	14.0	-	1942	Apr. 22, 1942	10.50	55,000
1935	May 19, 1935	14.5	-	1943	Oct. 3, 1942	9.10	31,700
1938	Apr. 27, 1938	9.26	44,400		May 19, 1943	6.40	10,000
	May 2, 1938	6.02	11,100		July 18, 1943	7.73	24,400
	May 19, 1938	9.49	46,600	1944	Apr. 22, 1944	9.80	47,000
	May 23, 1938	10.70	60,000		July 10, 1944	7.33	14,400
	May 31, 1938	7.17	22,300		July 25, 1944	9.00	30,600
	June 20, 1938	7.00	20,300	1945	Oct. 2, 1944	7.20	13,100
	Aug. 16, 1938	8.40	34,500		June 27, 1945	7.32	13,900
	Sept. 7, 1938	7.2	22,300		Sept. 28, 1945	8.00	20,400
1939	Apr. 5, 1939	7.17	22,200	1946	June 29, 1946	6.64	8,570
	Apr. 15, 1939	5.85	12,100				
	June 12, 1939	6.44	15,200	1947	Oct. 6, 1946	7.23	11,100
1940	May 19, 1940	7.50	19,500		Nov. 6, 1946	7.19	11,500
	July 2, 1940	7.05	15,100		Apr. 13, 1947	8.13	20,900
	Aug. 9, 1940	6.95	14,100		May 15, 1947	7.27	10,100
1941	Apr. 15, 1941	7.80	22,600	1948	June 28, 1948	9.35	34,600
	May 4, 1941	7.35	18,000				
	May 20, 1941	7.70	19,500	1949	May 7, 1949	7.25	10,500
	May 26, 1941	7.34	16,500		May 16, 1949	10.00	42,900
	June 9, 1941	8.10	26,100		May 21, 1949	8.90	28,200
	Sept. 25, 1941	8.35	29,700		June 5, 1949	8.55	24,000
					June 8, 1949	7.77	15,300
1942	Oct. 23, 1941	9.70	45,100		June 13, 1949	8.60	24,600
	Apr. 18, 1942	7.26	17,000		July 27, 1949	7.80	15,800

Peak stages and discharges of Cimarron River near Waynoka, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Sept. 12, 1949	7.68	14,800	1955	May 23, 1955	7.71	17,400
1950	July 19, 1950	8.03	18,400		May 26, 1955	9.10	34,000
	July 25, 1950	8.45	22,800		June 18, 1955	8.56	27,100
	July 28, 1950	11.40	70,000		June 20, 1955	8.37	24,700
	Aug. 2, 1950	8.90	32,600	1956	Aug. 19, 1956	6.31	6,290
	Aug. 4, 1950	6.90	12,300				
	Aug. 30, 1950	6.72	10,700	1957	Apr. 17, 1957	7.72	17,400
	Sept. 16, 1950	6.83	11,900		Apr. 23, 1957	7.40	14,500
1951	May 18, 1951	9.54	37,700		May 2, 1957	7.83	19,000
	May 23, 1951	8.69	28,300		May 10, 1957	9.06	34,000
	June 22, 1951	8.18	17,900		May 13, 1957	8.28	22,900
	June 24, 1951	9.58	33,900		May 16, 1957	15.10	94,500
	June 30, 1951	9.43	28,700		May 24, 1957	8.44	27,700
	July 4, 1951	6.65	10,200		May 30, 1957	10.56	48,400
					June 10, 1957	8.31	26,500
1952	May 1, 1952	6.87	7,640		June 18, 1957	6.79	11,900
1953	July 12, 1953	6.30	6,010		June 23, 1957	11.78	60,200
					July 1, 1957	9.71	41,800
1954	May 24, 1954	7.11	9,540		Sept. 14, 1957	6.65	10,700
1955	May 19, 1955	9.73	41,800	1958	June 26, 1958	8.34	16,400
					July 9, 1958	7.85	13,000

1585. Preacher Creek near Dover, Okla.

Location.--Lat 36°03', long 98°01', in NW¹ NW¹ sec. 13, T. 18 N., R. 8 W., on right bank 75 ft downstream from county highway bridge, 1.4 miles upstream from mouth, and 7 miles northwest of Dover.

Drainage area.--14.5 sq mi.

Gage.--Recording gage and Parshall flume. Altitude of gage is 1,073 ft.

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended above on basis of slope-area measurement at 6,420 cfs.

Bankfull stage.--3 ft.

Historical data.--In 1951, local residents stated that a stage of about 4 ft occurred "several years ago." The stage of 4.73 ft, occurring July 24, 1953, was reported to be the highest since at least 1918.

Remarks.--Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 22, 1952	2.31	9.2	1955	May 28, 1955	4.87	512
1953	July 19, 1953	4.02	155		June 16, 1955	4.41	275
	July 24, 1953	4.73	431		June 17, 1955	3.74	100
				1956	Oct. 4, 1955	3.84	118
1954	May 24, 1954	3.08	32		May 15, 1957	9.1	6,420
				1957			

1590. Turkey Creek near Drummond, Okla.

Location.--Lat 36°19', long 98°00', in NE $\frac{1}{4}$ sec.12, T.21 N., R.8 W., near right bank on downstream side of pile bent of county highway bridge, $2\frac{1}{4}$ miles northeast of Drummond, $2\frac{1}{2}$ miles downstream from Clear Creek, and 9 miles southwest of Enid.

Drainage area.--248 sq mi.

Gage.--Recording. Datum of gage is 1,148.22 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,300 cfs and extended above by logarithmic plotting.

Bankfull stage.--18 ft.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges .

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 10, 1948	5.92	1,620	1953	June 5, 1953	4.94	1,230
1949	Mar. 30, 1949	8.46	2,800	1954	May 25, 1954	4.25	908
	May 19, 1949	7.26	2,240				
	May 21, 1949	6.69	1,970	1955	May 9, 1955	7.88	2,520
	May 23, 1949	7.85	2,480		May 19, 1955	8.10	2,620
	May 28, 1949	11.69	4,390		June 18, 1955	13.30	5,320
	June 4, 1949	6.79	2,020	1956	Oct. 2, 1955	6.23	1,750
1950	May 8, 1950	17.36	10,200				
	May 10, 1950	8.29	2,710	May 3, 1957	6.58	1,840	
	July 20, 1950	6.59	1,930	May 16, 1957	21.61	18,800	
	July 29, 1950	20.44	16,300	May 25, 1957	8.58	2,660	
	Aug. 1, 1950	8.12	2,620	June 10, 1957	12.39	4,550	
	1951	May 22, 1951	7.61	2,380	June 18, 1957	7.70	2,240
May 27, 1951		7.17	2,200	June 23, 1957	11.55	3,620	
June 21, 1951		8.31	2,710	June 26, 1957	10.32	3,090	
June 30, 1951		8.17	2,660	July 1, 1957	7.15	1,840	
July 4, 1951		7.46	2,340	1958	Nov. 17, 1957	3.93	695
1952		Apr. 22, 1952	2.35				

1595. Bluff Creek above Lake Hefner, near Oklahoma City, Okla.

Location.--Lat 35°32'33", long 97°35'46", in SW $\frac{1}{4}$ sec.2, T.12 N., R.4 W., on left bank at upstream side of weir at bridge in Lake Hefner recreational area, just upstream from Lake Hefner, $6\frac{1}{4}$ miles northwest of the State Capitol in Oklahoma City.

Drainage area.--1.62 sq mi.

Gage.--Recording. Datum of gage is 1,199.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 80 cfs and extended above on basis of weir determination at 1,070 cfs.

Bankfull stage.--6 ft.

Remarks.--About 9.5 percent of drainage is in urban area of Warr Acres. Some regulation by ponds in basin. Base for partial-duration series, 70 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1951	May 9, 1951	2.55	192	1955	June 16, 1955	4.95	1,070	
	May 18, 1951	2.20	120		1956	June 17, 1955	2.76	240
	May 27, 1951	3.49	452	1957		Oct. 2, 1955	2.58	199
	July 24, 1951	2.44	168		1958	Apr. 22, 1957	2.15	110
1952	May 23, 1952	1.78	47	1959		May 24, 1957	2.21	122
	1953	Apr. 5, 1953	2.06			94	1960	June 22, 1957
July 20, 1953		2.28	136	1961		Sept. 14, 1957		1.97
1954	May 1, 1954	2.45	170		1962	Apr. 19, 1958	2.82	255
	1955	May 19, 1955	3.46			441	1963	June 21, 1958
1956		May 19, 1955	3.46	441		1964		June 25, 1958

1598. Cottonwood Creek at Guthrie, Okla.

Location.--Lat 35°53', long 97°26', in NE $\frac{1}{4}$ sec.8, T.16 N., R.2 W., near upstream side of bridge on State Highway 33 in northwest Guthrie, 2 $\frac{1}{2}$ miles upstream from mouth.

Drainage area.--370 sq mi.

Gage.--Reference point at tree and at street curb. Datum is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Not defined.

Bankfull elevation.--923 ft.

Remarks.--Data furnished by Ed Nelson, local resident, who has recorded all peaks above 924 ft since at least 1889.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1889	April 1889	927.1	-	1927	Apr. 12, 1927	927.85	-
1908	May 28, 1908	927.4	-	1941	May 4,5, 1941	925.2	-
1910	Nov. 28, 1909	927.1	-	1945	Apr. 16, 1945	925.6	-
1912	May 1912	927.4	-	1947	Apr. 14, 1947	925.3	-
1916	April 1916	927.5	-	1949	May 19, 1949	929.6	-
1921	March 1921	927.1	-	1956	Oct. 3, 1955	924.7	-
					Oct. 5, 1955	925.2	-

1600. Cimarron River near Guthrie, Okla.

Location.--Lat 35°55'10", long 97°25'35", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.17 N., R.2 W., on left bank 125 ft upstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 1.2 miles downstream from Cottonwood Creek, 2 $\frac{1}{2}$ miles north of Guthrie, 6.5 miles upstream from Skeleton Creek (Ephraim Creek), and at mile 121.8.

Drainage area.--16,892 sq mi, of which 11,966 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 10, 1939 at railway bridge; recording thereafter. Datum of gage is 900.50 ft above mean sea level (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--10 ft.

Historical data.--Flood in May 1935 is greatest known prior to flood of May 17, 1957, from information by Corps of Engineers. Other major floods are reported to have occurred in May 1914 and October 1926.

Remarks.--Base for partial-duration series, 13,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 1935	16.5	90,000	1941	Apr. 16, 1941	8.13	23,600
1938	Apr. 28, 1938	7.92	25,400		May 5, 1941	9.31	32,000
	May 5, 1938	6.86	15,700		May 22, 1941	7.66	15,000
	May 20, 1938	10.7	46,500		May 24, 1941	8.02	13,900
	May 24, 1938	10.10	42,100		June 10, 1941	9.87	21,400
	June 1, 1938	7.85	24,500	1942	Oct. 16, 1941	7.84	15,000
	June 21, 1938	7.56	22,800		Oct. 25, 1941	11.40	41,400
	Aug. 17, 1938	6.85	16,200		Apr. 10, 1942	9.22	26,200
			Apr. 20, 1942		11.90	45,400	
1939	Apr. 6, 1939	7.16	22,000		Apr. 23, 1942	10.19	34,400
1940	July 3, 1940	7.15	10,600		Apr. 26, 1942	10.59	38,200

Peak stages and discharges of Cimarron River near Guthrie, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 20, 1943	11.57	42,900	1950	Aug. 2, 1950	11.10	32,300
1944	Apr. 11, 1944	11.01	43,000	1951	May 20, 1951	11.80	42,500
	Apr. 23, 1944	9.15	27,800		May 23, 1951	9.42	20,800
	June 14, 1944	8.65	16,700		May 26, 1951	8.78	17,400
1945	Apr. 16, 1945	10.87	41,500		June 23, 1951	8.30	14,000
	Sept. 29, 1945	9.77	22,200		June 26, 1951	9.82	22,200
1946	June 30, 1946	8.37	16,100	1951	July 1, 1951	10.41	27,900
					July 6, 1951	8.40	14,500
1947	Apr. 14, 1947	11.27	43,500	1952	May 3, 1952	5.35	4,230
	May 13, 1947	8.35	14,600		July 20, 1953	6.70	5,620
	May 16, 1947	11.15	35,000	1954	May 26, 1954	8.66	11,000
1948	June 24, 1948	11.32	37,700		May 21, 1955	13.70	43,400
	June 29, 1948	9.98	28,800	1955	May 24, 1955	9.48	16,800
	Aug. 10, 1948	8.15	13,400		May 27, 1955	11.89	30,600
	Aug. 15, 1948	8.31	14,300		June 19, 1955	11.13	28,200
1949	Mar. 31, 1949	7.8	16,000	1956	Oct. 5, 1955	11.90	39,400
	May 20, 1949	12.98	51,500	1957	Apr. 24, 1957	9.67	20,700
	May 22, 1949	12.74	48,500		May 3, 1957	10.67	30,600
	May 25, 1949	9.02	18,000		May 17, 1957	18.58	158,000
	June 7, 1949	8.68	16,700		May 21, 1957	10.94	42,000
	June 11, 1949	8.62	15,400		May 26, 1957	9.7	30,300
	June 15, 1949	9.62	21,500		June 1, 1957	10.4	39,000
					June 11, 1957	11.04	42,000
1950	May 8, 1950	8.58	18,000				
	July 26, 1950	8.88	22,800				
	July 30, 1950	12.05	44,500				

1605. Skeleton Creek near Lovell, Okla.

Location.--Lat 36°04', long 97°35', in SW $\frac{1}{4}$ sec.1, T.18 N., R.4 W., near right bank on downstream side of pier of bridge on State Highway 74, 2 miles upstream from Otter Creek and 2 $\frac{3}{4}$ miles east of Lovell.

Drainage area.--410 sq mi.

Gage.--Nonrecording prior to Dec. 5, 1949; recording thereafter. Datum of gage is 914.76 ft above mean sea level, datum of 1929 (State Highway Commission bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft.

Historical data.--Local residents reported that flood in August 1932 was the highest known prior to 1957 and was considerably higher than the flood in 1912. The flood of July 30, 1950, was reported to be highest since 1922.

Remarks.--Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Aug. 17, 1932	32.0	-	1951	June 15, 1951	16.73	2,040
1949	May 20, 1949	24.01	-		June 22, 1951	18.28	2,520
					July 2, 1951	18.44	2,550
1950	May 12, 1950	13.71	1,300	1952	Aug. 9, 1952	10.20	638
	July 21, 1950	17.88	2,420		June 7, 1953	13.56	1,400
	July 26, 1950	13.90	1,360	1953	Nov. 20, 1953	14.48	1,290
	July 30, 1950	27.57	8,970		Dec. 4, 1953	13.90	1,430
1951	May 1, 1951	14.57	1,430	1955	May 9, 1955	26.80	7,650
	May 18, 1951	17.35	2,190		May 20, 1955	26.40	7,070
	May 23, 1951	17.78	2,340				
	May 28, 1951	14.72	1,480				

Peak stages and discharges of Skeleton Creek near Lovell, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 26, 1955	28.72	11,100	1957	June 11, 1957	23.30	4,090
	June 16, 1955	17.92	2,580		June 19, 1957	19.86	2,740
	June 19, 1955	22.56	4,440		June 24, 1957	26.21	7,370
	June 23, 1955	16.70	2,140		June 27, 1957	23.51	4,620
					July 2, 1957	19.83	2,840
1956	Oct. 4, 1955	27.10	7,960	1958	Sept. 16, 1957	20.93	3,220
1957	Apr. 23, 1957	19.40	2,840	1958	Apr. 3, 1958	18.10	2,400
	May 4, 1957	20.66	3,260		May 30, 1958	15.83	1,710
	May 16, 1957	34.58	75,200		June 21, 1958	16.91	1,960
	May 21, 1957	21.57	3,620		June 25, 1958	19.42	2,710
	May 26, 1957	22.61	4,090		Sept. 10, 1958	18.82	2,520
	May 30, 1957	21.00	3,380				

1610. Cimarron River at Perkins, Okla.

Location.--Lat 35°58', long 97°02', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.17 N., R.3 E., near right bank on downstream side of pier of bridge on State Highway 40, 1 mile south of Perkins, $\frac{1}{2}$ miles upstream from Dugout Creek, 4 miles downstream from Wildhorse Creek, and at mile 87.3.

Drainage area.--17,852 sq mi, of which about 12,926 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 26, 1940; recording thereafter. Datum of gage is 819.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 90,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--11 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 13,000 cfs. Only annual peaks are shown prior to 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	-	17.0	-	1941	June 11, 1941	12.70	31,600
1927	Oct. 5, 1926	17.0	-	1942	Oct. 16, 1941	11.70	23,100
1928	May 18, 1928	10.6	-		Oct. 25, 1941	14.25	46,900
					Apr. 10, 1942	12.40	30,600
1929	June 1, 1929	10.8	-		Apr. 20, 1942	14.30	48,300
					Apr. 23, 1942	13.09	34,400
1930	May 17, 1930	10.4	-		Apr. 26, 1942	13.17	35,500
					Aug. 14, 1942	11.75	23,100
1931	Apr. 18, 1931	10.1	-	1943	May 18, 1943	12.74	29,400
1932	Aug. 18, 1932	14.6	-		May 20, 1943	14.08	46,600
1933	Sept. 4, 1933	10.5	-	1944	Apr. 11, 1944	14.08	55,700
					Apr. 23, 1944	12.28	25,000
1934	Sept. 3, 1934	9.5	-		June 14, 1944	11.93	17,000
1935	June 21, 1935	18.0	-	1945	Apr. 12, 1945	11.73	25,500
					Apr. 17, 1945	13.92	41,900
1936	June 6, 1936	12.8	-		Sept. 30, 1945	12.56	34,100
1937	June 16, 1937	12.1	-	1946	June 30, 1946	11.03	16,000
1938	May 24, 1938	13.2	-		1947	Apr. 14, 1947	13.63
				May 13, 1947		11.33	17,400
1940	July 4, 1940	10.69	11,300	May 16, 1947		13.50	30,600
				May 22, 1947		10.55	14,100
1941	Apr. 17, 1941	11.90	24,600	1948	June 24, 1948	13.26	34,500
	May 6, 1941	12.57	29,700		June 29, 1948	12.87	29,400
	May 22, 1941	11.88	20,800	1949	May 19, 1949	15.22	65,300
	May 24, 1941	11.14	17,300		May 22, 1949	14.00	46,400
	June 8, 1941	10.55	14,700				

Peak stages and discharges of Cimarron River at Perkins, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 7, 1949	11.07	17,200	1954	May 27, 1954	10.43	11,000
	June 11, 1949	10.93	16,600				
	June 15, 1949	11.90	21,000				
1950	May 9, 1950	10.05	17,600	1955	May 11, 1955	11.15	13,000
	July 22, 1950	10.20	13,700		May 21, 1955	14.80	49,600
	July 26, 1950	10.75	18,900		May 27, 1955	13.80	35,400
	July 31, 1950	13.80	49,000		June 19, 1955	13.20	33,500
	Aug. 2, 1950	13.36	39,600	1956	Oct. 5, 1955	13.39	53,700
1951	May 20, 1951	13.90	50,200	1957	Apr. 24, 1957	11.62	27,700
	May 23, 1951	11.50	25,000		May 3, 1957	11.51	28,300
	May 26, 1951	10.73	18,900		May 17, 1957	19.53	149,000
	June 15, 1951	10.73	18,100		May 21, 1957	15.75	94,000
	June 23, 1951	10.54	17,700		May 26, 1957	12.22	33,000
	June 26, 1951	11.53	27,200		June 1, 1957	12.70	34,500
	July 1, 1951	11.40	33,800		June 11, 1957	12.61	53,200
	July 5, 1951	10.67	18,900		June 19, 1957	9.67	19,000
					June 25, 1957	13.80	76,600
1952	May 3, 1952	7.40	4,120	1958	June 22, 1958	8.77	15,800
1953	July 21, 1953	8.56	5,470		June 26, 1958	10.98	35,000

1630. Council Creek near Stillwater, Okla.

Location.--Lat 36°07', long 96°52', in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.19 N., R.4 E., on right bank 200 ft upstream from county highway bridge, 10 miles east of Stillwater, and at mile 10.0.

Drainage area.--31 sq mi.

Gage.--Nonrecording prior to May 4, 1934; recording thereafter. Datum of gage is 838.28 ft above mean sea level, adjustment of 1912.

Stage-discharge relation.--Defined by current-meter measurements below 2,500 cfs and extended above on basis of slope-area measurements at gage heights 13.4 and 17.5 ft.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 660 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 27, 1912	16.6	14,400	1941	May 20, 1941	8.14	1,520
1934	May 3, 1934	7.20	1,260		June 9, 1941	9.60	2,050
	Sept. 2, 1934	5.32	797	1942	Oct. 15, 1941	8.57	1,700
	Sept. 10, 1934	7.78	1,410		Oct. 22, 1941	9.79	2,120
1935	Oct. 17, 1934	7.34	1,290		Oct. 30, 1941	10.62	2,410
	June 17, 1935	5.00	736		Apr. 9, 1942	9.71	2,080
	June 21, 1935	11.92	2,900		Apr. 17, 1942	11.75	3,090
1936	Sept. 20, 1936	4.66	656		Apr. 19, 1942	12.76	4,190
					Apr. 24, 1942	10.28	2,300
1937	June 9, 1937	7.42	1,100		June 21, 1942	8.64	1,700
	June 15, 1937	5.37	717		June 24, 1942	13.42	5,170
	Sept. 7, 1937	8.79	1,480		Aug. 14, 1942	17.54	18,000
1938	Mar. 28, 1938	13.34	5,000	1943	May 10, 1943	10.31	2,300
	May 7, 1938	8.70	1,450		May 18, 1943	15.31	9,990
	June 11, 1938	9.97	1,940		Sept. 30, 1943	6.79	1,130
	Aug. 16, 1938	10.10	1,980	1944	Oct. 23, 1943	9.10	1,880
1939	June 28, 1939	3.9	461		Apr. 10, 1944	9.15	1,910
					Apr. 22, 1944	5.58	785
1940	Apr. 11, 1940	6.02	822		June 6, 1944	7.50	1,340
					June 13, 1944	9.30	1,940
1941	Nov. 25, 1940	6.53	1,040		June 19, 1944	5.95	890
	May 4, 1941	9.43	1,980	1945	Dec. 4, 1944	7.66	1,400
	May 7, 1941	5.50	762		Mar. 15, 1945	7.34	1,280
					Sept. 25, 1945	9.06	1,880

a Annual peak only.

Peak stages and discharges of Council Creek near Stillwater, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Sept. 30, 1945	11.20	2,690	1952	Mar. 9, 1952	5.59	828
1946	Jan. 8, 1946	6.32	1,140		June 5, 1952	8.34	1,600
	May 30, 1946	5.09	727	1953	July 12, 1953	7.43	1,310
	June 26, 1946	8.03	1,490		July 23, 1953	8.07	1,530
	June 29, 1946	8.35	1,630	1954	May 1, 1954	7.89	1,470
1947	Apr. 15, 1947	7.14	1,220	1955	May 19, 1955	8.18	1,560
	Apr. 24, 1947	6.83	1,140		May 20, 1955	7.89	1,470
	May 16, 1947	11.01	2,590	1956	Oct. 4, 1955	4.17	524
	June 26, 1947	7.83	1,430	1957	Apr. 19, 1957	5.51	805
1948	June 23, 1948	7.44	1,310		Apr. 23, 1957	6.07	948
	June 28, 1948	10.07	2,220		May 8, 1957	5.85	875
	July 10, 1948	12.67	4,050		May 17, 1957	4.88	680
	July 16, 1948	6.19	976		May 20, 1957	17.01	16,400
1949	May 19, 1949	12.69	4,050		June 10, 1957	10.68	2,450
	May 24, 1949	9.75	2,120		June 12, 1957	9.82	2,110
1950	June 3, 1950	5.39	783		June 18, 1957	8.49	1,660
	July 10, 1950	10.93	2,540		June 23, 1957	9.54	2,000
	July 21, 1950	11.22	2,690		June 28, 1957	9.03	1,830
	July 29, 1950	9.27	1,930		July 1, 1957	8.16	1,560
	July 31, 1950	6.60	1,080		Sept. 14, 1957	6.26	999
1951	May 1, 1951	9.44	1,970	1958	Mar. 29, 1958	8.20	1,560
	July 4, 1951	6.62	1,080		June 25, 1958	8.03	1,500
	Sept. 9, 1951	8.19	1,560		July 5, 1958	7.64	1,370
1952	Oct. 6, 1951	4.86	680		July 28, 1958	5.24	740
					Aug. 20, 1958	6.92	1,160

1635. Cimarron River at Oilton, Okla.

Location.--Lat 36°06', long 96°35', in SW $\frac{1}{4}$ sec. 28, T.19 N., R.7 E., near center of span on downstream side of pier of bridge on State Highway 51, half a mile north of Oilton, $4\frac{1}{4}$ miles upstream from Buckeye Creek, and at mile 35.1.

Drainage area.--18,669 sq mi, of which about 13,743 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 30, 1938; recording thereafter. Datum of gage is 718.99 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 56,000 cfs and extended above.

Bankfull stage.--18 ft.

Remarks.--Base for partial-duration series, 15,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	October 1908	21.3	-	1942	Oct. 16, 1941	10.53	19,700
1935	Mar. 24, 1935	10.26	17,200		Oct. 25, 1941	13.52	42,500
	May 15, 1935	11.09	22,600		Oct. 30, 1941	15.08	56,100
	May 20, 1935	13.96	45,800		Apr. 9, 1942	12.20	33,500
	June 21, 1935	16.8	72,300		Apr. 17, 1942	11.24	24,300
					Apr. 21, 1942	14.90	54,600
1936	June 6, 1936	12.07	30,900		Apr. 23, 1942	12.59	35,000
					June 21, 1942	10.83	21,100
1937	June 16, 1937	11.63	26,500		June 24, 1942	13.68	43,900
					Aug. 14, 1942	15.37	59,100
1938	Mar. 28, 1938	12.85	38,400	1943	May 10, 1943	11.94	30,600
	May 20, 1938	12.0	31,000		May 19, 1943	14.70	53,700
	May 24, 1938	12.36	34,600	1944	Oct. 23, 1943	10.85	19,400
	Aug. 17, 1938	10.50	18,100		Apr. 11, 1944	13.22	47,500
1939	July 2, 1939	9.15	9,550		Apr. 24, 1944	10.86	22,300
					June 14, 1944	10.09	15,900
1940	Sept. 4, 1940	12.11	29,200	1945	Apr. 12, 1945	11.25	27,000
1941	Apr. 17, 1941	10.97	21,400		Apr. 17, 1945	12.17	37,500
	May 6, 1941	11.30	23,600		Sept. 30, 1945	14.56	52,800
	June 11, 1941	11.48	25,200				

1640. Cimarron River at Mannford, Okla.

Location.--Lat 36°09', long 96°23', in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.5, T.19 N., R.9 E., on downstream side of county highway bridge, half a mile north of Mannford, 1 $\frac{1}{2}$ miles downstream from House Creek, and at mile 17.7.

Drainage area.--18,849 sq mi, of which about 13,923 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1942, at site 1 1/8 miles upstream at datum 5.00 ft higher; recording gage thereafter at last used site and datum. Datum of last used gage, 682.92 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 85,000 cfs and extended above.

Bankfull stage.--18 ft.

Historical data.--According to local residents, the flood in October 1908 was about 0.5 ft higher than that in 1940.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 17,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	-	20.0	-	1946	July 1, 1946	13.18	15,400
1936	July 1936	18.5	a53,000	1947	Apr. 15, 1947 May 16, 1947	19.22 17.90	53,800 44,800
1939	July 2, 1939	8.10	7,300	1948	June 23, 1948 June 29, 1948 July 11, 1948	18.40 15.00 18.13	48,100 26,700 46,200
1940	Sept. 4, 1940	25.2	103,000	1949	Feb. 7, 1949 May 19, 1949 May 23, 1949 May 26, 1949 June 3, 1949 June 16, 1949	16.12 23.58 18.10 16.60 14.06 13.53	33,400 78,400 45,400 36,400 22,100 19,000
1941	Apr. 17, 1941 May 6, 1941 June 11, 1941	11.70 11.97 12.10	22,100 24,800 23,600	1950	July 21, 1950 July 27, 1950 July 31, 1950 Aug. 2, 1950	14.40 13.06 17.20 16.62	25,900 17,400 43,600 36,400
1942	Oct. 16, 1941 Oct. 24, 1941 Oct. 30, 1941 Apr. 9, 1942 Apr. 17, 1942 Apr. 19, 1942 Apr. 25, 1942 June 21, 1942 June 24, 1942 Aug. 14, 1942	10.60 13.64 18.00 13.10 11.60 17.00 12.70 11.15 15.90 17.53	28,900 45,500 70,000 34,000 27,200 63,000 32,200 25,400 49,200 57,800	1951	May 20, 1951 June 15, 1951 June 26, 1951 July 2, 1951	17.43 13.73 14.58 15.17	45,000 - - -
1943	May 10, 1943 May 19, 1943	17.05 19.40	39,500 56,500	1952	Mar. 11, 1952	11.57	11,000
1944	Oct. 23, 1943 Apr. 11, 1944 Apr. 24, 1944	13.93 17.17 13.69	22,000 46,800 23,900	1953	July 12, 1953	12.40	14,500
1945	Apr. 12, 1945 Apr. 17, 1945 Sept. 30, 1945	15.60 16.05 20.40	32,800 37,200 62,500	1954	May 28, 1954	12.29	14,000
				1955	May 22, 1955	19.20	54,000

a Annual peak only.

ARKANSAS RIVER BASIN

1645. Arkansas River at Tulsa, Okla.

Location.--Lat 36°08'40", long 96°00'10", in NW¼ sec.11, T.19 N., R.12 E., near left bank on downstream side of pier of bridge on U. S. Highway 66 in Tulsa, 10.1 miles upstream from Polecat Creek, 17.1 miles downstream from Cimarron River, and at mile 523.7.

Drainage area.--74,615 sq mi, of which about 62,074 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 2, 1939; recording thereafter. Prior to Oct. 1, 1952, at datum 3.00 ft higher. Datum of present gage is 615.23 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Prior to 1938, defined by 35 current-meter measurements made by Corps of Engineers during 1928-32 below 60,000 cfs and extended to 114,000 cfs on basis of subsequent ratings defined by current-meter measurements to maximum discharge for period of record. Some rock outcrops in channel probably stabilize high-water rating.

Bankfull stage.--19 ft.

Remarks.--Slight regulation since December 1943 by John Martin Reservoir on Arkansas River (capacity, 662,900 acre-ft) and since June 1941 by Great Salt Plains Reservoir on Salt Fork Arkansas River (capacity, 292,400 acre-ft). Records prior to April 1938 computed on basis of once-daily Weather Bureau gage readings. Records 1939-55 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 50,000 cfs. Only annual peaks are shown prior to 1926.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 3, 1905	7.1	-	1928	June 13, 1928	10.5	65,500
1906	Sept. 20, 1906	8.0	-		June 22, 1928	11.5	76,500
1907	Jan. 22, 1907	12.4	-	1929	Nov. 21, 1928	11.0	71,000
1908	May 25, 1908	18.8	-		Apr. 14, 1929	10.2	62,100
1909	Oct. 23, 1908	15.7	-		Apr. 25, 1929	10.9	69,500
1910	Nov. 17, 1909	9.5	-		May 14, 1929	11.1	72,100
1911	Aug. 7, 1911	14.2	-		May 20, 1929	11.3	74,000
1912	Apr. 29, 1912	16.4	-		June 8, 1929	9.1	50,600
1913	May 6, 1913	6.7	-		June 25, 1929	9.8	57,900
1914	May 5, 1914	10.2	-		July 2, 1929	10.2	62,100
1915	May 25, 1915	14.8	-	1930	May 13, 1930	9.9	59,000
1916	June 15, 1916	11.6	-		June 15, 1930	9.5	55,000
1917	June 8, 1917	7.0	-	1931	June 15, 1931	8.9	49,000
1918	May 9, 1918	8.1	-	1932	Aug. 19, 1932	10.5	65,500
1919	June 16, 1919	9.8	-	1933	Sept. 5, 1933	7.4	35,200
1920	Sept. 9, 1920	11.5	-	1934	May 6, 1934	4.6	15,700
1921	June 26, 1921	12.0	-	1935	May 16, 1935	11.2	73,200
1922	Apr. 10, 1922	14.7	-		May 22, 1935	12.3	85,600
1923	June 13, 1923	19.8	244,000		June 2, 1935	10.7	67,700
1924	Oct. 16, 1923	12.5	-		June 21, 1935	13.3	98,200
1925	Apr. 28, 1925	5.9	-	1936	June 7, 1936	9.4	54,000
1926	June 3, 1926	8.3	43,200	1937	June 12, 1937	10.0	60,000
1927	Oct. 7, 1926	14.3	113,000	1938	Mar. 29, 1938	10.5	61,000
	Apr. 13, 1927	14.4	114,000		May 23, 1938	12.62	96,100
	Apr. 21, 1927	12.4	86,800		May 25, 1938	12.55	94,800
	Aug. 5, 1927	13.1	95,800	1939	Apr. 8, 1939	6.06	24,700
				1940	Sept. 4, 1940	16.20	143,000
				1941	Apr. 18, 1941	10.25	66,200
					June 11, 1941	11.65	78,100
				1942	Oct. 26, 1941	12.35	85,400
					Oct. 30, 1941	14.42	116,000
					Apr. 10, 1942	10.59	76,000
					Apr. 18, 1942	8.95	53,000
					Apr. 21, 1942	12.95	96,000

Peak stages and discharges of Arkansas River at Tulsa, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 24, 1942	10.22	61,700	1950	July 19, 1950	10.98	75,700
	Apr. 27, 1942	11.30	76,800		July 21, 1950	10.32	67,100
	June 25, 1942	15.20	139,000		Aug. 3, 1950	13.02	101,000
	Aug. 15, 1942	10.46	74,400	1951	May 3, 1951	9.73	57,700
1943	May 10, 1943	10.39	70,500		May 21, 1951	14.73	135,000
	May 20, 1943	16.50	173,000		May 25, 1951	13.30	111,000
1944	Apr. 12, 1944	13.12	102,000		June 10, 1951	10.00	61,200
	Apr. 26, 1944	17.00	172,000		June 27, 1951	12.86	102,000
	May 4, 1944	10.08	63,500		July 4, 1951	15.70	149,000
1945	Dec. 8, 1944	11.85	84,900		July 17, 1951	14.18	123,000
	Apr. 13, 1945	10.69	64,700	1952	June 7, 1952	6.88	32,900
	Apr. 18, 1945	15.40	140,000		June 1, 1953	7.04	17,000
	July 2, 1945	10.33	61,300	1954	May 3, 1954	8.88	26,000
1946	Oct. 1, 1945	16.70	165,000		May 22, 1955	12.47	56,300
1947	Apr. 16, 1947	15.94	151,000	1955	May 29, 1955	12.87	60,700
	May 18, 1947	11.83	87,600		June 21, 1955	11.73	54,500
	May 23, 1947	9.32	55,900	1956	Oct. 6, 1955	14.97	97,600
1948	June 23, 1948	10.50	67,100		Apr. 23, 1957	12.06	59,000
	June 30, 1948	10.38	65,900	1957	May 19, 1957	20.35	213,000
	July 11, 1948	9.70	58,000		May 21, 1957	21.53	235,000
	July 19, 1948	10.76	70,700		May 25, 1957	15.08	112,000
	Aug. 17, 1948	9.66	58,000		June 2, 1957	12.63	74,800
1949	Feb. 15, 1949	10.63	72,000		June 12, 1957	14.83	107,000
	Mar. 1, 1949	9.00	50,800		June 26, 1957	15.90	135,000
	May 20, 1949	14.44	123,000		July 2, 1957	15.88	119,000
				1958	July 8, 1958	11.55	62,200

1655. Polecat Creek below Heyburn Reservoir, near Heyburn, Okla.

(Published as "at Heyburn" prior to 1957)

Location.--Lat 35°57', long 96°18', in SE $\frac{1}{4}$ sec.13, T.17 N., R.9 E., at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2 $\frac{1}{2}$ miles northwest of Heyburn, 3.4 miles upstream from former site at bridge on U. S. Highway 66, 11 miles southwest of Sapulpa, and 48.6 miles upstream from mouth.

Drainage area.--123 sq mi.

Gage.--Nonrecording prior to Feb. 22, 1949; recording thereafter. Prior to Feb. 17, 1956, at site 3.4 miles downstream at datum 706.47 ft. Feb. 17, 1956, to Apr. 17, 1957, and Oct. 1, 1957 to Mar. 7, 1958, at site 1,100 ft downstream at datum 718.00 ft. Datum of present gage is 760.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements at present site. At former site, rating extended above 9,000 cfs on basis of 1940 estimate derived from slope-area measurement of peak flow at Sapulpa, 26 miles downstream.

Bankfull stage.--18 ft at former site.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Peak flows regulated since March 1950 by Heyburn Reservoir (capacity, 59,650 acre-ft). Base for partial-duration series, 3,600 cfs. Only annual peaks are shown subsequent to 1949.

Peak stages and discharges of Polecat Creek below Heyburn Reservoir, near Heyburn, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 4, 1940	31.5	a26,000	1948	June 23, 1948	28.18	17,300
1943	May 9, 1943	27.60	17,000	1949	May 19, 1949	28.53	17,300
	May 17, 1943	23.54	9,290	1950	Feb. 28, 1950	19.74	2,900
	May 19, 1943	20.37	5,170				
1944	Oct. 23, 1943	21.00	5,810	1951	Feb. 20, 1951	11.29	613
	Mar. 15, 1944	19.25	4,080	1952	May 23, 1952	14.94	1,180
	May 2, 1944	19.00	3,920				
				1953	Apr. 23, 1953	16.67	1,700
1945	Mar. 15, 1945	23.00	8,490	1954	May 2, 1954	15.89	1,610
	Apr. 13, 1945	24.39	10,900				
	Sept. 25, 1945	20.59	3,840	1955	May 24, 1955	11.15	718
	Sept. 28, 1945	22.46	6,150				
1946	Jan. 5, 1946	21.80	5,170	1956	Sept. 13, 1956	6.10	154
	May 7, 1946	21.12	4,340				
1947	Apr. 10, 1947	21.30	4,560	1957	May 25, 1957	11.08	1,880
	May 16, 1947	21.20	4,430				
1948	June 22, 1948	20.70	3,860	1958	June 25, 1958	11.40	1,890

a Annual peak only.

1660. Verdigris River near Coyville, Kans.

Location.--Lat 37°42'20", long 95°54'20", in SW $\frac{1}{4}$ sec.8, T.27 S., R.14 E., at county highway bridge $1\frac{1}{2}$ miles upstream from Meadow Creek, $1\frac{1}{2}$ miles north-west of Coyville, $2\frac{1}{2}$ miles downstream from Pig Creek, and at mile 268.0.

Drainage area.--747 sq mi.

Gage.--Nonrecording prior to Jan. 24, 1952; recording thereafter. Datum of gage is 845.28 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 46,000 cfs and by slope-area measurement at 130,000 cfs. Shifts in relation occur.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 17, 1940	27.17	7,580	1948	July 20, 1948	39.39	65,500
1941	June 1, 1941	38.58	51,800	1949	Mar. 31, 1949	32.64	10,500
	June 10, 1941	34.45	17,500		July 24, 1949	35.08	13,200
	Sept. 7, 1941	33.67	15,200	1950	July 11, 1950	32.20	10,300
1942	Nov. 1, 1941	32.02	10,700		July 17, 1950	34.23	12,000
	June 25, 1942	34.46	13,600	1951	May 2, 1951	35.10	13,200
	Sept. 6, 1942	32.90	11,700		June 24, 1951	34.24	12,200
					June 30, 1951	38.31	46,400
1943	Oct. 4, 1942	30.44	9,220		July 4, 1951	32.49	10,500
	Dec. 27, 1942	30.29	9,140		July 12, 1951	41.25	130,000
	May 19, 1943	37.41	26,700		Sept. 6, 1951	36.70	22,100
	May 24, 1943	34.53	13,300	1952	Mar. 10, 1952	31.09	9,310
	June 23, 1943	38.10	36,900		Apr. 1, 1953	16.07	1,870
1944	Apr. 11, 1944	37.06	30,000	1953	Apr. 27, 1954	28.68	7,700
	Apr. 23, 1944	37.89	40,100	1954	May 26, 1955	27.95	6,470
1945	Dec. 5, 1944	36.33	18,900				
	Mar. 25, 1945	37.23	27,800	1955	May 31, 1956	30.86	7,500
	Apr. 11, 1945	30.88	10,300				
	Apr. 16, 1945	39.45	67,000	1956	May 17, 1957	38.50	43,500
	Apr. 26, 1945	31.10	9,490		May 30, 1957	34.03	11,900
	Sept. 29, 1945	34.20	12,000		June 2, 1957	35.77	14,200
1946	Oct. 1, 1945	36.00	16,600		June 13, 1957	37.14	22,900
	Apr. 23, 1946	31.15	10,600	1958	Mar. 9, 1958	33.30	10,300
1947	Mar. 13, 1947	34.20	12,000		Mar. 24, 1958	33.49	10,500
	Apr. 5, 1947	33.68	11,500		July 17, 1958	38.30	29,000
	Apr. 11, 1947	31.20	9,270				
	Apr. 13, 1947	36.00	16,600				

1665. Verdigris River near Altoona, Kans.

Location.--Lat 37°29', long 95°41', in SW $\frac{1}{4}$ sec.29, T.29 S., R.16 E., at highway bridge $2\frac{1}{2}$ miles southwest of Altoona, $2\frac{1}{2}$ miles downstream from Big Cedar Creek, 6 miles upstream from Chetopa Creek, and at mile 227.9.

Drainage area.--1,138 sq mi.

Gage.--Nonrecording prior to Sept. 8, 1944; recording thereafter. Datum of gage is 780.18 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur. Relation affected by rate of change in stage.

Bankfull stage.--23 ft.

Historical data.--Flood in 1904 was a few inches higher than that in June 1923, according to the Altoona Tribune of June 14, 1923.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 23, 1939	6.22	1,530	1947	Apr. 6, 1947	24.08	12,400
1940	Apr. 18, 1940	21.36	10,300		Apr. 15, 1947	25.10	15,800
	Sept. 5, 1940	21.20	9,970		May 21, 1947	a22.71	9,780
1941	Apr. 15, 1941	24.81	14,400	1948	July 22, 1948	29.20	34,300
	June 2, 1941	27.90	35,700	1949	Feb. 13, 1949	22.85	10,000
	June 11, 1941	24.10	13,400		July 25, 1949	22.75	10,000
	Sept. 9, 1941	24.46	14,400	1950	July 19, 1950	25.04	14,800
1942	Oct. 1, 1941	20.70	9,120	1951	May 3, 1951	22.64	9,540
	Oct. 27, 1941	20.5	9,000		June 25, 1951	25.54	16,800
	Nov. 2, 1941	22.19	10,100		July 1, 1951	29.27	51,600
	June 27, 1942	22.18	10,100		July 12, 1951	31.09	71,000
	Sept. 7, 1942	22.33	10,200		Sept. 8, 1951	24.86	13,900
1943	May 19, 1943	28.35	41,000		Sept. 15, 1951	23.50	10,500
	May 26, 1943	23.77	12,800	1952	Mar. 12, 1952	21.84	8,510
	June 24, 1943	26.65	26,500	1953	Apr. 2, 1953	6.79	1,520
1944	Mar. 18, 1944	24.56	15,700	1954	May 2, 1954	24.97	14,300
	Apr. 12, 1944	26.70	27,200	1955	May 27, 1955	19.06	6,050
	Apr. 24, 1944	27.70	34,200	1956	June 1, 1956	17.06	4,920
	May 2, 1944	22.59	10,600	1957	May 17, 1957	24.88	13,900
1945	Oct. 4, 1944	22.20	10,200		May 19, 1957	26.56	26,000
	Dec. 7, 1944	a24.92	16,200		June 1, 1957	26.88	28,700
	Mar. 26, 1945	25.46	20,000		June 15, 1957	24.90	13,900
	Apr. 17, 1945	29.50	54,500				
	July 2, 1945	a23.20	9,000				
	Sept. 25, 1945	a24.01	9,860				
	Sept. 30, 1945	25.32	19,300				
1946	Apr. 24, 1946	21.33	8,440	1958	Mar. 25, 1958	23.73	10,600
1947	Mar. 15, 1947	a22.79	9,000		July 19, 1958	25.76	18,900

a Backwater from return of overbank flow.

1670. Fall River near Eureka, Kans.

Location.--Lat 37°47', long 96°14', on west line sec.17, T.26 S., R.11 E., at bridge on State Highway 99, 3 miles southeast of Eureka, 5 miles downstream from Spring Creek, and at mile 76.3.

Drainage area.--336 sq mi.

Gage.--Recording. Datum of gage is 988.50 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 65,000 cfs and by slope-area measurement at 91,800 cfs. Discharges for 1923 and 1944 are based on subsequent stage-discharge relation.

Bankfull stage.--18 ft.

Historical data.--Flood in April 1944 was 1.4 ft lower than that in 1923 at bridge 6 miles upstream, from information by State Highway Commission; the same relative difference has been estimated at the gage site.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	1923	27.1	a70,000	1951	June 29, 1951	29.60	91,800
1944	April 1944	25.7	a58,000		July 3, 1951	19.92	20,200
					July 11, 1951	23.43	41,100
1947	Apr. 13, 1947	16.80	11,900		July 23, 1951	15.64	10,400
					Sept. 12, 1951	17.50	13,200
1948	July 17, 1948	17.26	12,800	1952	Mar. 10, 1952	14.65	9,840
	July 19, 1948	17.02	12,300		Apr. 22, 1952	14.32	9,570
	July 22, 1948	16.00	10,800				
1949	Jan. 15, 1949	16.52	11,500	1953	May 16, 1953	2.40	47
	Jan. 23, 1949	14.58	9,350	1954	Apr. 27, 1954	5.90	860
	July 22, 1949	15.92	10,700	1955	May 25, 1955	5.45	1,960
1950	June 3, 1950	14.86	9,640	1956	Oct. 2, 1955	14.35	9,660
	July 16, 1950	14.62	9,350				
	July 31, 1950	19.92	20,200	1957	May 16, 1957	27.10	67,200
1951	May 1, 1951	17.68	13,600		June 13, 1957	20.00	20,700
	May 16, 1951	15.85	10,600				
	June 23, 1951	18.78	16,300	1958	Mar. 29, 1958	11.67	7,230

a Annual peak only.

1675. Otter Creek at Climax, Kans.

Location.--Lat 37°42'30", long 96°13'30", in SW $\frac{1}{4}$ sec.8, T.27 S., R.11 E., at bridge on State Highway 99, half a mile south of Climax, 5 $\frac{1}{4}$ miles upstream from mouth, and 5 $\frac{1}{2}$ miles downstream from South Branch Otter Creek.

Drainage area.--129 sq mi.

Gage.--Recording. Datum of gage is 977.76 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected at times since Apr. 20, 1949, by backwater from Fall River Reservoir.

Bankfull stage.--20 ft.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges of Otter Creek at Climax, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Mar. 12, 1947	14.57	5,310	1951	Sept. 12, 1951	17.58	7,290
	Apr. 4, 1947	22.60	11,700	1952	Mar. 10, 1952	12.77	4,200
	Apr. 10, 1947	17.84	7,430				
	Apr. 12, 1947	20.79	9,610	1953	May 18, 1953	3.66	148
1948	July 15, 1948	14.20	5,050	1954	May 24, 1954	6.24	866
	July 17, 1948	20.35	9,300				
	July 22, 1948	18.07	7,640	1955	June 26, 1955	8.80	1,820
1949	Mar. 30, 1949	18.28	7,780	1956	May 31, 1956	5.78	593
1950	June 3, 1950	18.69	8,060	1957	May 16, 1957	14.57	5,310
	July 28, 1950	15.25	5,700		June 1, 1957	20.36	9,300
	July 31, 1950	14.28	5,130		June 13, 1957	15.70	6,020
1951	May 1, 1951	19.02	8,270		June 27, 1957	16.50	6,540
	June 23, 1951	23.15	13,300	1958	Mar. 23, 1958	17.15	6,900
	June 30, 1951	23.73	15,400				
	July 3, 1951	20.88	9,680				
	July 13, 1951	22.00	10,700				
	Sept. 9, 1951	19.85	8,840		Sept. 16, 1958	21.67	10,400

1685. Fall River near Fall River, Kans.
(Published as "at Fall River" 1904-5)

Location.--Lat 37°38', long 96°03', in NW $\frac{1}{4}$ sec. 2, T. 28 S., R. 12 E., at highway bridge 0.3 mile downstream from Fall River Dam, 2.5 miles upstream from Salt Creek, 3 miles northwest of town of Fall River, and at mile 53.9.

Drainage area.--585 sq mi.

Gage.--Nonrecording prior to Aug. 26, 1946; recording thereafter. Prior to Sept. 30, 1906, at site 4.7 miles downstream at datum 21.6 ft lower. May 5, 1939, to June 12, 1946, at present site and datum. June 13, 1946, to Sept. 30, 1957, at site 3.1 miles downstream at datum 12.79 ft lower. Datum of present gage is 898.44 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements since 1939. Discharge for flood in June 1923 based on subsequent relation at 1939-46 site, and is approximate. Relation affected at times by backwater from Salt Creek. Shifts in relation occur.

Bankfull stage.--26 ft.

Historical data.--Flood in 1869 reached a stage of 35.6 ft based on a description in Fall River News, June 17, 1904, which states "Friday (June 10, 1904) the river was higher than ever known before. It was 15 inches higher than a week before (June 4, 1904) when it reached as high a point as had been observed by the oldest inhabitants." Jesse McDaniel, gage reader, reports a river stage of 36.8 ft on June 10, 1904, as being highest since 1869 flood.

Flood in 1898 reached a stage of 35.5 ft according to Jesse McDaniel, when he recorded the same stage on June 4, 1904.

Flood in June 1923 reached a stage of 32.57 ft, from floodmark, from information by Corps of Engineers.

Remarks.--Records after 1906 furnished by Corps of Engineers. Flow completely regulated since Apr. 20, 1949, by Fall River Reservoir, 3.4 miles upstream (capacity 263,000 acre-ft). Only annual peaks are shown after 1949. Base for partial-duration series, 8,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Fall River near Fall River, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	1869	35.6	-	1945	Dec. 5, 1944	21.05	18,800
1898	1898	35.5	-		Mar. 25, 1945	d25.40	28,200
1904	June 16, 1904	39.0	-		Apr. 16, 1945	31.15	45,600
1905	Sept. 18, 1905	26.5	-		Apr. 26, 1945	16.1	8,870
1906	Aug. 6, 1906	20.0	-		Sept. 30, 1945	d24.05	20,500
1923	June 1923	a32.57	b48,000	1946	Mar. 23, 1946	11.64	4,530
1939	May 25, 1939	10.75	c4,150	1947	Mar. 13, 1947	20.38	10,000
1940	Apr. 17, 1940	16.07	8,960		Apr. 5, 1947	23.80	13,600
1941	June 1, 1941	19.47	13,600		Apr. 10, 1947	20.88	10,500
	June 9, 1941	17.60	11,200		Apr. 13, 1957	27.17	18,300
	Sept. 7, 1941	16.05	9,320	1948	July 11, 1948	21.38	11,000
	Sept. 30, 1941	17.2	10,700		July 17, 1948	24.55	14,600
1942	Oct. 26, 1941	14.75	8,420		July 22, 1948	21.84	11,400
	Oct. 31, 1941	16.45	10,100	1949	Mar. 30, 1949	17.32	7,430
	Apr. 28, 1942	22.00	21,600	1950	Aug. 4, 1950	13.70	6,000
	Sept. 4, 1942	18.75	13,900	1951	July 8, 1951	19.87	10,600
1943	Dec. 27, 1942	18.10	11,800	1952	Apr. 24, 1952	10.62	5,030
	May 19, 1943	28.00	26,900	1953	Aug. 16, 1953	3.10	59
	May 24, 1943	15.25	8,820	1954	May 2, 1954	3.48	96
	June 23, 1943	21.70	16,400	1955	May 26, 1955	5.04	896
1944	May 18, 1944	24.75	28,300	1956	May 31, 1956	4.03	290
	Mar. 22, 1944	18.9	14,000	1957	June 8, 1957	17.94	8,540
	Apr. 10, 1944	25.90	31,200	1958	Mar. 27, 1958	14.23	6,740
	Apr. 23, 1944	29.74	41,500				
	May 1, 1944	19.15	14,600				

a Site and datum of 1939-46.

b Annual peak only.

c Maximum May 5 to Sept. 30, 1939; probably maximum for year.

d Backwater from Salt Creek.

1695. Fall River at Fredonia, Kans.

Location.--Lat 37°30'30", long 95°50'00", in NW $\frac{1}{4}$ sec.24, T.29 S., R.14 E., at bridge on State Highway 96, three-quarters of a mile upstream from Clear Creek, 1 mile downstream from Salt Creek, 1 mile south of Fredonia, and at mile 25.3.

Drainage area.--827 sq mi.

Gage.--Nonrecording prior to Dec. 20, 1949; recording thereafter. Datum of gage is 819.09 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur. Peak discharges prior to 1939 are based on a subsequent stage-discharge relation and are approximate.

Historical data.--Flood in 1904 was 8 inches lower than that of June 16-17, 1923, according to the Fredonia Daily Herald June 18, 1923, which states: "Highwater mark of 1904 is passed. Waters highest ever known since county has been settled. (Wilson County was organized in 1867). Jim Delaney, west of town, has kept a flood record by marking the height of the water on the bridge near his home. The water this time was 8 inches higher than ever before."

Flood of June 16-17, 1923, was 1 ft lower than that of Apr. 19, 1927, according to the Fredonia Daily Herald Apr. 20, 1927, which states: "Water levels reached one foot higher than in 1923," and the Independence Daily Reporter Apr. 20, 1927, which states: "Fredonia had the highest water in its history when Fall River went into the city waterworks, being a foot higher than any previous record."

Flood of Apr. 19, 1927, was about 14 inches lower than that of Apr. 16, 1945, according to the Fredonia Daily Herald Apr. 18, 1945, which states: "Mr. Sierman stated that to his knowledge this was the worst flood since 1927."

Flood of Oct. 2, 1927, was about 13 inches lower than that of Apr. 19, 1927, according to the Fredonia Daily Herald Oct. 3, 1927, which states: "Fall River did not reach its record level by a foot or 14 inches."

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Flow regulated by Fall River Reservoir, 29 miles upstream, since Apr. 20, 1949 (capacity, 263,000 acre-ft). Only annual peaks are shown after 1949. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 1904	33.3	a36,000	1945	July 1, 1945 Sept. 25, 1945	20.20 21.44	10,900 12,000
1923	June 16,17, 1923	34.0	a39,500	1946	Oct. 1, 1945 Apr. 23, 1946	27.73 17.60	19,700 8,740
1927	Apr. 19, 1927	35.0	a44,000	1947	Mar. 14, 1947 Apr. 5, 1947 Apr. 11, 1947 Apr. 14, 1947 May 20, 1947	19.56 23.70 21.42 29.40 18.93	10,400 14,200 12,000 23,100 9,820
1928	Oct. 2, 1927	33.9	a39,000	1948	July 12, 1948 July 18, 1948 July 23, 1948	19.07 26.50 18.29	9,030 16,500 8,370
1939	May 26, 1939	10.63	b3,660	1949	Feb. 13, 1949	19.16	9,120
1940	Apr. 18, 1940	15.40	6,910	1950	Aug. 5, 1950	14.72	5,630
1941	Apr. 15, 1941 June 2, 1941 June 10, 1941	20.00 17.00 19.10	12,600 8,730 11,200	1951	June 30, 1951	27.97	20,200
1942	Apr. 29, 1942 June 21, 1942 June 24, 1942 Sept. 6, 1942	21.00 18.22 17.39 19.95	12,200 9,440 8,710 11,200	1952	Mar. 10, 1952	15.13	6,670
1943	Dec. 27, 1942 May 20, 1943 June 23, 1943	19.10 33.32 25.04	10,000 34,000 16,100	1953	May 18, 1953	4.56	311
1944	Mar. 19, 1944 Mar. 22, 1944 Apr. 11, 1944 Apr. 23, 1944 May 2, 1944	27.68 20.66 30.67 33.29 18.30	20,600 11,900 27,400 38,800 9,600	1954	May 2, 1954	18.04	8,920
1945	Dec. 6, 1944 Mar. 25, 1945 Apr. 16, 1945 June 17, 1945	24.28 28.46 36.17 16.74	14,800 21,200 49,000 8,020	1955	May 26, 1955	13.04	4,500
				1956	May 31, 1956	8.07	1,510
				1957	June 9, 1957	23.70	14,000
				1958	Mar. 23, 1958	19.50	9,780

a Annual peak only.

b Maximum Nov. 18, 1938, to Sept. 30, 1939; probably maximum for year.

1700. Elk River near Elk City, Kans.

Location.--Lat 37°16', long 95°55', in NE $\frac{1}{4}$ sec.18, T.32 S., R.14 E., at county highway bridge, 150 ft downstream from Salt Creek, $\frac{1}{4}$ miles south of Elk City, and at mile 24.7.

Drainage area.--575 sq mi.

Gage.--Nonrecording prior to July 28, 1954; recording thereafter. Datum of gage is 795.80 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and by slope-area measurement at 81,500 cfs. Discharges shown prior to 1939 determined from stage-discharge relation for later period and are approximate. Shifts in relation occur.

Historical data.--Flood in 1869 at Elk City was about 1 ft lower than that of May 16, 1885, according to the Elk City Star of May 23, 1885, which states: "The rise of water in this section (May 16, 1885) beat the flood of '69 by a foot."

Flood of May 16, 1885, at Elk City was 1 ft higher than that of Oct. 2, 1926, according to the Independence Daily Reporter of Apr. 20, 1927, which states: "Elk River at Elk City reached a peak last night lacking but 18 inches of the high record of last fall (Oct. 2, 1926) when the peak was one foot less than the all time record made in 1885."

Flood of Oct. 2, 1927, at Elk City was 2 or 3 inches higher than that of May 16, 1885, according to the Elk City Sun of Oct. 7, 1927, which states: "The highmark (Oct. 2, 1927) at the corner of the gas office was 2 or 3 inches above that of any previous record since this county was settled" (Elk City was established in 1869).

Flood of June 30, 1951, at Elk City was the greatest according to the Elk City Sun of July 6, 1951, which states: "Duck Creek and Elk River at highest mark Saturday (June 30, 1951) in history of Elk City.---The former highwater mark at the gas office corner was exceeded by 6 or 7 inches." This former high-water mark is a chiseled mark about 8 inches above the sidewalk on the northeast cornerstone of the Gas Office building. Local residents mention both 1885 and 1927 as dates for this floodmark but it is apparently for flood of Oct. 2, 1927, which was 2 or 3 inches higher than that of May 16, 1885.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Levees constructed in August 1945 become overtopped at about elevation 25.5 ft. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1869	1869	a28.9	-	1945	Dec. 5, 1944	19.08	13,100
1885	May 16, 1885	a29.9	-		Mar. 25, 1945	21.47	15,500
					Apr. 16, 1945	28.27	39,200
1927	Oct. 2, 1926	a28.9	52,000		July 1, 1945	18.45	12,500
					Sept. 25, 1945	23.68	17,700
1929	Oct. 2, 1927	a30.1	71,000	1946	Oct. 1, 1945	24.09	19,100
1939	May 21, 1939	15.70	b10,200	1947	Apr. 5, 1947	19.21	13,100
1940	June 24, 1940	5.70	2,060		Apr. 10, 1947	17.65	11,500
1941	Apr. 15, 1941	22.00	16,000		Apr. 13, 1947	26.05	26,200
	June 9, 1941	17.50	11,700		May 20, 1947	15.05	9,040
1942	Oct. 26, 1941	17.94	12,000	1948	June 22, 1948	26.16	20,100
	June 21, 1942	18.05	12,100		June 25, 1948	15.88	9,580
	Sept. 4, 1942	18.09	12,200		July 18, 1948	23.41	15,900
					July 23, 1948	21.48	14,200
1943	May 10, 1943	20.13	14,100	1949	Jan. 23, 1949	16.50	10,900
	May 19, 1943	27.60	35,000		Feb. 13, 1949	18.64	13,000
	June 4, 1943	18.7	12,700		Apr. 27, 1949	18.03	12,800
	June 22, 1943	19.04	13,000		May 19, 1949	15.15	9,560
					June 9, 1949	17.00	11,400
1944	Mar. 18, 1944	18.93	13,000		June 26, 1949	20.10	14,600
	Apr. 10, 1944	27.22	32,200	1950	July 19, 1950	12.90	7,320
	Apr. 23, 1944	25.40	18,400				
	Apr. 26, 1944	17.50	11,700	1951	May 2, 1951	15.78	10,100
	May 2, 1944	14.82	9,420		May 22, 1951	15.84	10,100
	Sept. 28, 1944	14.25	9,000		June 24, 1951	15.51	9,780

a Annual peak only.

b Maximum Nov. 9, 1938, to Sept. 30, 1939; probably maximum for year.

Peak stages and discharges of Elk River near Elk City, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1951	June 30, 1951	30.65	81,500	1956	Oct. 2, 1955	7.78	3,200	
	July 10, 1951	15.00	9,310	1957	May 17, 1957	21.70	15,800	
	July 14, 1951	16.20	10,400		May 29, 1957	17.55	11,800	
1952	Mar. 10, 1952	18.00	12,200		June 9, 1957	17.28	11,500	
					June 12, 1957	17.62	11,800	
1953	May 18, 1953	5.00	1,540		June 18, 1957	17.58	11,800	
1954	May 2, 1954	23.45	17,500	1958	Mar. 23, 1958	21.07	14,600	
1955	May 26, 1955	17.72	11,100		Apr. 3, 1958	20.37	15,900	
					May 4, 1958	15.75	9,480	

1705. Verdigris River at Independence, Kans.

Location.--Lat 37°13', long 95°14', in NE $\frac{1}{4}$ sec.32, T.32 S., R.16 E., at bridge on U. S. Highway 160, 2 miles east of Independence, 3.6 miles downstream from Elk River, and at mile 194.3.

Drainage area.--2,892 sq mi.

Gage.--Nonrecording prior to Dec. 25, 1933; recording thereafter. Datum of gage is 716.63 ft above mean sea level, datum of 1929. Apr. 20, 1904, to Sept. 28, 1905, at site three-quarters of a mile upstream at different datum. Nov. 14, 1921, to Sept. 30, 1929, at Myrtle Street bridge three-quarters of a mile upstream at datum 0.87 ft higher. Stages for floods in 1904, 1905, 1907, 1908, 1915, and 1918 adjusted to datum used 1921-29.

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur. Peak discharges shown prior to 1922 are based on a subsequent stage-discharge relation.

Bankfull stage.--36 ft.

Historical data.--Flood in May 1885 reached a stage of about 38.9 ft, on basis of comparison of high-water marks of 1885 and July 8, 1904, in pumphouse of Independence water works, obtained in 1904 from F. N. Gordon, pump engineer.

Flood of Jan. 21, 1907, "----reached the highest mark except that of 1904 which was 18 inches higher," and flood of June 7, 1908, "----was 4 feet 9 inches below the highest, that of July 1904," according to the original notes by J. M. Altoffer, observer for U. S. Weather Bureau in Independence at that time.

Floods of Sept. 18, 1915, and May 18, 1918, reached stages of about 39.6 ft and 36.9 ft, respectively, on basis of comparison with stage of flood of July 8, 1904, from records of Independence City Water Department.

Remarks.--Records computed by Corps of Engineers since Oct. 1, 1951, and reviewed by Geological Survey. Flow regulated by Fall River Reservoir, 75 miles upstream, since Apr. 20, 1949 (capacity, 263,000 acre-ft). Records for station near Liberty considered equivalent. Base for partial-duration series, 14,000 cfs. Only annual peaks are shown prior to 1922 and subsequent to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1885	May 1885	38.9	40,000	1922	May 31, 1922	24.5	15,300	
1904	July 8, 1904	44.4	66,500	1922	July 2, 1922	29.5	20,100	
					July 13, 1922	39.5	34,100	
1905	Sept. 20, 1905	25.4	16,000	1923	May 26, 1923	27.8	18,400	
1907	Jan. 21, 1907	42.9	52,000		June 12, 1923	40.11	35,900	
					June 18, 1923	38.0	30,600	
1908	June 7, 1908	39.6	34,000	1924	Oct. 17, 1923	27.0	17,600	
1915	Sept. 18, 1915	39.6	34,000		June 9, 1924	27.0	17,600	
					Aug. 7, 1924	23.5	14,400	
1918	May 18, 1918	36.9	29,000		Sept. 19, 1924	26.6	17,300	
					1925	Nov. 14, 1924	25.3	16,000
1922	Mar. 14, 1922	37.7	30,000	1926	Nov. 8, 1925	27.5	18,100	
	Apr. 10, 1922	44.41	66,500		Apr. 12, 1926	27.0	17,600	
	May 23, 1922	30.58	21,200					

Peak stages and discharges of Verdigris River at Independence, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Sept. 6, 1926	27.39	18,000	1942	Apr. 10, 1942	29.65	19,600
1927	Oct. 5, 1926	41.6	42,900		Apr. 21, 1942	29.5	19,500
	Apr. 10, 1927	43.8	59,600		Apr. 30, 1942	25.5	15,600
	Apr. 20, 1927	45.24	76,900		June 19, 1942	27.4	17,400
	June 21, 1927	40.5	37,400		June 22, 1942	35.55	26,600
	Aug. 18, 1927	28.2	18,800		June 25, 1942	29.8	19,800
1928	Oct. 3, 1927	46.4	91,000		Sept. 6, 1942	34.5	25,000
	Mar. 18, 1928	26.3	17,000		Sept. 20, 1942	23.75	14,000
	June 10, 1928	35.0	25,900		Sept. 27, 1942	25.48	15,600
	June 20, 1928	37.0	28,900	1943	Dec. 28, 1942	28.43	18,400
1929	Nov. 19, 1928	43.93	60,700		May 7, 1943	31.71	21,700
	Dec. 18, 1928	30.0	20,600		May 11, 1943	36.78	28,600
	Jan. 11, 1929	27.3	17,900		May 19, 1943	47.6	114,000
	Apr. 14, 1929	25.7	16,400		May 26, 1943	27.45	17,400
	Apr. 21, 1929	42.5	48,800		June 5, 1943	29.95	20,000
	May 8, 1929	32.4	23,100		June 25, 1943	39.50	35,400
	May 14, 1929	43.3	54,900	1944	Mar. 20, 1944	38.15	31,600
	May 19, 1929	32.6	23,300		Mar. 23, 1944	27.78	17,800
	June 3, 1929	24.0	14,800		Apr. 11, 1944	43.06	51,400
1930	Apr. 30, 1930	29.1	19,900		Apr. 24, 1944	43.7	56,300
	May 8, 1930	30.29	21,100		May 2, 1944	33.7	23,900
	May 12, 1930	23.9	14,800		Sept. 28, 1944	29.4	19,400
	June 11, 1930	27.0	17,800	1945	Oct. 4, 1944	33.5	23,000
1931	May 20, 1931	29.0	17,600		Dec. 6, 1944	35.5	26,000
	June 13, 1931	29.6	18,200		Mar. 26, 1945	36.45	27,900
1932	Nov. 18, 1931	24.0	15,600		Apr. 17, 1945	47.28	117,000
	Nov. 25, 1931	36.18	26,600		Apr. 29, 1945	29.1	17,900
	June 22, 1932	33.2	25,700		June 18, 1945	25.1	14,300
1933	May 13, 1933	30.25	18,800		July 2, 1945	33.35	22,800
1934	May 16, 1934	24.1	13,900		Sept. 26, 1945	40.15	37,700
1935	May 15, 1935	28.8	19,600	1946	Oct. 1, 2, 1945	41.6	44,800
	May 22, 1935	32.76	23,700		Apr. 24, 1946	24.82	14,000
	May 30, 1935	44.8	68,800	1947	Mar. 14, 1947	28.73	17,500
	June 3, 1935	33.08	24,100		Apr. 7, 1947	35.05	25,200
	June 7, 1935	27.07	17,900		Apr. 14, 1947	41.83	51,600
	June 10, 1935	23.24	14,200		Apr. 26, 1947	30.0	18,800
	June 12, 1935	27.61	18,400		May 17, 1947	25.92	14,900
	June 17, 1935	39.34	34,600		May 22, 1947	32.94	22,200
	June 27, 1935	36.46	28,200	1948	June 23, 1948	38.52	32,500
1936	Nov. 4, 1935	24.72	15,500		June 26, 1948	33.32	22,700
	Nov. 28, 1935	31.53	22,400		July 12, 1948	26.28	15,300
1937	Oct. 10, 1936	35.35	26,300		July 23, 1948	42.28	49,300
	June 10, 1937	33.68	23,900	1949	Nov. 2, 1948	25.25	14,400
	July 20, 1937	29.1	19,100		Jan. 16, 1949	30.15	19,000
1938	May 21, 1938	38.44	32,300		Jan. 24, 1949	29.75	18,600
	May 26, 1938	38.4	32,300		Feb. 14, 1949	35.02	25,200
	June 2, 1938	31.39	21,400		Feb. 28, 1949	25.83	14,800
	June 17, 1938	30.61	20,600		Apr. 28, 1949	25.9	14,900
1939	May 21, 1939	18.90	9,920		June 10, 1949	27.73	16,500
1940	Apr. 19, 1940	24.48	14,700	1950	July 19, 1950	37.18	29,400
1941	Apr. 17, 1941	39.55	35,800	1951	July 1, 1951	46.59	104,000
	June 4, 1941	34.95	25,600	1952	May 11, 1952	30.63	21,800
	June 11, 1941	35.86	27,000	1953	Sept. 4, 1953	8.60	2,440
	Sept. 10, 1941	33.15	23,300	1954	May 3, 1954	36.63	29,100
1942	Oct. 5, 1941	31.8	21,800	1955	May 28, 1955	27.29	17,500
	Oct. 23, 1941	24.0	14,200	1956	June 2, 1956	13.28	5,140
	Oct. 27, 1941	31.2	21,200	1957	June 3, 1957	35.35	27,500
	Nov. 1, 1941	31.85	21,800	1958	Mar. 25, 1958	35.88	27,300

1707. Verdigris River near Liberty, Kans.

Location.--Lat 37°11', long 95°38', in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.33 S., R.16 E., at bridge on county highway, 250 ft downstream from former mill dam, 1 mile downstream from Drum Creek, 2 $\frac{1}{2}$ miles northwest of Liberty, and 4 $\frac{1}{2}$ miles southeast of Independence.

Drainage area.--3,023 sq mi.

Gage.--Nonrecording. Altitude of gage is 713 ft (from flood-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs and extended to 48,000 cfs on basis of records for Independence.

Remarks.--Records for station at Independence considered equivalent. Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	Sept. 11, 1895	36.3	440,600	1900	July 1, 1900	27.7	24,200
					Sept. 30, 1900	-	37,000
1896	Dec. 19, 1895	24.8	20,500				
	Dec. 25, 1895	30.1	27,400	1901	Nov. 2, 1900	28.0	24,600
	May 24, 1896	24.5	20,100		Apr. 13, 1901	21.3	16,300
	June 9, 1896	22.0	17,100				
1897	Mar. 5, 1897	23.0	18,300	1902	May 24, 1902	29.5	26,600
	Apr. 29, 1897	29.6	26,700		June 7, 1902	33.37	33,000
					Sept. 26, 1902	22.0	17,100
1898	May 5, 1898	33.5	32,700	1903	Feb. 28, 1903	26.7	22,900
					Mar. 8, 1903	25.0	20,700
1899	June 12, 1899	25.5	21,400		Apr. 4, 1903	24.5	20,100
	July 5, 1899	26.7	22,900		May 12, 1903	24.7	20,300
	July 9, 1899	30.45	29,900		May 24, 1903	37.5	48,000
1900	May 18, 1900	22.7	17,900		May 31, 1903	29.6	26,700

a Annual peak only. Maximum Aug. 2 to Sept. 30; probably maximum for year.

1710. Verdigris River near Lenapah, Okla.

Location.--Lat 36°51', long 95°35', at center of sec.3, T.27 N., R.16 E., near right bank on downstream side of pier of county highway bridge, 2 $\frac{1}{4}$ miles east of Lenapah, 4 $\frac{1}{2}$ miles upstream from Cedar Creek, and at mile 144.6.

Drainage area.--3,639 sq mi.

Gage.--Recording. Datum of gage is 644.89 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 105,000 cfs and extended above.

Bankfull stage.--30 ft.

Remarks.--Some regulation by Fall River Reservoir since Apr. 20, 1949 (capacity, 263,000 acre-ft). Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 23,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Verdigris River near Lenapah, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 21, 1939	19.88	17,600	1947	Apr. 8, 1947	25.62	24,100
1940	Apr. 19, 1940	18.25	15,000		Apr. 16, 1947	35.88	51,900
1941	Apr. 19, 1941	33.66	39,300	1948	June 23, 1948	35.97	45,700
	June 5, 1941	26.03	26,700		July 25, 1948	35.23	41,500
	June 10, 1941	32.02	36,400	1949	Jan. 16, 1949	27.53	25,600
	Sept. 10, 1941	29.40	32,100		Jan. 24, 1949	26.00	23,500
1942	Oct. 3, 1941	32.34	35,100		Feb. 15, 1949	27.30	25,300
	Oct. 5, 1941	31.90	34,400	1950	July 21, 1950	31.02	31,200
	Oct. 31, 1941	32.28	35,100	1951	July 3, 1951	38.66	94,800
	Apr. 7, 1942	26.43	25,200		July 15, 1951	37.36	68,900
	Apr. 10, 1942	27.12	26,300	1952	Mar. 12, 1952	23.52	20,300
	Apr. 20, 1942	25.43	23,700	1953	May 13, 1953	10.66	5,660
	Apr. 22, 1942	28.61	28,700	1954	May 4, 1954	27.90	26,100
	Sept. 7, 1942	25.74	24,200	1955	May 29, 1955	24.88	21,800
1943	May 11, 1943	34.40	38,700	1956	Oct. 3, 1955	21.72	16,800
	May 20, 1943	40.44	137,000	1957	May 19, 1957	29.34	28,300
	June 27, 1943	29.92	28,700		May 22, 1957	26.62	24,100
1944	Mar. 22, 1944	28.88	27,600		May 26, 1957	29.60	28,800
	Apr. 12, 1944	36.87	64,300		June 4, 1957	27.38	25,300
	Apr. 26, 1944	36.09	53,500		June 10, 1957	26.14	23,400
	May 2, 1944	27.94	26,000		June 15, 1957	31.22	31,500
	Sept. 29, 1944	26.45	23,900	1958	Mar. 26, 1958	27.80	25,900
1945	Oct. 5, 1944	30.55	30,600				
	Dec. 8, 1944	27.05	24,700				
	Mar. 28, 1945	27.44	26,800				
	Apr. 18, 1945	38.50	91,100				
1946	Oct. 3, 1945	36.03	50,700				
	Jan. 6, 1946	26.38	25,300				

1715. Verdigris River near Sageeyah, Okla.

Location.--Lat 36°23', long 95°40', in SW¹/₄ sec. 13, T.22 N., R.15 E., at Missouri Pacific Railroad Co. bridge, 1¹/₄ miles downstream from Sweetwater Creek, 1¹/₂ miles northwest of Sageeyah, 5.4 miles upstream from Caney River, and at mile 83.7.

Drainage area.--4,402 sq mi.

Gage.--Nonrecording prior to Feb. 10, 1939; recording thereafter. Datum of gage is 550.97 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--35 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 24,000 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 1904	44.8	-	1932	Nov. 27, 1931	33.3	-
1909	October 1908	43.4	-	1933	May 15, 1933	33.1	-
1922	April 1922	43.2	-	1934	Sept. 15, 1934	22.7	-
1927	April 1927	43.8	-	1935	June 6, 1935	40.0	-
1928	June 24, 1928	37.0	-	1936	Sept. 29, 1936	29.0	-
1929	Apr. 26, 1929	40.4	-	1937	Oct. 11, 1936	35.8	-
1930	May 2, 1930	35.3	-	1938	Mar. 31, 1938	30.4	25,600
1931	June 14, 1931	21.4	-		May 28, 1938	42.1	34,600

Note.--Due to effect of variable slope, peak stage often occurs at different time than peak discharge.

Peak stages and discharges of Verdigris River near Sageeay, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 13, 1939	23.00	17,700	1943	May 11, 1943	42.73	48,300
1940	Apr. 20, 1940	17.90	12,900		May 21, 1943	51.54	138,000
1941	Apr. 21, 1941	40.45	41,700		June 6, 1943	30.18	24,400
	June 12, 1941	39.60	32,800	1944	June 28, 1943	31.53	27,700
	Sept. 11, 1941	34.47	30,000		Mar. 23, 1944	30.95	27,000
1942	Oct. 7, 1941	42.18	40,300		Apr. 15, 1944	43.28	59,100
	Oct. 24, 1941	31.73	24,100	1945	Apr. 30, 1944	38.65	41,000
	Nov. 1, 1941	42.80	46,200		Oct. 7, 1944	36.78	31,300
	Apr. 8, 1942	32.51	26,600		Dec. 9, 1944	32.95	25,000
	Apr. 11, 1942	35.22	25,400		Mar. 16, 1945	31.67	24,300
	Apr. 21, 1942	36.60	29,900		Mar. 29, 1945	33.01	25,700
	June 24, 1942	38.15	31,300		Apr. 20, 1945	44.66	73,000
					July 1, 1945	33.55	31,500

Note.--Due to effect of variable slope, peak stage often occurs at different time than peak discharge.

1720. Caney River near Elgin, Kans.

Location.--Lat 37°00', long 96°19', in SE $\frac{1}{4}$ sec.16, T.35 S., R.10 E., at highway bridge 2 miles west of Elgin and at mile 117.8.

Drainage area.--445 sq mi.

Gage.--Recording. Datum of gage is 763.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs. Shifts in relation occur.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 21, 1939	6.39	4,280	1945	Mar. 29, 1945	9.55	7,770
1940	June 10, 1940	4.10	2,020		Apr. 16, 1945	21.32	20,700
1941	Apr. 15, 1941	14.50	13,600		Apr. 24, 1945	9.03	7,110
	June 9, 1941	15.38	14,700		May 9, 1945	9.00	7,110
1942	Oct. 26, 1941	13.40	12,200		July 1, 1945	12.18	10,600
	Oct. 31, 1941	13.82	12,700		Sept. 24, 1945	16.88	15,800
	Apr. 9, 1942	8.83	6,890		Sept. 28, 1945	19.53	18,700
	Apr. 19, 1942	14.77	14,000		Sept. 30, 1945	25.05	26,100
	June 21, 1942	16.02	15,500	1946	Mar. 23, 1946	7.55	5,580
	Sept. 4, 1942	14.54	13,600	1947	Apr. 5, 1947	10.14	7,770
	Sept. 19, 1942	10.11	8,320		Apr. 10, 1947	12.45	10,300
	Sept. 26, 1942	8.98	7,110		Apr. 13, 1947	21.33	20,700
1943	May 10, 1943	14.85	14,000		May 16, 1947	16.68	15,200
	May 19, 1943	24.51	29,000		May 20, 1947	9.97	7,550
1944	Mar. 22, 1944	8.53	6,560	1948	May 10, 1948	12.13	9,000
	Apr. 10, 1944	29.80	35,500		June 22, 1948	12.97	9,990
	Apr. 19, 1944	9.50	7,660		June 26, 1948	15.13	12,500
	Apr. 23, 1944	17.67	17,700		July 11, 1948	9.70	6,600
	Apr. 26, 1944	8.55	6,670		July 16, 1948	14.88	12,300
	Apr. 29, 1944	9.58	7,770	1949	Jan. 16, 1949	10.33	7,220
	Sept. 28, 1944	17.85	17,800		Jan. 23, 1949	12.95	9,990
1945	Oct. 2, 1944	16.05	14,800		Feb. 13, 1949	12.69	9,660
	Dec. 5, 1944	18.96	18,100		Feb. 27, 1949	9.48	6,470
	Mar. 24, 1945	23.52	23,700		Mar. 30, 1949	9.06	6,100
					Apr. 27, 1949	9.14	6,100
					May 8, 1949	11.31	8,190

a Maximum May 5 to Sept. 30, 1939; probably maximum for year.

Peak stages and discharges of Caney River near Elgin, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Sept. 18, 1949	17.10	15,000	1954	May 1, 1954	17.80	16,300
1950	June 3, 1950	13.54	10,600	1955	Oct. 12, 1954	9.80	6,990
	July 16, 1950	23.28	23,400		May 26, 1955	17.80	16,300
	July 31, 1950	17.26	15,300	1956	June 23, 1956	5.30	2,720
	Aug. 5, 1950	17.84	15,900	1957	Apr. 23, 1957	9.76	7,210
	Aug. 17, 1950	16.33	14,000		May 16, 1957	14.50	12,100
1951	May 1, 1951	19.73	19,000		May 22, 1957	17.02	15,400
	May 22, 1951	9.60	6,560		May 25, 1957	21.00	22,000
	June 9, 1951	14.32	11,600		June 12, 1957	26.40	32,500
	June 24, 1951	14.88	12,400		June 18, 1957	17.63	16,300
	June 30, 1951	26.22	30,000		June 27, 1957	10.49	7,880
	July 13, 1951	24.60	27,000	1958	Mar. 23, 1958	13.05	9,880
	Sept. 24, 1951	17.16	15,500		Apr. 3, 1958	19.29	17,900
1952	Mar. 10, 1952	15.76	13,500		May 4, 1958	11.32	8,080
1953	May 16, 1953	4.82	2,240				

1730. Caney River near Hulah, Okla.

Location.--Lat 36°56', long 96°05', in NW $\frac{1}{4}$ sec. 12, T. 28 N., R. 11 E., 1,000 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 0.9 mile downstream from Hulah Dam, 1 $\frac{1}{2}$ miles upstream from Opossum Creek, 2 $\frac{1}{2}$ miles west of Hulah, and at mile 95.8.

Drainage area.--736 sq mi.

Gage.--Nonrecording prior to Feb. 18, 1939; recording thereafter. Prior to Oct. 1, 1948, at site 0.8 mile upstream at datum 3.00 ft higher. Datum of present gage is 681.96 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs and extended above.

Bankfull stage.--34 ft.

Remarks.--Flow completely regulated by Hulah Reservoir since February 1950 (capacity, 295,100 acre-ft). Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs. Only annual peaks are shown subsequent to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	-	40.2	-	1942	Sept. 26, 1942	27.70	6,280
1938	Mar. 28, 1938	32.70	10,500	1943	May 10, 1943	37.10	16,800
	May 20, 1938	35.90	15,100		May 20, 1943	38.52	32,600
	May 23, 1938	35.80	14,900		June 10, 1943	28.40	6,580
	June 1, 1938	27.40	6,880	1944	Apr. 10, 1944	39.45	51,000
	June 7, 1938	30.60	8,600		Apr. 20, 1944	27.68	6,490
	June 11, 1938	31.50	9,350		Apr. 23, 1944	34.30	11,700
1939	May 22, 1939	21.90	4,700		Apr. 30, 1944	29.50	7,670
1940	June 10, 1940	32.35	10,200		Sept. 28, 1944	34.68	10,200
1941	Apr. 16, 1941	35.42	13,200	1945	Oct. 3, 1944	35.10	11,100
	Apr. 19, 1941	27.92	6,590		Dec. 5, 1944	37.20	17,500
	June 10, 1941	37.46	19,100		Mar. 15, 1945	27.05	6,030
1942	Oct. 23, 1941	31.05	8,530		Mar. 25, 1945	37.80	24,500
	Oct. 27, 1941	31.50	8,920		Apr. 16, 1945	37.95	24,700
	Oct. 31, 1941	30.52	8,030		Apr. 24, 1945	28.07	6,240
	Apr. 10, 1942	32.88	10,600		July 2, 1945	31.07	7,890
	Apr. 20, 1942	36.73	15,300		Sept. 25, 1945	36.50	14,200
	June 21, 1942	36.48	14,800		Sept. 30, 1945	38.58	30,500
	Sept. 5, 1942	31.58	8,530	1946	Mar. 23, 1946	22.80	3,580
	Sept. 9, 1942	28.25	6,490	1947	Apr. 11, 1947	29.52	6,600
	Sept. 19, 1942	27.77	6,320		Apr. 14, 1947	37.46	22,000

Peak stages and discharges of Caney River near Hulah, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 25, 1947	30.66	7,390	1951	July 9, 1951	33.55	7,930
	May 16, 1947	36.20	14,800				
1948	Apr. 25, 1948	28.52	6,020	1952	Mar. 14, 1952	26.30	4,670
	May 10, 1948	34.04	10,200				
	May 22, 1948	34.52	10,800	1953	May 19, 1953	17.78	1,870
	June 26, 1948	32.06	7,880				
	July 17, 1948	34.90	11,500	1954	May 6, 1954	24.55	4,350
	Aug. 12, 1948	30.03	6,410				
1949	Jan. 16, 1949	31.02	5,860	1955	June 1, 1955	25.18	4,540
	Jan. 24, 1949	36.20	9,890				
	Feb. 13, 1949	33.03	7,040	1956	Oct. 7, 1955	18.55	2,300
	May 19, 1949	31.72	6,240				
	Sept. 19, 1949	34.90	8,640	1957	June 27, 1957	33.92	9,240
1950	July 19, 1950	39.24	17,200	1958	Mar. 28, 1958	28.50	6,400

1740. Caney Creek near Copan, Okla.

Location.--Lat 36°58'15", long 95°56'05", on south line of sec.19, T.29 N., R.13 E., at downstream side of right pier of highway bridge, 500 ft downstream from The Atchison, Topeka, and Santa Fe Railway Co. bridge, 3½ miles upstream from Cotton Creek, 5 miles north of Copan, and at mile 18.9.

Drainage area.--424 sq mi.

Gage.--Nonrecording prior to Sept. 12, 1947; recording thereafter. Prior to May 26, 1944, at site 500 ft upstream at present datum. Datum of present gage is 690.03 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Apr. 10, 1944	30.58	36,400	1950	July 19, 1950	27.38	16,100
	Apr. 20, 1944	23.92	5,960		July 30, 1950	24.65	5,480
	Apr. 30, 1944	23.98	6,140		Sept. 22, 1950	24.30	5,080
	Sept. 29, 1944	24.01	6,140	1951	May 2, 1951	24.97	7,770
1945	Oct. 4, 1944	25.68	11,900		June 30, 1951	29.76	36,300
	Dec. 6, 1944	25.57	11,400		July 14, 1951	25.79	10,700
	Mar. 25, 1945	24.10	6,330	1952	Mar. 11, 1952	25.20	8,410
	Apr. 16, 1945	26.28	14,900				
	July 2, 1945	23.70	5,630	1953	May 13, 1953	18.26	2,040
	July 11, 1945	23.72	5,630				
	Sept. 26, 1945	25.49	11,000	1954	May 3, 1954	26.19	10,800
	Sept. 29, 1945	25.46	11,000				
1946	Oct. 1, 1945	25.94	12,900	1955	May 27, 1955	24.71	6,120
1947	Apr. 14, 1947	25.69	8,350	1956	Oct. 3, 1955	21.09	2,630
	Apr. 26, 1947	24.55	5,480				
	May 17, 1947	25.20	6,800	1957	May 2, 1957	24.10	5,100
1948	June 23, 1948	26.68	12,200		May 18, 1957	25.60	9,000
	June 27, 1948	25.44	7,390		May 23, 1957	25.09	7,200
	July 18, 1948	26.54	11,400		May 26, 1957	25.75	9,900
	Aug. 13, 1948	25.79	8,690		June 2, 1957	24.10	5,100
					June 13, 1957	26.81	15,600
1949	Jan. 24, 1949	25.30	7,090		June 19, 1957	25.50	8,600
	Feb. 14, 1949	24.35	5,200	1958	Mar. 10, 1958	24.29	5,360
	May 20, 1949	24.58	5,480		Mar. 24, 1958	25.64	9,000
1950	June 4, 1950	24.85	5,840		Apr. 4, 1958	25.75	9,900

1745. Caney River at Bartlesville, Okla.

Location.--Lat 36°45', long 95°58', in SE¹NE¹ sec.7, T.26 N., R.13 E., near right bank on downstream side of pier of bridge on U. S. Highway 60 at Bartlesville, 0.7 mile downstream from Coon Creek, 3.2 miles upstream from Sand Creek, and at mile 67.0.

Drainage area.--1,465 sq mi; at site 2.5 miles upstream, 1,392 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1949, at site 2.5 miles upstream at datum 0.53 ft higher; recording Oct. 1, 1949, to Sept. 30, 1956. Datum of last used gage is 634.80 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined at present site by current-meter measurements throughout range in stage. Defined at upstream site for within-bank flow only.

Bankfull stage.--29 ft; at site 2.5 miles upstream, 13 ft.

Historical data.--Peaks prior to 1937 are from floodmarks noted by water superintendent and tied in by levels by the Corps of Engineers.

Remarks.--Considerable regulation since February 1950 by Hulah Reservoir (capacity, 295,100 acre-ft) 29.2 miles above station. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs. Only annual peak stages are shown prior to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	May 7, 1918	23.3	-	1948	July 19, 1948	18.30	-
1927	Oct. 3, 1926	a41.80	-	1949	Jan. 25, 1949	14.20	-
1928	Oct. 3, 1927	22.2	-	1950	June 5, 1950	29.25	10,400
1929	Apr. 21, 1929	21.8	-		June 11, 1950	24.80	8,050
1935	June 19, 1935	18.3	-		July 21, 1950	35.62	26,400
1937	Oct. 11, 1936	17.7	-		Aug. 2, 1950	32.98	16,000
1938	May 25, 1938	15.73	-		Aug. 7, 1950	27.32	9,320
1939	May 22, 1939	7.61	-		Aug. 18, 1950	27.60	9,480
1940	June 11, 1940	8.21	-	1951	May 2, 1951	24.32	7,800
1941	June 11, 1941	17.85	-		May 4, 1951	23.92	7,600
1942	Apr. 21, 1942	18.63	-		May 24, 1951	21.74	6,580
1943	May 19, 1943	23.40	-		July 2, 1951	34.44	21,300
1944	Apr. 11, 1944	a41.07	-		July 16, 1951	21.67	6,580
1945	Apr. 17, 1945	19.18	-		Sept. 24, 1951	23.27	7,300
1946	Oct. 2, 1945	21.32	-	1952	Nov. 12, 1951	22.38	6,900
1947	Apr. 15, 1947	18.65	-		Mar. 18, 1952	20.75	6,180
				1953	June 6, 1953	13.93	3,280
				1954	May 2, 1954	27.20	7,300
					May 4, 1954	20.48	6,040
				1955	May 26, 1955	24.15	6,550
				1956	Oct. 7, 1955	11.76	2,580

a Last used site and datum.

1755. Caney River near Ramona, Okla.
(Published as "near Collinsville" October 1935 to February 1939)

Location.--Lat 36°30'30", long 95°50'30", in NE $\frac{1}{4}$ sec.5, T.23 N., R.14 E., near right bank on downstream side of pier of county highway bridge, 1 mile upstream from Buck Creek, $2\frac{1}{4}$ miles downstream from Double Creek, $4\frac{1}{2}$ miles southeast of Ramona, and at mile 32.0.

Drainage area.--1,955 sq mi; at former site, 2,046 sq mi.

Gage.--Nonrecording prior to Feb.16, 1946; recording thereafter. Prior to Feb. 28, 1939, at site 16.2 miles downstream at datum 21.41 ft lower. Datum of present gage is 586.43 ft above mean sea level, datum of 1929.

Stage-discharge relation.--At Collinsville site, defined by current-meter measurements below 13,000 cfs and extended to 18,000 cfs on basis of current-meter measurements made in earlier years. At present site, defined by current-meter measurements to maximum discharge for period of record.

Bankfull stage.--Present site, 27 ft; former site, 28 ft.

Remarks.--Some regulation since February 1950 by Hulah Reservoir 64.2 miles upstream (capacity, 295,100 acre-ft). Data for peaks prior to 1935 and for 1943 and 1945 are from files of the Corps of Engineers. Records since 1948 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1937.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	October 1926	39.0	-	1949	Jan. 18, 1949	24.10	7,300
1929	Apr. 24, 1929	33.4	-		Jan. 27, 1949	27.79	9,740
1930	May 4, 5, 1930	32.7	-		Feb. 10, 1949	23.40	6,930
1931	July 21, 1931	20.4	5,000		Feb. 16, 1949	26.50	8,690
1932	Nov. 27, 1931	30.6	-		May 22, 1949	28.00	10,100
1935	June 1935	33.5	29,000	1950	July 6, 1949	19.61	5,160
1936	June 8, 1936	27.85	10,200		July 13, 1949	19.70	5,210
1937	Oct. 13, 1936	32.05	18,000		Sept. 21, 1949	22.77	6,630
	Nov. 4, 1936	22.67	6,460		Apr. 29, 1950	21.35	5,970
	Jan. 30, 1937	21.1	5,500		May 11, 1950	27.80	9,300
	June 12, 1937	26.24	8,800		May 26, 1950	23.50	6,980
	June 17, 1937	22.97	6,640		June 6, 1950	27.37	10,100
	July 22, 1937	22.30	6,220	1951	June 12, 1950	23.60	7,040
1938	Apr. 2, 1938	31.27	13,100		July 23, 1950	29.42	21,800
	May 8, 1938	23.3	6,540		Aug. 4, 1950	29.10	16,700
	May 25, 1938	30.0	11,400		Aug. 20, 1950	26.85	8,870
	June 9, 1938	21.26	5,480	1951	May 3, 1951	24.14	7,300
	June 14, 1938	26.06	8,250		May 25, 1951	21.27	5,930
	Aug. 17, 1938	20.4	5,030		June 22, 1951	20.23	5,430
1943	May 21, 1943	39.8	-		July 5, 1951	29.02	15,700
1945	Oct. 7, 1944	28.88	15,600		July 17, 1951	21.86	6,200
	Mar. 16, 1945	28.14	9,850		July 22, 1951	20.54	5,560
	Mar. 22, 1945	22.10	6,040	1952	Nov. 12, 1951	26.13	8,810
	Mar. 28, 1945	28.45	11,400		Mar. 11, 1952	24.00	7,610
	Apr. 13, 1945	23.26	6,660		Mar. 19, 1952	21.47	6,350
	Apr. 19, 1945	29.28	21,600		Apr. 23, 1952	19.25	5,280
	Apr. 26, 1945	21.87	5,940	1953	May 12, 1953	22.28	7,050
	May 11, 1945	21.25	5,610	1954	May 3, 1954	26.69	9,340
	July 3, 1945	28.50	11,700	1955	May 13, 1955	18.80	5,360
1946	Oct. 3, 1945	30.12	38,500		May 21, 1955	20.75	6,300
	Jan. 6, 1946	27.07	8,850		May 29, 1955	25.50	8,650
	Jan. 11, 1946	20.44	5,260		June 15, 1955	18.42	5,180
	Feb. 20, 1946	22.87	6,450	1956	Oct. 8, 1955	11.54	2,570
1947	Apr. 18, 1947	29.06	17,600	1957	Apr. 22, 1957	22.90	6,600
	Apr. 27, 1947	26.41	8,390		May 2, 1957	26.70	9,730
	May 20, 1947	27.82	9,410		May 14, 1957	19.85	5,860
1948	Apr. 27, 1948	26.02	8,150		May 18, 1957	29.20	14,600
	May 13, 1948	24.90	7,520		May 27, 1957	29.17	14,400
	June 26, 1948	29.30	19,900		June 3, 1957	28.90	12,600
	July 13, 1948	26.65	8,520		June 12, 1957	29.69	36,700
	July 21, 1948	28.94	14,800		June 20, 1957	28.07	11,500
	Aug. 17, 1948	28.44	11,300	1958	June 25, 1957	29.11	16,000
					Mar. 14, 1958	19.25	5,590
					Mar. 24, 1958	22.13	7,000
					Apr. 7, 1958	22.65	7,250
					July 14, 1958	19.06	5,540

1760. Verdigris River near Claremore, Okla.

Location.--Lat 36°18'30", long 95°41'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.21 N., R.15 E., near left bank on downstream side of pier of bridge on State Highway 20, 2.3 miles downstream from Caney River, $\frac{1}{2}$ miles west of Claremore, 12.4 miles upstream from Bird Creek, and at mile 76.0.

Drainage area.--6,534 sq mi.

Gage.--Nonrecording prior to Feb. 24, 1939; recording thereafter. Datum of gage is 538.62 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--38 ft.

Remarks.--Some regulation since April 1949 by Fall River Reservoir on Fall River (capacity, 263,000 acre-ft) and since February 1950 by Hulah Reservoir on Caney River (capacity, 295,100 acre-ft). Records since 1950 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 24,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	46.2	264,200	1946	Oct. 4, 1945	46.98	73,000
1936	Sept. 28, 1936	33.95	29,500		Jan. 7, 1946	38.90	31,800
1937	Oct. 11, 1936	41.20	38,700	1947	Apr. 20, 1947	44.51	53,000
	Nov. 4, 1936	30.10	24,800		Apr. 26, 1947	38.29	32,300
	June 13, 1937	35.30	31,100		May 24, 1947	35.56	28,800
	July 22, 1937	31.70	26,700	1948	June 27, 1948	46.41	61,000
1938	Mar. 31, 1938	38.12	34,600		July 15, 1948	37.91	30,400
	May 29, 1938	42.10	39,900		July 23, 1948	44.80	50,400
1939	May 13, 1939	28.96	23,600		Aug. 15, 1948	36.15	28,600
1940	Apr. 21, 1940	18.20	12,200	1949	Jan. 18, 1949	34.39	26,700
1941	Apr. 22, 1941	44.46	48,200		Jan. 25, 1949	37.78	30,000
	June 14, 1941	44.30	45,100		Feb. 17, 1949	39.03	31,000
	Sept. 12, 1941	38.58	29,400		May 21, 1949	38.58	30,800
1942	Oct. 8, 1941	45.83	52,800		June 10, 1949	31.91	24,400
	Oct. 18, 1941	39.88	31,600	1950	May 11, 1950	31.15	28,400
	Nov. 2, 1941	46.60	64,200		June 4, 1950	33.30	26,000
	Apr. 12, 1942	41.41	34,900		July 23, 1950	40.00	37,200
	Apr. 23, 1942	42.82	38,300		July 30, 1950	30.30	25,200
	June 26, 1942	43.63	41,300		Aug. 4, 1950	32.58	24,700
	Sept. 9, 1942	34.27	26,400	1951	July 6, 1951	46.95	74,900
1943	May 13, 1943	46.55	68,000		July 20, 1951	44.16	51,900
	May 21, 1943	55.05	182,000	1952	Nov. 13, 1951	32.72	26,200
	June 7, 1943	34.86	28,000		Mar. 12, 1952	34.04	27,600
	June 28, 1943	34.31	27,300	1953	May 12, 1953	21.12	14,500
1944	Mar. 16, 1944	34.26	25,800	1954	May 4, 1954	38.12	32,900
	Mar. 23, 1944	34.43	27,400	1955	May 30, 1955	33.32	26,800
	Apr. 13, 1944	47.23	85,200	1956	Oct. 4, 1955	21.47	14,700
	Apr. 30, 1944	41.47	36,600	1957	May 22, 1957	43.96	47,500
1945	Oct. 1, 1944	35.10	28,200		June 5, 1957	41.98	37,900
	Oct. 7, 1944	41.40	36,400		June 15, 1957	46.51	68,500
	Dec. 10, 1944	38.37	32,200		June 25, 1957	38.36	35,800
	Mar. 16, 1945	37.54	30,400	1958	Mar. 27, 1958	33.82	30,800
	Mar. 29, 1945	38.10	32,800		Apr. 6, 1958	30.10	25,800
	Apr. 21, 1945	47.14	81,400				
	July 1, 1945	37.14	30,100				

a Annual peak only.

1765. Bird Creek at Avant, Okla.

Location.--Lat 36°29', long 96°04', in NW $\frac{1}{4}$ sec.7, T.23 N., R.12 E., near left bank on downstream side of pier of county highway bridge at Avant, $1\frac{1}{2}$ miles upstream from Candy Creek and at mile 54.2.

Drainage area.--364 sq mi.

Gage.--Recording. Datum of gage is 651.28 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 17,000 cfs and extended to maximum for period of record.

Bankfull stage.--17 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 1943	29.6	-	1951	June 21, 1951	16.17	11,200
1945	Sept. 30, 1945	21.66	15,600	1951	June 30, 1951	16.14	11,100
1946	May 9, 1946	7.21	6,920	1951	July 13, 1951	13.57	9,650
1947	Oct. 23, 1946	8.09	7,440	1951	Sept. 5, 1951	6.35	6,040
	Nov. 2, 1946	6.85	6,520	1951	Sept. 24, 1951	9.65	7,980
	Apr. 25, 1947	10.32	8,190	1952	Nov. 12, 1951	13.71	9,700
	May 16, 1947	14.97	10,400	1952	Mar. 10, 1952	9.58	7,980
	June 23, 1947	10.18	8,160	1952	May 23, 1952	12.70	9,200
1948	Apr. 25, 1948	17.09	11,800	1953	May 12, 1953	17.15	11,900
	June 22, 1948	11.80	7,890	1954	May 2, 1954	16.72	11,500
	June 26, 1948	20.47	14,500	1955	May 12, 1955	7.80	7,320
	July 11, 1948	12.16	8,950	1955	May 20, 1955	14.24	9,970
	July 15, 1948	13.43	9,550	1955	May 23, 1955	7.70	7,270
	Aug. 14, 1948	9.09	7,830	1955	May 26, 1955	9.66	8,010
1949	Jan. 23, 1949	9.10	7,830	1956	Oct. 5, 1955	3.69	1,320
	May 19, 1949	14.80	10,300	1957	Apr. 21, 1957	11.36	7,630
	May 21, 1949	11.68	8,730	1957	Apr. 23, 1957	8.17	6,810
	July 9, 1949	10.97	8,450	1957	May 17, 1957	23.16	18,700
1950	Apr. 29, 1950	13.37	9,550	1957	May 21, 1957	19.55	15,000
	May 10, 1950	14.84	10,300	1957	May 22, 1957	11.88	8,690
	May 26, 1950	18.77	13,100	1957	May 25, 1957	25.35	21,100
	June 10, 1950	7.82	7,320	1957	June 1, 1957	16.23	11,900
	July 10, 1950	12.10	8,900	1957	June 10, 1957	9.94	7,880
	July 19, 1950	11.98	8,850	1957	June 12, 1957	29.00	25,400
	Aug. 1, 1950	20.28	14,300	1957	June 18, 1957	18.40	14,800
	Aug. 18, 1950	16.44	11,300	1957	June 23, 1957	24.38	21,100
1951	May 1, 1951	13.13	9,400	1958	Mar. 23, 1958	5.25	4,100

a Annual peak only, may have been exceeded in July 1945.

1770. Hominy Creek near Skiatook, Okla.

Location.--Lat 36°21', long 96°07', in SE $\frac{1}{4}$ sec.27, T.22 N., R.11 E., on left bank 50 ft downstream from bridge on State Highway 20, 1 mile upstream from Tall Chief Creek, 6 miles west of Skiatook, and at mile 16.8.

Drainage area.--340 sq mi.

Gage.--Nonrecording prior to May 26, 1945; recording thereafter. Datum of gage is 619.66 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended above on basis of velocity-area studies.

Bankfull stage.--28 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges of Hominy Creek near Skiatook, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 1943	35.0	-	1950	July 11, 1950	31.04	8,800
1944	Apr. 11, 1944	27.41	8,210		Aug. 5, 1950	27.90	5,950
1945	Dec. 5, 1944	26.40	7,430	1951	June 22, 1951	31.30	9,160
	Mar. 15, 1945	28.00	8,690		July 1, 1951	27.28	5,610
	Apr. 15, 1945	26.60	7,220		July 15, 1951	25.95	5,000
	July 2, 1945	25.50	6,240	1952	Nov. 12, 1951	24.35	5,140
1946	Oct. 1, 1945	33.60	12,900	1953	May 3, 1953	24.07	5,000
	Jan. 9, 1946	25.23	5,280	1954	May 2, 1954	25.47	5,640
1947	Apr. 25, 1947	26.65	5,770	1955	May 21, 1955	23.92	4,920
	May 16, 1947	30.64	8,360	1956	Oct. 5, 1955	11.30	1,240
1948	Apr. 26, 1948	26.78	5,360	1957	Apr. 21, 1957	29.80	7,690
	June 22, 1948	32.61	10,800		May 17, 1957	30.48	8,390
	July 16, 1948	31.98	9,400		May 21, 1957	34.42	13,200
1949	May 19, 1949	31.63	9,520		May 25, 1957	32.43	10,600
	May 22, 1949	27.30	5,610		June 2, 1957	30.20	8,090
	May 24, 1949	27.27	5,610		June 13, 1957	31.94	9,970
	July 10, 1949	35.06	14,200		June 24, 1957	33.14	11,500
1950	May 11, 1950	30.26	8,030	1958	Mar. 24, 1958	22.60	3,630
	May 26, 1950	29.93	7,610				

a Maximum peak discharge; maximum discharge during year, 12,800 cfs at 12 p.m. Sept. 30, 1945, stage rising.

1775. Bird Creek near Sperry, Okla.

Location.--Lat 36°17', long 95°57', on south line of sec.20, T.21 N., R.13 E., on downstream side of right pier of county highway bridge, $1\frac{1}{2}$ miles upstream from Delaware Creek, 2.4 miles downstream from Hominy Creek, $2\frac{1}{2}$ miles southeast of Sperry, and at mile 25.0.

Drainage area.--905 sq mi.

Gage.--Recording. Datum of gage is 579.43 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and extended above on basis of current-meter measurement in main-channel during maximum flow and computation of overflow discharge.

Bankfull stage.--21 ft.

Historical data.--According to local residents, flood in 1915 reached a stage similar to that of Oct. 31, 1941.

Remarks.--Records since 1948 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 13, 1939	17.48	10,100	1943	May 10, 1943	30.25	52,100
1940	Sept. 5, 1940	19.53	11,300		May 18, 1943	31.68	86,500
					June 5, 1943	26.68	17,700
1941	Apr. 16, 1941	19.86	11,500	1944	Mar. 16, 1944	23.49	13,500
	June 11, 1941	28.46	23,000		Apr. 11, 1944	28.22	22,000
1942	Oct. 5, 1941	22.79	12,800	1945	Dec. 6, 1944	23.16	13,200
	Oct. 17, 1941	25.77	16,200		Mar. 16, 1945	25.17	15,200
	Oct. 25, 1941	24.19	14,200		Apr. 16, 1945	26.74	17,500
	Oct. 27, 1941	23.08	13,100		July 2, 1945	28.73	25,200
	Oct. 31, 1941	30.14	45,700		Sept. 26, 1945	22.65	11,900
	Apr. 8, 1942	28.56	24,000	1946	Oct. 1, 1945	28.84	24,300
	Apr. 10, 1942	27.22	18,600	1947	Apr. 26, 1947	22.32	11,000
	Apr. 20, 1942	28.93	27,500		May 17, 1947	25.48	14,200
	June 22, 1942	29.31	31,900				
	Sept. 19, 1942	23.28	13,300				

Peak stages and discharges of Bird Creek near Sperry, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	June 23, 1948	27.29	16,600	1954	May 3, 1954	23.10	11,800
	June 27, 1948	23.62	11,400		May 21, 1955	20.40	10,600
	July 17, 1948	24.77	12,400		Oct. 5, 1955	4.70	1,930
1949	May 20, 1949	26.55	15,000	1957	Apr. 22, 1957	21.90	11,200
1950	May 11, 1950	26.65	15,000		May 18, 1957	26.89	15,500
	May 27, 1950	26.10	14,100		May 22, 1957	27.20	17,100
1951	June 23, 1951	25.58	13,400		May 26, 1957	28.46	24,700
	July 1, 1951	23.50	11,300		June 2, 1957	24.83	15,600
1952	Mar. 11, 1952	19.33	8,790		June 13, 1957	29.03	31,400
	May 13, 1953	20.90	9,640		June 19, 1957	22.72	11,800
1953					June 24, 1957	26.35	23,800
				1958	Mar. 24, 1958	15.84	7,180

1780. Bird Creek near Owasso, Okla.

Location.--Lat 36°14'50", long 95°52'00", on east line NE $\frac{1}{4}$ sec.1, T.20 N., R.13 E., on upstream handrail near center of bridge on U. S. Highway 75, half a mile upstream from Ranch Creek, $1\frac{1}{2}$ miles southwest of Owasso, and 14 miles upstream from mouth.

Drainage area.--1,022 sq mi.

Gage.--Nonrecording. Datum of gage is 559.03 ft above mean sea level (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by occasional current-meter measurements but backwater effect from Verdigris River makes high-water record uncertain.

Bankfull stage.--21 ft.

Remarks.--Peak-stage data prior to 1935 furnished by Corps of Engineers. Base for partial-duration series, 11,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Oct. 25, 1908	34.0	-	1932	Nov. 24, 1931	21.0	12,000
1927	Apr. 15, 1927	28.5	-	1935	June 1935	26.2	16,900
1929	Apr. 15, 1929	26.3	17,000	1936	Sept. 27, 1936	17.14	8,490
1930	May 1, 1930	23.7	14,400	1937	Oct. 8, 1936	24.76	15,500
1931	May 4, 1931	19.2	12,200	1938	Mar. 29, 1938	26.2	19,700
					Aug. 17, 1938	21.0	14,500

1786. Verdigris River near Inola, Okla.

Location.--Lat 36°10', long 95°37', near northwest corner of sec.4, T.19 N., R.16 E., near right bank on downstream side of pier of bridge on State Highway 33, 6 miles downstream from Dog Creek, 6 miles west of Inola, and at mile 48.8.

Drainage area.--7,911 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1946; recording thereafter. Datum of gage is 506.87 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Peaks prior to 1945 obtained from rating defined by several discharge measurements in 1943.

Bankfull stage.--42 ft.

Remarks.--Some regulation since April 1949 by Fall River Reservoir (capacity, 253,000 acre-ft) on Fall River and since February 1950 by Hulah Reservoir (capacity, 295,100 acre-ft) on Caney River. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 23,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 5, 1940	30.8	16,300	1947	May 25, 1947	42.39	31,700
1941	Nov. 27, 1940	39.76	27,600	1948	June 27, 1948	52.40	77,000
	Apr. 23, 1941	49.79	49,800		July 25, 1948	49.02	49,000
	June 15, 1941	49.38	47,600		Aug. 16, 1948	42.86	32,500
	Sept. 12, 1941	44.06	34,800	1949	Jan. 19, 1949	39.00	26,700
1942	Oct. 8, 1941	50.83	63,000		Jan. 26, 1949	42.92	32,500
	Oct. 19, 1941	47.32	41,400		Feb. 18, 1949	43.55	33,600
	Nov. 1, 1941	52.00	105,000		May 23, 1949	46.46	38,900
	Apr. 13, 1942	48.18	45,700		June 11, 1949	38.28	25,800
	Apr. 23, 1942	49.22	46,700	1950	May 12, 1950	43.31	32,400
	June 26, 1942	48.82	45,400		May 28, 1950	39.41	26,700
	Sept. 8, 1942	40.27	28,300		June 5, 1950	39.18	28,300
	Sept. 20, 1942	37.41	24,100		July 23, 1950	43.55	34,300
1943	Dec. 30, 1942	37.73	24,500		Aug. 3, 1950	40.72	29,800
	May 12, 1943	51.80	98,000	1951	Feb. 21, 1951	34.43	23,500
	May 21, 1943	54.93	224,000		June 24, 1951	37.97	29,000
	June 7, 1943	41.10	29,600		July 8, 1951	52.32	69,200
1944	Mar. 17, 1944	43.25	33,200	1952	Nov. 14, 1951	39.28	30,200
	Mar. 23, 1944	41.00	29,400		Mar. 12, 1952	40.78	32,400
	Apr. 14, 1944	50.64	57,700	1953	Apr. 24, 1953	32.20	23,000
	May 4, 1944	46.60	39,800	1954	May 5, 1954	43.03	37,100
1945	Oct. 1, 1944	40.77	29,100	1955	May 30, 1955	37.68	29,500
	Oct. 8, 1944	45.40	37,300	1956	Oct. 6, 1955	a25.90	13,600
	Dec. 11, 1944	43.30	33,300	1957	Apr. 24, 1957	39.33	29,800
	Mar. 18, 1945	44.50	35,600		May 2, 1957	35.47	25,900
	Mar. 30, 1945	42.70	32,300		May 25, 1957	51.50	67,000
	Apr. 22, 1945	51.70	94,500		June 16, 1957	52.75	85,900
	July 5, 1945	44.30	35,200	1958	Mar. 15, 1958	33.83	24,900
1946	Oct. 4, 1945	51.65	86,100		Mar. 28, 1958	38.28	31,200
	Jan. 8, 1946	43.94	33,800		Apr. 6, 1958	34.70	26,100
	Feb. 20, 1946	37.10	23,400				
1947	Apr. 11, 1947	43.05	32,800				
	Apr. 22, 1947	48.74	44,400				
	Apr. 28, 1947	45.38	36,800				

a Occurred Oct. 4, affected by backwater.

1795. Neosho River at Council Grove, Kans.

Location.--Lat 38°40', long 96°30', in NW $\frac{1}{4}$ sec.14, T.16 S., R.8 E., at highway Bridge just downstream from city waterplant in north part of Council Grove, 300 ft downstream from Mozier Creek, 1 mile upstream from Elm Creek, and at mile 448.0.

Drainage area.--250 sq mi.

Gage.--Nonrecording prior to June 6, 1940; recording thereafter. Datum of gage is 1,205.63 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 36,000 cfs and by slope-area measurement at 121,000 cfs. Shifts in relation occur.

Bankfull stage.--29 ft.

Historical data.--Floods in 1903 and 1938 reached stages 0.7 and 2.7 ft, respectively, lower than that of July 11, 1951, which reached a stage of 37.97 ft at waterplant, from information by Corps of Engineers. Channel has changed since 1903. Flood in 1938 had a discharge of about 50,000 cfs on basis of subsequent rating. Flood of July 5, 1932, reached a stage of 30.9 ft at site of recording gage (discharge, about 28,500 cfs), from information by Kansas State Board of Agriculture.

Remarks.--Peak discharges not appreciably affected by Channing Creek Reservoir (capacity, 10,000 acre-ft). Records prior to Oct. 1, 1950, computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	-	37.3	-	1947	Mar. 12, 1947	19.04	8,210
1932	July 5, 1932	30.9	a28,500		Apr. 10, 1947	17.95	6,810
					June 6, 1947	18.74	7,790
1938	June 11, 1938	35.3	a50,000	1948	May 2, 1948	23.48	16,500
1939	May 22, 1939	20.10	4,330		July 20, 1948	28.70	29,900
1940	Sept. 5, 1940	21.15	6,330	1949	Jan. 15, 1949	18.46	7,590
1941	June 1, 1941	23.90	11,900		Jan. 23, 1949	b20.96	11,400
	June 9, 1941	24.00	12,100		Feb. 12, 1949	b22.30	7,000
1942	Oct. 20, 1941	37.13	65,900		Feb. 18, 1949	b22.45	7,000
	June 19, 1942	25.80	16,100		May 1, 1949	19.15	8,510
	June 24, 1942	21.73	7,340		May 21, 1949	18.75	7,980
1943	June 10, 1943	20.35	7,340	1950	June 2, 1950	20.31	10,200
	June 18, 1943	28.20	24,400		July 19, 1950	19.82	9,360
	June 22, 1943	21.43	9,050		Aug. 1, 1950	20.14	9,830
	July 2, 1943	19.60	6,080		Aug. 14, 1950	19.01	8,240
1944	Mar. 15, 1944	20.70	7,840	1951	May 1, 1951	26.55	18,600
	Apr. 10, 1944	20.35	7,340		June 7, 1951	28.27	23,000
	Apr. 22, 1944	24.37	17,600		June 15, 1951	18.82	7,250
	Apr. 26, 1944	21.70	10,700		July 11, 1951	35.50	121,000
	May 3, 1944	30.00	33,800		Sept. 4, 1951	27.00	19,700
	June 14, 1944	20.42	7,910	1952	Mar. 10, 1952	16.35	4,850
	Aug. 26, 1944	23.12	12,300	1953	May 27, 1953	9.09	202
1945	Dec. 4, 1944	25.10	19,500	1954	June 16, 1954	13.96	2,720
	Apr. 16, 1945	26.15	22,600	1955	May 26, 1955	17.94	6,480
	June 30, 1945	17.87	6,580	1956	Aug. 9, 1956	17.13	5,250
	July 26, 1945	19.97	9,700	1957	May 16, 1957	22.70	12,300
	Aug. 10, 1945	21.39	12,100		June 28, 1957	18.71	7,350
	Sept. 28, 1945	18.56	7,550	1958	July 11, 1958	18.38	5,360
1946	Jan. 5, 1946	18.06	6,840				
	June 19, 1946	19.18	8,450				

a Annual peak only.

b Backwater from ice.

ARKANSAS RIVER BASIN

1800. Cottonwood River near Marion, Kans.

Location.--Lat 38°21', long 97°04', in SW $\frac{1}{4}$ sec.36, T.19 S., R.3 E., at highway bridge 1.1 miles downstream from South Cottonwood River, 2 miles west of Marion, and at mile 123.9.

Drainage area.--329 sq mi.

Gage.--Nonrecording prior to May 2, 1945; recording thereafter. Datum of gage is 1,289.85 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs and by slope-area measurement at 66,000 cfs.

Bankfull stage.--16 ft.

Remarks.--Records prior to Oct. 1, 1950, computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 28, 1939	8.20	1,820	1949	Jan. 16, 1949	13.32	5,080
1940	Sept. 25, 1940	10.30	2,960		Jan. 23, 1949	14.31	5,620
1941	June 9, 1941	22.00	11,300		Feb. 18, 1949	13.64	5,240
	July 2, 1941	11.83	3,700		May 1, 1949	23.40	12,600
	Sept. 2, 1941	23.48	12,700		May 8, 1949	10.48	3,620
	Sept. 6, 1941	25.38	14,800		May 17, 1949	10.79	3,770
1942	Oct. 7, 1941	12.28	4,000	1950	May 21, 1949	10.22	3,470
	Oct. 20, 1941	25.68	15,200		June 9, 1950	10.50	3,620
	Dec. 23, 1941	10.70	3,060		July 19, 1950	16.55	7,020
	Apr. 25, 1942	13.65	4,860		Aug. 1, 1950	16.26	6,820
	June 25, 1942	12.17	3,940	1951	May 1, 1951	15.18	6,130
	Sept. 4, 1942	14.28	5,260		May 10, 1951	11.48	4,110
1943	Oct. 4, 1942	13.70	4,880		May 17, 1951	22.70	11,900
1944	Mar. 15, 1944	10.55	3,720		May 23, 1951	10.44	3,590
	Mar. 22, 1944	11.78	4,440		June 7, 1951	24.85	14,700
	Apr. 10, 1944	17.14	7,750		June 24, 1951	10.70	3,720
	Apr. 22, 1944	25.14	14,400		June 29, 1951	25.53	16,700
	Apr. 26, 1944	11.74	4,140		July 3, 1951	17.00	7,300
	Apr. 30, 1944	10.80	3,600		July 11, 1951	28.57	66,000
	May 3, 1944	24.25	13,400		July 23, 1951	11.78	4,260
1945	Dec. 5, 1944	17.00	7,360		Sept. 5, 1951	-	6,000
	Apr. 16, 1945	25.7	15,200	1952	Apr. 19, 1952	12.72	4,150
	Sept. 28, 1945	16.23	6,760	1953	May 27, 1953	15.10	5,620
1946	Sept. 7, 1946	8.45	2,470	1954	June 12, 1954	10.60	3,040
1947	Dec. 12, 1946	9.48	3,020	1955	Apr. 13, 1955	9.70	2,640
	Mar. 13, 1947	11.62	4,100	1956	July 6, 1956	3.69	366
	Apr. 10, 1947	18.53	9,250	1957	May 17, 1957	23.91	12,900
1948	May 2, 1948	10.51	3,520		July 28, 1957	13.41	4,560
	June 28, 1948	14.22	5,530	1958	May 4, 1958	18.90	8,640
	July 19, 1948	17.81	7,870		Sept. 17, 1958	10.18	3,030

1805. Cedar Creek near Cedar Point, Kans.

Location.--Lat 38°12', long 96°50', in NE $\frac{1}{4}$ sec.25, T.21 S., R.5 E., at highway bridge 4 miles south of Cedar Point and at mile 9.4.

Drainage area.--110 sq mi.

Gage.--Nonrecording prior to Sept. 27, 1944; recording thereafter. Datum of gage is 1,262.50 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 7,500 cfs and by a combined contracted-opening and flow-over-road measurement at 52,400 cfs.

Bankfull stage.--22 ft.

Historical data.--Flood of July 10, 1929, reached a stage of 24.63 ft from floodmark, in house on left bank 500 ft from gage where flood of June 29, 1951, reached a stage of 25.7 ft, from information obtained by Corps of Engineers in 1938 and from floodmarks in 1951.

Flood of June 29, 1951, about 2 miles downstream from gage, was maximum stage known since 1856, according to Pat Sauble, who settled there in 1856. He reported in 1951 that the flood of July 10, 1929, which was about the same as that in 1951, was about 1 ft higher than the flood in 1876 or 1877, which had been the highest between 1856 and 1929. Flood of June 29, 1951, about 2 miles upstream from the gage was about 0.5 ft higher than that of July 10, 1929, from floodmarks.

Remarks.--Records prior to Oct. 1, 1950, computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Aug. 11, 1939	7.90	1,020	1948	June 23, 1948	16.45	6,940
1940	Apr. 17, 1940	12.60	4,050		July 17, 1948	15.32	6,080
					July 19, 1948	16.63	7,100
1941	June 1, 1941	13.54	4,720	1949	Jan. 15, 1949	14.63	5,550
	June 9, 1941	13.63	4,800		Jan. 23, 1949	12.91	4,280
	Sept. 2, 1941	21.50	13,000				
	Sept. 6, 1941	18.05	8,280	1950	June 2, 1950	12.13	3,690
1942	June 24, 1942	12.05	3,620		July 31, 1950	17.46	7,850
1943	Dec. 26, 1942	13.81	4,950	1951	May 1, 1951	18.20	8,270
					June 29, 1951	23.70	52,400
1944	Mar. 15, 1944	15.65	6,480		July 3, 1951	16.77	7,120
	Mar. 21, 1944	15.10	6,060		July 11, 1951	21.20	11,200
	Apr. 10, 1944	14.46	5,480		Sept. 5, 1951	12.44	3,930
	Apr. 22, 1944	22.50	22,500	1952	Oct. 6, 1951	15.55	6,160
1945	Dec. 4, 1944	17.78	8,100	1953	May 27, 1953	10.63	2,700
	Apr. 15, 1945	19.58	9,760				
	Sept. 28, 1945	18.41	8,680	1954	Mar. 25, 1954	5.95	290
	Sept. 30, 1945	12.66	4,130	1955	Sept. 27, 1955	7.08	746
1946	May 17, 1946	11.33	3,120	1956	Oct. 2, 1955	8.49	1,400
1947	Apr. 10, 1947	15.62	6,580	1957	May 16, 1957	19.42	9,280
	Apr. 13, 1947	13.88	5,060				
	June 18, 1947	14.44	5,500	1958	Mar. 29, 1958	16.21	6,210
	June 25, 1947	12.93	4,260		July 16, 1958	14.45	4,500
	June 27, 1947	18.29	9,170				

ARKANSAS RIVER BASIN

1810. Cottonwood River at Elmdale, Kans.

Location.--Lat 38°22', long 96°38', in NW $\frac{1}{4}$ sec.26, T.19 S., R.7 E., at highway bridge 1 mile east of Elmdale, 1.2 miles upstream from Middle Creek, and at mile 70.8.

Drainage area.--1,045 sq mi.

Gage.--Nonrecording. Datum of gage is 1,165.11 ft above mean sea level, datum of 1929 (levels by Kansas State Board of Agriculture).

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs. Stage-discharge relation affected at times by backwater from Diamond and Middle Creeks.

Bankfull stage.--32 ft.

Remarks.--Base for partial-duration series, 3,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	June 1904	36.7	-	1928	Apr. 6, 1928	21.1	5,790
1923	Nov. 12, 1922	17.8	4,500		Apr. 27, 1928	16.4	3,970
	May 24, 1923	19.0	4,960		June 9, 1928	20.3	5,470
	June 11, 1923	35.5	20,000		June 17, 1928	25.51	7,650
	June 16, 1923	29.2	9,520		July 1, 1928	18.4	4,750
	July 4, 1923	20.5	5,550		Aug. 8, 1928	22.6	4,770
1924	Mar. 29, 1924	14.7	3,350	1929	Nov. 17, 1928	34.17	15,100
	Apr. 30, 1924	29.5	9,700		Apr. 10, 1929	16.3	3,870
1925	June 3, 1925	18.95	4,940		Apr. 21, 1929	19.43	5,090
					May 13, 1929	29.0	3,400
1926	Sept. 12, 1926	32.0	11,500		June 8, 1929	15.6	3,640
					July 12, 1929	36.4	26,000
1927	Oct. 4, 1926	32.2	11,700		Aug. 10, 1929	22.2	6,240
	Oct. 15, 1926	15.3	5,570	1930	May 7, 1930	24.85	7,330
	Apr. 1, 1927	21.5	5,960		Sept. 15, 1930	15.3	3,570
	Apr. 8, 1927	26.0	7,880	1931	June 7, 1931	16.4	3,970
	Apr. 15, 1927	30.5	10,300		Nov. 17, 1931	22.7	6,450
	Apr. 19, 1927	31.5	11,100	1932	Nov. 25, 1931	21.9	6,120
	May 6, 1927	26.2	7,980		June 29, 1932	17.58	4,430
	June 20, 1927	34.46	16,000	1944	Apr. 23, 1944	37.5	a40,000
	Aug. 18, 1927	32.5	12,000				
	Aug. 29, 1927	21.4	5,910				
	Sept. 6, 1927	20.4	5,510				

a Annual peak only; determined by Kansas State Board of Agriculture.

1815. Middle Creek near Elmdale, Kans.

Location.--Lat 38°24', long 96°43', in SW $\frac{1}{4}$ sec.13, T.19 S., R.6 E., at highway bridge 4 miles northwest of Elmdale and at mile 8.2.

Drainage area.--92 sq mi.

Gage.--Nonrecording. Datum of gage is 1,220.55 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs. Shifts in relation occur. Peak discharges for 1917, 1938, and 1951 are based on stage-discharge relation of 1939-50 and are approximate.

Bankfull stage.--16 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges of Middle Creek near Elmdale, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	Apr. 17, 1917	a20.0	17,000	1945	Apr. 15, 1945	17.32	8,570
1938	June 1938	a21.0	20,000		May 2, 1945	10.3	1,850
1939	Aug. 15, 1939	6.85	790		July 17, 1945	10.7	2,020
1940	Sept. 5, 1940	5.00	338		Sept. 28, 1945	14.32	3,810
1941	June 1, 1941	13.10	3,230	1946	June 19, 1946	18.03	10,600
	June 9, 1941	16.00	5,220		June 25, 1946	10.10	1,760
	Sept. 6, 1941	16.80	7,150	1947	Dec. 12, 1946	11.00	2,160
1942	Oct. 14, 1941	18.50	12,100		Mar. 13, 1947	12.50	2,890
	Oct. 20, 1941	17.90	10,300		Apr. 10, 1947	15.50	4,460
	June 24, 1942	11.75	2,600		Apr. 13, 1947	13.04	3,110
1943	Dec. 26, 1942	10.70	2,110	1948	July 20, 1948	17.82	10,000
1944	Mar. 15, 1944	11.1	2,440	1949	Jan. 15, 1949	14.95	4,220
	Mar. 22, 1944	11.0	2,400		Jan. 23, 1949	14.52	3,900
	Apr. 10, 1944	12.1	2,850		May 7, 1949	10.57	1,990
	Apr. 22, 1944	17.70	9,730	1950	July 9, 1950	17.88	10,300
	Apr. 26, 1944	14.50	3,980		July 16, 1950	9.95	1,750
	May 3, 1944	14.90	4,340		Mar. 13, 1950	13.20	3,210
1945	Oct. 2, 1944	11.20	2,260		July 23, 1950	11.66	2,480
	Dec. 4, 1944	17.00	7,700		Aug. 1, 1950	18.90	15,300
	Apr. 13, 1945	16.30	5,780		Aug. 29, 1950	10.58	1,990
				1951	July 1951	a20.6	18,000

a From floodmark, furnished by Corps of Engineers; annual peak only.

1820. Cottonwood River at Cottonwood Falls, Kans.

Location.--Lat 38°22', long 96°31', in NE¼ sec.28, T.19 S., R.8 E., at county highway bridge 1 mile east of Cottonwood Falls, 4.1 miles upstream from South Fork Cottonwood River, and at mile 52.8.

Drainage area.--1,402 sq mi; 1,390 sq mi prior to Feb. 12, 1935.

Gage.--Nonrecording Apr. 8, 1932, to Feb. 11, 1935, at The Atchison, Topeka and Santa Fe Railway Co. bridge 2.3 miles upstream at datum 0.64 ft higher; recording thereafter at present site. Datum of present gage is 1,147.28 ft above mean sea level, datum of 1929. U. S. Weather Bureau gage since 1939 at site 2.5 miles upstream at datum 14.35 ft higher than present gage.

Stage-discharge relation.--Defined by current-meter measurements below 48,000 cfs and by combination of contracted-opening and slope-area measurements at 68,000 and 196,000 cfs. Peak discharges prior to 1932 are based on subsequent relation developed for the U. S. Weather Bureau gage 2.5 miles upstream.

Bankfull stage.--19 ft.

Historical data.--Flood stages for 1902-4 and 1916 were determined from information published in the Chase County Leader June 5, 1902, June 4, 1903, June 9, 1904, and June 13, 1916, respectively.

Flood stages for 1926 and 1929 were determined from information furnished by The Atchison, Topeka and Santa Fe Railway Co.

Flood of July 11, 1951, is the greatest known since the Valley was settled in 1858, from information by local residents in 1957.

Remarks.--Base for partial-duration series, 3,600 cfs. Only annual peaks are shown prior to 1932.

ARKANSAS RIVER BASIN

Peak stages and discharges of Cottonwood River at Cottonwood Falls, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1902	June 5, 1902	a10.1	b13,000	1945	Dec. 5, 1944	21.60	40,200
1903	May 29, 30, 1903	a13.7	b31,000		Apr. 13, 1945	13.42	9,160
1904	June 3, 1904	a16.2	b70,000		Apr. 16, 1945	22.13	54,200
1916	June 11, 1916	a11.6	b16,000		Apr. 26, 1945	8.13	5,110
1926	Sept. 12, 1926	a10.2	b14,000		July 18, 1945	9.10	6,090
1929	July 13, 1929	a13.3	b28,000		July 26, 1945	7.6	4,640
1932	July 6, 1932	21.0	c11,800		Sept. 20, 1945	20.30	20,500
1933	May 19, 1933	11.36	5,700	1946	June 19, 1946	19.72	15,900
1934	Apr. 5, 1934	6.57	1,860	1947	Dec. 14, 1946	7.75	4,740
1935	May 15, 1935	7.31	4,400		Mar. 14, 1947	16.39	11,300
	May 20, 1935	13.3	7,770		Apr. 14, 1947	16.44	11,300
	May 28, 1935	15.24	10,600		May 25, 1947	6.72	3,610
	June 3, 1935	13.65	9,830		June 28, 1947	8.37	5,330
	June 12, 1935	8.14	5,290	1948	May 2, 1948	8.32	4,990
1936	Oct. 21, 1935	6.58	3,620		June 23, 1948	7.56	3,880
	May 10, 1936	6.66	3,640		June 30, 1948	9.62	5,740
1937	Feb. 8, 1937	9.58	6,570		July 20, 1948	23.30	78,000
1938	May 5, 1938	16.15	11,000	1949	Jan. 16, 1949	16.53	8,700
	May 12, 1938	12.0	7,620		Jan. 24, 1949	19.49	11,200
	May 19, 1938	15.3	10,400		Feb. 12, 1949	17.29	7,500
	May 23, 1938	17.24	12,000		Feb. 19, 1949	10.20	6,890
	May 27, 1938	7.63	4,820		May 3, 1949	12.26	8,370
	May 29, 1938	9.60	5,630		May 8, 1949	10.71	7,210
	June 16, 1938	7.97	4,290		May 18, 1949	7.00	3,820
	June 27, 1938	11.80	7,470		May 23, 1949	7.38	4,260
	Aug. 17, 1938	9.05	5,220		May 29, 1949	7.71	4,580
1939	Aug. 16, 1939	9.21	4,050	1950	June 3, 1950	13.8	8,550
1940	Sept. 25, 1940	6.74	3,610		July 10, 1950	18.33	12,500
1941	June 1, 1941	17.88	12,800		July 17, 1950	13.13	8,080
	June 10, 1941	19.13	14,700		July 19, 1950	14.14	8,760
	July 4, 1941	7.23	4,220		July 26, 1950	11.07	6,770
	Aug. 25, 1941	8.38	5,340		Aug. 1, 1950	19.73	15,700
	Sept. 4, 1941	15.48	10,600		Aug. 11, 1950	7.02	3,620
	Sept. 8, 1941	21.08	21,600		Aug. 27, 1950	9.19	5,410
1942	Oct. 9, 1941	7.70	4,690		Aug. 30, 1950	10.5	6,350
	Oct. 14, 1941	17.38	12,500	1951	May 1, 1951	20.35	18,400
	Oct. 20, 1941	21.35	35,800		May 11, 1951	7.14	3,960
	Oct. 22, 1941	20.57	19,000		May 19, 1951	16.58	11,300
	Nov. 2, 1941	10.22	6,910		May 23, 1951	9.62	5,970
	Apr. 21, 1942	6.94	3,690		June 9, 1951	19.12	14,700
	Apr. 27, 1942	9.65	6,450		June 15, 1951	6.92	3,720
	May 4, 1942	7.37	4,360		June 25, 1951	8.35	5,130
	June 19, 1942	6.82	3,780		June 30, 1951	22.68	65,200
	June 24, 1942	15.70	10,700		July 5, 1951	14.82	9,800
	Sept. 6, 1942	14.02	9,540		July 11, 1951	27.06	196,000
1943	Oct. 5, 1942	7.75	4,740		July 25, 1951	8.63	5,340
	Dec. 27, 1942	9.16	6,090	1952	July 27, 1951	7.91	4,760
	June 10, 1943	6.75	3,700		Sept. 3, 1951	11.32	7,160
1944	Mar. 16, 1944	15.26	10,400		Sept. 5, 1951	17.32	12,000
	Mar. 23, 1944	16.87	11,800		Oct. 7, 1951	7.05	3,860
	Apr. 9, 1944	7.13	4,080		Mar. 10, 1952	10.73	6,450
	Apr. 11, 1944	17.78	12,800		Apr. 20, 1952	8.25	4,670
	Apr. 20, 1944	7.80	4,790		Apr. 23, 1952	7.55	4,110
	Apr. 23, 1944	22.50	61,200	1953	May 29, 1953	7.68	4,210
	Apr. 27, 1944	15.36	10,500	1954	June 14, 1954	6.40	3,080
	Apr. 30, 1944	10.19	6,880	1955	Sept. 29, 1955	6.4	3,080
	May 5, 1944	17.02	11,900	1956	May 8, 1956	4.36	1,140
1945	Oct. 2, 1944	8.35	5,370	1957	May 14, 1957	9.13	5,280
					May 17, 1957	19.73	15,600
					June 29, 1957	7.70	4,230
				1958	Mar. 9, 1958	9.42	5,460
					Mar. 29, 1958	9.75	5,700
					May 6, 1958	10.3	6,080
					July 17, 1958	9.05	5,230
					Sept. 19, 1958	7.70	4,230

a Site and datum of U. S. Weather Bureau gage; approximate.

b Annual peak only.

c Maximum Apr. 8 to Sept. 30, 1932; probably maximum for year.

1824. Neosho River at Strawn, Kans.

Location.--Lat 38°16', long 95°52', SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.20 S., R.14 E., at highway bridge at Strawn, $\frac{1}{2}$ miles downstream from Eagle Creek and at mile 356.5.

Drainage area.--2,933 sq mi.

Gage.--Nonrecording June 8 to Sept. 26, 1948; recording thereafter. Datum of gage is 1,018.78 ft above mean sea level, datum of 1929, Kansas City supplementary adjustment of 1943 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 97,000 cfs and by rainfall-runoff studies and flood-routing from station near Iola, at 400,000 cfs. Annual peaks shown for water years 1885, 1902-47 are based on subsequent stage-discharge relation and are approximate. Shifts in relation occur.

Historical data.--Stages shown for water years 1885, 1902-47 are based on gage-height relations with stages for stations at Neosho Rapids 17.7 miles upstream and at Burlington 18 miles downstream, and are approximate only.

Flood of July 4, 1885, at Burlington, was the greatest prior to 1904, according to the Burlington Republican of June 9 and July 14, 1904, which states "Flood of July 8, 1904, was the greatest yet.--The highest record heretofore was that of July 4, 1885."

Floods of June 8, 1902, and June 1, 1903, at Burlington were 24 inches and 22 inches lower, respectively, than that of July 8, 1904, according to the Burlington Republican July 14, 1904.

Flood of May 31, 1903, at Neosho Rapids was about 2 $\frac{1}{2}$ ft less than the stage on July 7, 1904, according to Water-Supply Paper 147 page 90 (1904).

Flood of July 7, 1904, at Neosho Rapids was "The greatest flood that ever visited this community," according to the Neosho Valley Times of June 10 and July 8, 1904.

Remarks.--Gage heights for stations at Neosho Rapids and Burlington 1885 and 1904-47, furnished by U. S. Weather Bureau. Records June 8, 1948, to Sept. 30, 1950, computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 10,000 cfs. Only annual peaks are shown prior to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1885	July 1885	26.0	75,000	1920	Sept. 9, 1920	11.5	9,000
1902	June 1902	24.5	43,000	1921	May 12, 1921	10.0	7,000
1903	May 31, 1903	24.5	43,000	1922	Apr. 11, 1922	22.5	25,000
1904	July 7, 1904	26.5	90,000	1923	June 11, 1923	24.5	43,000
1905	July 6, 1905	20.0	18,000	1924	May 3, 1924	16.5	13,000
1906	June 9, 1906	20.5	19,000	1925	June 4, 1925	18.5	16,000
1907	Jan. 22, 1907	18.0	15,000	1926	Sept. 13, 1926	24.0	38,000
1908	June 15, 1908	24.5	43,000	1927	Apr. 21, 1927	25.0	51,000
1909	July 11, 1909	26.0	75,000	1928	June 3, 1928	22.0	23,000
1910	Jan. 15, 1910	21.0	20,000	1929	Nov. 18, 1928	25.5	62,000
1911	Feb. 20, 1911	18.0	15,000	1930	May 9, 1930	19.5	17,000
1912	Mar. 31, 1912	16.5	13,000	1931	June 9, 1931	6.5	5,000
1913	Oct. 14, 1912	17.0	14,000	1932	July 6, 1932	25.5	62,000
1914	Apr. 1, 1914	13.0	10,000	1933	Apr. 22, 1933	16.5	13,000
1915	May 23, 1915	21.5	21,000	1934	May 14, 1934	4.5	4,000
1916	June 22, 1916	21.5	21,000	1935	June 5, 1935	23.5	33,000
1917	June 5, 1917	19.5	17,000	1936	Oct. 21, 1935	19.0	16,000
1918	May 31, 1918	14.0	11,000	1937	Feb. 8, 1937	16.0	13,000
1919	Mar. 18, 1919	23.5	33,000	1938	May 21, 1938	23.0	29,000

Peak stages and discharges of Neosho River at Strawn, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 29, 1939	8.5	6,000	1951	May 3, 1951	23.67	34,500
1940	September 1940	5.5	4,000		May 21, 1951	14.20	10,900
1941	June 12, 1941	24.0	38,000		June 10, 1951	21.28	20,300
1942	Oct. 21, 1941	25.5	62,000		June 17, 1951	14.11	10,900
1943	June 18, 1943	21.5	21,000		June 24, 1951	19.03	16,200
1944	Apr. 24, 1944	26.0	75,000		July 1, 1951	25.19	55,000
1945	Apr. 17, 1945	26.0	75,000		July 7, 1951	20.15	17,900
1946	June 21, 1946	23.0	29,000		July 11, 1951	30.54	400,000
1947	Apr. 13, 1947	22.5	25,000		July 23, 1951	19.78	16,800
1948	July 21, 1948	27.48	99,200		Aug. 26, 1951	14.86	10,400
1949	Jan. 18, 1949	-	12,500		Sept. 6, 1951	23.48	32,800
	Jan. 26, 1949	17.73	14,800	1952	Mar. 12, 1952	17.45	14,300
	Feb. 14, 1949	17.85	15,000		Apr. 22, 1952	15.88	12,600
	Feb. 19, 1949	14.34	11,400	1953	May 31, 1953	5.80	4,340
	Apr. 12, 1949	16.61	13,600	1954	June 16, 1954	5.64	4,020
	May 23, 1949	13.62	10,700	1955	May 28, 1955	5.25	3,960
1950	June 5, 1950	18.40	15,600	1956	May 8, 1956	8.22	5,340
	July 12, 1950	15.53	12,600		May 17, 1957	22.45	24,900
	July 21, 1950	17.74	14,800		May 20, 1957	21.32	20,300
	Aug. 4, 1950	20.24	17,700		May 29, 1957	16.45	12,000
	Aug. 12, 1950	15.80	12,800		June 12, 1957	19.05	15,400
	Aug. 30, 1950	14.24	11,300		June 30, 1957	14.82	10,300
				1958	Mar. 9, 1958	16.55	11,800
					June 25, 1958	16.00	11,300
					July 17, 1958	18.40	13,900

1830. Neosho River near Iola, Kans.
(Published as "at Iola" prior to 1917)

Location.--Lat 37°53', long 95°26', in NE $\frac{1}{4}$ sec. 9, T.25 S., R.18 E., 1 mile downstream from Elm Creek, 3 miles southwest of Iola, and at mile 284.4.

Drainage area.--3,818 sq mi; 3,720 sq mi prior to Oct. 12, 1917.

Gage.--Nonrecording prior to Nov. 30, 1903, at tailgate of flume at milldam 4.8 miles upstream at datum 12.2 ft higher; recording thereafter at present site and datum. Datum of present gage is 914.77 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 84,000 cfs and by slope-area measurement at 436,000 cfs. Peak discharges for 1885 and 1904 based on the interim rating. Shifts in relation occur.

Bankfull stage.--27 ft.

Historical data.--Flood in July 1885 overflowed land on the Lawyer farm that had not been inundated in 30 years, according to the Iola Register of July 10, 1885.

Floods in July 1885 and June 6, 1904: "Observer Howard at the river power house says his best information is to the effect that the flood of 1885 recorded 14 feet 3 inches --- (as compared with the previous high mark of this year)--on June 6 when the stage of the river, as shown by the official gage, was 14 feet 1 $\frac{1}{4}$ inches," according to the Iola Register of July 9, 1904.

Flood of July 10, 1904, "reached a height of 15 feet 6 inches at 2 pm yesterday" (on the gage at Iola powerhouse), according to the Iola Register July 11, 1904.

Flood in 1885, which was about 1 ft lower than that of July 10, 1904, at Humbolt, 7 miles downstream, was the highest known prior to 1904 (Water-Supply Paper 147, p. 89).

Flood of Sept. 7, 1915, rose within 0.5 ft of that of July 10, 1904, at Iola and was the highest since that time, according to U. S. Weather Bureau Climatological Data September 1915.

The six greatest floods in the period 1855-1956 occurred in 1951, 1948, 1926, 1944, 1945, and 1904, respectively.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges of Neosho River near Iola, Kans.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1885	July 1885	22.7	a50,000	1926	Nov. 7, 1925	15.2	12,000
1895	Sept. 12, 1895	21.0	b38,300		Sept. 5, 1926	18.35	16,000
1896	Dec. 25, 1895	14.0	19,000		Sept. 13, 1926	33.2	75,100
	Apr. 9, 1896	10.7	12,400	1927	Oct. 6, 1926	26.1	27,100
	Apr. 25, 1896	10.0	11,000		Mar. 20, 1927	19.5	18,000
	May 16, 1896	12.2	15,400		Apr. 1, 1927	19.7	18,300
	May 24, 1896	21.1	36,800		Apr. 9, 1927	21.3	20,500
1897	Mar. 5, 1897	6.7	4,940		Apr. 19, 1927	29.8	49,600
1898	May 3, 1898	19.6	32,800		May 7, 1927	18.3	16,400
	May 16, 1898	19.0	31,000		June 21, 1927	24.1	24,600
	May 22, 1898	12.85	16,700	1928	Aug. 15, 1927	19.4	17,900
	June 27, 1898	22.2	46,100		Oct. 3, 1927	30.0	47,400
1899	Dec. 20, 1898	14.3	19,600		June 4, 1928	22.8	22,600
	Mar. 12, 1899	11.8	14,600		June 9, 1928	18.3	16,400
	June 9, 1899	18.5	29,500		June 18, 1928	21.8	21,200
	July 8, 1899	17.8	27,500	1929	Nov. 20, 1928	30.42	50,400
1900	Mar. 12, 1900	9.7	10,400		Dec. 14, 1928	14.06	10,800
	Apr. 16, 1900	10.7	12,400		Dec. 17, 1928	16.1	13,500
	Apr. 24, 1900	10.2	11,400		Apr. 21, 1929	16.7	14,300
	May 19, 1900	16.1	23,200		Apr. 24, 1929	17.9	15,900
	Sept. 29, 1900	12.2	15,400		May 12, 1929	20.65	19,600
1901	Nov. 2, 1900	19.5	32,500		May 16, 1929	20.1	18,800
	Apr. 8, 1901	12.2	15,400		May 18, 1929	19.7	18,300
	Apr. 17, 1901	13.4	17,800	1930	July 18, 1929	20.6	19,500
1902	Apr. 28, 1902	10.0	11,000		May 11, 1930	18.9	17,200
	May 26, 1902	14.0	19,000	1931	May 19, 1931	10.2	6,130
	June 11, 1902	21.5	41,200	1932	Nov. 18, 1931	17.32	15,100
	June 21, 1902	16.0	23,000		Nov. 24, 1931	21.54	20,800
	Aug. 24, 1902	17.1	25,800		June 23, 1932	15.05	12,100
	Sept. 1, 1902	14.3	19,600		July 11, 1932	21.2	20,400
	Sept. 25, 1902	12.8	16,600	1933	Apr. 23, 1933	13.7	10,400
1903	Oct. 4, 1902	14.7	20,400		May 29, 1933	13.8	10,500
	Feb. 27, 1903	11.0	13,000	1934	May 15, 1934	18.27	16,400
	Mar. 7, 1903	10.0	11,000	1935	May 19, 1935	20.97	20,100
	Apr. 4, 1903	11.1	13,200		May 28, 1935	26.92	30,600
	May 15, 1903	12.1	15,200		June 12, 1935	14.06	10,800
	May 22, 1903	13.5	18,000		June 16, 1935	20.87	20,000
	June 3, 1903	22.5	48,500	1936	Oct. 23, 1935	16.7	14,300
	Aug. 6, 1903	13.1	17,200		Nov. 2, 1935	17.95	15,900
	Aug. 8, 1903	12.1	15,200		Nov. 27, 1935	19.88	18,600
	Aug. 16, 1903	15.1	21,200	1937	May 23, 1937	15.1	11,800
	Sept. 11, 1903	12.0	15,000		May 26, 1937	14.48	11,000
1904	July 10, 1904	24.0	a63,600		June 10, 1937	16.04	13,000
1918	June 1, 1918	16.6	14,100		June 15, 1937	13.7	10,000
1919	Nov. 10, 1918	14.65	11,600	1938	May 8, 1938	15.66	12,600
	Mar. 21, 1919	19.4	17,900		May 14, 1938	20.07	18,600
	May 3, 1919	16.25	13,700		May 24, 1938	28.26	40,200
	May 20, 1919	16.0	14,000		June 7, 1938	14.5	11,000
1920	Sept. 9, 1920	13.1	9,580		June 14, 1938	16.87	14,100
1921	May 9, 1921	15.0	12,000	1939	June 30, 1939	7.80	3,450
	June 9, 1921	14.86	11,900	1940	Apr. 17, 1940	13.60	9,920
1922	Mar. 14, 1922	15.1	12,200	1941	Jan. 17, 1941	19.20	17,400
	Mar. 18, 1922	15.0	12,000		Jan. 26, 1941	14.8	11,400
	Mar. 26, 1922	25.6	26,900		June 3, 1941	27.7	32,800
	Apr. 4, 1922	17.55	15,400		June 11, 1941	23.0	22,700
	Apr. 10, 1922	27.32	33,000		Aug. 27, 1941	22.35	21,800
	July 13, 1922	15.05	12,100		Sept. 6, 1941	29.70	42,200
1923	May 26, 1923	15.83	13,100		Sept. 30, 1941	17.47	15,000
	June 15, 1923	27.33	32,200	1942	Oct. 5, 1941	20.8	19,600
	July 8, 1923	17.0	14,600		Oct. 8, 1941	15.45	12,300
1924	July 15, 1924	13.2	9,710		Oct. 18, 1941	21.4	20,500
1925	June 5, 1925	14.4	11,600		Oct. 26, 1941	28.44	38,000
					Nov. 1, 1941	21.82	21,000
					Mar. 16, 1942	14.4	10,900

a Annual peak only.

b Maximum Aug. 1 to Sept. 30, 1895; probably maximum for year.

Peak stages and discharges of Neosho River near Iola, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 7, 1942	14.8	11,400	1949	Jan. 24, 1949	17.3	14,200
	Apr. 10, 1942	18.9	17,000		Feb. 13, 1949	22.97	21,800
	Apr. 20, 1942	14.1	10,500		Feb. 19, 1949	16.54	13,200
	Apr. 28, 1942	18.5	16,400		Feb. 27, 1949	14.49	10,800
	June 21, 1942	24.55	24,600		Mar. 31, 1949	17.22	14,000
	June 25, 1942	19.29	16,700		Apr. 12, 1949	14.9	11,300
	Aug. 27, 1942	18.4	16,100		May 24, 1949	14.99	11,400
	Sept. 7, 1942	21.12	19,900	1950	June 6, 1950	16.22	13,800
	Sept. 19, 1942	14.4	10,800		July 10, 1950	18.39	16,600
	Sept. 26, 1942	17.3	14,600		July 13, 1950	20.45	19,200
1943	Oct. 4, 1942	17.14	14,500		July 19, 1950	20.43	19,200
	Dec. 27, 1942	18.56	16,500		July 26, 1950	16.56	14,300
	May 10, 1943	15.18	12,000		Aug. 6, 1950	18.55	16,900
	May 16, 1943	15.18	12,000		Aug. 8, 1950	16.77	14,500
	May 19, 1943	29.41	40,700		Aug. 16, 1950	17.50	15,400
	June 11, 1943	16.4	13,500		Aug. 27, 1950	14.34	11,300
	June 20, 1943	17.75	15,300		Aug. 30, 1950	20.94	19,900
	June 24, 1943	22.74	22,300	1951	May 6, 1951	23.89	23,300
1944	Mar. 19, 1944	23.4	22,400		May 10, 1951	13.68	10,300
	Mar. 22, 1944	15.22	11,700		May 23, 1951	16.66	14,300
	Mar. 26, 1944	16.94	13,700		June 12, 1951	22.16	21,200
	Apr. 10, 1944	25.98	28,000		June 18, 1951	13.9	10,600
	Apr. 25, 1944	32.31	72,300		June 25, 1951	-	c20,200
	May 7, 1944	17.38	14,300		June 30, 1951	-	c32,200
	June 14, 1944	14.40	10,700		July 4, 1951	30.0	46,000
	Aug. 27, 1944	17.57	14,500		July 13, 1951	43.0	436,000
1945	Oct. 5, 1944	18.3	15,400		July 25, 1951	19.81	18,400
	Dec. 8, 1944	29.97	51,300		Aug. 28, 1951	21.02	19,800
	Mar. 16, 1945	17.3	14,200		Sept. 9, 1951	28.69	37,600
	Mar. 20, 1945	15.8	12,400		Sept. 13, 1951	24.25	23,700
	Mar. 26, 1945	22.6	21,200	1952	Mar. 10, 1952	19.8	18,400
	Mar. 29, 1945	14.87	11,200		Mar. 19, 1952	13.87	10,500
	Apr. 12, 1945	16.62	13,300		Apr. 23, 1952	16.67	14,300
	Apr. 16, 1945	31.95	69,400	1953	Apr. 1, 1953	9.93	5,590
	Apr. 27, 1945	18.6	15,800				
	May 27, 1945	17.3	14,200	1954	May 2, 1954	19.16	17,600
	July 1, 1945	25.9	27,700				
	Aug. 11, 1945	18.3	15,400	1955	May 26, 1955	15.65	12,900
	Sept. 30, 1945	23.8	23,100				
1946	Jan. 5, 1946	18.02	15,000	1956	May 31, 1956	11.33	7,230
	Apr. 23, 1946	16.8	13,600				
	June 24, 1946	19.06	17,600	1957	May 19, 1957	21.78	20,500
1947	Mar. 14, 1947	19.77	17,300		May 23, 1957	19.80	18,000
	Apr. 5, 1947	25.57	26,900		May 30, 1957	20.42	18,700
	Apr. 15, 1947	26.21	28,700		June 2, 1957	19.58	17,700
	Apr. 25, 1947	15.61	12,100		June 13, 1957	20.14	18,400
	June 9, 1947	20.46	18,200		July 1, 1957	16.55	13,900
1948	Mar. 19, 1948	16.32	13,000	1958	Mar. 9, 1958	19.55	17,700
	Mar. 23, 1948	16.68	13,400		Mar. 24, 1958	14.85	11,600
	May 10, 1948	17.25	14,000		Apr. 3, 1958	14.14	10,700
	June 26, 1948	14.68	11,000		June 26, 1958	20.45	18,800
	July 23, 1948	34.63	83,100		July 5, 1958	14.39	11,000
	Sept. 8, 1948	16.18	12,800		July 12, 1958	21.86	20,600
					July 18, 1958	23.90	23,300
1949	Jan. 19, 1949	16.11	12,700		July 26, 1958	13.72	10,100
					Sept. 18, 1958	17.69	15,400

c Based on U. S. Weather Bureau gage 4.8 miles upstream.

1835. Neosho River near Parsons, Kans.

Location.--Lat 37°20'25", long 95°06'32", on north line of sec.21, T.31 S., R.21 E., at bridge on U. S. Highway 160, 0.4 mile upstream from Hickory Creek, 2.7 miles upstream from dam of Kansas Ordnance Plant, 8 miles east of Parsons, and at mile 204.1. Records include flow of Hickory Creek.

Drainage area.--4,905 sq mi (includes that of Hickory Creek).

Gage.--Nonrecording prior to Feb. 7, 1935; recording thereafter. Prior to Oct. 1, 1929, at railroad bridge half a mile downstream at datum 0.04 ft lower. Datum of present gage is 810.25 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 15,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Mar. 15, 1922	22.86	25,100	1937	Mar. 25, 1937	17.80	15,200
	Mar. 28, 1922	23.16	25,800		May 23, 1937	18.27	15,900
	Apr. 13, 1922	24.86	31,600		June 10, 1937	21.50	20,100
	July 13, 1922	21.56	22,100		June 15, 1937	24.45	26,500
1923	June 18, 1923	24.46	29,700	1938	May 16, 1938	20.00	18,100
1924	Oct. 17, 1923	19.90	18,800		May 29, 1938	26.20	33,400
	Dec. 13, 1923	19.26	17,800		June 8, 1938	22.95	22,900
	Feb. 17, 1924	17.96	15,800		June 17, 1938	23.96	25,300
	Aug. 7, 1924	18.96	17,300	1939	Apr. 5, 1939	9.21	4,980
1925	Apr. 10, 1925	14.56	11,400		Apr. 18, 1940	17.23	14,500
1926	Nov. 9, 1925	19.16	18,000	1941	Jan. 19, 1941	18.97	16,800
	Sept. 17, 1926	27.03	45,100		Apr. 17, 1941	24.78	27,600
1927	Oct. 8, 1926	25.31	34,100		Apr. 19, 1941	17.68	15,100
	Mar. 21, 1927	20.76	20,700		June 7, 1941	24.97	28,300
	Apr. 3, 1927	21.32	21,700		June 11, 1941	23.20	23,400
	Apr. 9, 1927	26.08	38,800		Aug. 31, 1941	20.44	18,600
	Apr. 22, 1927	27.41	47,800		Sept. 11, 1941	26.09	32,900
	May 9, 1927	20.21	19,700	1942	Oct. 6, 1941	25.83	31,500
	June 20, 1927	23.52	26,800		Oct. 17, 1941	22.48	22,000
	Aug. 9, 1927	20.26	19,800		Oct. 21, 1941	27.29	40,200
	Aug. 17, 1927	23.76	27,400		Apr. 10, 1942	22.16	21,400
1928	Oct. 6, 1927	26.22	39,700		Apr. 30, 1942	17.55	15,000
	June 2, 1928	22.46	24,100		June 24, 1942	25.40	29,800
	June 20, 1928	23.96	28,000		Sept. 9, 1942	20.28	18,500
1929	Nov. 24, 1928	27.49	48,100	1943	Dec. 29, 1942	19.54	17,200
	Jan. 11, 1929	17.48	15,500		May 11, 1943	23.94	23,600
	Apr. 11, 1929	17.49	15,500		May 20, 1943	29.25	67,200
	Apr. 21, 1929	23.75	27,400		June 13, 1943	18.08	15,200
	May 7, 1929	19.56	18,700		June 22, 1943	20.45	18,300
	May 15, 1929	24.36	29,300	1944	Mar. 20, 1944	25.01	27,300
	July 20, 1929	19.76	19,000		Apr. 12, 1944	25.68	30,800
					Apr. 27, 1944	29.70	83,500
1930	May 13, 1930	20.02	18,700		June 21, 1944	21.42	19,400
	June 12, 1930	20.92	20,100	1945	Sept. 29, 1944	22.21	20,400
	June 16, 1930	17.75	15,300		Oct. 3, 1944	21.87	20,000
1931	May 20, 1931	13.53	9,500		Dec. 13, 1944	26.22	33,600
1932	Nov. 28, 1931	22.96	23,000		Mar. 16, 1945	18.48	15,800
	July 13, 1932	20.46	18,200		Mar. 20, 1945	20.85	18,800
1933	Apr. 22, 1933	19.0	17,200		Mar. 28, 1945	21.12	19,100
	May 13, 1933	23.62	18,900		Apr. 21, 1945	29.02	63,200
1934	May 17, 1934	18.03	15,700		May 31, 1945	18.40	15,700
1935	May 21, 1935	24.57	27,000		July 5, 1945	24.10	24,200
	June 1, 1935	27.46	41,700	1946	Sept. 25, 1945	20.00	17,800
	June 17, 1935	22.50	21,900		Oct. 3, 1945	24.49	25,600
1936					Jan. 6, 1946	23.66	23,200
	Nov. 5, 1935	21.65	20,200	1947	June 25, 1946	18.71	16,100
					Mar. 16, 1947	19.72	17,400
					Apr. 8, 1947	23.12	21,900

Peak stages and discharges of Neosho River near Parsons, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 18, 1947	25.04	27,300	1951	July 14, 1951	40.20	410,000
	Apr. 26, 1947	21.20	19,200		July 26, 1951	19.73	17,900
	May 21, 1947	19.82	17,500		Aug. 29, 1951	23.09	24,200
	June 10, 1947	19.22	16,800		Sept. 13, 1951	27.25	43,800
1948	Mar. 24, 1948	20.05	17,800	1952	Feb. 2, 1952	18.14	15,300
	May 12, 1948	18.54	15,800		Mar. 12, 1952	21.16	20,500
	June 22, 1948	25.54	29,800	1953	Apr. 2, 1953	10.65	4,110
	June 26, 1948	19.49	17,200				
	July 12, 1948	18.20	15,400				
	July 27, 1948	30.74	87,800				
1949	Jan. 16, 1949	21.98	20,100	1954	May 4, 1954	24.97	27,900
	Jan. 24, 1949	21.27	19,300				
	Feb. 16, 1949	23.51	22,800	1955	May 28, 1955	19.94	18,600
	May 25, 1949	20.21	18,000				
	July 7, 1949	20.37	18,300	1957	May 19, 1957	22.80	23,600
1950	July 11, 1950	20.20	18,000				
	July 15, 1950	20.64	18,500				
	July 20, 1950	24.90	27,000				
	Aug. 7, 1950	18.90	16,400				
	Sept. 1, 1950	20.73	18,600				
1951	May 8, 1951	22.01	22,100	1958	Mar. 11, 1958	21.18	20,500
	May 23, 1951	22.61	23,500		Mar. 24, 1958	21.20	20,600
	June 14, 1951	21.49	21,100		Apr. 4, 1958	20.54	19,500
	June 27, 1951	23.52	25,000		May 5, 1958	18.73	16,900
					June 28, 1958	19.56	18,100
					July 13, 1958	24.58	27,200
					July 18, 1958	23.64	25,300

1840. Lightning Creek near McCune, Kans.

Location.--Lat 37°17', long 95°02', in NE $\frac{1}{4}$ sec. 7, T.32 S., R.22 E., at highway bridge 4 miles south of McCune, 5 miles southeast of Straus, 13 $\frac{1}{2}$ miles south-east of Parsons, and at mile 14.6.

Drainage area.--197 sq mi.

Gage.--Nonrecording prior to Mar. 9, 1945; recording thereafter. Datum of gage is 818.10 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 10,000 cfs and extended to 18,700 cfs on basis of rainfall-runoff studies. Shifts in relation occur. Peak discharge for 1938 based on subsequent rating.

Bankfull stage.--15 ft.

Historical data.--Flood in 1935 overflowed existing highway on each side of bridge, from information by Corps of Engineers.

Remarks.--Records collected by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1938	-	16.24	a5,800	1941	June 10, 1941	16.45	6,950	
1939	Apr. 6, 1939	13.11	2,080	1942	Sept. 10, 1941	16.00	4,500	
	May 22, 1939	13.16	2,110		Oct. 5, 1941	17.55	18,700	
1940	Apr. 18, 1940	12.50	1,900		Oct. 17, 1941	15.86	4,020	
					Oct. 31, 1941	17.04	12,200	
1941	Apr. 16, 1941	16.80	10,300		Apr. 7, 1942	15.22	2,980	
					Apr. 10, 1942	15.74	3,490	
					June 19, 1942	13.79	2,320	
					June 22, 1942	16.14	5,050	
	Apr. 19, 1941	16.40	6,950					
	June 2, 1941	14.89	2,820					

a Annual peak only.

Peak stages and discharges of Lightning Creek near McCune, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Dec. 27, 1942	16.33	6,420	1945	Oct. 4, 1944	15.93	4,370
	May 10, 1943	16.71	9,350		Mar. 20, 1945	16.10	5,300
	May 19, 1943	17.81	23,000		Apr. 16, 1945	16.12	5,300
	May 25, 1943	16.01	5,090		Apr. 22, 1945	16.25	5,820
	June 5, 1943	15.17	3,110		June 18, 1945	15.58	3,500
	June 9, 1943	14.95	2,900		July 2, 1945	13.41	2,150
	June 23, 1943	16.62	8,570		Aug. 7, 1945	14.39	2,460
1944	Mar. 19, 1944	16.25	5,650		Sept. 25, 1945	16.76	10,200
	Apr. 11, 1944	16.63	8,550	1946	Oct. 1, 1945	14.95	2,820
	May 2, 1944	13.85	2,540		Jan. 6, 1946	16.19	5,820
	June 21, 1944	16.08	5,050		Feb. 19, 1946	13.64	2,180
	Aug. 27, 1944	16.12	5,120				

1845. Labette Creek near Oswego, Kans.

Location.--Lat 37°12', long 95°11', in NW $\frac{1}{4}$ sec. 11, T. 33 S., R. 20 E., at bridge on State Highway 96, 1 mile upstream from St. Louis-San Francisco Railway Co. bridge, 5 miles northwest of Oswego, and at mile 18.8.

Drainage area.--211 sq mi.

Gage.--Nonrecording. Datum of gage is 809.34 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended to 30,000 cfs on basis of velocity-area studies. Shifts in relation occur. Peak discharges for May 1935 and June 22, 1948, based on subsequent rating.

Bankfull stage.--15 ft.

Historical data.--Flood of June 22, 1948, "near the southern edge of Parsons, was reported the highest ever known--," according to the U. S. Weather Bureau Climatological Data of June 1948.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 1935	21.44	a21,000	1942	Apr. 7, 1942	13.0	4,870
1939	Apr. 6, 1939	7.75	2,730		Apr. 10, 1942	15.48	6,100
	May 12, 1939	6.40	2,090		Apr. 17, 1942	8.39	2,850
	May 23, 1939	11.45	4,390		Apr. 20, 1942	8.18	2,770
	May 26, 1939	4.70	1,310		May 6, 1942	6.07	1,860
	June 9, 1939	5.60	1,720		June 13, 1942	7.96	2,820
	June 28, 1939	7.84	2,730		June 18, 1942	11.86	4,620
1940	Aug. 18, 1940	4.34	1,170		June 21, 1942	16.12	6,640
					July 10, 1942	8.24	2,920
1941	Nov. 26, 1940	4.72	1,310		July 21, 1942	9.20	3,200
	Jan. 17, 1941	4.60	1,260		Sept. 3, 1942	10.14	3,580
	Jan. 26, 1941	5.00	1,440		Sept. 19, 1942	9.48	3,330
	Feb. 1, 1941	5.00	1,440		Sept. 26, 1942	10.16	3,630
	Apr. 16, 1941	16.33	6,640	1943	Oct. 19, 1942	10.63	3,700
	Apr. 19, 1941	15.46	6,280		Oct. 30, 1942	4.62	1,240
	June 2, 1941	6.41	2,090		Nov. 5, 1942	5.02	1,420
	June 10, 1941	15.80	6,410		Dec. 22, 1942	5.10	1,470
	Sept. 5, 1941	8.85	3,190		Dec. 27, 1942	13.47	4,980
	Sept. 9, 1941	15.75	6,410		Mar. 19, 1943	4.78	1,340
					May 8, 1943	14.01	5,220
1942	Oct. 5, 1941	18.94	11,900		May 11, 1943	18.05	8,760
	Oct. 17, 1941	14.69	5,910		May 19, 1943	20.50	19,000
	Oct. 27, 1941	4.75	1,350		May 25, 1943	12.90	4,700
	Oct. 31, 1941	17.27	8,190		June 5, 1943	13.37	4,930
	Nov. 3, 1941	5.60	1,720		June 8, 1943	5.50	1,650
	Nov. 23, 1941	5.29	1,580		June 23, 1943	18.99	10,700
	Dec. 25, 1941	5.08	1,490		June 29, 1943	9.36	3,230
	Mar. 16, 1942	11.93	4,380		July 18, 1943	5.23	1,520
					Sept. 29, 1943	7.92	2,640

a Annual peak only.

Peak stages and discharges of Labette Creek near Oswego, Kans.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Oct. 13, 1943	4.73	1,290	1945	Mar. 20, 1945	14.30	5,380
	Oct. 23, 1943	5.28	1,560		Mar. 30, 1945	4.50	1,290
	Feb. 28, 1944	4.81	1,380		Apr. 16, 1945	15.22	5,900
	Mar. 16, 1944	7.02	2,280		Apr. 21, 1945	12.40	4,480
	Mar. 19, 1944	14.40	5,430		Apr. 25, 1945	7.00	2,320
	Apr. 11, 1944	18.19	8,980		Apr. 28, 1945	4.93	1,470
	Apr. 20, 1944	5.66	1,740		May 27, 1945	6.60	2,120
	Apr. 23, 1944	12.59	4,560		May 31, 1945	7.87	2,640
	Apr. 27, 1944	5.38	1,600		June 5, 1945	5.13	1,470
	May 1, 1944	8.61	2,920		June 17, 1945	5.97	1,880
	June 9, 1944	4.97	1,420		July 2, 1945	11.79	4,210
	July 11, 1944	5.08	1,470		July 9, 1945	4.92	1,380
	Aug. 26, 1944	15.73	6,240		Sept. 22, 1945	8.03	2,680
	Sept. 29, 1944	14.73	5,600		Sept. 25, 1945	18.06	9,700
					Sept. 29, 1945	11.40	4,040
1945	Oct. 3, 1944	15.58	5,810	1948	June 22, 1948	23.2	a30,000
	Dec. 5, 1944	10.49	3,510				
	Mar. 15, 1945	12.42	4,300				

a Annual peak only.

1850. Neosho River near Commerce, Okla.

Location.--Lat 36°56', long 94°57', in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.28 N., R.22 E., on downstream side of left pier of county highway bridge, 1 $\frac{1}{4}$ miles upstream from Mud Creek, 1 $\frac{1}{4}$ miles downstream from Four Mile Creek, 4 $\frac{1}{2}$ miles west of Commerce, and at mile 153.4.

Drainage area.--5,876 sq mi.

Gage.--Recording. Datum of gage is 748.97 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1904	June 1904	a21.5	a55,000	1944	Sept. 30, 1944	17.00	23,400	
1927	April 1927	a21.1	a50,000	1945	Oct. 5, 1944	18.50	29,200	
1935	May 1935	20.8	a46,000		Dec. 16, 1944	18.72	30,400	
					Mar. 16, 1945	15.70	20,800	
1938	May 1938	19.8	a36,400		Mar. 21, 1945	17.90	25,600	
					Mar. 29, 1945	14.49	18,700	
1940	Apr. 19, 1940	12.28	14,900		Apr. 23, 1945	22.17	73,300	
					July 3, 1945	17.34	23,800	
1941	Apr. 19, 1941	20.08	36,800		Sept. 27, 1945	20.22	39,800	
					1946	Oct. 2, 1945	19.22	32,200
						Jan. 8, 1946	19.14	31,600
1942	Oct. 7, 1941	21.08	49,100	1947	Apr. 21, 1947	18.43	27,600	
					Apr. 26, 1947	17.94	25,600	
					May 22, 1947	16.41	22,700	
				1948	June 1, 1947	13.78	18,000	
					Mar. 24, 1948	16.30	23,100	
1943	Dec. 28, 1942	17.86	25,000		June 24, 1948	23.38	85,000	
					July 13, 1948	17.34	25,300	
					July 28, 1948	24.43	93,200	
			1949	Jan. 17, 1949	17.78	26,500		
				Jan. 25, 1949	17.95	27,000		
Feb. 17, 1949	18.23	28,500						
1944	Mar. 22, 1944	18.93	31,600		May 20, 1949	15.54	21,400	
					May 26, 1949	14.17	18,900	
					July 8, 1949	16.35	23,300	
					Sept. 19, 1949	13.6	18,200	
					Apr. 12, 1944	20.00	41,500	
	Apr. 29, 1944	21.85	70,000					
					June 22, 1944	16.10	22,100	
					Aug. 27, 1944	15.56	21,100	

a Annual peak only.

Peak stages and discharges of Neosho River near Commerce, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 3, 1950	15.49	20,800	1954	May 4, 1954	18.04	27,000
	July 12, 1950	14.92	19,600				
	July 15, 1950	14.79	19,400		Oct. 12, 1954	14.36	19,300
	July 21, 1950	20.08	37,500		May 29, 1955	17.11	24,800
	Sept. 2, 1950	14.38	18,700		June 28, 1955	16.16	22,800
1951	May 9, 1951	15.20	20,800	1956	Oct. 5, 1955	10.98	13,300
	May 24, 1951	15.84	22,000				
	June 13, 1951	15.01	20,400	1957	May 25, 1957	19.71	36,200
	July 3, 1951	20.51	42,000		June 3, 1957	18.82	29,700
	July 15, 1951	34.03	267,000		June 16, 1957	20.22	41,000
	Aug. 30, 1951	15.59	21,600	1958	Mar. 10, 1958	15.97	22,400
	Sept. 14, 1951	20.68	48,400		Mar. 25, 1958	17.74	26,300
1952	Nov. 13, 1951	15.98	22,400		Apr. 5, 1958	17.05	24,600
	Mar. 11, 1952	16.04	22,400		May 6, 1958	14.58	19,800
1953	May 13, 1953	5.57	4,500		July 14, 1958	20.05	39,000
					July 18, 1958	17.86	26,800
					July 28, 1958	14.76	20,000

1855. Stahl Creek near Miller, Mo.

Location.--Lat 37°11'40", long 93°50'40", in SE $\frac{1}{4}$ sec.26, T.29 N., R.27 W., on downstream side of left abutment of bridge on State Highway 39, 1 $\frac{1}{2}$ miles south of Miller and 6.4 miles upstream from mouth.

Drainage area.--3.86 sq mi.

Gage.--Recording. Datum of gage is 1,184.49 ft above mean sea level, datum of 1929 (State Highway Commission bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 730 cfs.

Bankfull stage.--4 ft.

Remarks.--Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Oct. 3, 1950	3.78	195	1955	Feb. 19, 1955	4.56	341
	Feb. 20, 1951	3.94	224		Feb. 26, 1955	3.68	176
	June 22, 1951	3.85	206		Mar. 20, 1955	3.71	184
	July 4, 1951	6.18	904		June 5, 1955	4.27	278
1952	Nov. 15, 1951	4.00	232	1956	May 31, 1956	3.54	157
	Feb. 1, 1952	4.66	363		June 7, 1956	5.87	745
1953	Mar. 14, 1953	3.38	133	1957	May 22, 1957	5.36	560
1954	Sept. 29, 1954	4.08	250		May 30, 1957	4.60	344
					June 13, 1957	4.91	424
1955	Oct. 11, 1954	4.41	308		July 1, 1957	6.24	929
	Oct. 21, 1954	4.18	269	1958	July 7, 1958	6.40	1,010
	Oct. 25, 1954	5.15	497		July 17, 1958	4.80	396

1860. Spring River near Waco, Mo.

Location.--Lat 37°14'45", long 94°33'55", on line between SE $\frac{1}{4}$ sec.7 and NE $\frac{1}{4}$ sec.18, T.29 N., R.33 W., at county highway bridge three-quarters of a mile downstream from Blackberry Creek, 1 $\frac{1}{2}$ miles east of Waco, and 47.6 miles above mouth.

Drainage area.--1,164 sq mi.

Gage.--Nonrecording prior to Feb. 23, 1935; recording thereafter. Datum of gage is 833.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 87,000 cfs.

Bankfull stage.--19 ft.

Remarks.--Base for partial-duration series, 13,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Spring River near Waco, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	-	22	a21,000	1942	Oct. 5, 1941	24.4	37,300
					Oct. 31, 1941	23.66	33,500
1924	May 29, 1924	20.12	18,200				
	June 11, 1924	19.63	17,500	1943	Dec. 27, 1942	18.08	16,400
					May 11, 1943	22.75	29,900
1925	Sept. 22, 1925	10.37	6,550		May 19, 1943	30.94	103,000
					June 4, 1943	15.97	13,200
1926	Sept. 5, 1926	16.40	13,400				
				1944	Apr. 11, 1944	16.30	13,700
1927	Oct. 4, 1926	16.20	13,100		June 20, 1944	16.60	14,200
	Apr. 1, 1927	23.58	28,100				
	Apr. 10, 1927	21.78	22,100	1945	Mar. 20, 1945	16.18	13,600
	Apr. 15, 1927	20.13	18,400		Apr. 14, 1945	23.61	33,400
	Apr. 19, 1927	20.05	18,200		Apr. 16, 1945	24.65	38,300
	July 23, 1927	18.10	15,500		Apr. 22, 1945	17.38	15,600
	Aug. 9, 1927	20.14	18,400		May 27, 1945	17.33	15,400
	Aug. 17, 1927	28.6	57,400		June 6, 1945	18.00	16,500
					June 17, 1945	16.36	13,900
1928	Oct. 2, 1927	17.26	14,500		Sept. 26, 1945	21.98	26,800
	June 10, 1928	20.80	19,800				
	June 18, 1928	16.30	13,300	1946	June 1, 1946	19.1	18,400
	June 22, 1928	20.54	19,200				
1929	Apr. 9, 1929	20.57	19,400	1947	Apr. 11, 1947	16.16	13,700
	Apr. 20, 1929	21.15	20,600		Apr. 25, 1947	24.6	38,300
	May 13, 1929	22.65	25,000				
	May 19, 1929	19.78	17,900	1948	June 22, 1948	24.63	38,300
					June 26, 1948	17.62	15,900
1930	June 16, 1930	12.96	9,350		July 26, 1948	18.79	17,800
				1949	Jan. 24, 1949	15.50	13,000
1931	May 19, 1931	11.92	8,140				
				1950	Aug. 28, 1950	24.50	37,800
1932	June 28, 1932	20.88	19,800				
				1951	Feb. 21, 1951	19.52	19,200
1933	Dec. 25, 1932	17.84	15,100		July 1, 1951	15.95	13,700
	May 14, 1933	16.64	13,600		July 4, 1951	16.20	13,900
					Sept. 10, 1951	16.43	14,200
1934	Apr. 15, 1934	7.70	3,950		Sept. 13, 1951	17.74	16,000
				1952	Nov. 12, 1951	16.28	14,000
1935	Mar. 12, 1935	20.23	18,700		Feb. 2, 1952	20.08	20,700
	June 7, 1935	18.00	15,300				
1936	Sept. 28, 1936	15.70	12,500	1953	Apr. 24, 1953	7.63	3,710
1937	Nov. 3, 1936	17.57	14,800	1954	Sept. 30, 1954	8.14	4,160
	Jan. 14, 1937	16.59	13,500				
	June 10, 1937	19.42	17,200	1955	June 28, 1955	17.70	16,000
1938	May 31, 1938	18.50	16,000	1956	May 31, 1956	7.91	3,680
	June 16, 1938	17.23	14,300				
				1957	May 23, 1957	19.12	16,400
1939	May 22, 1939	15.34	11,900		May 25, 1957	20.34	19,100
					June 2, 1957	19.20	16,600
1940	July 23, 1940	11.46	7,700		June 9, 1957	24.20	34,500
					June 14, 1957	18.52	15,400
1941	Apr. 16, 1941	17.50	15,400				
	Apr. 20, 1941	24.66	38,800	1958	July 12, 1958	17.20	13,800

a Annual peak only.

1865. Turkey Creek at Joplin, Mo.

Location.--Lat 37°06'46", long 94°31'34", in NW¹/₄ NW¹/₄ sec. 24, T. 28 N., R. 33 W., 80 ft downstream from bridge on Lone Elm Road, a quarter of a mile downstream from Joplin Creek, and about 1 mile northwest of Joplin.

Drainage area.--33 sq mi, approximately.

Gage.--Recording. Datum of gage is 903.98 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 700 cfs.

Bankfull stage.--6 ft.

Historical data.--Highest stage known in over 36 years (1932), 10.0 ft, date unknown, from information by road district employee.

Remarks.--Base for partial-duration series, 510 cfs.

Peak stages and discharges of Turkey Creek at Joplin, Mo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Dec. 24, 1932	7.38	1,090	1936	July 1, 1936	6.65	890
	Apr. 20, 1933	7.57	1,150		Sept. 27, 1936	7.15	890
	May 13, 1933	6.58	876	1937	Oct. 6, 1936 Oct. 8, 1936 Jan. 14, 1937 Jan. 30, 1937	9.86	1,980
	May 15, 1933	5.70	658			6.43	838
	May 24, 1933	5.51	610			5.81	696
	Aug. 3, 1933	6.50	850			5.53	630
1934	Sept. 29, 1934	5.01	500				
1935	Mar. 11, 1935	7.30	1,090	1938	Mar. 30, 1938	6.48	864
				1939	May 12, 1939	5.04	530
1936	May 1, 1936	5.44	610		May 22, 1939	5.12	550

1870. Shoal Creek above Joplin, Mo.
(Published as "near Joplin" prior to 1942)

Location.--Lat 37°00'45", long 94°28'45", in NE¹/₄ sec. 1, T. 26 N., R. 33 W., at bridge on U. S. Highway 71, 4 miles southeast of Joplin, 6 miles downstream from Baynham Branch, and 15.0 miles above mouth.

Drainage area.--410 sq mi; 439 sq mi prior to Oct. 1, 1941.

Gage.--Nonrecording prior to Apr. 25, 1934; recording thereafter. At site 5.0 miles downstream prior to Oct. 1, 1941. At datum 44.21 ft lower prior to Apr. 25, 1934. At datum 45.21 ft lower Apr. 25, 1934, to Sept. 30, 1941. Datum of present gage is 902.37 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 41,000 cfs at former site. Defined by current-meter measurements at present site. Shifts in relation occur.

Bankfull stage.--10 ft.

Remarks.--Records for sites "near" and "above" Joplin considered equivalent for flood-frequency study. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	July 13, 1924	13.08	14,200	1933	Dec. 25, 1932 May 14, 1933	12.33 13.0	9,930 11,900
1925	Apr. 9, 1925	4.83	2,580	1934	Oct. 23, 1933	3.16	1,260
1926	Sept. 6, 1926	8.33	6,230	1935	Mar. 12, 1935 June 8, 1935	18.25 16.24	20,100 15,100
1927	Apr. 15, 1927 Apr. 19, 1927 Aug. 8, 1927 Aug. 18, 1927	12.33 12.42 10.50 8.70	12,700 12,900 9,550 6,780	1936	Sept. 27, 1936	8.88	5,220
1928	June 2, 1928 June 10, 1928 June 19, 1928 June 21, 1928 June 28, 1928 Aug. 5, 1928	8.70 13.83 13.83 12.75 9.00 11.50	6,430 15,100 15,100 13,200 6,850 11,000	1937	June 10, 1937	8.92	5,330
				1938	June 8, 1938	10.10	6,610
				1939	May 13, 1939	8.35	4,420
				1940	Aug. 18, 1940	4.78	1,630
1929	Apr. 9, 1929 Apr. 21, 1929 May 9, 1929 May 13, 1929 May 18, 1929 June 3, 1929	9.42 11.50 9.08 12.92 9.17 8.42	7,450 11,000 7,000 13,400 7,150 6,020	1941	Apr. 19, 1941	28.0	54,000
				1942	Oct. 5, 1941	11.86	11,500
				1943	May 10, 1943 May 18, 1943	12.16 16.8	16,600 62,100
1930	Sept. 10, 1930 Sept. 16, 1930	13.92 10.92	15,200 9,930	1944	June 20, 1944	10.0	7,260
1931	July 26, 1931	6.33	3,760	1945	Apr. 13, 1945 Apr. 15, 1945 May 10, 1945 May 17, 1945 Sept. 24, 1945	13.3 12.8 11.57 10.35 12.84	24,800 21,000 14,000 8,650 20,400
1932	June 2, 1932 June 27, 1932	9.00 15.00	6,850 17,200				

a Annual peak only.

Peak stages and discharges of Shoal Creek above Joplin, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 31, 1946	10.56	9,840	1952	Aug. 22, 1952	7.68	3,110
1947	Apr. 10, 1947	10.80	10,300	1953	Mar. 15, 1953	6.10	1,300
	Apr. 25, 1947	12.73	20,400		Sept. 30, 1954	8.36	4,150
1948	June 23, 1948	9.36	6,070	1955	Mar. 21, 1955	9.96	7,740
	July 26, 1948	9.90	7,440		May 16, 1956	10.00	7,740
1949	June 14, 15, 1949	8.07	3,620	1957	May 22, 1957	11.85	15,000
	Jan. 14, 1950	9.57	6,570		May 25, 1957	12.03	16,100
1950	Aug. 5, 1950	10.75	10,500		June 10, 1957	12.04	16,100
	Aug. 27, 1950	13.6	27,300		July 26, 1958	10.34	8,100
1951	June 30, 1951	10.87	10,900				

1880. Spring River near Quapaw, Okla.

Location--Lat 36°56', long 94°45', in center SW¹/₄ sec. 5, T.28 N., R.24 E., near center of span on downstream side of pier of county highway bridge, an eighth of a mile upstream from Rock Creek, 3 miles southeast of Quapaw, and at mile 13.9.

Drainage area--2,510 sq mi, includes that of Rock Creek.

Gage--Recording. Datum of gage is 746.25 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation--Defined by current-meter measurements below 54,000 cfs and extended above on basis of slope-area measurement at 190,000 cfs.

Bankfull stage--20 ft.

Historical data--A flood in December 1895 reached a stage similar to that in 1943, from information by local Indian Chief.

Remarks--Low and medium flow regulated by Riverton hydroelectric plant 15 miles upstream from station. Effect of regulation probably small for peaks above the base. Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 13, 1935	a30.0	-	1944	June 21, 1944	22.77	36,100
					Aug. 27, 1944	15.85	16,200
1940	July 24, 1940	11.60	8,480	1945	Mar. 2, 1945	15.94	16,400
1941	Apr. 16, 1941	20.40	26,300		Mar. 20, 1945	19.37	25,600
	Apr. 20, 1941	29.66	63,200		Mar. 26, 1945	16.28	17,700
	June 11, 1941	16.85	17,300		Apr. 16, 1945	29.60	67,900
	Sept. 9, 1941	19.11	22,600		Apr. 22, 1945	19.56	28,000
1942	Oct. 6, 1941	27.92	50,300		May 10, 1945	15.59	16,400
	Oct. 17, 1941	20.36	25,900		May 17, 1945	18.52	24,600
	Oct. 26, 1941	18.56	21,400		May 25, 1945	17.77	22,600
	Nov. 1, 1941	29.31	56,200		May 28, 1945	20.26	30,200
	Apr. 9, 1942	20.27	25,700		June 7, 1945	22.20	36,600
	June 19, 1942	17.58	19,100		June 18, 1945	19.17	26,800
	June 21, 1942	17.58	19,100		Sept. 25, 1945	26.81	54,300
	Sept. 7, 1942	17.90	19,600	1946	Oct. 22, 1945	15.56	16,700
	Sept. 19, 1942	19.22	23,300		Feb. 19, 1946	15.20	15,700
					May 31, 1946	22.26	37,000
1943	Dec. 27, 1942	22.18	30,800	1947	Apr. 11, 1947	19.78	28,600
	May 11, 1943	28.2	54,500		Apr. 26, 1947	26.46	53,000
	May 19, 1943	43.4	190,000		May 21, 1947	14.53	14,100
	May 24, 1943	19.6	24,300	1948	Mar. 23, 1948	15.89	17,600
	June 5, 1943	18.7	21,800		June 23, 1948	30.20	74,600
1944	Mar. 19, 1944	17.27	20,000		July 18, 1948	14.75	14,800
	Apr. 11, 1944	19.62	26,200		July 27, 1948	21.85	35,600
	May 2, 1944	15.55	15,700				

a Annual peak only.

Peak stages and discharges of Spring River near Quapaw, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 24, 1949	16.83	20,100	1954	Sept. 30, 1954	12.34	9,400
	Feb. 16, 1949	17.16	21,300	1955	Oct. 12, 1954	15.54	17,000
	May 21, 1949	16.61	19,600		Oct. 27, 1954	15.85	17,700
1950	Oct. 22, 1949	14.40	14,100		Feb. 20, 1955	15.17	16,200
	Jan. 14, 1950	16.19	18,200		June 28, 1955	20.20	29,800
	July 10, 1950	17.22	20,600	1956	Sept. 30, 1956	14.10	12,700
	July 19, 1950	18.50	24,000		Apr. 4, 1957	15.82	17,600
	Aug. 6, 1950	16.88	19,900	1957	Apr. 18, 1957	15.93	17,800
	Aug. 29, 1950	27.59	54,800		May 17, 1957	15.70	17,300
1951	Feb. 21, 1951	21.52	33,800		May 23, 1957	21.37	34,900
	June 22, 1951	17.97	23,500		May 25, 1957	25.40	49,700
	June 30, 1951	20.80	31,600		June 3, 1957	20.59	32,100
	July 5, 1951	18.62	25,200		June 11, 1957	27.00	56,000
	July 11, 1951	16.83	20,300		June 15, 1957	21.8	36,300
	Sept. 10, 1951	17.27	21,600	1958	Mar. 24, 1958	16.87	20,400
	Sept. 13, 1951	18.23	24,100		July 7, 1958	15.58	16,800
1952	Nov. 10, 1951	14.58	15,000		July 12, 1958	20.2	30,800
	Nov. 12, 1951	18.09	24,100		July 18, 1958	16.28	18,700
	Nov. 16, 1951	16.56	20,000		July 25, 1958	21.70	36,000
	Feb. 3, 1952	19.72	28,900		July 28, 1958	17.2	21,300
1953	Apr. 24, 1953	12.90	11,500				

1885. Lost Creek at Seneca, Mo.

Location--Lat 36°50', long 94°36', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.25 N., R.34 W., on left bank on downstream side of Seneca Street Bridge in Seneca, half a mile upstream from Little Lost Creek and $\frac{1}{2}$ miles upstream from mouth.

Drainage area--42 sq mi.

Gage--Recording. Datum of gage is 839.96 ft above mean sea level, datum of 1929.

Stage-discharge relation--Defined by current-meter measurements below 1,400 cfs and extended above by logarithmic plotting.

Remarks--Base for partial-duration series, 175 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 16, 1943	11.7	-	1955	Mar. 20, 1955	1.80	187
1945	September 1945	11.7	-	1955	June 27, 1955	1.96	218
					July 6, 1955	2.29	287
1949	Feb. 15, 1949	2.79	361		July 17, 1955	1.90	206
	Apr. 27, 1949	2.39	252	1956	May 31, 1956	1.49	132
	Sept. 13, 1949	2.08	178		Mar. 31, 1957	2.95	596
	Sept. 18, 1949	2.38	252	1957	Apr. 3, 1957	1.98	281
1950	Jan. 13, 1950	2.37	249		Apr. 16, 1957	2.79	539
	May 11, 1950	2.15	207		Apr. 20, 1957	3.59	890
	July 10, 1950	2.33	241		May 16, 1957	1.72	213
	Aug. 27, 1950	6.78	3,280		May 21, 1957	7.54	4,690
	Sept. 15, 1950	2.89	377		May 25, 1957	8.21	5,760
1951	Oct. 3, 1950	2.67	301		May 29, 1957	2.82	539
	Feb. 20, 1951	3.22	488		June 2, 1957	2.65	486
	June 30, 1951	8.05	4,600		June 9, 1957	7.20	4,270
	July 10, 1951	2.48	267		July 1, 1957	1.72	208
1952	May 23, 1952	3.18	472	1958	Mar. 23, 1958	2.25	361
	Apr. 24, 1953	1.77	107		Mar. 30, 1958	1.70	210
1953	Sept. 30, 1954	2.04	274		June 21, 1958	1.77	230
1954	Oct. 26, 1954	2.33	296		July 7, 1958	2.48	337
					July 25, 1958	4.46	1,420
					July 28, 1958	1.71	231

1886. Neosho River near Wyandotte, Okla.
(Below Spring River, known locally as Grand River)

Location.--Lat 36°48', long 94°45', in NE $\frac{1}{4}$ sec.30, T.27 N., R.24 E., at left pier of St. Louis-San Francisco Railway Co. bridge, 0.2 mile downstream from Lost Creek, $\frac{1}{2}$ miles west of Wyandotte, and at mile 130.3.

Drainage area.--8,792 sq mi.

Gage.--Nonrecording. Datum of gage is 717.56 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--23 ft.

Remarks.--Records furnished by U. S. Weather Bureau. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	December 1895	34.0	-	1926	Sept. 5, 1926	19.0	-
1912	Apr. 30, 1912	30.0	-	1927	Apr. 15, 1927	29.5	-
1913	Mar. 26, 1913	17.0	-	1928	June 22, 1928	25.5	-
1914	Feb. 20, 1914	11.4	-	1929	Apr. 22, 1929	26.8	-
1915	May 28, 1915	21.2	-	1930	June 16, 1930	18.0	-
1916	Jan. 29, 1916	25.6	-	1931	May 20, 1931	12.2	-
1917	June 6, 1917	9.5	-	1932	June 28, 1932	14.4	-
1918	Apr. 29, 1918	11.0	-	1933	May 15, 1933	21.6	-
1919	Nov. 8, 1918	20.0	-	1934	Sept.30, 1934	8.8	-
1920	Mar. 26, 1920	18.5	-	1935	June 8, 1935	27.7	-
1921	Apr. 27, 1921	15.2	-	1936	Sept.28, 1936	14.8	-
1922	Apr. 10, 1922	23.5	-	1937	June 11, 1937	18.5	-
1923	June 15, 1923	24.5	-	1938	May 1,30,1938	20.0	-
1924	May 30, 1924	21.0	-	1939	May 23, 1939	11.2	-
1925	Nov. 16, 1924	8.6	-				

1890. Elk River near Tiff City, Mo.

Location.--Lat 36°38', long 94°35', in NE $\frac{1}{4}$ sec.22, T.22 N., R.34 W., on downstream side of right pier of bridge on State Highway 43, three-quarters of a mile downstream from Blackfoot Branch, 2 $\frac{1}{2}$ miles upstream from Buffalo Creek, 3 miles southeast of Tiff City, and at mile 15.8.

Drainage area.--872 sq mi.

Gage.--Recording. Datum of gage is 750.61 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs and extended on basis of slope-area measurement at 137,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 12, 1940	11.62	9,480	1943	Dec. 28, 1942	14.35	15,600
1941	Apr. 16, 1941	21.46	48,000		Apr. 12, 1943	12.26	11,000
	Apr. 19, 1941	28.4	137,000		May 10, 1943	23.55	62,400
					May 18, 1943	23.60	62,900
1942	Oct. 5, 1941	11.60	9,480	1944	Apr. 11, 1944	15.36	18,500
	Oct. 31, 1941	19.69	36,400		June 21, 1944	14.46	16,600
	Apr. 9, 1942	12.66	11,700	1945	Feb. 22, 1945	14.90	18,000
1943	Oct. 31, 1942	16.70	23,000		Mar. 3, 1945	17.54	26,200
	Nov. 6, 1942	12.99	12,400		Mar. 7, 1945	13.57	14,900

Peak stages and discharges of Elk River near Tiff City, Mo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Mar. 19, 1945	16.16	21,700	1951	Feb. 19, 1951	17.00	22,000
	Mar. 25, 1945	13.46	14,700		Aug. 22, 1952	11.85	10,300
	Apr. 15, 1945	23.5	63,200	1953	Mar. 15, 1953	10.06	7,270
	May 17, 1945	12.46	12,200		May 3, 1954	11.06	9,030
	May 17, 1945	15.83	20,500	1955	Feb. 20, 1955	14.69	16,100
	May 27, 1945	11.20	10,400		Mar. 21, 1955	11.47	9,750
	June 18, 1945	10.61	9,320	1956	May 15, 1956	23.14	49,900
	Sept. 25, 1945	12.84	13,300		Apr. 4, 1957	18.37	23,900
1946	Feb. 14, 1946	13.79	15,200	1957	May 19, 1957	12.13	10,900
	May 25, 1946	11.22	10,400		May 21, 1957	24.72	70,800
1947	Dec. 10, 1946	15.94	20,800	1958	May 25, 1957	21.12	38,000
	Apr. 11, 1947	14.29	16,500		June 3, 1957	12.85	12,200
	Apr. 25, 1947	16.10	21,400	1958	June 10, 1957	12.51	11,600
1948	Aug. 15, 1948	10.50	8,410		June 13, 1957	11.66	10,200
	May 20, 1949	11.29	9,860	1958	Mar. 24, 1958	12.75	12,200
1950	Jan. 14, 1950	15.13	18,500		May 3, 1958	13.53	13,500
	May 11, 1950	21.72	45,900		May 9, 1958	11.20	9,340
	July 20, 1950	17.52	24,000		July 12, 1958	11.40	9,680
	Aug. 6, 1950	19.60	33,000		July 26, 1958	18.53	26,000
	Aug. 27, 1950	11.83	10,500				

1895. Neosho River near Grove, Okla.
(Below Spring River, known locally as Grand River)

Location.--Lat 36°36'45", long 94°49'25", in SE $\frac{1}{4}$ sec.27, T.25 N., R.23 E., near left bank on downstream side of former bridge on State Highway 25, 3 miles downstream from Spring Branch, 3 $\frac{1}{2}$ miles northwest of Grove, 8.2 miles downstream from Elk River, and at mile 105.4.

Drainage area.--9,969 sq mi.

Gage.--Nonrecording. Datum of gage is 666.94 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 100,000 cfs and extended above.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 23,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
-	-	a33.0	125,000	1928	Oct. 3, 1927	22.00	70,600
1925	Mar. 20, 1925	10.0	19,400	1928	Feb. 7, 1928	13.43	32,000
					Mar. 17, 1928	12.51	28,600
1926	Nov. 9, 1925	12.05	26,200		Apr. 6, 1928	12.46	28,600
	Sept. 5, 1926	23.0	72,100		Apr. 23, 1928	18.70	55,000
	Sept. 22, 1926	14.50	35,600		Apr. 27, 1928	11.22	24,100
1927					June 2, 1928	22.62	73,500
	Oct. 1, 1926	14.04	34,300		June 11, 1928	19.98	61,100
	Oct. 5, 1926	24.64	83,100		June 22, 1928	25.87	89,500
	Nov. 15, 1926	12.22	27,500		June 29, 1928	13.28	31,600
	Jan. 29, 1927	13.48	32,300		July 1, 1928	12.38	28,200
	Mar. 21, 1927	16.95	47,200		Aug. 4, 1928	20.98	65,800
	Apr. 1, 1927	23.00	75,400	1929	Nov. 28, 1928	15.86	42,300
	Apr. 15, 1927	b34.58	133,000		Dec. 18, 1928	14.45	35,900
	Apr. 19, 1927	25.58	88,000		Jan. 11, 1929	11.70	25,800
	Apr. 25, 1927	18.26	53,200		Apr. 9, 1929	20.80	64,900
	May 8, 1927	12.54	28,600		Apr. 15, 1929	18.00	51,800
	June 22, 1927	21.56	68,700		Apr. 21, 1929	29.60	108,000
	July 23, 1927	10.98	23,400		May 9, 1929	21.38	67,700
	Aug. 4, 1927	11.30	24,400		May 13, 1929	29.50	107,000
	Aug. 10, 1927	20.10	61,600		May 19, 1929	25.40	87,000
	Aug. 19, 1927	25.10	85,500		June 4, 1929	19.20	57,300

a Floodmark found in 1925; date unknown but may have occurred in April 1912, according to Weather Bureau records at Pensacola.

b This flood probably lower than that in December 1895.

Peak stages and discharges of Neosho River near Grove, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 8, 1929	16.10	43,100	1935	June 18, 1935	20.9	65,300
	June 13, 1929	13.30	31,600		June 22, 1935	20.0	61,100
	June 20, 1929	13.80	33,500		June 27, 1935	14.7	37,100
	June 25, 1929	11.4	24,800				
	July 8, 1929	11.5	25,100	1936	Nov. 6, 1935	12.50	25,800
					Sept. 28, 1936	19.3	57,800
1930	Feb. 5, 1930	13.10	30,800				
	Feb. 8, 1930	12.36	28,200	1937	Oct. 8, 1936	17.0	47,200
	May 1, 1930	18.75	55,500		Nov. 3, 1936	20.0	61,100
	May 12, 1930	13.75	33,500		Jan. 15, 1937	18.20	52,700
	May 18, 1930	12.05	26,800		Jan. 31, 1937	18.45	53,600
	June 13, 1930	12.15	27,500		Mar. 25, 1937	11.05	23,400
	June 16, 1930	19.7	59,700		Apr. 22, 1937	11.88	26,500
					May 24, 1937	11.49	25,100
1931	May 30, 1931	13.30	31,600		June 11, 1937	21.88	70,100
					June 16, 1937	21.0	65,800
1932	Nov. 25, 1931	13.08	30,800		July 20, 1937	11.20	24,100
	June 22, 1932	11.80	26,100		Sept. 10, 1937	18.0	51,800
	June 28, 1932	15.20	39,200				
				1938	Feb. 18, 1938	15.0	38,400
1933	Dec. 25, 1932	23.28	76,300		Mar. 31, 1938	18.46	54,100
	Apr. 22, 1933	14.50	36,300		Apr. 11, 1938	12.09	27,200
	May 15, 1933	25.9	89,500		May 8, 1938	13.75	33,500
					May 30, 1938	23.85	79,200
1934	Sept. 30, 1934	10.4	21,300		June 1, 1938	20.45	63,000
					June 17, 1938	17.40	49,000
1935	Nov. 23, 1934	14.20	35,100				
	Mar. 12, 1935	26.10	90,500	1939	May 14, 1939	15.6	40,900
	Mar. 25, 1935	12.32	27,900		May 23, 1939	13.99	34,300
	May 20, 1935	16.55	45,400		May 27, 1939	12.31	27,900
	June 8, 1935	34.0	130,000				

1905. Neosho River near Langley, Okla.
(Below Spring River, known locally as Grand River)

Location.--Lat 36°26', long 95°03', in SW 1/4 sec. 27, T.23 N., R.21 E., near left bank on downstream side of pier of bridge on State Highway 82, 1 1/2 miles southwest of Langley, 4.1 miles downstream from Pensacola Dam, 5.8 miles upstream from Big Cabin Creek, and at mile 73.4.

Drainage area.--10,335 sq mi.

Gage.--Nonrecording prior to Feb. 16, 1940; recording thereafter. Prior to Feb. 10, 1954, at site half a mile upstream. Datum of gage is 607.65 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements to 133,000 cfs and extended on basis of computation of peak outflow from Lake O' The Cherokees during 1943 flood.

Bankfull stage.--27 ft.

Historical data.--Flood of Oct. 31, 1941, was reported by local resident as being higher than that in December 1895.

Remarks.--Flow completely regulated since March 1940 by Lake O' The Cherokees (capacity, 2,197,000 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	35.4	150,000	1949	Feb. 18, 1949	19.66	48,100
1940	Mar. 10, 1940	5.20	1,280	1950	Aug. 30, 1950	20.10	50,400
1941	Apr. 20, 1941	35.43	150,000	1951	July 18, 1951	36.25	158,000
1942	Oct. 31, 1941	36.20	158,000	1952	Nov. 13, 1951	22.11	58,700
1943	May 20, 1943	45.5	300,000	1953	Apr. 22, 1953	11.00	10,200
1944	Apr. 17, 1944	24.92	73,300	1954	July 7, 1954	9.50	10,700
1945	Apr. 16, 1945	34.24	143,000	1955	June 30, 1955	15.30	33,900
1946	Oct. 5, 1945	22.20	60,900	1956	Dec. 7, 1955	9.50	10,700
1947	Apr. 27, 1947	24.73	73,200	1957	May 25, 1957	37.6	180,000
1948	June 27, 1948	26.23	80,000	1958	July 13, 1958	21.60	62,800

1910. Big Cabin Creek near Big Cabin, Okla.

Location.--Lat 36°31', long 95°08', in NW 1/4 sec. 35, T.24 N., R.20 E., on downstream side of right pier of county highway bridge, 2 1/3 miles upstream from Mustang Creek, 5 miles southeast of Big Cabin, and 8.5 miles upstream from mouth.

Drainage area.--466 sq mi.

Gage.--Nonrecording prior to Oct. 29, 1947; recording thereafter. Datum of gage is 622.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and extended on basis of slope-area measurement at 63,000 cfs.

Bankfull stage.--17 ft.

Historical data.--In 1941, local residents reported that the flood in 1935 was the highest in 48 years. Peak stage data prior to 1948 furnished by Corps of Engineers.

Remarks.--Records for 1948 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 6, 1935	30.9	41,000	1948	Aug. 15, 1948	22.40	13,400
1941	Apr. 19, 1941	27.5	27,300	1949	May 20, 1949	21.43	12,000
	June 10, 1941	27.7	28,000		June 14, 1949	20.75	11,100
1942	Oct. 5, 1941	31.1	42,000	1950	May 11, 1950	19.27	9,150
	Sept. 20, 1942	23.5	15,600		May 26, 1950	20.62	10,800
1943	May 10, 1943	32.0	46,500		May 30, 1950	20.95	11,400
	May 18, 1943	34.96	63,000	1951	Oct. 3, 1950	19.98	10,100
1944	Mar. 16, 1944	22.4	13,400		Feb. 21, 1951	20.33	10,400
	Apr. 9, 1944	25.0	19,300		June 30, 1951	30.76	40,700
	Apr. 11, 1944	19.8	9,800	1952	Mar. 11, 1952	17.50	6,920
1945	Mar. 19, 1945	19.8	9,800	1953	Apr. 24, 1953	19.84	9,670
	Apr. 13, 1945	24.1	17,000	1954	May 1, 1954	14.13	3,930
	Apr. 16, 1945	23.0	14,500				
	May 10, 1945	19.3	9,150	1955	Mar. 21, 1955	18.30	7,880
	Sept. 25, 1945	25.5	20,800				
				1956	Apr. 15, 1956	14.74	4,350
1946	May 31, 1946	19.5	9,410				
1947	Apr. 11, 1947	24.4	17,700	1957	May 1, 1957	19.66	9,860
	Apr. 25, 1947	28.25	29,900		May 17, 1957	19.40	9,470
	Apr. 27, 1947	19.8	9,800		May 21, 1957	25.65	18,900
	June 23, 1947	20.9	11,300		May 25, 1957	27.81	25,500
1948	June 23, 1948	28.78	33,800		June 2, 1957	19.10	9,090
	June 27, 1948	21.80	12,500		June 10, 1957	21.38	12,200
	July 19, 1948	19.73	9,670		June 13, 1957	23.05	14,500
	Aug. 13, 1948	24.87	19,800	1958	Mar. 24, 1958	19.90	10,100
					July 13, 1958	30.58	33,900

Note.--Stages for 1935 and 1941-43 are not complete as a partial-duration series.

ARKANSAS RIVER BASIN

1915. Neosho River near Chouteau, Okla.
(Below Spring River, known locally as Grand River)

Location.--Lat 36°14', long 95°14', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.20 N., R.19 E., on downstream side of right pier of county highway bridge, 5.0 miles upstream from Pryor Creek, 7 $\frac{1}{2}$ miles northeast of Chouteau, and at mile 44.7.

Drainage area.--11,546 sq mi; at former site below Pryor Creek, 11,915 sq mi.

Gage.--Nonrecording prior to Apr. 4, 1941, at site 5.7 miles downstream at datum 15.46 ft lower; recording thereafter at present site and datum. Datum of present gage is 551.83 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 140,000 cfs and extended on basis of slope-area measurement at 400,000 cfs. Peak discharges since 1950 computed from 1950 rating curve.

Bankfull stage.--25 ft.

Remarks.--Flow regulated since 1940 by Lake O' The Cherokees (capacity, 2,197,000 acre-ft) 32.3 miles upstream. Records for 1937-39 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 30,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 19, 1927	44.5	165,000	1943	June 25, 1943	16.96	47,700
					June 29, 1943	14.42	33,800
1938	Feb. 18, 1938	23.40	66,800				
	Mar. 31, 1938	24.07	71,000	1944	Mar. 23, 1944	14.43	33,800
	May 9, 1938	16.85	34,900		Mar. 29, 1944	13.88	31,000
	May 31, 1938	26.18	83,600		Apr. 11, 1944	20.30	68,000
	June 10, 1938	20.63	52,700		Apr. 18, 1944	21.09	72,500
	June 18, 1938	20.80	53,700		Apr. 23, 1944	15.62	43,500
1939	May 14, 1939	21.00	54,700		May 2, 1944	20.89	71,500
	May 21, 1939	15.76	30,900		May 6, 1944	20.79	71,000
	May 23, 1939	17.35	37,300		June 22, 1944	15.60	43,100
1940	Apr. 29, 1940	8.6	6,100	1945	Mar. 8, 1945	13.80	31,700
					Mar. 19, 1945	18.12	57,000
1941	Apr. 20, 1941	35.10	188,000		Mar. 25, 1945	17.47	53,800
	June 11, 1941	23.92	82,300		Apr. 16, 1945	35.00	164,000
	Sept. 10, 1941	18.60	57,500		Apr. 25, 1945	22.36	79,500
	Sept. 17, 1941	13.79	36,000		May 10, 1945	14.47	36,800
1942	Oct. 6, 1941	30.70	115,000		May 20, 1945	13.91	32,900
	Oct. 16, 1941	20.51	66,200		May 30, 1945	16.4	46,800
	Nov. 1, 1941	36.45	205,000		June 8, 1945	13.74	33,600
	Apr. 10, 1942	22.00	73,100		June 19, 1945	14.86	40,700
	Apr. 28, 1942	17.60	52,900		Sept. 26, 1945	22.90	81,000
	June 13, 1942	14.22	37,800	1946	Oct. 2, 1945	18.52	59,000
	June 22, 1942	18.94	58,800		Oct. 24, 1945	13.73	32,700
	June 27, 1942	17.10	50,600		Jan. 12, 1946	15.09	40,300
	July 12, 1942	12.75	31,600		Feb. 22, 1946	14.73	38,500
	Sept. 7, 1942	16.63	48,500		June 4, 1946	14.61	37,900
	Sept. 20, 1942	20.22	64,800	1947	Apr. 8, 1947	14.25	35,600
1943	Oct. 4, 1942	14.62	39,500		Apr. 11, 1947	22.53	79,000
	Oct. 31, 1942	13.70	34,300		Apr. 20, 1947	16.43	48,100
	Dec. 28, 1942	20.34	64,200		Apr. 26, 1947	24.89	91,000
	May 11, 1943	38.35	214,000		May 23, 1947	14.04	34,400
	May 20, 1943	45.00	400,000	1948	June 23, 1948	21.80	73,500
	June 7, 1943	20.18	63,700		June 27, 1948	25.32	92,500

a Annual peak only.

Peak stages and discharges of Neosho River near Chouteau, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	July 13, 1948	13.65	33,200	1952	Nov. 26, 1951	13.52	33,000
	July 23, 1948	18.50	60,500		Feb. 4, 1952	14.23	37,100
	July 31, 1948	19.05	63,500		Mar. 11, 1952	15.52	44,800
	Aug. 14, 1948	16.09	47,500	1953	Apr. 24, 1953	11.21	20,700
1949	Feb. 18, 1949	16.58	50,400		June 23, 1954	8.42	9,760
	May 20, 1949	14.58	40,100	1955	June 30, 1955	13.66	34,100
	May 29, 1949	15.88	47,700		May 15, 1956	9.75	14,600
	June 16, 1949	13.47	33,500	1957	May 1, 1957	18.21	59,200
1950	May 11, 1950	21.58	76,500		June 16, 1957	30.80	127,000
	June 11, 1950	13.05	31,200		July 4, 1957	25.32	96,200
	July 28, 1950	15.84	47,100		Mar. 25, 1958	17.00	53,100
	Aug. 11, 1950	15.42	44,800	1958	Mar. 30, 1958	15.10	42,500
1951	Aug. 30, 1950	16.62	51,500		Apr. 4, 1958	16.18	48,800
	Oct. 4, 1950	13.15	31,200		July 13, 1958	24.80	93,600
	June 23, 1951	13.40	32,400		July 27, 1958	18.15	59,200
	July 1, 1951	21.30	74,600		July 29, 1958	14.85	41,000
	July 18, 1951	31.8	133,000				
	Sept. 18, 1951	15.88	47,100				
1952	Nov. 14, 1951	17.88	57,700				

1920. Pryor Creek near Pryor, Okla.

Location.--Lat 36°17', long 95°20', in SW $\frac{1}{4}$ sec. 19, T.21 N., R.19 E., on right bank at downstream side of bridge on U. S. Highway 69, $1\frac{1}{4}$ miles south of Pryor, 2 miles downstream from Seminole Creek, and 10.5 miles upstream from mouth.

Drainage area.--229 sq mi.

Gage.--Nonrecording prior to Nov. 1, 1947; recording thereafter. Datum of gage is 578.06 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended by logarithmic plotting.

Bankfull stage.--16 ft.

Historical data.--Local residents reported that the flood of Oct. 5, 1941, was somewhat lower than that in 1943 and highest previously known for at least 28 years.

Remarks.--Records for 1947-48 computed by Corps of Engineers and reviewed by Geological Survey. Peak stages prior to 1947 from files of Corps of Engineers. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 10, 1943	20.4	-	1952	Oct. 27, 1951	13.85	2,580
	May 18, 1943	18.85	11,000		Mar. 11, 1952	13.94	2,610
1944	Mar. 16, 1944	17.10	4,400	1953	Apr. 24, 1953	17.15	4,400
1945	Apr. 14, 1945	19.6	17,500	1954	May 1, 1954	7.99	1,000
1946	Feb. 19, 1946	13.8	2,540	1955	Sept. 30, 1955	11.93	2,120
1947	Apr. 25, 1947	18.4	8,800	1956	Oct. 5, 1955	11.67	2,060
1948	Mar. 23, 1948	15.30	2,960		May 15, 1956	13.82	2,580
	June 23, 1948	18.95	11,600	1957	Apr. 3, 1957	11.35	2,030
	July 16, 1948	17.41	5,120		Apr. 23, 1957	15.63	3,620
	Aug. 15, 1948	17.60	5,700		May 2, 1957	15.87	3,760
1949	Jan. 23, 1949	12.66	2,240		May 17, 1957	11.87	2,200
	Feb. 15, 1949	18.12	3,240		May 21, 1957	18.84	11,400
	May 19, 1949	18.32	8,300		May 25, 1957	19.41	15,700
	May 24, 1949	16.51	3,500		May 30, 1957	11.35	2,030
	May 11, 1950	18.21	7,900		June 1, 1957	17.28	4,920
1950	Feb. 20, 1951	12.12	2,100		June 15, 1957	18.26	7,850
	July 2, 1951	16.60	3,890		June 23, 1957	15.09	3,400
1951				1958	Mar. 24, 1958	11.77	2,100

ARKANSAS RIVER BASIN

1925. Neosho River near Wagoner, Okla.
(Below Spring River, known locally as Grand River)

Location.--Lat 35°56', long 95°16', on south line of sec.22, T.17 N., R.19 E., on downstream side of left pier of bridge on State Highway 51, 2¼ miles downstream from Nigger Creek, 5 miles southeast of Wagoner, 6 miles upstream from Fourteen Mile Creek, and at mile 13.7.

Drainage area.--12,307 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1939, at site 1¼ miles downstream; recording thereafter at last used site. Prior to Dec. 20, 1925, at datum 0.17 ft higher. Oct. 6, 1937, to Sept. 30, 1939, at datum 4.03 ft lower. Datum of last used gage is 495.35 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Gage heights after Mar. 14, 1949, computed from stage-relation curve and gage-height record at Fort Gibson damsite.

Stage-discharge relation.--Defined by current-meter measurements to 210,000 cfs and extended on basis of slope-area measurement at 400,000 cfs.

Bankfull stage.--34 ft.

Historical data.--Flood in December 1896 was reported by local residents as being similar to that of Nov. 2, 1941, and flood in June 1935 as similar to that of Apr. 20, 1941. Flood of Apr. 30, 1912, was 0.1 ft lower than in 1927 at Wagoner Water Works.

Remarks.--Flow regulated since March 1940 by Lake O' The Cherokees 63.3 miles above station. Records for 1937-39 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 35,000 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Apr. 28, 1925	11.27	24,100	1943	June 7, 1943	-	70,000
					June 25, 1943	-	48,500
1927	Apr. 16, 1927	a39.0	170,000	1944	Mar. 23, 1944	17.12	35,000
1929	May 14, 1929	a34.2	122,000		Apr. 11, 1944	22.34	66,500
1938	Feb. 19, 1938	23.40	63,200		Apr. 18, 1944	23.68	74,400
	Apr. 1, 1938	24.70	70,000		Apr. 23, 1944	18.48	45,400
	May 9, 1938	17.70	37,400		May 2, 1944	24.28	77,700
	May 31, 1938	26.41	79,400		June 23, 1944	18.02	42,700
	June 11, 1938	21.56	54,500	1945	Mar. 19, 1945	22.58	66,500
	June 18, 1938	20.70	50,200		Mar. 25, 1945	20.19	53,600
1939	May 14, 1939	21.10	52,100		Apr. 17, 1945	36.42	167,000
	May 23, 1939	17.53	36,600		Apr. 25, 1945	25.0	81,700
1940	June 28, 1940	10.49	10,500		May 11, 1945	16.77	37,300
1941	Apr. 16, 1941	17.21	37,000		May 30, 1945	18.74	48,700
	Apr. 20, 1941	37.65	183,000		June 19, 1945	17.44	41,100
	June 11, 1941	27.24	88,400		Sept. 27, 1945	24.97	85,200
	Sept. 11, 1941	21.61	58,000	1946	Oct. 6, 1945	20.78	58,100
1942	Oct. 7, 1941	33.38	126,000		Jan. 12, 1946	17.76	42,200
	Oct. 17, 1941	25.26	80,000		Feb. 19, 1946	17.10	38,600
	Oct. 22, 1941	20.63	54,000		June 4, 1946	16.81	37,600
	Nov. 2, 1941	38.78	190,000	1947	Apr. 8, 1947	17.15	39,600
	Apr. 10, 1942	25.19	79,400		Apr. 12, 1947	25.70	87,900
	Apr. 25, 1942	20.00	49,800		Apr. 20, 1947	18.84	48,100
	Apr. 28, 1942	23.40	68,100		Apr. 26, 1947	28.17	103,000
	June 16, 1942	17.77	39,600		May 23, 1947	17.60	41,700
	June 22, 1942	22.31	63,200	1948	June 28, 1948	32.26	99,800
	June 27, 1942	20.00	50,800		July 23, 1948	23.72	59,400
	Sept. 7, 1942	19.16	47,700		Aug. 1, 1948	24.64	63,600
	Sept. 20, 1942	23.06	68,700		Aug. 14, 1948	22.89	55,800
1943	Dec. 28, 1942	23.53	72,000	1949	Feb. 19, 1949	22.06	52,200
	May 11, 1943	39.35	215,000		May 19, 1949	23.9	60,600
	May 21, 1943	45.2	400,000		May 29, 1949	17.88	47,200
					June 11, 1949	15.54	36,400

a At site and datum used 1937-39.

1935. Neosho River below Fort Gibson Reservoir, near Fort Gibson, Okla.
(Below Spring River, known locally as Grand River)

Location--Lat 35°51'15", long 95°13'45", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.16 N., R.19 E., on left bank 1.1 miles downstream from Fort Gibson Dam, 4.5 miles north of Fort Gibson, and at mile 6.6.

Drainage area--12,495 sq mi.

Gage--Nonrecording prior to Aug. 21, 1951; recording thereafter. Prior to June 12, 1952, at site 4.4 miles downstream at datum 8.00 ft lower. Datum of present gage is 483.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation--Defined by current-meter measurements.

Bankfull stage--23 ft.

Remarks--Flow regulated by Lake O' The Cherokees (capacity, 2,197,000 acre-ft) and, since May 1950, by Fort Gibson Reservoir (capacity, 1,284,000 acre-ft). Records computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 1943	a43.0	400,000	1954	May 3, 1954	10.23	12,100
1950	May 11, 1950	22.10	57,000	1955	July 1, 1955	14.10	33,500
	Aug. 3, 1950	b22.73	-	1956	Oct. 6, 1955	12.01	11,600
1951	July 18, 1951	b30.96	-	1957	May 26, 1957	37.60	223,000
	July 20, 1951	b28.40	133,000	1958	July 13, 1958	20.96	79,000
1952	Nov. 17, 1951	17.57	46,800				
1953	Apr. 24, 25, 1953	12.84	25,700				

a From high-water profile.

b Affected by backwater.

1945. Arkansas River near Muskogee, Okla.

Location--Lat 35°46', long 95°18', in NW $\frac{1}{4}$ sec.21, T.15 N., R.19 E., on downstream side of left pier of bridge on U. S. Highways 62 and 64, 1.7 miles downstream from Neosho River, 3 $\frac{1}{2}$ miles northeast of Muskogee, and at mile 457.8.

Drainage area--96,674 sq mi, of which about 84,133 sq mi contributes directly to surface runoff.

Gage--Nonrecording prior to Feb. 22, 1939; recording thereafter. Peak stages prior to March 1935 are adjusted to present site and datum from gage-relation curve and gage-height graphs based on once-daily readings at Oklahoma Gas & Electric Co. gage 1,600 ft downstream. Datum of gage is 471.38 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation--Defined by current-meter measurements.

Bankfull stage--35 ft.

Historical data--Flood in 1833 was probably similar to that in 1943. It was 0.8 ft lower than 1943 flood at Webbers Falls 29 miles downstream.

Remarks--Increasing regulation since 1940 by the following reservoirs, listed chronologically by completion: Lake O' The Cherokees on Neosho River, Salt Plains Reservoir on Salt Fork Arkansas River, John Martin Reservoir on Arkansas River in Colorado, Fall River Reservoir on Fall River in Kansas, Fort Gibson Reservoir on Neosho River, and Hulah Reservoir (1950) on Caney River. Base for partial-duration series, 100,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Arkansas River near Muskogee, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	May 1898	a39.5	b584,000	1942	Oct. 17, 1941	25.85	151,000
1923	June 1923	34.7	b295,000		Oct. 27, 1941	26.00	153,000
					Oct. 31, 1941	37.23	304,000
1926	Sept. 7, 1926	23.4	142,000		Apr. 10, 1942	27.42	176,000
					Apr. 22, 1942	24.13	138,000
1927	Oct. 6, 1926	31.4	248,000		Apr. 25, 1942	25.78	158,000
	Apr. 3, 1927	23.8	145,000		Apr. 28, 1942	29.56	211,000
	Apr. 15, 1927	36.5	325,000		June 25, 1942	28.97	198,000
	June 21, 1927	24.8	157,000	1943	Dec. 30, 1942	21.28	115,000
	Aug. 5, 1927	24.9	160,000		May 11, 1943	38.32	340,000
	Aug. 20, 1927	23.2	139,000		May 21, 1943	48.20	700,000
					June 6, 1943	22.35	122,000
1928	Oct. 4, 1927	25.3	163,000				
	Apr. 24, 1928	20.0	103,000	1944	Mar. 24, 1944	20.91	111,000
	June 14, 1928	23.0	137,000		Apr. 12, 1944	27.44	187,000
	June 22, 1928	27.9	197,000		Apr. 17, 1944	26.06	171,000
	Aug. 5, 1928	26.0	172,000		Apr. 27, 1944	27.64	189,000
1929	Nov. 21, 1928	20.0	103,000	1945	Oct. 7, 1944	19.68	103,000
	Apr. 10, 1929	21.0	114,000		Dec. 8, 1944	21.08	116,000
	Apr. 15, 1929	25.1	162,000		Mar. 20, 1945	22.99	131,000
	Apr. 23, 1929	29.8	222,000		Mar. 27, 1945	21.29	113,000
	May 10, 1929	23.0	137,000		Apr. 18, 1945	36.65	326,000
	May 15, 1929	31.5	249,000		July 3, 1945	20.89	115,000
	May 20, 1929	31.4	248,000	1946	Oct. 1, 1945	30.67	231,000
	June 5, 1929	22.1	128,000				
	June 9, 1929	22.9	138,000	1947	Apr. 16, 1947	27.31	196,000
	June 26, 1929	20.1	105,000		Apr. 26, 1947	25.19	156,000
1930	May 14, 1930	20.9	114,000		May 18, 1947	22.39	128,000
	June 17, 1930	22.7	136,000		May 23, 1947	22.36	128,000
1931	June 16, 1931	16.0	63,000	1948	June 24, 1948	30.25	224,000
1932	Nov. 25, 1931	19.2	95,300		June 30, 1948	28.62	203,000
					July 19, 1948	24.10	145,000
1933	Dec. 26, 1932	21.5	121,000		Aug. 15, 1948	21.04	112,000
	May 16, 1933	25.1	165,000	1949	Feb. 16, 1949	22.62	137,000
1934	Apr. 9, 1934	14.9	b57,200		May 20, 1949	28.27	208,000
					June 11, 1949	22.07	121,000
1935	Nov. 23, 1934	19.9	103,000	1950	May 11, 1950	23.15	141,000
	Mar. 13, 1935	23.2	141,000		July 22, 1950	23.46	138,000
	May 22, 1935	23.6	146,000		Aug. 3, 1950	25.10	157,000
	June 9, 1935	30.8	243,000		Aug. 8, 1950	20.68	107,000
	June 17, 1935	29.8	229,000	1951	May 22, 1951	23.20	144,000
	June 22, 1935	28.0	204,000		May 26, 1951	22.68	138,000
	July 1, 1935	21.4	120,000		July 5, 1951	30.83	242,000
1936	Sept. 29, 1936	19.54	98,000		July 17, 1951	31.40	240,000
					Sept. 16, 1951	21.23	111,000
1937	Oct. 9, 1936	21.55	122,000	1952	Nov. 17, 1951	17.71	83,000
	Jan. 16, 1937	19.67	100,000				
	Feb. 1, 1937	20.46	109,000	1953	Apr. 25, 1953	15.99	66,600
	June 13, 1937	23.25	141,000				
	June 18, 1937	22.47	133,000	1954	May 3, 1954	15.83	63,000
1938	Mar. 30, 1938	21.39	108,000				
	May 26, 1938	24.79	149,000	1955	May 29, 1955	18.16	87,200
	May 31, 1938	23.78	135,000				
	June 12, 1938	21.11	105,000	1956	Oct. 6, 1955	20.28	110,000
1939	May 14, 1939	18.20	77,800	1957	May 3, 1957	19.86	104,000
1940	Sept. 5, 1940	24.68	161,000		May 20, 1957	29.50	248,000
					May 22, 1957	31.85	259,000
1941	Apr. 21, 1941	32.72	248,000		May 26, 1957	39.03	366,000
	June 12, 1941	29.09	195,000	1958	Mar. 27, 1958	20.54	110,000
	Sept. 11, 1941	20.99	100,000		July 14, 1958	22.66	138,000
1942	Oct. 7, 1941	27.39	173,000				

a Based on comparative elevations of floods in 1898 and 1927 at site 4 miles downstream.

b Annual peak only.

1946. Arkansas River at Webbers Falls, Okla.

Location.--Lat 35°31', long 95°07', in SW $\frac{1}{4}$ sec.18, T.12 N., R.21 E., near right bank at downstream side of pier of bridge on U. S. Highway 64 at east edge of Webbers Falls, 1.7 miles upstream from Illinois River and at mile 428.4.

Drainage area.--97,049 sq mi, of which about 84,508 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to July 7, 1934, and after Sept. 16, 1948; recording July 7, 1934, to Sept. 16, 1948. Datum of gage is 442.2 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 270,000 cfs during 1929. Backwater occurs from high inflows of Illinois River. Large shifts occur.

Bankfull stage.--23 ft.

Remarks.--Flow partly regulated since 1940 (see references for station near Muskogee). Stage records obtained from publications of U. S. Weather Bureau. Results of several discharge measurements during 1928-32 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1833	June 1833	38.2	-	1935	June 18, 1935	29.9	-
1905	June 1, 1905	17.4	-	1936	June 9, 1936	16.4	-
1906	June 7, 1906	18.0	-	1937	June 13, 1937	22.3	-
1907	May 17, 1907	19.4	-	1938	Feb. 18, 1938	26.8	-
1908	May 26, 1908	31.0	-	1939	May 15, 1939	17.9	-
1909	Dec. 1, 1908	26.5	-	1940	Sept. 6, 1940	21.3	-
1910	Nov. 19, 1909	13.2	-	1941	Apr. 21, 1941	31.1	-
1911	Aug. 8, 1911	21.1	-	1942	Nov. 1, 1941	35.8	-
1923	June 14, 1923	29.5	-	1943	May 22, 1943	39.0	-
1924	Oct. 17, 1923	23.6	-	1944	May 3, 1944	25.9	-
1925	Apr. 29, 1925	14.5	-	1945	Apr. 16, 1945	37.2	-
1926	Sept. 10, 1926	21.1	-	1946	Oct. 2, 1945	29.0	-
1927	Apr. 15, 1927	33.6	-	1947	Apr. 16, 1947	26.4	-
1928	June 23, 1928	25.7	-	1948	June 24, 1948	30.1	-
1929	May 15, 1929	29.0	273,000	1949	May 20, 1949	29.3	-
1930	June 17, 1930	21.6	-	1950	May 12, 1950	31.8	-
1931	June 17, 1931	15.0	-	1951	July 5, 1951	28.9	-
1932	Nov. 25, 1931	19.4	-	1952	Mar. 13, 1952	18.2	-
1933	May 16, 1933	26.4	-	1953	Apr. 25, 1953	17.2	-
1934	Apr. 10, 1934	14.4	57,200	1954	May 3, 1954	20.9	-
				1955	May 30, 1955	19.5	-

1950. Osage Creek near Elm Springs, Ark.

Location.--Lat 36°13', long 94°17', in sec.21, T.18 N., R.31 W., on left bank 1 mile downstream from Little Osage Creek and $\frac{3}{4}$ miles northwest of Elm Springs.

Drainage area.--129 sq mi.

Gage.--Recording. Altitude of gage is 1,052 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs.

Historical data.--Flood of May 10, 1950, was greatest known by local residents.

Remarks.--Base for partial-duration series, 3,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Osage Creek near Elm Springs, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 10, 1950	16.7	-	1956	May 15, 1956	5.79	1,160
1951	Feb. 20, 1951	11.72	6,770	1957	Jan. 22, 1957	8.96	3,760
	June 9, 1951	9.32	4,230		Apr. 3, 1957	14.36	10,800
1952	Aug. 22, 1952	6.99	2,210		May 21, 1957	10.78	5,760
					May 22, 1957	12.50	8,000
1953	Mar. 17, 1953	6.40	1,820		May 25, 1957	14.09	10,300
					June 2, 1957	10.00	4,870
1954	May 2, 1954	9.44	4,050	Aug. 17, 1957	8.11	3,050	
1955	Feb. 19, 1955	10.58	5,280	1958	July 25, 1958	7.05	2,200

1965. Illinois River near Tahlequah, Okla.

Location.--Lat 35°55', long 94°55', in SE $\frac{1}{4}$ sec.26, T.17 N., R.22 E., near center of span on downstream side of pier of bridge on U. S. Highway 62, 2 $\frac{1}{4}$ miles northeast of Tahlequah, 6.5 miles upstream from Barren Fork, and at mile 55.8.

Drainage area.--959 sq mi.

Gage.--Nonrecording prior to Feb. 23, 1939; recording thereafter. Datum of gage is 664.14 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 77,000 cfs and extended on basis of slope-area measurement at 150,000 cfs.

Bankfull stage.--11 ft.

Remarks.--Peak stage data for 1916 and 1927 furnished by Corps of Engineers. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	January 1916	26	a112,000	1943	May 21, 1943	14.53	18,400
1927	Apr11 1927	22.3	a60,000	1944	Mar. 17, 1944	12.72	12,400
1935	-	15	a18,500	Mar. 21, 1944	15.82	23,200	
				Apr. 12, 1944	11.06	8,300	
1936	Dec. 7, 1935	-	9,000	May 3, 1944	10.86	7,820	
1937	Jan. 10, 1937	11.98	9,580	1945	Feb. 22, 1945	14.85	19,800
	Jan. 16, 1937	13.65	14,500	Feb. 27, 1945	13.26	14,200	
	Apr. 22, 1937	11.42	7,960	Mar. 4, 1945	15.14	20,800	
	Sept. 11, 1937	11.49	8,220	Mar. 7, 1945	12.54	12,100	
				Mar. 16, 1945	11.38	9,290	
1938	Feb. 18, 1938	19.67	39,400	Mar. 20, 1945	21.12	51,000	
	Mar. 29, 1938	13.19	12,600	Mar. 25, 1945	11.38	9,040	
	May 24, 1938	13.14	12,300	Mar. 31, 1945	11.12	8,540	
				Apr. 15, 1945	23.60	68,800	
1939	Feb. 21, 1939	10.8	6,400	May 17, 1945	12.44	12,700	
1940	Apr. 12, 1940	10.39	5,600	June 12, 1945	12.88	14,600	
1941	Jan. 2, 1941	15.22	20,500	1946	Feb. 15, 1946	12.81	14,000
	Apr. 16, 1941	13.10	13,300	May 26, 1946	15.99	25,800	
	Apr. 20, 1941	19.56	41,400	1947	Nov. 8, 1946	12.23	12,200
1942	Oct. 17, 1941	12.57	11,200		Nov. 11, 1946	12.03	11,600
	Nov. 1, 1941	17.71	30,000		Dec. 11, 1946	13.95	18,000
	Apr. 10, 1942	11.83	9,200		Dec. 13, 1946	14.36	19,800
	Apr. 26, 1942	12.13	10,000		Apr. 12, 1947	10.97	9,160
	Apr. 29, 1942	15.41	20,600		May 17, 1947	12.87	14,700
1943					June 3, 1947	11.49	10,500
	Oct. 31, 1942	16.66	25,800	1948	Mar. 3, 1948	10.45	7,770
	Nov. 6, 1942	13.60	14,200	Aug. 10, 1948	10.24	7,300	
	Nov. 9, 1942	13.64	14,200	Aug. 13, 1948	14.16	19,100	
	Dec. 28, 1942	17.33	29,400	Aug. 15, 1948	19.21	41,400	
	May 11, 1943	25.37	93,200	1949	Jan. 26, 1949	10.66	8,500

a Annual peak only.

Peak stages and discharges of Illinois River near Tahlequah, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 29, 1949	10.58	8,250	1953	May 14, 1953	11.21	10,100
	Feb. 16, 1949	13.29	16,000	1954	May 3, 1954	13.13	16,000
	Mar. 28, 1949	10.44	8,010				
	May 20, 1949	13.36	16,700	1955	Feb. 21, 1955	13.02	13,000
1950	Jan. 5, 1950	10.80	9,240	1955	Mar 22, 1955	13.55	14,800
	Jan. 15, 1950	12.70	14,800		1956	May 16, 1956	11.40
	Feb. 14, 1950	11.46	11,200				
	May 10, 1950	27.94	150,000				
	July 24, 1950	10.1	7,980	1957			
	Aug. 7, 1950	9.87	7,500				
1951	Feb. 21, 1951	18.22	38,000		Apr. 24, 1957	10.92	8,140
	Mar. 12, 1951	10.37	8,470	May 19, 1957	16.16	23,800	
	1952	Mar. 12, 1952	10.10	7,740	May 24, 1957	17.48	31,500
Apr. 13, 1952		10.24	7,980	May 26, 1957	18.17	35,100	
1953		Mar. 15, 1953	10.58	8,470	June 3, 1957	13.10	13,500
	Mar. 19, 1953	10.83	8,470	June 11, 1957	12.34	11,400	
	1958				Mar. 25, 1958	11.59	8,180
				May 4, 1958	12.20	9,440	
				July 13, 1958	16.89	25,800	

1970. Barren Fork at Eldon, Okla.

Location.--Lat 35°55', long 94°50', in SE $\frac{1}{4}$ sec.27, T.17 N., R.23 E., at bridge on State Highway 51, three-eighths of a mile southeast of Eldon, 6 miles downstream from Tyner Creek, and 8.8 miles upstream from mouth.

Drainage area.--307 sq mi.

Gage.--Nonrecording prior to Dec. 14, 1948; recording thereafter. Datum of gage is 701.14 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 28,000 cfs and extended above.

Bankfull stage.--18 ft.

Remarks.--Peak-stage data for 1945 and 1948 furnished by Corps of Engineers. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 15, 1945	23.8	-	1953	Mar. 18, 1953 May 12, 1953	10.82 12.03	6,660 9,240
1948	Aug. 14, 1948	19.8	a34,400	1954	May 2, 1954	16.78	21,600
1949	Jan. 24, 1949	11.21	7,220	1955	Feb. 20, 1955	12.42	9,680
	Feb. 14, 1949	12.85	10,600		Mar. 20, 1955	14.47	14,800
	Mar. 26, 1949	10.62	6,480		June 6, 1955	11.53	7,800
	May 19, 1949	11.63	8,400		June 15, 1955	14.96	16,200
	June 14, 1949	10.76	6,660				
1950	Jan. 4, 1950	11.70	8,200	1956	May 15, 1956	10.70	6,300
	Jan. 13, 1950	12.27	9,240		1957	Apr. 3, 1957	20.33
	Feb. 12, 1950	11.62	8,000	May 17, 1957		18.89	31,600
	May 10, 1950	19.51	31,000	May 23, 1957		18.79	31,100
1951	Feb. 20, 1951	18.65	27,800	May 25, 1957	17.48	25,600	
	July 2, 1951	11.77	8,400	June 1, 1957	11.98	8,400	
				June 9, 1957	15.5	18,000	
1952	Apr. 13, 1952	10.76	6,480	1958	July 13, 1958	14.75	15,700
	May 23, 1952	11.03	6,840				

a Annual peak only.

1980. Illinois River near Gore, Okla.

Location--Lat 35°34', long 95°04', in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.13 N., R.21 E., on right bank 4.3 miles downstream from Tenkiller Ferry Dam, 4 $\frac{1}{2}$ miles north-east of Gore, and 8.5 miles upstream from mouth.

Drainage area--1,626 sq mi; at site used 1939-51, 1,622 sq mi.

Gage--Nonrecording prior to Apr. 2, 1926, and May 21, 1949, to Feb. 19, 1952; recording Apr. 15, 1939, to May 20, 1949, and since Feb. 20, 1952. Mar. 25, 1924, to Apr. 1, 1926, at site 2.4 miles downstream at altitude 467 ft. Apr. 15, 1939, to Feb. 19, 1952, at site 1.6 miles upstream at datum 9.60 ft higher than present gage. Datum of present gage is 473.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation--Defined by current-meter measurements below 42,000 cfs and extended on basis of logarithmic plotting and velocity-area studies.

Bankfull stage--13 ft; at previous site, 10 ft.

Remarks--Flow regulated since July 1952 by Tenkiller Ferry Reservoir, with some attenuation of peaks in 1951 during construction operations (capacity, 791,900 acre-ft). Base for partial-duration series, 17,000 cfs. Only annual peaks are shown subsequent to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Dec. 21, 1924	5.10	6,990	1947	May 17, 1947	10.13	17,800
					June 11, 1947	10.53	19,400
1940	Aug. 17, 1940	10.20	17,600	1948	Aug. 16, 1948	15.09	40,200
1941	Apr. 20, 1941	16.18	43,900	1949	Feb. 17, 1949	10.18	19,300
1942	Nov. 1, 1941	14.95	38,900		May 21, 1949	11.7	24,900
	Apr. 28, 1942	14.26	35,900	1950	Jan. 15, 1950	10.24	17,300
1943	Nov. 1, 1942	12.20	27,100		May 11, 1950	30.2	180,000
	Nov. 8, 1942	11.17	22,900	1951	Feb. 22, 1951	12.50	27,200
	Dec. 29, 1942	13.37	32,200	1952	Apr. 14, 1952	11.29	10,500
	May 11, 1943	24.50	110,000	1953	May 12, 1953	6.41	1,160
	May 21, 1943	11.62	21,800	1954	May 2, 1954	10.90	9,280
1944	Mar. 20, 1944	12.81	29,200	1955	June 18, 1955	9.89	5,880
1945	Feb. 23, 1945	11.06	22,500	1956	Aug. 14, 1956	8.93	3,610
	Mar. 4, 1945	11.71	25,000	1957	June 9, 1957	13.70	18,100
	Mar. 20, 1945	18.30	58,800	1958	May 4, 1958	12.50	13,700
	Apr. 15, 1945	25.38	118,000				
	June 10, 1945	16.28	45,900				
1946	May 27, 1946	11.83	22,000				
	June 30, 1946	10.46	17,100				
1947	Dec. 12, 1946	13.16	30,900				

1985. Dirty Creek near Warner, Okla.

Location--Lat 35°33', long 95°18', in SE $\frac{1}{4}$ sec.32, T.13 N., R.19 E., near center of bridge on U. S. Highway 64, 4 miles north of Warner, 6 $\frac{1}{2}$ miles upstream from Georges Fork, and 6 $\frac{1}{2}$ miles downstream from Butter Creek.

Drainage area--227 sq mi.

Gage--Nonrecording. Datum of gage is 485.51 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation--Defined by current-meter measurements below 29,000 cfs and extended on basis of contracted-opening measurement at 42,000 cfs.

Bankfull stage--17 ft.

Remarks--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,400 cfs.

Peak stages and discharges of Dirty Creek near Warner, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	February 1938	23.0	119,300	1943	June 7, 1943	20.65	9,030
1940	Aug. 19, 1940	18.42	2,360	1944	Mar. 16, 1944	18.60	2,820
1941	Jan. 2, 1941	18.42	2,360		Mar. 20, 1944	19.41	4,220
					May 3, 1944	18.17	2,460
1942	Oct. 16, 1941	21.20	11,900	1945	Feb. 22, 1945	19.78	5,490
	Oct. 31, 1941	22.9	17,800		Mar. 3, 1945	20.22	6,910
	Apr. 9, 1942	18.84	3,620		Mar. 7, 1945	18.70	3,030
	Apr. 25, 1942	20.75	10,500		Mar. 16, 1945	20.40	7,680
	Apr. 28, 1942	19.43	5,600		Mar. 19, 1945	21.47	12,600
	May 3, 1942	19.50	5,950		Apr. 2, 1945	18.48	2,710
	May 5, 1942	19.50	5,950		Apr. 14, 1945	24.17	30,800
	May 20, 1942	20.26	8,750		June 11, 1945	22.00	15,300
					June 23, 1945	18.33	2,570
1943	Nov. 6, 1942	19.50	4,300				
	Dec. 27, 1942	20.90	10,100	1946	Feb. 19, 1946	19.10	3,660
	May 10, 1943	26.00	42,000		Apr. 30, 1946	18.60	2,900
	May 17, 1943	18.58	2,590		May 24, 1946	20.78	9,340
	May 20, 1943	19.53	4,300		June 1, 1946	19.48	4,580
	May 28, 1943	19.07	3,300		June 27, 1946	18.80	3,170

a Annual peak only.

1990. Canadian River near Hebron, N. Mex.

Location.--Lat 36°47'10", long 104°27'45", in Maxwell Grant, at bridge on U. S. Highways 64 and 85, 3 $\frac{1}{4}$ miles north of Hebron, 5 miles upstream from Chicorica Creek, and 8 miles south of Raton.

Drainage area.--229 sq mi.

Gage.--Recording. Prior to July 14, 1955, at sites 150 and 200 ft upstream at datum 1 ft higher. Altitude of present gage is 6,250 ft (from topographic map).

Stage-discharge relation.--1946-55: Fairly well defined by current-meter measurements below 3,200 cfs and extended by logarithmic plotting.

1956-58: Defined by current-meter measurements below 100 cfs and extended by comparison with rating developed at sites 150 to 200 ft upstream. Relation subject to shifting.

Remarks.--Peak discharges not appreciably affected by small diversions for irrigation above station. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	-	a26.0	-	1953	May 27, 1953	5.95	1,340
					Aug. 16, 1953	10.49	5,250
1947	Aug. 11, 1947	4.63	728	1954	July 30, 1954	6.50	1,480
1948	May 31, 1948	8.20	4,020		Aug. 25, 1954	5.98	1,000
1949	Sept. 7, 1949	5.35	1,020	1955	May 19, 1955	10.40	6,860
					May 21, 1955	5.35	1,440
1950	May 31, 1950	5.90	1,560		July 16, 1955	4.05	1,060
	June 17, 1950	6.43	2,080		July 26, 1955	4.65	1,480
	July 4, 1950	6.43	1,890				
	July 26, 1950	6.68	2,040	1956	July 16, 1956	8.6	5,610
	July 30, 1950	6.04	1,470		July 19, 1956	7.7	4,480
	Aug. 2, 1950	5.52	1,180				
	Sept. 18, 1950	5.84	1,390	1957	July 22, 1957	4.44	1,120
					Aug. 24, 1957	4.75	1,580
1951	July 22, 1951	5.10	1,010				
	Aug. 24, 1951	b11.6	1,300	1958	Oct. 19, 1957	4.60	1,440
					May 24, 1958	3.92	1,010
1952	June 28, 1952	7.26	2,800		June 6, 1958	6.90	3,700
	July 11, 1952	8.58	4,270		July 7, 1958	4.02	1,050
	Aug. 3, 1952	5.52	1,270		July 11, 1958	6.05	2,860
	Sept. 13, 1952	8.76	4,490				

a At site and datum used prior to July 14, 1955.

b Backwater from temporary dam.

2010. Raton Creek at Raton, N. Mex.

Location.--Lat 36°54', long 104°26', 60 ft upstream from bridge on State Highway 72 at Raton.

Drainage area.--14.4 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by 2 indirect measurements and 1 current-meter measurement.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	-	2.88	470	1956	Aug. 19, 1956	6.5	1,850
1954	August 1954	1.32	165	1957	-	2.25	330
1955	-	5.82	1,500	1958	July 1958	5.00	1,060

2020. Chicorica Creek near Hebron, N. Mex.

Location.--Lat 36°46'10", long 104°23'45", in S $\frac{1}{2}$ sec. 4, T.29 N., R.24 E., at highway bridge near east boundary of Maxwell Grant, 300 ft downstream from Una de Gato Creek, 4 $\frac{1}{4}$ miles northeast of Hebron, and 9 miles south of Raton.

Drainage area.--381 sq mi.

Gage.--Recording. Altitude of gage is 6,200 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 600 cfs and extended on basis of contracted-opening measurement at 7,530 cfs. Relation subject to slight shifting.

Historical data.--Maximum stage known, 20 ft, from floodmarks (discharge, about 15,000 cfs), date unknown.

Remarks.--Peak discharges not appreciably affected by diversions above station for irrigation of about 1,000 acres. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1946	Aug. 18, 1946	7.50	2,770	1949	Aug. 25, 1949	4.85	1,100	
	Aug. 27, 1946	5.35	1,360		Sept. 7, 1949	4.60	980	
	Aug. 28, 1946	8.23	3,300	1950	June 17, 1950	6.74	2,210	
1947	May 11, 1947	5.30	1,330		June 29, 1950	4.40	852	
					July 21, 1950	4.57	945	
1948	May 31, 1948	13.00	7,530	July 26, 1950	8.75	3,780		
	June 8, 1948	5.30	1,330	Aug. 2, 1950	5.86	1,660		
	Aug. 7, 1948	5.12	1,220	Aug. 19, 1950	4.82	1,020		
1949	June 5, 1949	5.90	1,690	1951	July 12, 1951	5.50	1,420	
	June 7, 1949	4.95	1,140		July 14, 1951	5.10	1,240	
	June 21, 1949	5.07	1,200		July 22, 1951	5.05	1,240	
	July 7, 1949	4.65	995		Aug. 10, 1951	4.85	1,140	
	July 9, 1949	5.45	1,420		Aug. 24, 1951	4.66	1,070	

2030. Vermejo River near Dawson, N. Mex.

Location.--Lat 36°40'50", long 104°47'05", T.28 N., R.20 E., in Maxwell Grant, $1\frac{1}{2}$ miles north of Dawson.

Drainage area.--301 sq mi.

Gage.--Recording. Prior to Sept. 23, 1953, at several sites about three-quarters of a mile upstream at datum 8 to 12 ft higher. Altitude of present gage is 6,540 ft (from topographic map).

Stage-discharge relation.--1929-53: Defined by current-meter measurements below 360 cfs and extended on basis of slope-area measurements at 3,250 cfs and 5,000 cfs at later site. Correlation between various sites and datums by rating study for Compilation Report.

1953-58: Defined by current-meter measurements below 290 cfs and extended by logarithmic plotting and comparison with curves at former sites. Relations subject to moderate shifting.

Bankfull stage.--16 ft, approximately, on right bank.

Historical data.--A major flood occurred Aug. 2, 1921, when discharge probably exceeded 10,000 cfs.

Remarks.--Records prior to December 1931 published in reports of State engineer. Peak discharges not appreciably affected by small diversions for irrigation above station. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 20, 1929	5.2	1,100	1943	Aug. 16, 1943	4.88	931
	July 18, 1929	6.5	2,100				
	July 23, 1929	5.4	1,200	1944	July 5, 1944	5.42	1,200
	Aug. 2, 1929	5.7	1,400				
	Aug. 4, 1929	5.35	1,180	1945	Aug. 20, 1945	5.46	1,250
	Aug. 11, 1929	4.85	840				
1930	Aug. 27, 1930	6.35	2,000	1946	July 15, 1946	4.80	840
					Aug. 24, 1946	5.68	1,540
1931	Aug. 23, 1931	4.53	588		Aug. 27, 1946	5.97	1,860
					Aug. 29, 1946	6.25	1,900
1932	July 10, 1932	6.42	a2,100	1947	Aug. 11, 1947	5.49	900
					Aug. 24, 1947	5.29	800
1933	July 21, 1933	5.05	752	1948	May 31, 1948	11.00	5,100
1934	June 30, 1934	5.6	1,200		July 27, 1948	7.10	1,780
	July 27, 1934	5.3	900	1949	Sept. 9, 1949	9.20	3,320
1935	Aug. 29, 1935	2.9	1,200				
	Sept. 24, 1935	4.28	3,720	1950	July 3, 1950	7.34	1,970
1936	Aug. 3, 1936	5.1	980		July 5, 1950	5.18	900
	Aug. 6, 1936	5.3	1,100		July 21, 1950	7.90	2,320
	Aug. 7, 1936	7.99	3,700	1951	July 18, 1951	4.12	317
1937	Aug. 4, 1937	6.89	2,500	1952	Aug. 4, 1952	6.40	1,360
	Sept. 6, 1937	5.4	1,200		Sept. 13, 1952	5.78	1,050
	Sept. 7, 1937	6.0	1,700	1953	May 27, 1953	8.80	3,160
1938	July 18, 1938	4.95	840		July 11, 1953	6.40	1,480
	July 20, 1938	5.05	890	1954	July 24, 1954	4.80	755
	Aug. 3, 1938	7.81	3,600				
	Sept. 7, 1938	6.15	2,040	1955	May 19, 1955	6.62	1,770
1939	Oct. 8, 1938	5.46	1,360		July 20, 1955	5.11	995
	July 28, 1939	5.0	950		Aug. 8, 1955	7.90	2,540
1940	July 15, 1940	5.1	980		Aug. 15, 1955	6.55	1,730
	Aug. 6, 1940	11.88	9,000		Aug. 18, 1955	5.50	1,160
	Aug. 18, 1940	5.7	1,400		Aug. 20, 1955	4.88	850
	Sept. 10, 1940	6.8	2,500		Aug. 21, 1955	6.13	1,500
1941	May 2, 1941	7.96	3,700	1956	Aug. 2, 1956	4.14	486
	July 13, 1941	4.96	1,050	1957	Aug. 4, 1957	11.25	5,000
	July 15, 1941	5.45	1,440		Aug. 10, 1957	5.10	955
	July 21, 1941	5.58	1,540		Aug. 16, 1957	4.85	825
	July 26, 1941	4.75	828	1958	May 23, 1958	5.93	1,380
	Sept. 21, 1941	5.52	1,390		July 16, 1958	5.70	1,250
	Sept. 23, 1941	7.57	3,200		July 25, 1958	5.90	1,340
1942	Apr. 23, 1942	8.03	3,800				
	Sept. 1, 1942	6.20	1,900				

a Annual maximum only.

2040. Moreno Creek at Eagle Nest, N. Mex.
(Published as "near Therma" 1928-34)

Location.--Lat 36°33'10", long 105°15'55", in Maxwell Grant, at left upstream wingwall of bridge on U. S. Highway 64, 1,000 ft west of Eagle Nest, Colfax County, and half a mile upstream from high-water line of Eagle Nest Reservoir.

Drainage area.--82 sq mi, approximately.

Gage.--Recording. Prior to June 10, 1952, at site about 75 to 100 ft downstream at various datums within 1 ft of present gage. Datum of present gage is 8,195.71 ft above mean sea level, datum of 1929. A concrete control has been in effect since Sept. 8, 1934.

Stage-discharge relation.--1928-52: Fairly well defined by current-meter measurements below 170 cfs and extended by logarithmic plotting. Correlation between various ratings used to obtain peaks. Relation subject to slight shifting.

1952-55: Defined by current-meter measurements below 9 cfs and extended by logarithmic plotting. Relation subject to slight shifting.

Remarks.--Records prior to July 1931 collected by State engineer of New Mexico. Winter records not collected; peak discharges above base unlikely during winter. Peak discharges not appreciably affected by diversions above station for irrigation of about 1,200 acres. Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	July 28, 1929	1.26	60	1942	Apr. 14, 1942	2.38	159
	Aug. 23, 1929	1.19	55		Apr. 23, 1942	2.83	223
1930	Apr. 7, 1930	1.15	58	1943	July 19, 1943	1.70	92
	Apr. 25, 1930	1.05	50		July 24, 1943	1.29	57
	Aug. 10, 1930	1.90	110	1944	Apr. 19, 1944	1.20	53
1931	Apr. 19, 1931	1.04	38		May 2, 1944	1.41	69
					May 14, 1944	2.33	161
1932	May 20, 1932	1.65	a80		July 3, 1944	1.50	75
1933	May 4, 1933	1.28	a51	1945	Apr. 22, 1945	1.57	90
					May 6, 1945	1.76	109
1934	Aug. 13, 1934	1.11	34	1946	Sept. 1, 1946	3.10	240
1935	May 19, 1935	2.10	56				
1936	Mar. 31, 1936	2.75	115	1947	May 5, 1947	1.24	69
	May 8, 1936	2.17	62		May 10, 1947	1.67	105
1937	Apr. 15, 1937	3.23	146	1948	Apr. 11, 1948	-	(b)
	May 10, 1937	2.37	64		Apr. 19, 1948	1.06	54
	May 29, 1937	2.25	55		May 19, 1948	1.18	66
	June 3, 1937	2.42	70		May 25, 1948	1.50	93
	July 20, 1937	2.97	133	1949	May 11, 1949	1.46	48
	Aug. 26, 1937	2.38	78				
	Aug. 31, 1937	2.30	70	1950	July 9, 1950	1.44	48
1938	May 3, 1938	2.25	65	1951	May 18, 1951	0.87	23
	May 16, 1938	2.37	77				
1939	Mar. 23, 1939	1.46	56	1952	Apr. 7, 1952	-	110
					Apr. 20, 1952	1.78	90
1940	Aug. 19, 1940	3.16	200		Apr. 28, 1952	1.70	83
					May 6, 1952	2.05	117
1941	May 14, 1941	2.59	145	1953	May 28, 1953	1.77	94
	May 22, 1941	2.44	135				
	July 15, 1941	1.85	75	1954	July 21, 1954	1.55	5.5
	Aug. 11, 1941	1.79	73				
1942	Apr. 2, 1942	1.48	73	1955	May 24, 1955	2.23	58

a Annual peak only.

b May have exceeded 95 cfs.

2045. Cieneguilla Creek near Eagle Nest, N. Mex.
(Published as "near Therma" 1928-34)

Location.--Lat 36°29'00", long 105°15'40", in Maxwell Grant, a quarter of a mile downstream from Schoolhouse Draw, 3,500 ft upstream from high-water line of Eagle Nest Reservoir, and 6 miles south of Eagle Nest, Colfax County.

Drainage area.--56 sq mi, approximately.

Gage.--Recording. Prior to Sept. 16, 1934, at site a quarter of a mile downstream at different datum. Altitude of last used gage was 8,190 ft (from topographic map). Concrete control since Sept. 25, 1947.

Stage-discharge relation.--1928-34: Fairly well defined by current-meter measurements below 90 cfs.

1935-47: Fairly well defined by current-meter measurements below 380 cfs.

1948-55: Fairly well defined by current-meter measurements below 120 cfs.

All ratings extended above highest current-meter measurement by logarithmic plotting.

Remarks.--Records prior to July 1931 collected by State engineer. Winter records not collected except in 1931 and 1948 water years; peak discharges above base unlikely during winter. Peak discharges not appreciably affected by diversions above station for irrigation of about 1,000 acres. Base for partial-duration series, 70 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Apr. 17, 1929	3.02	125	1941	July 14, 1941	3.45	124
	May 19, 1929	2.70	70		July 16, 1941	3.82	197
	June 1, 1929	2.77	80		July 18, 1941	3.50	133
	Aug. 2, 1929	2.85	90		Aug. 12, 1941	3.64	162
1930	Apr. 7, 1930	2.92	85	1942	Apr. 23, 1942	-	500
	Apr. 10, 1930	3.36	160		Aug. 15, 1942	3.64	84
	Apr. 25, 1930	2.78	75	1943	Mar. 30, 1943	3.86	127
	July 24, 1930	2.75	70		Apr. 3, 1943	3.80	117
1931	May 3, 1931	2.57	66	1944	Apr. 25, 1944	3.57	80
1932	June 30, 1932	3.26	a216		May 1, 1944	3.63	89
	May 21, 1934	1.97	57		May 11, 1944	4.75	354
1935	May 20, 1935	3.17	100	1945	Apr. 20, 1945	4.19	159
	June 13, 1935	3.02	80		May 3, 1945	4.58	219
	Aug. 2, 1935	4.38	360		Aug. 14, 1945	3.51	80
	Aug. 23, 1935	4.65	470	1946	Aug. 29, 1946	3.37	89
	Aug. 26, 1935	3.55	150		Sept. 1, 1946	3.47	98
1936	Apr. 11, 1936	2.85	65	1947	Mar. 21, 1947	b4.06	-
1937	Apr. 13, 1937	4.10	265		Mar. 27, 1947	3.87	158
	Apr. 16, 1937	3.88	196		Apr. 20, 1947	3.50	102
	Apr. 22, 1937	3.87	194		May 9, 1947	4.04	178
	May 30, 1937	3.08	77		July 5, 1947	5.01	364
	June 2, 1937	3.71	168		July 18, 1947	3.80	142
	July 20, 1937	3.13	82	1948	Apr. 11, 1948	4.30	144
1938	Apr. 20, 1938	3.11	95		Apr. 20, 1948	3.99	107
	Apr. 27, 1938	2.99	80		May 25, 1948	3.68	77
	June 26, 1938	3.52	140	1949	July 22, 1949	3.51	57
1939	Mar. 27, 1939	3.15	90	1950	Apr. 9, 1950	3.03	21
	Apr. 5, 1939	3.41	125	1951	Apr. 21, 1951	3.20	29
1940	July 30, 1940	2.97	73		Apr. 5, 1952	5.30	340
	Aug. 19, 1940	3.14	90	1952	Apr. 16, 1952	3.93	110
	Aug. 21, 1940	3.73	174		Apr. 20, 1952	4.02	118
1941	Apr. 12, 1941	3.20	98	1953	May 17, 1953	3.17	29
	Apr. 24, 1941	3.37	120		Apr. 6, 1954	3.19	40
	May 2, 1941	4.34	346	1955	May 27, 1955	4.00	113
	May 8, 1941	4.50	402				
	May 22, 1941	3.80	197				
	July 11, 1941	4.55	412				

a Annual peak only.

b Result of ice jam; discharge estimated not to exceed that of Mar. 27, 1947.

2050. Six Mile Creek near Eagle Nest, N. Mex.
(Published as "near Therma" 1928-34)

Location.--Lat 36°31'10", long 105°16'15", in Maxwell Grant, 600 ft downstream from bridge on U. S. Highway 64, a quarter of a mile upstream from high-water line of Eagle Nest Reservoir, and 3 miles southwest of Eagle Nest, Colfax County.

Drainage area.--11 sq mi, approximately.

Gage.--Recording gage and concrete control. Prior to Sept. 12, 1938, at site 88 ft upstream at datum 0.43 ft higher. Datum of last used gage was 8,195.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1931-38: Fairly well defined by current-meter measurements below 27 cfs and extended by logarithmic plotting.

1939-54: Well defined by current-meter measurements below 56 cfs and extended by logarithmic plotting.

Remarks.--Records prior to July 1931 collected by State engineer. Winter records not collected; peak discharges above base unlikely during winter. Peak discharges not appreciably affected by diversions above station for irrigation of about 300 acres. Base for partial-duration series, 15 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Sept. 20, 1931	2.06	13	1943	Aug. 17, 1943	1.55	46
1932	Mar. 8, 1932	2.03	a23	1944	Apr. 12, 1944	2.14	82
	Apr. 10, 1932	2.03	a23		Apr. 24, 1944	.97	25
1933	May 4, 1933	2.06	a26		May 16, 1944	1.89	64
1934	Not determined	-	10	1945	Apr. 19, 1945	1.33	40
1935	May 24, 1935	1.74	17		May 5, 1945	1.58	49
1936	Apr. 5, 18, 25, 27	1.60	11	1946	Sept. 1, 1946	.90	22
1937	Apr. 2, 1937	b3.38	-	1947	Apr. 24, 1947	.73	16
	Apr. 11, 1937	2.77	120		May 9, 1947	1.34	40
	May 12, 1937	1.92	39	1948	Apr. 11, 1948	-	25
	June 3, 1937	1.74	22		Apr. 24, 1948	.87	21
1938	Apr. 25, 1938	1.84	36		Apr. 30, 1948	.91	22
	May 1, 1938	1.81	34		May 19, 1948	.86	22
	May 15, 1938	1.70	22		May 25, 1948	.89	23
1939	Mar. 21, 1939	.74	17	1949	Apr. 30, 1949	1.19	33
	Apr. 4, 1939	.84	20		May 11, 1949	.98	25
	Apr. 17, 1939	.73	17		July 30, 1949	.97	25
1940	Apr. 17, 1940	1.10	29	1950	July 23, 1950	1.12	31
	Sept. 3, 1940	1.19	33	1951	Aug. 2, 1951	.52	9.4
1941	Apr. 9, 1941	1.11	30	1952	Apr. 5-7, 1952	-	70
	Apr. 12, 1941	1.32	38		Apr. 20, 1952	1.59	47
	Apr. 20, 1941	.78	17		Apr. 28, 1952	1.65	50
	Apr. 24, 1941	.90	22		May 5, 1952	2.08	68
	May 1, 1941	1.95	70		July 23, 1952	1.06	29
	May 3, 1941	2.33	91		July 30, 1952	1.12	30
	May 14, 1941	2.85	124		Aug. 21, 1952	1.87	60
	July 14, 1941	1.09	31	1953	May 22, 1953	.55	11
				1954	June 30, 1954	2.67	91
1942	Apr. 2, 1942	1.40	40	1955	May 25, 1955	1.09	29
	Apr. 12, 1942	1.44	42		July 15, 1955	1.17	32
	Apr. 17, 1942	1.85	58		Aug. 8, 1955	1.33	37
	Apr. 23, 1942	2.51	103		Aug. 14, 1955	1.31	37
	May 11, 1942	1.91	60		Aug. 18, 1955	2.05	66
	June 7, 1942	1.20	34		Aug. 22, 1955	.70	16
1943	Mar. 29, 1943	.95	24				
	Apr. 25, 1943	.92	23				

a Annual peak only.

b Result of ice jam.

2060. Cimarron Creek below Eagle Nest Dam, N. Mex.
(Published as Cimarron "River" prior to 1953)

Location.--Lat 36°32'05", long 105°13'55", about sec.26, T.27 N., R.16 E. (projected), in Maxwell Grant, on left bank 300 ft downstream from Eagle Nest Dam, 2 miles southeast of Eagle Nest, and 6¼ miles west of Ute Park.

Drainage area.--167 sq mi.

Gage.--Recording gage and Parshall flume. Prior to May 15, 1951, control was a 12-foot contracted weir; gage at same site at datum 0.81 ft higher. Altitude of present gage is 8,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements and theoretical rating for a 10-foot Parshall flume.

Bankfull stage.--Not known; flume depth is 2½ ft.

Remarks.--Flows completely regulated by outlet valves at Eagle Nest Dam. There has been no spillway discharge during period of this record. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 28, 1950	1.29	132	1955	June 14, 1955	2.79	205
1951	Sept. 3, 1951	2.03	139	1956	May 9, 1956	1.29	58
1952	July 24, 1952	1.39	120	1957	June 19, 1957	2.02	125
1953	May 27, 1953	1.83	103	1958	Aug. 17, 1958	1.16	50
1954	May 23-25, 1954	0.97	36				

a Maximum May 10 to Sept. 30, 1950; probably yearly maximum.

2065. Cimarron Creek at Ute Park, N. Mex.
(Formerly published as Cimarron "River")

Location.--Lat 36°33'30", long 105°05'20", in Maxwell Grant, half a mile downstream from Ute Creek and 1 mile east of Ute Park, Colfax County.

Drainage area.--260 sq mi.

Gage.--Recording. Prior to Apr. 4, 1929, at site 300 ft upstream at different datum. Altitude of last used gage was 7,400 ft (estimated from elevation of nearby bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs and extended by logarithmic plotting. Subject to moderate shifting.

Historical data.--Flood of Sept. 28 or 29, 1904, may have exceeded recorded maximum.

Remarks.--Records for 1915-30 furnished by State engineer of New Mexico. Storage began in Eagle Nest Reservoir in June 1917. Only controlled release (no spill) since that date. Diversions for irrigation could have some effect on the smaller peaks. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 6, 1910	1.55	320	1918	Aug. 14, 1918	1.05	140
1911	July 24, 1911	1.43	280	1922	July 12-14, 1919	1.64	150
1912	Mar. 20, 1912	1.95	480	1924	July 6, 1924	1.55	165
1913	Apr. 7, 1913	1.24	173	1925	June 24, 1925	-	230
1914	May 1, 1914	1.85	480	1926	May 24, 1926	-	170
1915	April or May 1915	1.78	360	1927	Apr. 28, 1927	-	98
1916	May 10, 1916	2.4	700	1928	July 13, 1928	0.95	95
1917	May 16, 1917	1.35	250				

Peak stages and discharges of Cimarron Creek at Ute Park, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 22, 1929	2.77	125	1940	June 22, 1940	2.91	160
1930	July 13, 1930	-	330	1941	May 23, 1941	3.10	240
1931	Aug. 9, 1931	2.52	130	1942	May 12, 1942	3.43	404
1932	June 24, 1932	2.58	126	1943	Aug. 26, 1943	2.93	211
1933	June 12, 1933	2.72	144	1944	May 17, 18, 1944	3.33	354
1934	July 4, 1934	2.92	175	1945	May 5, 1945	2.89	217
1935	July 22, 1935	2.80	164	1946	Aug. 10, 1946	3.09	284
1936	May 29, 1936	2.77	155	1947	Aug. 11, 1947	2.87	220
1937	July 21, 1937	2.76	162	1948	May 25, 1948	2.66	155
1938	July 18, 1938	3.27	300	1949	June 3, 1949	2.64	150
1939	May 31, 1939	2.86	149	1950	May 17, 1950	2.78	158

2070. Cimarron Creek near Cimarron, N. Mex.
(Published as Cimarron "River" prior to 1953)

Location.--Lat 36°31'00", long 104°58'35", about sec.6, T.26 N., R.19 E. (projected), in Maxwell Grant, on right bank 3.8 miles west of Cimarron.

Drainage area.--294 sq mi.

Gage.--Recording. Datum of gage is 6,599.58 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 140 cfs and extended by logarithmic plotting and slope-area measurement at 540 cfs. Sand and gravel channel subject to moderate shifting.

Remarks.--Flow mostly regulated by Eagle Nest Reservoir. Of the 294 sq mi drainage area, 167 sq mi are above Eagle Nest Dam. Diversions and bypass flow would have some effect on the regulated peaks. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept. 8, 1950	3.00	a540	1955	May 19, 1955	1.65	166
1951	July 13, 1951	2.56	383	1956	July 16, 1956	1.66	169
1952	Sept. 12, 1952	2.82	486	1957	Aug. 10, 1957	2.43	325
1953	Aug. 18, 1953	2.47	374	1958	June 6, 1958	3.10	580
1954	July 29, 1954	2.86	524				

a Maximum recorded; record began May 26, 1950.

2075. Ponil Creek near Cimarron, N. Mex.

Location.--Lat 36°34'35", long 104°56'55", about sec.8, T.27 N., R.19 E. (projected), on left bank $\frac{1}{2}$ miles downstream from confluence of Middle and North Ponil Creeks and 5 miles northwest of Cimarron.

Drainage area.--171 sq mi.

Gage.--Recording. Prior to May 8, 1922, at site about an eighth of a mile downstream at different datum; May 8, 1922, to Aug. 8, 1929, at site about three-eighths of a mile upstream at different datum. Altitude of present gage is 6,670 ft (from topographic map).

Stage-discharge relation.--1916-29: Not reliable.

1951-58: Defined by current-meter measurements below 115 cfs and extended on basis of slope-area measurements and by logarithmic plotting. Relation subject to moderate shifting.

Remarks.--Peak discharges probably not appreciably affected by diversions above station for irrigation of 200 to 300 acres. Records for 1916-29 furnished by State engineer of New Mexico. Base for partial-duration series, 150 cfs.

Peak stages and discharges of Ponil Creek near Cimarron, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Aug. 15, 1916	2.3	170	1955	July 20, 1955	4.90	1,080
1917	Aug. 15, 1917	2.5	200		July 29, 1955	3.84	508
1918	Aug. 14, 1918	2.5	200		Aug. 6, 1955	3.48	357
					Aug. 15, 1955	4.52	852
1924	May 14, 1924	3.4	290	1956	May 31, 1956	4.28	725
1928	July 19, 1928	4.3	270		July 31, 1956	3.00	189
1929	Aug. 8, 1929	-	5,200		Aug. 19, 1956	4.99	1,140
1948	September 1948	7.0	-	1957	July 13, 1957	3.47	334
					July 15, 1957	2.93	165
1951	Aug. 21, 1951	2.93	166		July 21, 1957	3.25	254
	Aug. 24, 1951	3.44	318		July 26, 1957	3.60	395
1952	Aug. 22, 1952	3.13	226		Aug. 3, 1957	3.05	198
1953	May 28, 1953	3.56	388		Aug. 9, 1957	5.51	1,530
1954	July 11, 1954	4.30	752		Aug. 11, 1957	3.50	350
	July 22, 1954	3.80	512		Aug. 15, 1957	2.88	155
	July 24, 1954	3.29	314	1958	Apr. 22, 1958	3.30	194
	July 31, 1954	3.56	433		May 8, 1958	3.47	224
	Aug. 7, 1954	3.07	276		May 24, 1958	3.05	150
1955	May 23, 1955	3.35	289		June 5, 1958	4.55	540
					Aug. 5, 1958	4.25	430
					Aug. 16, 1958	5.80	1,160
					Aug. 17, 1958	4.30	466
					Sept. 6, 1958	3.65	274

2085. Rayado Creek at Sauble Ranch, near Cimarron, N. Mex.
(Published as "Rayado River at Abreu's ranch" 1909-10, "near Abreu's ranch" 1911, 1913-14, 1916-24, "above Abreu's ranch" 1912, 1915, and as "Rayado River" prior to October 1953)

Location.--Lat 36°22', long 104°58', in sec.30, T.25 N., R.19 E. (projected), in Maxwell Grant, on left bank at Sauble Ranch, 10 miles southwest of Cimarron and 16 miles upstream from mouth.

Drainage area.--65 sq mi, approximately.

Gage.--Recording. Aug. 4, 1911, to Sept. 8, 1925, at two sites about 3 miles upstream at three different datums. Sept. 9, 1925, to July 16, 1934, at site 700 ft upstream at different datum. Altitude of present gage is 6,880 ft (from topographic map).

Stage-discharge relation.--1913-25: Well defined by current-meter measurements. 1926-34: Well defined by current-meter measurements below 80 cfs and extended by logarithmic plotting. 1935-58: Well defined by current-meter measurements below 270 cfs and extended on basis of one slope-area measurement and by logarithmic plotting. Relations subject to slight shifting.

Historical data.--A major flood occurred June 10, 1913 (maximum stage or discharge not determined). By comparison with other nearby streams and discharges at the mouth of the river, it appears that the maximum discharge for this flood exceeded that of all other floods during period of record. Another major flood probably occurred Sept. 29 or 30, 1904.

Remarks.--Station operated by Territory of New Mexico prior to October 1909. Base for partial-duration series, 100 cfs.

Peak stages and discharges of Rayado Creek at Sauble Ranch, near Cimarron, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 14, 1914	2.24	105	1941	May 22, 1941	3.70	440
	Apr. 30, 1914	3.30	240		June 3, 1941	3.04	220
	May 3, 1914	3.25	230		June 17, 1941	2.59	110
	May 16, 1914	2.46	125		Aug. 9, 1941	2.99	210
1917	Aug. 15, 1917	1.88	65		Aug. 12, 1941	2.60	115
					Sept. 23, 1941	2.90	185
1918	May 9, 1918	2.65	95	1942	Apr. 14, 1942	3.84	450
1919	Apr. 23, 24, 1919	3.56	205		Apr. 23, 1942	4.94	850
					May 9, 1942	3.65	330
					June 7, 1942	3.29	228
					July 20, 1942	3.19	190
1920	May 21, 1920	3.2	160	1943	May 10, 1943	2.51	63
1924	Apr. 14, 1924	3.6	250	1944	May 11, 1944	3.65	350
	Apr. 21, 1924	3.0	175		May 29, 1944	3.00	150
		May 6, 1924	2.5	115	1945	May 4, 1945	3.04
				Aug. 20, 1945		3.05	162
1928	Apr. 27, 1928	2.70	212	1946	Sept. 2, 1946	3.00	132
	May 13, 1928	2.45	145				
1929	May 19, 1929	2.50	120	1947	May 10, 1947	3.11	135
	June 1, 1929	2.38	105				
	Aug. 25, 1929	2.28	100	1948	Apr. 21, 1948	3.07	127
1930	Apr. 6, 1930	2.48	170		May 26, 1948	3.15	144
	May 31, 1930	2.1	100	1949	June 30, 1949	3.47	216
	July 13, 1930	2.70	235		July 22, 1949	3.03	113
1931					July 29, 1949	2.99	104
	Oct. 1, 1930	2.20	120	1950	June 29, 1950	2.56	45
	Oct. 2, 1930	2.25	130				
	Oct. 11, 1930	2.50	180	1951	July 30, 1951	2.70	55
	Apr. 12, 1931	2.20	116				
	May 3, 1931	2.88	290				
July 20, 1931	2.55	192	Aug. 1, 1952	3.21	113		
Aug. 8, 1931	2.45	168	Sept. 13, 1952	3.91	295		
1932	May 12, 1932	2.95	a316	1953	May 28, 1953	3.53	187
1934	Aug. 18, 1934	2.90	230		Aug. 3, 1953	3.45	172
					Aug. 16, 1953	3.20	119
1935	May 7, 1935	2.53	130	1954	July 20, 1954	3.12	100
	May 17, 1935	3.24	340		July 29, 1954	3.65	227
1936	July 8, 1936	2.40	105	1955	May 26, 1955	3.42	268
1937	Apr. 13, 1937	3.56	a450		Aug. 18, 1955	3.02	159
1938	June 1, 1938	2.25	85	1956	Aug. 18, 1956	2.38	38
1939	Oct. 8, 1938	2.65	172				
	Mar. 24, 1939	2.44	114	1957	May 12, 1957	2.97	128
	Apr. 5, 1939	2.65	165		July 13, 1957	3.15	171
					Aug. 5, 1957	2.97	126
1940	July 11, 1940	2.47	117	1958	Apr. 5, 1958	3.03	148
1941	May 6, 1941	4.10	600		Apr. 22, 1958	3.85	319
					June 6, 1958	3.87	323
					June 17, 1958	2.87	113

a Annual peak only.

2110. Cimarron Creek at Springer, N. Mex.
(Published as Cimarron "River" prior to 1953)

Location.--Lat 36°21'30", long 104°35'50", in southeast corner of Maxwell Grant on left bank at Springer, Colfax County, 270 ft downstream from highway bridge, 6 miles downstream from Rayado Creek, and 6 miles upstream from mouth.

Drainage area.--1,032 sq mi.

Gage.--Nonrecording prior to Feb. 9, 1930; recording thereafter. Prior to July 13, 1934, and May 8 to July 16, 1942, at site 270 ft upstream from present gage at datums as follows: Prior to Nov. 20, 1924, at various datums; Nov. 20, 1924, to Feb. 8, 1930, at datum 3.34 ft higher than present gage; Feb. 9, 1930, to July 12, 1934, at datum 3.66 ft higher than present gage; May 8 to July 16, 1942, at datum 3.33 ft lower than present gage. July 13, 1934, to Apr. 13, 1942, at site 30 ft downstream at different datum. Altitude of present gage is 5,770 ft (from nearby level line).

Stage-discharge relation.--1930-34: Fairly well defined by current-meter measurements below 810 cfs.

1935-42: Well defined by current-meter measurements below 1,300 cfs.

1943-58: Well defined by current-meter measurements below 1,700 cfs.

All ratings extended by logarithmic plotting. Relation subject to shifting.

Historical data.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 10,000 cfs; largest floods known to local residents since 1893. Large flood on July 29, 1927, was reported by observer.

Remarks.--Station operated by State engineer of New Mexico from Dec. 20, 1919, to July 1, 1931. Flow partly regulated by Eagle Nest Reservoir since June 1917. Diversion for irrigation of about 23,000 acres; peak discharges not appreciably affected. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Sept. 29, 1904	22.0	-	1938	Aug. 10, 1938	6.00	1,380
					Sept. 4, 1938	5.83	1,290
1930	July 14, 1930	3.50	835				
1931	Oct. 11, 1930	4.00	al, 130	1939	Oct. 8, 1938	5.86	1,250
					Aug. 20, 1939	4.40	595
1932	May 21, 1932	3.44	802	1940	May 7, 1940	4.15	460
1933	June 14, 1933	4.02	al, 130				
1934	July 23, 1934	4.55	590	1941	May 2, 1941	6.37	1,620
					May 24, 1941	5.80	1,310
1935	May 23, 1935	4.70	650		July 24, 1941	5.11	965
	June 26, 1935	8.28	3,000		Sept. 23, 1941	4.95	898
	Aug. 27, 1935	8.70	3,420				
	Aug. 29, 1935	5.28	1,000	1942	Apr. 23, 1942	bl0.11	5,000
					May 12, 1942	10.3	1,030
					May 22, 1942	10.5	1,130
					July 1, 1942	9.1	500
1936	June 9, 1936	5.12	920		Sept. 1, 1942	7.35	2,510
					Sept. 4, 1942	5.26	956
1937	June 1, 1937	7.70	2,410				
	June 3, 1937	9.15	3,690	1943	Aug. 14, 1943	4.16	363
	Sept. 7, 1937	5.48	1,020				
1938	June 25, 1938	5.28	945	1944	May 17, 1944	4.58	505
	June 27, 1938	7.34	2,330	1945	Aug. 8, 1945	4.54	500

a Annual maximum only.

b Referred to present datum.

Peak stages and discharges of Cimarron Creek at Springer, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 21, 1945	5.80	1,300	1951	Aug. 21, 1951	8.11	2,900
1946	July 20, 1946	5.20	740	1952	Sept. 13, 1952	7.11	1,830
	Aug. 9, 1946	7.70	2,700	1953	Aug. 17, 1953	5.36	505
	Aug. 29, 1946	4.81	630		Aug. 19, 1953	7.5	2,200
	Sept. 7, 1946	6.33	1,690	1954	May 24, 1954	6.00	1,030
1947	June 24, 1947	5.58	840	1955	Oct. 6, 1954	5.56	656
	July 2, 1947	5.54	810		May 19, 1955	7.25	1,170
	Aug. 15, 1947	5.04	520		Aug. 15, 1955	7.94	1,600
1948	Feb. 23, 1948	5.92	1,040		Aug. 19, 1955	6.33	690
	May 31, 1948	9.25	4,090	1956	Aug. 20, 1956	5.43	394
1949	May 15, 1949	5.89	1,040	1957	July 30, 1957	5.28	316
	June 7, 1949	5.14	580		Oct. 19, 1957	6.63	888
	June 18, 1949	5.87	1,000	1958	Apr. 24, 1958	6.05	600
1950	July 12, 1950	4.72	293		May 15, 1958	6.89	1,020
1951	May 16, 1951	5.81	1,040		Aug. 15, 1958	6.08	612
	June 15, 1951	5.16	602		May 25, 1958	6.08	612
	July 30, 1951	7.59	2,450		June 6, 1958	10.55	6,250
	Aug. 19, 1951	6.02	1,040				

2115. Canadian River near Taylor Springs, N. Mex.

Location.--Lat 36°17'20", long 104°29'10", in NW $\frac{1}{4}$ sec. 27, T. 24 N., R. 23 E., on left bank 1 mile upstream from Chico Creek, $2\frac{1}{2}$ miles downstream from Cimarron Creek, and $2\frac{1}{2}$ miles south of Taylor Springs.

Drainage area.--2,853 sq mi.

Gage.--Recording. Altitude of gage is 5,600 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements below 9,800 cfs and extended on basis of slope-area measurements at 21,700 cfs and 41,000 cfs. Relation subject to shifting.

Historical data.--Maximum known flood occurred Sept. 29, 1904 (about 90,000 cfs). Flood of July 22, 1927, is believed to be one of the five highest peaks of record.

Remarks.--Peak discharges not appreciably affected by diversions above station for irrigation of about 30,000 acres. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 7, 1940	10.20	7,830	1946	Aug. 9, 1946	9.50	6,730
1941	Apr. 28, 1941	8.21	4,450	Aug. 20, 1946	7.98	4,390	
	May 2, 1941	18.79	24,800	Aug. 24, 1946	11.25	9,780	
	June 1, 1941	9.47	6,250	Aug. 29, 1946	14.30	15,100	
	July 13, 1941	7.55	3,740	Sept. 7, 1946	8.47	5,110	
	July 14, 1941	7.30	3,410	Sept.15, 1946	9.30	6,390	
	Sept.19, 1941	8.70	5,090	1947	July 2, 1947	16.9	22,000
	Sept.20, 1941	10.26	7,530		July 6, 1947	18.9	25,000
	Sept.22, 1941	10.09	7,200	1948	Feb. 23, 1948	7.32	3,370
	Sept.23, 1941	14.33	15,100		May 31, 1948	11.62	9,840
1942	Apr. 23, 1942	24.17	37,400		June 1, 1948	10.57	8,040
	Aug. 14, 1942	7.23	3,300		June 3, 1948	7.69	3,990
	Sept. 1, 1942	11.98	10,600	1949	May 15, 1949	9.36	6,100
	Sept. 2, 1942	24.00	37,000		June 19, 1949	7.55	3,740
	Sept. 4, 1942	7.55	3,740		June 22, 1949	8.45	4,700
1943	July 15, 1943	5.88	2,440	1950	July 4, 1950	9.07	5,090
1944	May 28, 1944	7.20	3,250		July 11, 1950	8.85	4,800
	Aug. 6, 1944	9.76	7,090		July 19, 1950	7.90	3,740
1945	Aug. 21, 1945	5.26	1,400		July 21, 1950	11.00	8,560
					July 26, 1950	7.08	3,000

Peak stages and discharges of Canadian River near Taylor Springs, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Aug. 2, 1950	13.24	12,900	1955	Apr. 29, 1955	9.45	6,220
	Sept. 18, 1950	7.90	3,500		May 19, 1955	18.68	24,500
1951	Aug. 10, 1951	9.41	5,860		July 12, 1955	12.95	12,400
	Aug. 25, 1951	9.04	5,720	1956	July 17, 1956	6.10	2,100
1952	Aug. 23, 1952	7.08	3,100		July 8, 1957	7.35	3,140
	Sept. 13, 1952	11.95	9,950	1958	Aug. 5, 1957	14.05	14,000
1953	July 19, 1953	8.48	4,830		Oct. 19, 1957	11.35	9,650
	Aug. 20, 1953	10.76	8,380		May 15, 1958	12.65	11,800
1954	Aug. 7, 1954	7.15	3,240		June 6, 1958	11.18	9,060
					July 6, 1958	8.25	4,580
1955	Oct. 6, 1954	7.40	3,520		Sept. 15, 1958	7.38	3,580

2137. Canadian River tributary near Mills, N. Mex.

Location--Lat 36°10'00", long 104°15'47", in NE $\frac{1}{4}$ sec. 3, T. 22 N., R. 25 E., on downstream end of left bridge abutment on State Highway 39, 6 miles north of Mills.

Drainage area--4.2 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by two indirect measurements and one current-meter measurement.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	1954	0.75	4.3	1956	July 1956	1.34	54
1955	May 18, 1955	2.07	190	1957	1957	3.99	918
				1958	1958	3.40	630

2140. Canadian River near Roy, N. Mex.

Location--Lat 35°55'10", long 104°21'10", in E $\frac{1}{2}$ sec. 35, T. 20 N., R. 24 E., on right bank 1,080 ft upstream from bridge on State Highway 120 and 9 miles west of Roy.

Drainage area--4,066 sq mi, of which about 3,959 sq mi contributes directly to surface runoff.

Gage--Recording. Prior to Oct. 9, 1942, Jan. 5, 1943, to Jan. 20, 1945, and Aug. 6, 1945, to Apr. 30, 1946, at site 1,080 ft downstream at datum 0.61 ft lower. Datum of present gage is 4,893.55 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation--Downstream gage: Well defined by current-meter measurements below 28,000 cfs and extended on basis of surface-float measurement of 43,800 cfs and logarithmic plotting.

Upstream gage: Fairly well defined by current-meter measurements throughout. Relation subject to shifting.

Historical data--Maximum known flood occurred Sept. 29 or 30, 1904.

Remarks--Records prior to Jan. 1, 1940, furnished by Corps of Engineers. Peak discharges not appreciably affected by diversions above station for irrigation of about 30,000 acres. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges of Canadian River near Roy, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	June 10, 1936	3.90	4,200	1948	May 31, 1948	7.28	8,400
	June 12, 1936	4.35	5,900		June 1, 1948	6.72	6,800
1937	June 2, 1937	6.70	13,500		June 20, 1948	5.50	4,300
	June 3, 1937	12.20	48,100	1949	May 16, 1949	5.76	4,800
	June 26, 1937	6.90	14,500				
	Sept. 8, 1937	6.55	13,000	1950	July 4, 1950	5.04	4,190
					July 20, 1950	9.20	15,700
1938	June 14, 1938	9.60	29,600		July 21, 1950	7.00	7,600
	June 27, 1938	5.10	7,540		Aug. 2, 1950	9.50	17,000
	July 17, 1938	5.10	7,540		Sept. 8, 1950	7.60	9,700
	Sept. 5, 1938	4.10	4,490				
1939	Oct. 9, 1938	5.48	9,200	1951	July 4, 1951	5.76	4,670
	Aug. 7, 1939	4.22	4,780		July 12, 1951	5.82	4,770
1940					Aug. 10, 1951	10.78	20,900
	Aug. 7, 1940	4.22	4,570		Aug. 25, 1951	5.65	4,480
1941				1952	Aug. 5, 1952	8.70	13,700
	May 2, 1941	10.33	34,700		Aug. 21, 1952	10.50	20,000
	June 1, 1941	4.59	6,020		Sept. 13, 1952	7.55	9,700
	Aug. 13, 1941	4.13	4,640	1953	Aug. 20, 1953	8.06	11,300
	Sept. 23, 1941	7.20	16,700				
1942	Apr. 23, 1942	14.22	63,800	1954	Aug. 8, 1954	3.73	1,710
	Sept. 2, 1942	13.80	60,500	1955	Oct. 5, 1954	7.70	8,550
1943					Apr. 30, 1955	7.62	8,820
	Oct. 17, 1942	4.36	2,320		May 19, 1955	14.60	41,000
1944	Aug. 6, 1944	4.39	4,640		July 12, 1955	8.00	10,000
1945	July 13, 1945	5.35	4,000	1956	Aug. 21, 1956	4.58	2,660
1946				1957	July 9, 1957	6.43	5,460
	Aug. 10, 1946	5.90	5,100		Aug. 5, 1957	6.85	5,720
	Aug. 25, 1946	5.98	5,400	1958	Oct. 19, 1957	7.50	8,000
	Aug. 27, 1946	7.72	10,000		May 15, 1958	9.60	14,800
	Aug. 29, 1946	10.51	20,000		June 6, 1958	7.00	6,750
	Sept. 1, 1946	7.35	8,700		June 20, 1958	7.65	8,380
1947					Aug. 16, 1958	8.84	11,900
	Oct. 4, 1946	6.65	6,700				
	July 2, 1947	9.95	18,000				
	July 7, 1947	12.00	28,000				

2145. Rio Agua Negra near Holman, N. Mex.

Location.--Lat 36°07'00", long 105°22'35", on right bank 150 ft upstream from bridge, 2½ miles south of Chacon, 4½ miles downstream from confluence of Luna and Lujan Creeks, 5.0 miles north of Holman, 8½ miles southwest of Guadalupe, Mora County.

Drainage area.--57 sq mi.

Gage.--Recording. Altitude of gage is 7,876 ft (by barometer).

Stage-discharge relation.--Fairly well defined at medium and high stages by current-meter measurements and one slope-area measurement. Relation subject to moderate shift corrections.

Historical data.--Major floods are known to have occurred in this area on Sept. 29, 1904, and June 11, 1913, and probably exceeded recorded maximum.

Remarks.--Diversion for irrigation of about 1,600 acres may have slight effect on peaks near base discharge, but diversion ditches are small in capacity. Base for partial-duration series, 150 cfs.

Peak stages and discharges of Rio Agua Negra near Holman, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	June 25, 1954	3.20	231	1957	July 12, 1957	2.57	210
	July 9, 1954	2.83	134		July 14, 1957	4.90	2,080
	July 21, 1954	3.31	258		July 16, 1957	2.14	310
	July 22, 1954	6.10	4,700		July 28, 1957	4.00	1,070
	Aug. 25, 1954	3.25	315		Aug. 4, 1957	2.80	314
1955	Aug. 8, 1955	2.82	314	1958	Aug. 24, 1957	3.28	515
	Aug. 11, 1955	2.43	188		Aug. 31, 1957	3.07	418
	Aug. 16, 1955	2.65	254		Apr. 22, 1958	2.65	254
	Aug. 19, 1955	2.77	295		May 8, 1958	2.72	281
	Aug. 29, 1955	2.35	168		June 6, 1958	5.62	3,880
1956	July 30, 1956	5.40	3,000		Aug. 20, 1958	3.11	414
	Aug. 18, 1956	2.97	441				

2155. Mora River at La Cueva, N. Mex.

Location.--Lat 35°56'15", long 105°15'05", in Mora Grant, on right downstream wingwall of highway bridge at La Cueva, Mora County, a quarter of a mile downstream from Las Vegas-Mora highway bridge and half a mile downstream from La Cueva damsite.

Drainage area.--173 sq mi.

Gage.--Recording. Altitude of gage is 6,890 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 400 cfs and extended by logarithmic plotting. Relation subject to moderate shifting.

Bankfull stage.--10 to 11 ft.

Historical data.--Flood of Sept. 29, 1904, may have exceeded 20,000 cfs. Another major flood occurred June 11, 1913, which is believed to be less than that in 1904.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation of about 7,000 acres. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1931	May 2, 1931	3.20	500	1941	May 11, 1941	4.65	740			
	Sept. 24, 1931	3.05	460		May 22, 1941	5.10	850			
1932	June 28, 1932	3.05	a460		June 4, 1941	3.51	545			
					June 25, 1941	2.74	380			
1934	July 26, 1934	1.32	70		July 16, 1941	4.07	678			
					Aug. 28, 1941	3.33	512			
1935	May 19, 1935	4.60	625		Sept. 23, 1941	7.58	1,530			
				Aug. 3, 1935	4.74	647	1942	Oct. 24, 1941	2.65	347
				Aug. 21, 1935	4.5			605	Apr. 17, 1942	3.35
1936	Sept. 19, 1936	6.31	1,000	Apr. 23, 1942	6.50	1,260				
				1937	June 1, 1937	4.95	710	May 11, 1942	2.87	440
May 22, 1942	3.20	506								
1938	June 26, 1938	7.16	1,210	Aug. 14, 1942	4.20	726				
				1943	Aug. 16, 1943	3.33	539			
					Aug. 17, 1943	2.39	334			
					Aug. 18, 1943	2.65	396			
					Aug. 26, 1943	2.47	352			
				1944	May 16, 1944	2.65	407			
July 1, 1944	2.29	315								
1939	Oct. 8, 1938	-	b700	July 6, 1944	2.27	310				
				1940	Aug. 5, 1940	7.62	1,340	1945	Aug. 20, 1945	2.26
1941	May 2, 1941	5.49	850							

a Annual peak only.

b Estimated on basis of records for Mora River near Golondrin.

Peak stages and discharges of Mora River at La Cueva, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept. 1, 1946	5.93	1,050	1954	Aug. 6, 1954	5.30	817
	Sept. 2, 1946	3.28	440		Aug. 8, 1954	2.55	322
	Sept. 7, 1946	2.82	341	1955	Oct. 5, 1954	2.58	338
1947	Aug. 22, 1947	2.26	323		July 11, 1955	7.07	1,090
	May 25, 1948	2.94	449		July 30, 1955	3.75	575
1948	June 3, 1948	2.44	359		Aug. 6, 1955	4.71	728
	June 11, 1948	2.53	377		Aug. 15, 1955	2.80	377
	July 22, 1948	5.02	789		Aug. 21, 1955	3.05	431
	Aug. 4, 1948	6.05	940	1956	July 19, 1956	2.65	338
	May 11, 1949	3.47	526		July 30, 1956	3.05	431
1949	July 22, 1949	2.63	395	1957	May 30, 1957	3.04	302
	July 23, 1949	2.20	325		July 31, 1957	4.22	504
	Aug. 17, 1949	3.49	543		Aug. 5, 1957	5.31	726
	July 12, 1950	3.72	577		Aug. 16, 1957	5.85	842
1950	Aug. 1, 1951	2.91	405		Aug. 22, 1957	4.05	489
	Aug. 4, 1951	2.72	355		Aug. 25, 1957	3.52	392
1951	Aug. 21, 1952	4.48	685		Aug. 28, 1957	3.51	392
	Aug. 25, 1952	2.82	375		Aug. 30, 1957	3.89	466
1952	July 19, 1953	3.57	565	1958	Oct. 12, 1957	3.76	308
	July 22, 1954	3.62	549		Oct. 20, 1957	4.85	466
1953	July 23, 1954	2.77	379		Apr. 20, 1958	4.88	797
					May 8, 1958	4.20	634
1954					June 6, 1958	6.52	1,190
					Aug. 4, 1958	3.02	362
					Aug. 23, 1958	3.45	448

2165. Mora River near Golondrinas, N. Mex.

Location.--Lat 35°53'40", long 105°09'30", in Mora Grant, at downstream end of left abutment of highway bridge, 1.2 miles upstream from Coyote Creek, 2 miles east of Golondrinas, Mora County, and 4 miles downstream from Cebolla River.

Drainage area.--267 sq mi.

Gage.--Recording. Prior to June 5, 1921, at site $3\frac{1}{2}$ miles upstream at different datum. Altitude of gage is 6,730 ft (from topographic map).

Stage-discharge relation.--1915-20: Fairly well defined by current-meter measurements below 440 cfs; extended by logarithmic plotting.

1929-58: Well defined by current-meter measurements below 440 cfs; extended on basis of slope-area measurement of 14,000 cfs. Relation subject to shifting.

Historical data.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 25,000 cfs.

Remarks.--Station operated by State engineer of New Mexico prior to July 1931.

Peak discharges not appreciably affected by diversions for irrigation of about 9,000 acres. Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Aug. 1, 1916	3.1	400	1919	July 16, 1919	3.34	895
1917	May 17, 1917	1.97	170	1919	July 19, 1919	2.80	600
					Aug. 1, 1919	2.67	530
1918	July 6, 1918	2.3	350	1920	May 22, 1920	-	250
1919	Apr. 27, 1919	4.5	700	1929	May 21, 1929	8.10	1,750
	May 23, 1919	4.40	700		May 31, 1929	7.10	1,300
	June 20, 1919	2.70	550		July 24, 1929	4.25	500
	June 27, 1919	2.95	650		Aug. 8, 1929	5.3	760
	July 1, 1919	3.35	900		Aug. 11, 1929	5.6	850
	July 8, 1919	2.50	450		Sept. 23, 1929	6.90	1,200

Peak stages and discharges of Mora River near Golondrinas, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	July 14, 1930	4.55	550	1942	Sept. 12, 1942	4.20	420
	July 24, 1930	5.00	660				
	Aug. 4, 1930	6.65	1,050	1943	Aug. 18, 1943	4.47	472
	Aug. 10, 1930	5.60	850				
	Sept. 2, 1930	3.93	420	1944	May 16, 1944	4.47	340
1931	May 2, 1931	5.05	585				
	Sept. 10, 1931	4.53	480	1945	Sept. 1, 1945	4.72	378
	Sept. 24, 1931	4.52	480				
				1946	Aug. 9, 1946	5.48	517
1932	July 2, 1932	4.53	a475		Sept. 1, 1946	5.94	629
				1947	Aug. 25, 1947	4.70	378
1935	May 18, 1935	7.98	1,690				
	Aug. 4, 1935	5.66	660	1948	May 25, 1948	4.64	388
	Aug. 21, 1935	4.75	470				
	Aug. 27, 1935	5.71	670	1949	May 12, 1949	5.84	629
					June 18, 1949	8.80	2,200
1936	May 28, 1936	5.60	643		July 23, 1949	5.26	528
	July 13, 1936	5.48	620		Sept. 9, 1949	6.05	677
	Sept. 20, 1936	4.74	470	1950	July 13, 1950	5.88	606
1937	June 1, 1937	8.10	1,750	1951	July 31, 1951	7.18	1,100
1938	June 26, 1938	7.78	1,580		Aug. 5, 1951	4.90	416
	Sept. 3, 1938	6.83	957	1952	Aug. 22, 1952	14.40	14,000
	Sept. 6, 1938	7.08	1,010				
	Sept. 15, 1938	4.64	400	1953	July 17, 1953	5.46	660
					July 19, 1953	5.26	600
1939	Oct. 8, 1938	6.29	776		Sept. 1, 1953	11.52	5,250
	July 30, 1939	5.16	483	1954	Aug. 6, 1954	5.36	633
1940	Aug. 6, 1940	7.83	1,580				
1941	May 2, 1941	8.37	1,930	1955	July 12, 1955	5.05	562
	May 22, 1941	6.13	940		Aug. 6, 1955	4.68	470
	June 3, 1941	4.98	650	1956	May 23, 1956	6.17	875
	June 16, 1941	4.14	450				
	July 12, 1941	4.30	498	1957	July 8, 1957	5.43	650
	July 16, 1941	4.2	498		Aug. 4, 1957	5.58	707
	Aug. 12, 1941	4.5	533				
	Sept. 23, 1941	8.88	2,270	1958	Oct. 12, 1957	4.79	506
	Sept. 29, 1941	5.40	754		Oct. 19, 1957	6.88	2,030
					Apr. 17, 1958	5.53	766
1942	Apr. 18, 1942	6.40	980		May 8, 1958	5.40	598
	Apr. 23, 1942	10.40	3,680		June 6, 1958	5.47	778
	Sept. 1, 1942	4.82	585				
	Sept. 4, 1942	5.12	635				

a Annual maximum only.

2170. Coyote Creek below Black Lake, N. Mex.

Location.--Lat 36°16'20", long 105°14'50", in NW¼ sec. 33, T.14 N., R.16 E., on right bank 150 ft downstream from road crossing, a quarter of a mile downstream from Black Lake, 2 miles south of Black Lake Village, and 12 miles south of Agua Fria.

Drainage area.--48 sq mi.

Gage.--Recording. Altitude of gage is 8,450 ft (from topographic map).

Stage-discharge relation.--Only fair definition at upper stages by current-meter measurements and one slope-area measurement. Subject to moderate shift corrections at all stages.

Bankfull stage.--3½ ft.

Historical data.--Peak of 1958 probably is highest since about 1904, on basis of weather records and information on nearby streams.

Remarks.--Some regulation from Black Lake. Diversions for irrigation of several hundred acres would have little effect on medium to high peaks. Base for partial-duration series, 15 cfs.

Peak stages and discharges of Coyote Creek below Black Lake, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 9, 1953	1.73	a18	1957	Aug. 19, 1957	1.91	15
1954	Feb. 18, 1954	1.05	5.0		Aug. 25, 1957	2.81	59
					Aug. 31, 1957	3.10	73
1955	May 22, 1955	2.73	44	1958	Oct. 21, 1957	2.65	44
	Aug. 20, 1955	1.75	16		Feb. 26, 1958	2.61	42
1956	Mar. 5, 1956	1.57	12		Mar. 28, 1958	2.51	38
					Apr. 3, 1958	2.44	34
1957	Apr. 1, 1957	1.90	19		Apr. 8, 1958	2.19	24
	May 11, 1957	2.65	55		Apr. 18, 1958	3.94	295
	May 16, 1957	2.20	31		May 14, 1958	3.37	121
	June 1, 1957	3.02	76		June 6, 1958	4.70	913

a Record incomplete, but probably annual maximum.

2180. Coyote Creek near Golondrinas, N. Mex.

Location.--Lat 35°54'40", long 105°09'50", in Mora Grant, on left bank a third of a mile downstream from Coyote Creek damsite, 2 miles upstream from mouth, and 2 miles northeast of Golondrinas.

Drainage area.--215 sq mi.

Gage.--Recording. Prior to Apr. 26, 1938, at site 0.4 mile downstream at different datum. Apr. 26, 1938, to Sept. 25, 1946, at site 139 ft downstream at same datum. Altitude of present gage is 6,820 ft (from topographic map).

Stage-discharge relation.--Prior to April 1938, well defined by current-meter measurements below 250 cfs and extended by logarithmic plotting.

April 1938-58: Fairly well defined by current-meter measurements below 250 cfs and extended on basis of slope-area measurements at 990 and 2,320 cfs. Relation subject to moderate shifting.

Remarks.--Peak discharges not appreciably affected by diversions (including off-channel storage) for irrigation of about 4,000 acres. Base for partial-duration series, 175 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 21, 1929	3.55	200	1937	July 10, 1937	3.65	220
	Aug. 11, 1929	4.24	400				
	Sept. 22, 1929	9.25	2,700	1938	June 26, 1938	4.52	714
1930	Aug. 9, 1930	4.1	350		July 14, 1938	3.21	175
1931	May 3, 1931	3.60	212		July 17, 1938	3.25	185
1932	May 12, 1932	3.52	a197	1939	Oct. 8, 1938	3.47	244
1933	June 20, 1933	4.91	a685		Sept. 17, 1939	4.00	520
1934	July 7, 1934	3.46	175	1940	Aug. 5, 1940	3.50	293
	July 8, 1934	3.63	219		Sept. 20, 1940	4.35	650
1935	May 18, 1935	5.20	835	1941	Apr. 28, 1941	3.02	295
	May 23, 1935	4.84	650		May 2, 1941	4.92	950
	Aug. 3, 1935	5.00	730		May 22, 1941	2.99	290
	Aug. 10, 1935	3.50	191		June 4, 1941	3.32	380
	Aug. 21, 1935	4.53	508		June 24, 1941	2.60	195
	Aug. 27, 1935	4.35	435		July 12, 1941	4.10	640
1936	May 30, 1936	7.10	1,800		July 14, 1941	3.55	450
	July 13, 1936	4.40	455		July 28, 1941	2.85	250
	Aug. 3, 1936	3.43	175		Sept. 21, 1941	2.76	230
	Aug. 5, 1936	3.55	202		Sept. 23, 1941	4.65	840
	Aug. 30, 1936	10.1	3,020	1942	Oct. 4, 1941	2.54	190
	Sept. 7, 1936	4.14	359		Oct. 24, 1941	2.88	280
	Sept. 22, 1936	4.36	439		Apr. 18, 1942	3.40	410
1937	May 31, 1937	4.70	540		Apr. 23, 1942	6.44	1,700
	June 1, 1937	6.62	1,550		July 20, 1942	2.68	225
	June 3, 1937	6.63	1,550		Aug. 14, 1942	4.16	700
	June 26, 1937	7.19	1,840		Aug. 18, 1942	3.25	390
				1943	Sept. 1, 1942	3.10	350
					Aug. 18, 1943	2.97	321
					Aug. 26, 1943	2.74	255

a Records incomplete; annual peak only.

Peak stages and discharges of Coyote Creek near Golondrinas, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	July 5, 1944	2.62	172	1953	May 29, 1953	3.40	201
1945	Aug. 21, 1945	4.25	550		June 17, 1953	3.63	236
	Aug. 31, 1945	3.79	380		July 17, 1953	3.50	220
1946	July 19, 1946	3.27	230		July 19, 1953	3.83	282
	Aug. 9, 1946	4.82	800		Aug. 17, 1953	7.70	2,320
	Aug. 25, 1946	3.28	230		Sept. 1, 1953	3.75	240
	Sept. 1, 1946	3.33	240	1954	July 24, 1954	3.76	230
1947	May 7, 1947	3.61	260		Aug. 6, 1954	4.80	516
	Aug. 22, 1947	3.40	210	1955	May 19, 1955	4.25	415
1948	May 25, 1948	3.68	296		July 11, 1955	8.60	3,200
	July 6, 1948	4.99	710		July 13, 1955	3.35	200
	Aug. 1, 1948	3.40	237		July 23, 1955	4.55	512
1949	May 12, 1949	4.16	418		Aug. 14, 1955	3.35	200
	July 22, 1949	5.55	1,100		Aug. 18, 1955	4.30	430
	July 29, 1949	3.55	213		Aug. 30, 1955	3.95	332
	Aug. 3, 1949	4.30	404	1956	May 23, 1956	3.53	228
	Aug. 17, 1949	3.83	272	1957	May 30, 1957	4.87	640
1950	July 10, 1950	3.45	191		May 31, 1957	3.58	210
	July 12, 1950	3.49	203		July 9, 1957	5.32	845
	July 21, 1950	4.00	340		July 12, 1957	3.52	192
	Aug. 1, 1950	4.74	610		Aug. 5, 1957	4.73	548
1951	May 17, 1951	3.43	219		Aug. 28, 1957	4.16	354
	July 18, 1951	3.85	305		Aug. 30, 1957	4.25	382
	July 23, 1951	3.59	246	1958	Oct. 12, 1957	4.30	431
	July 30, 1951	4.24	442		Oct. 19, 1957	6.50	1,540
	July 31, 1951	4.78	670		Apr. 19, 1958	5.04	663
1952	Aug. 13, 1952	3.32	184		June 6, 1958	4.95	668
	Aug. 22, 1952	4.00	331		July 2, 1958	4.15	360
					Aug. 16, 1958	3.48	181

2209. Dog Creek near Shoemaker, N. Mex.

Location--Lat 35°49'32", long 104°53'28", 0.5 mile upstream from Valmora-Shoemaker road and 1.8 miles northwest of Shoemaker.

Drainage area--11.2 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Poorly defined by two indirect measurements and one current-meter measurement.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	-	9.25	1,160	1956	July 23, 1956	8.21	702
1955	Sept. 25, 1955	9.92	1,530	1957	July 1957	8.21	702
				1958	Aug. 24, 1958	9.26	1,170

2210. Mora River near Shoemaker, N. Mex.

Location.--Lat 35°48', long 104°47', in Mora Grant, on left bank $4\frac{1}{2}$ miles east of Shoemaker, Mora County, and 23 miles upstream from mouth.

Drainage area.--1,104 sq mi, of which about 1,033 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Oct. 11, 1934, at site 2,000 ft upstream at different datum. Altitude of present gage is 6,170 ft (from topographic map).

Stage-discharge relation.--1914-34: Fairly well defined by current-meter measurements below 1,300 cfs and extended on basis of rating at site 2,000 ft downstream.

1934-58: Well defined by current-meter measurements below 2,800 cfs and extended on basis of slope-area measurements at 8,200 and 15,300 cfs. Relation subject to shifts.

Historical data.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 30,000 cfs.

Remarks.--Records collected by State engineer of New Mexico Jan. 1, 1915, to Sept. 30, 1930. Peak discharges not appreciably affected by diversions for irrigation of about 26,000 acres. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Apr. 16-21, 1915	6.27	a3,100	1931	Oct. 2, 1930	5.24	2,100
1916	Aug. 28, 1916	2.85	640		May 3, 1931	4.55	1,500
1917	May 18, 1917	1.82	175		Sept. 22, 1931	3.75	1,000
1918	Aug. 8, 1918	3.50	900	1932	May 12, 1932	3.30	790
	Aug. 15, 1918	5.40	2,200	1933	June 12, 1933	5.52	a2,300
1919	Apr. 12, 1919	4.65	1,800	1934	May 26, 1934	4.30	1,300
	Apr. 27, 28, 1919	-	b1,600		July 7, 1934	3.73	1,000
	May 10, 1919	3.7	1,100		Sept. 1, 1934	3.48	850
	May 24, 1919	4.78	1,900	1935	May 18, 1935	6.14	3,100
	July 8, 1919	5.1	2,100		Aug. 4, 1935	5.02	1,770
	July 17, 1919	5.65	2,500		Aug. 21, 1945	4.17	1,040
	July 28, 1919	4.45	1,400		Aug. 29, 1935	5.30	2,080
	Aug. 16, 1919	3.50	890		Sept. 2, 1935	3.84	834
1920	May 9, 1920	4.00	1,200	1936	May 30, 1936	3.83	828
1921	June 4, 1921	11.1	11,000		Aug. 31, 1936	4.34	1,200
	June 10, 1921	3.95	1,100	1937	June 3, 1937	10.41	9,260
	June 14, 1921	4.35	1,400		July 11, 1937	3.83	884
	June 18, 1921	3.88	1,100		July 20, 1937	4.80	1,580
	July 4, 1921	6.10	2,900	1938	June 8, 1938	3.96	912
	July 19, 1921	5.10	2,000		June 12, 1938	8.0	5,300
	July 22, 1921	6.35	3,200		June 13, 1938	7.51	4,600
	July 24, 1921	6.17	3,000		June 27, 1938	5.10	1,880
	July 28, 1921	5.37	2,200		July 18, 1938	5.53	2,360
	Aug. 11, 1921	4.38	1,400		July 20, 1938	5.94	2,840
	Aug. 15, 1921	4.66	1,600		Sept. 3, 1938	5.10	1,880
	Aug. 19, 1941	3.88	1,100		Sept. 5, 1938	4.58	1,430
1922	July 1, 1922	2.02	190		Sept. 7, 1938	4.09	1,060
1924	Dec. 27, 1923	5.18	2,000	1939	Oct. 8, 1938	7.15	4,210
1927	Aug. 3, 1927	6.95	3,900		July 28, 1939	5.01	1,830
	Aug. 10, 1927	7.15	4,200	1940	June 21, 1940	7.20	4,210
	Aug. 21, 1927	3.86	1,100		Aug. 6, 1940	4.69	1,510
1928	May 12, 1928	2.17	239		Aug. 8, 1940	4.73	1,560
1929	May 22, 1929	6.8	3,700	1941	Apr. 29, 1941	3.89	1,020
	May 31, 1929	7.75	5,000		May 2, 1941	7.17	4,210
	July 18, 1929	3.80	1,040		May 12, 1941	5.16	1,980
	Aug. 11, 1929	-	b2,000		May 22, 1941	5.90	2,790
	Sept. 23, 1929	6.15	3,000		May 30, 1941	4.93	1,800
1930	July 14, 1930	5.25	2,100		June 4, 1941	5.22	2,110
	July 23, 1930	4.18	1,300		June 16, 1941	4.03	1,120
	Aug. 11, 1930	4.10	1,200		June 24, 1941	3.77	930
					July 13, 1941	7.65	4,730
					July 21, 1941	8.17	5,570

a Records incomplete; annual peak only.

b Estimated on basis of records for station near Golondrinás.

Peak stages and discharges of Mora River near Shoemaker, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	July 24, 1941	3.88	1,050	1949	July 22, 1949	4.09	1,090
	Aug. 12, 1941	3.63	900		July 31, 1949	4.20	1,160
	Sept. 20, 1941	6.66	3,590		Sept. 10, 1949	7.82	5,250
	Sept. 23, 1941	8.50	5,720	1950	July 13, 1950	4.72	1,520
	Sept. 30, 1941	6.83	3,710		Aug. 3, 1950	6.46	3,250
1942	Oct. 25, 1941	3.62	890		Aug. 21, 1950	5.20	1,940
	Apr. 18, 1942	5.45	2,360	1951	July 31, 1951	10.09	9,200
	Apr. 23, 1942	10.20	8,880	1952	Aug. 23, 1952	9.25	7,400
	May 22, 1942	4.50	1,500		Aug. 28, 1952	4.80	1,680
	July 20, 1942	7.80	5,010		Sept. 13, 1952	5.07	1,900
	Aug. 14, 1942	3.94	1,100	1953	July 18, 1953	7.25	4,210
	Sept. 1, 1942	6.55	3,470		Aug. 11, 1953	3.90	960
	Sept. 5, 1942	3.83	1,040		Aug. 17, 1953	6.68	3,590
	Sept. 12, 1942	5.80	2,740		Sept. 1, 1953	10.16	8,880
	Sept. 14, 1942	4.68	1,660	1954	Aug. 7, 1954	3.09	536
1943	July 1, 1943	4.40	1,420	1955	Oct. 7, 1954	3.72	892
1944	Aug. 22, 1944	2.83	510		July 12, 1955	4.38	1,300
1945	Aug. 21, 1945	4.70	1,620		Aug. 11, 1955	7.35	4,410
1946	Aug. 10, 1946	4.06	1,180		Aug. 15, 1955	5.58	2,310
	Aug. 18, 1946	4.30	1,350	1956	May 23, 1956	5.20	1,980
	Aug. 24, 1946	3.90	1,070		Aug. 1, 1956	5.40	2,190
	Sept. 2, 1946	3.65	920	1957	July 9, 1957	4.80	1,610
1947	Oct. 5, 1946	2.41	334		Aug. 5, 1957	7.80	5,070
1948	May 26, 1948	3.53	890		Aug. 8, 1957	3.85	970
	June 3, 1948	12.79	15,200	1958	Oct. 13, 1957	3.59	815
	June 20, 1948	8.52	6,150		Oct. 20, 1957	6.60	3,510
	Aug. 5, 1948	5.31	2,080		Apr. 17, 1958	6.23	3,050
1949	May 12, 1949	3.93	1,000		June 6, 1958	4.52	1,420
	May 19, 1949	5.50	2,280		Aug. 24, 1958	4.05	1,160
	June 21, 1949	4.09	1,120				

2215. Canadian River near Sanchez, N. Mex.

Location.--Lat 35°39'15", long 104°22'30", in S½ sec. 34, T.17 N., R.24 E., at downstream end of bridge pier on State Highway 65, 1 mile upstream from Lagartija Creek, 3 miles northeast of Sanchez, 10 miles downstream from Mora River, and 24 miles southwest of Mosquero.

Drainage area.--6,015 sq mi, of which about 5,712 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Jan. 1, 1915, at two adjacent sites about 3 miles upstream at different datums. Altitude of present gage is 4,500 ft (from topographic map).

Stage-discharge relation.--1912-14: Fairly well defined by current-meter measurements below 2,800 cfs and extended on basis of determinations by Kutter's formula at stages of 10, 15, and 25 ft.

1936-58: Fairly well defined by current-meter measurements below 48,000 cfs and extended on basis of slope-area measurement at 87,800 cfs. Subject to moderate shifting.

Historical data.--Maximum known flood occurred Sept. 29 or 30, 1904. Discharge probably exceeded 100,000 cfs.

Remarks.--Station operated by Corps of Engineers April 1936 to May 1, 1939. Peak discharges not appreciably affected by diversions for irrigation of about 56,000 acres. Base for partial-duration series, 5,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Canadian River near Sanchez, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 12, 1913	25.0	a82,700	1948	June 3, 1948	-	(b)
1914	May 1, 1914	11.8	a19,000	1949	Sept. 10, 1949	4.70	4,550
1936	June 12, 1936	4.28	4,340	1950	July 20, 1950	6.10	7,810
1937	June 3, 1937	13.35	a46,300		July 22, 1950	5.41	5,740
1938	June 14, 1938	9.02	a19,900		July 31, 1950	5.25	5,360
					Aug. 3, 1950	6.50	9,050
1939	Oct. 9, 1938	8.80	19,000		Sept. 9, 1950	5.32	5,480
	Aug. 1, 1939	5.10	5,600		Sept. 11, 1950	5.11	5,000
1940	Aug. 7, 1940	3.80	2,900	1951	July 12, 1951	6.50	9,710
					Aug. 1, 1951	5.86	7,810
1941	Mar. 25, 1941	5.10	5,610		Aug. 10, 1951	7.40	13,000
	Apr. 28, 1941	5.0	5,360	1952	Aug. 5, 1952	5.77	7,360
	May 2, 1941	12.96	44,900		Aug. 23, 1952	7.35	12,600
	May 11, 1941	11.0	31,000		Sept. 13, 1952	6.15	8,730
	May 29, 1941	7.7	14,200	1953	July 6, 1953	5.71	7,360
	July 26, 1941	5.1	5,740		July 19, 1953	5.23	6,120
	Aug. 12, 1941	6.20	9,050		Aug. 20, 1953	6.50	9,710
	Sept. 22, 1941	10.27	26,900		Sept. 1, 1953	6.83	10,700
1942	Apr. 24, 1942	16.7	70,200	1954	Aug. 8, 1954	2.86	1,430
	Sept. 2, 1942	19.3	87,800	1955	Oct. 6, 1954	6.28	8,350
1943	Oct. 18, 1942	5.30	6,260		Apr. 30, 1955	5.54	6,330
	Aug. 18, 1943	4.80	5,000		May 19, 1955	12.45	41,200
1944	June 29, 1944	5.00	4,660		July 12, 1955	5.60	7,830
1945	Oct. 16, 1944	6.23	8,730	1956	Aug. 21, 1956	3.17	2,450
1946	Aug. 27, 1946	6.28	9,380	1957	July 9, 1957	4.60	5,100
	Aug. 29, 1946	8.98	21,000		Aug. 5, 1957	5.40	6,650
	Sept. 2, 1946	4.95	5,740	1958	Oct. 20, 1957	6.50	9,350
	Sept. 16, 1946	5.10	6,120		May 15, 1958	7.23	10,200
1947	Oct. 4, 1946	8.00	15,400		June 7, 1958	5.20	5,910
	July 2, 1947	6.70	10,400		July 24, 1958	6.30	7,950
	July 7, 1947	9.0	20,000		Aug. 16, 1958	7.62	11,400

a Record incomplete; annual peak only.

b Annual peak; probably did not exceed 15,000 cfs.

2220. Canadian River near Bell Ranch, N. Mex.

Location.--Lat 35°30', long 104°15', in Pablo Montoya Grant, 1 mile upstream from Perra Creek, about 7 miles north of Conchas Dam, and about 9 miles west of Bell Ranch.

Drainage area.--6,200 sq mi, approximately, of which about 5,900 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Aug. 12, 1934, at site 200 ft upstream at datum 0.65 ft higher. Altitude of last used gage was 4,130 ft (estimated from water surface elevation at Conchas Dam on July 30, 1939).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 7,500 cfs and extended on basis of slope-area measurement at 47,800 cfs.

Historical data.--Maximum flood known occurred Sept. 29 or 30, 1904. Flood of July 1927 probably exceeded 40,000 cfs.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Peak discharges not appreciably affected by diversions above station for irrigation of about 56,000 acres. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges of Canadian River near Bell Ranch, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Aug. 31, 1916	4.35	5,100	1934	Sept. 1, 1934	6.8	9,600
1928	Sept. 2, 1928	4.23	2,580	1935	May 18, 1935	6.42	7,400
1929	Oct. 14, 1928	6.22	8,000		June 27, 1935	11.7	26,100
	May 22, 1929	5.60	6,090		Aug. 4, 1935	7.30	10,000
	July 10, 1929	8.0	14,500		Aug. 28, 1935	6.70	8,500
1930	June 5, 1930	5.40	5,530		Aug. 30, 1935	6.10	6,500
	June 17, 1930	6.95	10,800		Sept. 8, 1935	6.45	7,500
	July 13, 1930	5.30	5,250	1936	June 12, 1936	5.09	4,180
	July 24, 1930	6.00	7,330	1937	June 3, 1937	15.8	47,800
1931	Oct. 1, 1930	8.30	15,600		June 28, 1937	8.30	12,200
	Oct. 2, 1930	7.95	14,500		Sept. 8, 1937	7.70	10,200
	Oct. 5, 1930	8.30	15,600	1938	June 12, 1938	9.00	14,700
	Oct. 11, 1930	7.30	11,900		June 14, 1938	10.35	20,300
1932	June 24, 1932	4.50	3,080		June 27, 1938	7.1	8,440
1933	Aug. 4, 1933	7.95	14,500	1939	Sept. 4, 1938	8.9	14,300
					Oct. 9, 1938	9.97	18,600

a Record incomplete; annual peak only.

2225. Conchas River at Variadero, N. Mex.

Location.--Lat 35°24'10", long 104°26'35", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.14 N., R.23 E., on left bank 1.5 miles northeast of Variadero and 15 miles west of Conchas Dam.

Drainage area.--523 sq mi, of which about 393 sq mi contributes directly to surface runoff.

Gage.--Recording. Apr. 3, 1936. Prior to Mar. 30, 1942, at site $1\frac{1}{2}$ miles upstream at different datum. Mar. 30, 1942, to May 18, 1950, at present site at datum 0.5 ft higher. Altitude of present gage is 4,430 ft (from topographic map).

Stage-discharge relation.--1936-42: Fairly well defined by current-meter measurements below 2,600 cfs and extended on basis of slope-area measurement at 44,000 cfs.

1942-58: Fairly well defined by current-meter measurements below 760 cfs and extended on basis of slope-area measurement at 8,300 and 44,000 cfs.

Remarks.--Station operated by Corps of Engineers prior to Jan. 1, 1940. Peak discharges not appreciably affected by diversions for irrigation of about 300 acres. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Apr. 19, 1937	4.40	1,500	1941	July 27, 1941	7.02	3,500
	May 29, 1937	8.2	5,100		Aug. 10, 1941	5.80	2,300
	June 3, 1937	21.2	34,000		Aug. 27, 1941	10.26	7,600
	June 27, 1937	4.9	1,900		Sept. 22, 1941	9.87	7,000
	Sept. 7, 1937	7.05	3,800		Sept. 29, 1941	13.1	12,000
1938	June 12, 1938	16.7	20,000	1942	Apr. 17, 1942	5.90	3,100
	June 26, 1938	7.3	4,100		Apr. 23, 1942	4.10	1,560
	Sept. 5, 1938	20.75	33,000		Sept. 1, 1942	19.5	44,000
1939	Oct. 9, 1938	5.55	2,000	1943	July 12, 1943	3.87	1,300
	May 28, 1939	6.45	2,900	1944	July 16, 1944	4.12	1,500
	July 14, 1939	8.10	4,700	1945	July 14, 1945	4.36	1,700
	Aug. 1, 1939	9.42	6,400	1946	Aug. 20, 1946	4.78	2,100
	Aug. 9, 1939	4.80	1,500		Aug. 29, 1946	9.72	8,500
1940	Aug. 7, 1940	5.81	2,440		Sept. 15, 1946	12.00	12,500
1941	May 1, 1941	20.72	32,000	1947	Oct. 4, 1946	7.26	4,700
	June 5, 1941	6.45	2,900	1948	June 25, 1948	4.19	1,710
	June 24, 1941	12.0	10,000				
	July 13, 1941	5.10	1,700				
	July 24, 1941	6.39	2,800				

Peak stages and discharges of Conchas River at Variadero, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	July 10, 1949	4.48	2,000	1954	Sept. 27, 1954	5.16	2,170
	July 13, 1949	9.85	8,730	1955	Oct. 6, 1954	7.07	4,190
	July 31, 1949	4.32	1,900		May 18, 1955	4.60	1,620
1950	July 4, 1950	4.68	1,710		July 19, 1955	5.27	2,270
	July 19, 1950	4.91	1,900		July 28, 1955	5.95	2,960
	Aug. 1, 1950	4.82	1,850		Aug. 6, 1955	5.40	2,400
1951					Aug. 11, 1955	4.90	1,900
	May 15, 1951	5.00	1,950	1956			
	July 14, 1951	5.76	2,700		July 18, 1956	4.48	1,510
July 22, 1951	9.98	8,130	1957		May 30, 1957	4.85	1,850
1952	Aug. 3, 1952	4.50		1,530	July 14, 1957	5.30	2,300
	Aug. 22, 1952	5.35		2,400	July 25, 1957	5.25	2,250
1953					Aug. 5, 1957	5.80	2,840
	July 20, 1953	4.72	1,710	1958			
Aug. 11, 1953	5.05	2,050	July 17, 1958		5.28	2,240	

2245. Canadian River below Conchas Dam, N. Mex.

Location.--Lat 35°24'30", long 104°10'10", in sec. 27, T.14 N., R.26 E. (projected), in Pablo Montoya Grant, on right bank 2.0 miles east of Conchas Dam Post Office and 2.8 miles downstream from Conchas Dam.

Drainage area.--7,417 sq mi, of which about 6,984 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Dec. 13, 1941, at site 0.7 mile downstream at datum 6.2 ft higher. Datum of present gage is 4,021.90 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1936-50: Defined by current-meter measurements below 71,000 cfs.

1951-57: Backwater from La Cinta Creek made ratings very unstable and uncertain.

1958: Defined by current-meter measurements below 10,000 cfs.

Historical data.--Flood of Sept. 30, 1904, has been estimated at 279,000 cfs by Corps of Engineers.

Remarks.--Prior to October 1942, records furnished by Corps of Engineers. Regulated by Conchas Reservoir since Dec. 29, 1938 (capacity, 370,200 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 12, 1936	-	a3,780	1948	June 1, 2, 4, 1948	10.20	9,550
1937	June 3, 1937	12.8	73,000	1949	Aug. 5, 1949	5.18	1,640
1938	Sept. 4, 1938	10.4	47,400	1950	July 29, 1950	2.48	167
1939	Oct. 9, 1938	6.45	b21,100	1951	Sept. 12, 1951	3.59	357
1943	Oct. 8, 1942	9.76	11,700		Sept. 3, 1952	8.70	6,700
	Nov. 5, 1942	9.80	11,700		Sept. 28, 1953	8.76	6,030
	July 31, 1943	9.79	11,700		Sept. 26, 1954	2.35	28
1944	June 10, 1944	10.20	10,200		May 24, 1955	11.60	6,790
1945	Aug. 8, 1945	2.03	250	1956	Oct. 21, 1955	2.18	1.2
1946	Sept. 16, 1946	10.28	10,400		-	3.35	-
	Oct. 5, 1946	10.90	11,000		May 21, 1958	14.28	10,600
1947							

a Maximum for period Apr. 13 to Sept. 30, 1936.

b Maximum prior to beginning of storage in Conchas Reservoir Dec. 29, 1938.

2260. Ute Creek near Bueyeros, N. Mex.

Location.--Lat 36°00'00", long 103°44'35", in NE $\frac{1}{4}$ sec.3, T.20 N., R.30 E., on left bank at ford on State Highway 57, 3 $\frac{1}{2}$ miles northwest of Bueyeros and 19 $\frac{1}{2}$ miles northeast of Mosquero.

Drainage area.--620 sq mi, of which about 458 sq mi contributes directly to surface runoff.

Gage.--Recording. Altitude of gage is 4,900 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 830 cfs and extended on basis of slope-area measurement at 20,400 cfs and by logarithmic plotting.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation of about 100 acres. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 15, 1949	4.21	3,630	1951	May 27, 1951	3.95	4,500
	July 11, 1949	3.90	3,070		July 11, 1951	4.70	6,710
	Aug. 9, 1949	5.40	7,540		July 12, 1951	3.85	4,360
	Aug. 15, 1949	7.90	20,400		July 23, 1951	3.65	3,100
	Sept. 7, 1949	2.60	1,530	1952	July 3, 1952	2.73	1,730
1950	July 18, 1950	3.16	1,920		Aug. 22, 1952	7.81	19,900
	July 19, 1950	4.00	3,400		Aug. 24, 1952	3.10	2,490
	July 28, 1950	2.89	1,670	1953	Aug. 16, 1953	11.07	39,000
	July 31, 1950	8.77	27,300		Aug. 31, 1953	2.60	2,070
	Sept. 8, 1950	3.14	2,310	1954	May 16, 1954	1.78	710
1951	May 15, 1951	6.68	14,300				
	May 17, 1951	2.95	2,170				

2265. Ute Creek near Logan, N. Mex.

Location.--Lat 35°24', long 103°30', in NE $\frac{1}{4}$ sec.35, T.14 N., R.32 E., on right bank a quarter of a mile downstream from Logan-Trigg Ranch road crossing, 5 $\frac{1}{2}$ miles upstream from mouth, and 6 miles northwest of Logan.

Drainage area.--2,073 sq mi, of which about 1,456 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 1, 1911, at site 1 $\frac{1}{2}$ miles downstream at different datum; recording thereafter. Aug. 1, 1911, to May 23, 1914, at site 1 $\frac{1}{2}$ miles downstream at different datum. Jan. 13, 1942, to Dec. 14, 1955, at present site at datum 1.00 ft higher. Datum of present gage is 3,758.50 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1909-14: Not reliably defined.

1942-58: Fairly well defined by current-meter measurements below 7,700 cfs and extended on basis of slope-area measurements of 9,700 and 18,000 cfs. Relation subject to slight shifts.

Remarks.--Peak discharges not appreciably affected by diversions for irrigation of a few hundred acres. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges of Ute Creek near Logan, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Sept. 6, 1909	12.2	-	1950	July 3, 1950	7.20	18,000
1914	May 1, 1914	22.95	-		July 5, 1950	5.50	10,000
1941	-	17.0	70,000		July 21, 1950	5.75	10,400
1942	Apr. 24, 1942	5.95	11,500		Aug. 1, 1950	7.20	18,000
1943	July 7, 1943	3.8	3,800	1951	May 15, 1951	6.90	16,500
1944	July 4, 1944	5.27	8,600		July 12, 1951	8.4	24,500
1945	Aug. 7, 1945	4.70	6,500	1952	Aug. 22, 1952	6.50	13,800
1946	May 28, 1946	8.40	24,500	1953	Aug. 17, 1953	5.63	10,900
	Aug. 27, 1946	4.80	7,300	1954	June 29, 1954	3.50	4,100
	Sept. 16, 1946	4.70	6,900	1955	Oct. 6, 1954	4.35	6,350
1947	Oct. 9, 1946	5.95	12,000		May 19, 1955	7.85	21,500
	May 15, 1947	4.80	7,300	1956	July 22, 1956	7.50	14,700
1948	June 19, 1948	6.90	16,500	1957	Aug. 5, 1957	8.85	21,100
1949	May 15, 1949	6.09	12,500	1958	May 15, 1958	7.35	13,900
	July 31, 1949	4.80	6,900		May 25, 1958	5.85	8,710
	Aug. 16, 1949	5.20	9,700		July 24, 1958	5.50	6,130
1950	June 11, 1950	6.20	12,000		Aug. 23, 1958	5.75	6,360
					Sept. 4, 1958	6.57	10,000
					Sept. 15, 1958	5.60	7,040

a Present site and datum, from information by Bureau of Reclamation.

b Record incomplete; annual peak only.

2270. Canadian River at Logan, N. Mex.
(Published as South Canadian River in 1904)

Location.--Lat 35°21'20", long 103°25'20", in NE $\frac{1}{4}$ sec.15, T.13 N., R.33 E., on left bank half a mile south of Logan, $1\frac{1}{2}$ miles upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, $4\frac{1}{4}$ miles upstream from Tucumcari Creek, and $5\frac{1}{2}$ miles downstream from Ute Creek.

Drainage area.--11,141 sq mi, of which about 10,031 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 4, 1910, at site $1\frac{1}{2}$ miles downstream at different datums; recording thereafter at present site. Prior to Oct. 21, 1928, at different datums and Oct. 21, 1928, to Sept. 30, 1934, at datum 1.54 ft lower. Altitude of present gage is 3,670 ft (from river-profile study).

Stage-discharge relation.--1904-5, 1908-10: Fairly well defined by current-meter and float measurements below 140,000 cfs and extended by logarithmic plotting.

1910-58: Fairly well defined by current-meter and float measurements below 75,000 cfs and extended by logarithmic plotting.

Historical data.--According to Ninth Biennial Report of State engineer, the flood of Sept. 30, 1904, is the greatest known.

Remarks.--Records for 1922 to Oct. 30, 1930, collected by State engineer of New Mexico. Peak discharges partially regulated by Conchas Reservoir since Dec. 29, 1938; prior to 1938 not appreciably affected by diversions for irrigation of several thousand acres. Base for partial-duration series, 12,000 cfs.

Peak stages and discharges of Canadian River at Logan, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Sept. 30, 1904	36.5	a278,000	1941	June 5, 1941	10.5	28,000
1909	Sept. 6, 1909	-	a150,000		June 18, 1941	8.0	14,000
1910	Aug. 18, 1910	-	a45,000		June 25, 1941	8.8	18,000
1911	May 30, 1911	-	a27,000		July 10, 1941	9.4	21,000
1912	June 11, 1912	10.0	14,000		July 13, 1941	10.6	28,000
	Aug. 21, 1912	11.0	18,000		July 17, 1941	8.3	14,000
1913	June 12, 1913	20.00	97,000		July 22, 1941	29.3	219,000
1914	May 1, 1914	-	207,000		July 23, 1941	8.3	14,000
1926	June 19, 1926	14.0	a40,000	1942	Apr. 24, 1942	13.90	54,400
1927	July 30, 1927	10.8	18,500		May 8, 1942	8.25	15,000
	Aug. 5, 1927	9.9	14,000		May 15, 1942	7.6	12,000
	Aug. 11, 1927	10.0	15,000		July 1, 1942	8.4	12,500
1928	June 10, 1928	10.8	19,000		Aug. 14, 1942	8.3	12,000
1929	Oct. 14, 1928	16.6	60,000		Sept. 3, 1942	12.7	33,000
	July 10, 1929	15.9	59,000		Sept. 11, 1942	7.95	14,000
1930	July 23, 1930	8.9	12,000		Sept. 17, 1942	8.05	14,000
1931	Oct. 3, 1930	14.9	51,000	1943	Oct. 8, 1942	7.9	13,000
	Oct. 11, 1930	19.0	90,000		Oct. 20, 1942	8.10	13,900
	Aug. 4, 1931	9.0	13,000		Nov. 6, 1942	8.05	13,400
1932	June 25, 1932	10.02	a17,000	1944	June 1, 1944	8.74	11,400
1934	Sept. 1, 1934	10.80	21,000	1945	Aug. 15, 1945	8.3	10,000
1935	May 18, 1935	9.4	22,000	1946	May 28, 1946	14.23	50,000
	June 28, 1935	10.9	31,000		Sept. 14, 1946	9.9	17,000
	Aug. 4, 1935	11.95	39,000		Sept. 16, 1946	9.7	16,000
1936	July 13, 1936	13.5	51,600	1947	Oct. 5, 1946	9.0	13,000
	Aug. 28, 1936	8.0	14,000		Oct. 9, 1946	11.70	28,000
1937	May 29, 1937	17.8	94,000		May 15, 1947	9.1	13,000
	June 3, 1937	18.91	110,000	1948	June 2, 1948	9.56	14,200
	June 27, 1937	11.5	33,000		June 19, 1948	12.10	30,000
1938	May 30, 1938	9.7	24,000	1949	May 16, 1949	8.59	11,000
	June 13, 1938	10.2	29,000	1950	June 11, 1950	10.2	16,000
	June 26, 1938	9.25	21,000		July 3, 1950	9.5	13,000
	July 18, 1938	8.4	17,000		July 6, 1950	14.41	41,200
	Sept. 5, 1938	12.57	48,000		July 22, 1950	9.1	12,000
1939	Oct. 10, 1938	10.39	28,000		Aug. 1, 1950	9.8	15,000
	May 3, 1939	8.9	19,000	1951	May 15, 1951	9.48	17,300
	May 28, 1939	9.5	22,000		July 12, 1951	10.80	24,000
	July 29, 1939	7.8	14,000	1952	Aug. 22, 1952	9.00	11,000
	Aug. 3, 1939	9.0	19,000	1953	Aug. 17, 1953	10.3	17,000
1940	June 21, 1940	7.00	10,600	1954	June 30, 1954	7.54	4,540
1941	May 2, 1941	17.5	91,000	1955	Oct. 7, 1954	11.00	18,500
	May 23, 1941	16.2	78,000		May 19, 1955	11.90	24,400
	May 30, 1941	14.8	64,000	1956	July 22, 1956	11.80	26,300
				1957	Aug. 5, 1957	11.25	18,800
				1958	May 25, 1958	10.05	12,900
					Sept. 4, 1958	10.65	13,800

a Record incomplete, annual peak only.

2270.5. Plaza Larga Creek tributary near Ragland, N. Mex.

Location.--NE $\frac{1}{4}$ sec.15, T.7 N., R.30 E., at culvert on State Highway 18, 1.2 miles north of Ragland.

Drainage area.--0.5 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by two indirect measurements and point of zero flow.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Plaza Larga Creek tributary near Ragland, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Aug. 12, 1952	6.87	195	1956	July 19, 1956	7.38	270
1953	May 27, 1953	6.61	160	1957	May 29, 1957	7.70	320
1954	May 16, 1954	7.46	285	1958	July 16, 1958	12.70	1,170
1955	July 22, 1955	7.42	280				

2275. Canadian River near Amarillo, Tex.

Location.--Lat 35°28'10", long 101°52'45", near left bank on downstream side of pier of bridge on U. S. Highways 87 and 287, 1,500 ft downstream from Pitcher Creek, 1.7 miles downstream from Panhandle and Santa Fe Railway Co. bridge, 19 miles north of Amarillo, Potter County, and at mile 538.

Drainage area.--19,445 sq mi, of which about 15,376 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 5, 1938; recording and nonrecording thereafter. Prior to June 2, 1938, at site of old bridge 20 ft upstream at same datum. Datum of present gage is 2,989.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 100,000 cfs.

Bankfull stage.--21 ft.

Historical data.--Flood in May 1914, reached a stage of about 24.0 ft; a higher stage probably occurred during flood in October 1904, from information by local residents.

Remarks.--Some regulation by Conchas Reservoir since Dec. 28, 1938. Conchas Canal and Bell Ranch Canal divert from Conchas Reservoir for irrigation. Base for partial-duration series, 14,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Aug. 14, 1924	7.95	44,400	1941	July 11, 1941	7.85	24,000
1925	July 29, 1925	7.10	18,800		July 13, 1941	9.60	47,000
	Aug. 7, 1925	9.15	34,700		July 25, 1941	15.70	135,000
	Sept. 16, 1925	7.51	18,000		Aug. 20, 1941	8.40	41,200
					Aug. 23, 1941	7.40	32,900
1938	May 31, 1938	8.30	29,600		Sept. 23, 1941	15.00	115,000
	June 8, 1938	7.08	16,000		Sept. 30, 1941	9.69	60,900
	June 15, 1938	10.50	48,000	1942	Oct. 23, 1941	9.50	45,500
	June 18, 1938	7.80	23,600		Oct. 26, 1941	6.80	14,000
	June 27, 1938	7.40	17,800		Apr. 21, 1942	7.08	15,500
	July 19, 1938	9.35	38,300		Apr. 25, 1942	9.15	38,300
	July 22, 1938	7.32	16,900		May 17, 1942	7.05	15,000
	Sept. 6, 1938	10.40	46,700		June 1, 1942	6.97	15,000
					June 23, 1942	8.20	25,600
	Oct. 10, 1938	9.91	43,000		July 2, 1942	7.55	16,800
	Jan. 8, 1939	8.70	29,600		July 21, 1942	7.65	21,900
	Apr. 5, 1939	10.25	46,700		Aug. 15, 1942	7.15	15,500
1939	June 21, 1939	7.36	18,700		Sept. 3, 1942	8.80	25,600
	Aug. 2, 1939	8.20	23,600		Sept. 6, 1942	8.30	22,400
	Aug. 4, 1939	8.15	24,600	1943	Oct. 14, 1942	7.40	16,800
	Aug. 10, 1939	9.50	38,300		Oct. 20, 1942	7.56	15,000
					July 9, 1943	8.57	19,800
1940	May 7, 1940	7.63	25,600	1944	June 2, 15, Aug. 28	a8.10	12,500
	May 28, 1940	7.20	18,700				
	Aug. 8, 1940	8.36	26,600	1945	Aug. 15, 1945	8.67	18,300
	Sept. 5, 1940	7.67	17,800	1946	May 29, 1946	9.80	30,300
1941	May 3, 1941	11.70	72,300	1947	Oct. 7, 1946	10.00	39,500
	May 20, 1941	7.15	17,200		Oct. 10, 1946	7.90	21,600
	May 23, 1941	9.00	59,300		May 14, 1947	7.87	14,900
	May 25, 1941	7.27	24,000		May 20, 1947	7.90	16,800
	May 31, 1941	8.98	38,300				
	June 6, 1941	8.90	37,000	1948	June 20, 1948	7.70	14,500
	June 9, 1941	7.85	21,400				
	June 25, 1941	8.78	30,400				
	July 3, 1941	8.15	25,600				

a Occurred June 2, 1944.

Peak stages and discharges of Canadian River near Amarillo, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	June 24, 1948	8.30	22,200	1953	Aug. 18, 1953	8.29	17,300
1949	May 16, 1949	12.63	97,000	1954	May 17, 1954	7.70	19,000
	May 18, 1949	6.94	15,000		July 23, 1954	10.86	42,900
	June 3, 1949	8.42	30,400	1955	Oct. 8, 1954	7.87	30,000
	June 11, 1949	7.20	17,300		Apr. 30, 1955	10.95	47,600
	July 15, 1949	7.20	14,600		May 19, 1955	8.40	28,200
	July 27, 1949	7.30	17,300		June 19, 1955	7.16	20,500
1950	June 22, 1950	7.65	25,600	1956	May 24, 1956	9.46	27,400
	June 29, 1950	7.77	29,800	1957	May 24, 1957	12.82	66,900
	July 5, 1950	7.18	24,500		Aug. 1, 1957	7.50	14,400
	July 7, 1950	9.82	63,100		Aug. 4, 1957	7.48	14,300
	July 21, 1950	7.87	33,600		Aug. 17, 1957	10.12	48,900
	July 23, 1950	7.15	24,500	1958	June 18, 1958	7.98	18,100
	Aug. 2, 1950	7.18	23,000		July 3, 1958	8.02	18,100
	Sept. 11, 1950	8.95	45,500		July 6, 1958	11.30	48,600
	Sept. 26, 1950	7.50	20,800		July 16, 1958	8.91	25,200
1951	Mar. 16, 1951	9.56	27,700		July 21, 1958	8.00	18,100
	Aug. 23, 1952	7.68	13,000		July 26, 1958	6.95	17,800
1952	Aug. 23, 1952	7.68	13,000		Sept. 7, 1958	8.80	25,200
	July 19, 1953	9.42	28,100				

2280. Canadian River near Canadian, Tex.

Location.--Lat 35°55' long 100°22', near left bank on downstream side of pier of bridge on U. S. Highways 60 and 83, 500 ft downstream from Panhandle and Santa Fe Railway Co. bridge, 1.2 miles downstream from Red Deer Creek, 1.6 miles northeast of Canadian, Hemphill County, and at mile 434.

Drainage area.--22,866 sq mi, of which about 18,178 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 15, 1938; recording and nonrecording thereafter. Prior to Sept. 30, 1953, at site 300 ft upstream at same datum. Datum of present gages is 2,301.50 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent large shifts. Defined by current-meter measurements below 55,000 cfs in two channels.

Bankfull stage.--10 ft.

Historical data.--Maximum stage known, about 20.0 ft Oct. 2, 1904. Other high stages occurred May 2, 1914, and Oct. 5, 1923 (about 12 ft), and May 31, 1937 (11.2 ft). Elevation of 1904 flood determined by levels to point given by Mr. Charles Peet, observer, in 1924. Information on floods in 1914, 1923, and 1927 furnished by Chief Engineer Office of Panhandle and Santa Fe Railroad.

Remarks.--Some regulation by Conchas Reservoir since Dec. 28, 1938. Conchas Canal and Bell Ranch Canal divert from Conchas Reservoir for irrigation. Base for partial-duration series, 8,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 16, 1938	5.91	9,600	1939	June 22, 1939	7.94	68,600
	May 18, 1938	6.62	16,400		June 29, 1939	7.68	55,600
	June 1, 1938	6.75	20,500		Aug. 3, 1939	6.70	21,300
	June 9, 1938	7.18	34,600		Aug. 5, 1939	7.15	31,600
	June 16, 1938	6.85	25,100		Aug. 12, 1939	6.82	26,700
	June 28, 1938	6.40	17,400	1940	Nov. 26, 1939	6.70	11,400
	July 20, 1938	7.25	34,600	1941	Apr. 30, 1941	7.00	27,400
	Sept. 8, 1938	7.50	37,000		May 3, 1941	9.60	110,000
1939	Oct. 11, 1938	7.20	46,600		May 21, 1941	6.60	14,000
	Jan. 9, 1939	7.56	48,300		May 24, 1941	8.25	49,100
	Apr. 6, 1939	7.61	53,700		May 26, 1941	7.17	35,000
	May 7, 1939	6.01	13,100		May 31, 1941	7.62	47,600
	June 13, 1939	7.06	35,800				

Peak stages and discharges of Canadian River near Canadian, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 7, 1941	7.54	47,200	1948	Aug. 17, 1948	6.60	11,400
	June 9, 1941	8.55	85,200	1949	May 7, 1949	7.18	29,900
	June 16, 1941	6.26	9,280		May 17, 1949	8.34	69,600
	June 27, 1941	8.08	35,200		May 19, 1949	6.77	19,800
	July 5, 1941	8.15	52,300		June 4, 1949	7.62	20,700
	July 12, 1941	6.38	9,540		June 8, 1949	6.92	9,970
	July 15, 1941	7.15	20,600		June 13, 1949	6.40	10,100
	July 20, 1941	6.80	16,300		July 13, 1949	6.85	11,700
	July 25, 1941	9.60	114,000		July 16, 1949	6.50	8,910
	Aug. 21, 1941	7.60	35,700	1950	July 8, 1950	7.84	24,400
	Aug. 24, 1941	7.91	43,800		July 19, 1950	7.05	14,800
	Sept. 23, 1941	9.80	122,000		July 21, 1950	7.65	22,800
1942	Oct. 1, 1941	8.98	91,600		July 24, 1950	6.98	13,000
	Oct. 7, 1941	6.64	25,000		July 29, 1950	7.30	17,700
	Oct. 12, 1941	5.78	10,300		Aug. 1, 1950	7.46	16,000
	Oct. 22, 1941	7.93	60,700		Aug. 29, 1950	7.58	19,100
	Oct. 25, 1941	6.92	20,000		Sept. 4, 1950	6.90	10,400
	Oct. 29, 1941	6.46	13,400		Sept. 12, 1950	7.20	13,600
	Apr. 20, 1942	7.35	21,600		Sept. 26, 1950	7.08	11,800
	Apr. 22, 1942	6.98	14,800	1951	May 17, 1951	8.82	65,900
	Apr. 24, 1942	6.94	18,200		June 5, 1951	7.75	19,900
	Apr. 26, 1942	8.08	41,900		June 24, 1951	7.60	15,400
	May 11, 1942	6.30	19,800		Sept. 7, 1951	7.27	9,320
	May 19, 1942	6.24	20,500	1952	Aug. 26, 1952	7.50	10,700
	June 2, 1942	6.55	12,200	1953	July 20, 1953	7.73	15,600
	June 8, 1942	8.40	44,300		July 23, 1953	7.61	14,700
	June 22, 1942	6.05	14,900	1954	May 24, 1954	7.18	9,050
	June 29, 1942	6.89	27,200		July 25, 1954	7.54	12,200
	July 4, 1942	6.24	14,200	1955	Oct. 9, 1954	7.35	18,900
	Aug. 17, 1942	6.97	17,000		May 1, 1955	7.88	34,400
	Sept. 4, 1942	7.75	38,600		May 20, 1955	8.43	36,800
	Sept. 7, 1942	6.98	25,200		June 8, 1955	7.43	17,800
	Sept. 13, 1942	6.35	10,600		June 28, 1955	9.25	79,000
	Sept. 20, 1942	6.50	9,410	1956	May 26, 1956	7.25	21,200
1943	July 10, 1943	6.47	9,990	1957	May 25, 1957	9.30	77,600
					June 2, 1957	6.86	9,640
					July 30, 1957	6.78	11,300
1944	Oct. 16, 1943	6.93	10,500		Aug. 8, 1957	7.10	10,400
	Oct. 22, 1943	6.71	13,900		Aug. 18, 1957	7.40	16,400
	June 4, 1944	6.90	11,000		Sept. 14, 1957	6.85	9,660
1945	Oct. 2, 1944	7.02	8,860	1958	June 20, 1958	7.22	11,700
1946	May 30, 1946	7.50	33,000		July 5, 1958	7.16	12,800
	Sept. 12, 1946	8.12	49,400		July 7, 1958	8.42	37,900
	Sept. 18, 1946	6.58	11,900		July 17, 1958	7.47	17,300
	Sept. 21, 1946	6.84	11,200		July 21, 1958	8.42	37,900
1947	Oct. 5, 1946	7.98	46,500		July 28, 1958	7.14	14,500
	Oct. 7, 1946	8.26	58,100		Aug. 1, 1958	7.80	38,100
	Oct. 11, 1946	6.96	23,900		Sept. 8, 1958	7.48	20,200
	May 15, 1947	6.83	14,800				
1948	June 5, 1948	6.77	10,700				
	June 7, 1948	6.75	10,300				
	June 21, 1948	7.14	22,200				
	June 25, 1948	7.01	20,100				
	Aug. 15, 1948	6.75	14,000				

2285. Canadian River at Bridgeport, Okla.

Location.--Lat 35°34'00", long 98°22'45", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.13 N., R.11 W., near right bank on downstream side of pier of Chicago, Rock Island and Pacific Railroad Co. bridge, 1 mile north of Bridgeport, 2 $\frac{3}{4}$ miles upstream from Lumpmouth Creek, and at mile 267.1.

Drainage area.--25,229 sq mi, of which about 20,428 sq mi contributes directly to surface runoff.

Gage.--Recording Oct. 1, 1944, to Sept. 30, 1947, and since Sept. 30, 1948; non-recording Oct. 1, 1947, to Sept. 30, 1948. Prior to Oct. 1, 1947, at site a quarter of a mile downstream at same datum. Datum of present gage is 1,384.25 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended by logarithmic plotting.

Bankfull stage.--14 ft.

Historical data.--The flood in October 1904 probably exceeded that of 1914, from information by Corps of Engineers.

Remarks.--Some regulation by Conchas Reservoir. Records 1944-48 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 15,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 3, 1914	a19.4	-	1951	May 17, 1951	11.74	65,000
1915	April 1915	a15.9	-		May 20, 1951	10.25	42,000
					June 7, 1951	8.55	20,100
1945	Sept. 28, 1945	8.16	15,600		June 10, 1951	8.55	15,000
1946	June 29, 1946	7.40	7,900	1952	May 23, 1952	8.50	9,300
1947	Oct. 9, 1946	9.52	57,000	1953	Aug. 22, 1953	9.77	9,900
	Oct. 13, 1946	7.50	20,800	1954	May 24, 1954	10.34	16,100
	May 12, 1947	8.14	26,700	1955	May 19, 1955	11.04	23,700
	May 16, 1947	8.77	35,000		May 22, 1955	11.63	31,200
	May 20, 1947	8.26	25,600	1956	Oct. 4, 1955	11.35	30,800
1948	June 23, 1948	14.60	150,000	1957	May 26, 1957	11.30	40,600
1949	May 7, 1949	8.30	18,600		Aug. 20, 1957	8.71	12,600
	May 19, 1949	9.93	42,000	1958	June 21, 1958	10.17	23,400
	June 5, 1949	9.00	21,800		July 8, 1958	10.73	31,400
1950	July 9, 1950	9.38	21,900		July 19, 1958	9.43	15,600
	July 20, 1950	8.73	18,000		July 23, 1958	10.10	22,800
	July 23, 1950	9.57	28,000				
	Aug. 1, 1950	9.98	27,800				
	Aug. 30, 1950	8.91	15,300				

a Furnished by Chicago, Rock Island and Pacific Railroad Co.

2290. Canadian River near Newcastle, Okla.

Location.--Lat 35°18', long 97°36', in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.10 N., R.4 W., near right bank on downstream side of pier of bridge on U. S. Highways 62 and 277, 4 miles north of Newcastle, 9 miles downstream from Worley Creek, and at mile 213.5.

Drainage area.--25,763 sq mi, of which about 20,962 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 31, 1939; recording thereafter. Datum of gage is 1,146.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 80,000 cfs and extended above.

Bankfull stage.--12 ft.

Remarks.--Some regulation by Conchas Reservoir. Base for partial-duration series, 15,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Canadian River near Newcastle, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Oct. 3, 1904	18.5	-	1942	Oct. 2, 1941	7.10	53,400
1939	Oct. 13, 1938	6.50	35,500		Oct. 6, 1941	5.62	19,900
	Apr. 8, 1939	6.32	35,500		Oct. 15, 1941	5.60	23,400
	June 24, 1939	6.65	39,700		Oct. 24, 1941	7.19	54,500
	July 2, 1939	6.54	56,200		Apr. 19, 1942	5.84	20,800
					Apr. 25, 1942	6.49	37,200
1940	July 3, 1940	4.57	5,300		Apr. 27, 1942	7.57	52,700
					June 10, 1942	7.31	39,400
1941	May 4, 1941	9.2	200,000		Sept. 6, 1942	6.60	31,000
	May 21, 1941	6.46	42,600		Sept. 9, 1942	6.29	25,200
	May 25, 1941	6.58	57,500	1943	Oct. 19, 1942	6.05	20,000
	May 28, 1941	5.06	16,300				
	June 2, 1941	5.69	33,400	1944	Apr. 10, 1944	8.17	66,000
	June 10, 1941	6.49	42,600		June 13, 1944	7.00	31,500
	June 29, 1941	5.90	16,100	1945	Apr. 15, 1945	6.00	19,500
	July 27, 1941	8.39	142,000		June 10, 1945	6.29	21,600
	Aug. 23, 1941	6.57	52,800		July 10, 1945	6.10	15,400
	Aug. 28, 1941	5.70	24,300		Sept. 29, 1945	6.50	30,000
	Sept. 25, 1941	8.0	150,000				

2300. Little River below Hog Creek, near Norman, Okla.

Location--Lat 35°13'15", long 97°12'40", in SW $\frac{1}{4}$ sec. 28, T.9 N., R.1 E., near center of span on downstream side of bridge on county road, just downstream from Hog Creek, three-quarters of a mile upstream from Prairie Creek, 13 miles east of Norman, and at mile 96.0.

Drainage area--257 sq mi.

Gage--Nonrecording prior to Nov. 28, 1956; recording thereafter. Datum of gage is 965.62 ft above mean sea level, datum of 1929.

Stage-discharge relation--Defined by current-meter measurements below 15,000 cfs and extended on basis of logarithmic plotting.

Bankfull stage--32 ft.

Remarks--Base for partial-duration series, 2,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 5, 1953	8.90	2,640	1957	May 13, 1957	13.92	6,760
1954	Apr. 30, 1954	8.82	2,610		May 18, 1957	12.76	5,690
					May 25, 1957	28.85	34,600
1955	May 19, 1955	13.45	6,010		June 4, 1957	9.28	2,800
					June 15, 1957	21.44	17,800
1956	Oct. 3, 1955	12.6	5,360		June 22, 1957	15.50	8,580
	Oct. 5, 1955	10.55	3,840		Sept. 14, 1957	13.28	6,100
1957	Apr. 23, 1957	13.03	5,930	1958	June 20, 1958	13.43	6,730

2305. Little River near Tecumseh, Okla.

Location--Lat 35°10'25", long 96°55'55", near northwest corner of sec. 18, T.8 N., R.4 E., on downstream side of right pier of bridge on State Highway 18, $1\frac{1}{2}$ miles downstream from Dance Creek, 5 miles south of Tecumseh, and at mile 77.2.

Drainage area--456 sq mi.

Gage--Recording. Datum of gage is 898.52 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation--Defined by current-meter measurements below 26,000 cfs and extended above.

Bankfull stage--11 ft.

Remarks--Records 1944-48 collected by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges of Little River near Tecumseh, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 1932	a25.58	b60,000	1950	May 11, 1950	17.20	20,600
1944	May 23, 1944	13.35	6,120		July 20, 1950	10.90	5,790
	May 27, 1944	14.06	6,720		July 22, 1950	11.04	5,900
1945	Mar. 11, 1945	12.62	5,860	1951	May 1, 1951	12.93	6,370
	Mar. 15, 1945	13.88	6,670		May 18, 1951	12.09	5,680
	Mar. 19, 1945	13.87	6,090	1952	May 23, 1952	12.11	6,140
	Apr. 14, 1945	18.00	25,100		July 20, 1953	12.25	6,280
	May 12, 1945	12.70	6,090	1953	Oct. 23, 1953	11.25	5,060
	June 12, 1945	14.04	8,230		Apr. 30, 1954	12.82	6,310
	July 10, 1945	14.13	7,890	1954	May 19, 1955	14.87	8,700
	Sept. 30, 1945	16.06	15,200		Oct. 5, 1955	12.00	5,640
1946	May 23, 1946	12.54	5,530	1955	Apr. 23, 1957	12.77	6,010
	May 29, 1946	13.07	6,080		May 13, 1957	13.87	7,640
	June 29, 1946	13.38	6,380	1956	May 17, 1957	14.74	9,200
1947	Dec. 11, 1946	12.57	5,690		May 25, 1957	18.84	32,400
	Apr. 14, 1947	13.43	6,620	1957	May 31, 1957	12.75	6,010
	Apr. 24, 1947	11.86	5,040		June 4, 1957	12.62	5,770
	May 12, 1947	12.78	5,900	1958	June 15, 1957	14.95	9,800
	May 16, 1947	14.75	10,300		June 23, 1957	13.34	6,700
	June 1, 1947	14.77	10,300	1958	Sept. 15, 1957	14.68	9,200
	June 23, 1947	14.80	10,300		Sept. 21, 1957	13.05	6,250
1948	June 21, 1948	16.43	17,000	1958	June 21, 1958	13.05	7,220
	July 23, 1948	13.14	6,240				
1949	May 18, 1949	19.68	32,300				
	May 26, 1949	11.86	5,210				
	June 10, 1949	15.10	11,200				

a From floodmark, furnished by Corps of Engineers.

b From rating extension.

2310. Little River near Sasakwa, Okla.

Location.--Lat 34°59', long 96°33', in NE $\frac{1}{4}$ sec.22, T.6 N., R.7 E., on right bank at downstream side of pier of county highway bridge, 2 $\frac{1}{2}$ miles northwest of Sasakwa, 8.7 miles downstream from Salt Creek, and at mile 24.1.

Drainage area.--865 sq mi.

Gage.--Nonrecording prior to Apr. 11, 1946; recording thereafter. Datum of gage is 749.21 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--21 ft.

Historical data.--Corps of Engineers reports indicate that at site 5 miles downstream the flood of June 6, 1932, was 2.3 ft higher than that in May 1929, and that major floods occurred in May 1898, May 1908, and October 1923.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 1939	31.2	33,000	1946	Oct. 1, 1945	27.50	16,000
1943	May 11, 1943	30.8	27,100		Mar. 28, 1946	23.55	7,460
					June 1, 1946	23.30	7,120
1944	May 28, 1944	25.54	11,700		July 1, 1946	22.37	5,990
1945	Mar. 4, 1945	23.00	6,510	1947	Dec. 13, 1946	23.56	7,460
	Mar. 16, 1945	27.00	16,000		Apr. 16, 1947	25.39	11,500
	Mar. 20, 1945	25.70	12,300		Apr. 26, 1947	21.62	5,080
	Apr. 15, 1945	32.50	39,000		May 17, 1947	25.67	12,300
	June 13, 1945	25.6	12,000		May 21, 1947	24.36	9,040
	June 18, 1945	22.9	6,260		June 2, 1947	26.60	14,800
	June 23, 1945	23.3	6,900		June 25, 1947	23.93	8,010
	July 11, 1945	23.2	6,730	1948	June 24, 1948	30.63	28,000

Peak stages and discharges of Little River near Sasakwa, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	July 4, 1948	23.78	7,300	1954	May 13, 1954	18.55	5,010
	July 24, 1948	23.15	6,600				
1949	May 2, 1949	21.38	5,160	1955	May 21, 1955	24.29	10,200
	May 19, 1949	30.80	29,800				
	June 12, 1949	24.39	9,040	1956	Oct. 7, 1955	13.51	2,630
1950	May 11, 1950	33.48	44,600	1957	Apr. 3, 1957	19.87	6,270
	July 11, 1950	21.03	5,760		Apr. 22, 1957	21.59	7,320
	July 19, 1950	22.79	7,420		May 18, 1957	29.80	26,500
	July 23, 1950	25.07	11,000		May 22, 1957	22.90	8,360
	July 26, 1950	20.64	5,480		May 27, 1957	28.71	22,400
	Sept. 16, 1950	23.01	7,650		June 6, 1957	23.43	8,870
1951	May 20, 1951	19.40	4,770		June 10, 1957	20.38	6,570
1952	Apr. 23, 1952	22.88	8,150		June 15, 1957	23.10	8,550
1953	July 21, 1953	26.41	15,400		June 17, 1957	21.51	7,250
1954	Oct. 24, 1953	24.31	10,200		June 24, 1957	23.21	8,650
	Oct. 27, 1953	20.35	6,090		July 25, 1957	18.27	5,380
	May 2, 1954	25.20	12,200	1958	Sept. 16, 1957	19.62	6,090
					Sept. 22, 1957	19.56	6,090
					June 22, 1958	18.92	6,390
					June 25, 1958	18.65	6,090
					Aug. 21, 1958	28.24	23,100

2315. Canadian River at Calvin, Okla.

Location.--Lat 34°58', long 96°14', in NE 1/4 sec. 22, T.6 N., R.10 E., near left bank on downstream side of pier of bridge on U. S. Highway 75, half a mile northeast of Calvin, 2½ miles upstream from Shawnee Creek, 8.5 miles downstream from Little River, and at mile 93.9.

Drainage area.--27,952 sq mi, of which about 23,151 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Aug. 13, 1944; recording thereafter. Prior to 1935 at site three-quarters of a mile upstream at datum 2 ft higher. Datum of present gage is 684.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 140,000 cfs and extended above.

Bankfull stage.--15 ft.

Remarks.--Slight regulation since 1938 by Conchas Reservoir. Gage-height records 1909-38 furnished by U. S. Weather Bureau. Records 1944-55 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 25,000 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Oct. 4, 1904	20.5	-	1916	Jan. 21, 1916	11.2	-
1906	Aug. 7, 1906	21.0	128,000	1917	Aug. 18, 1917	7.8	-
1907	Aug. 27, 1907	5.8	-	1918	May 11, 1918	6.2	-
1908	May 24, 1908	17.2	-	1919	Sept. 22, 1919	8.0	-
1909	May 24, 1909	11.0	-	1920	Sept. 10, 1920	8.7	-
1910	Aug. 20, 1910	5.8	-	1921	June 9, 1921	12.0	-
1911	June 2, 1911	7.1	-	1922	May 9, 1922	7.5	-
1912	June 18, 1912	6.5	-	1923	June 10, 1923	13.0	-
1913	June 17, 1913	7.4	-	1924	Oct. 14, 1923	13.2	-
1914	May 3, 1914	18.0	-	1925	May 11, 1925	8.6	-
1915	Apr. 21, 1915	8.8	-	1926	Sept. 30, 1926	8.5	-

a Result of slope-area measurement of peak discharge.

Note.--Gage heights shown for period 1904-38 are generally maximum observed and are often considerably lower than peak stage.

Peak stages and discharges of Canadian River at Calvin, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 13, 1927	9.5	-	1946	Jan. 5, 1946	6.60	29,200
1928	Oct. 2, 1927	8.0	-		May 29, 1946	8.36	39,500
1929	Nov. 20, 1928	8.0	-		May 31, 1946	7.94	34,900
1930	June 16, 1930	8.9	-	1947	Oct. 11, 1946	9.68	49,300
1931	Oct. 15, 1930	12.0	-		Dec. 11, 1946	9.10	48,500
1932	June 6, 1932	8.5	-		Apr. 10, 1947	7.29	28,500
1933	Aug. 30, 1933	10.6	-		Apr. 15, 1947	8.06	36,500
1934	Apr. 5, 1934	7.0	-		May 12, 1947	10.92	70,500
1935	Sept. 1, 1935	9.0	-		May 16, 1947	11.50	78,100
1936	June 7, 1936	8.3	-		May 20, 1947	8.40	46,000
1937	May 31, 1937	15.0	-		May 24, 1947	6.95	25,000
1938	May 20, 1938	8.8	-		June 1, 1947	12.30	88,500
1939	June 25, 1939	7.86	31,700		June 23, 1947	9.47	57,300
	July 3, 1939	8.8	41,900	1948	Mar. 1, 1948	6.95	26,500
1940	July 2, 1940	8.82	28,400		June 24, 1948	15.20	149,000
1941	May 5, 1941	17.0	150,000		July 23, 1948	6.02	28,600
	May 26, 1941	8.18	39,300	1949	Feb. 14, 1949	6.76	29,800
	June 2, 1941	9.50	47,800		May 1, 1949	9.00	61,000
	June 6, 1941	11.00	63,100		May 18, 1949	15.55	146,000
	June 10, 1941	11.44	80,400		May 29, 1949	6.45	35,900
	June 13, 1941	7.68	32,600		June 10, 1949	8.04	49,000
	July 27, 1941	10.60	65,600	1950	May 11, 1950	17.35	174,000
	Sept. 9, 1941	8.66	35,300		July 10, 1950	6.58	31,600
	Sept. 25, 1941	13.85	101,000		July 22, 1950	6.88	30,600
1942	Oct. 4, 1941	11.74	77,400		July 24, 1950	7.05	32,600
	Oct. 15, 1941	9.17	36,300		July 29, 1950	6.80	29,600
	Oct. 24, 1941	10.29	54,700	1951	May 18, 1951	10.55	80,800
	Oct. 30, 1941	13.9	100,000		June 12, 1951	7.94	47,800
	Apr. 9, 1942	8.40	39,300	1952	May 24, 1952	6.49	26,300
	Apr. 20, 1942	8.07	44,300	1953	July 20, 1953	9.60	60,400
	Apr. 25, 1942	8.71	52,400	1954	Oct. 23, 1953	7.26	35,100
	Apr. 28, 1942	9.89	57,100		May 2, 1954	8.52	51,600
	June 11, 1942	9.80	51,100	1955	May 20, 1955	12.60	102,000
	Sept. 7, 1942	8.21	35,200		May 24, 1955	8.10	43,900
1943	May 10, 1943	14.8	b130,000	1956	Oct. 6, 1955	8.76	51,600
1944	June 14, 1944	7.8	b33,000	1957	Apr. 3, 1957	8.25	45,000
1945	Mar. 15, 1945	11.15	71,000		Apr. 21, 1957	7.45	31,800
	Mar. 19, 1945	7.76	33,700		Apr. 23, 1957	8.20	37,300
	Apr. 16, 1945	9.65	56,000		May 14, 1957	8.02	42,800
	June 11, 1945	9.62	52,500		May 18, 1957	14.10	134,000
	June 17, 1945	7.98	38,200		May 22, 1957	10.80	84,200
	June 21, 1945	8.00	38,500		May 25, 1957	13.05	102,000
	July 7, 1945	6.90	27,200		May 28, 1957	8.40	48,400
	July 10, 1945	8.96	49,500		May 31, 1957	6.63	30,000
	Sept. 27, 1945	9.00	45,000		June 4, 1957	6.60	30,000
	Sept. 30, 1945	12.05	91,000		June 15, 1957	10.50	72,100
					Sept. 21, 1957	7.46	39,000
				1958	June 22, 1958	7.61	36,200
					June 25, 1958	7.55	38,400
					Aug. 21, 1958	12.70	104,000

b Estimated on basis of ratings for adjacent years, annual peak only.

Note.--Gage heights shown for period 1904-38 are generally maximum observed and are often considerably lower than peak stage.

2320. Gaines Creek near Krebs, Okla.

Location.--Lat 34°59', long 95°37', in SW $\frac{1}{4}$ sec. 21, T.6 N., R.16 E., on downstream side of right pier of abandoned bridge on county road, three-quarters of a mile upstream from Nutter Creek and $6\frac{1}{2}$ miles northeast of Krebs.

Drainage area.--588 sq mi.

Gage.--Nonrecording prior to Dec. 5, 1945; recording thereafter. Datum of gage is 551.22 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 19,000 cfs and extended on basis of contracted-opening measurement at 62,000 cfs.

Bankfull stage.--26 ft.

Historical data.--In 1942, local residents reported that an outstanding flood occurred in 1909 and a flood almost as high occurred in 1915. The flood in 1938 was reported to be greatest since at least 1912. The flood of Apr. 25, 1942, was reported as outstanding.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 18, 1938	31.9	70,000	1950	Jan. 15, 1950	23.87	7,950
1943	Dec. 28, 1942	28.85	18,700		Feb. 14, 1950	24.24	8,400
	May 11, 1943	31.7	62,000		May 13, 1950	23.75	7,300
					July 7, 1950	24.48	9,500
1944	Mar. 1, 1944	22.9	7,900		July 25, 1950	23.34	7,850
	Mar. 21, 1944	19.5	6,310		July 31, 1950	24.76	9,350
	May 4, 1944	24.8	9,100		Sept. 17, 1950	30.62	25,200
	June 7, 1944	19.3	5,780	1951	Feb. 21, 1951	24.68	8,720
1945	Feb. 22, 1945	29.6	24,300		June 14, 1951	24.76	9,460
	Mar. 4, 1945	26.4	11,300	1952	Apr. 14, 1952	24.73	10,200
	Mar. 20, 1945	29.0	20,300		Apr. 24, 1952	23.30	7,100
	Apr. 1, 1945	26.7	10,700	1953	Mar. 16, 1953	26.0	11,100
	Apr. 15, 1945	24.9	8,390		Mar. 19, 1953	25.84	10,700
	May 17, 1945	27.2	12,500		Apr. 7, 1953	18.61	5,210
	June 13, 1945	29.1	20,800		Apr. 25, 1953	26.24	12,200
	June 19, 1945	23.4	7,840		Apr. 30, 1953	24.98	9,840
	July 3, 1945	19.5	5,690		May 14, 1953	27.46	13,400
	Sept. 29, 1945	24.7	6,680		July 22, 1953	22.16	6,960
					July 26, 1953	20.46	6,160
1946	Feb. 7, 1946	18.82	5,280	1954	May 4, 1954	23.95	7,720
	Feb. 15, 1946	23.82	8,600	1955	Mar. 22, 1955	26.8	10,800
	Feb. 20, 1946	23.63	7,960	1956	May 25, 1956	14.76	3,570
	June 2, 1946	24.72	9,400	1957	Apr. 5, 1957	28.49	16,800
1947	Nov. 8, 1946	28.62	17,200		Apr. 27, 1957	28.72	17,400
	Dec. 12, 13, 1946	29.82	21,600		May 19, 1957	24.40	8,950
	Apr. 12, 1947	23.65	8,540		May 27, 1957	27.96	14,500
	Apr. 30, 1947	23.89	8,700		June 4, 1957	26.07	9,900
1948	May 18, 1947	27.64	13,000		Sept. 24, 1957	23.05	8,350
	June 3, 1947	24.95	9,600	1958	Nov. 9, 1957	24.3	10,100
	Jan. 2, 1948	18.44	5,550		Mar. 25, 1958	20.96	6,930
1949	Feb. 28, 1948	24.20	9,140		May 4, 1958	25.94	12,200
	Feb. 16, 1949	22.27	7,250				
	May 3, 1949	18.78	5,180				
	June 16, 1949	22.45	7,450				

Note.--Due to effect of slope, the peak stage and discharge often occur at different times of day.

2325. North Canadian River near Guymon, Okla.

Location.--Lat 36°43'20", long 101°29'30", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.3 N., R.15 E., near center of span on downstream side of pier of bridge on U. S. Highway 64 at Dry Sand Draw, 1 $\frac{1}{2}$ miles upstream from Gulf Creek, 2 $\frac{1}{2}$ miles north of Guymon, and at mile 650.7.

Drainage area.--2,139 sq mi (includes that of Dry Sand Draw), of which about 1,175 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,970.93 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs and extended by logarithmic plotting.

Bankfull stage.--7 ft.

Remarks.--Records 1937-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 1937	11.4	a28,600	1947	June 25, 1947	6.98	6,240
1938	May 31, 1938	6.33	4,800	1948	June 1, 1948	8.26	12,100
	June 17, 1938	7.22	7,550		June 24, 1948	8.70	13,900
	July 30, 1938	6.57	5,640		Aug. 13, 1948	5.61	3,380
	Sept. 5, 1938	7.58	9,020		Aug. 27, 1948	7.03	7,290
1939	Apr. 5, 1939	6.72	5,930	1949	May 17, 1949	5.58	3,380
	June 23, 1939	9.45	17,100				
	June 29, 1939	5.50	3,580	1950	July 19, 1950	7.96	11,200
	July 2, 1939	6.30	5,070		July 21, 1950	5.70	3,850
	Aug. 20, 1939	5.20	2,560		Aug. 27, 1950	7.17	8,400
					Sept. 11, 1950	4.90	2,560
1940	May 18, 1940	6.55	5,930				
	May 28, 1940	6.10	5,070	1951	May 14, 1951	5.38	2,950
	Aug. 7, 1940	8.10	11,000		May 17, 1951	7.56	9,970
	Sept. 3, 1940	7.20	7,550				
1941	May 3, 1941	9.20	16,100	1952	July 16, 1952	6.95	6,930
	June 7, 1941	6.10	2,950	1953	July 20, 1953	4.44	1,240
	July 2, 1941	6.20	4,040				
	July 5, 1941	7.85	9,400	1954	Oct. 21, 1953	6.31	4,650
	Sept. 21, 1941	9.50	17,600				
	Sept. 23, 1941	13.82	44,000	1955	May 19, 1955	7.42	6,930
1942	Oct. 21, 1941	5.50	4,380		May 25, 1955	10.90	25,300
	Apr. 20, 1942	8.00	16,700		June 16, 1955	5.61	3,380
	June 1, 1942	5.30	3,800		June 19, 1955	7.88	10,400
	June 8, 1942	6.80	10,700		Aug. 8, 1955	7.13	7,650
1943	Aug. 6, 1943	5.15	1,470	1956	May 25, 1956	9.50	17,700
1944	July 20, 1944	5.15	1,470		June 20, 1956	6.15	4,540
1945	July 7, 1945	6.32	4,800		July 6, 1956	5.65	3,320
	July 12, 1945	5.95	3,200		July 17, 1956	5.43	2,920
	July 14, 1945	5.56	2,480		Aug. 19, 1956	7.03	7,100
1946	May 29, 1946	8.40	12,300	1957	May 28, 1957	5.78	2,950
	Aug. 15, 1946	7.79	9,880		June 23, 1957	7.45	7,650
	Aug. 19, 1946	8.60	13,200		Aug. 4, 1957	10.30	21,700
	Aug. 28, 1946	7.15	7,420	1958	July 6, 16, 1958	5.90	2,650
					Aug. 20, 1958	8.38	11,300
					Sept. 5, 1958	11.12	22,600
					Sept. 7, 1958	7.68	8,500
1947	Oct. 7, 1946	6.10	4,100				

a Annual peak only.

2330. Coldwater Creek near Hardesty, Okla.

Location.--Lat 36°39', long 101°13', in NW¼NE¼ sec.15, T.2 N., R.17 E., on downstream side of piling near center of bridge on State Highway 3, 2 miles northwest of Hardesty and 5.7 miles upstream from mouth.

Drainage area.--1,967 sq mi, of which about 767 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,751.32 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Prior to 1950, extended above 1,500 cfs by conveyance studies; defined by current-meter measurements thereafter.

Bankfull stage.--7 ft.

Remarks.--Records 1939-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	July 2, 1939	6.70	10,600	1950	July 18, 1950	9.12	10,500
1940	May 6, 1940	5.15	3,090		July 21, 1950	5.31	2,680
	May 18, 1940	7.35	14,500		July 31, 1950	7.70	5,100
	May 28, 1940	5.22	4,080		Aug. 27, 1950	4.45	1,510
	June 10, 1940	4.85	2,720		Aug. 29, 1950	6.15	2,510
	Aug. 12, 1940	4.40	1,160		Sept. 5, 1950	5.25	2,450
	Sept. 24, 1940	4.81	2,220		Sept. 11, 1950	6.22	4,130
1941	May 22, 1941	5.95	6,640		Sept. 13, 1950	5.80	3,380
	July 15, 1941	5.20	3,700		Sept. 26, 1950	5.26	1,400
1942	June 8, 1942	4.87	2,330	1951	Oct. 1, 1950	5.44	1,480
	July 11, 1942	4.20	1,150		May 14, 1951	6.84	4,020
1943	July 9, 1943	4.57	1,550		May 16, 1951	7.68	7,250
1944	May 11, 1944	5.49	3,570		Aug. 22, 1951	5.34	1,360
1945	June 24, 1945	4.13	501	1952	July 17, 1952	5.18	837
1946	July 4, 1946	6.37	8,720	1953	July 23, 1953	5.15	845
1947	Oct. 5, 1946	5.80	5,880	1954	June 15, 1954	3.98	95
	Oct. 7, 1946	8.76	22,800	1955	May 15, 1955	8.45	6,810
	June 25, 1947	9.07	24,600		May 19, 1955	7.90	5,110
1948	June 27, 1948	3.80	440		May 26, 1955	6.80	2,640
1949	May 15, 1949	5.15	3,160		June 3, 1955	5.88	1,610
	July 10, 1949	5.84	6,080		June 18, 1955	8.80	8,670
1950	July 2, 1950	4.88	1,960		July 14, 1955	6.95	3,490
	July 5, 1950	4.27	1,120	1956	May 2, 1956	6.15	1,460
				1957	June 23, 1957	8.65	5,860
					Aug. 5, 1957	8.40	5,410
				1958	Aug. 20, 1958	7.88	4,810

2335. Palo Duro Creek near Spearman, Tex.

Location.--Lat 36°12', long 101°19', near center of span on downstream side of bridge on State Highway 282, at abandoned town of Hansford, 6 miles west of Spearman, Hansford County, about 18 miles upstream from Horse Creek, and at mile 50.0.

Drainage area.--960 sq mi, approximately, of which about 440 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,961.63 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended by logarithmic plotting.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges of Palo Duro Creek near Spearman, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	June 4, 1936	21	26,100	1953	June 4, 1953	13.12	1,750
1938	Sept. 4, 1938	22.5	34,000		July 12, 1953	12.15	1,060
1945	Sept. 28, 1945	11.14	790		July 19, 1953	16.93	8,550
	Sept. 30, 1945	10.02	530		July 23, 1953	11.66	844
1946	Sept. 12, 1946	13.90	3,430	1954	June 8, 1954	11.91	985
1947	Oct. 7, 1946	19.87	21,200		June 14, 1954	15.92	6,000
	June 25, 1947	12.88	2,090		July 23, 1954	12.04	840
1948	Oct. 7, 1947	11.20	820	1955	Oct. 6, 1954	12.82	1,450
1949	May 16, 1949	12.70	1,980		Apr. 30, 1955	16.25	6,660
	May 19, 1949	10.88	730		May 18, 1955	14.56	3,700
1950	June 22, 1950	11.25	820		July 14, 1955	14.53	3,700
	July 18, 1950	12.98	2,220	1956	July 17, 1956	12.10	955
	July 21, 1950	10.62	655		July 19, 1956	12.60	1,290
	July 29, 1950	11.30	1,110		Aug. 20, 1956	12.11	785
	Aug. 1, 1950	13.50	3,580	1957	Apr. 28, 1957	12.43	1,180
	Sept. 11, 1950	12.45	1,580		May 16, 1957	11.38	695
1951	May 14, 1951	13.03	1,770		May 25, 1957	13.58	1,810
	May 17, 1951	15.32	4,930		June 1, 1957	12.12	955
1952	Apr. 20, 1952	14.12	3,060		July 25, 1957	11.01	616
	Aug. 7, 1952	10.58	578		July 31, 1957	12.14	982
					Aug. 4, 1957	11.10	632
				1958	July 3, 1958	10.00	616
					July 7, 1958	11.40	860
					July 23, 1958	13.01	1,540
					Aug. 1, 1958	12.51	1,210

2340. North Canadian River at Beaver, Okla.
(Published as "Beaver Creek at Beaver" 1904-5)

Location.--Lat 36°49'20", long 100°31'05", in SW $\frac{1}{4}$ sec. 7, T. 4 N., R. 24 E., near right bank on downstream side of pier of bridge on U. S. Highway 270 at Beaver, $\frac{1}{2}$ miles downstream from Home Creek, 5 miles upstream from Clear Creek, and at mile 576.0.

Drainage area.--7,955 sq mi, of which about 3,685 sq mi contributes directly to surface runoff.

Gage.--Nonrecording during 1904-5 at unknown datum; recording since 1938. Prior to Oct. 1, 1946, at datum 3.0 ft higher. Datum of present gage is 2,368.16 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 42,000 cfs and extended to maximum discharge on basis of slope-area measurement of overflow and extension of main-channel curve.

Bankfull stage.--9 ft.

Remarks.--Records 1937-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 9, 1904	(a)	-	1939	June 27, 1939	3.96	4,650
1923	-	b12.3	-		June 29, 1939	4.90	7,880
1938	May 31, 1938	4.72	6,920		July 2, 1939	6.95	16,500
	June 9, 1938	4.19	5,160	1940	May 18, 1940	6.00	11,100
	June 18, 1938	3.97	4,580		May 28, 1940	5.00	6,350
	Sept. 5, 1938	7.25	17,400		June 5, 1940	4.85	5,610
1939	Apr. 5, 1939	5.80	11,300		June 10, 1940	5.45	8,050
	May 5, 1939	4.95	8,060	1941	May 3, 1941	7.00	17,000
	May 25, 1939	4.70	7,000		May 23, 1941	5.05	6,330
	June 24, 1939	6.62	14,700		July 5, 1941	6.93	16,000
					Sept. 18, 1941	6.05	10,000

a Gage destroyed.

b Present datum, from floodmark, furnished by Corps of Engineers.

Peak stages and discharges of North Canadian River at Beaver, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Sept. 24, 1941	10.65	38,200	1950	July 29, 1950	8.52	7,200
1942	Oct. 22, 1941	6.14	14,500		Aug. 1, 1950	9.32	10,200
	Apr. 21, 1942	7.60	20,200		Aug. 29, 1950	8.50	6,800
	June 1, 1942	5.57	8,840		Sept. 27, 1950	7.66	4,350
	June 9, 1942	6.42	12,200	1951	May 14, 1951	10.60	22,100
1943	Oct. 19, 1942	4.26	3,060		May 17, 1951	11.57	32,200
1944	Apr. 10, 1944	5.63	8,240	1952	July 19, 1952	5.49	1,180
1945	June 3, 1945	5.10	5,350	1953	July 23, 1953	9.12	11,900
	June 26, 1945	5.20	5,710		Aug. 18, 1953	8.04	8,800
	July 6, 1945	5.60	7,500	1954	July 23, 1954	7.01	4,100
1946	Aug. 27, 1946	4.50	4,400	1955	May 2, 1955	7.01	4,100
1947	Oct. 8, 1946	14.15	70,000		May 16, 1955	10.25	19,900
	June 26, 1947	8.90	18,300		May 20, 1955	8.74	11,200
1948	June 2, 1948	6.72	6,180		May 26, 1955	9.70	17,200
	June 27, 1948	6.32	4,630		June 8, 1955	7.08	6,710
1949	June 4, 1949	8.11	13,200		June 17, 1955	10.94	28,100
	June 9, 1949	8.54	16,100		June 19, 1955	9.95	20,800
	June 13, 1949	7.20	7,920	1956	May 26, 1956	7.04	5,700
	June 24, 1949	7.33	9,090	1957	Apr. 17, 1957	8.03	8,810
1950	Oct. 10, 1949	7.18	8,240		May 16, 1957	7.75	7,960
	July 5, 1950	8.54	7,800		June 24, 1957	7.35	6,650
	July 12, 1950	7.92	5,250		July 1, 1957	7.15	5,110
	July 19, 1950	9.75	12,800		Aug. 5, 1957	7.9	8,470
	July 21, 1950	8.53	7,000	1958	Aug. 21, 1958	9.31	12,800
	July 25, 1950	9.92	13,700		Sept. 6, 1958	7.98	9,600
					Sept. 10, 1958	6.93	5,860

2345. North Canadian River near Fort Supply, Okla.
(Published as "near Supply" prior to 1942)

Location.--Lat 36°35'30", long 99°35'30", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 24 N., R. 22 W., near right bank on downstream side of pier of bridge on State Highway 34, $\frac{1}{2}$ miles northwest of Fort Supply, 8.1 miles upstream from Wolf Creek, and at mile 495.8.

Drainage area.--9,615 sq mi, of which about 5,068 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 12, 1938; recording thereafter. Prior to June 6, 1951, at datum 6.0 ft higher. Datum of present gage is 1,969.63 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 37,000 cfs and extended above. Not defined since 1950.

Bankfull stage.--13 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,500 cfs. Only annual peak stages are shown since 1950.

Peak stages and discharges of North Canadian River near Fort Supply, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 10, 1937	8.3	10,900	1946	Aug. 30, 1946	6.20	2,100
1938	May 6, 1938	6.40	4,280	1947	Oct. 9, 1946	11.83	50,000
	May 23, 1938	6.30	3,960		May 16, 1947	6.95	8,100
	June 1, 1938	6.45	4,570		May 20, 1947	6.40	3,500
	June 20, 1938	5.70	2,610		June 27, 1947	7.04	7,400
	Sept. 7, 1938	8.18	10,400	1948	June 28, 1948	7.82	8,680
1939	Apr. 7, 1939	7.10	6,090	1949	May 17, 1949	7.91	11,100
	May 6, 1939	6.00	2,830		May 19, 1949	7.08	6,800
	June 25, 1939	7.75	8,740		May 23, 1949	6.05	2,680
	June 28, 1939	6.36	3,740		June 5, 1949	7.19	5,620
	June 30, 1939	6.77	4,940		June 9, 1949	7.33	6,120
	July 3, 1939	7.85	8,940		June 14, 1949	7.20	7,930
1940	May 19, 1940	6.77	6,850		June 24, 1949	5.35	3,060
	May 31, 1940	6.31	4,820		July 10, 1949	5.30	2,960
	June 6, 1940	6.62	4,180		July 12, 1949	5.62	4,000
	June 11, 1940	7.01	5,610	1950	Oct. 10, 1949	4.08	3,820
	Aug. 8, 1940	7.67	9,300		May 24, 1950	3.61	2,750
1941	May 4, 1941	7.10	6,030		July 6, 1950	4.84	6,350
	May 23, 1941	8.50	17,300		July 28, 1950	5.15	12,700
	June 9, 1941	6.50	4,630		Aug. 2, 1950	6.27	24,600
	July 7, 1941	7.60	8,940		Aug. 30, 1950	3.60	5,330
	Sept. 25, 1941	7.95	13,900		Sept. 6, 1950	3.12	3,930
1942	Oct. 23, 1941	8.75	17,400		Sept. 12, 1950	3.69	5,330
	Apr. 22, 1942	7.80	8,960		Sept. 27, 1950	3.00	3,520
	Apr. 24, 1942	6.22	3,900	1951	May 17, 1951	7.77	-
	June 10, 1942	7.80	7,280		July 25, 1953	10.14	-
1943	Oct. 20, 1942	5.91	2,510	1954	June 17, 1954	7.73	-
1944	Apr. 11, 1944	7.26	6,390	1955	June 18, 1955	12.03	-
	Apr. 30, 1944	6.14	3,240	1956	May 27, 1956	10.03	-
1945	June 4, 1945	6.25	2,850		June 23, 1957	12.12	-
	June 27, 1945	6.45	3,340	1957	Aug. 22, 1958	10.05	-
	July 7, 1945	6.34	4,260				
	Sept. 28, 1945	5.95	2,590	1958			

2350. Wolf Creek at Lipscomb, Tex.

Location.--Lat 36°14', long 100°16', at bridge on State Highway 305 in north-west corner of Lipscomb, 2 miles upstream from Plum Creek and at mile 61.2.Drainage area.--697 sq mi, of which about 475 sq mi contributes directly to surface runoff.Gage.--Recording. Datum of gage is 2,377.06 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended on basis of velocity-area studies.Bankfull stage.--4.5 ft.Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Wolf Creek at Lipscomb, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 1, 1938	3.35	3,090	1941	May 11, 1941	3.60	3,900
	May 16, 1938	3.10	2,350		May 20, 1941	3.10	2,750
	May 22, 1938	3.47	3,710		May 23, 1941	4.20	6,800
	June 7, 1938	3.27	2,460		June 9, 1941	4.50	11,000
	June 9, 1938	3.50	3,660		July 6, 1941	3.40	3,660
	June 15, 1938	3.80	5,050		Aug. 22, 1941	3.38	2,810
	Sept. 4, 1938	4.52	9,000		Sept. 29, 1941	3.15	2,090
1939	Apr. 5, 1939	4.16	6,800	1942	Oct. 21, 1941	5.80	20,000
	June 12, 1939	3.25	2,620		Oct. 23, 1941	4.08	8,310
	June 13, 1939	3.23	2,520		June 9, 1942	3.40	3,460
	June 23, 1939	4.73	12,100		Aug. 12, 1942	2.85	2,360
	June 24, 1939	3.72	5,250		Sept. 6, 1942	2.68	2,030
	July 2, 1939	3.85	5,030	1943	Sept. 4, 1943	24.05	-
	Aug. 7, 1939	4.00	6,070		Aug. 16, 1944	24.00	-
1940	June 10, 1940	3.80	4,780				
	Aug. 8, 1940	3.88	6,070				
	Sept. 2, 1940	3.95	6,300				

a Annual peak only.

2355. Wolf Creek near Shattuck, Okla.

Location.--Lat 36°17'10", long 99°54'45", in NE $\frac{1}{4}$ sec. 19, T. 21 N., R. 25 W., at The Atchison, Topeka and Santa Fe Railway Co. bridge, 2 miles northwest of Shattuck, $\frac{1}{2}$ miles upstream from Rock Creek, 3 miles downstream from Ivanhoe Creek, and at mile 38.2.

Drainage area.--1,183 sq mi, of which about 961 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,189.22 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended on basis of logarithmic plotting.

Bankfull stage.--6 ft.

Historical data.--Flood in October 1923 was reported by railway section foreman as highest known.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 1, 1938	4.11	2,570	1942	Oct. 22, 1941	8.87	24,000
	May 23, 1938	4.63	3,840		Oct. 26, 1941	3.80	2,690
	May 31, 1938	4.23	2,880		Apr. 23, 1942	4.00	2,340
	June 7, 1938	4.07	2,500		June 9, 1942	5.35	5,920
	June 9, 1938	3.89	2,100		Aug. 12, 1942	5.70	6,900
	June 15, 1938	4.74	4,100		Aug. 15, 1942	4.17	3,160
	Sept. 4, 1938	5.55	6,480	1943	Oct. 15, 1942	4.47	3,820
1939	Mar. 25, 1939	4.12	2,620		Sept. 4, 1943	4.15	2,070
	Apr. 5, 1939	6.10	8,020	1944	Apr. 10, 1944	4.59	2,840
	June 23, 1939	6.30	8,580		July 25, 1944	6.60	8,800
	July 2, 1939	4.60	3,840		Aug. 17, 1944	4.88	3,900
	Aug. 8, 1939	4.55	3,710		Sept. 19, 1944	4.94	4,060
1940	June 10, 1940	6.96	10,700	1945	Oct. 2, 1944	6.18	8,290
	Aug. 8, 1940	8.42	16,600		June 12, 1945	4.72	3,960
	Sept. 3, 1940	4.05	2,460		Sept. 28, 1945	7.15	11,400
1941	May 11, 1941	4.30	3,320	1946	July 1, 1946	4.00	1,970
	May 23, 1941	7.20	12,100		Sept. 2, 1946	3.95	1,850
	June 9, 1941	7.70	14,600				
	July 6, 1941	3.40	2,940				
	Aug. 21, 1941	4.20	2,810				

2360. Wolf Creek near Fargo, Okla.

Location.--Lat 36°24'00", long 99°37'25", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.22 N., R.23 W., near right bank on downstream side of county highway bridge, 800 ft downstream from Boggy Creek, 1 $\frac{1}{4}$ miles downstream from Sixteen Mile Creek, 1 $\frac{1}{2}$ miles north of Fargo, and at mile 18.7.

Drainage area.--1,624 sq mi, of which about 1,386 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 2,054.35 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 8,300 cfs and extended on basis of contracted-opening measurement at 81,600 cfs.

Bankfull stage.--7 ft.

Historical data.--Flood of May 16, 1951, reported as maximum known at town of Gage, 12 miles upstream, prior to 1957.

Remarks.--Records 1943-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Oct. 15, 1942	-	4,500	1950	Sept. 5, 1950	3.70	3,570
	May 18, 1943	4.59	3,300				
1944	Mar. 15, 1944	3.96	2,050	1951	May 16, 1951	8.19	23,500
	Apr. 10, 1944	4.38	3,150		June 15, 1951	4.26	5,160
	Apr. 22, 1944	6.17	6,950		June 20, 1951	3.50	3,220
	Apr. 29, 1944	4.65	3,410		June 25, 1951	3.67	3,620
	July 25, 1944	6.93	8,900	1952	May 24, 1952	3.86	2,910
	Sept. 19, 1944	4.05	2,200				
1945	Oct. 2, 1944	7.65	10,800	1953	May 16, 1953	3.32	2,170
	Sept. 28, 1945	5.70	6,030		June 7, 1953	3.86	3,660
					July 24, 1953	3.67	3,100
1946	July 1, 1946	3.20	1,150	1954	Oct. 15, 1953	6.00	8,950
1947					May 25, 1954	3.34	2,450
	Apr. 10, 1947	4.22	2,350	1955	May 19, 1955	4.88	5,830
	May 16, 1947	7.18	9,530		June 9, 1955	4.32	4,560
	May 20, 1947	4.40	2,850		June 17, 1955	4.96	6,540
	June 20, 1947	4.13	2,230		June 19, 1955	3.85	3,300
1948	Apr. 22, 1948	5.10	4,400		June 28, 1955	4.64	5,590
	June 28, 1948	4.52	3,120		July 15, 1955	3.44	2,380
1949					Sept. 28, 1955	3.57	2,640
	May 7, 1949	4.30	2,260	1956	Aug. 19, 1956	3.58	3,100
	May 16, 1949	7.00	8,880				
	May 19, 1949	6.65	8,070	1957	Mar. 31, 1957	3.98	4,280
	May 23, 1949	5.70	5,750		Apr. 21, 1957	5.50	9,610
	June 4, 1949	6.27	7,280		Apr. 23, 1957	3.15	2,400
	June 9, 1949	5.19	4,530		May 3, 1957	3.72	3,080
	June 13, 1949	4.20	2,340		May 10, 1957	3.73	3,540
	June 24, 1949	5.05	4,290		May 16, 1957	6.25	11,300
					May 24, 1957	4.70	6,680
					June 18, 1957	5.91	10,100
1950	May 8, 1950	6.38	6,250		June 23, 1957	10.0	81,600
	May 20, 1950	5.15	4,170		July 1, 1957	4.60	8,600
	June 12, 1950	4.20	2,050		July 24, 1957	2.32	2,220
	July 6, 1950	5.85	6,120		Sept. 14, 1957	3.25	3,580
	July 18, 1950	7.06	9,420	1958	June 19, 1958	2.70	2,000
	July 22, 1950	6.54	8,450		Aug. 1, 1958	4.10	6,400
	July 27, 1950	5.40	5,870				
	July 29, 1950	3.82	2,630				
	Aug. 2, 1950	6.65	9,750				
	Aug. 29, 1950	3.95	3,470				

2370. Wolf Creek near Fort Supply, Okla.
(Published as "near Supply" prior to Oct. 1, 1941)

Location.--Lat 36°34'00", long 99°33'05", in SE¹/₄SE¹/₄ sec.9, T.24 N., R.22 W., on left bank on downstream side of pier of bridge on U. S. Highway 270, 1 mile southeast of Fort Supply, 1.6 miles downstream from Fort Supply Dam, and 3.9 miles upstream from mouth.

Drainage area.--1,739 sq mi, of which about 1,498 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 10, 1938; recording thereafter. At datum 6.00 ft higher prior to Oct. 1, 1944, and 3.00 ft higher Oct. 1, 1944, to Sept. 30, 1950. Datum of present gage is 1,962.38 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs and extended by logarithmic plotting.

Bankfull stage.--11 ft.

Remarks.--Flow completely regulated since May 1942 by Fort Supply Reservoir (capacity, 106,100 acre-ft). Records 1938-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,000 cfs. Only annual peaks are shown subsequent to 1941.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Oct. 13, 1937	3.35	3,210	1946	Oct. 8, 1945	4.47	1,230
	Apr. 27, 1938	4.64	5,340				
	May 19, 1938	4.15	4,110	1947	May 23, 1947	5.44	3,290
	May 23, 1938	4.10	4,110				
	June 15, 1938	4.09	3,850	1948	July 1, 1948	3.79	1,500
1939	Sept. 4, 1938	4.20	4,250				
	Mar. 25, 1939	4.35	5,400	1949	May 25, 1949	4.44	2,230
	Apr. 5, 1939	5.20	10,700				
	June 24, 1939	5.60	14,200	1950	Aug. 23, 1950	3.22	1,410
	July 2, 1939	4.22	4,700				
1940	June 11, 1940	4.65	6,510	1951	May 28, 1951	5.90	-
	Aug. 6, 1940	4.15	3,320		June 13-16, 1951	-	1,230
	Aug. 8, 1940	5.80	10,400	1952	Apr. 24, 1952	4.92	583
1941	May 24, 1941	4.62	3,980	1953	July 26, 1953	5.35	798
	June 10, 1941	4.75	6,050	1954	Oct. 25, 1953	5.99	1,470
1942	Oct. 24, 1941	4.38	6,350	1955	June 23, 1955	6.63	2,240
1943	Oct. 15, 1942	1.59	477	1956	Feb. 20, 1956	3.25	49
1944	Apr. 24, 1944	3.11	3,620	1957	May 19, 1957	7.71	5,020
1945	Oct. 4, 1944	5.42	3,200	1958	Aug. 2, 1958	5.81	2,080

2375. North Canadian River at Woodward, Okla.

Location.--Lat 36°26', long 99°17', in SE¹SE¹ sec.25, T.23 N., R.20 W., near left bank on downstream side of pier of bridge on State Highway 15, 200 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6 miles east of Woodward, 7.2 miles upstream from Indian Creek, 27.5 miles downstream from Wolf Creek, and at mile 460.2.

Drainage area.--11,589 sq mi, of which about 6,777 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 26, 1943; recording thereafter. Prior to July 13, 1951, at site 7.8 miles upstream. Oct. 1, 1938, to July 12, 1951, at datum 37.01 ft higher. Prior to Oct. 1, 1938, datum unknown but is approximately same as for 1938-51. Datum of present gage is 1,830.43 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 29,000 cfs and extended above.

Bankfull stage.--12 ft. At prior site and present Weather Bureau datum, 10 ft.

Remarks.--Some regulation since May 1942 by Fort Supply Reservoir on Wolf Creek (capacity, 106,100 acre-ft). Records 1938-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,500 cfs. Only annual peaks (furnished by U. S. Weather Bureau) are shown prior to 1939 and are generally maximum observed. Prior to 1931, no records were collected during winter period November to February.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	Sept. 8, 1920	7.9	-	1938	Sept. 7, 1938	5.3	11,400
1921	Oct. 22, 1920	9.4	-	1939	Apr. 6, 1939	4.78	9,320
1922	Mar. 15, 1922	7.6	-		June 25, 1939	5.40	10,500
1923	June 10, 1923	9.9	-		June 28, 1939	3.94	4,970
1924	Oct. 12, 1923	10.9	-		June 30, 1939	4.40	5,950
1925	June 14, 1925	4.0	-		July 3, 1939	5.40	10,500
1926	Sept. 6, 1926	4.0	-	1940	May 19, 1940	4.10	4,960
1927	Aug. 4, 1927	5.1	-		June 7, 1940	4.00	4,600
1928	June 16, 1928	4.0	-		June 11, 1940	5.10	8,940
1929	Nov. 17, 1928	4.0	-		Aug. 9, 1940	5.44	10,300
1930	June 7, 1930	4.6	-	1941	May 4, 1941	4.52	7,780
1931	Oct. 13, 1930	4.0	-		May 24, 1941	6.40	18,000
1932	June 17, 1932	6.8	-		June 9, 1941	4.80	8,240
1933	May 7, 1933	7.0	-		July 7, 1941	5.40	12,200
1934	June 17, 1934	5.0	-		Sept. 25, 1941	5.20	8,240
1935	May 18, 1935	10.4	-	1942	Oct. 23, 1941	7.70	31,000
1936	June 6, 1936	7.8	-		Apr. 22, 1942	5.40	8,800
1937	June 16, 1937	6.8	-		Apr. 24, 1942	4.40	6,000
					June 10, 1942	5.15	8,250
				1943	Oct. 3, 1942	4.6	6,000
					Oct. 20, 1942	4.00	3,780
				1944	Apr. 11, 1944	4.82	6,600
					Apr. 22, 1944	4.54	6,030
					Apr. 25, 1944	4.53	5,000
					Apr. 30, 1944	4.24	4,280
					July 26, 1944	4.70	5,530
				1945	Oct. 5, 1944	4.22	4,180
					June 27, 1945	4.31	4,020

Peak stages and discharges of North Canadian River at Woodward, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept. 28, 1946	4.10	3,170	1951	May 18, 1951	8.70	43,000
1947	Oct. 10, 1946	9.80	42,000		May 23, 1951	4.08	4,630
	May 16, 1947	5.76	5,630		June 12, 1951	4.55	5,320
	May 20, 1947	5.09	5,210		June 17, 1951	4.00	3,940
	May 23, 1947	4.63	4,280		June 25, 1951	4.58	5,710
	June 27, 1947	5.48	6,930	1952	Apr. 25, 1952	5.46	912
1948	June 28, 1948	5.55	8,410	1953	July 24, 1953	8.10	4,940
1949	May 17, 1949	5.98	9,790		Aug. 19, 1953	7.73	4,200
	May 19, 1949	4.90	6,270	1954	Oct. 27, 1953	6.15	1,410
	May 25, 1949	4.25	3,770	1955	May 18, 1955	8.41	6,400
	May 28, 1949	4.24	4,070		May 20, 1955	9.46	12,400
	June 5, 1949	5.60	7,900		May 28, 1955	8.31	6,600
	June 10, 1949	5.40	7,250		June 18, 1955	9.01	11,200
	June 14, 1949	5.60	7,900		June 21, 1955	9.08	11,200
	June 25, 1949	4.48	5,190		June 28, 1955	7.58	4,540
	July 12, 1949	4.98	6,550				
1950	July 6, 1950	4.67	5,320	1956	May 27, 1956	6.10	1,650
	July 13, 1950	4.73	5,190	1957	May 16, 1957	8.55	6,820
	July 21, 1950	6.25	9,790		May 20, 1957	7.75	4,340
	July 23, 1950	6.50	10,500		May 25, 1957	7.57	4,450
	July 25, 1950	4.60	4,800		June 20, 1957	7.15	3,740
	July 28, 1950	6.68	10,900		June 22, 1957	7.58	4,700
	July 30, 1950	5.44	7,610		June 24, 1957	10.50	14,000
	Aug. 3, 1950	7.06	13,900		July 2, 1957	8.70	7,880
	Aug. 30, 1950	5.02	6,410	1958	June 22, 1958	7.36	3,680
	Sept. 6, 1950	4.38	4,930		Aug. 22, 1958	8.00	5,510
	Sept. 12, 1950	4.77	5,850				
	Sept. 15, 1950	4.43	5,060				
	Sept. 28, 1950	4.38	4,930				

2380. North Canadian River near Seiling, Okla.

Location.--Lat 36°11', long 98°55', in NW $\frac{1}{4}$ sec. 28, T.20 N., R.16 W., near center of span on downstream side of pier of bridge on U. S. Highway 60, 2 miles upstream from Seiling Creek, 2 $\frac{1}{4}$ miles north of Seiling, 2 $\frac{3}{4}$ miles downstream from Deep Creek, and at mile 422.6.

Drainage area.--12,261 sq mi, of which about 7,414 sq mi contributes directly to surface runoff.

Gage.--Recording. Prior to Oct. 1, 1954, at datum 5.00 ft higher. Present datum of gage is 1,675.42 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11 ft.

Remarks.--Some regulation by Fort Supply Reservoir on Wolf Creek. Records 1946-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Oct. 13, 1923	16.4	-	1949	May 29, 1949	5.45	4,640
1947	Oct. 11, 1946	11.00	29,300		June 4, 1949	6.38	6,760
	May 16, 1947	5.95	7,000		June 8, 1949	6.03	7,130
	May 21, 1947	5.78	6,550		June 10, 1949	5.71	6,210
	May 24, 1947	5.15	4,670		June 15, 1949	5.64	6,200
	May 27, 1947	5.78	5,450		June 25, 1949	5.31	4,320
					July 12, 1949	5.63	6,580
1948	June 29, 1948	5.63	5,180	1950	June 10, 1950	4.75	4,110
	Aug. 9, 1948	7.06	9,550		July 7, 1950	5.19	4,850
	Aug. 14, 1948	5.84	5,680		July 14, 1950	5.35	5,180
					July 21, 1950	6.63	8,140
1949	May 7, 1949	5.39	4,530		July 30, 1950	7.25	9,290
	May 19, 1949	8.71	14,800		Aug. 4, 1950	7.78	8,600

a Annual peak only.

Peak stages and discharges of North Canadian River near Seiling, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Aug. 30, 1950	6.54	6,530	1955	May 26, 1955	9.95	4,060
	Sept. 7, 1950	5.58	4,850		May 28, 1955	11.02	6,490
	Sept. 13, 1950	5.71	5,840		June 21, 1955	11.80	8,770
	Sept. 15, 1950	5.40	5,180		June 24, 1955	9.73	3,770
	Sept. 28, 1950	5.67	5,290		June 29, 1955	10.28	5,370
1951	May 19, 1951	10.61	40,100	1956	May 28, 1956	7.80	1,000
	May 22, 1951	5.81	5,480				
	June 12, 1951	5.61	4,680	1957	May 4, 1957	10.06	4,050
	June 17, 1951	5.21	3,980		May 17, 1957	11.10	7,010
	June 25, 1951	5.82	5,390		May 20, 1957	10.24	5,210
1952	Apr. 19, 1952	3.35	1,260		May 25, 1957	10.51	6,240
					June 22, 1957	10.15	5,070
1953	July 25, 1953	6.02	3,840		June 25, 1957	12.48	13,100
	Aug. 19, 1953	5.79	3,780		July 2, 1957	10.97	8,510
1954	Apr. 30, 1954	5.56	3,720	1958	June 22, 1958	9.64	3,600
					June 25, 1958	9.63	3,600
1955	May 20, 1955	12.10	8,510		Aug. 4, 1958	10.16	4,800
					Aug. 23, 1958	10.06	4,540

2390. North Canadian River at Canton, Okla.

Location.--Lat 36°04'45", long 98°35'25", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.19 N., R.13 W., on right bank 2,700 ft downstream from Canton Dam, $1\frac{1}{2}$ miles northwest of Canton, $4\frac{3}{4}$ miles upstream from Minnehaha Creek, and at mile 393.8.

Drainage area.--12,484 sq mi, of which about 7,601 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1937, at railway bridge 300 ft upstream from State Highway 58; recording Oct. 1, 1937, to Jan. 6, 1955, at State Highway 58, $2\frac{1}{2}$ miles downstream. Prior to Oct. 1, 1950, all gage heights adjusted to datum 1.91 ft lower than present datum. Oct. 1, 1950, to Jan. 6, 1955, datum of gage was 6.91 ft lower. Datum of present gage is 1,562.50 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements throughout range of discharges shown.

Bankfull stage.--12 ft. At prior site and present datum, 14 ft.

Remarks.--Some regulation by Fort Supply Reservoir on Wolf Creek during May 1942 to April 1948 and complete regulation thereafter by Canton Reservoir (capacity, 390,800 acre-ft). Records 1937-50 computed by Corps of Engineers and reviewed by Geological Survey. Gage-height records for period 1914-37 furnished by U. S. Weather Bureau are generally annual observed peaks. Prior to 1931, no data were collected in winter period November to February. Base for partial-duration series, 2,000 cfs. Only annual peaks are shown prior to 1938 and subsequent to 1947.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 6, 1914	10.0	-	1923	June 10, 1923	13.6	-
1915	June 7, 1915	12.8	-	1924	Oct. 13, 1923	16.8	-
1916	June 7, 1916	13.0	-	1925	June 13, 1925	7.4	-
1917	Aug. 18, 1917	9.0	-	1926	Sept. 12, 1926	5.6	-
1918	May 31, 1918	12.5	-	1927	Aug. 5, 1927	10.6	-
1919	May 27, 1919	8.0	-	1928	May 17, 1928	6.6	-
1920	Sept. 9, 1920	9.6	-	1929	Nov. 18, 1928	7.0	-
1921	Oct. 24, 1920	12.3	-	1930	May 7, 1930	8.6	-
1922	Mar. 16, 1922	9.1	-	1931	Oct. 14, 1930	6.0	-

Peak stages and discharges of North Canadian River at Canton, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 28, 1932	9.3	-	1942	June 11, 1942	9.35	5,780
1933	May 8, 1933	9.4	-		Sept. 26, 1942	7.03	2,500
1934	Apr. 4, 1934	11.5	-	1943	Oct. 3, 1942	9.20	6,500
1935	May 20, 1935	13.2	-		Oct. 21, 1942	7.45	3,740
1936	June 7, 1936	11.5	-		May 19, 1943	7.03	2,410
1937	June 17, 1937	11.2	-		June 8, 1943	7.45	2,920
1938	Apr. 28, 1938	7.43	3,690	1944	Apr. 12, 1944	8.54	3,820
	May 7, 1938	7.42	3,610		Apr. 23, 1944	9.63	5,850
	May 19, 1938	10.25	8,750		Apr. 26, 1944	8.78	4,550
	May 24, 1938	8.13	4,770		Apr. 29, 1944	7.74	2,940
	June 2, 1938	7.38	3,530	1945	May 1, 1944	7.69	3,120
	June 16, 1938	6.35	2,060		July 28, 1944	7.75	3,390
	June 20, 1938	7.20	3,290		Oct. 6, 1944	7.56	2,350
	Sept. 8, 1938	8.78	6,010		June 28, 1945	7.16	2,940
	Sept. 13, 1938	6.82	2,690	1946	Sept. 28, 1945	9.02	4,550
1939	Nov. 3, 1938	6.52	2,270		June 29, 1946	7.23	1,620
	Apr. 7, 1939	9.10	6,550	1947	Oct. 12, 1946	12.83	24,800
	June 26, 1939	9.78	7,860		Apr. 13, 1947	9.62	3,980
	July 1, 1939	8.06	4,770		May 17, 1947	10.20	5,350
	July 4, 1939	9.53	7,290		May 21, 1947	9.63	4,450
1940	May 20, 1940	7.36	3,610		May 24, 1947	9.12	3,880
	June 1, 1940	6.40	2,130		June 28, 1947	9.73	4,570
	June 7, 1940	6.76	2,620	1948	Aug. 15, 1948	7.86	2,020
	June 12, 1940	9.00	5,300	1949	June 11, 1949	9.86	4,020
	Aug. 10, 1940	9.04	5,300	1950	Aug. 15, 24-27	a8.55	3,230
1941	May 5, 1941	8.92	6,910	1951	June 15, 1951	13.44	3,820
	May 21, 1941	8.47	3,650	1952	Feb. 28, 1952	7.88	1,060
	May 25, 1941	11.05	9,980	1953	Sept. 13, 1953	9.42	1,660
	June 4, 1941	7.40	2,500	1954	Mar. 19, 1954	9.32	1,500
	June 7, 1941	7.17	2,720	1955	June 30, 1955	10.62	2,360
	June 10, 1941	10.10	7,200	1956	July 10, 1956	9.84	1,590
	June 23, 1941	7.07	2,610	1957	July 1, 1957	10.79	2,420
	July 8, 1941	9.25	5,420	1958	July 1, 1958	8.82	1,450
	Aug. 27, 1941	8.27	4,050				
	Sept. 26, 1941	9.45	5,780				
1942	Oct. 6, 1941	6.65	2,140				
	Oct. 15, 1941	7.28	2,830				
	Oct. 25, 1941	12.51	21,900				
	Apr. 23, 1942	9.35	5,780				
	Apr. 25, 1942	8.98	5,260				

a Occurred Aug. 18, 1950.

2395. North Canadian River near El Reno, Okla.

Location.--Lat 35°34', long 97°58', on east line of sec. 32, T. 13 N., R. 7 W., near left bank on downstream side of pier of bridge on U. S. Highway 81, 2 miles north of El Reno, $2\frac{1}{4}$ miles downstream from Target Creek, and at mile 307.4.

Drainage area.--13,042 sq mi, of which about 8,143 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 3, 1938; recording thereafter. 1902-8 at site 50 ft downstream at unknown datum. Datum of present gage is 1,299.02 ft above mean sea level, datum of 1929. U. S. Weather Bureau gage heights for period 1934-37 have been adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Remarks.--Some regulation by Fort Supply Reservoir on Wolf Creek since May 1942 and major regulation by Canton Reservoir since April 1948 (capacity, 390,800 acre-ft), 87 miles upstream. Gage heights for 1934-37 furnished by U. S. Weather Bureau. Base for partial-duration series, 3,100 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges of North Canadian River near El Reno, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 28, 1903	10.5	4,400	1944	Apr. 10, 1944	13.18	9,540
1904	July 15, 1904	10.4	4,320		Apr. 24, 1944	9.09	3,110
1905	June 1, 1905	6.0	980		Apr. 27, 1944	9.08	3,220
1906	Aug. 12, 1906	10.0	3,600		June 13, 1944	10.70	4,820
1907	June 9, 1907	10.0	3,640	1945	Apr. 11, 1945	9.05	3,140
					Apr. 16, 1945	9.48	3,500
					May 12, 1945	9.40	3,380
					July 10, 1945	9.38	3,380
1924	Oct. 15, 1923	(a)	(b)	1946	June 29, 1946	9.41	3,300
1934	Apr. 6, 1934	11.5	-	1947	Oct. 15, 1946	11.99	5,800
1935	May 21, 1935	16.8	-		Apr. 15, 1947	9.74	3,390
1936	June 10, 1936	12.9	-		May 12, 1947	10.37	3,940
1937	June 19, 1937	11.8	-		May 16, 1947	11.57	5,440
1938	May 8, 1938	9.10	3,390		May 22, 1947	10.02	3,720
	May 21, 1938	11.10	7,950		May 26, 1947	10.08	3,610
	May 25, 1938	10.00	5,290		June 29, 1947	9.34	2,500
	Sept. 9, 1938	9.80	3,590	1948	June 24, 1948	16.14	12,800
1939	Apr. 9, 1939	10.40	4,340	1949	May 19, 1949	12.23	6,320
	June 28, 1939	10.07	4,620		May 21, 1949	11.76	5,680
	July 2, 1939	9.98	4,520		May 29, 1949	10.56	4,050
	July 6, 1939	10.13	4,800		June 13, 1949	10.68	4,050
1940	June 13, 1940	9.32	3,080	1950	Aug. 1, 1950	10.99	4,280
1941	May 6, 1941	9.54	3,190		Aug. 16, 1950	10.19	3,620
	May 23, 1941	9.67	3,300		Sept. 5, 1950	10.23	3,620
	May 28, 1941	11.56	5,830		Sept. 17, 1950	9.76	3,290
	June 6, 1941	9.35	3,080	1951	June 11, 1951	10.77	4,280
	June 13, 1941	11.60	6,130		June 15, 1951	10.58	4,280
	July 9, 1941	9.64	3,760	1952	May 23, 1952	8.64	2,250
	Sept. 27, 1941	9.72	3,760	1953	Sept. 13, 1953	8.96	1,120
1942	Oct. 28, 1941	15.98	15,000	1954	May 25, 1954	9.95	2,200
	Apr. 19, 1942	12.82	8,360	1955	May 27, 1955	11.32	2,970
	Apr. 25, 1942	10.61	5,940	1956	Oct. 4, 1955	12.82	5,240
	Apr. 27, 1942	9.80	4,660	1957	Apr. 24, 1957	10.28	2,540
	June 7, 1942	8.90	3,300	1958	June 22, 1958	10.68	3,090
	June 12, 1942	9.49	4,200				
1943	May 10, 1943	8.88	3,160				
	May 19, 1943	10.00	4,430				

a Flood reached an elevation of 1,326.3 ft above mean sea level at railroad bridge 1 mile upstream.

b A peak inflow figure of 135,000 cfs at Lake Overholser, 25 miles downstream, is used by Oklahoma City Water Department, based on cross-sectional studies.

2410. North Canadian River below Lake Overholser, near Oklahoma City, Okla.

Location.--Lat 35°28'44", long 97°39'47", on north line of sec.31, T.12 N., R.4 W., near left bank on downstream side of pier of bridge on State Highway 4, 0.5 mile downstream from Lake Overholser, 2.4 miles upstream from Mustang Creek, 9.1 miles southwest of State Capitol in Oklahoma City, and at mile 281.0.

Drainage area.--13,222 sq mi, of which about 8,323 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,204.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,310 cfs and extended above.

Bankfull stage.--20 ft.

Remarks.--Flow partly regulated by Lake Overholser (capacity, 17,100 acre-ft), by Fort Supply Reservoir since 1942, and by Canton Reservoir since 1948. Municipal water supply for Oklahoma City obtained from flow diverted to Lake Hefner through Lake Hefner Canal and from Lake Overholser. Base for partial-duration series, 4,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of North Canadian River below Lake Overholser, near Oklahoma City, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	October 1920	a20.7	-	1955	July 6, 1955	8.15	1,860
1923	June 1923	a26.0	-	1956	Oct. 5, 1955 Oct. 7, 1955	12.44 10.34	5,790 4,120
1924	October 1923	a30.9	-	1957	June 24, 1957	10.00	3,120
1953	Apr. 5, 1953	4.47	165	1958	June 21, 1958	11.10	4,810
1954	May 2, 1954	3.81	78				

a Annual peak only, from information by State Highway Commission.

2415. North Canadian River near Oklahoma City, Okla.

Location.--Lat 35°29'40", long 97°25'40", on north line of sec.29, T.12 N., R.2 W., near right bank on downstream side of pier of bridge on U. S. Highway 62, 4½ miles east of State Capitol in Oklahoma City, 5 miles upstream from Crutch Creek, and at mile 261.2.

Drainage area.--13,364 sq mi, of which about 8,455 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Feb. 8, 1940; recording thereafter. Prior to June 27, 1939, at site 1,250 ft downstream at datum 0.66 ft lower. Datum of last used gage is 1,140.79 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11 ft.

Remarks.--Considerable regulation since April 1948 by Canton Reservoir, 133 miles upstream. Some regulation during period of record by Lake Overholser (capacity, 17,100 acre-ft), 20 miles upstream. Base for partial-duration series, 4,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 3, 1932	-	a100,000	1946	June 29, 1946	7.39	3,330
1939	June 28, 1939	11.47	7,600	1947	Apr. 13, 1947 Apr. 15, 1947 May 16, 1947 May 19, 1947 June 1, 1947	9.84 9.53 10.74 10.30 8.84	6,130 5,450 8,010 6,910 4,610
1940	July 2, 1940	9.80	5,240	1948	Mar. 26, 1948 June 22, 1948 June 24, 1948	9.00 12.01 12.06	5,300 9,060 9,120
1941	May 5, 1941 May 29, 1941 June 6, 1941 June 15, 1941	11.77 10.31 11.79 10.78	8,240 5,420 8,780 6,080	1949	May 23, 1949 May 29, 1949 June 10, 1949 June 21, 1949	8.47 9.82 9.56 9.04	4,870 6,320 6,130 4,870
1942	Oct. 15, 1941 Oct. 30, 1941 Apr. 19, 1942 Apr. 26, 1942	9.81 14.74 10.72 10.11	5,100 16,700 6,550 5,820	1950	Aug. 16, 1950	8.23	4,190
1943	May 10, 1943 May 20, 1943	8.55 10.07	4,420 6,090	1951	May 18, 1951 May 21, 1951 May 27, 1951 June 11, 1951 June 19, 1951	11.35 9.83 9.41 11.88 9.06	7,880 5,660 5,420 8,700 5,060
1944	Mar. 15, 1944 Apr. 11, 1944 June 13, 1944	8.13 9.13 10.96	4,430 4,620 8,730	1952	May 23, 1952	8.20	4,700
1945	Apr. 12, 1945 Apr. 16, 1945 June 11, 1945 July 10, 1945 Sept.30, 1945	9.20 10.67 10.88 9.17 10.0	5,600 8,200 8,500 5,580 7,000	1953	Apr. 5, 1953	9.54	6,410

a Data determined at Spencer, 5 miles downstream, furnished by Oklahoma City Water Department.

2420. North Canadian River near Wetumka, Okla.

Location.--Lat 35°15'40", long 96°12'40", in center of SW $\frac{1}{4}$ sec.12, T.9 N., R.10 E., near left bank on downstream side of pier of bridge on U. S. Highway 75, 2.3 miles upstream from Wewoka Creek, 2 $\frac{1}{2}$ miles northeast of Wetumka, and at mile 84.4.

Drainage area.--14,290 sq mi, of which about 9,391 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 19, 1939; recording thereafter. Datum of gage is 683.28 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs and extended above.

Bankfull stage.--14 ft.

Remarks.--Some regulation by Lake Overholser (capacity, 17,100 acre-ft) at mile 281.5 and since April 1948 by Canton Reservoir (capacity, 390,800 acre-ft) at mile 394.3. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	October 1923	a26.9	-	1947	Apr. 28, 1947	11.43	6,590
1927	April 1927	a26.5	-		May 12, 1947	11.30	6,790
1938	Feb. 17, 1938	-	11,000		May 17, 1947	13.23	9,550
	Mar. 29, 1938	15.64	7,440		May 21, 1947	12.76	8,650
	Apr. 22, 1938	12.52	5,050		June 1, 1947	12.14	7,770
	May 23, 1938	13.14	5,470		June 24, 1947	11.75	6,480
1939	June 29, 1939	12.62	5,950		June 26, 1947	11.72	6,270
1940	Sept. 5, 1940	9.47	3,820	1948	Mar. 26, 1948	11.35	5,660
1941	Apr. 19, 1941	13.20	7,900		May 6, 1948	12.63	8,210
	June 2, 1941	11.77	6,260		May 25, 1948	11.30	5,460
	June 8, 1941	13.94	8,340		June 24, 1948	20.99	30,000
	June 12, 1941	19.18	16,600		July 8, 1948	12.99	11,000
	Sept. 10, 1941	11.88	6,360	1949	Feb. 24, 1949	10.40	5,780
1942	Oct. 5, 1941	15.25	8,730		May 1, 1949	11.45	7,280
	Oct. 16, 1941	15.49	9,020		May 18, 1949	17.60	32,200
	Oct. 26, 1941	11.37	5,790		May 24, 1949	10.40	7,450
	Oct. 31, 1941	24.4	25,000		June 3, 1949	11.10	8,950
	Nov. 4, 1941	18.75	19,800		June 11, 1949	11.55	9,950
	Apr. 10, 1942	15.58	10,200		June 24, 1949	10.06	5,700
	Apr. 22, 1942	15.18	12,200	1950	Apr. 3, 1950	9.83	6,460
	Apr. 25, 1942	15.85	10,300		May 11, 1950	16.49	36,000
	June 11, 1942	11.87	7,290		July 10, 1950	11.10	8,050
	June 13, 1942	11.03	6,150		July 22, 1950	11.50	10,800
	June 22, 1942	11.79	6,770		Aug. 28, 1950	10.29	5,670
1943	Oct. 30, 1942	11.00	5,670		Sept. 1, 1950	10.10	5,370
	May 10, 1943	23.72	28,300		Sept. 16, 1950	13.07	23,500
	May 17, 1943	10.53	6,120	1951	Sept. 25, 1950	10.35	5,820
	May 20, 1943	11.35	7,090		May 24, 1951	9.30	5,230
1944	Mar. 16, 1944	10.31	6,120		June 15, 1951	10.81	9,210
1945	Mar. 3, 1945	12.34	7,980	1952	Apr. 23, 1952	10.10	8,000
	Mar. 12, 1945	10.98	6,650	1953	Apr. 24, 1953	10.60	11,300
	Mar. 15, 1945	b13.51	9,300	1954	May 2, 1954	11.20	16,900
	Mar. 20, 1945	14.93	10,400	1955	May 20, 1955	11.94	14,500
	Apr. 15, 1945	26.40	66,000	1956	Oct. 6, 1955	9.53	4,970
	May 12, 1945	12.36	10,100	1957	Apr. 3, 1957	11.02	10,900
	June 12, 1945	11.98	8,840		Apr. 23, 1957	10.25	8,710
	June 17, 1945	13.02	11,500		May 13, 1957	10.54	12,300
1946	Oct. 1, 1945	14.23	13,900		May 19, 1957	11.88	18,400
	Mar. 28, 1946	9.43	5,210		May 23, 1957	11.25	12,900
	Apr. 23, 1946	10.25	6,370		May 25, 1957	15.00	39,400
	Apr. 30, 1946	9.47	5,630		June 4, 1957	11.00	10,900
	May 8, 1946	10.00	6,070		June 10, 1957	11.35	14,100
	May 24, 1946	14.10	15,200		June 15, 1957	10.74	12,500
	May 31, 1946	12.28	10,000		June 19, 1957	10.96	13,500
	June 30, 1946	11.12	6,790		June 24, 1957	10.33	9,690
1947	Dec. 12, 1946	11.77	8,770	1958	June 25, 1958	10.75	11,800
	Apr. 16, 1947	11.50	7,850		Aug. 22, 1958	10.80	13,500
	Apr. 25, 1947	10.91	5,650				

a Annual peak only, from floodmarks from information furnished by Corps of Engineers.

b Occurred Mar. 16, 1945.

2425. Belloc Creek at Chandler, Okla.

Location.--Lat 35°42', long 96°53', in SW $\frac{1}{4}$ sec.9, T.14 N., R.4 E., on right bank half a mile upstream from bridge on U. S. Highway 66, half a mile west of courthouse in Chandler, and 1.4 miles downstream from Belloc Creek.

Drainage area.--46 sq mi.

Gage.--Recording. Datum of gage is 824.26 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,600 cfs and extended above.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 16, 1943	-	a2,600	1951	June 8, 1951	8.34	1,620
1948	June 24, 1948	15.20	-	1951	June 10, 1951	8.54	1,680
					June 19, 1951	10.84	2,530
1949	Jan. 23, 1949	6.9	1,210		Sept. 6, 1951	7.69	1,420
	May 18, 1949	7.52	1,390	1952	May 23, 1952	11.80	2,910
	May 19, 1949	11.00	2,540		July 17, 1952	10.16	2,300
	May 21, 1949	7.0	1,240	1953	Apr. 5, 1953	7.00	1,260
	May 24, 1949	9.0	1,860		July 23, 1953	7.14	1,270
1950	June 10, 1950	8.46	1,700	1954	May 1, 1954	8.53	1,700
	July 10, 1950	9.04	1,860		May 19, 1955	9.80	2,110
	July 20, 1950	8.34	1,670				
	Aug. 1, 1950	6.97	1,240				
1951	May 1, 1951	7.80	1,450				

a From contracted-opening measurement of peak discharge at site three-quarters of a mile downstream.

2435. Deep Fork near Beggs, Okla.

Location.--Lat 35°41', long 96°04', on line between secs. 19 and 20, T.14 N., R.12 E., near left bank on downstream side of pier of county highway bridge, 3 miles upstream from Adams Creek, 4 miles south of Beggs, 8 miles downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0.

Drainage area.--2,018 sq mi.

Gage.--Nonrecording prior to June 23, 1953; recording thereafter. Prior to Aug. 29, 1939, at site 450 ft downstream at present datum. Datum of gage is 632.55 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended by logarithmic plotting.

Bankfull stage.--16 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges of Deep Fork near Beggs, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	July 8, 1939	12.50	2,280	1947	Apr. 19, 1947	23.30	11,300
1940	Apr. 30, 1940	14.82	3,060		Apr. 30, 1947	22.40	9,220
	Sept. 5, 1940	20.94	4,870		May 18, 1947	25.90	17,700
					June 3, 1947	16.00	3,120
1941	Dec. 2, 1940	20.13	4,890		July 2, 1947	17.20	3,500
	Apr. 22, 1941	23.88	18,500	1948	May 17, 1948	19.24	4,300
	May 10, 1941	21.85	10,500		June 24, 1948	33.35	53,400
	June 11, 1941	29.78	31,000		July 12, 1948	22.90	10,400
	Sept. 11, 1941	18.40	3,950	1949	Feb. 16, 1949	18.12	3,960
					May 3, 1949	19.34	4,590
1942	Oct. 6, 1941	23.50	11,800		May 24, 1949	27.80	23,200
	Oct. 17, 1941	22.90	10,400		June 4, 1949	22.62	9,680
	Nov. 3, 1941	28.79	27,100		June 12, 1949	25.20	15,800
	Nov. 25, 1941	15.98	3,120	1950	Apr. 5, 1950	15.71	3,190
	Apr. 13, 1942	24.18	13,400		May 12, 1950	26.35	20,200
	Apr. 23, 1942	27.75	23,400		July 13, 1950	16.65	3,520
	June 15, 1942	23.71	12,200		July 20, 1950	23.65	12,000
	June 26, 1942	26.25	18,600		Sept. 16, 1950	20.80	6,050
	Aug. 19, 1942	22.18	8,760	1951	Feb. 21, 1951	16.00	3,300
1943	Oct. 31, 1942	19.33	4,270		Mar. 11, 1951	15.40	3,080
	Mar. 28, 1943	17.00	3,430		June 17, 1951	20.35	5,780
	May 11, 1943	34.55	66,800	1952	Mar. 12, 1952	14.90	3,010
	May 20, 1943	28.05	24,000		Apr. 24, 1952	18.60	5,090
	June 2, 1943	18.0	3,770		May 30, 1952	19.60	6,200
1944	Mar. 22, 1944	18.61	3,990	1953	Apr. 26, 1953	19.00	4,710
	Apr. 10, 1944	17.40	3,570		May 4, 1954	18.83	4,660
	May 5, 1944	16.62	3,310	1954	May 26, 1954	14.74	3,010
	May 11, 1944	19.90	4,600	1955	May 25, 1955	23.18	11,100
	May 30, 1944	17.90	3,740		Oct. 5, 1955	12.82	2,400
1945	Mar. 8, 1945	17.01	3,430	1956	Apr. 3, 1957	15.86	3,430
	Mar. 20, 1945	25.63	17,700		Apr. 27, 1957	21.50	7,290
	Apr. 15, 1945	34.11	60,900	1957	May 20, 1957	22.74	9,910
	June 14, 1945	17.88	4,030		May 26, 1957	29.75	30,300
	June 18, 1945	22.09	8,530	1958	June 5, 1957	22.52	10,500
	July 3, 1945	19.97	5,070		June 16, 1957	26.17	20,300
					June 29, 1957	20.35	6,810
				1958	June 23, 1958	19.53	5,390
1946	Oct. 5, 1945	24.50	13,400		June 27, 1958	25.22	16,600
	Jan. 11, 1946	15.79	3,060				
	Apr. 4, 1946	15.93	3,180				
	May 5, 1946	17.60	3,700				
	May 14, 1946	16.40	3,340				
	May 29, 1946	20.36	5,600				
	June 30, 1946	15.50	3,030				
1947	Dec. 14, 1946	17.95	3,770				

2440. Deep Fork near Dewar, Okla.

Location.--Lat 35°28'50", long 95°52'50", in SE $\frac{1}{4}$ sec. 25, T.12 N., R.13 E., at left bank on downstream side of pier of bridge on U. S. Highway 266, 3.2 miles upstream from Wolf Creek, 3 $\frac{1}{2}$ miles east of Dewar, and at mile 43.9.

Drainage area.--2,307 sq mi.

Gage.--Nonrecording prior to Feb. 14, 1939, and since Sept. 30, 1950; recording for remainder of period. Datum of gage is 578.32 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Historical data.--Crest stage for 1908 obtained from floodmark by Corps of Engineers. Crest for 1935 obtained from floodmark on bridge in 1939, identified by local resident who said 1923 flood was "higher."

Remarks.--Records 1948-50 computed by Corps of Engineers and reviewed by Geological Survey. Maximum observed stages since 1950 from U. S. Weather Bureau records. Base for partial-duration series, 3,200 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Deep Fork near Dewar, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	October 1908	29.0	85,000	1946	Jan. 12, 1946	17.05	3,650
					Feb. 19, 1946	17.65	3,970
1935	June 1935	24.48	29,000		Apr. 24, 1946	16.94	3,690
					May 1, 1946	19.59	6,070
1938	February 1938	-	20,000		May 16, 1946	18.71	4,860
	Mar. 23, 1938	19.76	6,360		May 24, 1946	19.86	6,760
	Apr. 4, 1938	21.43	10,100		June 1, 1946	19.24	5,390
	Apr. 22, 1938	15.74	3,580		July 1, 1946	17.29	3,650
	May 23, 1938	19.21	5,700				
	June 12, 1938	17.40	4,370	1947	Nov. 7, 1946	16.82	3,680
					Dec. 12, 1946	20.00	7,020
1939	July 9, 1939	11.69	2,220		Apr. 22, 1947	20.67	9,500
					May 3, 1947	20.11	7,600
1940	Sept. 6, 1940	18.45	4,140		May 20, 1947	21.84	14,700
					June 2, 1947	18.74	4,860
1941	Dec. 6, 1940	17.72	4,190		July 4, 1947	16.14	3,430
	Apr. 24, 1941	21.87	12,300				
	May 15, 1941	19.64	5,700	1948	Mar. 2, 1948	15.90	3,340
	June 15, 1941	23.9	23,300		Mar. 23, 1948	15.77	3,300
	Sept. 18, 1941	17.26	3,420		Mar. 26, 1948	18.45	4,640
					May 19, 1948	17.52	4,110
1942	Oct. 10, 1941	21.05	8,750		June 24, 1948	25.16	39,500
	Oct. 16, 1941	21.88	12,200		July 15, 1948	20.72	8,760
	Oct. 30, 1941	24.17	24,400				
	Nov. 5, 1941	24.24	24,400	1949	Feb. 15, 1949	18.61	4,720
	Apr. 15, 1942	21.56	12,400		Feb. 25, 1949	16.20	3,360
	Apr. 25, 1942	24.32	27,400		May 9, 1949	19.18	5,560
	June 18, 1942	20.82	9,410		May 25, 1949	23.12	21,700
	June 28, 1942	22.02	14,800		June 4, 1949	21.25	11,000
	Aug. 23, 1942	19.83	6,310		June 12, 1949	22.63	18,600
1943	Nov. 8, 1942	18.73	4,440	1950	Apr. 3, 1950	18.71	4,960
	Dec. 27, 1942	17.79	3,850		May 11, 1950	23.18	23,000
	Mar. 27, 1943	18.53	4,440		July 23, 1950	22.22	15,800
	May 12, 1943	26.21	44,800		Sept. 17, 1950	20.46	8,160
	May 22, 1943	23.29	20,600				
1944	Mar. 20, 1944	18.98	5,580	1951	Feb. 21, 1951	19.3	5,710
	Apr. 12, 1944	16.12	3,660		Mar. 12, 1951	18.7	4,960
	May 6, 1944	15.49	3,410		June 22, 1951	18.7	4,960
	May 12, 1944	18.61	5,290	1952	Apr. 23, 1952	19.6	6,160
	May 29, 1944	17.10	4,110		June 2, 1952	17.7	4,050
1945	Mar. 3, 1945	19.12	5,390	1953	Mar. 25, 1953	19.06	5,440
	Mar. 21, 1945	21.96	15,800				
	Apr. 16, 1945	26.67	57,400	1954	May 3, 1954	21.06	7,120
	June 12, 1945	20.1	7,910				
	June 22, 1945	21.47	13,700	1955	May 21, 1955	19.98	6,900
	July 2, 1945	18.90	5,250		May 29, 1955	20.17	7,360
1946	Oct. 7, 1945	21.51	12,300				

2450. Canadian River near Whitefield, Okla.

Location.--Lat 35°16', long 95°14', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.9 N., R.19 E., near right bank on downstream side of pier of bridge on State Highway 2, three-quarters of a mile north of Whitefield, $5\frac{1}{2}$ miles upstream from Snake Creek, and at mile 18.8.

Drainage area.--47,576 sq mi, of which about 37,876 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 11, 1939; recording thereafter. Prior to Dec. 10, 1941, and June 12, 1947, to Sept. 30, 1948, at site 2.1 miles downstream at datum 2.80 ft lower. Datum of present gage is 478.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 230,000 cfs and extended above.

Bankfull stage.--16 ft.

Historical data.--Local residents reported that flood in May 1898 was about same as that in October 1941 (discharge smaller since channel capacity has increased over the period of years). Corps of Engineers reported that significant floods occurred in May 1914 and October 1923.

Remarks.--Occasional slight regulation by Conchas Reservoir in New Mexico. Records for 1938-39 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 35,000 cfs.

Peak stages and discharges of Canadian River near Whitefield, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	July 3, 1939	13.0	58,800	1948	Feb. 27, 1948	10.55	42,000
1940	Aug. 18, 1940	12.3	31,400		Mar. 1, 1948	10.97	46,800
1941	Jan. 1, 1941	14.41	53,500		June 25, 1948	17.7	260,000
	Apr. 19, 1941	15.45	63,900		July 12, 1948	11.47	42,700
	May 6, 1941	17.75	94,600	1949	Feb. 15, 1949	13.44	54,100
	May 26, 1941	13.04	40,800		May 2, 1949	14.86	78,700
	June 2, 1941	13.20	36,300		May 19, 1949	18.70	210,000
	June 7, 1941	15.70	74,200		June 14, 1949	14.41	73,900
	June 11, 1941	16.90	85,400	1950	Feb. 13, 1950	12.60	42,700
	July 28, 1941	14.0	49,000		May 7, 1950	11.92	42,700
	Sept. 26, 1941	15.0	62,300		May 11, 1950	20.00	256,000
1942	Oct. 5, 1941	16.74	84,500		July 11, 1950	12.42	48,200
	Oct. 16, 1941	15.75	66,000		July 18, 1950	12.00	41,000
	Oct. 25, 1941	15.70	65,000		July 23, 1950	14.35	81,100
	Oct. 31, 1941	21.4	220,000		July 26, 1950	14.88	91,000
	Apr. 9, 1942	17.49	89,000		July 29, 1950	15.37	102,000
	Apr. 25, 1942	21.10	137,000		Aug. 3, 1950	13.34	43,600
	June 11, 1942	14.88	45,500		Sept. 16, 1950	18.73	159,000
	June 24, 1942	15.47	57,600	1951	Feb. 20, 1951	13.15	54,100
1943	Dec. 27, 1942	14.8	48,500		May 19, 1951	14.47	73,900
	May 10, 1943	25.5	281,000		June 12, 1951	13.97	64,800
1944	May 28, 1944	13.08	35,800		June 15, 1951	12.50	44,500
	June 14, 1944	13.07	35,600	1952	Apr. 23, 1952	14.42	60,400
1945	Mar. 3, 1945	15.15	70,600	1953	Mar. 31, 1953	14.10	66,100
	Mar. 15, 1945	17.22	107,000		Apr. 24, 1953	14.01	57,800
	Mar. 19, 1945	15.66	90,000		May 13, 1953	12.11	35,900
	Mar. 30, 1945	14.36	47,500		July 21, 1953	13.40	48,700
	Apr. 16, 1945	21.80	255,000	1954	May 2, 1954	18.71	165,000
	May 13, 14, 1945	12.25	35,000		May 13, 1954	12.48	35,900
	June 12, 1945	15.50	90,400	1955	May 21, 1955	15.22	97,500
	July 11, 1945	13.11	46,100		May 24, 1955	13.07	48,700
1946	Oct. 1, 1945	16.08	102,000	1956	Oct. 6, 1955	12.50	41,000
	Feb. 18, 1946	12.38	45,000	1957	Apr. 3, 1957	15.76	94,700
	May 3, 1946	13.25	46,400		Apr. 24, 1957	15.38	100,000
	May 23, 1946	14.26	75,000		May 18, 1957	18.25	176,000
	June 1, 1946	13.46	60,000		May 23, 1957	16.40	159,000
	July 1, 1946	12.22	35,500		May 26, 1957	16.80	159,000
1947	Oct. 11, 1946	12.07	38,700		June 2, 1957	14.74	89,500
	Nov. 6, 1946	12.85	45,600		June 11, 1957	12.63	45,400
	Dec. 10, 1946	17.1	151,000		June 15, 1957	15.72	119,000
	Apr. 11, 1947	13.60	47,100		Sept. 22, 1957	12.00	37,100
	Apr. 16, 1947	13.4	45,600	1958	June 22, 1958	13.17	50,400
	Apr. 29, 1947	13.80	48,600		June 26, 1958	14.30	77,400
	May 13, 1947	16.93	118,000		Aug. 21, 1958	15.55	103,000
	May 17, 1947	18.07	144,000				
	June 1, 1947	16.93	118,000				

2455. Sallisaw Creek near Sallisaw, Okla.

Location.--Lat 35°28', long 94°52', in SW $\frac{1}{4}$ sec.34, T.12 N., R.23 E., on downstream side of right pier of abandoned highway bridge, 400 ft downstream from water-supply dam of City of Sallisaw, $3\frac{1}{2}$ miles west of Sallisaw, 5 miles upstream from Little Sallisaw Creek, and 9 miles upstream from mouth.

Drainage area.--182 sq mi.

Gage.--Recording gage. Prior to Aug. 20, 1953, just above dam 400 ft upstream at datum 13.22 ft higher. Datum of present gage is 476.78 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements to 23,000 cfs and extended on basis of contracted-opening measurements of peak flows in April and June 1945.

Bankfull stage.--14 ft.

Historical data.--Flood in October 1941 reported by local resident in 1943 as "highest flood in recent years," referenced to high-water mark for flood of Dec. 27, 1942.

Remarks.--Small diversion at low-water dam for municipal water supply. Base for partial-duration series, 4,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Sallisaw Creek near Sallisaw, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	October 1941	a15.4	b28,400	1949	Jan. 24, 1949	3.56	5,66C
1943	Nov. 5, 1942	4.08	7,740		Jan. 27, 1949	3.10	4,37C
	Dec. 27, 1942	6.65	18,900		Feb. 14, 1949	3.50	5,51C
	Apr. 11, 1943	3.80	6,690		May 1, 1949	5.29	12,40C
	May 10, 1943	8.63	38,000		June 3, 1949	3.52	5,66C
	May 27, 1943	3.07	4,430		June 13, 1949	4.46	8,82C
1944	Mar. 19, 1944	4.07	7,340	1950	Jan. 13, 1950	3.75	6,30C
	May 2, 1944	4.21	7,870		Feb. 12, 1950	4.05	7,34C
					May 10, 1950	8.30	35,00C
1945	Feb. 21, 1945	4.74	10,000	1951	Feb. 20, 1951	4.55	8,820
	Feb. 26, 1945	4.34	8,430		June 9, 1951	5.77	14,90C
	Mar. 2, 1945	4.68	9,820	1952	Apr. 12, 1952	3.32	4,92C
	Mar. 15, 1945	3.73	6,300		May 3, 1952	3.43	5,63C
	Mar. 19, 1945	6.76	20,100	1953	Mar. 17, 1953	3.85	6,98C
	Mar. 25, 1945	4.51	9,010		May 12, 1953	4.06	7,69C
	Apr. 15, 1945	11.25	110,000	1954	May 2, 1954	15.50	30,00C
	May 16, 1945	3.59	5,820				
	June 10, 1945	7.96	58,000	1955	Feb. 19, 1955	11.56	9,62C
	July 1, 1945	-	10,000		Mar. 20, 1955	11.59	9,620
1946	Feb. 13, 1946	4.72	9,820	1956	Apr. 29, 1956	6.83	3,42C
	Apr. 23, 1946	3.10	4,370				
	May 23, 1946	5.76	14,900	1957	Apr. 3, 1957	16.50	38,40C
	June 30, 1946	5.40	12,900		Apr. 23, 1957	8.28	4,86C
1947	Nov. 6, 1946	4.75	10,000		May 25, 1957	12.00	10,80C
	Nov. 10, 1946	4.50	9,010		June 2, 1957	10.42	7,17C
	Nov. 25, 1946	3.25	4,780		June 10, 1957	9.40	5,90C
	Dec. 10, 1946	5.85	14,900		June 13, 1957	13.50	17,000
	Dec. 12, 1946	5.45	12,900	1958	Mar. 8, 1958	8.07	4,06C
	May 17, 1947	3.63	5,980		May 2, 1958	10.46	6,94C
	June 1, 1947	3.71	6,140		May 9, 1958	10.94	7,80C
	June 11, 1947	4.73	10,000		June 25, 1958	11.46	8,09C
1948	June 21, 1947	3.78	6,470		July 7, 1958	11.39	7,870
	Mar. 26, 1948	3.11	4,500		July 13, 1958	10.80	6,790
	Apr. 10, 1948	3.00	4,240				
	June 24, 1948	4.45	8,820				
	Aug. 8, 1948	3.71	6,300				
	Aug. 15, 1948	3.45	5,360				

a At present site and datum.

b Annual peak only.

2460. Sans Bois Creek near Keota, Okla.

Location.--Lat 35°16', long 94°58', in NW $\frac{1}{4}$ sec.15, T.9 N., R.22 E., at bridge on State Highway 10, 2 $\frac{1}{2}$ miles west of Keota and 13 miles upstream from mouth

Drainage area.--346 sq mi.

Gage.--Nonrecording. Datum of gage is 437.27 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 17,000 cfs and extended above.

Bankfull stage.--17 ft.

Remarks.--Records 1938-40 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,800 cfs.

Peak stages and discharges of Sans Bois Creek near Keota, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 18, 1938	a26.1	30,000	1941	Apr. 21, 1941	16.7	2,310
1939	Feb. 20, 1939	14.8	1,840		May 1, 1941	14.4	1,970
	Mar. 5, 1939	14.8	1,840	1942	Oct. 17, 1941	17.5	3,050
	Apr. 7, 1939	17.1	2,920		Nov. 1, 1941	22.2	10,100
	Apr. 18, 1939	17.55	3,450		Jan. 31, 1942	14.7	2,030
1940	Apr. 13, 1940	17.90	3,660		Feb. 17, 1942	14.5	2,120
	June 11, 1940	16.7	2,740		Apr. 9, 1942	19.5	7,150
1941	Jan. 3, 1941	19.4	6,300		Apr. 25, 1942	25.2	26,300
	Feb. 4, 1941	13.8	1,830		June 28, 1942	15.7	2,260
	Feb. 21, 1941	17.6	3,290	1943	July 12, 1942	15.6	2,280
	Apr. 17, 1941	16.1	2,800		May 11, 1943	a27.9	-

a Annual peak only.

2465. Arkansas River near Sallisaw, Okla.

Location.--Lat 35°21', long 94°46', in SW $\frac{1}{4}$ sec.9, T.10 N., R.24 E., near center of span on downstream side of pier of bridge on State Highway 59, 3.9 miles downstream from Sans Bois Creek, 7 $\frac{1}{2}$ miles south of Sallisaw, and at mile 395.0.

Drainage area.--147,757 sq mi, of which about 125,516 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 413.42 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--23 ft.

Remarks.--Some regulation of peaks by storage reservoirs and power development. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 100,000 cfs. Only annual peak stages are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	34.5	-	1951	May 22, 1951	21.30	180,000
1940	Sept. 6, 1940	20.0	-		June 12, 1951	18.96	124,000
1941	Apr. 21, 1941	29.05	-		July 6, 1951	25.65	253,000
1942	Nov. 2, 1941	34.70	-		July 19, 1951	25.84	245,000
1943	May 11, 1943	37.90	-		Sept. 17, 1951	18.75	118,000
1944	May 3, 1944	24.33	-	1952	Mar. 13, 1952	17.03	104,000
1945	Apr. 16, 1945	35.96	-		Apr. 23, 1952	18.82	129,000
1946	Oct. 2, 1945	27.37	-	1953	Apr. 25, 1953	17.26	112,000
1947	Dec. 12, 1946	23.80	-	1954	May 3, 1954	23.70	202,000
1948	June 25, 1948	29.70	361,000	1955	May 22, 1955	17.30	108,000
	July 20, 1948	20.72	144,000		May 30, 1955	17.46	102,000
	Aug. 16, 1948	20.26	138,000	1956	Oct. 7, 1955	19.70	139,000
1949	Jan. 28, 1949	17.65	132,000	1957	Apr. 4, 1957	19.85	134,000
	Feb. 16, 1949	21.86	199,000		Apr. 27, 1957	23.98	191,000
	May 2, 1949	18.83	139,000		May 3, 1957	22.08	146,000
	May 21, 1949	28.18	363,000		May 15, 1957	18.57	110,000
	June 12, 1949	21.77	160,000		May 20, 1957	29.75	334,000
1950	May 12, 1950	31.04	442,000		May 23, 1957	31.15	367,000
	July 23, 1950	24.40	212,000		May 27, 1957	34.80	544,000
	Aug. 3, 1950	23.75	203,000		June 3, 1957	28.83	300,000
	Sept. 17, 1950	22.00	176,000		June 16, 1957	28.04	264,000
1951	Feb. 21, 1951	19.50	146,000	1958	Mar. 27, 1958	18.40	130,000
					Apr. 26, 1958	20.28	161,000
					July 9, 1958	16.76	106,000
					July 14, 1958	20.00	156,000

2470. Poteau River at Cauthron, Ark.

Location.--Lat 34°55', long 94°18', in sec.16, T.3 N., R.31 W., on right bank at downstream side of highway bridge at Cauthron, 8 miles downstream from Jones Creek.

Drainage area.--200 sq mi.

Gage.--Nonrecording prior to May 2, 1939; recording thereafter. Datum of gage is 569.53 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--19 ft.

Historical data.--Flood in June 1935 was reported by local residents as greatest known.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	27.4	-	1949	Feb. 14, 1949	17.68	8,52C
					Mar. 26, 1949	14.20	5,12C
1939	Feb. 19, 1939	15.1	5,640		May 1, 1949	16.29	6,84C
	Feb. 25, 1939	17.0	7,460				
	Mar. 5, 1939	14.6	5,240	1950	Jan. 4, 1950	17.08	7,71C
	Apr. 6, 1939	17.8	8,470		Jan. 13, 1950	19.81	13,200
	Apr. 16, 1939	22.5	24,400		Feb. 1, 1950	17.92	8,840
					Feb. 12, 1950	22.78	27,80C
1940	Apr. 29, 1940	10.71	2,810		Apr. 4, 1950	11.85	3,580
					May 8, 1950	18.28	9,500
1941	Dec. 16, 1940	10.57	2,760		May 12, 1950	14.98	5,690
					July 23, 1950	14.55	5,400
1942	Oct. 4, 1941	17.34	7,820		Aug. 2, 1950	15.60	6,180
	Oct. 31, 1941	18.87	10,500		Sept. 16, 1950	14.42	5,260
	Apr. 8, 1942	16.70	7,130				
	May 20, 1942	14.54	5,160	1951	Feb. 15, 1951	15.08	5,770
					Feb. 20, 1951	14.59	5,40C
1943	May 11, 1943	21.74	19,000				
	May 20, 1943	19.43	11,800	1952	Nov. 1, 1951	15.13	5,77C
					Jan. 2, 1952	16.16	6,74C
1944	Feb. 17, 1944	15.23	5,720		Mar. 10, 1952	15.88	6,45C
	Feb. 28, 1944	17.09	7,580		Apr. 12, 1952	18.86	10,70C
	Mar. 16, 1944	14.33	5,010		Apr. 22, 1952	18.69	10,90C
	May 2, 1944	16.96	7,460				
				1953	Nov. 25, 1952	20.44	15,60C
1945	Feb. 21, 1945	21.03	16,600		Mar. 18, 1953	20.28	15,20C
	Feb. 27, 1945	19.07	10,800		Apr. 24, 1953	17.23	7,830
	Mar. 3, 1945	16.14	6,640		Apr. 29, 1953	18.90	10,700
	Mar. 6, 1945	14.13	5,050		May 13, 1953	20.46	16,000
	Mar. 12, 1945	17.34	7,950				
	Mar. 19, 1945	17.78	8,590	1954	May 2, 1954	19.86	13,600
	Mar. 29, 1945	22.11	22,000				
	May 15, 1945	22.39	23,800	1955	Mar. 21, 1955	17.22	7,830
	June 11, 1945	18.56	9,850				
				1956	Feb. 18, 1956	16.52	6,790
1946	Jan. 9, 1946	16.37	6,940				
	Feb. 13, 1946	18.30	9,350	1957	Jan. 22, 1957	14.57	5,220
	May 23, 1946	17.44	8,070		Apr. 4, 1957	18.37	9,680
	May 31, 1946	17.67	8,450		Apr. 25, 1957	16.28	6,840
					Apr. 27, 1957	18.15	9,320
1947	Nov. 26, 1946	15.58	6,180		May 23, 1957	18.73	10,300
	Dec. 10, 1946	21.18	17,400		June 5, 1957	16.20	6,740
					Aug. 12, 1957	18.38	9,320
1948	Dec. 7, 1947	14.90	5,610				
	Jan. 1, 1948	21.08	17,000	1958	Nov. 18, 1957	18.63	10,100
	Feb. 26, 1948	14.52	5,330		Mar. 7, 1958	15.85	6,820
	Mar. 2, 1948	14.44	5,260		May 2, 1958	18.91	11,200
1949	Jan. 24, 1949	23.34	31,000				

a Annual peak only.

2475. Fourche Maline near Red Oak, Okla.

Location.--Lat 34°54'45", long 95°09'20", in NW¹/₄ NW¹/₄ sec.13, T.5 N., R.20 E., on downstream side of left abutment of highway bridge, 0.1 mile downstream from Little Fourche Maline, 5 miles southwest of Red Oak, and at mile 41.2.

Drainage area.--122 sq mi.

Gage.--Nonrecording prior to Apr. 25, 1939; recording thereafter. Datum of gage is 540.80 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs and extended by logarithmic plotting.

Bankfull stage.--15 ft.

Remarks.--Records for 1939 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 3,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	a25.4	-	1948	Feb. 27, 1948	16.32	3,200
1939	Apr. 16, 1939	16.60	3,630	1949	Feb. 14, 1949	16.38	3,330
1940	Apr. 11, 1940	17.47	5,850		June 14, 1949	16.15	3,090
1941	Apr. 16, 1941	16.53	3,470	1950	Jan. 13, 1950	16.87	4,210
1942	Oct. 31, 1941	17.94	7,130		Feb. 13, 1950	16.72	3,810
	Apr. 8, 1942	17.72	6,470		May 11, 1950	17.49	5,720
	Apr. 25, 1942	22.34	26,300		July 22, 1950	17.30	5,190
	July 11, 1942	17.64	6,150		July 29, 1950	20.72	16,400
					Sept. 16, 1950	20.60	16,100
1943	Dec. 27, 1942	21.34	21,600	1951	Feb. 18, 1951	17.60	5,990
	Apr. 12, 1943	17.24	4,990		June 11, 1951	17.00	4,440
	May 10, 1943	21.14	20,900	1952	Apr. 12, 1952	17.36	5,450
1944	Feb. 28, 1944	17.80	6,790	1953	Mar. 14, 1953	18.17	7,730
	May 2, 1944	17.54	5,850		Mar. 18, 1953	18.46	8,970
1945	Feb. 21, 1945	21.01	17,600		Apr. 24, 1953	19.47	12,800
	Mar. 3, 1945	17.60	5,990		Apr. 29, 1953	17.25	5,450
	Mar. 19, 1945	19.17	11,000		May 12, 1953	17.96	8,030
	Mar. 30, 1945	17.99	7,130		July 25, 1953	16.79	4,680
	Apr. 14, 1945	17.22	4,930	1954	May 2, 1954	11.89	1,460
	May 15, 1945	20.40	15,300	1955	Mar. 21, 1955	17.28	5,190
	June 11, 1945	18.14	7,430	1956	Feb. 17, 1956	12.55	1,490
1946	Feb. 13, 1946	17.32	5,190	1957	Apr. 3, 1957	18.86	13,400
	May 31, 1946	16.86	4,210		Apr. 23, 1957	16.68	3,870
1947	Nov. 6, 1946	17.68	6,270		Apr. 26, 1957	19.02	14,300
	Dec. 10, 1946	19.34	11,300		May 26, 1957	17.76	7,520
	Apr. 11, 1947	17.70	6,270	1958	May 2, 1958	18.19	8,200
	Apr. 29, 1947	17.04	4,440				
	May 17, 1947	17.13	4,680				

a Annual peak only.

2485. Poteau River near Wister, Okla.

Location.--Lat 34°56'15", long 94°42'50", in NW¼NW¼ sec.6, T.5 N., R.25 E., on left bank of outflow channel, 700 ft downstream from Wister Dam, 2¼ miles southeast of Wister, 2.6 miles upstream from Caston Creek, and at mile 60.5.

Drainage area.--993 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1939, at site 0.1 mile downstream at datum 13.11 ft lower; recording thereafter. Jan. 1, 1939, to Sept. 30, 1947, and Oct. 1, 1947, to June 28, 1953, at sites 1.6 and 1.1 miles, respectively, downstream at datum 12.41 ft lower. Datum of present gage is 445.43 ft above mean sea level, datum of 1929.

Bankfull stage.--18 ft. At previous site, 24 ft.

Historical data.--Maximum stage known occurred in 1935. According to project report for Wister Reservoir, other major floods occurred in August and October 1915, April 1927, May 1930, May 1935, and February 1938.

Remarks.--Flow completely regulated by Wister Reservoir since October 1949 (capacity, 429,600 acre-ft). Records 1938-39 furnished by Corps of Engineers. Base for partial-duration series, 7,000 cfs. Only annual peaks are shown subsequent to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	a43.0	-	1946	Jan. 10, 1946	27.51	14,800
1939	Feb. 21, 1939	22.88	10,200	Feb. 14, 1946	30.00	18,400	
	Feb. 26, 1939	25.37	13,000	Apr. 25, 1946	27.15	14,400	
	Apr. 7, 1939	25.90	13,700	May 1, 1946	19.08	6,880	
	Apr. 17, 1939	37.1	77,800	May 4, 1946	23.31	10,200	
1940	Apr. 12, 1940	19.70	7,670	May 18, 1946	21.78	8,880	
				May 26, 1946	30.20	18,800	
1941				June 1, 1946	32.24	26,800	
	Jan. 2, 1941	21.58	8,760	1947	Nov. 7, 1946	27.90	15,300
	Feb. 21, 1941	19.89	7,740		Nov. 9, 1946	28.72	16,400
	Apr. 16, 1941	18.98	7,200		Nov. 27, 1946	21.40	8,560
Apr. 18, 1941	21.28	8,580	Dec. 12, 1946		34.66	46,400	
1942	Oct. 5, 1941	20.79	8,770	Apr. 11, 1947	26.29	13,800	
	Nov. 2, 1941	27.69	15,400	Apr. 30, 1947	23.56	11,500	
	Apr. 9, 1942	31.03	21,800	May 14, 1947	25.10	12,700	
	Apr. 26, 1942	29.82	18,700	May 18, 1947	22.46	10,700	
1943	Dec. 28, 1942	30.64	20,600	1948	Dec. 8, 1947	23.34	10,300
	May 11, 1943	37.05	77,000		Jan. 2, 1948	32.71	24,500
	May 22, 1943	26.08	13,400		Feb. 27, 1948	29.50	17,500
1944					Mar. 2, 1948	26.03	12,200
	Feb. 29, 1944	28.75	17,000	May 12, 1948	25.12	11,300	
	Mar. 20, 1944	25.20	12,400	1949	Jan. 27, 1949	29.89	14,600
	May 3, 1944	31.06	22,100				
	June 14, 1944	20.94	8,840	1950	Jan. 12, 1950	23.33	8,420
1945	Feb. 18, 1945	20.40	8,490	1951	Feb. 27, 1951	20.11	7,090
	Feb. 22, 1945	34.31	42,800		1952	Apr. 27, 1952	24.03
	Feb. 28, 1945	32.66	30,100	1953		May 5, 1953	22.89
	Mar. 14, 1945	22.67	10,100		1954	May 13, 1954	8.73
	Mar. 20, 1945	33.08	32,900	1955		Apr. 7, 1955	8.43
	Mar. 25, 1945	20.18	8,360		1956	Feb. 23, 1956	8.10
	Mar. 31, 1945	34.23	41,900	1957		May 27, 1957	14.41
	Apr. 13, 1945	21.10	8,980		1958	May 23, 1958	8.76
	May 13, 1945	20.47	8,560				
	May 16, 1945	37.16	78,600				
	June 12, 1945	35.00	49,400				
	June 18, 1945	23.66	10,900				
	Sept. 29, 1945	26.64	14,000				

a Annual peak only, at site and datum used in 1938; estimated as 38.5 ft at site used 1939-47, on basis of fall determined for flood in 1943.

2490. Poteau River at Poteau, Okla.

Location--Lat 35°03'35", long 94°36'10", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.7 N., R.26 E.,
at St. Louis-San Francisco Railway Co. bridge, 1 mile northeast of Poteau,
2 miles upstream from Nail Creek, and at mile 39.6.

Drainage area--1,240 sq mi.

Gage--Nonrecording prior to May 20, 1939, at site 100 ft upstream; recording
thereafter. Datum of gage is 409.4 ft above mean sea level (Corps of Engi-
neers bench mark).

Stage-discharge relation--Defined by current-meter measurements below 73,000
cfs.

Bankfull stage--20 ft.

Historical data--Major floods are reported to have occurred in May 1898, June
1904, and May 1908.

Remarks--Base for partial-duration series, 6,500 cfs. Only annual peaks are
shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	September 1923	29.0	21,000	1941	Feb. 21, 1941	23.28	8,250
1926	September 1926	32.5	40,000		Apr. 19, 1941	24.75	9,160
1927	Apr. 15, 1927	34.0	51,000	1942	Oct. 6, 1941	22.31	7,750
1929	May 20, 1929	29.0	21,000		Nov. 3, 1941	27.77	11,800
1930	May 12, 1930	31.8	37,000		Feb. 1, 1942	20.16	6,700
1932	Feb. 18, 1932	31.0	32,000		Apr. 10, 1942	29.63	22,700
1935	June 18, 1935	39.0	100,000		Apr. 27, 1942	28.56	18,500
1938	Nov. 12, 1937	24.0	8,370	1943	Dec. 29, 1942	29.03	20,900
	Dec. 19, 1937	25.0	9,370		May 11, 1943	37.00	58,100
	Jan. 25, 1938	31.8	37,000		May 16, 1943	23.22	7,420
	Feb. 19, 1938	36.3	73,000		May 22, 1943	26.76	11,500
	May 30, 1938	28.0	16,500	1944	Feb. 19, 1944	24.29	8,140
	Apr. 1, 1938	24.1	8,460		Mar. 1, 1944	28.27	15,400
	Apr. 9, 1938	24.8	9,160		Mar. 21, 1944	26.68	10,900
	Apr. 17, 1938	24.2	8,560		May 4, 1944	29.51	20,300
1939	Feb. 21, 1939	24.70	9,060		June 14, 1944	23.86	7,900
	Feb. 27, 1939	26.80	12,400	1945	Feb. 19, 1945	22.51	7,150
	Apr. 8, 1939	26.69	12,100		Feb. 22, 1945	32.89	39,200
	Apr. 17, 1939	36.20	68,200		Mar. 1, 1945	31.02	27,300
1940	Apr. 12, 1940	22.40	7,540		Mar. 14, 1945	25.13	9,500
1941	Jan. 3, 1941	24.87	9,260		Mar. 20, 1945	31.55	30,700
	Feb. 4, 1941	19.91	6,550		Mar. 25, 1945	23.95	9,000
					Mar. 31, 1945	32.38	35,800
					Apr. 14, 1945	23.67	7,780
					May 16, 1945	36.42	66,300
					June 12, 1945	35.10	55,900
					June 19, 1945	25.89	9,680
					Sept. 30, 1945	27.84	13,800

2494.5. Arkansas River at Fort Smith, Ark.

Location.--Lat 35°23'35", long 94°26'00", in S $\frac{1}{2}$ sec.27, T.11 N., R.27 E., Indian Meridian, on upstream side of bridge on U. S. Highway 64 at Fort Smith, 0.2 mile downstream from Poteau River, 7.1 miles upstream from Lee Creek, and at mile 361.8.

Drainage area.--149,972 sq mi, of which about 127,731 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Prior to Oct. 1, 1903, at present site and Oct. 1, 1903, to July 23, 1942, on Missouri Pacific Railroad Co. bridge 800 ft upstream. All gages at datum 380.24 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--22 ft.

Historical data.--The flood in June 1833 was highest known prior to flood in 1943.

Remarks.--Gage heights furnished by U. S. Weather Bureau. Crest stages affected by storage reservoirs and power development since 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1833	June 1833	38.0	-	1917	June 10, 1917	15.0	-
1879	May 4, 1879	10.8	-	1918	May 12, 1918	18.00	-
1880	Apr. 5, 1880	12.9	-	1919	Nov. 10, 1918	20.7	-
				1920	Mar. 28, 1920	22.9	-
1881	May 25, 1881	15.8	-	1921	Mar. 25, 1921	22.8	-
1882	Feb. 23, 1882	21.8	-	1922	Apr. 12, 1922	27.8	-
1883	June 11, 1883	22.8	-	1923	June 15, 1923	29.4	-
1884	Feb. 14, 1884	27.9	-	1924	May 2, 1924	23.0	-
1885	Apr. 26, 1885	27.9	-	1925	Apr. 30, 1925	15.8	-
1886	Aug. 9, 1886	13.7	-	1926	Sept. 8, 1926	19.7	-
1887	June 18, 1887	9.3	-	1927	Apr. 16, 1927	30.7	-
1888	May 21, 1888	17.8	-	1928	June 24, 1928	24.8	-
1889	Mar. 26, 1889	20.0	-	1929	May 16, 1929	29.7	-
1890	Mar. 12, Apr. 28	21.0	-	1930	May 13, 1930	21.5	-
1891	June 8, 1891	20.4	-	1931	Feb. 10, 1931	14.2	-
1892	May 19, 1892	30.95	-	1932	Jan. 24, 1932	22.0	-
1893	May 1, 1893	26.8	-	1933	May 17, 1933	27.7	-
1894	Mar. 8-9, 1894	17.6	-	1934	Apr. 8, 1934	18.1	-
1895	Aug. 1, 1895	19.6	-	1935	June 19, 1935	34.4	-
1896	Dec. 26, 1895	27.6	-	1936	Sept. 30, 1936	20.00	-
1897	Jan. 5, 1897	18.6	-	1937	June 14, 1937	21.7	-
1898	May 7, 1898	35.4	-	1938	Feb. 19, 1938	33.2	-
1899	May 9, 1899	26.4	-	1939	May 16, 1939	16.6	-
1900	May 23, 1900	12.8	-	1940	Sept. 6, 1940	19.1	-
1901	Apr. 19, 1901	14.7	-	1941	Apr. 22, 1941	31.4	-
1902	May 25, 1902	19.0	-	1942	Nov. 1, 1941	37.3	-
1903	May 26, 1903	25.1	-	1943	May 12, 1943	41.7	-
1904	June 7, 1904	33.4	-	1944	May 4, 1944	26.7	-
1905	May 30, 1905	22.4	-	1945	Apr. 16, 1945	38.4	-
1906	Aug. 10, 1906	20.2	-	1946	Oct. 2, 1945	28.8	-
1907	May 17-18, 1907	19.3	-	1947	Dec. 13, 1946	26.6	-
1908	May 27, 1908	32.7	-	1948	June 26, 1948	29.7	-
1909	May 27, 1909	26.6	-	1949	May 22, 1949	28.6	-
1910	Nov. 19, 1909	12.4	-	1950	May 13, 1950	31.0	-
1911	Aug. 7, 1911	21.2	-	1951	July 19, 1951	25.9	-
1912	May 1, 1912	28.2	-	1952	Apr. 24, 1952	19.2	-
1913	Mar. 28, 1913	16.0	-	1953	Apr. 26, 1953	18.3	-
1914	May 6, 1914	17.2	-	1954	May 3, 1954	22.5	-
1915	May 30, 1915	29.2	-	1955	May 31, 1955	17.7	-
1916	Jan. 30, 1916	32.7	-	1957	May 27, 1957	35.75	-

2495. Cove Creek near Lee Creek, Ark.

Location.--Lat 35°43'20", long 94°24'30", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.12 N., R.32 W., on downstream side of bridge, 4 $\frac{1}{2}$ miles northwest of Lee Creek and 5 $\frac{3}{4}$ miles upstream from mouth.

Drainage area.--36.9 sq mi.

Gage.--Recording. Altitude of gage is 852 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs and extended on basis of slope-area measurement at 20,500 cfs.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1950	May 10, 1950	10.50	a9,510	1955	June 15, 1955	7.80	4,340	
1951	Feb. 18, 1951	6.65	2,850	1956	Apr. 28, 1956	7.80	4,320	
	July 2, 1951	8.80	5,890		May 15, 1956	6.60	2,790	
1952	Mar. 10, 1952	5.28	1,580	1957	Apr. 3, 1957	13.50	20,500	
	Apr. 12, 1952	5.79	2,150		May 17, 1957	11.75	13,700	
	May 23, 1952	6.01	2,250		May 22, 1957	11.75	13,700	
1953	Mar. 14, 1953	8.03	4,640		May 25, 1957	7.00	3,300	
	May 12, 1953	6.20	2,250		June 9, 1957	6.30	2,440	
	May 17, 1953	6.45	2,520		Aug. 13, 1957	8.70	5,840	
1954	May 2, 1954	5.56	1,670		Aug. 16, 1957	9.60	7,680	
					Sept. 21, 1957	5.83	2,000	
1955	Oct. 11, 1954	6.78	2,930	1958	Nov. 7, 1957	6.09	2,230	
	Dec. 27, 1954	6.20	2,250		Nov. 18, 1957	6.44	2,610	
	Feb. 19, 1955	7.90	4,190		Mar. 8, 1958	6.15	2,280	
	Mar. 20, 1955	7.20	3,470		June 25, 1958	6.90	3,170	
	May 26, 1955	6.30	2,350		July 12, 1958	12.45	16,100	
	June 5, 1955	7.95	4,640		Aug. 2, 1958	6.30	2,200	

a Annual peak only.

2500. Lee Creek near Van Buren, Ark.

Location.--Lat 35°29'40", long 94°27'00", in SE $\frac{1}{4}$ sec.21, T.12 N., R.27 E., Indian Meridian, on right bank 300 ft west of Arkansas-Oklahoma State line, 3.2 miles downstream from Webbers Creek, 6 $\frac{1}{4}$ miles northwest of Van Buren, and 7.9 miles upstream from mouth.

Drainage area.--427 sq mi.

Gage.--Nonrecording prior to June 1937; recording thereafter. Datum of gage is 408.04 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 13,000 cfs. Only annual peaks are shown prior to 1951.

ARKANSAS RIVER BASIN

Peak stages and discharges of Lee Creek near Van Buren, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Feb. 8, 1931	20.5	27,700	1953	Mar. 14, 1953	15.65	16,200
1932	Jan. 16, 1932	18.1	23,200		Mar. 18, 1953	17.24	19,500
					May 12, 1953	16.57	18,300
1933	May 14, 15, 1933	22.3	32,200	1954	May 2, 1954	15.34	15,600
1934	Sept. 2, 1934	13.3	13,700	1955	Feb. 20, 1955	18.54	22,500
1935	June 17, 1935	27.0	57,700		Mar. 20, 1955	16.06	17,300
1936	Dec. 6, 1935	14.8	15,100	1956	Apr. 29, 1956	14.02	13,000
1943	May 10, 1943	27.0	57,700	1957	Apr. 3, 1957	29.37	73,200
1945	Apr. 15, 1945	35.0	112,000		May 17, 1957	17.98	21,700
					May 23, 1957	25.16	48,500
1950	May 10, 1950	27.2	58,900		June 2, 1957	15.86	16,700
					June 13, 1957	20.66	29,800
1951	Feb. 18, 1951	17.76	20,900		Aug. 16, 1957	14.04	13,000
	July 2, 1951	19.46	25,000	1958	May 9, 1958	14.34	14,800
					June 25, 1958	15.22	16,600
1952	Apr. 12, 1952	15.02	15,000		July 13, 1958	22.32	35,900

2505. Arkansas River at Van Buren, Ark.

Location.--Lat 35°25'42", long 94°21'37", in NW¹ sec.36, T.9 N., R.32 W., near right bank on downstream side of bridge on U. S. Highways 64 and 71 at Van Buren, 1.3 miles downstream from Lee Creek, 8.6 miles downstream from Poteau River, and at mile 353.4.

Drainage area.--150,483 sq mi, of which about 128,242 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1934; recording thereafter. Datum of gage is 372.36 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 760,000 cfs.

Bankfull stage.--22 ft.

Historical data.--Maximum stage known since at least 1833, that of Apr. 16, 1945.

Remarks.--Peak discharges affected by storage reservoirs and power development since March 1940. Base for partial-duration series, 110,000 cfs. Only annual peaks prior to 1934.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 16, 1927	35.0	-	1936	Dec. 8, 1935	20.10	118,000
					Sept. 30, 1936	21.17	143,000
1928	Oct. 5, 1927	25.2	243,000	1937	Oct. 10, 1936	20.10	126,000
1929	May 16, 1929	29.0	315,000		Jan. 17, 1937	21.9	154,000
					Feb. 2, 1937	21.1	143,000
1930	May 10, 1930	22.6	164,000		June 2, 1937	18.9	122,000
					June 14, 1937	21.9	148,000
1931	Dec. 6, 1930	15.5	82,500		June 19, 1937	21.0	134,000
1932	Jan. 24, 1932	22.15	184,000	1938	Feb. 19, 1938	32.71	375,000
					Mar. 30, 1938	a25.40	195,000
1933	May 17, 1933	27.88	278,000		May 25, 1938	25.12	200,000
1934	Apr. 9, 1934	17.90	116,000	1939	May 16, 1939	16.68	77,400
1935	Nov. 24, 1934	18.60	111,000	1940	Sept. 6, 1940	20.45	127,000
	Mar. 14, 1935	25.10	206,000	1941	Apr. 22, 1941	30.58	311,000
	Mar. 26, 1935	23.78	179,000		June 13, 1941	27.52	244,000
	May 6, 1935	22.41	165,000		Sept. 11, 1941	a19.64	115,000
	May 22, 1935	25.48	215,000				
	June 9, 1935	a29.47	269,000	1942	Oct. 7, 1941	a25.93	209,000
	June 19, 1935	b34.1	418,000		Oct. 18, 1941	a26.32	204,000

a Occurred on following day.

b Occurred at different time than peak discharge.

Peak stages and discharges of Arkansas River at Van Buren, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Oct. 28, 1941	25.56	203,000	1948	Aug. 17, 1948	21.9	149,000
	Nov. 2, 1941	a35.70	485,000				
	Apr. 12, 1942	27.78	268,000	1949	Jan. 27-28, 1949	b22.02	157,000
	Apr. 30, 1942	31.00	328,000		Feb. 16, 1949	b24.90	205,000
	June 26, 1942	26.20	218,000		May 2, 1949	b21.40	152,000
1943	Dec. 29, 1942	a23.30	188,000		May 22, 1949	b29.03	323,000
	May 12, 1943	b38.00	850,000		June 15, 1949	23.04	175,000
	May 23, 1943	b36.80	752,000	1950	May 13, 1950	b30.90	402,000
	June 8, 1943	22.80	144,000		July 24, 1950	25.30	225,000
1944	Mar. 21, 1944	22.50	152,000		July 30, 1950	23.20	173,000
	Apr. 13, 1944	24.63	192,000		Aug. 4, 1950	24.50	204,000
	May 3, 1944	a25.84	238,000		Sept. 17, 1950	22.80	185,000
	June 15, 1944	20.32	127,000	1951	Feb. 21, 1951	21.19	164,000
1945	Dec. 9, 1944	19.37	124,000		May 22, 1951	a22.08	164,000
	Feb. 24, 1945	19.28	111,000		June 15, 1951	20.72	138,000
	Mar. 4, 1945	b23.88	177,000		June 28, 1951	20.98	140,000
	Mar. 21, 1945	b29.78	304,000		July 6, 1951	28.76	250,000
	Apr. 2, 1945	23.70	156,000		July 19, 1951	26.82	238,000
	Apr. 17, 1945	c38.10	650,000		Sept. 17, 1951	19.56	117,000
	May 17, 1945	21.86	145,000	1952	Apr. 24, 1952	20.70	145,000
	June 11, 1945	b26.70	229,000		Apr. 26, 1953	b19.28	133,000
	July 4, 1945	20.40	130,000	1954	May 3, 1954	23.84	205,000
1946	Oct. 2, 1945	29.42	287,000		May 31, 1955	18.91	101,000
	Jan. 12, 1946	20.45	139,000	1956	Oct. 7, 1955	19.63	128,000
	Feb. 20, 1946	20.13	128,000		Apr. 5, 1957	21.78	150,000
	May 24, 1946	21.63	148,000	1957	Apr. 28, 1957	25.32	197,000
	June 2, 1946	19.62	118,000		May 28, 1957	35.97	510,000
1947	Nov. 10, 1946	19.68	119,000	1958	Mar. 28, 1958	20.17	132,000
	Dec. 13, 1946	27.80	262,000		May 10, 1958	18.93	117,000
	Apr. 17, 1947	26.36	238,000		June 26, 1958	21.90	171,000
	Apr. 30, 1947	25.80	205,000		July 15, 1958	22.20	160,000
	May 18, 1947	26.72	224,000				
	June 3, 1947	23.53	155,000				
1948	June 25-26, 1948	b30.61	330,000				
	July 20, 1948	22.12	152,000				

a Occurred on following day.

b Occurred at different time than peak discharge.

c Occurred Apr. 16, 1945.

2510. Frog Bayou near Mountainburg, Ark.

Location.--Lat 35°39'40", long 94°09'10", in NW¼NE¼ sec.2, T.11 N., R.30 W., on left bank above concrete weir in spillway of Fort Smith Dam, three-quarters of a mile upstream from Warloop Creek, 1½ miles upstream from Howard Fork, 2½ miles northeast of Mountainburg, and 3 miles downstream from Jones Fork.

Drainage area.--74 sq mi.

Gage.--Nonrecording gage and concrete control prior to Aug. 28, 1939; recording thereafter. Datum of gage is 800.00 ft above mean sea level, datum of 1929 (levels by city of Fort Smith).

Stage-discharge relation.--Defined by current-meter measurements below 11,100 cfs and extended by logarithmic plotting.

Remarks.--Records represent spillway overflow from Lake Fort Smith and do not include water diverted for municipal supply of Fort Smith. Peak discharge affected by storage in Lake Fort Smith (capacity, 10,000 acre-ft) and since Jan. 1, 1956, by Lake Sheppard Springs (capacity, 19,000 acre-ft). Base for partial-duration series, 3,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Frog Bayou near Mountainburg, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 14, 1937	26.6	2,400	1947	June 21, 1947	27.58	4,800
1938	Feb. 15, 1938	27.90	5,600	1948	Aug. 14, 1948	26.69	2,550
	Feb. 18, 1938	28.20	6,500	1949	Jan. 24, 1949	28.21	6,500
1939	Feb. 19, 1939	26.55	2,190		Feb. 15, 1949	27.66	4,940
1940	Apr. 11, 1940	27.35	4,220	1950	Jan. 13, 1950	27.00	3,270
1941	Apr. 19, 1941	26.58	2,310		May 10, 1950	27.61	4,800
1942	Apr. 8, 1942	27.96	5,780	1951	Feb. 18, 1951	28.01	5,920
1943	Nov. 5, 1942	26.92	3,300		July 2, 1951	28.48	7,440
	Dec. 27, 1942	28.61	11,100	1952	Apr. 12, 1952	26.58	2,310
	May 10, 1943	29.84	12,000	1953	Mar. 17, 1953	27.05	3,390
1944	Apr. 8, 1944	28.40	7,120		Apr. 29, 1953	27.09	3,510
	June 14, 1944	27.06	3,390		May 12, 1953	27.08	3,510
1945	Feb. 21, 1945	28.81	8,420	1954	May 3, 1954	25.46	397
	Mar. 2, 1945	27.71	5,070	1955	Feb. 19, 1955	27.32	4,010
	Mar. 19, 1945	28.43	7,120		Mar. 20, 1955	26.91	3,030
	Mar. 30, 1945	27.92	5,630	1956	June 9, 10, 1956	25.16	92
	Apr. 15, 1945	31.06	17,300		Apr. 3, 1957	27.83	5,630
	June 10, 1945	29.10	9,420	1957	May 13, 1957	26.85	3,030
1946	Feb. 13, 1946	27.77	5,210		May 23, 1957	30.28	13,700
	May 24, 1946	29.14	9,420	1958	(a)	26.48	2,100
1947	Nov. 9, 1946	28.12	6,210				
	Dec. 10, 1946	27.41	4,270				

a Nov. 18, 1957, July 12, 1958.

2515. Frog Bayou at Rudy, Ark.

Location.--Lat 35°31'25", long 94°16'30", in SW¼ sec.23, T.10 N., R.31 W., on left bank at downstream side of bridge on county road at Rudy, 0.5 mile downstream from Cedar Creek.

Drainage area.--217 sq mi.

Gage.--Recording. Datum of gage is 475.08 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs.

Bankfull stage.--10 ft.

Remarks.--Peak discharge affected to some extent by storage in Lake Fort Smith (capacity, 10,000 acre-ft) and since Jan. 1, 1956, by Lake Sheppard Springs (capacity, 19,000 acre-ft). Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 15, 1945	18.5	a39,500	1955	Dec. 28, 1954	9.15	7,070
1950	May 10, 1950	11.40	a13,200		Feb. 19, 1955	11.34	12,600
1951	Feb. 15, 1951	9.07	7,110		Mar. 20, 1955	9.17	7,070
	Feb. 18, 1951	11.35	13,200	1956	May 15, 1956	6.82	2,710
	Feb. 20, 1951	8.75	6,490	1957	Apr. 3, 1957	12.88	13,900
	July 2, 1951	11.77	14,700		Apr. 26, 1957	7.74	4,140
1952	Nov. 25, 1951	7.98	4,980		May 13, 1957	9.32	6,810
	Mar. 10, 1952	8.46	5,900		May 23, 1957	18.04	36,200
	Apr. 12, 1952	8.86	6,690		May 24, 1957	11.85	12,400
1953	Mar. 14, 1953	8.55	5,860		June 13, 1957	12.37	13,800
	Mar. 17, 1953	10.22	9,250		Aug. 13, 1957	8.45	5,130
	Apr. 29, 1953	9.90	8,570		Aug. 16, 1957	16.24	25,800
	May 12, 1953	10.18	9,250	1958	Nov. 18, 1957	9.02	6,200
1954	May 2, 1954	5.86	1,520		May 9, 1958	10.85	9,890
					June 25, 1958	8.62	5,480
					July 12, 1958	14.25	19,100

a Annual peak only.

2520. Mulberry River near Mulberry, Ark.

Location.--Lat 35°34', long 94°01', in NW $\frac{1}{4}$ sec.6, T.10 N., R.28 W., on left bank a quarter of a mile upstream from Mill Creek, 5 miles northeast of Mulberry, and 11.3 miles upstream from mouth.

Drainage area.--372 sq mi.

Gage.--Nonrecording prior to Apr. 19, 1940, at site 500 ft downstream; recording thereafter. Datum of gage is 432.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 39,000 cfs and extended on basis of velocity-area study.

Bankfull stage.--18 ft.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	December 1927	a22.0	59,000	1949	Jan. 24, 1949	18.61	42,100
					Feb. 14, 1949	15.98	30,100
1939	Apr. 17, 1939	11.2	12,600				
1940	Apr. 11, 1940	8.6	8,010	1950	Jan. 4, 1950	13.90	22,000
					Jan. 13, 1950	10.53	12,300
1941	Jan. 24, 1941	8.32	7,110		Feb. 12, 1950	13.44	20,300
					May 11, 1950	12.74	18,000
1942	Oct. 31, 1941	10.79	12,200	1951	Feb. 15, 1951	10.95	13,500
	Apr. 8, 1942	12.89	17,500		Feb. 18, 1951	14.55	24,500
1943	Dec. 27, 1942	14.00	20,700	1952	Nov. 25, 1951	11.10	13,800
	May 10, 1943	18.23	40,100		Mar. 11, 1952	11.57	14,500
1944	Apr. 8, 1944	12.82	17,600		Apr. 12, 1952	11.63	15,000
	June 14, 1944	11.83	15,000		May 23, 1952	10.93	13,300
1945	Feb. 21, 1945	17.17	35,400	1953	Mar. 14, 1953	10.52	12,300
	Mar. 3, 1945	12.77	18,300		Mar. 19, 1953	15.17	26,800
	Mar. 19, 1945	15.06	26,400		Apr. 29, 1953	11.07	13,800
	Mar. 30, 1945	14.17	23,100		May 12, 1953	13.92	22,000
	Apr. 2, 1945	10.52	12,300	1954	Apr. 16, 1954	8.33	7,320
	Apr. 15, 1945	18.70	47,800				
	May 16, 1945	10.37	12,100	1955	Feb. 20, 1955	12.14	15,600
	June 10, 1945	17.30	35,800		Mar. 21, 1955	13.28	19,000
1946	Jan. 9, 1946	10.33	11,900	1956	May 15, 1956	11.68	15,300
	Feb. 6, 1946	10.56	12,600				
	Feb. 13, 1946	13.57	20,900	1957	Apr. 3, 1957	15.70	28,800
	May 25, 1946	14.93	25,700		Apr. 26, 1957	10.81	13,100
1947	Nov. 10, 1946	13.93	22,000		May 13, 1957	15.54	21,600
	Dec. 12, 1946	15.28	27,200		May 23, 1957	11.90	16,600
	May 20, 1947	15.4	27,600		June 13, 1957	9.55	10,700
1948	Jan. 1, 1948	12.04	16,100	1958	Mar. 8, 1958	9.54	10,100
	Feb. 26, 1948	9.68	10,500		May 9, 1958	9.88	11,000

a Annual peak only.

2524. Arkansas River at Ozark, Ark.

Location.--Lat 35°29'02", long 93°49'56", in SE $\frac{1}{4}$ sec.35, T.10 N., R.27 W., at bridge on State Highway 23 at Ozark, 14 miles downstream from Mulberry River and at mile 310.3.

Drainage area.--151,797 sq mi, of which about 129,556 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 337.06 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--22 ft.

Remarks.--Records furnished by U. S. Weather Bureau. Crest stages affected by storage reservoir and power development since March 1940. Only annual peak stages are shown.

Peak stages and discharges of Arkansas River at Ozark, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 27, 1927	35.4	-	1943	May 14, 1943	38.4	-
1928	Oct. 5, 1927	22.4	-	1944	May 4, 1944	23.3	-
1929	May 17, 1929	24.9	-	1945	Apr. 19, 1945	35.9	-
1930	May 11, 1930	21.0	-	1946	Oct. 3, 1945	25.8	-
1931	Feb. 10, 1931	12.0	-	1947	Dec. 13, 1946	23.3	-
1932	Nov. 26, 1931	14.8	-	1948	June 27, 1948	25.2	-
1933	May 18, 1933	23.7	-	1949	May 22, 1949	24.9	-
1934	Apr. 9, 1934	13.2	-	1950	May 13, 1950	27.5	-
1935	June 21, 1935	31.1	-	1951	July 7, 1951	22.8	-
1936	June 10, 1936	12.2	-	1952	Apr. 24, 1952	15.9	-
1937	Jan. 17, 1937	17.0	-	1953	Mar. 27, 1953	15.1	-
1938	Feb. 20, 1938	28.9	-	1954	May 4, 1954	19.2	-
1939	May 16, 1939	12.0	-	1955	May 25, 1955	13.7	-
1940	Sept. 7, 1940	14.3	-	1956	Oct. 8, 1955	14.9	-
1941	Apr. 22, 1941	26.0	-	1957	May 28, 1957	34.4	-
1942	Nov. 4, 1941	33.0	-	1958	June 27, 1958	19.3	-

2565. Spadra Creek at Clarksville, Ark.

Location.--Lat 35°28', long 93°28', in NW $\frac{1}{4}$ sec.4, T.9 N., R.23 W., on right bank at Clarksville, 1,000 ft downstream from bridge on U. S. Highway 64 and 4 $\frac{1}{2}$ miles upstream from mouth.

Drainage area.--54.8 sq mi.

Gage.--Recording. Datum of gage is 352.99 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs.

Bankfull stage.--10 ft.

Remarks.--Gage heights since 1952 represent water surface in gage well and are slightly lower than outside water surface because of drawdown. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	December 1927	a14.7	14,500	1955	Feb. 19, 1955	8.91	5,550
1949	Jan. 24, 1949	a14.5	14,000	1955	Mar. 20, 1955	10.32	7,130
1953	Nov. 25, 1952	7.23	3,820	1956	Feb. 17, 1956	6.64	3,120
	Mar. 14, 1953	6.82	3,390	1957	Apr. 3, 1957	14.58	15,300
	Mar. 17, 1953	9.84	7,160		Apr. 27, 1957	9.30	6,390
	Apr. 24, 1953	6.75	3,390		Apr. 29, 1957	6.83	3,420
	Apr. 29, 1953	9.26	6,460		May 24, 1957	7.13	3,740
1954	Jan. 20, 1954	10.7	7,600		June 13, 1957	14.38	14,700
	Feb. 15, 1954	7.0	3,500	1958	May 2, 1958	7.96	4,100
	May 2, 1954	6.99	3,600		May 9, 1958	10.15	6,880

a Annual peak only.

2570. Piney Creek near Dover, Ark.

Location.--Lat 35°33'00", long 93°09'25", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.10 N., R.20 W., $\frac{7}{8}$ miles downstream from Indian Creek and 10 miles north of Dover.

Drainage area.--274 sq mi.

Gage.--Recording. Datum of gage is 487.66 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and extended by logarithmic plotting.

Remarks.--Base for partial-duration series, 7,000 cfs.

Peak stages and discharges of Piney Creek near Dover, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 24, 1949	a25.6	80,000	1955	Mar. 20, 1955	17.06	28,900
1951	Feb. 20, 1951	14.95	17,600	1955	Apr. 21, 1955	11.37	11,000
1952	Nov. 23, 1951	12.64	14,000	1956	Feb. 1, 1956	12.44	13,400
	Mar. 10, 1952	12.78	14,500		Feb. 17, 1956	11.28	10,700
	Apr. 12, 1952	13.34	15,800		May 15, 1956	10.68	9,380
	May 23, 1952	11.95	12,400	1957	Apr. 3, 1957	20.37	44,000
1953	Nov. 25, 1952	12.46	13,700		Apr. 27, 1957	11.02	10,100
	Mar. 14, 1953	13.34	15,800		Apr. 30, 1957	10.18	8,280
	Mar. 17, 1953	17.04	28,500		May 13, 1957	11.85	12,000
	Apr. 24, 1953	11.56	11,400		May 23, 1957	10.45	8,830
	Apr. 29, 1953	11.18	10,500		June 10, 1957	9.70	7,320
	May 12, 1953	13.08	15,300		June 13, 1957	13.60	16,600
1954	Jan. 20, 1954	11.15	10,500	1958	Mar. 8, 1958	10.65	9,160
	Apr. 16, 1954	10.98	10,000		Mar. 13, 1958	9.62	7,140
	May 2, 1954	16.03	24,700		May 3, 1958	9.58	7,140
1955	Feb. 20, 1955	15.62	23,200		May 9, 1958	10.30	8,520
					Aug. 1, 1958	12.80	14,500

a Annual peak only.

2575. Illinois Bayou near Scottsville, Ark.

Location.--Lat 35°28', long 93°02', in SW $\frac{1}{4}$ sec.32, T.10 N., R.19 W., on downstream side of bridge on county road, $1\frac{1}{4}$ miles north of Scottsville and 3 miles downstream from North Fork Illinois Bayou.

Drainage area.--242 sq mi.

Gage.--Nonrecording prior to Mar. 25, 1948; recording thereafter. Datum of gage is 447.54 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 57,000 cfs and extended by logarithmic plotting.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 10, 1943	a24.6	77,000	1953	Nov. 25, 1952	14.74	17,400
1948	Jan. 1, 1948	15.0	18,600		Mar. 14, 1953	11.56	8,760
1949	Dec. 15, 1948	10.96	7,000		Mar. 18, 1953	14.76	17,800
	Jan. 24, 1949	24.60	77,000		Apr. 24, 1953	11.60	8,760
	Jan. 27, 1949	11.60	9,550	1954	May 2, 1954	16.48	23,500
	Feb. 14, 1949	12.05	10,600	1955	Feb. 20, 1955	-	15,000
1950	Oct. 21, 1949	11.90	9,460		Mar. 20, 1955	14.75	17,300
	Jan. 4, 1950	15.30	19,400		Apr. 21, 1955	14.66	17,000
	Jan. 13, 1950	14.80	17,800	1956	Feb. 2, 1956	12.70	10,700
	Feb. 1, 1950	11.28	8,100		Feb. 17, 1956	12.84	11,000
	Feb. 12, 1950	13.65	14,100	1957	Apr. 3, 1957	17.90	24,600
	June 3, 1950	10.98	7,470		May 24, 1957	16.20	19,200
1951	Feb. 15, 1951	11.56	8,760		June 13, 1957	11.60	7,160
	Feb. 20, 1951	14.20	15,900		Aug. 13, 1957	16.80	21,100
1952	Nov. 24, 1951	12.65	11,300	1958	Nov. 13, 1957	13.32	10,900
	Mar. 10, 1952	14.08	15,600		Nov. 18, 1957	12.86	9,920
	Apr. 12, 1952	13.47	13,800		Mar. 23, 1958	12.34	8,620
	Apr. 22, 1952	13.90	15,000		May 2, 1958	12.27	8,620
	May 23, 1952	11.82	9,220		May 9, 1958	12.10	8,200

a Annual peak only.

2580. Arkansas River at Dardanelle, Ark.

Location.--Lat 35°13'34", long 93°08'58", in SW $\frac{1}{4}$ sec.29, T.7 N., R.20 W., on downstream side of bridge on State Highway 7 at Dardanelle, 1 mile upstream from Whig Creek, 4.7 miles downstream from Illinois Bayou, and at mile 255.8.

Drainage area.--153,707 sq mi, of which about 131,466 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 11, 1939; recording thereafter. Datum of gage is 290.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined prior to 1937. Defined by current-meter measurements since that date.

Bankfull stage.--22 ft.

Remarks.--Gage-height record prior to 1939 furnished by U. S. Weather Bureau. Peak discharges affected by storage reservoirs and power development since March 1940. Base for partial-duration series, 130,000 cfs. Only annual peak stages are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1887	May 5, 1887	12.6	-	1915	May 30, 1915	26.9	-
1888	May 22, 1888	16.1	-	1916	Jan. 31, 1916	29.8	-
1889	Mar. 26, 1889	19.0	-	1917	June 11, 1917	14.4	-
1890	Apr. 27, 1890	20.00	-	1918	May 13, 1918	20.3	-
1891	Apr. 22, 1891	18.0	-	1919	Nov. 11-12, 1918	17.9	-
1892	May 18, 1892	27.5	-	1920	Mar. 29, 1920	20.9	-
1893	May 2, 1893	24.0	-	1921	Mar. 26, 1921	20.6	-
1894	Mar. 21, 1894	17.5	-	1922	Apr. 13, 1922	25.2	-
1895	Aug. 2, 1895	17.5	-	1923	June 17, 1923	26.5	-
1896	Dec. 26, 1895	23.5	-	1924	Dec. 16, 1923	22.0	-
1897	Mar. 20, 1897	17.4	-	1925	May 1, 1925	13.0	-
1898	May 10, 1898	28.9	-	1926	Oct. 17, 1925	12.1	-
1899	May 10, 1899	23.1	-	1927	Apr. 19, 1927	33.0	-
1900	July 7, 1900	11.3	-	1928	Dec. 14, 1927	24.5	-
1901	Apr. 19, 1901	15.5	-	1929	May 18, 1929	27.6	-
1902	June 2, 1902	17.3	-	1930	May 11, 1930	24.3	-
1903	May 31, 1903	22.8	-	1931	Feb. 10, 1931	14.2	-
1904	June 9, 1904	28.0	-	1932	Jan. 25, 1932	20.2	-
1905	May 30-31, 1905	21.2	-	1933	May 18, 1933	25.1	-
1906	May 4, 1906	19.0	-	1934	Apr. 8, 1934	15.5	-
1907	May 11, 1907	18.8	-	1935	June 21, 1935	29.5	-
1908	May 29, 1908	27.2	-	1936	Dec. 8, 1935	18.5	-
1909	Dec. 2, 1908	24.9	-	1937	Jan. 18, 1937	19.4	-
1910	Jan. 20, May 17	12.0	-	1938	Feb. 19-20, 1938	29.55	396,000
1911	Aug. 9, 1911	18.4	-		Apr. 1, 1938	22.8	201,000
1912	May 3, 1912	24.3	-		May 26, 1938	22.8	205,000
					June 14, 1938	20.2	157,000
1913	Mar. 29, 1913	14.4	-	1939	Apr. 17, 1939	19.00	142,000
1914	(a)	16.2	-	1940	Sept. 7, 1940	216.65	103,000

a Dec. 7, 1913, May 7, 1914.
b Occurred on following day.

Peak stages and discharges of Arkansas River at Dardanelle, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 23, 1941	27.16	295,000	1948	June 27, 1948	c27.07	300,000
	June 14, 1941	23.94	233,000		July 21, 1948	19.37	153,000
1942					Aug. 18, 1948	18.93	146,000
	Oct. 9, 1941	b22.70	203,000	1949	Jan. 25, 1949	c25.70	294,000
	Oct. 19, 1941	b23.30	213,000		Feb. 17, 1949	23.51	235,000
	Nov. 5, 1941	c31.92	433,000		May 3, 1949	19.13	143,000
	Apr. 13, 1942	25.06	246,000		May 22, 1949	26.97	303,000
	May 1, 1942	c28.65	316,000		June 15, 1949	22.00	195,000
	June 27, 1942	c23.55	200,000	1950	Feb. 13, 1950	17.94	137,000
1943	Dec. 28, 1942	c21.24	182,000		May 14, 1950	c29.20	382,000
	May 13-14, 1943	33.30	683,000		July 24, 1950	c23.68	215,000
	May 25, 1943	33.60	682,000		Aug. 5, 1950	24.22	221,000
	June 9, 1943	22.06	147,000		Sept. 18, 1950	c21.64	175,000
1944	Mar. 21, 1944	21.88	164,000	1951	Feb. 22, 1951	21.20	174,000
	Apr. 14, 1944	23.37	191,000		May 23, 1951	19.70	148,000
	May 4, 1944	26.29	245,000		June 14, 1951	18.73	135,000
	June 15-16, 1944	19.60	132,000		July 7, 1951	25.06	224,000
1945	Feb. 22, 1945	21.10	170,000		July 20, 1951	25.14	227,000
	Feb. 27, 1945	21.24	172,000	1952	Apr. 24, 1952	19.88	145,000
	Mar. 5, 1945	23.18	201,000		Mar. 18, 1953	19.33	137,000
	Mar. 21, 1945	28.45	307,000	1953	May 4, 1954	c22.64	194,000
	Mar. 31, 1945	27.09	265,000		Mar. 21, 1955	17.35	109,000
	Apr. 19, 1945	33.15	579,000	1956	Oct. 9, 1955	16.50	113,000
	June 11, 1945	29.46	335,000		Apr. 4, 1957	22.10	204,000
1946	Oct. 4, 1945	27.63	285,000	1957	Apr. 28, 1957	24.77	244,000
	Jan. 9, 1946	19.71	148,000		May 30, 1957	33.42	471,000
	Feb. 21, 1946	18.53	132,000	1958	Mar. 27, 1958	18.56	139,000
	May 25, 1946	21.64	175,000		May 10, 1958	19.46	152,000
1947	Nov. 10, 1946	20.00	160,000		June 27, 1958	18.93	156,000
	Dec. 13, 1946	26.56	303,000		July 16, 1958	18.97	154,000
	Apr. 18, 1947	24.02	224,000				
	May 1, 1947	23.82	220,000				
	May 15, 1947	18.90	146,000				
	May 21, 1947	24.90	246,000				
	June 3, 1947	20.23	163,000				

b Occurred on following day.

c Occurred at different time than peak discharge.

2585. Petit Jean Creek near Booneville, Ark.

Location.--Lat 35°06'25", long 93°55'25", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.5 N., R.27 W., on right bank at downstream side of bridge on State Highway 116, 0.5 mile downstream from Fletcher Creek and 2 $\frac{1}{4}$ miles south of Booneville.

Drainage area.--247 sq mi.

Gage.--Nonrecording prior to May 24, 1939; recording thereafter. Datum of gage is 423.39 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs and extended by slope-area and contracted-opening measurements made by Corps of Engineers.

Bankfull stage.--19 ft.

Remarks.--Base for partial-duration series, 4,000 cfs.

ARKANSAS RIVER BASIN

Peak stages and discharges of Petit Jean Creek near Booneville, Ark.

water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 19, 1939	19.5	8,250	1949	Jan. 25, 1949	22.40	29,800
	Feb. 25, 1939	19.6	8,350		Feb. 14, 1949	19.85	9,700
	Mar. 5, 1939	13.3	4,120		June 14, 1949	18.10	6,650
	Apr. 6, 1939	17.2	6,540	1950	Jan. 4, 1950	20.24	11,100
	Apr. 16, 1939	23.42	43,200		Jan. 13, 1950	20.58	12,900
1940	Apr. 29, 1940	10.45	2,580		Feb. 1, 1950	19.05	8,000
					Feb. 12, 1950	21.40	18,100
1941	Jan. 1, 1941	18.81	7,640		May 7, 1950	20.68	13,400
					May 12, 1950	17.43	6,280
1942	Oct. 31, 1941	15.33	5,320		July 22, 1950	17.62	6,440
	Jan. 30, 1942	16.53	5,320		Sept. 16, 1950	18.51	7,250
	Apr. 8, 1942	19.43	7,360	1951	Feb. 15, 1951	19.43	8,290
	May 6, 1942	14.19	4,250		Feb. 18, 1951	17.32	5,950
	May 20, 1942	18.35	6,530	1952	Oct. 31, 1951	19.35	8,700
1943	Dec. 27, 1942	15.35	4,790		Mar. 10, 1952	18.68	7,520
	May 10, 1943	22.59	32,300		Apr. 12, 1952	20.49	11,500
	May 16, 1943	18.10	6,290		Apr. 22, 1952	18.90	8,340
1944	Feb. 28, 1944	15.95	5,270	1953	Nov. 25, 1952	19.88	10,000
	Mar. 16, 1944	16.46	5,520		Mar. 14, 1953	19.91	10,000
	Mar. 19, 1944	14.78	4,700		Mar. 17, 1953	20.99	15,100
	May 2, 1944	17.12	5,930		Mar. 31, 1953	13.20	4,430
	June 13, 1944	16.78	5,690		Apr. 6, 1953	14.19	4,910
1945	Feb. 17, 1945	15.78	5,000		Apr. 24, 1953	20.95	15,100
	Feb. 21, 1945	21.16	16,100		Apr. 29, 1953	19.66	9,400
	Feb. 27, 1945	20.42	10,800		May 13, 1953	19.42	8,770
	Mar. 3, 1945	17.45	6,030	1954	Jan. 20, 1954	14.05	4,480
	Mar. 12, 1945	19.74	8,850		Feb. 16, 1954	13.48	4,260
	Mar. 19, 1945	20.92	13,600		May 2, 1954	15.47	5,190
	Mar. 30, 1945	21.38	18,000	1955	Feb. 20, 1955	16.38	5,660
	Apr. 13, 1945	16.61	5,460		Mar. 18, 1955	14.50	4,710
	May 12, 1945	16.98	5,730		Mar. 20, 1955	20.58	12,900
	May 15, 1945	21.61	20,100	1956	Feb. 17, 1956	16.72	6,240
	June 11, 1945	20.55	11,800	1957	Feb. 5, 1957	14.46	4,770
	Sept. 12, 1945	15.52	4,850		Apr. 3, 1957	20.94	13,700
	Sept. 27, 1945	15.31	4,750		Apr. 25, 1957	15.28	5,380
1946	Jan. 8, 1946	18.20	6,750		Apr. 27, 1957	20.60	12,200
	Feb. 13, 1946	18.56	7,170		May 13, 1957	14.60	5,020
	Apr. 16, 1946	16.48	5,400		May 23, 1957	20.78	13,200
	Apr. 24, 1946	19.58	8,650		May 25, 1957	14.94	5,220
	Apr. 29, 1946	14.45	4,380		June 5, 1957	13.90	4,770
	May 3, 1946	17.71	6,270		Aug. 12, 1957	20.47	11,000
	May 23, 1946	16.03	5,100		Aug. 15, 1957	16.32	5,900
1947	Nov. 10, 1946	13.75	4,070		Sept. 22, 1957	15.64	5,530
	Nov. 26, 1946	14.04	4,160	1958	Nov. 18, 1957	20.81	13,200
	Dec. 10, 1946	21.24	16,400		Mar. 7, 1958	12.89	4,280
	Apr. 10, 1947	16.70	5,520		May 2, 1958	21.13	15,700
1948	Dec. 31, 1947	20.92	14,500		May 9, 1958	19.22	8,470
	Feb. 5, 1948	13.95	4,160		June 26, 1958	19.02	8,210
	Feb. 25, 1948	13.98	4,160				
	Mar. 1, 1948	17.17	5,880				
	Apr. 11, 1948	18.43	7,100				

2595. Petit Jean Creek near Waveland, Ark.
(Published as "near Blue Mountain" prior to 1943)

Location.--Lat 35°06'17", long 93°37'51", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.11, T.5 N., R.25 W., on left bank 0.8 mile downstream from Rock Creek, 1.2 miles downstream from Cedar Creek, 1.3 miles south of Waveland, and 1.4 miles downstream from Blue Mountain Dam.

Drainage area.--517 sq mi (495 sq mi at former site).

Gage.--Recording. Prior to Oct. 1, 1943, at site $1\frac{3}{4}$ miles upstream at datum 9.54 ft higher. Datum of present gage is 339.70 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements at former site below 13,000 cfs and extended by velocity-area study and slope-area determination at 62,600 cfs. Defined by current-meter measurements at present site.

Bankfull stage.--22 ft.

Remarks.--Flow regulated by Blue Mountain Reservoir since May 7, 1946 (capacity, 258,000 acre-ft). Base for partial-duration series, 5,000 cfs. Only annual peaks are shown subsequent to 1946.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 20, 1939	21.89	10,200	1945	May 13, 1945	25.30	6,880
	Feb. 25, 1939	22.06	10,500		May 16, 1945	31.18	25,800
	Mar. 5, 1939	20.78	8,670		June 12, 1945	29.70	16,200
	Apr. 6, 1939	20.35	8,250		Sept. 13, 1945	22.56	5,040
	Apr. 16, 1939	28.95	62,600	1946	Jan. 9, 1946	28.15	11,600
1940	Apr. 29, 1940	13.65	3,700		Feb. 14, 1946	29.07	14,000
					Mar. 6, 1946	23.80	5,740
1941	Jan. 2, 1941	20.75	7,460		Mar. 28, 1946	25.81	7,390
					Apr. 16, 1946	28.27	11,800
1942	Oct. 31, 1941	21.43	7,100		Apr. 25, 1946	27.37	9,790
	Jan. 31, 1942	20.24	7,200		May 3, 1946	27.07	9,230
	Apr. 9, 1942	21.64	9,950	1947	Dec. 13, 1946	27.63	9,050
	May 20, 1942	20.07	7,600				
1943	Dec. 28, 1942	18.3	6,560	1948	Jan. 2, 1948	27.25	8,580
	Apr. 12, 1943	17.2	5,890				
	May 11, 1943	28.70	38,000	1949	Jan. 24, 1949	24.27	5,900
	May 17, 1943	19.0	7,050				
1944	Feb. 9, 1944	23.48	5,570	1950	Feb. 12, 1950	21.67	4,860
	Feb. 17, 1944	27.12	9,260				
	Feb. 28, 1944	27.65	10,200	1951	Feb. 25, 1951	15.63	2,500
	Mar. 16, 1944	27.22	9,440				
	Mar. 20, 1944	27.20	9,440	1952	Apr. 22, 1952	19.42	3,800
	May 2, 1944	28.10	11,400				
	June 14, 1944	23.88	5,810	1953	Mar. 17, 1953	24.58	6,310
1945	Feb. 18, 1945	25.07	6,700				
	Feb. 21, 1945	30.70	21,800	1954	May 2, 1954	17.44	3,150
	Feb. 28, 1945	30.07	18,100				
	Mar. 3, 1945	28.33	11,800	1955	Feb. 24, 1955	16.72	2,820
	Mar. 7, 1945	23.60	5,620				
	Mar. 13, 1945	28.06	11,400	1956	Feb. 23, 1956	15.80	2,550
	Mar. 20, 1945	29.77	16,600				
	Mar. 25, 1945	25.31	6,880	1957	Aug. 15, 1957	22.00	4,600
	Mar. 30, 1945	32.23	37,100				
				1958	Mar. 23, 1958	15.65	2,650

2600. Dutch Creek at Waltreak, Ark.

Location.--Lat 34°59', long 93°37', in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.24, T.4 N., R.25 W., on left bank a quarter of a mile north of Waltreak and 20.0 miles upstream from mouth.

Drainage area.--74 sq mi.

Gage.--Recording. Datum of gage is 371.48 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and by slope-area measurement at 13,000 cfs.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	-	a19.5	-	1951	Feb. 15, 1951	10.76	3,140
1946	Jan. 9, 1946	10.80	3,140	1952	Oct. 31, 1951	11.80	3,820
	Feb. 13, 1946	17.42	11,400		Mar. 10, 1952	11.90	3,900
	Mar. 6, 1946	10.73	3,060		Apr. 12, 1952	13.68	5,450
	May 25, 1946	14.30	6,360		Apr. 22, 1952	17.40	11,100
1947	Dec. 12, 1946	16.66	10,100	1953	Nov. 25, 1952	16.56	9,160
1948	Jan. 1, 1948	18.12	13,000		Mar. 18, 1953	13.67	5,450
	Feb. 25, 1948	12.28	4,400		Apr. 29, 1953	11.57	3,670
	Apr. 10, 1948	11.41	3,460		May 12, 1953	13.77	5,550
	Apr. 13, 1948	12.07	4,260	1954	May 2, 1954	16.46	9,700
1949	Jan. 24, 1949	18.45	13,700		Mar. 21, 1955	12.81	4,620
	Feb. 13, 1949	12.24	4,350	1956	Feb. 17, 1956	11.39	3,530
	Mar. 26, 1949	12.26	4,440		Apr. 3, 1957	15.04	7,270
1950	Jan. 2, 1950	12.39	4,550	1957	Apr. 27, 1957	14.73	6,860
	Jan. 13, 1950	16.50	9,950		May 23, 1957	11.34	3,560
	Feb. 1, 1950	14.00	6,310	1958	May 2, 1958	12.80	4,890
	Feb. 12, 1950	15.31	8,090				
	May 7, 1950	15.94	8,980				
	July 23, 1950	16.56	10,100				

a Annual peak only.

2605. Petit Jean Creek at Danville, Ark.

Location.--Lat 35°04', long 93°24', in SE $\frac{1}{4}$ sec.25, T.5 N., R.23 W., on left bank at downstream side of bridge on State Highway 10 at Danville, 1,800 ft upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 0.5 mile upstream from Spring Creek, and 0.6 mile downstream from Dutch Creek.

Drainage area.--741 sq mi.

Gage.--Nonrecording prior to July 13, 1939; recording gage and concrete-control thereafter. Prior to Aug. 25, 1934, at site 1,800 ft downstream at datum 0.25 ft higher. Datum of present gage is 303.33 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 57,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Records prior to July 1937 computed by Corps of Engineers using gage heights furnished by U. S. Weather Bureau, reviewed by U. S. Geological Survey. Flow regulated by Blue Mountain Reservoir since May 7, 1946. Only annual peaks are shown prior to 1938 and subsequent to 1946. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges of Petit Jean Creek at Danville, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 3, 1917	21.7	6,290	1939	Apr. 17, 1939	31.82	70,800
1918	May 14, 1918	20.9	5,010	1940	Apr. 30, 1940	a19.30	3,380
1919	Dec. 15, 1918	24.3	14,600	1941	Jan. 4, 1941	22.18	6,350
1920	Jan. 24, Mar. 26	24.8	17,700	1942	Nov. 1, 1941	24.18	13,000
1921	Apr. 28, 1921	24.7	17,000		Apr. 10, 1942	23.53	10,400
1922	Nov. 20, 1921	24.0	15,800	1943	May 12, 1943	28.12	35,500
1923	May 16, 1923	25.1	19,800	1944	Feb. 18, 1944	23.26	9,700
1924	Apr. 30, 1924	25.4	22,200		Mar. 1, 1944	23.39	10,000
1925	Feb. 24, 1925	18.3	3,020		Mar. 21, 1944	23.22	9,350
1926	Oct. 18, 1925	23.5	10,900		May 4, 1944	24.02	12,200
1927	Apr. 15, 1927	28.4	50,900	1945	Feb. 22, 1945	27.02	23,800
1928	Apr. 7, 1928	25.5	23,000		Feb. 28, 1945	26.47	20,500
1929	Jan. 26, 1929	23.9	12,600		Mar. 14, 1945	23.44	9,290
1930	May 11, 1930	26.3	30,200		Mar. 20, 1945	25.93	20,000
1931	Feb. 24, 1931	21.4	5,770		Mar. 31, 1945	29.50	45,700
1932	Feb. 18, 1932	24.4	15,200		May 17, 1945	27.47	29,700
1933	May 17, 1933	23.6	11,300		June 13, 1945	26.00	20,500
1934	Mar. 27, 1934	22.9	8,970	1946	Jan. 10, 1946	23.96	10,000
1935	June 18, 1935	30.2	58,300		Feb. 14, 1946	25.05	13,400
1936	Dec. 9, 1935	23.3	9,560		Apr. 18, 1946	23.60	8,940
1937	Jan. 23, 1937	24.3	13,000		May 26, 1946	23.32	8,190
1938	Nov. 12, 1937	23.0	8,650	1947	Dec. 13, 1946	24.99	13,400
	Jan. 25, 1938	27.12	28,000	1948	Jan. 1, 1948	25.05	13,400
	Feb. 18, 1938	29.30	45,400	1949	Jan. 25, 1949	27.85	27,000
	Mar. 31, 1938	23.04	8,650	1950	Jan. 14, 1950	25.43	15,000
	Apr. 17, 1938	22.9	8,350	1951	Feb. 16, 1951	22.07	5,730
1939	Feb. 21, 1939	23.40	10,000	1952	Apr. 23, 1952	25.12	14,200
	Feb. 27, 1939	23.81	11,400	1953	Mar. 18, 1953	b24.14	11,100
	Apr. 7, 1939	22.64	7,450	1954	May 3, 1954	24.35	11,200
				1955	Mar. 22, 1955	21.66	5,190
				1956	Feb. 19, 1956	22.10	5,730
				1957	Apr. 4, 1957	25.53	16,300
				1958	May 3, 1958	23.77	11,100

a Occurred at different time than peak discharge.

b Occurred Nov. 26, 1952.

2608. Arkansas River near Morrilton, Ark.

Location.--Lat 35°07'36", long 92°43'54", in SW $\frac{1}{4}$ sec. 29, T.6 N., R.16 W., at bridge on State Highway 9, 1 $\frac{1}{2}$ miles southeast of Morrilton, 2 miles downstream from Point Remove Creek, and at mile 221.0.

Drainage area.--155,480 sq mi, of which about 133,239 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 255.55 ft above mean sea level, datum of 1929. Prior to Jan. 1, 1948, at datum 10 ft higher. All stages for this report adjusted to present datum.

Bankfull stage.--30 ft.

Remarks.--Records furnished by U. S. Weather Bureau. Crest stages affected by storage reservoirs and power development since March 1940. Only annual peak stages are shown.

Peak stages and discharges of Arkansas River near Morrilton, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 19, 1927	42.0	-	1943	May 15, 1943	40.8	-
1928	June 25, 1928	32.4	-	1944	May 5, 1944	31.8	-
1929	May 19, 1929	36.6	-	1945	Apr. 21, 1945	40.4	-
1930	May 12, 1930	32.0	-				
1931	Feb. 10, 1931	21.9	-	1946	Oct. 4, 1945	31.6	-
1932	Jan. 25-26, 1932	29.8	-	1947	Dec. 14, 1946	31.1	-
1933	May 19, 1933	33.9	-	1948	June 28-29, 1948	31.2	-
1934	Apr. 8, 1934	23.9	-	1949	May 24, 1949	31.0	-
1935	June 22, 1935	39.2	-	1950	May 15, 1950	33.7	-
1936	Dec. 8, 1935	27.2	-	1951	July 21, 1951	29.6	-
1937	Jan. 18, 1937	27.8	-	1952	Apr. 25, 1952	23.7	-
1938	Feb. 21, 1938	38.0	-	1953	Mar. 19, 1953	22.2	-
1939	Apr. 17, 1939	26.4	-	1954	Aug. 5, 1954	25.7	-
1940	Sept. 9, 1940	23.0	-	1955	Mar. 22, 1955	20.6	-
1941	Apr. 24, 1941	33.4	-	1956	Oct. 9, 1955	19.7	-
1942	Nov. 6, 1941	39.1	-	1957	May 30, 1957	39.55	-
				1958	May 10, 1958	24.4	-

2615. Fourche La Pave River near Gravelly, Ark.

Location.--Lat 34°52', long 93°39', in NW $\frac{1}{4}$ sec.34, T.3 N., R.25 W., on left bank at downstream side of bridge on State Highway 28, 1 mile downstream from Garner Creek, $1\frac{1}{2}$ miles east of Gravelly, and 6.4 miles upstream from Gaffords Creek.

Drainage area.--413 sq mi.

Gage.--Nonrecording prior to May 11, 1939; recording thereafter. Datum of gage is 410.50 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 47,000 cfs.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 16, 1939	27.00	38,000	1945	Mar. 12, 1945	16.15	11,500
1940	Apr. 29, 1940	10.32	4,630		Mar. 17, 1945	12.32	6,980
1941	May 9, 1941	9.35	3,970		Mar. 19, 1945	21.89	19,500
1942	Oct. 31, 1941	25.87	29,100		Mar. 25, 1945	14.25	9,100
	Apr. 9, 1942	17.48	14,100		Mar. 29, 1945	27.01	38,000
	Apr. 28, 1942	18.58	15,800		May 16, 1945	25.31	26,800
	May 20, 1942	13.35	8,420		June 11, 1945	19.90	16,400
1943	Dec. 27, 1942	11.41	6,120		June 18, 1945	13.16	7,970
	May 11, 1943	14.19	9,430		Sept. 26, 1945	11.02	5,650
	May 20, 1943	15.61	11,300	1946	Oct. 1, 1945	12.20	6,870
1944	Feb. 9, 1944	11.55	6,260		Jan. 5, 1946	12.50	7,200
	Feb. 17, 1944	16.40	12,000		Jan. 9, 1946	20.86	18,000
	Feb. 28, 1944	17.56	13,600		Feb. 6, 1946	10.97	5,650
	Mar. 16, 1944	15.92	11,300		Feb. 14, 1946	24.77	25,200
	Mar. 19, 1944	11.80	6,480		Mar. 6, 1946	11.74	6,350
	Apr. 2, 1944	11.52	6,160		Apr. 16, 1946	13.74	8,520
	Apr. 11, 1944	11.22	5,860		Apr. 30, 1946	17.01	12,500
	May 2, 1944	20.03	17,000		May 24, 1946	23.70	22,700
1945	Dec. 7, 1944	15.10	10,200		May 31, 1946	21.92	19,500
	Feb. 21, 1945	26.90	36,800	1947	Nov. 7, 1946	12.05	6,650
	Feb. 27, 1945	23.88	23,100		Nov. 26, 1946	15.64	10,800
	Mar. 3, 1945	18.69	14,800		Dec. 12, 1946	25.75	28,800
	Mar. 6, 1945	12.90	7,640	1948	Dec. 8, 1947	12.21	6,870
					Jan. 1, 1948	27.37	39,800
					Feb. 25, 1948	18.00	13,800
					Mar. 2, 1948	13.35	8,190

Peak stages and discharges of Fourche La Fave River
near Gravelly, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Apr. 13, 1948	14.85	9,820	1952	Apr. 22, 1952	26.99	37,700
	May 12, 1948	11.20	5,850				
1949	Jan. 18, 1949	10.57	5,250	1953	Nov. 25, 1952	22.73	22,400
	Jan. 24, 1949	28.86	54,000		Dec. 4, 1952	11.38	6,450
	Feb. 14, 1949	15.47	10,700		Jan. 23, 1953	11.10	6,150
	Mar. 26, 1949	16.90	12,400		Mar. 18, 1953	17.19	13,400
	May 1, 1949	23.89	23,100		Apr. 6, 1953	11.90	6,970
	June 14, 1949	11.78	6,450		Apr. 24, 1953	13.20	8,400
1950	Jan. 3, 1950	17.67	13,400	1954	Apr. 29, 1953	20.83	18,800
	Jan. 10, 1950	10.76	5,450		May 13, 1953	22.77	22,600
	Jan. 13, 1950	26.70	35,200				
	Jan. 26, 1950	11.80	6,450	1954	Apr. 16, 1954	11.12	6,150
	Feb. 1, 1950	22.10	19,900		May 2, 1954	26.20	33,400
	Feb. 13, 1950	27.20	38,400	1955	Oct. 25, 1954	9.97	5,050
	Apr. 4, 1950	12.63	7,310		Feb. 20, 1955	11.95	7,080
	May 2, 1950	13.66	8,520		Mar. 21, 1955	17.60	13,900
	May 7, 1950	21.80	19,400	1956	Feb. 2, 1956	10.16	5,250
	May 12, 1950	11.25	5,850		Feb. 18, 1956	16.59	12,600
	July 23, 1950	14.79	9,820	1957	Jan. 23, 1957	11.78	6,860
	Aug. 2, 1950	11.75	6,450		Apr. 4, 1957	22.39	21,800
	Sept. 16, 1950	16.51	11,900		Apr. 25, 1957	16.68	12,700
1951	Feb. 15, 1951	15.77	11,000		Apr. 27, 1957	21.58	20,200
	Feb. 20, 1951	14.71	9,700		May 23, 1957	14.43	9,820
	July 3, 1951	13.80	8,630		May 26, 1957	16.06	11,900
1952	Nov. 1, 1951	19.85	17,100		June 5, 1957	12.14	7,190
	Nov. 6, 1951	10.05	5,050		June 13, 1957	18.44	15,000
	Dec. 9, 1951	10.29	5,350	1958	Mar. 7, 1958	14.90	10,400
	Jan. 3, 1952	12.91	8,070		Mar. 24, 1958	13.63	8,860
	Mar. 11, 1952	16.43	12,300		Apr. 21, 1958	12.93	8,070
	Mar. 22, 1952	10.42	5,450		Apr. 27, 1958	10.90	5,950
	Apr. 4, 1952	10.49	5,550		May 3, 1958	23.21	24,300
	Apr. 10, 1952	13.12	8,290		May 10, 1958	11.63	6,650
	Apr. 12, 1952	23.27	23,700		June 26, 1958	11.45	6,450

2625. Fourche La Fave River near Nimrod, Ark.

Location--Lat 34°57'01", long 93°09'18", in SW $\frac{1}{4}$ sec. 32, T.4 N., R.20 W., on left bank 2,000 ft downstream from Nimrod Dam, $4\frac{1}{2}$ miles southwest of Nimrod, and 9.8 miles upstream from South Fourche La Fave River.

Drainage area--680 sq mi.

Gage--Nonrecording prior to Dec. 20, 1938, at site 1.1 miles downstream at datum 3.92 ft lower; recording thereafter. Dec. 21, 1938, to Aug. 26, 1946, at site 2.0 miles downstream at datum 9.72 ft lower. Datum of present gage is 305.25 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation--Defined by current-meter measurements below 34,000 cfs.

Historical data--Flood in April 1927 reached a stage of 28.15 ft at site and datum of nonrecording gage, from information by Corps of Engineers. Flood in June 1935 reached a stage of 28.8 ft at present site and datum, from information by Corps of Engineers.

Remarks--Records prior to 1938 furnished by Corps of Engineers and reviewed by Geological Survey. Flow completely regulated by Nimrod Reservoir since May 1942 (capacity, 336,000 acre-ft). Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1937 and subsequent to 1941.

ARKANSAS RIVER BASIN

Peak stages and discharges of Fourche La Fave River near Nimrod, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	28.15	32,800	1943	Dec. 30, 1942	15.86	9,900
1935	June 1935	30.9	39,000	1944	Apr. 25, 1944	13.21	7,180
1937	Dec. 7, 1936	14.7	10,000	1945	Apr. 1, 1945	26.19	20,000
	Jan. 10, 1937	15.2	10,600	1946	Feb. 14, 1946	15.93	9,380
	Jan. 16, 1937	14.5	9,760		Dec. 20, 1946	10.36	7,210
	Jan. 23, 1937	22.8	21,800	1947	At times	9.74	6,170
	May 3, 1937	14.8	10,100	1948	Feb. 6, 1949	10.38	7,480
1938	Oct. 20, 1937	13.9	9,040	1949	Feb. 21, 1950	10.31	7,030
	Nov. 11, 1937	18.5	14,800	1950	Mar. 5, 1951	9.79	5,830
	Dec. 8, 1937	11.4	5,420		May 5, 6, 1952	10.20	6,850
	Jan. 25, 1938	28.2	32,800	1951	May 25, 1953	10.09	6,680
	Jan. 31, 1938	12.9	7,740	1952	May 11, 1954	9.68	6,000
	Feb. 19, 1938	29.7	36,100	1953	Mar. 27, 1955	9.54	5,670
	Mar. 30, 1938	17.6	13,500	1954	Feb. 13, 1956	9.68	5,830
	Apr. 9, 1938	12.0	6,380	1955	July 18, 19, 1957	9.72	5,830
	Apr. 17, 1938	16.6	12,300	1956	May 26, 29, 1958	9.70	5,930
				1957			
1939	Feb. 21, 1939	17.33	10,800	1958			
	Feb. 26, 1939	18.32	11,800				
	Mar. 6, 1939	12.17	6,140				
	Apr. 7, 1939	20.94	14,900				
	Apr. 18, 1939	30.45	34,600				
1940	June 11, 1940	10.80	4,910				
1941	Feb. 4, 1941	9.35	3,680				
1942	Apr. 29, 1942	18.21	10,700				

2630. South Fourche La Fave River near Hollis, Ark.

Location.--Lat 34°55', long 93°03', in NE $\frac{1}{4}$ sec.18, T.3 N., R.19 W., on left bank 0.6 mile upstream from Big Cove Creek, 4 miles northeast of Hollis, and 5.8 miles upstream from mouth.

Drainage area.--211 sq mi.

Gage.--Recording. Datum of gage is 366.10 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs and extended on basis of slope-area measurements at 47,000 and 54,000 cfs.

Remarks.--Records furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 15,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 8, 1942	12.75	16,700	1950	Sept. 16, 1950	12.65	17,000
	Apr. 27, 1942	15.80	29,700	1951	Feb. 15, 1951	11.38	12,300
1943	Dec. 27, 1942	13.29	18,500	1952	Apr. 22, 1952	13.22	18,300
1944	Apr. 23, 1944	18.51	47,000	1953	Nov. 25, 1952	13.96	21,300
1945	Feb. 21, 1945	15.29	27,200		Dec. 4, 1952	15.51	28,200
	Mar. 30, 1945	19.47	54,400		May 12, 1953	13.04	17,600
1946	Mar. 28, 1946	14.16	22,200	1954	May 2, 1954	16.30	32,400
1947	Dec. 12, 1946	13.96	21,300	1955	Mar. 20, 1955	13.38	19,100
1948	Apr. 13, 1948	12.21	14,600	1956	Jan. 29, 1956	12.75	17,000
1949	Dec. 15, 1948	13.32	18,500	1957	Apr. 3, 1957	14.56	24,000
	Jan. 24, 1949	16.04	30,700		May 24, 1957	12.90	17,300
1950					Aug. 13, 1957	13.62	19,800
	Jan. 2, 1950	13.24	18,200	1958	Apr. 29, 1958	12.48	16,100
	Jan. 10, 1950	12.60	16,700		May 2, 1958	14.56	24,000
	Feb. 1, 1950	12.28	15,600				
	Feb. 12, 1950	12.68	17,000				

2635. Arkansas River at Little Rock, Ark.

Location.--Lat 34°45'00", long 92°16'25", in sec.3, T.1 N., R.12 W., on right bank 130 ft downstream from Main Street Bridge in Little Rock and at mile 165.5.

Drainage area.--158,201 sq mi, of which about 135,960 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1934; recording thereafter. Datum of gage is 223.61 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements since 1928 and by float or current-meter measurements made intermittently since 1885.

Bankfull stage.--23 ft.

Historical data.--Maximum stage known, 34.6 ft in June 1833. Flood in May 1844 reached a stage of 32.6 ft, authority of U. S. Weather Bureau.

Remarks.--Peak discharges affected by storage reservoirs and power development since March 1940. Gage-height record prior to 1928 and for 1932-33, furnished by U. S. Weather Bureau. Peak discharge for 1932-33 water years from reports of Mississippi River Commission. Base for partial-duration series, 140,000 cfs. Only annual peaks are shown prior to 1928.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1833	June 1833	34.6	-	1897	Mar. 21, 1897	21.4	-
1844	May 1844	32.6	-	1898	May 11, 1898	27.5	-
1873	Apr. 12, 1873	25.6	-	1899	May 11, 1899	24.5	-
1874	Apr. 24, 1874	26.0	-	1900	Feb. 11, 1900	12.5	-
1875	Aug. 5, 1875	24.8	-	1901	Apr. 20, 1901	17.9	-
1876	July 7, 1876	29.3	-	1902	May 28, 1902	18.1	-
1877	June 13, 1877	30.5	-	1903	June 3, 1903	24.8	-
1878	May 28, 1878	27.3	-	1904	June 11, 1904	27.8	-
1879	Feb. 3, 1879	19.4	-	1905	May 31, 1905	23.0	-
1880	Mar. 14, 1880	16.1	-	1906	May 5, 1906	20.5	-
1881	Feb. 20, 1881	18.6	-	1907	May 11, 1907	21.5	-
1882	Feb. 25, 1882	25.1	-	1908	May 30, 1908	26.5	-
1883	Feb. 19, 1883	24.4	-	1909	May 29, 1909	23.5	-
1884	Feb. 16, 1884	27.0	-	1910	May 26, 1910	14.5	-
1885	Apr. 27, 1885	26.6	-	1911	Aug. 10, 1911	18.5	-
1886	Feb. 15, 1886	16.6	-	1912	May 4, 1912	24.0	-
1887	May 6, 1887	16.5	-	1913	Apr. 13, 1913	17.4	-
1888	May 23, 1888	18.4	-	1914	May 8, 1914	17.8	-
1889	Mar. 28, 1889	21.5	-	1915	June 1, 1915	25.4	-
1890	Apr. 29, 1890	24.3	-	1916	Feb. 2, 1916	27.3	-
1891	Apr. 23, 1891	20.9	-	1917	June 12, 1917	15.0	-
1892	May 20, 1892	27.9	-	1918	May 14, 1918	18.9	-
1893	May 3, 1893	25.2	-	1919	Nov. 13, 1918	16.9	-
1894	May 22, 1894	22.6	-	1920	Mar. 30, 1920	20.6	-
1895	Aug. 3, 1895	19.1	-	1921	Apr. 30, 1921	20.8	-
1896	Dec. 29, 1895	23.5	-	1922	Apr. 14, 1922	23.1	-

ARKANSAS RIVER BASIN

Peak stages and discharges of Arkansas River at Little Rock, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 18, 1923	25.3	300,000	1943	May 27, 1943	30.05	536,000
1924	May 3, 1924	21.0	-		June 10, 1943	19.03	164,000
1925	May 2, 1925	12.0	-	1944	Mar. 22, 1944	18.94	196,000
1926	Sept. 11, 1926	14.2	-		Apr. 15, 1944	19.52	194,000
1927	Apr. 20, 1927	33.0	-		May 4, 1944	a22.35	282,000
1928	Oct. 7, 1927	20.9	220,000		June 17, 1944	15.60	154,000
	Dec. 15, 1927	20.0	200,000	1945	Mar. 5, 1945	a19.90	242,000
	Apr. 10, 1928	18.7	175,000		Mar. 23, 1945	24.00	325,000
	Apr. 26, 1928	20.5	211,000		Apr. 1, 1945	24.05	314,000
	June 16, 1928	19.6	192,000		Apr. 21, 1945	b28.13	467,000
	June 26-27, 1928	20.6	213,000		May 17, 1945	18.90	176,000
1929	Apr. 13, 1929	17.9	160,000		June 13, 1945	23.98	332,000
	Apr. 19, 1929	18.1	164,000	1946	Oct. 4, 1945	21.22	268,000
	Apr. 26, 1929	19.9	194,000		Jan. 14, 1946	16.69	174,000
	May 19, 1929	23.5	275,000		Feb. 22, 1946	15.08	148,000
	June 8, 1929	18.1	163,000		May 26, 1946	17.31	192,000
1930	Feb. 8, 1930	17.4	152,000	1947	Nov. 11, 1946	14.41	145,000
	May 12, 1930	21.3	221,000		Dec. 13, 1946	a20.56	288,000
1931	Feb. 11, 1931	13.0	97,000		Apr. 19, 1947	18.37	224,000
1932	Jan. 20, 1932	18.5	206,000		May 2, 1947	18.90	224,000
	Jan. 26, 1932	19.5	233,000		May 21, 1947	19.80	234,000
	Feb. 19, 1932	18.0	182,000		June 5, 1947	16.03	162,000
1933	Dec. 28, 1932	17.2	175,000	1948	Mar. 4, 1948	14.34	142,000
	May 19, 1933	22.7	277,000		June 28, 1948	20.80	264,000
	Sept. 6, 1933	17.0	158,000		July 23, 1948	15.63	151,000
1934	Apr. 9, 1934	15.52	127,000		Aug. 19, 1948	15.36	140,000
1935	Mar. 15, 1935	20.40	208,000	1949	Jan. 26, 1949	20.28	301,000
	Mar. 27, 1935	21.22	207,000		Feb. 17, 1949	19.09	225,000
	May 8, 1935	22.20	229,000		May 4, 1949	15.56	161,000
	May 22, 1935	21.71	218,000		May 23, 1949	a20.98	284,000
	June 12, 1935	23.64	263,000		June 16, 1949	18.45	199,000
	June 22-23, 1935	28.18	422,000	1950	Jan. 15, 1950	15.41	158,000
1936	Dec. 9, 1935	18.00	144,000		Feb. 14, 1950	15.25	164,000
1937	Jan. 18, 1937	18.74	170,000		May 15, 1950	22.80	358,000
	Feb. 3, 1937	17.60	152,000		July 25, 1950	16.88	222,000
1938	Jan. 25-26, 1938	15.16	142,000		Aug. 6, 1950	19.50	222,000
	Feb. 21, 1938	a26.2	471,000		Sept. 19, 1950	17.67	175,000
	Apr. 1, 1938	a21.60	244,000	1951	Feb. 22, 1951	17.37	189,000
	May 26, 1938	20.30	207,000		May 24, 1951	15.00	159,000
	June 15, 1938	17.24	148,000		July 8, 1951	b19.79	235,000
1939	Apr. 18, 1939	18.12	181,000		July 22, 1951	b20.36	225,000
1940	Sept. 9, 1940	11.87	92,300	1952	Mar. 12, 1952	14.91	148,000
1941	Apr. 24, 1941	b22.36	294,000		Apr. 14, 1952	14.69	146,000
	June 15, 1941	b20.30	214,000		Apr. 25, 1952	16.20	167,000
1942	Oct. 10, 1941	a19.65	202,000	1953	Mar. 19, 1953	15.24	159,000
	Oct. 20, 1941	a20.61	209,000		Apr. 27, 1953	14.30	142,000
	Nov. 7, 1941	26.33	404,000		May 16, 1953	14.61	150,000
	Apr. 14, 1942	22.24	285,000	1954	May 5, 1954	17.86	210,000
	May 2, 1942	24.86	312,000	1955	Mar. 22, 1955	13.85	130,000
	June 28, 1942	20.67	218,000		Oct. 10, 1955	11.94	102,000
1943	Dec. 31, 1942	19.63	216,000	1957	Apr. 6, 1957	18.52	224,000
	May 16, 1943	28.34	484,000		Apr. 29, 1957	21.86	270,000
					May 31, 1957	27.87	460,000
				1958	Mar. 28, 1958	16.03	158,000
					May 11, 1958	17.43	187,000
					June 28, 1958	15.08	154,000
					July 17, 1958	15.27	166,000

a Occurred on following day.

b Occurred at different time than peak discharge.

2637. Arkansas River at Pine Bluff, Ark.

Location.--Lat 34°13'55", long 91°58'35", on right bank at Pine Bluff, Jefferson County, 1.4 miles downstream from Cassey Bayou, 6.1 miles upstream from Plum Bayou, and at mile 110.3.

Drainage area.--158,765 sq mi, of which about 136,524 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 181.06 ft above mean sea level, datum of 1929, supplemental adjustment of 1946.

Stage-discharge relation.--Defined by current-meter measurements below 560,000 cfs.

Bankfull stage.--25 ft.

Remarks.--Gage-height records furnished by U. S. Weather Bureau. Peak discharge for 1938, 1940-43, 1948-53 calendar years from reports of Mississippi River Commission. Peak discharge affected by storage reservoirs and power development since March 1940. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1892	May 22, 1892	29.6	-	1932	Jan. 27, 1932	23.5	-
1906	May 6-7, 1906	22.6	-	1933	May 20, 1933	25.8	-
1907	May 12, 1907	23.7	-	1934	Apr. 10, 1934	19.0	-
1908	May 31, June 1	28.9	-	1935	June 24, 1935	33.0	-
1909	May 30, 1909	27.0	-	1936	Oct. 3, 1936	18.0	-
1910	May 26-27, 1910	18.2	-	1937	Jan. 19, 1937	22.1	-
1911	Aug. 11, 1911	22.1	-	1938	Feb. 22, 1938	a31.7	476,000
1912	May 4, 1912	27.7	-	1939	Apr. 19, 1939	20.9	-
1913	Apr. 14, 1913	20.4	-	1940	Sept. 10, 1940	14.9	77,900
1914	May 9, 1914	19.7	-	1941	Nov. 8, 1941	b30.6	409,000
1915	June 2, 1915	26.9	-	1942	May 3, 1942	27.7	312,000
1916	Feb. 3, 1916	29.6	-	1943	May 28, 1943	33.78	553,000
1917	June 13, 1917	17.6	-	1944	May 6, 1944	25.3	-
1918	May 15, 1918	20.9	-	1945	Apr. 22, 1945	32.1	-
1919	Nov. 3-5, 1919	20.0	-	1946	Dec. 15, 1946	21.7	-
1920	Mar. 31, 1920	23.5	-	1947	May 22, 1947	21.4	-
1921	May 1, 1921	23.9	-	1948	June 30, 1948	21.9	281,000
1922	Apr. 16, 1922	26.0	-	1949	May 25, 1949	22.7	291,000
1923	June 19-20, 1923	27.7	-	1950	May 16, 1950	24.1	340,000
1924	May 5, 1924	23.7	-	1951	July 8, 1951	c21.9	230,000
1925	Oct. 19, 1925	16.6	-	1952	Apr. 26, 1952	19.4	164,000
1926	Oct. 15, 1926	25.8	-	1953	Apr. 28, 1953	d17.6	141,000
1927	Apr. 21, 1927	32.4	-	1954	May 6, 1954	19.9	-
1928	June 27, 1928	24.8	-	1955	Mar. 23, 1955	15.7	-
1929	May 20, 1929	27.6	-	1956	Feb. 20, 1956	12.4	-
1930	May 13, 1930	24.7	-	1957	May 31, 1957	30.85	-
1931	Dec. 1, 1931	17.6	-	1958	May 12, 1958	19.3	-

a Occurred on following day.

b Occurred Nov. 8-9, 1941.

c Occurred July 22-23, 1951.

d Occurred May 17, 1953.

2639.2. Bayou Meto near North Little Rock, Ark.
(Published as "Big Bayou Meto")

Location.--Lat 34°52'49", long 92°10'58", in NE $\frac{1}{4}$ sec. 21, T.3 N., R.11 W., on downstream side of bridge on State Highway 5, 3.7 miles upstream from Kellogg Creek, 3.8 miles downstream from Bridge Creek, and 8.9 miles northeast of junction of State Highway 30 with U. S. Highways 70 and 67E in North Little Rock.

Drainage area.--68 sq mi.

Gage.--Recording. Datum of gage is 226.53 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined at high stages.

Bankfull stage.--18 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

ARKANSAS RIVER BASIN

Peak stages and discharges of Bayou Meto near North Little Rock, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 2, 1948	23.2	-	1953	Dec. 4, 1952	24.9	-
1949	Jan. 28, 1949	22.2	-	1954	May 2, 1954	27.1	-
1950	Feb. 13, 1950	24.2	-	1955	May 27, 1955	23.3	-
1951	Apr. 7, 1951	23.2	-	1956	Feb. 2, 1956	23.6	-
1952	Apr. 13, 1952	21.0	-	1957	Aug. 13, 1957	25.2	-

2640. Bayou Meto near Lonoke, Ark.

(Published by Corps of Engineers as "Big Bayou Meto" prior to 1955)

Location.--Lat 34°44'10", long 91°54'58", in SW $\frac{1}{4}$ sec.6, T.1 N., R.8 W., near left bank on downstream side of bridge on State Highway 31, 3 miles upstream from Brushy Slough, and 3 $\frac{1}{2}$ miles south of Lonoke.

Drainage area.--203 sq mi.

Gage.--Recording. Prior to Feb. 10, 1955, at site 4 $\frac{1}{2}$ miles upstream at datum 6.97 ft higher. Datum of present gage is 199.11 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements at present site. Not adequately defined at former site.

Bankfull stage.--16 ft.

Remarks.--Gage-height records prior to 1955 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	January 1937	22.9	-	1953	May 19, 1953	19.7	-
				1954	May 7, 1954	21.3	-
1948	March 1948	20.2	-	1955	June 1, 1955	22.30	1,920
1949	Jan. 30, 1949	22.1	-				
1950	Jan. 14, 1950	22.0	-	1956	Feb. 6, 1956	23.80	2,120
				1957	May 29, 1957	25.16	3,360
1951	Jan. 20, 1951	18.0	-	1958	May 6, 1958	25.13	3,440
1952	Apr. 18, 1952	16.8	-				

a Site and datum used prior to 1955.

2645. Bayou Meto near Stuttgart, Ark.

Location.--Lat 34°27'15", long 91°37'00", in SE $\frac{1}{4}$ sec.11, T.3 S., R.6 W., on downstream side of bridge on U. S. Highway 79, 5 $\frac{1}{2}$ miles southwest of Stuttgart and 8 miles upstream from Crooked Creek.

Drainage area.--560 sq mi. Combined area of Bayou Meto and Crooked Creek, 647 sq mi.

Gage.--Nonrecording. Prior to Oct. 1, 1936, at datum 5.00 ft higher. Present datum of gage is 169.94 ft above mean sea level, datum of 1929. All stages adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Diversions above station for irrigation of about 1,300 acres do not seriously affect peak discharges. Stage for 1955-58 from reports of Corps of Engineers.

During flows above 600 cfs, Bayou Meto and Crooked Creeks are interconnected above station. Discharges tabulated below are for combined flows of Bayou Meto and Crooked Creek. Gage heights are for Bayou Meto. Only annual maximum daily discharges are shown.

Peak stages and discharges of Bayou Meto near Stuttgart, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 5, 1936	15.00	a1,060	1948	Mar. 8, 9, 1948	22.82	4,500
1937	Jan. 26, 1937	25.50	a9,350	1949	Feb. 6, 1949	23.67	5,280
1938	Feb. 1, 1938	23.26	a4,850	1950	Feb. 18-20, 1950	24.33	6,200
1939	Feb. 16, 1939	23.54	5,180				
1940	Feb. 22, 1940	17.01	1,640	1951	Jan. 20, 1951	20.38	3,080
				1952	Mar. 14, 15, 1952	18.75	2,260
1941	Apr. 25, 1941	17.49	1,570	1953	May 23, 1953	22.56	4,410
1942	Apr. 29, 1942	21.59	3,200	1954	Jan. 31, 1954	19.27	2,690
1943	Mar. 27, 28, 1943	20.04	2,530	1955	June 8-10, 1955	19.47	2,500
1944	Apr. 12, 1944	21.25	3,290				
1945	Apr. 7, 1945	22.86	4,410	1956	Feb. 24, 1956	22.23	4,020
				1957	May 5, 6, 1957	22.60	4,540
1946	Jan. 20, 21, 1946	23.29	4,420	1958	May 12, 1958	23.55	5,340
1947	June 4, 1947	16.57	1,420				

a Flow for Crooked Creek estimated.

Note.--Peak stage frequently occurs on different date than maximum daily discharge.

2650. Crooked Creek near Humphrey, Ark.

Location--Lat 34°25'35", long 91°40'00", in SE $\frac{1}{4}$ sec. 20, T.3 S., R.6 W., near center of span on downstream side of bridge on U. S. Highway 79, 100 ft upstream from St. Louis-Southwestern Railway bridge, 2 miles east of Humphrey, and 5.8 miles upstream from mouth.

Drainage area--87 sq mi.

Gage--Nonrecording gage Oct. 1, 1938, to June 19, 1950, and since Sept. 30, 1954. Recording June 20, 1950, to Sept. 30, 1954. Datum of gage is 169.94 ft above mean sea level, datum of 1929.

Stage-discharge relation--Defined by current-meter measurements below 1,800 cfs. Discharges for 1936-38 computed on basis of stage relation with Bayou Meto near Stuttgart.

Bankfull stage--20 ft.

Remarks--See Bayou Meto near Stuttgart.

MISSISSIPPI RIVER MAIN STEM

2655. Mississippi River near Arkansas City, Ark.

Location--Lat 33°33'55", long 91°14'34", in sec. 18, T.13 S., R.1 W., on right bank 3 miles southwest of Arkansas City, 28 miles downstream from Arkansas River, and at mile 547.0.

Drainage area--1,130,700 sq mi, approximately.

Gage--Nonrecording. Prior to Sept. 3, 1930, at site 4 miles upstream, Sept. 3, 1930, to Feb. 29, 1944, at site 1.9 miles upstream, and Mar. 1, 1944, to Oct. 31, 1948, at site 1.2 miles upstream. All gages at datum 96.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1941, or 96.75 ft above mean Gulf level.

Stage-discharge relation--Defined by current-meter measurements. (Frequent measurements since 1928 and occasional measurements since 1884.)

Bankfull stage--44 ft.

Remarks--Natural flow affected by many reservoirs and navigation dams. Records from publications of Mississippi River Commission and Vicksburg District, Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Mississippi River near Arkansas City, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1880	Mar. 20-27, 1880	45.1	-	1920	Apr. 12, 1920	a54.0	1,513,000
1881	May 16-18, 1881	44.3	-	1921	May 5, 6, 1921	45.4	1,083,000
1882	Feb. 28, 1882	47.1	-	1922	Apr. 22-27, 1922	58.0	1,725,000
1883	Mar. 11, 1883	46.35	-	1923	Mar. 31, 1923	a49.4	1,224,000
1884	Mar. 7-9, 1884	46.5	-	1924	Jan. 24-26, 1924	45.05	1,070,000
1885	May 7-9, 1885	42.6	-	1925	Mar. 7, 1925	37.6	834,000
1886	May 4, 5, 1886	46.9	-	1926	Apr. 25-27, 1926	41.9	965,000
1887	Mar. 24, 1887	a46.65	1,480,000	1927	Apr. 20, 1927	a60.4	b1,712,000
1888	Apr. 21, 22, 1888	45.38	-	1928	July 3, 1928	a52.5	1,424,000
1889	June 30, July 1	36.3	-	1929	May 30, 1929	a58.8	1,788,000
1890	Mar. 19, 1890	a49.5	1,418,000	1930	Jan. 28, 29, 1930	47.78	1,141,000
1891	Apr. 7, 1891	a48.2	1,425,000	1931	Apr. 18, 1931	33.6	725,000
1892	May 4, 1892	a50.0	1,742,000	1932	Feb. 27, 1932	a53.45	1,448,000
1893	May 27, 1893	a50.3	1,676,000	1933	June 5, 1933	a53.63	1,380,000
1894	Feb. 24, 1894	40.5	-	1934	Apr. 12, 1934	a38.99	874,000
1895	Apr. 1, 2, 1895	32.2	-	1935	Apr. 3-5, 1935	a51.75	1,460,000
1896	Apr. 19, 1896	40.0	-	1936	Apr. 26, 1936	a41.3	1,289,000
1897	Mar. 27, 1897	a51.9	1,646,000	1937	Feb. 16, 1937	a53.86	2,159,000
1898	Apr. 20, 1898	a51.2	1,497,000	1938	Apr. 23, 1938	a37.4	1,201,000
1899	Apr. 15-20, 1899	48.6	-	1939	Feb. 28, 1939	a39.0	1,435,000
1900	Mar. 25, 1900	39.3	933,000	1940	May 7, 1940	a30.8	1,067,000
1901	May 12, 13, 1901	43.3	1,090,000	1941	Apr. 29, 1941	25.3	821,000
1902	Mar. 29, 1902	41.4	1,011,000	1942	Apr. 18, 1942	a33.9	1,121,000
1903	Mar. 16, 1903	a52.9	1,743,000	1943	June 2, 1943	a44.2	1,688,000
1904	Apr. 20, 1904	a49.0	1,403,000	1944	May 7, 1944	a42.2	1,614,000
1905	June 3, 1905	43.2	1,086,000	1945	Apr. 9, 1945	a46.3	1,922,000
1906	Apr. 19, 1906	a50.0	1,462,000	1946	Jan. 25, 1946	a37.3	1,520,000
1907	Feb. 4, 1907	a52.1	1,573,000	1947	May 3, 4, 1947	a35.81	1,312,000
1908	June 2-4, 1908	49.9	1,449,000	1948	Apr. 11, 12, 1948	a37.54	1,320,000
1909	Mar. 27, 1909	a50.1	1,520,000	1949	Feb. 14, 1949	a36.7	1,523,000
1910	Mar. 23, 1910	43.13	1,083,000	1950	Feb. 21, 22, 1950	a41.37	1,791,000
1911	May 2, 1911	a48.03	1,281,000	1951	Mar. 9, 1951	a33.57	1,330,000
1912	Apr. 16, 1912	a55.33	2,007,000	1952	Apr. 6, 1952	a35.91	1,374,000
1913	Apr. 26, 1913	a55.15	1,782,000	1953	May 25, 26, 1953	a29.57	997,000
1914	Apr. 20-23, 1914	43.24	1,087,000	1954	May 7, 1954	20.21	697,000
1915	Feb. 24, 25, 1915	45.95	1,201,000	1955	Apr. 6, 1955	34.71	1,315,000
1916	Feb. 10, 1916	a56.4	1,889,000	1956	Mar. 3, 1956	28.87	1,120,000
1917	Apr. 17, 1917	a52.11	1,591,000	1957	June 5, 1957	37.6	1,545,000
1918	Mar. 5-7, 1918	39.8	951,000	1958	May 15, 1958	33.85	1,192,000
1919	Apr. 5, 1919	a49.4	1,378,000				

a Occurred on following day.

b About 2,472,000 cfs in May if flow had been confined between levees.

Note.--Daily discharges computed from 1928 to date. Peaks prior to this date are results of discharge measurements made during periods of maximum stage.

YAZOO RIVER BASIN

2660. Cane Creek near New Albany, Miss.

Location.--Lat 34°34'15", long 88°57'25", in SW $\frac{1}{4}$ sec. 11, T.6 S., R.3 E., Chickasaw meridian, on right bank 150 ft downstream from Ellis Creek, 600 ft downstream from bridge on county highway, 5.0 miles upstream from mouth, and $6\frac{1}{4}$ miles northeast of New Albany.

Drainage area.--22.2 sq mi.

Gage.--Recording prior to July 19, 1941, and since June 15, 1950; nonrecording Feb. 1 to June 14, 1950. Prior to Dec. 10, 1955, at site 600 ft upstream and prior to Oct. 1, 1955, at datum 10.00 ft higher. Datum of present gage is 356.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1944.

Stage-discharge relation.--Defined by current-meter measurements at former site below 4,200 cfs and extended by logarithmic plotting. Defined by current-meter measurements at present site below 1,900 cfs and extended on basis of slope-area measurement. Rating subject to small shifts.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 1,400 cfs.

Peak stages and discharges of Cane Creek near New Albany, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 22, 1939	8.43	5,700	1955	Mar. 21, 1955	9.08	8,680
	June 11, 1939	7.51	2,750		Apr. 12, 1955	7.56	1,520
	June 13, 1939	7.24	2,080	1956	Feb. 4, 1956	11.89	3,340
	June 17, 1939	7.25	2,100		Apr. 6, 1956	9.33	1,720
1940	Apr. 4, 1940	7.55	2,860	1957	Feb. 1, 1957	10.91	2,020
	Apr. 18, 1940	6.99	1,620		Apr. 4, 1957	17.02	4,780
1941	Dec. 16, 1940	7.02	1,670		June 9, 1957	14.72	3,270
	June 29, 1941	7.16	1,920		July 1, 1957	9.19	1,460
1950	Mar. 27, 1950	7.59	1,890		July 2, 1957	10.32	1,820
	Mar. 28, 1951	8.20	3,220		Sept. 15, 1957	9.12	1,420
1951	Jan. 3, 1951	7.87	2,400		Sept. 20, 1957	9.32	1,490
	Jan. 27, 1952	7.99	2,700	1958	Oct. 23, 1957	10.01	1,720
1952	Mar. 10, 1952	7.50	1,470		Nov. 13, 1957	14.67	3,270
	July 21, 1953	8.45	4,720		Nov. 18, 1957	10.21	1,790
1953	Jan. 22, 1954	7.42	1,220		Apr. 29, 1958	11.37	2,180
					May 1, 1958	9.71	1,620
1954					Sept. 20, 1958	14.33	3,140

2670. Hell Creek near New Albany, Miss.

Location.--Lat 34°30'55", long 89°03'10", in SW $\frac{1}{4}$ sec.36, T.6 S., R.2 E., Chickasaw meridian, at bridge on U. S. Highway 78, 3 miles northwest of New Albany, and $4\frac{1}{2}$ miles upstream from mouth.

Drainage area.--27.3 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1939; recording July 22, 1941, to Dec.31, 1942; crest-stage gage since Oct. 25, 1951.

Stage-discharge relation.--Defined by current-meter measurements below 2,400 cfs. Rating subject to small shifts.

Bankfull stage.--16 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 17, 1939	16.73	3,600	1954	Jan. 21, 1954	15.12	1,880
				1955	Mar. 21, 1955	17.32	3,210
1942	Apr. 9, 1942	15.80	2,240	1956	Feb. 4, 1956	15.72	2,120
1952	Jan. 27, 1952	16.23	2,400		Apr. 4, 1957	17.06	3,030
1953	Feb. 20, 1953	14.96	1,830	1958	Nov. 15, 1957	17.16	3,080

2680. Tallahatchie River at Etta, Miss.

Location.--Lat 34°29'00", long 89°13'30", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.7 S., R.1 E., Chickasaw meridian, at bridge on State Highway 30, three-quarters of a mile northeast of Etta, $3\frac{1}{2}$ miles upstream from Puskus Creek, and 4 miles downstream from Locks Creek.

Drainage area.--526 sq mi.

Gage.--Nonrecording prior to Mar. 17, 1939, and Aug. 26, 1952, to June 22, 1953; recording Mar. 17, 1939, to Aug. 25, 1952, and since June 23, 1953. Prior to June 1, 1937, at datum 5.33 ft higher. Sept. 24, 1938, to Sept. 30, 1952, at datum 5.00 ft higher. Datum of present gage is 273.48 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 47,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Gage-height records prior to June 1, 1937, from reports of Corps of Engineers. Base for partial-duration series, 13,000 cfs.

Peak stages and discharges of Tallahatchie River at Etta, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 3, 1937	18.10	13,500	1949	Jan. 4, 1949	21.81	31,000
					Feb. 28, 1949	20.26	20,100
1939	Feb. 15, 1939	20.71	29,900				
	May 23, 1939	19.06	17,800	1950	Jan. 6, 1950	19.70	15,900
	June 18, 1939	20.56	29,200		Mar. 13, 1950	20.53	21,500
1940	Mar. 14, 1940	18.78	14,500	1951	Jan. 4, 1951	21.09	25,700
	Apr. 19, 1940	20.43	27,300		Mar. 29, 1951	23.11	50,500
1941	Dec. 17, 1940	18.81	14,500	1952	Dec. 26, 1951	20.20	19,400
1942	Apr. 10, 1942	17.99	8,670	1953	Feb. 21, 1953	21.66	12,600
1943	Mar. 13, 1943	19.85	21,900	1954	Jan. 22, 1954	22.41	13,900
1944	Feb. 27, 1944	18.99	15,600	1955	Mar. 22, 1955	29.32	79,000
	Mar. 29, 1944	20.6	28,800		Apr. 13, 1955	24.57	28,200
1945	Jan. 1, 1945	21.11	28,600	1956	Feb. 4, 1956	23.89	23,100
	Mar. 4, 1945	19.16	14,400		Feb. 18, 1956	22.78	16,000
1946	Jan. 8, 1946	21.59	32,600		Apr. 6, 1956	22.34	13,300
	Feb. 9, 1946	21.36	31,000		May 1, 1956	23.59	21,000
	May 26, 1946	19.45	16,300	1957	Feb. 1, 1957	24.93	30,600
1947	Jan. 3, 1947	20.01	20,200		Apr. 4, 1957	23.83	22,400
	Apr. 12, 1947	20.36	23,000	1958	Oct. 23, 1957	22.55	15,200
1948	Feb. 13, 1948	23.70	59,500		Nov. 14, 1958	25.62	32,700
	Mar. 17, 1948	20.72	25,100		Apr. 29, 1958	23.32	19,000
1949	Nov. 19, 1948	23.15	52,000		Sept. 21, 1958	24.54	27,400

2682. Fice Creek at Etta, Miss.

Location.--Lat 34°28'20", long 89°14'10", in SE¹/₄ sec.18, T.7 S., R.1 E., Chickasaw meridian, at bridge on State Highway 30, 0.6 mile east of Lafayette-Union County line and 0.8 mile west of Etta.

Drainage area.--9.09 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by 3 current-meter measurements below 2,400 cfs.

Bankfull stage.--8 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Mar. 10, 1952	10.84	a568	1956	Feb. 4, 1956	12.33	3,780
1953	Feb. 20, 1953	10.90	607	1957	Apr. 4, 1957	11.61	1,420
1954	Jan. 21, 1954	11.20	850	1958	Nov. 15, 1957	12.62	5,220
1955	Mar. 21, 1955	12.23	3,360				

a Record incomplete; possibly the yearly maximum.

2685. Cypress Creek near Etta, Miss.

Location.--Lat 34°26'30", long 89°17'25", in SE $\frac{1}{4}$ sec.27, T.7 S., R.1 W., Chickasaw meridian, at bridge on State Highway 30, $4\frac{1}{2}$ miles southwest of Etta and 5 miles upstream from mouth.

Drainage area.--28.5 sq mi.

Gage.--Recording prior to December 1942; crest-stage gage since October 1951. Altitude of gage is 315 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 6,300 cfs.

Bankfull stage.--8 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	June 17, 1939	10.12	3,920	1953	Apr. 29, 1953	9.48	2,150
1940	Mar. 13, 1940	9.20	1,460	1954	May 28, 1954	9.52	2,200
				1955	Mar. 21, 1955	11.58	8,800
1941	Dec. 16, 1940	9.93	3,220	1956	Feb. 4, 1956	10.88	5,900
1942	Apr. 9, 1942	9.54	2,380	1957	July 1, 1957	10.19	3,700
1948	Feb. 13, 1948	10.7	-	1958	Nov. 14, 1957	11.35	7,800
1952	Dec. 26, 1951	10.46	4,450				

2690. North Tippah Creek near Ripley, Miss.

Location.--Lat 34°44', long 89°02', in SW $\frac{1}{4}$ sec.18, T.4 S., R.3 E., Chickasaw meridian, at bridge on State Highway 4, 2 miles upstream from Tippah drainage canal and $5\frac{1}{2}$ miles west of Ripley.

Drainage area.--20.0 sq mi.

Gage.--Nonrecording prior to Mar. 13, 1939; recording Mar. 13, 1939, to September 1942; crest-stage gage after Oct. 26, 1951.

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs and extended by logarithmic plotting.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 900 cfs. Only annual peaks are shown subsequent to 1942.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 11, 1939	10.45	945	1948	-	12.1	2,420
	Apr. 17, 1939	10.50	970		(b)	11.59	1,770
	May 22, 1939	10.85	1,180				
	May 27, 1939	10.70	1,090	1953	July 21, 1953	13.63	6,180
	June 17, 1939	11.40	11,510				
1940	Apr. 18, 1940	10.23	845	1954	Feb. 20, 1954	11.14	1,310
1941	Dec. 16, 1940	10.47	945	1955	Mar. 21, 1955	12.10	2,420
	Apr. 23, 1941	10.38	920	1956	Feb. 4, 1956	11.67	1,860
1942	Feb. 6, 1942	11.29	1,670	1957	Apr. 4, 1957	12.05	2,350
	Feb. 24, 1942	11.20	1,550				
	Apr. 9, 1942	11.53	1,980	1958	Nov. 16, 1957	12.29	2,710

a Record incomplete; may not be maximum of the year.

b Prior to Mar. 4, 1952.

2699.9. Tippah Creek near Potts Camp, Miss.

Location.--Lat 34°35'51", long 89°21'01", in NW $\frac{1}{4}$ sec.6, T.6 S., R.1 W., Chickasaw meridian, at bridge on county road, 5 miles southwest of Potts Camp.

Drainage area.--359 sq mi.

Gage.--Recording. Datum of gage is 277.79 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs.

Bankfull stage.--14 ft.

Remarks.--Records furnished by Corps of Engineers. Peak discharge for 1947-58 from rating curve defined by Corps of Engineers discharge measurements. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Mar. 14, 1943	17.3	9,000	1952	Mar. 12, 1952	16.3	6,600
1944	Mar. 29, 1944	18.0	11,600	1953	Feb. 12, 1953	18.4	13,000
1945	Jan. 1, 1945	19.78	19,200		Feb. 22, 1953	16.0	6,000
1946	Jan. 8, 1946	18.9	15,000		Mar. 5, 1953	16.3	6,600
1947	Jan. 4, 1947	17.37	9,600		Mar. 24, 1953	15.4	4,900
1948	Feb. 13, 1948	20.78	24,000		Apr. 7, 1953	16.6	7,300
1949	Nov. 20, 1948	18.9	a15,000		May 5, 1953	16.4	6,900
1950	Mar. 13, 1950	17.71	10,600		May 17, 1953	18.8	14,800
1951	Jan. 4, 1951	17.67	10,500		July 22, 1953	18.99	15,500
	Feb. 9, 1951	15.8	5,600	1954	Jan. 23, 1954	15.62	5,200
	Feb. 21, 1951	15.6	5,200	1955	Mar. 22, 1955	19.79	19,300
	Mar. 28, 1951	15.6	5,200		Apr. 13, 1955	18.0	11,600
	Mar. 31, 1951	15.2	4,600	1956	Feb. 4, 1956	17.90	11,200
1952	Dec. 16, 1951	16.5	7,000		Feb. 19, 1956	15.3	4,700
	Jan. 28, 1952	17.69	10,500	1957	Feb. 1, 1957	18.7	14,300
	Feb. 4, 1952	15.2	4,600		Apr. 4, 1957	17.8	10,900
				1958	Nov. 15, 1957	18.1	12,000
					May 1, 1958	16.3	7,000
					Sept. 22, 1958	17.23	8,900

a Maximum daily.

2710. Clear Creek near Oxford, Miss.

Location.--Lat 34°21'20", long 89°39'30", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.8 S., R.4 W., Chickasaw meridian, at bridge on State Highway 6, 1.0 mile upstream from Hudson Creek and 8.3 miles west of Oxford.

Drainage area.--10.3 sq mi.

Gage.--Nonrecording prior to Mar. 6, 1939; recording thereafter. Datum of gage is 275.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1944.

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs, by slope-area measurements below 2,700 cfs and extended by logarithmic plotting.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 900 cfs.

Peak stages and discharges of Clear Creek near Oxford, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 29, 1939	6.77	1,330	1954	Dec. 5, 1953	5.46	1,200
	Apr. 11, 1939	6.56	1,210		Jan. 20, 1954	9.18	2,380
	Apr. 26, 1939	6.90	1,430		Jan. 21, 1954	5.98	1,360
	June 17, 1939	8.44	2,130		May 27, 1954	11.04	2,960
	June 27, 1939	8.70	a2,220	1955	Mar. 20, 1955	11.02	3,700
1940	June 28, 1940	7.18	1,640		Apr. 12, 1955	8.35	2,660
	July 12, 1940	9.17	2,380		Apr. 21, 1955	4.42	1,080
					May 28, 1955	7.23	2,180
1941	Dec. 15, 1940	7.14	a1,600		July 17, 1955	4.53	1,120
1950	Mar. 12, 1950	6.64	1,520		July 24, 1955	5.02	1,320
	Apr. 30, 1950	6.48	1,480		Sept. 23, 1955	4.00	930
	June 3, 1950	7.22	a1,740	1956	Feb. 2, 1956	8.25	2,580
	July 6, 1950	6.51	1,480		Feb. 16, 1956	7.68	2,380
	Aug. 17, 1950	6.20	1,370		Apr. 30, 1956	11.14	3,740
	Aug. 25, 1950	5.44	1,090	1957	Jan. 4, 1957	5.38	1,330
1951	Nov. 20, 1950	6.19	1,380		Feb. 1, 1957	5.54	1,380
	Jan. 3, 1951	7.72	1,940		Apr. 4, 1957	11.66	3,980
	Mar. 28, 1951	7.47	1,860		Apr. 22, 1957	5.17	1,240
1952	Dec. 25, 1951	6.68	1,560		June 4, 1957	11.28	3,820
	Jan. 27, 1952	6.72	1,560		June 22, 1957	6.67	1,920
	Mar. 10, 1952	5.08	1,020		June 30, 1957	9.80	3,220
1953	Feb. 6, 1953	4.76	976	1958	Nov. 14, 1957	10.90	3,660
	Feb. 20, 1953	9.46	2,480		Nov. 17, 1957	5.18	1,240
	Mar. 2, 1953	5.56	1,230		Apr. 27, 1958	4.67	1,010
	Mar. 3, 1953	5.49	1,200		Apr. 29, 1958	7.97	2,500
	Mar. 22, 1953	6.82	1,620		June 26, 1958	5.80	1,510
	Apr. 29, 1953	5.26	1,140		July 8, 1958	5.92	1,560
	May 4, 1953	4.75	976		July 23, 1958	5.71	1,460
	May 16, 1953	7.40	1,810		Sept. 20, 1958	8.40	2,660
	May 16, 1953	5.38	1,170				

a Record incomplete; probably the yearly maximum.

2725. Tallahatchie River at Sardis Dam, near Sardis, Miss.

Location.--Lat 34°23'57", long 89°47'10", in NE¹/₄ sec.11, T.8 S., R.6 W., Chickasaw meridian, in gatehouse of Sardis Dam, 7¹/₂ miles southeast of Sardis.

Drainage area.--1,545 sq mi.

Gage.--Recording. Datum of gage is 219.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Corps of Engineers).

Remarks.--Flow completely regulated by Sardis Reservoir. Records furnished by Corps of Engineers. Only annual peak discharges are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 19, 1940		4,730	1950	June 8, 1950		5,160
1941	Nov. 28, 1940		3,330	1951	Aug. 2, 1951		5,580
1942	(a)		4,580	1952	June 23, 1952		4,470
1943	July 14, 1943		4,130	1953	Sept. 14, 1953		5,280
1944	At times		4,920	1954	Oct. 8, 1953		5,130
1945	July 25, 1945		5,380	1955	Sept. 26, 1955		4,710
1946	June 24, 1946		5,780	1956	Oct. 1, 1955		4,310
1947	Oct. 4, 1946		5,410	1957	Apr. 25, 1957		4,660
1948	Aug. 18, 1948		5,430	1958	Feb. 4, 1958		4,860
1949	Sept. 9, 1949		5,520				

a May 10, 11, June 13, 14, 23, 1942.

2730. Tallahatchie River near Sardis, Miss.

Location.--Lat 34°23'10", long 89°52'52", in NE $\frac{1}{4}$ sec.13, T.8 S., R.7 W., Chickasaw meridian, at bridge on U. S. Highway 51 (old), $3\frac{1}{2}$ miles upstream from Illinois Central Railroad bridge, 4 miles southeast of Sardis, and 9 $\frac{1}{2}$ miles downstream from Sardis Reservoir.

Drainage area.--1,595 sq mi.

Gage.--Nonrecording prior to 1949; recording thereafter. Datum of gage is 187.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Corps of Engineers).

Bankfull stage.--16 ft.

Remarks.--After Aug. 26, 1939, 1,545 sq mi regulated by Sardis Reservoir. Records for July 1928 to September 1931 and October 1938 to September 1942 computed by Corps of Engineers and reviewed by Geological Survey. Records for December 1931 to September 1938 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 26, 1929	20.23	21,900	1944	July 17, 1944	12.0	5,600
1930	Mar. 10, 1930	21.31	29,600	1945	Dec. 31, 1944	15.8	9,100
1931	Apr. 2, 1931	14.58	7,000	1946	July 8, 1946	14.1	7,200
1932	Jan. 15, 1932	26.36	65,300	1947	Apr. 11, 1947	12.82	6,200
1933	Apr. 3, 1933	22.67	39,400	1948	Feb. 13, 1948	14.98	8,100
1934	Mar. 6, 1934	19.93	20,100	1949	Jan. 3, 1949	13.16	6,400
1935	Jan. 23, 1935	19.80	19,500	1950	Mar. 13, 1950	14.03	7,100
1936	Mar. 29, 1936	17.61	11,000	1951	Jan. 3, 1951	16.70	10,500
1937	Jan. 5, 1937	21.08	28,200	1952	Jan. 27, 1952	12.90	6,300
1938	Apr. 12, 1938	18.23	13,200	1953	May 4, 1953	13.72	6,900
1939	June 20, 1939	22.09	39,000	1954	May 28, 1954	12.50	6,000
1940	Aug. 19, 1940	10.4	4,610	1955	Mar. 21, 1955	14.10	7,200
1941	Jan. 1, 1941	9.00	4,030	1956	Apr. 6, 1956	12.11	5,700
1942	Apr. 9, 1942	17.1	14,400	1957	Feb. 1, 1957	12.0	5,600
1943	Mar. 12, 1943	10.5	4,700	1958	Nov. 14, 1957	14.0	7,100

2735. Tallahatchie River at Batesville, Miss.

Location.--Lat 34°19'55", long 89°58'00", in SE $\frac{1}{4}$ sec.6, T.9 S., R.7 W., Chickasaw meridian, near center of span on upstream side of county highway bridge, 1 mile west of Batesville and about 2 miles downstream from Illinois Central Railroad bridge.

Drainage area.--1,750 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 175.4 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Nov. 22, 1905	18.6	13,800	1910	July 12, 1910	17.1	11,400
1908	Feb. 18, 1908	18.2	13,100	1911	Apr. 20, 1911	18.9	14,200
1909	Feb. 21, Mar. 2	16.9	11,100	1912	Dec. 28, 1911	18.4	13,400

2735.5. Tallahatchie River (Panola-Quitman floodway) near Batesville, Miss.

Location--Lat 34°17'44", long 90°03'18", on south line of sec.17, T.9 S., R.8 W., Chickasaw meridian, at bridge on new State Highway 6, 6.4 miles west of Batesville.

Drainage area--1,802 sq mi (1,545 sq mi controlled by Sardis Dam).

Gage--Nonrecording prior to January 1946; recording thereafter. Prior to June 26, 1941, at site 800 ft upstream. Datum of gage is 163.46 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation--Defined by current-meter measurements below 18,000 cfs.

Bankfull stage--18 ft.

Remarks--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 9, 1937	18.0	10,600	1949	Jan. 3, 1949	18.52	11,900
				1950	Mar. 13, 1950	19.35	14,300
1940	Apr. 15, 1940	14.91	6,890	1951	Jan. 3, 1951	19.66	15,700
1941	Apr. 23, 1941	16.8	-	1952	Mar. 10, 1952	18.30	11,200
1942	Apr. 9, 1942	21.16	27,500	1953	May 4, 1953	19.36	14,300
1943	Mar. 13, 1943	18.2	11,000	1954	May 13, 1954	15.15	6,500
1944	Mar. 28, 1944	17.6	10,400	1955	Mar. 21, 1955	20.00	17,500
1945	Dec. 31, 1944	19.98	15,600	1956	Feb. 3, 1956	17.90	9,380
1946	July 8, 1946	19.36	19,600	1957	Feb. 1, 1957	18.79	11,000
1947	Jan. 30, 1947	17.33	9,600	1958	Apr. 29, 1958	18.02	10,400
1948	Feb. 13, 1948	20.12	25,200				

a Result of discharge measurement.

2736. Tallahatchie River (Panola-Quitman floodway) near Crowder, Miss.

Location--Lat 34°10'45", long 90°06'18", in SE $\frac{1}{4}$ sec.29, T.27 N., R.2 E., Choctaw meridian, at bridge over west channel of Panola-Quitman floodway on county road, $\frac{1}{2}$ miles upstream from Yocona River Canal and 1.8 miles north-east of Crowder.

Drainage area--1,826 sq mi.

Gage--Nonrecording prior to Nov. 10, 1947; recording thereafter. Datum of gage is 143.89 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Bankfull stage--26 ft.

Remarks--1,545 sq mi controlled by Sardis Dam. Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 24, 1941	a21.0		1951	Jan. 3, 1951	27.51	
1942	Apr. 9, 1942	25.4		1952	Dec. 26, 1951	24.3	
1943	Mar. 13, 1943	a24.2		1953	May 5, 1953	23.13	
1944	Mar. 29, 1944	a24.4		1954	May 28, 1954	20.66	
1945	Jan. 1, 1945	a26.0		1955	Mar. 21, 1955	24.06	
1946	Jan. 9, 1946	a25.5		1956	Feb. 4, 1956	22.42	
1947	Apr. 11, 1947	24.69		1957	Feb. 1, 1957	23.40	
1948	Feb. 13, 1948	27.57		1958	Nov. 14, 1957	22.9	
1949	Jan. 4, 1949	26.87					
1950	Mar. 13, 1950	28.28					

a Maximum observed; S a.m. reading.

b Year incomplete; may not be the yearly maximum.

2740. Yocona River near Oxford, Miss.

Location--Lat 34°16'23", long 89°31'11", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.9 S., R.3 W., Chickasaw meridian, at bridge on State Highway 7, 1½ miles downstream from Burney Branch and 6 miles south of Oxford.

Drainage area--262 sq mi.

Gage--Recording. Datum of gage is 272.20 ft above mean sea level, datum of 1929, supplementary adjustment of 1944.

Stage-discharge relation--Defined by current-meter measurements below 22,000 cfs and extended by logarithmic plotting.

Bankfull stage--20 ft.

Historical data--The flood of Mar. 21, 1955, is the greatest known in at least 50 years, from information by local residents.

Remarks--Records prior to 1952 furnished by Corps of Engineers. Base for partial-duration series, 8,000 cfs. Only annual peaks are shown prior to 1952.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 11, 1947	21.78	9,210	1954	Jan. 22, 1954	16.33	4,250
1948	Feb. 13, 1948	22.60	19,400	1955	Mar. 21, 1955	23.72	44,100
1949	Jan. 4, 1949	22.23	15,800		Apr. 13, 1955	21.48	11,500
1950	Mar. 13, 1950	21.46	9,350	1956	Feb. 4, 1956	21.40	10,900
1951	Mar. 29, 1951	23.10	24,400		May 1, 1956	20.79	8,090
1952	Dec. 27, 1951	21.50	8,710	1957	Feb. 2, 1957	21.40	10,900
1953	Feb. 21, 1953	20.57	6,750		Apr. 4, 1957	21.45	11,100
				1958	Nov. 15, 1957	22.16	14,200
					Apr. 29, 1958	21.42	8,500
					Sept. 21, 1958	22.78	22,300

2742.5. Otuckalofa Creek near Water Valley, Miss.

Location--Lat 34°08'25", long 89°38'15", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.11 S., R.4 W., Chickasaw meridian, at bridge on State Highway 7, 0.9 mile south of Water Valley and 5.2 miles upstream from mouth.

Drainage area--84.1 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by current-meter measurements below 5,900 cfs.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Dec. 23, 1951	25.9	5,600	1956	Feb. 4, 1956	25.49	4,700
1953	Feb. 20, 1953	23.84	3,300	1957	Sept. 14, 1957	23.84	3,300
1954	Jan. 20, 1954	20.75	1,950	1958	Sept. 20, 1958	26.30	6,800
1955	Mar. 21, 1955	27.36	21,000				

2750. Yocona River at Enid Dam, near Enid, Miss.

Location.--Lat 34°09'29", long 89°54'14", in NE $\frac{1}{4}$ sec.2, T.11 S., R.7 W., Chickasaw meridian, in gatehouse of Enid Dam, 0.8 mile upstream from U. S. Highway 51, $2\frac{1}{2}$ miles upstream from Illinois Central Railroad bridge, and $3\frac{1}{4}$ miles northeast of Enid.

Drainage area.--560 sq mi.

Gage.--Nonrecording prior to July 14, 1939, and July 16, 1951, to May 23, 1952; recording July 14, 1939, to July 15, 1951, and since May 23, 1952. Prior to July 15, 1951, at site 0.8 mile downstream at datum 10.58 ft lower. Datum of present gage is 200.00 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to shift.

Bankfull stage.--17 ft at site and datum used prior to July 15, 1951.

Remarks.--Flow completely regulated by Enid Reservoir since July 16, 1951. Records for 1932-38 furnished by Corps of Engineers. Records for 1939-58 computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 23, 1929	19.16	16,000	1944	Mar. 29, 1944	20.13	24,400
1930	May 20, 1930	18.22	10,100	1945	Jan. 1, 1945	20.20	25,400
1931	Apr. 1, 1931	13.16	4,880	1946	Feb. 10, 1946	20.17	25,400
1932	Jan. 14, 1932	21.04	27,000	1947	Apr. 12, 1947	19.41	20,100
1933	Apr. 1, 1933	19.70	20,600	1948	Feb. 14, 1948	21.61	36,300
1934	Mar. 3, 1934	16.87	10,500	1949	Jan. 5, 1949	20.10	28,800
1935	Mar. 12, 1935	16.90	9,720	1950	Mar. 13, 1950	17.45	18,000
1936	Feb. 4, 1936	16.89	9,710	1951	Mar. 30, 1951	18.63	21,700
1937	Jan. 2, 1937	17.76	13,200	1952	Dec. 28, 1951	-	6,080
1938	Apr. 7, 1938	18.32	12,800	1953	July 8-9, 1953	-	1,360
1939	Mar. 30, 1939	18.57	16,800	1954	Jan. 26-27, 1954	-	1,090
1940	Mar. 13, 1940	17.84	12,600	1955	July 20-21, 1955	-	2,190
1941	Dec. 16, 1940	18.00	13,000	1956	Oct. 1, 1955	-	1,480
1942	Apr. 9, 1942	18.53	15,200	1957	Sept. 19, 1957	-	2,240
1943	Mar. 13, 1943	18.55	13,900	1958	Jan. 21, 1958	-	3,670

2755. Long Creek at Courtland, Miss.

Location.--Lat 34°13'40", long 89°56'25", in sec.9, T.10 S., R.7 W., Chickasaw meridian, at bridge on U. S. Highway 51, 1 mile south of Courtland, $5\frac{1}{2}$ miles upstream from mouth, and 6 miles south of Batesville.

Drainage area.--66.2 sq mi.

Gage.--Recording prior to Dec. 31, 1943; crest-stage gage since Nov. 18, 1951. Datum of gage is 205.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs and by indirect measurement of 38,300 cfs.

Bankfull stage.--18 ft.

Historical data.--Flood of May 28, 1954, is the highest since at least 1907, from information by local residents. Unusual floods occurred in 1907, 1911, and 1929, and reached stages within 3 ft of that of May 28, 1954.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Long Creek at Courtland, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 12, 1940	14.82	a5,440	1953	May 5, 1953	20.21	13,400
1941	Nov. 11, 1940	11.87	3,540	1954	May 28, 1954	25.02	38,300
1942	Apr. 9, 1942	22.21	13,500	1955	Mar. 21, 1955	22.39	20,700
1943	Dec. 27, 1942	19.51	a9,380	1956	Apr. 30, 1956	12.30	3,100
1948	Feb. 13, 1948	21.8	a12,800	1957	Apr. 3, 1957	20.71	14,800
1952	Dec. 27, 1951	21.03	15,800	1958	Nov. 14, 1957	21.17	16,200

a Record incomplete; may not be yearly maximum.

2760. Coldwater River near Lewisburg, Miss.

Location.--Lat 34°50'27", long 89°49'32", in center of sec.10, T.3 S., R.6 W., Chickasaw meridian, at bridge on State Highway 305, 1.6 miles south of Lewisburg and 4.0 miles upstream from Pigeonroost Creek.

Drainage area.--218 sq mi.

Gage.--Nonrecording prior to Sept. 3, 1942, and Aug. 26, 1948, to Aug. 22, 1950; recording Sept. 3, 1942, to Aug. 25, 1948, and since Aug. 22, 1950. Datum of gage is 250.52 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs.

Bankfull stage.--10 ft.

Remarks.--High flows intermingle above station with Pigeonroost Creek. Records furnished by Corps of Engineers and reviewed by Geological Survey 1942-53. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 29, 1940	10.8	2,020	1950	Jan. 13, 1950	12.53	10,600
1941	Jan. 6, 1941	9.3	790	1951	Jan. 3, 1951	12.90	11,400
1942	Apr. 9, 1942	14.56	20,900	1952	Jan. 27, 1952	12.84	11,200
1943	Mar. 13, 1943	12.97	12,900	1953	May 19, 1953	13.10	12,300
1944	Mar. 29, 1944	12.41	16,200	1954	Feb. 18, 1954	10.77	2,750
1945	Jan. 1, 1945	12.95	13,200	1955	Mar. 21, 1955	12.68	10,500
1946	Jan. 8, 1946	15.60	25,900	1956	Feb. 4, 1956	12.18	8,440
1947	June 23, 1947	13.20	13,900	1957	Feb. 1, 1957	12.38	9,240
1948	Feb. 13, 1948	14.02	17,400	1958	Sept. 22, 1958	12.60	10,100
1949	June 15, 1949	11.98	8,400				

2765. Pigeonroost Creek near Byhalia, Miss.

Location.--Lat 34°45'35", long 89°41'45", in SE $\frac{1}{4}$ sec.2, T.4 S., R.5 W., Chickasaw meridian, at bridge on county road, 3.1 miles north of Wall Hill, 3.9 miles downstream from Cuffawa Creek Canal, and 7.8 miles south of Byhalia.

Drainage area.--117 sq mi.

Gage.--Recording prior to Apr. 2, 1942, and since Nov. 2, 1956; nonrecording Apr. 2 to Sept. 30, 1942. Prior to Nov. 3, 1956, at datum 3.76 ft lower. Altitude of present gage is 300 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 8,400 cfs and extended on basis of velocity-area study.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Pigeonroost Creek near Byhalia, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 29, 1940	9.96	5,480	1957	Jan. 31, 1957	8.60	-
1941	Jan. 2, 1941	9.88	5,320	1958	Nov. 14, 1957	8.95	-
1942	Apr. 9, 1942	14.6	24,500				

a Record incomplete; probably the yearly maximum.

2770. Pigeonroost Creek near Lewisburg, Miss.

Location.--Lat 34°49'49", long 89°49'20", in NW $\frac{1}{4}$ sec.15, T.3 S., R.6 W., Chickasaw meridian, at bridge on State Highway 305, 1.6 miles upstream from mouth and 2.4 miles south of Lewisburg.

Drainage area.--228 sq mi.

Gage.--Nonrecording prior to Sept. 3, 1942, and July 12, 1948, to Dec. 17, 1949; recording Sept. 3, 1942, to July 11, 1948, and since Dec. 17, 1949. Datum of gage is 253.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1944.

Bankfull stage.--9 ft.

Remarks.--High flows intermingle above station with Coldwater River. Records furnished by Corps of Engineers and reviewed by Geological Survey 1942-53. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 29, 1940	10.00	4,600	1950	Mar. 13, 1950	12.30	4,960
1941	Jan. 2, 1941	10.40	5,480	1951	Jan. 3, 1951	12.52	5,060
1942	Apr. 9, 1942	12.2	34,900	1952	Jan. 27, 1952	12.64	5,100
1943	Mar. 13, 1943	11.01	9,390	1953	May 19, 1953	16.74	17,200
1944	Apr. 23, 1944	10.96	6,110	1954	Feb. 20, 1954	13.10	6,450
1945	Feb. 27, 1945	11.08	6,100	1955	Apr. 13, 1955	14.32	10,000
1946	Jan. 8, 1946	12.85	9,430	1956	Jan. 29, 1956	14.30	10,000
1947	June 22, 1947	12.70	3,250	1957	Feb. 1, 1957	13.89	8,850
1948	Feb. 13, 1948	12.68	6,160	1958	Sept. 20, 1958	14.60	11,000
1949	Nov. 19, 1948	13.05	7,210				

2775. Coldwater River near Coldwater, Miss.

Location.--Lat 34°43', long 89°59', in SW $\frac{1}{4}$ sec.19, T.4 S., R.7 W., Chickasaw meridian, at bridge on U. S. Highway 51, 1 $\frac{1}{4}$ miles northwest of Coldwater, 3.0 miles downstream from Beartail Creek, and 3.8 miles upstream from Hickahala Creek.

Drainage area.--617 sq mi.

Gage.--Nonrecording. Datum of gage is 208.29 ft above mean sea level, datum of 1929.

Stage-discharge relation.-- Defined by current-meter measurements.

Bankfull stage.--13 ft.

Remarks.--Records July 1928 to September 1931 and October 1938 to July 1942 computed by Corps of Engineers and reviewed by Geological Survey. Records for October 1931 to September 1938 furnished by Corps of Engineers. Only annual peaks are shown.

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Peak stages and discharges of Coldwater River near Coldwater, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Feb. 27, 1929	15.89	20,000	1936	Oct. 24-25, 1935	13.97	4,900
1930	Jan. 9, 1930	18.86	41,800	1937	Jan. 25, 1937	17.00	25,000
				1938	Jan. 23, 1938	16.49	17,300
1931	July 26, 1931	14.18	7,940	1939	Feb. 3, 1939	16.14	16,500
1932	Jan. 14, 1932	16.03	20,900	1940	June 30, 1940	14.64	8,300
1933	Apr. 1, 1933	16.10	18,800				
1934	Dec. 19, 1933	17.75	29,200	1941	Jan. 4, 1941	13.95	4,280
1935	Jan. 21, 1935	21.00	79,500	1942	Apr. 9, 1942	20.40	33,600

2777. Hickahala Creek near Senatobia, Miss.

Location.--Lat 34°37'54", long 89°55'30", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T.5 S., R.7 W., Chickasaw meridian, at bridge on county road, 1.5 miles upstream from confluence of Hickahala Creek and Senatobia Creek and 3 miles northeast of Senatobia.

Drainage area.--121 sq mi.

Gage.--Recording. Datum of gage is 233.02 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements below 2,600 cfs.

Bankfull stage.--13 ft.

Historical data.--The flood of June 22, 1947, is the highest known, reaching a stage slightly higher than the 1900 flood, from information by local residents.

Remarks.--Gage-height records furnished by Corps of Engineers. Discharge computed from curve defined by Corps of Engineer measurements. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Dec. 27, 1942	15.4	7,300	1955	Mar. 21, 1955	16.25	10,400
					Apr. 6, 1955	14.8	5,200
1944	Feb. 26, 1944	14.3	4,000		Apr. 13, 1955	16.2	10,200
					Apr. 21, 1955	15.6	8,000
1945	Dec. 31, 1944	16.4	11,000		June 14, 1955	15.0	5,900
1946	July 8, 1946	17.1	14,000	1956	Jan. 30, 1956	15.3	6,900
					Feb. 3, 1956	16.10	9,900
1947	June 22, 1947	20.6	30,000		Feb. 18, 1956	15.6	8,000
					Apr. 6, 1956	14.9	5,600
1948	Feb. 13, 1948	15.6	8,000				
1949	Nov. 19, 1948	15.1	6,100	1957	Feb. 1, 1957	16.67	12,300
					Apr. 4, 1957	15.0	5,900
					Apr. 25, 1957	15.0	5,900
1950	Mar. 13, 1950	14.76	5,200		June 4, 1957	14.9	5,600
1951	Jan. 3, 1951	15.50	7,700	1958	Nov. 14, 1957	16.1	9,900
					Nov. 18, 1957	15.9	9,100
1952	Jan. 27, 1952	16.70	12,300		Nov. 25, 1957	15.2	6,500
					Dec. 7, 1957	16.5	11,400
1953	May 19, 1953	18.00	17,900		Dec. 15, 1957	15.1	6,100
					Apr. 4, 1958	15.32	6,900
1954	May 3, 1954	14.61	4,700		May 1, 1958	15.80	8,800
					May 10, 1958	15.56	7,800
1955	Mar. 16, 1955	14.8	5,200		Sept. 20, 1958	16.70	12,300

a Record incomplete; may not be yearly maximum.

2777.3. Senatobia Creek near Senatobia, Miss.

Location.--Lat 34°37'02", long 89°56'30", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.5 S., R.7 W., Chickasaw meridian, at bridge on State Highway 4, 1.4 miles upstream from mouth and 1.5 miles east of Senatobia.

Drainage area.--82 sq mi.

Gage.--Recording. Datum of gage is 233.80 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements furnished by Corps of Engineers below 9,200 cfs.

Bankfull stage.--13 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Base for partial-duration series, 11,300 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Dec. 27, 1942	16.7	13,200	1953	May 17, 1953	17.5	17,100
1944	Apr. 23, 1944	15.6	9,300		May 19, 1953	17.2	15,500
1945	Dec. 31, 1944	16.0	10,500	1954	May 28, 1954	15.85	10,000
1946	July 8, 1946	16.7	13,200	1955	Mar. 20, 1955	17.40	16,600
1947	June 22, 1947	17.85	19,000		Apr. 13, 1955	17.2	15,500
1948	Feb. 12, 1948	16.60	12,900		Apr. 21, 1955	17.1	15,100
1949	Jan. 3, 1949	16.85	13,900	1956	Feb. 2, 1956	16.9	14,100
1950	Apr. 30, 1950	16.92	14,200		Feb. 17, 1956	17.0	14,800
1951	Jan. 3, 1951	17.20	15,500		Apr. 6, 1956	17.24	15,600
1952	Jan. 27, 1952	17.60	17,700		Apr. 30, 1956	16.5	12,500
	Mar. 10, 1952	16.8	13,900	1957	Jan. 31, 1957	16.5	12,500
1953	Feb. 11, 1953	16.8	13,900		Apr. 4, 1957	17.0	14,800
	Feb. 20, 1953	17.3	16,000		Apr. 18, 1957	16.6	12,900
	Mar. 3, 1953	17.4	16,600		Apr. 25, 1957	16.4	12,000
	Mar. 22, 1953	17.2	15,500	1958	Nov. 13, 1957	17.56	17,500
	Apr. 6, 1953	17.1	15,100		Nov. 18, 1957	17.58	17,600
	Apr. 29, 1953	17.6	17,700		Dec. 7, 1957	16.9	14,200
	May 4, 1953	17.60	17,700		Apr. 29, 1958	17.05	15,000
					May 1, 1958	16.75	13,600
					June 26, 1958	17.15	15,300
					Sept. 17, 1958	16.40	12,000
					Sept. 19, 1958	17.90	19,400

2785. Coldwater River at Arkabutla Dam, near Arkabutla, Miss.
(Prior to October 1941 published as "at Pratts Bridge")

Location.--Lat 34°45'26", long 90°07'27", in SW $\frac{1}{4}$ sec.2, T.4 S., R.9 W., Chickasaw meridian, in gatehouse of Arkabutla Dam, 4 miles north of Arkabutla.

Drainage area.--1,000 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1939, and Jan. 1 to June 30, 1942; recording Oct. 1, 1939, to Nov. 28, 1941, and after June 30, 1942. Prior to Oct. 1, 1941, at site 1.7 miles downstream at datum 3.64 ft lower. Jan. 1, 1942, to Dec. 31, 1947, at site 370 ft downstream from outlet tunnel and at datum 19.90 ft lower. Datum of present gage is 191.18 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944 (levels by Corps of Engineers).

Historical data.--A stage of 21.3 ft occurred in January 1935, from floodmarks at original site and datum (determined by Corps of Engineers).

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Flow completely regulated by Arkabutla Reservoir since Aug. 14, 1941. Only annual peaks are shown.

Peak stages and discharges of Coldwater River at Arkabutla Dam, near Arkabutla, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 22, 1938	12.7	28,700	1949	May 19, 1949	-	9,030
1939	Feb. 4, 1939	12.5	23,600	1950	Feb. 16, 1950	-	4,850
1940	June 29, 1940	10.2	8,170				
1941	Jan. 4, 1941	10.0	5,360	1951	Dec. 16, 1950	-	4,830
1942	Apr. 12, 1942	-	10,200	1952	Mar. 13, 1952	-	4,100
1943	Mar. 14, 1943	-	8,720	1953	May 21, 1953	-	7,120
1944	May 21, 1944	-	4,610	1954	Feb. 26, 1954	-	3,230
1945	Apr. 20, 1945	-	4,700	1955	Apr. 22, 1955	-	4,900
1946	Jan. 13, 1946	-	5,150	1956	Feb. 20, 1956	-	4,580
1947	June 27, 1947	-	3,850	1957	Feb. 7-9, 1957	-	3,950
1948	Mar. 8, 1948	-	5,110	1958	Dec. 23, 1957	-	3,920

2793. Coldwater River at Prichard, Miss.

Location.--Lat 34°41'58", long 90°13'54", in SW $\frac{1}{4}$ sec.26, T.4 S., R.10 W., Chickasaw meridian, at bridge on county road, 0.3 mile southeast of Prichard.

Drainage area.--1,214 sq mi (1,000 sq mi controlled by Arkabutla Dam).

Gage.--Nonrecording prior to 1948; recording thereafter. Datum of gage is 156.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 6,800 cfs.

Bankfull stage.--30 ft.

Remarks.--Flow regulated by Arkabutla Dam. Gage-height records furnished by Corps of Engineers. Discharge computed from curve defined by Corps of Engineer measurements. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 12, 1946	31.34	8,000	1953	May 21, 1953	29.79	7,200
1947	June 28, 1947	25.78	5,350	1954	Feb. 20, 1954	23.19	4,200
1948	Feb. 14, 1948	28.93	6,700	1955	Apr. 22, 1955	28.47	6,600
1949	Apr. 13, 1949	29.05	6,800				
1950	Feb. 14, 1950	29.87	7,300	1956	Feb. 18, 1956	28.26	6,500
				1957	Feb. 1, 1957	26.4	5,600
1951	Jan. 14, 1951	28.10	6,400	1958	Nov. 14, 1957	26.61	5,700
1952	Mar. 11, 1952	27.32	6,000				

2795. Coldwater River at Savage, Miss.

Location.--Lat 34°38'00", long 90°13'50", in SW $\frac{1}{4}$ sec.23, T.5 S., R.10 W., Chickasaw meridian, at county highway bridge 1,000 ft downstream from Yazoo and Mississippi Valley Railroad bridge, a quarter of a mile west of Savage, $7\frac{1}{4}$ miles upstream from Arkabutla Canal, and $9\frac{1}{2}$ miles southeast of Tunica.

Drainage area.--1,225 sq mi.

Gage.--Nonrecording. Oct. 1, 1908, to Oct. 31, 1912, at site 1,000 ft upstream from last used gage at mean sea level datum. Dec. 19, 1935, to May 24, 1942, at same site as and at datum 5.00 ft higher than last used gage. Datum of last used gage was 164.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--16 ft.

Remarks.--Flow regulated by Arkabutla Reservoir since Aug. 14, 1941. Records for 1935-58 furnished by Corps of Engineers. Records for 1938-42 computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges of Coldwater River at Savage, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 3, 1909	186.1	11,300	1937	Jan. 25, 1937	18.05	45,800
1910	Apr. 18, 1910	187.0	13,000	1938	Jan. 25, 1938	17.46	24,900
1911	Apr. 7, 17, 1911	186.9	14,500	1939	Feb. 5, 1939	17.35	25,100
1912	May 1, 1912	186.9	14,500	1940	July 3, 1940	15.52	4,320
1935	January 1935	a20	-	1941	Apr. 28, 1941	b15.11	3,590
1936	Mar. 31, 1936	15.51	3,800	1942	Apr. 12-13, 1942	21.66	11,800

a From floodmark by Corps of Engineers.

b Occurred on following day.

2796. Arkabutla Creek near Arkabutla, Miss.

Location.--Lat 34°39'10", long 90°09'40", in SW¹/₄ NW¹/₄ sec.16, T.5 S., R.9 W., Chickasaw meridian, at bridge on county road, 0.5 mile downstream from Hoover Creek, 4 miles southwest of Arkabutla, and 7.9 miles upstream from mouth.

Drainage area.--97 sq mi.

Gage.--Recording. Datum of gage is 185.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements furnished by Corps of Engineers below 7,100 cfs and extended on basis of logarithmic plotting.

Bankfull stage.--16 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 24, 1947	21.2	a13,000	1953	Feb. 11, 1953	19.3	7,800
1948	Jan. 1, 1948	20.0	9,800		Apr. 6, 1953	20.2	10,000
	Feb. 13, 1948	22.26	16,500		Apr. 30, 1953	20.8	11,800
	Mar. 2, 1948	20.8	11,800		May 4, 1953	21.00	12,200
	Mar. 6, 1948	20.0	9,800		May 11, 1953	20.2	10,000
	Mar. 31, 1948	19.1	7,400		May 14, 1953	18.8	7,000
	Apr. 13, 1948	20.3	10,500		May 17, 1953	20.6	11,200
					May 19, 1953	20.6	11,200
1949	Nov. 19, 1948	20.6	11,200	1954	Feb. 20, 1954	17.30	3,800
	Jan. 3, 1949	20.80	11,800				
	Mar. 25, 1949	20.1	9,900	1955	Mar. 21, 1955	19.6	8,600
1950	Dec. 12, 1949	19.6	8,600		Apr. 12, 1955	21.03	12,300
	Jan. 5, 1950	19.90	9,400		Apr. 21, 1955	19.9	9,400
	Jan. 10, 1950	20.50	11,000	1956	Feb. 3, 1956	19.00	7,200
	Jan. 12, 1950	19.25	7,800				
	Feb. 13, 1950	21.2	13,000	1957	Jan. 30, 1957	19.5	8,500
	Mar. 13, 1950	21.60	14,000		Apr. 4, 1957	18.9	7,100
	Apr. 30, 1950	19.0	7,200				
1951	Jan. 2, 1951	20.15	10,000	1958	Nov. 18, 1957	20.12	10,000
					Dec. 7, 1957	19.6	8,600
1952	Dec. 14, 1951	19.0	7,200		Apr. 15, 1958	19.35	8,000
	Jan. 27, 1952	21.60	14,000		Apr. 26, 1958	19.70	8,800
	Mar. 2, 1952	19.0	7,200		May 1, 1958	19.70	8,800
	Mar. 11, 1952	21.1	12,800		May 10, 1958	18.90	7,100
					Sept. 20, 1958	20.10	9,900

a Record incomplete; may not be the yearly peak.

2796.5. Arkabutla Creek near Sarah, Miss.

Location.--Lat 34°36'14", long 90°13'05", in NE¼SE¼ sec.35, T.5 S., R.10 W., Chickasaw meridian, at bridge on Yazoo and Mississippi Valley Railroad, 2.3 miles upstream from mouth and 2.5 miles north of Sarah.

Drainage area.--160 sq mi.

Gage.--Recording. Datum of gage is 168.81 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not adequately defined. Relation affected by back-water from Coldwater River.

Bankfull stage.--16 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 24, 1940	16.8	-	1950	Feb. 13, 1950	19.02	-
1941	Apr. 23, 1941	18.8	-	1951	Jan. 3, 1951	17.95	-
1942	Apr. 9, 1942	19.0	-	1952	Mar. 10, 1952	18.16	-
1943	Mar. 12-13, 1943	12.1	-	1953	May 19, 1953	18.70	-
1944	Apr. 23, 1944	18.1	-	1954	Feb. 20, 1954	14.90	-
1945	Apr. 26, 1945	18.5	-	1955	Mar. 21, 1955	18.20	-
1946	May 24, 1946	18.4	-	1956	Feb. 2, 1956	17.90	-
1947	Jan. 2, 1947	18.65	-	1957	Apr. 4, 1957	16.50	-
1948	Feb. 13, 1948	17.40	-	1958	Apr. 30, 1958	16.80	-
1949	Mar. 25, 1949	18.60	-				

a Record incomplete; may not be yearly maximum.

2798. Coldwater River (Pompey ditch) near Sledge, Miss.

Location.--Lat 34°26'20", long 90°15'29", on line between secs. 28 and 33, T.7 S., R.10 W., Chickasaw meridian, at bridge on county road, 2.5 miles west of Sledge.

Drainage area.--Not determined.

Gage.--Nonrecording. Datum of gage is 146.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--24 ft.

Remarks.--Flow affected by Arkabutla Reservoir. Gage-height records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 14, 1951	23.99	-	1956	Feb. 3-4, 1956	23.28	-
1952	Jan. 28, 1952	24.28	-	1957	Feb. 1, 1957	23.30	-
1953	May 20, 1953	26.08	-	1958	Dec. 20, 1957	21.6	-
1954	Feb. 20, 1954	25.40	-				
1955	Apr. 13, 1955	24.25	-				

2798.5. Coldwater River (old channel) near Birdie, Miss.

Location.--Lat 34°24'39", long 90°23'22", in sec.3, T.29 N., R.2 W., Choctaw meridian, at bridge on county road, 1.3 miles northwest of Birdie.

Drainage area.--Not determined.

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. Datum of gage is 140.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--25 ft.

Remarks.--Flow affected by Arkabutla Dam since Aug. 14, 1941. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Feb. 20, 1940	16.2	-	1950	Feb. 15, 1950	25.97	-
1941	Apr. 25, 1941	18.0	-	1951	Jan. 16, 1951	24.31	-
1942	Apr. 12, 1942	24.3	-	1952	Jan. 29, 1952	23.62	-
1943	Mar. 17, 1943	24.8	-	1953	May 20, 1953	28.05	-
1944	Mar. 31, 1944	23.6	-	1954	Jan. 23, 1954	20.19	-
1945	Jan. 3, 1945	25.2	-	1955	Apr. 15, 1955	25.65	-
1946	Jan. 11, 1946	27.3	-	1956	Feb. 5, 1956	26.16	-
1947	Jan. 5, 1947	22.20	-	1957	Feb. 2, 1957	25.53	-
1948	Feb. 15, 1948	25.90	-	1958	May 2, 1958	24.60	-
1949	Jan. 29, 1949	23.40	-				

2798.7. Yazoo Pass near Lula, Miss.

Location.--Lat 34°26'18", long 90°29'48", in SW $\frac{1}{4}$ sec.27, T.30 N., R.3 W., Choctaw meridian, at bridge on county road, 200 ft from outlet of Moon Lake and $\frac{1}{2}$ miles southwest of Lula.

Drainage area.--Not determined.

Gage.--Nonrecording prior to 1949; recording thereafter. Datum of gage is 151.47 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--19 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 27 to May 5	7.8	-	1950	Mar. 20, 1950	16.56	-
1941	Apr. 30 to May 7	7.6	-	1951	Jan. 20-23, 1951	13.30	-
1942	Apr. 21-24, 1942	12.4	-	1952	Feb. 16, 1952	12.73	-
1943	Mar. 27-29, 1943	12.2	-	1953	May 24, 1953	17.30	-
1944	Apr. 12-15, 1944	11.5	-	1954	Feb. 4-5, 1954	9.20	-
1945	Apr. 6-10, 1945	13.6	-	1955	Apr. 24, 1955	14.19	-
1946	Jan. 20-25, 1946	16.7	-	1956	Feb. 24, 1956	13.35	-
1947	Jan. 31 to Feb. 3	10.3	-	1957	Feb. 10-11, 1957	11.1	-
1948	Mar. 8-10, 1948	14.75	-	1958	May 12, 1958	14.44	-
1949	Feb. 5-6, 1949	13.30	-				

2799. Coldwater River near Darling, Miss.

Location.--Lat 34°21'40", long 90°17'21", in sec.30, T.8 S., R.10 W., Chickasaw meridian, at bridge on county road, 0.8 mile west of Darling.

Drainage area.--1,620 sq mi.

Gage.--Nonrecording prior to January 1948; recording thereafter. Datum of gage is 134.31 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Slope affected.

Bankfull stage.--29 ft.

Remarks.--Flow affected by Arkabutla Reservoir. Gage-height records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 10, 1946	31.7	-	1953	May 20, 1953	30.49	-
1947	Jan. 4, 1947	26.22	-	1954	Jan. 22, 1954	22.15	-
1948	Feb. 15, 1948	30.67	-	1955	Apr. 14, 1955	28.55	-
1949	Jan. 5, 1949	27.15	-				
1950	Feb. 16, 1950	29.52	-	1956	Feb. 4, 1956	28.79	-
				1957	Feb. 2, 1957	28.38	-
1951	Jan. 15, 1951	27.75	-	1958	Nov. 19, 1957	26.9	-
1952	Jan. 28, 1952	26.65	-				

2799.2. David Bayou near Sledge, Miss.

Location.--Lat 34°25'14", long 90°14'02", in NE¹ sec.3, T.8 S., R.10 W., Chickasaw meridian, at bridge on Illinois Central Railroad, 1 mile southwest of Sledge.

Drainage area.--28 sq mi.

Gage.--Nonrecording. Datum of gage is 154.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Bankfull stage.--11 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Feb. 10, 1946	11.0	-	1953	May 21, 1953	11.85	-
1947	Jan. 4, 1947	10.37	-	1954	Jan. 23, 1954	8.09	-
1948	Feb. 15, 1948	11.90	-	1955	Mar. 22-23, 1955	11.10	-
1949	Nov. 20-22, 1948	10.8	-				
1950	Jan. 16, Mar. 14, 15	11.35	-	1956	Feb. 5, 1956	11.68	-
				1957	Feb. 2, 1957	11.28	-
1951	Jan. 5, 1951	10.70	-	1958	Nov. 19, 1957	10.9	-
1952	Jan. 29, 1952	10.09	-				

a Maximum daily.

2799.5. Coldwater River at Marks, Miss.

Location.--Lat 34°15', long 90°15', in NE $\frac{1}{4}$ sec.35, T.28 N., R.1 W., Choctaw meridian, at bridge on old State Highway 6 in Marks, 8.1 miles upstream from mouth (1946).

Drainage area.--Not determined.

Gage.--Nonrecording. Datum of gage is 120.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not well defined. A discharge of 14,800 cfs was measured May 20, 1953 (gage height, 38.90 ft).

Bankfull stage.--35 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 30, 1949	36.47	-	1954	Jan. 23, 1954	31.67	-
1950	Jan. 17, 1950	39.34	-	1955	Apr. 16, 1955	36.88	-
1951	Jan. 17, 1951	36.39	-	1956	Feb. 5, 1956	36.80	-
1952	Jan. 29, 1952	35.05	-	1957	Feb. 2, 1957	36.37	-
1953	May 23, 1953	39.20	-	1958	May 4, 1958	36.43	-

2799.7. Bobo Bayou at Bobo, Miss.

Location.--Lat 34°17'00", long 90°10'32", in SE $\frac{1}{4}$ sec.22, T.28 N., R.1 E., Choctaw meridian, at bridge on State Highway 6 in Bobo, 7 miles east of Marks.

Drainage area.--92 sq mi.

Gage.--Recording. Datum of gage is 140.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1944.

Stage-discharge relation.--Defined by current-meter measurements. May be affected by variable slope.

Bankfull stage.--18 ft.

Remarks.--Floodflows intermingle with adjacent basins. Gage-height records and occasional current-meter measurements collected by Corps of Engineers; discharge computed on mean curve based on current-meter measurements. Base for partial-duration series, 1,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	July 11, 1946	16.5	1,770	1952	Dec. 28, 1951	15.0	1,290
1947	Jan. 20, 1947	13.90	980		Jan. 29, 1952	14.8	1,230
1948	Feb. 19, 1948	16.70	1,900		Mar. 13, 1952	15.56	1,460
1949	Nov. 22-24, 1948	a16.0	1,600	1953	Feb. 13, 1953	14.8	1,230
	Jan. 6, 1949	a16.23	1,700		May 6, 1953	15.8	1,550
	Jan. 29, 30, 1949	a15.1	1,300		May 19, 1953	16.71	1,900
	Feb. 5, 1949	a14.7	1,200	1954	May 3, 1954	13.69	930
	Mar. 28, 29, 1949	a15.6	1,480	1955	Mar. 23, 1955	16.44	1,740
1950	Jan. 18, 1950	16.62	1,800		Apr. 15, 1955	15.8	1,550
	Feb. 5, 1950	a15.5	1,450	1956	Feb. 6, 1956	16.54	1,780
	Feb. 16, 17, 1950	a15.8	1,550	1957	Feb. 3, 1957	16.12	1,650
	Feb. 23, 1950	a15.8	1,550	1958	Nov. 19-21, 1957	15.8	1,550
	Mar. 15, 1950	a16.4	1,730		May 2, 1958	16.42	1,730
1951	Jan. 6, 1951	16.04	1,610		Sept. 24, 1958	15.80	1,550
	Jan. 16, 1951	15.2	1,340				
	Feb. 9, 1951	15.3	1,390				
	Apr. 27, 1951	14.8	1,230				

a Maximum daily.

2800. Tallahatchie River near Lambert, Miss.

Location.--Lat 34°10'50", long 90°12'55", in SW $\frac{1}{4}$ sec.29, T.27 N., R.1 E., Choc-taw meridian, at bridge on county road, a quarter of a mile downstream from Coldwater River, 4 miles southeast of Lambert, and 24 $\frac{1}{2}$ miles downstream from point of diversion of Panola-Quitman floodway.

Drainage area.--1,980 sq mi; does not include 2,600 sq mi of Upper Tallahatchie and Yocona Rivers, entire flow of which is diverted through Panola-Quitman floodway.

Gage.--Nonrecording prior to Sept. 4, 1946; recording thereafter. Datum of gage is 123.83 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements. Relation is affected by variable slope.

Bankfull stage.--31 ft.

Remarks.--Flow partly regulated by Arkabutla Reservoir since Aug. 14, 1941. Records for 1936-38 furnished by Corps of Engineers. Records for 1938-58 computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	January 1932	a36.8	-	1947	Jan. 5, 1947	28.98	8,510
1936	Mar. 31, 1936	27.8	4,500	1948	Feb. 18, 1948	32.01	12,400
1937	Jan. 30, 1937	35.5	32,800	1949	Feb. 3, 1949	30.64	9,570
1938	Feb. 6, 1938	33.6	9,320	1950	Jan. 18, 1950	33.16	13,800
1939	Feb. 20, 1939	34.64	15,100	1951	Jan. 18, 1951	30.42	11,900
1940	July 8, 1940	25.98	4,090	1952	Jan. 29, 1952	29.10	10,700
1941	Apr. 27, 1941	24.50	5,590	1953	May 23, 1953	32.68	15,900
1942	Apr. 14, 1942	31.5	15,800	1954	Jan. 23, 1954	26.25	7,680
1943	Mar. 19, 1943	31.27	14,400	1955	Apr. 17, 1955	30.76	12,900
1944	Apr. 3, 1944	30.30	11,400	1956	Feb. 9, 1956	30.81	12,700
1945	Jan. 7, 1945	31.57	12,400	1957	Feb. 3, 1957	30.30	12,500
1946	Jan. 16, 1946	33.50	16,100	1958	May 3, 1958	30.54	11,600

a From floodmark; probably affected by levee breaks above.

2800.5. Tallahatchie River at Shine Turner Bridge, near Lambert, Miss.

Location.--Lat 34°08'37", long 90°13'51", in NE $\frac{1}{4}$ sec.7, T.26 N., R.1 E., Choc-taw meridian, at bridge on county road, 7.1 miles southeast of Lambert and 23 $\frac{1}{2}$ miles downstream from point of diversion of Panola-Quitman floodway.

Drainage area.--1,985 sq mi; does not include 2,600 sq mi of Upper Tallahatchie and Yocona Rivers, entire flow of which is diverted through Panola-Quitman floodway.

Gage.--Nonrecording prior to Jan. 1, 1946; recording thereafter. Datum of gage is 126.49 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Not defined.

Bankfull stage.--26 ft.

Remarks.--Flow partly regulated by Arkabutla Reservoir since Aug. 14, 1941. Only annual peak stages are shown.

Peak stages and discharges of Tallahatchie River at Shine Turner Bridge near Lambert, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	January 1932	32.6	-	1948	Feb. 17, 1948	27.18	-
1939	Feb. 21, 1939	29.5	-	1949	Jan. 7, 1949	26.35	-
1940	Apr. 23, 1940	22.4	-	1950	Jan. 19, 1950	27.96	-
1941	Apr. 27, 1941	19.6	-	1951	Jan. 18, 1951	26.14	-
1942	Apr. 13, 1942	26.8	-	1952	Jan. 30, 1952	24.90	-
1943	Mar. 18, 20, 1943	26.6	-	1953	May 24, 1953	28.00	-
1944	Apr. 1, 1944	26.1	-	1954	Jan. 23, 1954	22.29	-
1945	Mar. 6-7, 1945	26.4	-	1955	Apr. 17, 1955	26.30	-
1946	Jan. 15-18, 1946	28.2	-	1956	Feb. 9, 1956	26.45	-
1947	Jan. 6, 1947	24.82	-	1957	Feb. 5, 1957	26.00	-
				1958	May 3, 1958	26.37	-

2808. Cassidy Bayou near Marks, Miss.

Location.--Lat 34°14'00", long 90°25'42", on line between secs. 5 and 8, T.27 N., R.2 W., Choctaw meridian, at bridge on State Highway 6, 10 miles west of Marks.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to 1948; recording thereafter. Datum of gage is 141.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--20 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	July 8, 1946	12.3	-	1953	May 19, 1953	17.53	-
1947	Jan. 3, 1947	11.92	-	1954	Jan. 22, 1954	10.20	-
1948	Feb. 13, 1948	15.20	-	1955	Mar. 22 to Apr. 13	14.52	-
1949	Jan. 4, 1949	13.39	-	1956	Feb. 4, 1956	15.25	-
1950	Mar. 13, 1950	14.65	-	1957	Feb. 1, 1957	14.60	-
1951	Jan. 3, 1951	12.51	-	1958	May 1, 1958	13.91	-
1952	Dec. 26, 1951	12.6	-				

a Maximum daily.

2809. Cassidy Bayou at Webb, Miss.

Location.--Lat 33°56'59", long 90°20'28", in NW¹/₄ sec. 18, T.24 N., R.1 W., Choctaw meridian, at bridge on State Highway 32 at Webb.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to 1948; recording thereafter. Datum of gage is 127.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected.

Bankfull stage.--18 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Cassidy Bayou at Webb, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	July 13, 1946	13.6	-	1953	May 21, 1953	17.15	-
1947	Jan. 26, 1947	15.05	-	1954	Jan. 25, 1954	11.02	-
1948	Feb. 17, 1948	19.50	-	1955	Apr. 17, 1955	16.13	-
1949	Jan. 9, 1949	17.46	-				
1950	Mar. 17, 1950	18.53	-	1956	Feb. 8, 1956	15.66	-
				1957	Feb. 4, 1957	15.4	-
1951	Jan. 9-10, 1951	16.27	-	1958	May 3, 1958	17.96	-
1952	Jan. 1, 1952	15.08	-				

a Record incomplete.

2810. Tallahatchie River at Swan Lake, Miss.

Location.--Lat 33°52'55", long 90°16'45", in NE¼ sec.10, T.23 N., R.1 W., Choctaw meridian, at bridge on county road, half a mile northeast of Swan Lake, 2 miles downstream from Cassidy Bayou, and 17 miles downstream from point where Panola-Quitman floodway empties into Tallahatchie River.

Drainage area.--5,130 sq mi, approximately.

Gage.--Nonrecording. Prior to Oct. 10, 1934, at datum 2.00 ft higher. Datum of gage is 113.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements; slope affected. Not defined prior to 1930.

Bankfull stage.--26 ft.

Remarks.--Gage-height records prior to 1930 furnished by U. S. Weather Bureau. Records 1930-38 furnished by Corps of Engineers. Records 1938-58 computed by Corps of Engineers and reviewed by Geological Survey. Flow partly regulated by reservoirs since August 1938. Only annual peaks are shown. Gage heights prior to Dec. 21, 1922, too high by varying amounts; maximum error about 0.9 ft.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1907	Dec. 2, 1906	29.3	-	1935	Jan. 31, 1935	34.1	46,000
1911	Apr. 25, 1911	29.9	-	1936	Apr. 13, 1936	27.6	11,600
1914	Apr.19-21, 1914	24.8	-	1937	Feb. 2, 1937	33.8	48,900
1915	Feb. 15, 1915	29.1	-	1938	Apr.11-13, 1938	31.0	19,700
				1939	Feb. 22, 1939	32.97	43,200
1916	Feb. 11, 1916	29.1	-	1940	July 18-20, 1940	b25.15	10,400
1917	Apr. 13, 1917	29.6	-	1941	Dec. 21, 1940	22.41	10,400
1918	May 4, 1918	21.9	-	1942	Apr. 14, 1942	b29.34	24,000
1919	Mar. 26, 1919	29.8	-	1943	Mar. 21, 1943	29.02	21,400
1920	May 3-7, 1920	29.1	-	1944	Apr. 2, 1944	b50.17	27,500
				1945	Jan. 6, 1945	30.79	34,000
1921	Apr.25-27, 1921	29.8	-				
1922	Mar.19-21, 1922	29.2	-	1946	Feb. 14, 1946	c32.03	41,200
1923	May 26, 1923	29.0	-	1947	Jan. 24, 1947	28.27	16,200
1924	Jan.18-20, 1924	28.4	-	1948	Feb. 17, 1948	32.20	43,800
1925	Mar.25-26, 1925	18.9	-	1949	Jan. 9, 1949	30.53	26,500
				1950	Mar. 17, 1950	31.30	33,800
1926	Nov.20-21, 1925	26.4	-				
1927	Mar. 22, 1927	31.8	-	1951	Jan. 8, 1951	d29.38	23,600
1928	May 3-4, 1928	30.6	-	1952	Jan. 1, 1952	28.20	18,600
1929	Mar.29 to Apr. 1	31.7	-	1953	May 21, 1953	29.71	24,100
1930	Jan.27-29, 1930	31.9	20,700	1954	Jan. 26, 1954	b23.75	12,800
				1955	Mar. 26, 1955	e28.67	21,700
1931	(a)	23.2	9,920				
1932	Jan. 15, 1932	35.0	30,000	1956	Feb. 10, 1956	28.28	19,100
1933	Apr. 9, 1933	33.2	49,200	1957	Feb. 5, 1957	b28.02	18,900
1934	Mar.14-16, 1934	27.7	16,200	1958	May 4, 1958	30.40	28,300

a Mar. 13, 14, Apr. 10, 11, 1931.

b Occurred on following day.

c Occurred on preceding day.

d Occurred Feb. 23, 1951.

e Occurred Apr. 17, 1955.

2811. Tallahatchie River (cutoff) near Glendora, Miss.

Location.--Lat 33°50'35", long 90°16'51", in SE $\frac{1}{4}$ sec.22, T.23 N., R.1 W., Choctaw meridian, at bridge on county road, 2 miles northeast of Glendora and 3 miles south of Swan Lake.

Drainage area.--5,135 sq mi.

Gage.--Nonrecording prior to Oct. 6, 1944; recording thereafter. Prior to Oct. 6, 1944, at bridge over old bend at Glendora at present datum. Datum of gage is 112.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Bankfull stage.--30 ft.

Remarks.--Records furnished by Corps of Engineers. Flow regulated by reservoirs upstream since August 1939. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 21, 1940	25.0	-	1950	Mar. 17, 1950	30.91	-
1941	Jan. 7, 1941	22.0	-	1951	Feb. 23, 1951	29.20	-
1942	Apr.15-17, 1942	29.4	-	1952	Jan. 1, 1952	28.08	-
1943	Mar. 22, 1943	29.1	-	1953	May 21, 1953	29.48	-
1944	Apr.3-4, 1944	30.1	-	1954	Jan. 27, 1954	23.52	-
1945	Jan. 7, 1945	30.6	-	1955	Apr. 17, 1955	28.51	-
1946	Feb. 14, 1946	31.5	-	1956	Feb. 10, 1956	28.11	-
1947	Jan. 28, 1947	28.15	-	1957	Feb. 6, 1957	27.9	-
1948	Feb. 17, 1948	31.65	-	1958	May 4, 1958	30.07	-
1949	Jan. 10, 1949	30.25	-				

2815. Tallahatchie River at Phillip, Miss.

Location.--Lat 33°45'30", long 90°12'30", in NE $\frac{1}{4}$ sec.20, T.22 N., R.1 E., Choctaw meridian, at Illinois Central (Y and MV) Railroad bridge at Phillip.

Drainage area.--5,165 sq mi.

Gage.--Nonrecording. Datum of gage is at mean sea level.

Stage-discharge relation.--Defined by current-meter measurements. Rating is affected by variable slope.

Bankfull stage.--135 ft.

Remarks.--Records for 1932 and 1937 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Mar.24-28, 1909	136.8	21,000	1913	Feb.1-7, 1913	138.2	-
1910	July 24-27, 1910	134.3	14,800	1932	January 1932	141.2	-
1911	Apr.28-30, 1911	138.6	25,600				
1912	Apr.5-6, 1912	139.0	28,600	1937	Jan. 14, 1937	135.11	12,500

2815.5. Tallahatchie River near Minter City, Miss.

Location.--Lat 33°45'10", long 90°17'00", in SE $\frac{1}{4}$ sec.22, T.22 N., R.1 W., Choctaw meridian, at county road bridge half a mile east of Minter City.

Drainage area.--Not determined.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Flow regulated by reservoirs since 1939. Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Tallahatchie River near Minter City, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan. 16, 1932	140.0	-	1944	Apr. 3, 1944	138.1	-
1933	Apr. 10, 1933	139.2	-	1945	Jan. 9, 1945	138.0	-
1935	February 1935	137.2	-	1946	Feb. 15, 1946	139.1	-
1937	Feb. 3, 1937	138.9	-	1947	Jan. 28, 1947	136.8	-
1938	Apr. 15, 1938	135.7	-	1948	Feb. 18, 1948	138.8	-
1939	Feb. 25, 1939	137.1	-	1949	Jan. 12, 1949	138.5	-
1940	July 21, 1940	129.8	-	1950	Mar. 18, 1950	138.2	-
				1951	Feb. 16, 1951	137.0	-
1941	Jan. 7, 1941	126.8	-	1953	May 22, 1953	136.8	-
1942	Apr. 17, 1942	134.7	-				
1943	Mar. 24, 1943	134.4	-				

2816. Tallahatchie River at Money, Miss.

Location.--Lat 33°39'04", long 90°12'40", in SE $\frac{1}{4}$ sec.29, T.21 N., R.1 E., Choctaw meridian, at bridge on county road at Money.

Drainage area.--Not determined.

Gage.--Nonrecording. Datum of gage is 98.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Bankfull stage.--27 ft.

Remarks.--Flow regulated by reservoirs. Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 19, 1948	36.90	-	1954	Jan. 27, 1954	23.80	-
1949	Jan. 11, 1949	36.40	-	1955	Apr. 16, 1955	31.39	-
1950	Mar. 20, 1950	36.25	-	1956	Feb. 25, 1956	29.82	-
1951	Apr. 5, 1951	35.36	-	1957	Feb.5-9, 1957	29.4	-
1952	Jan. 5, 1952	30.85	-	1958	May 7, 1958	33.15	-
1953	May 22-23, 1953	33.48	-				

2820. Yalobusha River at Calhoun City, Miss.

Location.--Lat 33°50'20", long 89°18'55", in SE $\frac{1}{4}$ sec.23, T.23 N., R.9 E., Choctaw meridian, at bridge on State Highway 9 over Yalobusha River Canal, three-quarters of a mile upstream from Topashaw Creek, 1.2 miles south of Calhoun City, $\frac{1}{2}$ miles upstream from Old Channel and $\frac{3}{4}$ miles upstream from Topashaw Creek Canal. Records include flow in Topashaw Canal and all supplemental channels.

Drainage area.--305 sq mi (combined drainage area of all channels).

Gage.--Nonrecording prior to Nov. 15, 1950; recording thereafter. Datum of gage is 236.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to shifting.

Bankfull stage.--12 ft.

Remarks.--Gage-height records 1949-50 furnished by Corps of Engineers. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges of Yalobusha River at Calhoun City, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 4, 1949	a14.35	-	1955	Mar. 22, 1955	14.19	21,900
1950	Feb. 14, 1950	a13.42	-		Apr. 13, 1955	13.45	14,800
1951	Jan. 4, 1951	14.06	15,300	1956	Feb. 4, 1956	12.57	8,600
	Feb. 2, 1951	13.36	10,000		Apr. 6, 1956	12.14	6,550
	Feb. 7, 1951	12.34	6,730	1957	Feb. 1, 1957	11.54	9,530
	Mar. 29, 1951	15.22	23,000				
1952	Dec. 21, 1951	12.07	4,570	1958	Nov. 14, 1957	13.78	17,100
					Nov. 19, 1957	13.05	10,200
1953	Feb. 21, 1953	13.38	13,100		Apr. 27, 1958	12.31	6,030
					Apr. 29, 1958	13.34	12,300
1954	Jan. 16, 1954	b11.29	3,760		May 2, 1958	12.83	8,420

a Annual peak only.

b Occurred May 5, 1954.

2825. Yalobusha River at Graysport, Miss.

Location.--Lat 33°49', long 89°37', in E $\frac{1}{2}$ sec.36, T.23 N., R.6 E., Choctaw meridian, on left bank at downstream side of bridge on State Highway 8 (old), half a mile north of Graysport, half a mile downstream from Butputter Creek, $4\frac{1}{2}$ miles upstream from Redgrass Creek, 11 miles east of Grenada, and 11 $\frac{1}{4}$ miles upstream from Skuna River.

Drainage area.--607 sq mi.

Gage.--Recording. Datum of gage is 179.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 42,000 cfs.

Bankfull stage.--22 ft.

Remarks.--Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 19, 1940	24.76	18,500	1946	Feb. 10, 1946	25.35	18,600
	July 10, 1940	23.73	9,670				
1941	Dec. 17, 1940	23.54	8,470	1947	Jan. 3, 1947	24.65	14,100
					Jan. 20, 1947	23.81	9,400
1942	Nov. 23, 1941	23.63	8,940		Apr. 12, 1947	25.89	21,600
1943	Mar. 14, 1943	23.44	7,840	1948	Feb. 13, 1948	28.25	46,800
1944	Mar. 29, 1944	27.00	34,300	1949	Nov. 29, 1948	23.94	9,650
					Jan. 5, 1949	27.56	35,600
1945	Mar. 5, 1945	24.39	14,800		Jan. 24, 1949	24.57	12,400
					Mar. 28, 1949	26.00	20,700
1946	Jan. 9, 1946	25.52	19,200				

2830. Skuna River at Bruce, Miss.

Location.--Lat 33°58', long 89°21', in SW $\frac{1}{4}$ sec.6, T.13 S., R.1 W., Chickasaw meridian, at bridge on State Highway 9, 1 mile south of Bruce.

Drainage area.--254 sq mi.

Gage.--Recording. Datum of gage is 239.70 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 19,000 cfs and extended on basis of an incomplete current-meter measurement and estimate of flow over road and through bridge openings by indirect methods.

Bankfull stage.--20 ft.

Historical data.--The flood of Mar. 21, 1955, was the highest known, from information by local residents.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 17, 1948	-	6,500	1953	Feb. 21, 1953	20.83	9,480
	Apr. 13, 1948	20.0	6,150		Mar. 23, 1953	20.30	7,500
1949	Nov. 19, 1948	20.90	10,200	1954	Apr. 30, 1953	18.85	5,210
	Nov. 28, 1948	19.60	5,460		May 5, 1953	18.65	5,050
	Jan. 5, 1949	21.14	11,900	1955	Feb. 20, 1954	18.96	5,400
	Jan. 22, 1949	19.32	5,100		Dec. 28, 1954	18.74	5,150
	Feb. 4, 1949	19.48	5,330	1956	Mar. 21, 1955	24.11	61,400
	Mar. 27, 1949	20.69	8,820		Apr. 13, 1955	21.46	14,600
1950	Jan. 6, 1950	20.31	7,350	1957	May 29, 1955	20.66	8,650
	Feb. 2, 1950	19.94	6,280		Feb. 4, 1956	19.94	6,730
	Feb. 14, 1950	20.2	7,050	1958	Apr. 6, 1956	20.85	9,480
	Mar. 14, 1950	20.63	8,650		Apr. 30, 1956	21.21	11,600
	Aug. 31, 1950	20.19	7,050	1959	Jan. 28, 1957	18.60	5,780
1951	Jan. 3, 1951	21.23	11,900		Feb. 1, 1957	20.53	9,250
	Feb. 1, 1951	20.58	8,450	1960	Apr. 4, 1957	18.99	7,100
	Feb. 7, 1951	20.04	6,850		Apr. 8, 1957	18.83	5,940
	Mar. 29, 1951	21.62	17,800	1961	Nov. 18, 1957	19.40	10,300
	Apr. 22, 1951	19.90	6,650		Apr. 29, 1958	19.60	10,600
1952	Dec. 20, 1951	19.41	5,800	1962	Sept. 20, 1958	19.78	10,800
	Dec. 26, 1951	20.48	8,050				
	Mar. 11, 1952	19.62	6,160				

a Maximum daily discharge.

2835. Skuna River near Coffeetown, Miss.

Location.--Lat 33°34'35", long 89°38'30", in NW $\frac{1}{4}$ sec.35, T.24 N., R.6 E., Choc-taw meridian, at bridge on county road, 1 mile south of Gums, $3\frac{1}{4}$ miles upstream from Turkey Creek, 5 miles south of Coffeetown, and $9\frac{1}{4}$ miles upstream from mouth.

Drainage area.--435 sq mi.

Gage.--Recording. Datum of gage is 188.46 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended on basis of area-velocity studies.

Bankfull stage.--19 ft.

Historical data.--Flood of Apr. 20, 1940, was highest in at least 12 years, from information by local residents.

Remarks.--Base for partial-duration series, 7,000 cfs.

Peak stages and discharges of Skuna River near Coffeerville, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Mar. 15, 1940	18.98	7,100	1946	Jan. 9, 1946	21.07	16,500
	Apr. 20, 1940	20.58	16,100		Feb. 10, 1946	20.88	15,600
1941	Dec. 17, 1940	19.78	10,300		Mar. 30, 1946	20.01	10,600
				1947	Jan. 4, 1947	20.23	10,700
Mar. 19, 1942	19.46	8,350	Apr. 12, 1947		20.87	14,400	
1942	Apr. 10, 1942	19.25	7,350	1948	Feb. 14, 1948	22.15	31,000
	1943	Mar. 14, 1943	19.76		10,000	Mar. 18, 1948	20.19
Apr. 14, 1948						19.91	8,900
1944	Feb. 28, 1944	20.02	12,200	1949	Nov. 20, 1948	20.90	14,600
	Mar. 29, 1944	23.22	44,000		Jan. 4, 1949	21.75	25,000
	Apr. 12, 1944	19.23	8,140		Mar. 28, 1949	20.50	10,900
1945	Jan. 2, 1945	19.62	9,910				
	Mar. 5, 1945	20.16	10,700				

2850. Yalobusha River at Grenada Dam, near Grenada, Miss.

(Published as "at Grenada Dam Site near Grenada" prior to June 30, 1953)

Location.--Lat 33°48'31", long 89°46'14", in SE $\frac{1}{4}$ sec.33, T.23 N., R.5 E., Choc-taw meridian, in gatehouse of Grenada Dam, $2\frac{1}{4}$ miles upstream from Batupan Creek and 3 miles northeast of Grenada.

Drainage area.--1,320 sq mi.

Gage.--Nonrecording prior to Dec. 19, 1953; recording thereafter. Prior to July 1, 1953, at datum 6.00 ft lower. Datum of gage is 160.00 ft above mean sea level, datum of 1929. Alluvial Valley supplementary adjustments of 1941 and 1944 (levels by Corps of Engineers).

Stage-discharge relation.--Not defined.

Bankfull stage.--21 ft, former datum.

Remarks.--Flow completely regulated by Grenada Reservoir since June 1953. Gage-height records prior to 1954 furnished by Corps of Engineers; discharge since this date computed by Corps of Engineers and reviewed by Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 11, 1938	24.9	-	1949	Jan. 5, 1949	34.50	-
1939	Apr. 1, 1939	28.2	-	1950	Mar. 15, 1950	30.70	-
1940	Apr. 21, 1940	29.7	-	1951	Mar. 30, 1951	33.76	-
1941	Dec. 18, 1940	27.7	-	1952	Mar. 14, 1952	25.30	-
1942	Nov. 25, 1941	26.4	-	1953	Feb. 23, 1953	33.00	-
1943	Mar. 15-16, 1943	27.4	-	1954	Mar. 9, 1954	-	3,790
1944	Mar. 30, 1944	34.5	-	1955	Mar. 31, 1955	-	3,990
1945	Mar. 5-6, 1945	29.4	-	1956	May 7-8, 1956	-	3,120
1946	Jan. 10, Feb. 11	31.1	-	1957	Sept. 19, 1957	-	3,020
1947	Apr. 12, 1947	31.50	-	1958	Jan. 3, 1958	-	4,880
1948	Feb. 14, 1948	35.3	-				

a Maximum daily.

Note.--Cofferdam closure made June 30, 1953. Peak discharges for 1954-58 computed by Corps of Engineers as peak inflow.

2855. Yalobusha River at Grenada, Miss.

Location.--Lat 33°47'19", long 89°48'36", in NE $\frac{1}{4}$ sec.7, T.22 N., R.5 E., Choctaw meridian, at bridge on U. S. Highway 51, in Grenada, 0.8 mile downstream from Illinois Central Railroad bridge and 1 mile downstream from Batupan River.

Drainage area.--1,550 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 30, 1944; recording thereafter. Prior to July 23, 1934, at site 0.1 mile downstream. Datum of gage is 152.03 ft above mean sea level, datum of 1929, supplementary adjustments of 1941 and 1944.

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to shifts.

Bankfull stage.--20 ft.

Remarks.--Regulated by Grenada Reservoir since June 1953. Records for 1932-38 furnished by Corps of Engineers. Records computed by Corps of Engineers and reviewed by Geological Survey since 1938. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	May 27, 1909	24.6	a15,900	1942	Nov. 23, 1941	25.35	16,100
1910	July 9, 1910	25.7	a17,600	1943	Mar. 16, 1943	25.65	16,000
				1944	Mar. 29, 1944	30.53	76,800
1911	Apr. 22, 1911	25.4	a17,000	1945	Mar. 4, 1945	27.24	29,000
1929	Mar. 25, 1929	25.42	17,800	1946	Jan. 10, 1946	28.40	38,500
1930	May 20, 1930	27.49	33,700	1947	Apr. 11, 1947	29.35	50,100
				1948	Feb. 14, 1948	30.78	78,900
1931	Apr. 1, 1931	20.64	5,180	1949	Jan. 5, 1949	30.30	61,600
1932	Jan. 13, 1932	28.40	46,000	1950	Mar. 15, 1950	27.88	32,600
1933	Dec. 14, 1932	26.90	29,200				
1934	Mar. 6, 1934	24.34	10,300	1951	Mar. 30, 1951	29.72	56,400
1935	Mar. 12, 1935	26.33	24,100	1952	Dec. 21, 1951	24.60	9,800
				1953	Feb. 23, 1953	25.71	26,600
1936	Apr. 9, 1936	24.68	12,100	1954	Feb. 20, 1954	19.91	7,800
1937	Jan. 25, 1937	25.43	17,700	1955	Apr. 13, 1955	b24.82	18,600
1938	Apr. 12, 1938	24.10	9,300				
1939	Mar. 30, 1939	26.30	20,700	1956	Feb. 4, 1956	20.36	9,300
1940	Apr. 21, 1940	27.26	29,100	1957	Apr. 4, 1957	20.4	9,300
				1958	Nov. 14, 1957	22.10	12,000
1941	Dec. 18, 1940	26.16	19,200				

a Maximum daily.

b Occurred Mar. 21, 1955.

2860. Askalmore Creek near Charleston, Miss.

Location.--Lat 33°55'05", long 90°04'10", in SE $\frac{1}{4}$ sec.27, T.24 N., R.2 E., Choctaw meridian, at bridge on county highway from Charleston to Holcomb, 0.4 mile downstream from Shook Creek, 1.4 miles downstream from Young Creek, 6.5 miles south of Charleston, and 12.2 miles upstream from mouth.

Drainage area.--31.0 sq mi.

Gage.--Nonrecording prior to Sept. 3, 1941; recording Sept. 3, 1941, to Sept. 30, 1942, and May 20, 1946, to Mar. 24, 1948; crest-stage gage Nov. 1, 1951, to February 1957; recording thereafter. Datum of gage is 161.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Prior to May 20, 1946, at datum 0.45 ft lower.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Gage-height records for 1947-48, 1957-58, furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Askalmore Creek near Charleston, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Aug. 1, 1941	10.5	a5,350	1953	Feb. 20, 1953	13.33	8,200
1942	May 14, 1942	12.9	8,420	1954	May 27, 1954	15.8	11,700
				1955	Mar. 21, 1955	14.8	10,400
1947	Apr. 11, 1947	14.8	10,300				
1948	Feb. 12, 1948	11.90	a6,400	1956	Feb. 4, 1956	13.05	7,800
				1957	Apr. 4, 1957	16.10	12,200
1952	Apr. 24, 1952	12.83	7,500	1958	Nov. 16, 1957	15.6	11,500

a Record incomplete; probable yearly peak.

2862. Yalobusha River at Whaley, Miss.

Location.--Lat 33°37'33", long 90°06'27", in NE $\frac{1}{4}$ sec.5, T.20 N., R.2 E., Choctaw meridian, at bridge on county road at Whaley, 10.2 miles upstream from mouth.

Drainage area.--1,960 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1947; recording thereafter. Datum of gage is 107.80 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Relation affected by slope.

Bankfull stage.--21 ft.

Remarks.--Records furnished by Corps of Engineers. Flow partially regulated by Grenada Reservoir since June 30, 1953. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr.16-17, 1938	a24.5	8,290	1949	Jan.8-9, 1949	27.44	33,500
1939	Feb.28 to Mar.6	26.3	20,000	1950	Mar. 20, 1950	27.09	30,200
1940	Apr.25, July 19	23.4	8,170				
1941	Dec. 24, 1940	22.65	7,810	1951	Apr. 3, 1951	27.19	26,200
1942	Apr.18-19, 1942	23.4	6,620	1952	Jan. 4, 1952	23.58	6,740
1943	Mar. 21, 1943	23.78	7,230	1953	May 21, 1953	25.13	11,100
1944	Apr.1-2, 1944	27.7	32,600	1954	May 3, 1954	21.15	6,260
1945	Mar. 9-11, 1945	27.0	28,000	1955	Apr. 15, 1955	23.62	10,200
				1956	Feb. 4, 1956	21.89	8,200
1946	Feb.14-16, 1946	27.6	44,100	1957	Feb. 1, 1957	22.75	8,200
1947	Apr. 17, 1947	26.20	19,800	1958	May 5, 1958	24.35	12,600
1948	Feb. 18, 1948	27.79	72,600				

a Occurred on different date than peak discharge.

2865. Thompson Creek at McCarley, Miss.

Location.--Lat 33°31'25", long 89°50'40", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.19 N., R.4 E., Choctaw meridian, at county road 0.6 mile west of McCarley.

Drainage area.--14.4 sq mi.

Gage.--Recording. Datum of gage is 251.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs.

Bankfull stage.--13 ft.

Remarks.--Peak stage data prior to October 1956, from records furnished by U. S. Department of Agriculture, Soil Conservation Service. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Thompson Creek at McCarley, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Aug. 28, 1950	12.58	a3,000	1955	Mar. 21, 1955	12.72	3,070
1951	Jan. 3, 1951	11.76	2,440	1955	Apr. 12, 1955	14.05	3,980
	Mar. 27, 1951	12.96	3,280		Feb. 4, 1956	10.58	1,940
1952	Dec. 20, 1951	12.42	2,860	1957	Dec. 13, 1956	11.68	2,270
1953	Feb. 20, 1953	11.26	2,180	1958	Jan. 4, 1957	12.06	2,420
1954	Apr. 29, 1954	10.84	2,000		June 20, 1958	11.49	2,190

a Record incomplete; probable yearly maximum.

2867. Big Sand Creek at Carrollton, Miss.

Location.--Lat 33°30'50", long 89°55'10", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.19 N., R.4 E., Choctaw meridian, at bridge between Carrollton and North Carrollton.

Drainage area.--74.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is 197.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 11, 1947	a23	-	1955	Apr. 12, 1955	17.78	22,500
1952	Dec. 20, 1951	17.64	22,000	1956	Feb. 4, 1956	14.2	9,000
1953	Feb. 20, 1953	16.97	18,800	1957	Dec. 12, 1956	15.94	14,000
1954	May 3, 1954	16.17	15,500	1958	-	12.3	5,000

a From information by Corps of Engineers.

2868. Big Sand Creek at Valley Hill, Miss.

Location.--Lat 33°31'07", long 90°02'58", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.19 N., R.2 E., Choctaw meridian, at bridge on Columbus and Greenville Railway at Valley Hill, 8 miles east of Greenwood.

Drainage area.--110 sq mi.

Gage.--Recording. Datum of gage is 148.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Poorly defined by current-meter measurements below 19,000 cfs. Relation subject to large shifts.

Bankfull stage.--25 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Discharge computed from rating curves based on Corps of Engineers measurements. Base for partial-duration series, 12,500 cfs.

Peak stages and discharges of Big Sand Creek at Valley Hill, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 11, 1947	21.91	33,000	1954	May 1, 1954	12.75	15,000
1948	Feb. 13, 1948	15.4	20,000	1955	Mar. 21, 1955	14.9	19,000
1949	Jan. 3, 1949	19.0	28,000		Apr. 12, 1955	16.43	22,100
1950	Mar. 12, 1950	11.9	13,000	1956	Feb. 4, 1956	12.2	13,600
	Aug. 29, 1950	11.7	12,700		Mar. 13, 1956	12.3	13,800
	Sept. 17, 1950	13.40	16,000	1957	Dec. 13, 1956	14.44	18,100
1951	Jan. 3, 1951	12.2	13,600		Jan. 4, 1957	13.85	16,800
1952	Mar. 10, 1952	10.35	10,000		Apr. 4, 1957	11.7	12,700
1953	Feb. 20, 1953	15.20	19,600	1958	Nov. 14, 1957	11.8	12,800
					Nov. 18, 1957	11.6	12,500
					Sept. 21, 1958	13.86	17,000

2870. Yazoo River at Greenwood, Miss.

Location.--Lat 33°31'17", long 90°11'03", in SW $\frac{1}{4}$ sec. 10, T. 19 N., R. 1 E., Choc-taw meridian, at bridge on U. S. Highways 49E and 82 in Greenwood, 0.4 mile downstream from Palusha Bayou, and 3 miles downstream from confluence of Tallahatchie and Yalobusha Rivers.

Drainage area.--7,450 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 1, 1940; recording thereafter. Datum of gage was at mean sea level 1908-12. Datum of present gage is 92.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Relation is affected by slope.

Bankfull stage.--35 ft.

Remarks.--Gage-height records 1904-7, 1913-27, furnished by U. S. Weather Bureau. Records 1928-38 furnished by Mississippi River Commission. Records since 1938 computed by Corps of Engineers and reviewed by Geological Survey. Flow partly regulated by reservoirs since August 1939. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	-	a41.2	-	1921	Apr. 27-28, 1921	37.3	-
1905	Feb. 23, 1905 ^b	29.6	-	1922	Mar. 22, 1922	35.6	-
1906	Apr. 9, 1906	21.3	-	1923	May 30-31, 1923	34.3	-
1907	Dec. 14, 1906	32.6	-	1924	Jan. 18, 1924	32.0	-
1908	Feb. 26-27, 1908	124.5	29,800	1925	Mar. 28, 1925	22.0	-
1909	Mar. 27-28, 1909	122.72	27,200	1926	Nov. 19-20, 1925	30.0	-
1910	July 21-23, 1910	119.3	22,700	1927	Jan. 2-3, 1927	38.4	-
1911	May 1-2, 1911	128.9	36,300	1928	May 4-6, 1928	32.5	31,000
1912	Apr. 6-7, 1912	130.7	39,000	1929	Mar. 31 to Apr. 5	32.2	28,000
1913	Feb. 11, 1913	35.8	-	1930	May 29, 1930	34.2	27,200
1914	Apr. 14, 1914 ^b	26.6	-	1931	Apr. 11-12, 1931	22.0	12,800
1915	Feb. 23-25, 1915	32.7	-	1932	Jan. 19-20, 1932	40.10	72,900
1916	Feb. 13, 1916 ^b	31.4	-	1933	Apr. 14-17, 1933	38.1	41,000
1917	Apr. 17, 1917 ^b	35.4	-	1934	Mar. 16-18, 1934	26.0	17,100
1918	May 1-2, 1918	19.2	-	1935	Mar. 19-21, 1935	35.6	31,200
1919	Apr. 2, 1919	34.7	-	1936	Apr. 16, 1936	c27.1	19,300
1920	May 7-8, 1920	36.9	-	1937	Feb. 9, 1937	36.4	33,200
				1938	Apr. 18-20, 1938	c32.7	24,600

a Caused by overflow from Mississippi River.

b And also on later dates.

c Occurred on following day.

YAZOO RIVER BASIN

Peak stages and discharges of Yazoo River at Greenwood, Miss.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 11-12, 1939	35.9	31,000	1949	Jan. 10, 1949	g38.84	41,400
1940	July 22-23, 1940	25.74	19,800	1950	Mar. 21, 1950	38.67	41,800
1941	(d)	e23.70	16,900	1951	Apr. 5, 1951	c36.92	35,200
1942	Apr. 20, 1942	29.72	24,800	1952	Jan. 4, 1952	h29.33	20,900
1943	Mar. 23-24, 1943	f30.03	24,400	1953	May 22, 1953	33.71	26,800
1944	Apr. 4, 1944	38.47	45,700	1954	May 5, 1954	24.16	15,400
1945	Mar. 13, 1945	37.06	36,900	1955	Apr. 15, 1955	c32.31	23,600
1946	Feb. 17, 1946	39.78	48,900	1956	Feb. 22, 1956	19.74	22,300
1947	Apr. 19, 1947	c35.72	30,500	1957	Feb. 4, 1957	29.15	22,000
1948	Feb. 21, 1948	39.99	50,400	1958	May 10, 1958	34.15	28,200

c Occurred on following day.

d Dec. 24-25, 27, 1940.

e Occurred Dec. 28, 1940.

f Occurred Mar. 27, 1943.

g Occurred Jan. 12, 1949.

h Occurred Jan. 6, 1952.

2873. Yazoo River at Belzoni, Miss.

Location.--Lat 33°10'25", long 90°29'17", in SE $\frac{1}{4}$ sec. 3, T.15 N., R.3 W., Choc-taw meridian, at bridge on State Highway 12 at Belzoni.

Drainage area.--7,830 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1949; recording thereafter. Datum of gage is 76.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected.

Bankfull stage.--34 ft.

Remarks.--Records furnished by Corps of Engineers. Flow partly regulated by reservoirs since August 1939. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan. 27-30, 1932	37.9	-	1948	Mar. 22, 1948	36.90	-
				1949	Jan. 24, 1949	37.00	-
1937	Feb. 23-28, 1937	36.3	-	1950	Mar. 28, 1950	36.97	-
1940	July 25-27, 1940	27.6	-	1951	Apr. 11, 1951	36.29	-
1941	(a)	26.8	-	1952	Apr. 5, 1952	31.71	-
1942	Apr. 21, 24-29	31.3	-	1953	May 28, 1953	34.55	-
1943	Apr. 4, 7, 10, 1943	29.6	-	1954	May 7, 1954	26.68	-
1944	Apr. 20, May 6	35.8	-	1955	Apr. 21, 1955	34.02	-
1945	Apr. 2-5, 1945	36.6	-	1956	Mar. 18, 1956	31.90	-
1946	Feb. 20 to Mar. 2	37.2	-	1957	Feb. 12-22, 1957	29.90	-
1947	Apr. 30, 1947	34.40	-	1958	May 16-17, 1958	34.53	-

a Dec. 30-31, 1940, Jan. 10, 1941.

2873.55. Fannegusha Creek near Howard, Miss.

Location.--Lat 33°08'15", long 90°11'40", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.15 N., R.1 E., Choctaw meridian, at steel girder bridge on county road, 1 mile north of Howard and 3.2 miles southeast of Tchula.

Drainage area.--103 sq mi.

Gage.--Crest-stage gage. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Poorly defined by current-meter measurements. Subject to large shifts.

Bankfull stage.--142 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 29, 1953	137.7	35,000	1956	Feb. 4, 1956	138.80	15,000
1954	Jan. 20, 1954	131.7	1,100	1957	Dec. 12, 1956	138.84	8,600
1955	Apr. 12, 1955	142.10	37,000	1958	Nov. 14, 1957	140.64	14,000

2874.8. Piney Creek near Yazoo City, Miss.

Location.--Lat 32°54'25", long 90°22'55", in NE $\frac{1}{4}$ sec.10, T.12 N., R.2 W., Choctaw meridian, at bridge on U. S. Highway 49E, 75 ft upstream from Illinois Central Railroad, 3 miles upstream from mouth, and 3 miles northeast of north city limits of Yazoo City.

Drainage area.--70 sq mi.

Gage.--Crest-stage gage. Datum of gage is at mean sea level.

Stage-discharge relation.--Poorly defined by current-meter measurements below 10,000 cfs. Subject to large shifts.

Bankfull stage.--110 ft.

Historical data.--According to local engineers, the flood of Mar. 28, 1951, reached an elevation of 119.3 ft upstream from main channel bridge and an elevation of 117 ft downstream from bridge, from floodmark. Local residents report that greatest flood known occurred Aug. 9, 1942, exceeding that of 1951.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 29, 1953	114.52	13,000	1956	Feb. 4, 1956	113.9	10,500
1954	May 3, 1954	112.40	3,500	1957	Dec. 12, 1956	114.05	11,000
1955	Apr. 12, 1955	114.43	12,400	1958	Sept. 22, 1958	114.23	11,700

a From information by Corps of Engineers.

2875. Yazoo River near Yazoo City, Miss.

Location.--Lat 32°51'29", long 90°26'07", in E $\frac{1}{2}$ sec.30, T.12 N., R.2 W., Choc-taw meridian, at bridge on U. S. Highway 49 West, 1.2 miles upstream from Topeka Bayou, $1\frac{1}{2}$ miles northwest of Yazoo City, and 3.9 miles upstream from old U. S. Highway 49 bridge.

Drainage area.--8,900 sq mi, approximately.

Gage.--Nonrecording. Prior to Aug. 1, 1956, at site 3.9 miles downstream and prior to Oct. 11, 1934, at datum 6.0 ft higher. Datum of present gage is 67.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Affected by slope.

Bankfull stage.--32 ft at present site and 29 ft at former site and present datum.

Remarks.--Flow partly regulated by reservoirs since August 1939. Records furnished by U. S. Weather Bureau. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	-	36.5	-	1922	(c)	31.9	-
1886	May 9, 1886	ab22.4	-	1923	Apr. 25, 1923	30.3	-
1887	May 20, 1887	a23.8	-	1924	Feb. 4-5, 1924	26.0	-
1888	Apr. 24, 1888	a23.9	-	1925	Mar. 20, 1925	16.6	-
1889	Feb. 11, 1889	a18.5	-	1926	Nov. 19, 1925	18.1	-
1890	Apr. 27, 1890	28.9	-	1927	May 5, 1927	37.4	-
1891	Mar. 9, 1891	29.0	-	1928	May 21, 1928	26.0	-
1892	Apr. 29, 1892	a27.4	-	1929	May 1, 1929	29.7	-
1893	May 23, 1893	a25.6	-	1930	Feb. 7-8, 1930	24.2	-
1894	Apr. 10, 1894	a24.5	-	1931	Apr. 18, 1931	13.8	-
1895	Apr. 1, 1895	a18.9	-	1932	Feb. 21, 1932	32.0	-
1896	Apr. 14, 1896	a21.4	-	1933	May 6-7, 1933	31.2	-
1897	Apr. 27, 1897	a31.5	-	1934	Mar. 8, 1934	23.5	-
1898	Apr. 26, 1898	a24.4	-	1935	Apr. 11, 1935	36.3	-
1899	Apr. 9, 1899	a25.8	-	1936	Apr. 30, 1936	28.2	-
1900	Apr. 30, 1900	23.0	-	1937	Feb. 24, Mar. 1	37.1	-
1901	Jan. 11, 1901	18.3	-	1938	Apr. 28-30, May 1	30.5	-
1902	Apr. 21-22, 1902	26.6	-	1939	Apr. 26, May 8	33.1	-
1903	Apr. 5-8, 1903	28.7	-	1940	May 3, 1940	24.6	-
1904	Apr. 26-29, 1904	22.6	-	1941	Dec. 28, 1940	22.9	-
1905	Mar. 20, 1905	a21.5	-	1942	Apr. 25-30, 1942	28.3	-
1906	Apr. 27, 1906	a22.6	-	1943	Apr. 10, 1943	28.1	-
1907	Feb. 14, 1907	a26.1	-	1944	May 5, 1944	34.1	-
1908	Mar. 24, 1908	26.0	-	1945	Apr. 4-13, 1945	35.8	-
1909	Apr. 3, 1909	a25.9	-	1946	Feb. 10, 1946	37.0	-
1910	Aug. 1, 1910	a19.1	-	1947	May 1-4, 1947	31.4	-
1911	May 12, 1911	a25.1	-	1948	Mar. 19-20, 1948	35.65	-
1912	Apr. 17, 1912	30.4	-	1949	Feb. 10, 1949	36.22	-
1913	May 2, 1913	a29.8	-	1950	Mar. 14, 1950	36.32	-
1914	Apr. 29, 1914	21.5	-	1951	Mar. 28, 1951	36.9	-
1915	Mar. 5, 1915	25.2	-	1952	Apr. 13, 1952	29.28	-
1916	Feb. 18, 1916	29.9	-	1953	May 30, 1953	31.96	-
1917	Apr. 29, 1917	29.6	-	1954	May 7, 1954	23.60	-
1918	Apr. 30, May 5-10	14.4	-	1955	Apr. 13, 1955	33.34	-
1919	Apr. 17, 1919	a28.9	-	1956	Mar. 16, 1956	30.4	-
1920	May 19-21, 1920	31.0	-	1957	Feb. 19-21, 1957	28.2	-
1921	May 3, 4, 10-13	30.8	-	1958	May 22, 1958	34.29	-

a Also on later dates.

b May have been exceeded during period of missing record.

c Apr. 29-30, May 1, 4-6, 1922.

2876. Yazoo River at Sartartia, Miss.

Location.--Lat 32°40'22", long 90°32'54", in NW $\frac{1}{4}$ sec.31, T.10 N., R.3 W., Choc-taw meridian, at bridge on county road at Sartartia.

Drainage area.--9,020 sq mi.

Gage.--Nonrecording. Datum of gage is 60.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected.

Bankfull stage.--35 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 9, 1929	42.1	-	1944	May 12-18, 1944	35.8	-
1930	Feb. 5, 1930	34.1	-	1945	Apr.12-18, 1945	38.6	-
1931	Apr. 22, 1931	21.9	-	1946	Feb.27,Mar. 4	37.0	-
1932	Mar.1-5, 1932	40.8	-	1947	May 1-3, 1947	32.41	-
1933	May 5, 1933	38.9	-	1948	Apr. 17, 1948	35.97	-
1934	Apr.13-14, 1934	24.9	-	1949	Feb. 19, 1949	37.22	-
1935	Apr. 13, 1935	38.2	-	1950	Mar. 13, 1950	38.45	-
1936	Apr. 29, 1936	32.5	-	1951	Mar. 28, 1951	38.29	-
1937	Feb.21-24, 1937	43.0	-	1952	Apr.15-16, 1952	31.65	-
1938	Apr.25-26, 1938	32.9	-	1953	May 28-29, 1953	32.75	-
1939	Apr.4,6-7, 1939	34.8	-	1954	May 8, 1954	24.70	-
1940	May 4-5, 1940	25.9	-	1955	Apr. 13, 1955	35.43	-
1941	Dec. 28, 1940	21.3	-	1956	Feb. 20, 1956	31.05	-
1942	Apr. 24, 1942	30.4	-	1957	May 10-12, 1957	30.3	-
1943	June 9-12, 1943	31.8	-	1958	May 24, 1958	35.57	-

2880. Sunflower River at Clarksdale, Miss.

Location.--Lat 34°12'00", long 90°34'30", in E $\frac{1}{2}$ sec.23, T.27 N., R.4 W., Choc-taw meridian, at Second Street bridge in Clarksdale, approximately 1,200 ft upstream from Yazoo and Mississippi Valley Railroad bridge and $\frac{1}{2}$ miles downstream Little Sunflower River.

Drainage area.--106 sq mi.

Gage.--Nonrecording prior to January 1949; recording thereafter. Prior to Dec. 10, 1946, at site 2 blocks downstream at same datum. Datum of gage is 131.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected.

Bankfull stage.--38 ft.

Historical data.--A discharge of 4,620 cfs was measured Feb. 16, 1909.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

YAZOO RIVER BASIN

Peak stages and discharges of Sunflower River at Clarksdale, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 25, 1938	15.5	-	1949	Jan. 4, 1949	15.95	-
1939	Mar. 31, 1939	16.0	-	1950	Jan. 16, 1950	18.96	-
1940	Apr. 20, 1940	9.8	-				
				1951	Jan. 5, 1951	16.04	-
1941	Apr. 25, 1941	11.2	-	1952	Jan. 28, 1952	12.77	-
1942	Apr. 11, 1942	17.9	-	1953	May 20, 1953	19.99	-
1943	Mar. 14, 1943	16.5	-	1954	Jan. 23, 1954	13.03	-
1944	Mar. 30, 1944	15.8	-	1955	Mar. 23, 1955	17.64	-
1945	Jan. 1, 1945	16.2	-				
				1956	Feb. 6, 1956	18.94	-
1946	Jan. 12, 1946	21.2	-	1957	Feb. 3, 1957	17.98	-
1947	Jan. 4, 1947	14.42	-	1958	May 3, 1958	20.78	-
1948	Feb. 15, 1948	18.75	-				

2880.8. Sunflower River at Harvey's Chapel, Miss.

Location.--Lat 34°03'52", long 90°35'23", in SW $\frac{1}{4}$ sec.2, T.25 N., R.4 W., Choc-taw meridian, at bridge 0.4 mile south of Harvey's Chapel and 9.5 miles south of Clarksdale.

Drainage area.--257 sq mi.

Gage.--Recording. Datum of gage is 123.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected. A discharge of 3,040 cfs was measured May 2, 1958 (gage height, 26.00 ft).

Bankfull stage.--28 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 15, 1948	23.15	-	1954	Jan. 23, 1954	16.73	-
1949	Jan. 5, 1949	19.99	-	1955	Mar. 23, 1955	21.94	-
1950	Jan. 16, 1950	23.39	-				
				1956	Feb. 5, 1956	23.10	-
1951	Jan. 5, 1951	19.99	-	1957	Feb. 2, 1957	22.2	-
1952	Jan. 29, 1952	16.12	-	1958	May 2, 1958	26.02	-
1953	May 19, 1953	23.95	-				

2881.5. Hushpuckena River at Hushpuckena, Miss.

Location.--Lat 34°00'35", long 90°45'10", in SE $\frac{1}{4}$ sec.30, T.25 N., R.5 W., Choc-taw meridian, at bridge on U. S. Highway 61 at Hushpuckena.

Drainage area.--102 sq mi.

Gage.--Nonrecording prior to January 1948; recording thereafter. Datum of gage is 115.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected.

Bankfull stage.--35 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Hushpuckena River at Hushpuckena, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 12, 1946	26.37	-	1953	May 20, 1953	24.20	-
1947	Jan. 4, 1947	16.37	-	1954	Jan. 23, 1954	16.95	-
1948	Feb. 15, 1948	23.38	-	1955	Mar. 24, 1955	21.21	-
1949	Jan. 6, 1949	19.10	-				
1950	Jan. 17, 1950	24.40	-	1956	Feb. 6, 1956	21.73	-
1951	Jan. 5, 1951	19.70	-	1957	Feb. 3, 1957	20.8	-
1952	Jan. 29, 1952	16.27	-	1958	May 3, 1958	27.74	-

2882. Sunflower River near Lombardy, Miss.

Location.--Lat 33°52'54", long 90°36'38", in NE $\frac{1}{4}$ sec.9, T.23 N., R.4 W., Choc-taw meridian, at bridge on county road, 1 $\frac{1}{2}$ miles south of Lombardy and 5 miles upstream from Hyde Bayou.

Drainage area.--492 sq mi.

Gage.--Nonrecording prior to January 1948; recording thereafter. Datum of gage is 98.72 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Slope affected. A discharge of 6,840 cfs was measured May 2, 1958 (gage height, 41.26 ft).

Bankfull stage.--42 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 5, 1947	28.10	-	1953	May 20, 1953	36.18	-
1948	Feb. 15, 1948	35.89	-	1954	Jan. 24, 1954	28.49	-
1949	Jan. 6, 1949	31.14	-	1955	Mar. 23, 1955	34.48	-
1950	Jan. 17, 1950	36.69	-				
				1956	Feb. 9, 1956	35.28	-
1951	Jan. 5, 1951	32.09	-	1957	Feb. 3, 1957	34.8	-
1952	Jan. 29, 1952	27.22	-	1958	May 3, 1958	41.30	-

2885. Sunflower River at Sunflower, Miss.

Location.--Lat 33°32'50", long 90°32'35", in NE $\frac{1}{4}$ sec.6, T.19 N., R.3 W., Choc-taw meridian, at bridge on old U. S. Highway 49, half a mile northwest of Sunflower, 2 $\frac{1}{2}$ miles downstream from Jones Bayou, and 19 miles upstream from Quiver River.

Drainage area.--767 sq mi.

Gage.--Nonrecording prior to July 1, 1947; recording thereafter. Prior to Nov. 28, 1934, at datum 93.00 ft lower. Datum of gage is 92.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. All gage heights adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements. Relation is slope affected.

Bankfull stage.--25 ft.

Remarks.--Records furnished by Corps of Engineers and since 1938, records reviewed by Geological Survey. Only annual peaks are shown.

YAZOO RIVER BASIN

Peak stages and discharges of Sunflower River at Sunflower, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	Dec. 5, 1919	19.6	-	1942	Apr. 13, 1942	25.35	6,620
1923	May 22, 1923	19.0	-	1943	Mar. 19, 1943	21.06	5,140
1924	May 31, 1924	9.7	-	1944	Apr. 1, 1944	26.26	7,520
				1945	Jan. 3, 1945	b26.50	7,240
1928	Apr. 29, 1928	18.3	-	1946	Jan. 16, 1946	27.43	7,700
1929	Feb. 27, 1929	11.3	-	1947	Jan. 8, 1947	c22.05	3,830
				1948	Feb. 16, 1948	26.65	6,740
1932	Jan. 7, 1932	a25.6	-	1949	Jan. 8, 1949	d23.20	4,650
1933	Apr. 4, 1933	20.8	-	1950	Feb. 18, 1950	e26.23	6,740
1934	Mar. 6, 1934	19.8	-				
1935	Jan. 26, 1935	24.8	-	1951	Jan. 8, 1951	24.24	5,080
				1952	Jan. 31, 1952	19.17	3,450
1936	Feb. 6-7, 1936	10.10	1,660	1953	May 21, 1953	25.94	6,300
1937	Jan. 28, 1937	23.76	5,960	1954	Jan. 26, 1954	f21.48	3,370
1938	Apr. 11, 1938	18.69	4,000	1955	Mar. 26, 1955	25.42	5,910
1939	Apr. 3, 1939	25.00	6,850				
1940	Apr. 22, 1940	15.42	3,040	1956	Feb. 10, 1956	26.13	6,460
				1957	Feb. 5, 1957	25.65	6,060
1941	Dec. 19, 1940	16.50	3,490	1958	May 5, 1958	28.31	9,300

a From floodmark.

b Occurred Jan. 4, 1945.

c Occurred June 4-5, 1947.

d Occurred Mar. 30-31, 1949.

e Occurred Mar. 17, 1950.

f Occurred May 6, 1959.

2885.7. Quiver River near Doddsville, Miss.

Location.--Lat 33°38'25", long 90°24'05", in SE¹ sec.33, T.21 N., R.2 W., Choc-taw meridian, at bridge on State Highway 442, 3.1 miles west of Shtater and 7.5 miles east of Doddsville. Prior to Oct. 19, 1945, at bridge 1 mile downstream.

Drainage area.--292 sq mi (352 sq mi at former site); subject to flow from Tallahatchie River when stages exceed approximately 17 ft at Swan Lake.

Gage.--Nonrecording prior to Oct. 19, 1945; recording thereafter. Prior to Oct. 19, 1945, at site 1 mile downstream from and at datum 1.84 ft lower than present gage. Datum of present gage is 97.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Fairly well defined by current-meter measurements. Slope affected.

Bankfull stage.--28 ft, at present site.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 10-13, 1938	23.6	2,510	1949	Jan. 6, 1949	23.63	-
1939	Mar. 2-7, 1939	25.3	3,060		Mar. 28, 29, 1949	-	2,340
1940	July 17, 1940	20.0	1,580	1950	Mar. 15, 1950	24.90	3,940
1941	Dec. 17, 1940	15.7	1,500	1951	Jan. 15, 1951	23.04	2,350
1942	Apr. 11, 1942	24.5	4,190	1952	Dec. 22, 1951	19.70	1,410
1943	Mar. 15, 1943	19.8	2,450	1953	May 19, 1953	23.62	2,720
1944	Mar. 30, 1944	26.2	6,790	1954	May 5, 1954	22.49	1,800
1945	Jan. 5, 6, 1945	25.6	4,640	1955	Mar. 25, 1955	23.85	2,700
1946	Jan. 21, 1946	24.64	3,520	1956	Feb. 7, 1956	23.84	2,700
1947	Apr. 14, 1947	22.02	1,690	1957	Feb. 4, 1957	23.6	2,500
1948	Feb. 15, 1948	24.73	3,530	1958	May 6, 1958	25.29	5,000

2886.1. Sunflower River near Moorhead, Miss.

Location.--Lat 33°27'44", long 90°33'45", in S $\frac{1}{2}$ sec.25, T.19 N., R.4 W., Choctaw meridian, at bridge on U. S. Highway 82, 3 miles west of Moorhead and at mile 98.6 (1947).

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 78.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not adequately defined. A discharge of 14,700 cfs was measured May 12, 1958, at a stage of 36.49 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 31, 1949	29.89	-	1954	May 5, 1954	29.45	-
1950	Mar. 20, 1950	32.47	-	1955	Mar. 26, 1955	31.90	-
1951	Jan. 14, 1951	30.36	-	1956	Feb. 11, 1956	31.99	-
1952	Feb. 6, 1952	23.60	-	1957	Feb. 6, 1957	31.1	-
1953	May 19, 1953	32.40	-	1958	May 11-12, 1958	36.52	-

2886.5. Bogue Phalia near Leland, Miss.

Location.--Lat 33°23'47", long 90°50'47", in NW $\frac{1}{4}$ sec.20, T.18 N., R.6 W., Choctaw meridian, at bridge on State Highway 10, 0.7 mile upstream from Bogue Phalia cut-off and 3.2 miles east of Leland.

Drainage area.--Approximately 484 sq mi.

Gage.--Recording. Datum of gage is 86.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Slope affected at times.

Bankfull stage.--31 ft.

Remarks.--Records furnished by Corps of Engineers. Base for partial-duration series, 3,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 12, 1946	a28.0	8,500	1951	Jan. 7, 1951	26.58	7,200
	Feb. 14, 1946	26.6	7,200		Feb. 10, 1951	23.7	4,300
	Mar. 17, 1946	23.3	3,900		Feb. 21, 1951	22.1	3,100
					Apr. 24, 1951	22.4	3,300
1947	Jan. 4, 1947	23.1	3,800	1952	Feb. 4, 1952	22.56	3,400
	Jan. 20, 1947	22.7	3,500				
	Apr. 12, 1947	24.7	5,100	1953	May 5, 1953	22.6	3,400
	June 3, 1947	24.90	5,300		May 20, 1953	22.74	3,500
1948	Feb. 16, 1948	26.63	7,200	1954	May 3, 1954	25.24	5,600
	Mar. 6, 1948	24.9	5,300				
1949	Nov. 29, 1948	22.1	3,100	1955	Mar. 22, 1955	25.08	5,500
	Jan.5-7, 1949	24.6	5,000		Apr. 16, 1955	23.4	4,000
	Jan. 24, 1949	22.3	3,200	1956	Feb. 8, 1956	25.19	5,600
	Feb. 5, 1949	23.0	3,700				
	Mar. 30, 1949	26.74	7,300	1957	Feb. 1, 1957	24.7	5,100
	May 2, 1949	24.9	5,300				
1950	Jan.16-18, 1950	25.3	5,700	1958	Nov. 18, 1957	25.20	5,600
	Feb.17,18, 1950	26.2	6,800		May 5, 1958	27.11	7,900
	Mar. 17, 1950	27.81	8,400		Sept.21, 1958	26.82	7,400

a From floodmark.

2886.6. Bogue Phalia cutoff near Leland, Miss.

Location.--Lat 33°23'13", long 90°48'58", on line between secs.22 and 27, T.18 N., R.6 W., Choctaw meridian, at bridge on county road, 1.6 miles downstream from Bogue Phalia and 5 miles southeast of Leland.

Drainage area.--Indeterminate.

Gage.--Recording. Datum of gage is 84.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Poorly defined, slope affected.

Bankfull stage.--31 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 12, 1946	27.7	-	1953	May 17, 1953	23.12	-
1947	Apr. 11, 1947	25.40	-	1954	May 3, 1954	25.23	-
1948	Feb. 14, 1948	26.70	-	1955	Mar. 22, 1955	25.24	-
1949	Mar. 30, 1949	26.98	-				
1950	Mar. 17, 1950	27.41	-	1956	Feb. 8, 1956	25.27	-
				1957	Feb. 1, 1957	24.8	-
1951	Jan. 7, 1951	26.33	-	1958	May 5, 1958	27.38	-
1952	Feb. 4, 1952	22.39	-				

2886.8. Sunflower River at Little Callao Landing, Miss.

Location.--Lat 33°11'02", long 90°41'10", on south line of sec.35, T.16 N., R.5 W., Choctaw meridian, at bridge on State Highway 12, 6.3 miles downstream from Beasley Bayou, 10.5 miles east of Hollandale, and at mile 62.2 (1947).

Drainage area.--2,287 sq mi.

Gage.--Recording. Datum of gage is 66.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Poorly defined. A discharge of 21,900 cfs was measured May 6, 1958 (gage height, 36.85 ft).

Bankfull stage.--43 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 16, 1948	34.99	16,600	1954	May 5, 1954	32.41	12,800
1949	Jan. 6, 1949	34.54	16,000	1955	Apr. 15, 1955	34.12	15,200
1950	Mar. 22, 1950	34.48	15,800				
				1956	Feb. 11, 1956	33.60	14,600
1951	Jan. 14, 1951	34.00	15,100	1957	Feb. 3-6, 1957	33.2	14,000
1952	Feb. 3, 1952	29.94	10,000	1958	May 11, 1958	36.87	23,000
1953	May 18, 1953	33.78	14,800				

a Year incomplete; probable yearly maximum.

2887. Sunflower River near Anguilla, Miss.

Location.--Lat 32°58'18", long 90°46'40", in SE $\frac{1}{4}$ sec.14, T.13 N., R.6 W., Choc-taw meridian, at bridge on State Highway 14, 0.9 mile downstream from Jaynes Bayou, 3 miles east of Anguilla, and 39.4 miles upstream from mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 51.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined. A discharge of 23,100 cfs was measured May 8, 1958 (gage height, 48.07 ft).

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Apr. 1, 1949	46.05	-	1954	May 5, 1954	45.09	-
1950	Mar. 25, 1950	46.91	-	1955	Apr.15-16, 1955	46.55	-
1951	Jan. 14, 1951	46.46	-	1956	Feb.11-12, 1956	45.98	-
1952	Feb. 3, 1952	43.50	-	1957	Feb.4-8, 1957	45.5	-
1953	May 19, 1953	46.40	-	1958	May 11, 1958	48.16	-

2887.2. Sunflower River at Holly Bluff, Miss.

Location.--Lat 32°49'04", long 90°42'36", in NW $\frac{1}{4}$ sec.9, T.11 N., R.5 W., Choc-taw meridian, at bridge on county road, 1 mile southwest of Holly Bluff, and at mile 18.7

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 0.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined, slope affected and in backwater of Mississippi River.

Bankfull stage.--95 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 6, 1912	102.0	-	1936	May 2, 1936	90.8	-
1913	May 1, 1913	101.9	-	1937	Feb.22-25, 1937	102.3	-
1914	Apr. 25, 1914	89.1	-	1938	Apr.20-23, 1938	91.2	-
1915	Mar. 9, 1915	92.9	-	1939	Apr.6-8, 1939	92.8	-
				1940	July 16, 1940	85.8	-
1916	Feb.17-19, 1916	102.2	-				
1917	Apr.23-27, 1917	97.6	-	1941	Jan. 7, 1941	80.6	-
1918	Mar. 6, 1918	83.4	-	1942	Apr.21-22, 1942	90.1	-
1919	Apr.13-16, 1919	93.8	-	1943	June 9-13, 1943	91.4	-
1920	Apr.26-28, 1920	88.7	-	1944	May 13-17, 1944	93.6	-
				1945	Apr.16-17, 1945	96.7	-
1921	Apr. 23, 1921	94.6	-				
1922	May 5, 1922	103.5	-	1946	Feb.23-26, 1946	93.7	-
1923	Apr. 20, 1923	96.9	-	1947	Apr. 21, 1947	91.0	-
1924	Jan. 31, Feb. 1	91.6	-	1948	Mar. 19, 1948	93.1	-
1925	Mar. 27, 1925	83.6	-	1949	Feb. 20, 1949	93.8	-
				1950	Mar. 4, 1950	95.53	-
1926	Mar.13, Apr. 28	86.4	-				
1927	May 5-6, 1927	110.5	-	1951	Mar. 31, 1951	92.13	-
1928	July 18-19, 1928	95.6	-	1952	Apr.16-17, 1952	89.64	-
1929	June 5-9, 1929	101.7	-	1953	May 22, 1953	90.72	-
1930	Feb.5-7, 1930	92.6	-	1954	May 14, 1954	85.40	-
				1955	Apr.15-16, 1955	92.15	-
1931	Apr.20-21, 1931	78.5	-				
1932	Mar. 4, 1932	99.6	-	1956	Feb. 21, 1956	90.13	-
1933	Mar.6-8, 1933	95.9	-	1957	June 11, 1957	89.6	-
1934	Mar.7-8, 1934	84.8	-	1958	May 23-25, 1958	93.12	-
1935	Apr.15-24, 1935	95.6	-				

2887.7. Deer Creek near Hollandale, Miss.

Location.--Lat 33°08'59", long 90°50'47", in NW $\frac{1}{4}$ sec.17, T.15 N., R.6 W., Choctaw meridian, at bridge 1 mile south of Hollandale.

Drainage area.--98 sq mi.

Gage.--Nonrecording prior to January 1948; recording thereafter. Datum of gage is 93.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Bankfull stage.--18 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Feb. 17, 1946	15.5	700	1953	May 24, 1953	13.17	510
1947	Apr. 16, 1947	12.72	470	1954	May 6, 1954	12.70	470
1948	Feb. 19, 1948	14.12	600	1955	Mar. 25, 1955	15.05	680
1949	Apr. 3, 1949	15.70	800				
1950	Mar. 24, 1950	15.03	680	1956	Feb. 10, 1956	11.64	390
				1957	Feb. 6-7, 1957	12.3	440
1951	Jan. 13, 1951	14.26	610	1958	May 6, 1958	18.18	1,000
1952	Feb. 3, 1952	9.24	240				

2888. Yazoo River at Redwood, Miss.

Location.--Lat 32°29'16", long 90°49'00", in sec.4, T.17 N., R.4 E., Washington meridian, at bridge on Illinois Central Railroad at Redwood.

Drainage area.--12,603 sq mi.

Gage.--Nonrecording. Datum of gage is 40.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Prior to Jan. 11, 1941, at datum 39.90 ft lower.

Stage-discharge relation.--Not defined. Slope affected and in backwater of Mississippi River.

Bankfull stage.--54 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1911	May 7, 1911	91.7	-	1936	Apr.29 to May 2	90.1	-
1912	Apr. 12, 1912	99.6	-	1937	Feb. 24, 1937	102.4	-
1913	Apr. 30, 1913	101.3	-	1938	Apr.25-28, 1938	88.1	-
1914	Apr. 26, 1914	87.4	-	1939	Mar.31 to Apr.1	90.5	-
1915	Feb.29 to Mar.2	90.2	-	1940	May 10-12, 1940	81.2	-
1916	Feb.15-18, 1916	102.3	-	1941	Apr. 30, 1941	32.0	-
1917	Apr.22-25, 1917	97.7	-	1942	Apr.27-28, 1942	43.4	-
1918	Mar. 8, 1918	83.6	-	1943	June 10-11, 1943	51.9	-
1919	Apr. 11, 1919	93.4	-	1944	May 16, 1944	52.2	-
1920	Apr. 26, 1920	98.9	-	1945	Apr.28-30, 1945	56.7	-
1921	May 11, 1921	91.3	-	1946	Jan.29-30, 1946	48.0	-
1922	Apr. 29, 1922	103.3	-	1947	May 7, 1947	46.12	-
1923	Apr.11-13, 1923	95.0	-	1948	Apr. 18, 1948	48.62	-
1924	Jan.27 to Feb.1	90.00	-	1949	Feb. 21, 1949	49.93	-
1925	Mar.8-9, 1925	80.9	-	1950	Mar. 1, 1950	54.66	-
1926	Oct.25-26, 1926	86.5	-	1951	Mar. 13, 1951	45.71	-
1927	May 4, 1927	107.9	-	1952	Apr. 13, 1952	47.22	-
1928	July 12-18, 1928	95.9	-	1953	May 29, 1953	42.73	-
1929	June 5-6, 1929	102.0	-	1954	May 9, 1954	31.23	-
1930	Feb.2-4, 1930	91.7	-	1955	Apr. 9, 1955	46.57	-
1931	Dec. 31, 1931	83.0	-	1956	Mar. 5, 1956	41.59	-
1932	Feb.28 to Mar.2	99.0	-	1957	June 9, 1957	48.64	-
1933	June 10-12, 1933	95.3	-	1958	May 25, 1958	48.05	-
1934	Apr.13-14, 1934	81.3	-				
1935	Apr.14-18, 1935	94.9	-				

2888.8. Steele Bayou near Rolling Fork, Miss.

Location.--Lat 32°54'10", long 90°58'43", in SW $\frac{1}{4}$ sec.15, T.12 N., R.8 W., Choc-taw meridian, on downstream side of old State Highway 14 bridge over main channel of Steele Bayou, 6 miles west of Rolling Fork and 49.1 miles upstream from mouth (1946).

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. Datum of gage is 75.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--27 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 17, 1947	24.15	-	1952	Feb. 6, 1952	20.86	-
1948	Feb.22-25, 1948	24.20	-	1953	May 21, 1953	22.45	-
1949	Jan. 10, 1949	23.74	-	1954	May 13, 1954	18.76	-
1950	Feb. 22, 1950	23.62	-	1955	Mar. 28, 1955	18.50	-
1951	Jan. 18, 1951	23.90	-				

2889.3. Muddy Bayou at Eagle Lake, Miss.

Location.--Lat 32°30'46", long 90°59'40", in NW $\frac{1}{4}$ sec.26, T.18 N., R.2 E., Washington meridian, on downstream side of highway bridge, 0.1 mile upstream from Eagle Lake and 17 miles north of Vicksburg.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 63.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 9, 1947	22.72	-	1951	Mar.14-15, 1951	21.80	-
1948	Apr.16-21, 1948	24.76	-	1952	Apr.10-11, 1952	23.56	-
1949	Feb.21-22, 1949	26.10	-	1953	May 30, 1953	18.72	-
1950	Mar. 1, 1950	30.98	-				

2890. Mississippi River near Vicksburg, Miss.

Location.--Lat 32°18'45", long 90°54'25", in T.16 N., R.3 E., Washington meridian, at combined highway and railway bridge of Vicksburg Bridge Commission of Warren County, $1\frac{1}{2}$ miles downstream from Yazoo diversion canal, 3 miles southwest of Vicksburg, and at mile 430.4.

Drainage area.--1,144,500 sq mi, approximately.

Gage.--Nonrecording prior to April 1930 at mouth of Yazoo diversion canal $1\frac{1}{2}$ miles upstream; recording thereafter at present site. Datum of gage is 46.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (Corps of Engineers bench mark). All gages at same datum, but readings differ due to slope of water surface.

Stage-discharge relation.--Defined by current-meter measurements. Relation is affected by slope.

Remarks.--Records of discharge prior to June 1931 and records of stage prior to April 1930 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1828	-	46.38	-	1892	June 2, 3, 1892	48.45	-
1844	June 28, 1844	46.18	-	1893	May 22, 23, 1893	48.3	-
1849	Apr. 26, 1849	46.38	-	1894	Apr. 2, 1894	40.9	-
1850	June 4, 1850	47.08	-	1895	Apr. 3, 4, 1895	31.7	-
1858	June 24, 1858	a46.98	1,244,000	1896	Apr. 21, 1896	39.0	-
1859	Apr. 21, 1859	48.28	-	1897	Apr. 15, 1897	a52.48	1,777,000
1862	Apr. 27, 1862	51.1	-	1898	Apr. 23-25, 1898	49.4	1,456,000
1865	-	46.43	-	1899	Apr. 17-23, 1899	47.3	-
1867	-	49.02	-	1900	Mar. 27, 1900	38.0	-
1872	May 2, 3, 1872	39.5	-	1901	May 16, 1901	41.5	-
1873	May 29, 30, 1873	40.6	-	1902	Apr. 17, 1902	41.22	-
1874	May 2-5, 1874	45.7	-	1903	Mar. 31, 1903	a51.8	b1,606,000
1875	Apr. 21, 1875	43.0	-	1904	Apr. 23, 1904	a46.85	b1,382,000
1876	May 10, 1876	44.9	-	1905	June 6, 1905	40.75	-
1877	May 8-13, 1877	41.6	-	1906	Apr. 25, 1906	a47.15	1,536,000
1878	Mar. 24-27, 1878	40.95	-	1907	Feb. 12, 13, 1907	49.65	1,721,000
1879	Feb. 17, 1879	39.45	-	1908	June 5-8, 1908	47.8	-
1880	Apr. 8, 9, 1880	43.15	-	1909	Mar. 29, 1909	a48.0	1,516,000
1881	Mar. 10-12, 1881	41.85	-	1910	Mar. 25, 26, 1910	40.6	-
1882	Mar. 20, 21, 1882	48.75	-	1911	May 6, 1911	45.13	-
1883	Apr. 7, 1883	43.8	-	1912	Apr. 12, 1912	51.65	1,780,000
1884	Mar. 25, 1884	49.0	-	1913	May 2, 1913	a52.2	1,783,000
1885	Jan. 22, 1885	a42.4	1,151,000	1914	Apr. 26, 1914	41.16	-
1886	May 7-9, 1886	44.15	-	1915	Feb. 28, Mar. 1	43.9	-
1887	Mar. 26-31, 1887	44.7	-	1916	Feb. 16, 1916	a53.85	1,735,000
1888	Apr. 26, 1888	44.18	-	1917	Apr. 20, 1917	49.98	1,541,000
1889	July 3, 1889	34.45	-	1918	Mar. 8, 1918	37.66	-
1890	Apr. 24, 25, 1890	49.05	-	1919	Apr. 10, 11, 1919	46.37	-
1891	Apr. 2-4, 1891	48.1	-	1920	Apr. 17, 1920	a50.9	1,649,000
				1921	May 8, 10, 1921	44.55	-
				1922	Apr. 20, 1922	a54.85	1,752,000
				1923	Apr. 9, 10, 1923	47.9	-
				1924	Jan. 29, 1924	44.0	-
				1925	Mar. 8, 1925	35.2	-

a Occurred on different day than peak discharge.

b May have been exceeded during period of missing record.

Peak stages and discharges of Mississippi River near Vicksburg, Miss.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Apr. 27-29, May 2	39.9	-	1943	June 6, 1943	a43.42	1,648,000
1927	May 1, 1927	a58.4	c2,278,000	1944	May 13, 1944	a43.13	1,609,000
1928	July 12-16, 1928	49.3	d1,325,000	1945	Apr. 8, 9, 1945	a47.49	1,922,000
1929	June 6, 1929	55.1	d1,730,000				
1930	Feb. 3, 1930	45.7	d1,148,000	1946	Jan. 26, 1946	a38.81	1,481,000
1931	Apr. 20, 1931	a30.58	d711,000	1947	May 4, 5, 1947	a37.06	1,301,000
1932	Feb. 26, 1932	a50.27	1,410,000	1948	Apr. 13, 1948	a39.72	1,401,000
1933	June 10, 1933	47.50	1,360,000	1949	Feb. 10, 1949	a40.38	1,574,000
1934	Apr. 13, 1934	34.56	877,000	1950	Feb. 23, 1950	a44.97	1,876,000
1935	Apr. 15, 1935	46.75	1,420,000	1951	Mar. 12, 1951	36.20	1,356,000
1936	Apr. 29, 30, 1936	42.54	1,280,000	1952	Apr. 10, 1952	38.49	1,368,000
1937	Feb. 17, 1937	a53.2	2,080,000	1953	May 27, 1953	a33.52	983,000
1938	Apr. 23, 1938	a40.4	1,190,000	1954	May 8, 1954	a22.07	706,000
1939	Mar. 9, 1939	a42.65	1,410,000	1955	Apr. 7, 1955	a37.36	1,282,000
1940	May 11, 1940	33.67	1,075,000	1956	Mar. 3, 1956	a32.33	1,108,000
1941	Apr. 30, 1941	24.11	814,000	1957	June 7, 1957	40.10	d1,312,000
1942	Apr. 20, 1942	a34.43	1,178,000	1958	May 16-18, 1958	a38.44	d1,191,000

a Occurred on different day than peak discharge.

c Estimated, if all flow had been confined between levees.

d Maximum daily.

FOUR MILE BAYOU BASIN

2890.1. Durden Creek near Vicksburg, Miss.

Location.--Lat 32°17'50", long 90°52'10", in SE $\frac{1}{4}$ sec.1, T.15 N., R.3 E., Washington meridian, at Waterways Experiment Station Lake (Corps of Engineers) upstream from Halls Ferry county road, 2.3 miles south of this road's intersection with U. S. Highway 80 Bypass in Vicksburg.

Drainage area.--5.50 sq mi.

Gage.--Recording. Datum of gage is mean sea level.

Stage-discharge relation.--Defined by hydraulic computations or by current-meter measurements.

Remarks.--Peak inflow discharges prior to 1948 computed by Corps of Engineers; thereafter by U. S. Geological Survey. Peak stages shown occurred shortly after the computed peak inflow. Only annual peak discharges are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 5, 6, 1935	-	3,120	1949	Nov. 18, 1948	-	4,570
1941	Nov. 23, 1940	-	1,040	1953	Apr. 29, 1953	-	2,630
1942	May 14, 1942	-	2,740	1954	May 3, 1954	-	964
1943	Mar. 19, 1943	-	1,190	1955	May 14, 1955	-	2,180
1944	Mar. 28, 1944	-	2,000				
1945	Mar. 17, 1945	-	795	1956	Feb. 8, 1956	-	904
				1957	Nov. 6, 1956	-	1,460
1946	June 26, 1946	-	2,600	1958	Apr. 30, 1958	-	1,400

2891.7. Mulberry Creek at Kilmichael, Miss.

Location.--Lat 33°26'24", long 89°33'00', in E $\frac{1}{2}$ sec.10, T.18 N., R.7 E., Choc-taw meridian, on downstream side of bridge on U. S. Highway 82, 0.9 mile east of Kilmichael and 2 miles upstream from mouth.

Drainage area.--40 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. Datum of gage is 296.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs.

Remarks.--Gage-height records and current-meter measurements furnished by Corps of Engineers. Discharge computed from rating curve based on current-meter measurements. High flows intermingle with flows from Big Black River above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Feb. 10, 1946	14.5	7,600	1951	Mar. 29, 1951	16.45	15,000
1947	June 3, 1947	14.16	6,900	1952	Mar. 11, 1952	12.57	3,600
1948	Feb. 13, 1948	14.00	6,400	1953	Feb. 22, 1953	a13.63	5,400
1949	Jan. 5-6, 1949	15.90	12,000				
1950	Mar. 14, 1950	14.89	8,700				

a Record incomplete; probable yearly maximum.

2891.8. Big Black River near Kilmichael, Miss.

Location.--Lat 33°25'30", long 89°34'30", in SW $\frac{1}{4}$ sec.15, T.18 N., R.7 E., Choc-taw meridian, at bridge $1\frac{1}{2}$ miles southeast of Kilmichael.

Drainage area.--549 sq mi (includes Mulberry Creek).

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. Datum of gage is 296.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs.

Bankfull stage.--10 ft.

Remarks.--Records furnished by Corps of Engineers. Peak discharges include flow from Mulberry Creek. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 25, 1937	12.8	5,100	1944	May 5, 1944	15.10	26,800
1938	Apr. 9, 1938	13.2	6,000	1945	Feb. 23, 1945	a13.3	10,600
1939	Feb. 5, 1939	12.45	4,300		Mar. 5, 1945	13.90	16,000
1940	Apr. 19, 1940	a13.25	10,600	1946	Jan. 8, 1946	14.4	18,000
	July 4, 1940	15.2	25,800		Feb. 10, 1946	15.2	24,000
1941	Dec. 16, 1940	12.8	7,900	1947	Jan. 4, 1947	14.0	15,000
1942	Nov. 23, 1941	12.5	6,100		Jan. 21, 1947	13.4	10,000
1943	Dec. 29, 1942	13.20	10,600		Apr. 11, 1947	15.1	23,000
1944	Mar. 29, 1944	14.53	23,600		June 3, 1947	14.7	20,000
				1948	Feb. 13, 1948	14.20	16,500
				1949	Nov. 29, 1948	13.5	11,000

a Maximum daily.

Peak stages and discharges of Big Black River near Kilmichael, Miss.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Dec. 18, 1948	13.2	8,800	1953	May 6, 1953	13.4	8,000
	Jan. 5, 1949	16.30	31,000				
	Jan. 23, 1949	14.0	15,000	1954	May 3, 1954	13.71	10,500
1950	Jan. 8, 1950	a14.7	20,000	1955	Mar. 22, 1955	13.8	11,000
	Feb. 15, 1950	a14.5	18,000		Apr. 14, 1955	14.56	17,000
	Mar. 14, 1950	15.32	24,000				
1951	Jan. 4, 1951	13.9	12,000	1956	Feb. 4, 1956	13.4	8,000
	Feb. 4, 1951	13.8	11,000		Mar. 16, 1956	13.7	10,500
	Mar. 29, 1951	17.23	37,300		Apr. 6, 1956	13.6	9,500
	Apr. 23, 1951	13.3	7,000	1957	Feb. 2, 1957	13.8	11,000
1952	Dec. 21, 1951	14.0	13,000	1958	Nov. 15, 1957	14.68	18,000
					Apr. 27, 1958	14.29	15,000
1953	Feb. 22, 1953	14.01	13,000				

a Maximum daily.

2893.3. Zilpha Creek near Kosciusko, Miss.

Location--Lat 33°14', long 89°40', in NW¹/₄ sec.23, T.16 N., R.6 E., Choctaw meridian, at bridge on State Highway 35, 5½ miles upstream from mouth and 12.5 miles north of Kosciusko.

Drainage area--90.0 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by current-meter measurements below 2,900 cfs and extended by logarithmic plotting.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Feb. 20, 1953	25.11	3,300	1956	Feb. 4, 1956	25.10	3,200
1954	May 4, 1954	25.96	6,100	1957	Dec. 15, 1956	25.21	3,500
1955	Apr. 13, 1955	27.49	16,000	1958	Nov. 14, 1957	24.75	2,400

2893.5. Big Black River at West, Miss.

Location--Lat 33°11'45", long 89°46'30", in NW¹/₄ sec.3, T.15 N., R.5 E., Choctaw meridian, on Holmes-Attala County line, at bridge on State Highway 19, 0.2 mile east of West, 5.2 miles upstream from Jordan Creek, and 7.1 miles downstream from Zilpha Creek.

Drainage area--985 sq mi.

Gage--Nonrecording prior to June 10, 1948; recording thereafter. Datum of gage is 249.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Defined by current-meter measurements made by Corps of Engineers.

Bankfull stage--12 ft.

Remarks--Records furnished by Corps of Engineers. Base for partial-duration series, 10,000 cfs.

BIG BLACK RIVER BASIN

Peak stages and discharges of Big Black River at West, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 23, 1937	19.28	10,500	1949	Nov. 29, 30, 1948	18.9	12,500
1938	Apr. 8, 1938	19.0	10,000		Jan. 5, 1949	23.81	44,500
1939	Apr. 7, 1939	19.00	10,000		Jan. 23, 1949	21.0	24,000
1940	Feb. 11, 1940	19.3	14,500		Mar. 28, 1949	19.4	15,000
	July 6, 1940	21.2	25,000	1950	May 2, 1949	19.6	16,000
1941	Dec. 17, 1940	20.0	18,000		Jan. 9, 1950	21.0	24,000
1942	Nov. 24, 1941	18.3	9,500		Feb. 16, 1950	20.4	20,500
1943	Dec. 30, 1942	18.9	12,500		Mar. 15, 1950	21.35	26,000
1944	Feb. 25, 1944	19.9	17,500	1951	Jan. 4, 1951	19.9	17,500
	Mar. 30, 1944	22.36	33,500		Feb. 7, 1951	20.8	22,500
	May 6, 1944	22.0	30,500		Mar. 30, 1951	24.09	47,000
1945	Feb. 21, 1945	19.50	15,500		Apr. 23, 1951	19.4	15,000
	Mar. 5, 1945	19.92	17,500	1952	Dec. 22, 1951	20.1	18,500
	Mar. 21, 1945	19.6	16,000	1953	Feb. 24, 1953	19.58	16,000
1946	Jan. 9, 1946	22.0	30,500		May 5, 1953	19.0	13,000
	Feb. 10, 1946	22.60	35,000	1954	May 3, 1954	20.61	21,500
1947	Jan. 4, 1947	20.6	21,500	1955	Mar. 24, 1955	19.2	14,000
	Jan. 21, 1947	19.8	17,000		Apr. 14, 1955	21.16	25,000
	Apr. 12, 1947	22.64	35,500	1956	Feb. 5, 1956	19.5	15,500
	June 5, 1947	20.5	21,000		Mar. 17, 1956	19.80	17,000
1948	Feb. 14, 1948	22.33	33,000		Apr. 8, 1956	19.1	13,500
	Mar. 7, 1948	19.9	17,500	1957	Dec. 14, 1956	18.7	11,500
	Apr. 15, 1948	19.0	13,000		Feb. 2, 1957	20.1	18,500
				1958	Nov. 18, 1957	21.86	29,000
					Apr. 30, 1958	21.08	24,500

a Daily mean.

2895. Big Black River at Pickens, Miss.

Location.--Lat 32°52'45", long 89°58'05", in SW $\frac{1}{4}$ sec. 14, T. 12 N., R. 3 E., Choctaw meridian, at bridge on old U. S. Highway 51, half a mile southeast of Pickens, 6 miles downstream from Seneasha Creek, and 6 miles upstream from Cypress Creek.

Drainage area.--1,460 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 20, 1939; recording thereafter. Datum of gage is 196.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (U. S. Department of Agriculture bench mark, levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur.

Bankfull stage.--13 ft.

Historical data.--Flood in 1892 reached about the same stage as the floods in 1926 and 1930, from information by local residents.

Remarks.--Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Dec. 29, 1926	23.7	-	1941	Dec. 19, 1940	18.97	13,900
1930	May 1930	23.5	-	1942	Jan. 1, 1942	17.35	5,180
1937	Jan. 26, 1937	18.8	5,300	1943	Jan. 2, 1943	18.45	8,950
1938	Apr. 10, 1938	18.7	5,160	1944	Feb. 27, 1944	19.02	16,200
1939	Feb. 11, 1939	18.07	6,000		Mar. 20, 1944	18.01	7,360
1940	Feb. 13, 1940	18.82	12,300		Mar. 31, 1944	20.34	35,900
	Apr. 22, 1940	18.90	13,400		May 8, 1944	19.71	25,900
	July 8, 1940	19.92	25,600	1945	Feb. 22, 1945	19.17	18,100
					Mar. 6, 1945	19.01	16,200

Peak stages and discharges of Big Black River at Pickens, Miss.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1945	Mar. 23, 1945	18.72	12,500	1950	Mar. 17, 1950	19.37	20,600	
	Apr. 3, 1945	18.29	8,800					
1946	Jan. 11, 1946	20.08	28,800	1951	Jan. 8, 1951	18.78	14,200	
	Feb. 11, 1946	20.85	37,900		Feb. 7, 1951	19.46	21,600	
	Apr. 2, 1946	18.18	8,350		Mar. 28, 1951	22.20	49,400	
					Apr. 26, 1951	18.04	8,480	
1947	Jan. 5, 1947	19.19	17,600	1952	Dec. 26, 1951	18.47	11,600	
	Jan. 21, 1947	18.89	14,300					
	Apr. 13, 1947	20.16	29,400	1953	Feb. 26, 1953	18.62	14,600	
	June 7, 1947	18.54	11,000		May 6, 1953	18.49	11,800	
1948	Feb. 15, 1948	20.52	35,600	1954	May 5, 1954	18.82	14,600	
	Mar. 8, 1948	18.82	14,100					
	Apr. 16, 1948	18.51	11,000	1955	Mar. 27, 1955	18.20	10,100	
1949	Dec. 1, 1948	18.76	11,500		Apr. 16, 1955	18.82	14,600	
			1956	Feb. 7, 1956	18.25	10,400		
	Dec. 21, 1948	18.23		7,940	Mar. 18, 1956	18.48	12,100	
	Jan. 7, 1949	21.95		42,400	Apr. 11, 1956	18.20	10,100	
	Jan. 24, 1949	19.21		18,800				
	Feb. 10, 1949	18.62	12,400	1957	Feb. 3, 1957	18.56	17,400	
	Mar. 30, 1949	18.66	12,900		June 29, 1957	17.22	7,600	
	May 3, 1949	18.98	16,600					
	1950	Jan. 11, 1950	19.29	20,000	1958	Nov. 20, 1957	19.59	26,800
Feb. 16, 1950		18.96	16,000	May 2, 1958		20.15	37,800	

2895.3. Doaks Creek near Canton, Miss.

Location--Lat 32°44', long 90°00', in NE $\frac{1}{4}$ sec.9, T.10 N., R.3 E., Choctaw meridian, at bridge on U. S. Highway 51, $3\frac{1}{2}$ miles upstream from mouth and $8\frac{1}{2}$ miles north of Canton.

Drainage area--161 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by current-meter measurements below 10,000 cfs.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 13, 1948	15.35	a3,760	1954	May 1, 1954	14.93	2,930
1949	-	16.81	7,400	1955	Apr. 13, 1955	17.32	8,900
1950	Feb. 13, 1950	16.47	6,460	1956	Apr. 6, 1956	17.31	8,870
1951	Jan. 7, 1951	18.46	12,600		Apr. 5, 1957	15.62	4,360
1952	-	(b)	-		May 2, 1958	16.73	7,170
1953	Apr. 30, 1953	17.71	10,100				

a Record incomplete; probable yearly maximum.

b Less than 14.46 ft, bottom of gage.

2895.6. Bear Creek near Madison, Miss.

Location--Lat 32°30'50", long 90°05'10", in NW $\frac{1}{4}$ sec.27, T.8 N., R.2 E., Choctaw meridian, 175 ft upstream from bridge on U. S. Highway 51, 4 miles north-east of Madison.

Drainage area--24.2 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Poorly defined by 2 current-meter measurements.

Remarks--Only annual peaks are shown.

Peak stages and discharges of Bear Creek near Madison, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 13, 1948	12.04	880	1954	May 1, 1954	12.85	1,600
1949	-	14.38	3,700	1955	Apr. 13, 1955	13.36	2,200
1950	Feb. 13, 1950	13.33	2,150	1956	Feb. 4, 1956	-	cl,400
1951	Mar. 30, 1951	12.36	1,090	1957	Apr. 4, 1957	-	cl,100
1952	-	(b)	-	1958	May 1958	-	c2,200
1953	Apr. 29, 1953	16.04	7,300				

a Record incomplete; probable yearly maximum.

b Less than 11.5 ft, bottom of gage.

c Computed on basis of stages for Corps of Engineers gage just downstream.

2895.8. Bear Creek at Highway 51, near Canton, Miss.

Location--Lat 32°36', long 90°03', in SE $\frac{1}{4}$ sec.25, T.9 N., R.2 E., Choctaw meridian, at bridge on U. S. Highway 51, half a mile upstream from Illinois Central Railroad and three-quarters of a mile south of Canton.

Drainage area--86 sq mi.

Gage--Crest-stage gage. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Defined by current-meter measurements below 4,200 cfs.

Remarks--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 28-29, 1951	220.60	4,100	1956	Apr. 5, 1956	220.62	4,100
1952	-	(a)	-	1957	Apr. 4, 1957	220.87	4,500
1953	Apr. 30, 1953	222.22	7,300	1958	Nov. 14, 1957	221.35	5,600
1954	-	(a)	-				
1955	Apr. 14, 1955	221.55	5,600				

a Less than 217 ft, bottom of gage.

2896. Tilda Bogue near Canton, Miss.

Location--Lat 32°39'10", long 90°00'30", in SW $\frac{1}{4}$ sec.5, T.9 N., R.3 E., Choctaw meridian, at bridge on U. S. Highway 51, 3 miles north of Canton, and $3\frac{1}{2}$ miles upstream from mouth.

Drainage area--24.4 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Defined by current-meter measurements below 4,000 cfs.

Remarks--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 13, 1948	16.01	666	1954	Feb. 19, 1954	16.67	1,160
1949	-	17.99	4,260	1955	Apr. 13, 1955	17.83	3,750
1950	Feb. 13, 1950	17.40	2,520	1956	Mar. 15, 1956	17.53	2,870
1951	Mar. 19, 1951	18.03	4,300	1957	Dec. 13, 1956	16.49	977
1952	-	(a)	-	1958	Nov. 14, 1957	18.33	5,540
1953	Apr. 29, 1953	19.0	8,800				

a Less than 15.62 ft, bottom of gage.

2896.1. Bachelor Creek at Canton, Miss.

Location.--Lat 32°37', long 90°02', in NW $\frac{1}{4}$ sec.19, T.9 N., R.3 E., Choctaw meridian, at bridge on U. S. Highway 51 truck route at Canton High School.

Drainage area.--3.11 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by current-meter measurements between 350 and 550 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 29, 1953	17.78	991	1956	Mar. 15, 1956	16.05	584
1954	Jan. 20, 1954	16.07	588	1957	Dec. 13, 1956	15.49	468
1955	Apr. 12, 1955	16.98	795	1958	Apr. 29, 1958	16.27	632

2896.2. Bear Creek near Canton, Miss.

Location.--Lat 32°40'28", long 90°05'19", on line between secs.33 and 34, T.10 N., R.2 E., Choctaw meridian, at bridge on road, 5 miles northwest of Canton and 5.6 miles upstream from mouth.

Drainage area.--154 sq mi.

Gage.--Recording. Datum of gage is 176.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Poorly defined by current-meter measurements below 4,100 cfs. Backwater from Big Black River occurs occasionally on minor rises and falling stages.

Bankfull stage.--12 ft.

Remarks.--Gage-height records and discharge measurements furnished by Corps of Engineers. Discharge computed from rating curve based on discharge measurements. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Feb. 14, 1950	18.12	6,200	1955	Apr. 13, 1955	18.72	7,600
1951	Mar. 28, 1951	18.94	8,000	1956	Apr. 6, 1956	18.52	7,100
1952	Mar. 12, 1952	13.70	1,000	1957	Apr. 4, 1957	18.0	6,000
1953	Apr. 30, 1953	19.49	9,400	1958	Nov. 14, 1957	18.56	7,300
1954	May 4, 1954	16.92	4,000				

a Year incomplete.

2897.3. Big Black River near Bentonla, Miss.

Location.--Lat 32°36'12", long 90°21'45", in NW $\frac{1}{4}$ sec.25, T.9 N., R.2 W., Choctaw meridian, at bridge on U. S. Highway 49, 2 $\frac{1}{2}$ miles south of Bentonla, and 4 miles downstream from Burnt Corn Creek.

Drainage area.--2,340 sq mi; prior to 1948, 2,320 sq mi.

Gage.--Nonrecording prior to Jan. 1, 1948; recording thereafter. At site 3.1 miles upstream prior to Jan. 1, 1948. Datum of all gages is 130.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft prior to 1948, 22 ft thereafter.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

BIG BLACK RIVER BASIN

Peak stages and discharges of Big Black River near Bentonla, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 27, 1929	31.9	a30,100	1944	Mar. 31, 1944	33.97	55,000
1930	May 23, 1930	34.7	61,800	1945	Feb. 25, 1945	30.63	26,000
1931	Aug. 3, 1931	29.8	13,600	1946	Feb. 12, 1946	32.83	44,500
1932	Feb. 23, 24, 1932	31.5	31,500	1947	Apr. 16, 1947	31.3	32,700
1933	Dec. 14, 1932	32.4	40,000	1948	Feb. 17, 1948	28.38	38,900
1934	Mar. 6, 1934	29.8	13,600	1949	Jan. 9, 1949	29.4	49,400
1935	Mar. 4, 1935	33.1	47,000	1950	Feb. 16, 1950	27.45	28,000
1936	Feb. 6, 1936	30.3	16,700	1951	Mar. 30, 1951	31.64	66,500
1937	Jan. 26, 1937	30.8	20,400	1952	Jan. 3, 4, 1952	24.59	7,900
1938	Apr. 10, 1938	30.2	16,000	1953	May 5, 1953	27.12	21,300
1939	Feb. 6, Mar. 6, 1939	29.58	13,000	1954	May 9, 1954	26.74	18,000
1940	July 11, 1940	31.48	33,000	1955	Apr. 15, 1955	27.68	27,000
1941	Dec. 22, 1940	29.64	16,200	1956	Apr. 8, 1956	27.80	28,000
1942	Mar. 17, 1942	28.52	10,000	1957	Feb. 7, 1957	26.70	17,500
1943	Dec. 30, 1942	29.8	17,200	1958	May 2, 1958	30.80	57,000

a Record incomplete.

2898.5. Bogue Chitto near Flora, Miss.

Location.--Lat 32°33', long 90°24', in NW $\frac{1}{4}$ sec.15, T.8 N., R.2 W., Choctaw meridian, at bridge on State Highway 22, 4.6 miles southwest of Flora.

Drainage area.--127 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs.

Historical data.--Flood of Apr. 30, 1953, is the highest since at least 1938, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 30, 1953	20.88	21,000	1956	Apr. 6, 1956	18.51	10,000
1954	May 2, 1954	16.44	4,300	1957	July 2, 1957	17.45	6,750
1955	Feb. 22, 1955	15.01	2,000	1958	Nov. 13, 1957	18.69	10,700

2900. Big Black River near Bovina, Miss.

Location.--Lat 32°20'51", long 90°41'48", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.16 N., R.5 E., Washington meridian, at bridge on U. S. Highway 80, 300 ft upstream from Clear Creek, 0.4 mile upstream from Illinois Central Railroad bridge, 2 miles east of Bovina, and 12 miles upstream from Fourteenmile Creek.

Drainage area.--2,810 sq mi, approximately, includes that of Clear Creek.

Gage.--Nonrecording prior to Oct. 23, 1941; recording thereafter. Datum of gage is 84.93 ft above mean sea level, datum of 1929.

Bankfull stage.--24 ft.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--The flood of May 5, 1958, is the highest since May 1930.

Floods in 1912 and January 1927 both reached an elevation of 119 ft msl at Askew's Bridge 6 miles upstream (about 3 ft higher than that of May 5, 1958, at that site). The flood in May 1930 reached about the same elevation as the flood in April 1951 (117.7 ft msl) at Askew's Bridge.

Remarks.--Records February 1936 to September 1938 furnished by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 12,000 cfs.

Peak stages and discharges of Big Black River near Bovina, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Feb. 10, 1936	36.23	16,100	1949	Nov. 19, 1948	31.16	13,400
1937	Jan. 28, 1937	38.14	17,100		Dec. 3, 1948	35.25	19,100
1938	Apr. 12-13, 1938	37.04	15,200		Jan. 11, 1949	39.22	46,400
1939	Feb. 25, 1939	32.96	9,600		Jan. 29, 1949	36.07	21,300
1940	Apr. 11, 1940	34.19	15,700		Mar. 31, 1949	34.97	18,600
	May 1, 1940	32.97	13,700		May 8, 1949	35.46	19,800
	July 14-15, 17-18	38.25	26,000	1950	Jan. 17, 1950	35.95	21,000
1941	Dec. 21-22, 1940	34.12	15,500		Feb. 18, 1950	37.22	26,100
1942	Mar. 13, 1942	30.44	12,100		Mar. 22, 1950	35.27	19,300
1943	Jan. 3, 1943	32.81	13,400	1951	Jan. 15, 1951	31.96	14,300
1944	Mar. 5, 1944	35.38	16,100		Feb. 13, 1951	37.56	28,800
	Apr. 1, 1944	39.04	44,400		Apr. 1, 1951	39.65	58,600
1945	Feb. 27, 1945	36.47	19,600	1952	Jan. 7, 1952	23.64	6,450
	Mar. 21, 1945	35.52	16,400	1953	Mar. 4, 1953	32.95	15,600
1946	Jan. 15, 1946	38.60	37,700		May 7, 1953	37.07	25,500
	Feb. 14, 1946	39.09	46,000	1954	May 13, 1954	32.67	15,200
	May 27, 1946	32.67	12,800	1955	Apr. 18, 1955	36.75	23,900
1947	Jan. 13, 1947	38.00	29,500	1956	Feb. 12, 1956	34.67	15,700
	Apr. 18, 1947	37.86	28,400		Mar. 21, 1956	36.45	21,900
1948	Feb. 19, 1948	38.32	35,000		Apr. 10, 1956	37.32	26,700
	Mar. 10, 1948	35.40	19,800	1957	Feb. 11, 1957	32.72	13,300
				1958	Nov. 25, 1957	38.43	26,800
					May 5, 1958	39.74	52,700

2900.05. Clear Creek near Bovina, Miss.

Location.--Lat 32°22', long 90°43', in SW $\frac{1}{4}$ sec. 17, T.6 N., R.5 W., Choctaw meridian, at bridge on county highway, 1 mile northeast of Bovina.

Drainage area.--36 sq mi.

Gage.--Crest-stage gage. Datum of gage is 113.3 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 3,700 cfs.

Historical floods.--The floods of Feb. 17, 1927, and Mar. 28, 1951, are the highest known, from information by local residents.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 17, 1927	32.0	-	1955	Apr. 12, 1955	25.08	5,320
1951	Mar. 28, 1951	30.5	-	1956	Feb. 4, 1956	22.26	2,980
1953	Apr. 29, 1953	27.24	9,330	1957	-	24.74	4,850
1954	-	(a)	-	1958	May 1, 1958	23.39	5,780

a Less than 24.2 ft, bottom of gage.

BIG BLACK RIVER BASIN

2902. Big Black River near Hankinson, Miss.

Location.--Lat 32°07'12", long 90°53'24", in sec.15, T.13 N., R.3 E., Washington meridian, at downstream side of bridge, 2.0 miles northwest of Hankinson and 25.5 miles upstream from mouth.

Drainage area.--3,319 sq mi.

Gage.--Nonrecording. Datum of gage is 48.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Feb. 21-22, 1937	47.2		1942	Mar. 20, 1942	28.1	
1938	Apr. 19, 1938	38.4		1943	June 9, 1943	35.9	
1939	Mar. 31, Apr. 1	35.7		1944	Apr. 3, 1944	41.6	
1940	July 20, 1940	38.0		1945	Apr. 12-13, 1945	41.4	
1941	Dec. 30, 1940	35.0		1946	Feb. 16, 1946	41.3	

BAYOU PIERRE BASIN

2905. Bayou Pierre near Carpenter, Miss.

Location.--Lat 32°00', long 90°41', in NE $\frac{1}{4}$ sec. 22, T. 12 N., R. 5 E., Washington meridian, at left of span on downstream side of bridge on State Highway 18, $\frac{1}{4}$ miles upstream from Whiteoak Creek, 2 miles south of Carpenter, 2 miles upstream from Illinois Central Railroad bridge, and 8 miles southwest of Utica.

Drainage area.--371 sq mi.

Gage.--Nonrecording prior to 1952; crest-stage gage thereafter. Datum of gage is 129.67 ft above mean sea level, from State Highway Department.

Stage-discharge relation.--Defined by current-meter measurements. Occasionally affected by backwater from Whiteoak Creek.

Bankfull stage.--25 ft.

Historical data.--According to local residents, the flood in June 1928 was highest in at least 70 years and the flood in 1900 was practically as high.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	June 1928	a31.0	-	1950	May 2, 1950	25.65	23,600
1932	-	a28.0	-	1951	Mar. 28, 1951	15.0	7,050
1940	July 1940	a30.0	-	1952	-	(b)	-
1945	Feb. 5, 1945	25.63	23,400	1953	May 3, 1953	25.95	24,400
1946	Feb. 9, 1946	24.05	20,700	1954	May 1, 1954	23.04	18,300
1947	Apr. 11, 1947	24.98	22,400	1955	Apr. 13, 1955	24.84	21,900
1948	Aug. 9, 1948	15.00	7,650	1956	June 14, 1956	a18.0	10,000
1949	Nov. 28, 1948	25.27	22,900	1957	-	23.6	19,400
				1958	June 17, 1958	21.72	15,900

a From information by local residents.

b Less than 19.0 ft, bottom of gage.

2906.6. Bayou Pierre near Port Gibson, Miss.

Location.--Lat 31°59'58", long 90°58'00", in sec.23, T.12 N., R.3 E., Washington meridian, at bridge on U. S. Highway 61, 3¼ miles north of Port Gibson and 21 miles upstream from mouth.

Drainage area.--678 sq mi.

Gage.--Recording. Datum of gage is 52.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood prior to 1936 (believed to be June 1928), reached a stage of 43.7 ft, from information by State Highway Department.

Remarks.--Gage-height records and discharge measurements furnished by Corps of Engineers. Base for partial-duration series, 13,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 5, 1945	38.82	23,800	1953	Feb. 24, 1953	31.0	17,500
1946	June 1, 1946	34.4	20,400		Mar. 12, 1953	28.2	14,800
					Mar. 15, 1953	26.7	13,200
1947	Apr. 11, 1947	34.61	20,500		Apr. 30, 1953	40.9	25,400
					May 5, 1953	31.2	17,700
1948	Apr. 14, 1948	31.5	a18,000		May 19, 1953	41.20	25,600
1949	Nov. 29, 1948	38.30	23,400	1954	Mar. 28, 1954	32.7	19,000
	Apr. 1, 1949	35.00	20,900		May 1, 1954	38.70	23,700
					May 11, 1954	27.6	14,200
1950	Jan. 6, 1950	33.40	19,700	1955	Feb. 6, 1955	34.6	20,500
	Feb. 3, 1950	34.0	20,100		Feb. 21, 1955	31.1	17,600
	Feb. 10, 1950	31.52	17,900		Apr. 14, 1955	37.98	23,200
	Feb. 14, 1950	36.55	22,000				
	Feb. 22, 1950	31.19	17,700	1956	Feb. 4, 1956	29.6	16,200
	Mar. 12, 1950	29.15	15,700		Mar. 16, 1956	34.15	20,200
	Mar. 13, 1950	29.15	15,700				
	Mar. 27, 1950	27.61	14,200	1957	Apr. 4, 1957	29.95	16,300
	May 3, 1950	38.06	23,200		June 28, 1957	28.0	14,600
1951	Feb. 1, 1951	34.05	20,000	1958	Nov. 14, 1957	28.9	15,400
	Mar. 28, 1951	30.6	16,700		Nov. 19, 1957	29.2	15,800
	Apr. 22, 1951	30.6	16,700		Jan. 21, 1958	28.90	15,400
1952	Feb. 23, 1952	24.70	10,600		Mar. 24, 1958	28.23	14,800
1953	Feb. 15, 1953	27.8	14,400		Apr. 30, 1958	27.55	14,000
	Feb. 21, 1953	27.9	14,500		June 17, 1958	34.08	20,000

a Maximum daily.

ST. CATHERINE CREEK BASIN

2909. St. Catherine Creek near Natchez, Miss.

Location.--Lat 31°32'30", long 91°21'43", in sec.75, T.7 N., R.3 W., Washington meridian, at bridge on Liberty road, 2½ miles southeast of Natchez.

Drainage area.--53 sq mi.

Gage.--Recording. Datum of gage is 74.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 15,000 cfs.

Bankfull stage.--18 ft.

Remarks.--Gage-height records and current-meter measurements furnished by Corps of Engineers. Only annual peaks are shown.

ST. CATHERINE CREEK BASIN

Peak stages and discharges of St. Catherine Creek near Natchez, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 2, 1950	24.90	16,300	1955	Apr. 12, 1955	27.74	20,600
1951	June 16, 1951	18.70	8,400	1956	Feb. 4, 1956	13.1	3,500
1952	Dec. 8, 1951	17.0	6,700	1957	June 27, 1957	16.7	6,500
1953	May 17, 1953	33.80	31,000	1958	Nov. 8, 1957	18.80	8,500
1954	Apr. 30, 1954	32.15	28,000				

HOMOCHITTO RIVER BASIN

2910. Homochitto River at Eddiceton, Miss.

Location.--Lat 31°30', long 90°47', near center of sec.11, T.6 N., R.4 E., Washington meridian, at Mississippi Central Railroad Co. bridge, 900 ft downstream from U. S. Highway 84, 0.4 mile upstream from McCall Creek, and three-quarters of a mile east of Eddiceton.

Drainage area.--180 sq mi, approximately.

Gage.--Nonrecording prior to May 25, 1942, at site 900 ft upstream; recording thereafter at present site. Datum of gages is 217.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs at former site, and below 20,000 cfs at present site. Relation subject to shifts.

Bankfull stage.--13 ft.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 29, 1939	12.73	30,900	1950	Feb. 13, 1950	9.64	10,800
1940	July 3, 1940	11.09	20,600		Mar. 1, 1950	9.62	10,800
1941	Dec. 13, 1940	10.7	18,200		Mar. 15, 1950	10.34	12,900
					May 2, 1950	15.74	26,200
1942	May 15, 1942	12.0	26,000	1951	Mar. 28, 1951	8.56	8,310
1943	Apr. 9, 1943	9.74	11,800	1952	Dec. 14, 1951	6.70	4,660
1944	Mar. 29, 1944	13.84	21,000	1953	Feb. 24, 1953	10.44	12,600
1945	Feb. 5, 1945	9.10	10,500		Mar. 11, 1953	8.82	9,130
1946	Feb. 6, 1946	9.98	13,100		Apr. 29, 1953	13.57	20,400
1947	Nov. 10, 1946	10.30	12,900		May 4, 1953	12.33	17,200
	Jan. 19, 1947	10.53	13,500		May 17, 1953	16.37	28,100
	Mar. 13, 1947	10.10	12,300	1954	Mar. 27, 1954	6.73	4,960
	Apr. 1, 1947	14.52	21,700	1955	Feb. 6, 1955	10.49	12,800
	Apr. 11, 1947	12.01	19,700		Feb. 21, 1955	10.86	13,800
	Apr. 20, 1947	9.41	10,300		Apr. 10, 1955	11.69	15,700
1948	Mar. 2, 1948	9.27	10,000		Apr. 13, 1955	14.67	23,400
1949	Nov. 28, 1948	10.83	14,700	1956	Feb. 3, 1956	9.08	9,760
	Jan. 5, 1949	9.04	9,250		Mar. 15, 1956	9.76	11,300
	Mar. 31, 1949	14.70	23,400	1957	June 28, 1957	9.66	11,000
1950	Jan. 6, 1950	15.34	25,000	1958	Nov. 18, 1957	8.75	9,130
					June 16, 1958	11.59	15,400

2912.5. McCall Creek near Lucien, Miss.

Location.--Lat 31°31', long 90°39', in SW $\frac{1}{4}$ sec.6, T.6 N., R.6 E., Washington meridian, at bridge on U. S. Highway 84, 0.8 mile east of Lucien.

Drainage area.--60 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Poorly defined below 5,400 cfs by two current-meter measurements, extended by logarithmic plotting.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	-	(a)	-	1956	Mar. 15, 1956	84.31	5,100
1953	May 18, 1953	89.02	8,250	1957	June 28, 1957	88.2	7,700
1954	-	(a)	-	1958	June 16, 1958	85.44	5,900
1955	Apr. 13, 1955	89.44	8,450				

a Below 84.2 ft, bottom of gage.

2915. Homochitto River near Bude, Miss.

Location.--Lat 31°26', long 90°51', in NE $\frac{1}{4}$ sec.5, T.6 N., R.3 E., Washington meridian, at bridge on old State Highway 44, a quarter of a mile downstream from Porter Creek, 1.6 miles southwest of Bude, and 5.0 miles upstream from Middle Fork.

Drainage area.--399 sq mi.

Gage.--Recording.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs.

Bankfull stage.--13 ft.

Remarks.--Base for partial-duration series, 20,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 15, 1942	12.18	25,300	1947	Apr. 11, 1947	12.87	28,000
1943	Dec. 27, 1942	11.50	22,200	1948	Mar. 2, 1948	11.56	21,500
1944	Mar. 29, 1944	14.45	36,200	1949	Nov. 26, 1948	12.40	25,500
1945	Feb. 5, 1945	10.38	19,200		Nov. 28, 1948	12.15	24,500
1946	Feb. 6, 1946	11.62	23,000		Mar. 31, 1949	14.26	35,600
1947	Jan. 19, 1947	11.81	22,500	1950	Jan. 6, 1950	16.60	49,400
	Mar. 13, 1947	12.20	24,500		Mar. 1, 1950	11.30	20,000
	Apr. 1, 1947	15.25	41,000		Mar. 15, 1950	11.75	22,500
					May 2, 1950	15.85	44,600

HOMOCHITTO RIVER BASIN

2925. Homochitto River at Rosetta, Miss.

Location.--Lat 31°19'20", long 91°06'20", in sec.12, T.4 N., R.1 E., Washington meridian, at bridge on State Highway 33 at Rosetta, 800 ft downstream from Illinois Central Railroad bridge, 1 mile downstream from Foster Creek, and 5 miles upstream from Dry Creek.

Drainage area.--750 sq mi, approximately.

Gage.--Recording. Datum of gage is 94.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to shifts.

Bankfull stage.--37 ft.

Remarks.--Gage-height records prior to 1952 furnished by Corps of Engineers.

Only peak stages are shown prior to 1952. Base for partial-duration series, 16,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 31, 1949	37.80	-	1954	May 3, 1954	24.08	9,160
1950	Jan. 6, 1950	37.60	-	1955	Feb. 6, 1955	31.66	38,800
	May 2, 1950	36.95	-		Feb. 21, 1955	30.58	34,400
1951	Mar. 29, 1951	30.30	-		Apr. 10, 1955	30.80	35,200
					Apr. 13, 1955	35.62	57,200
1952	Dec. 15, 1951	25.72	9,930	1956	Mar. 15, 1956	28.6	47,500
1953	Feb. 21, 1953	27.86	17,700	1957	Dec. 22, 1956	26.79	34,000
	Feb. 24, 1953	31.41	37,500		Apr. 1, 1957	24.24	19,000
	Mar. 11, 1953	30.64	33,900		June 28, 1957	27.72	40,400
	Apr. 30, 1953	35.56	57,000		Sept. 27, 1957	27.68	40,400
	May 4, 1953	36.03	59,400	1958	Oct. 16, 1957	25.3	24,700
	May 13, 1953	27.59	20,600		Nov. 14, 1957	25.60	26,500
	May 15, 1953	26.62	16,900		Nov. 18, 1957	25.85	27,700
	May 18, 1953	35.91	58,800		Sept. 22, 1958	24.83	22,000

2940. Second Creek at Sibley, Miss.

Location.--Lat 31°23'20", long 91°23'20", in S½ sec.13, T.5 N., R.3 W., Washington meridian, at bridge on county highway, 0.7 mile east of Sibley and 5 miles upstream from mouth.

Drainage area.--55.3 sq mi.

Gage.--Recording prior to September 1942; crest-stage gage since 1952. At site 360 ft upstream during 1942. All gages at present datum.

Stage-discharge relation.--Defined by current-meter measurements below 9,800 cfs.

Bankfull stage.--10 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 15, 1942	8.56	-	1955	Apr. 13, 1955	11.36	13,500
1952	December 1951	7.55	6,040	1956	Feb. 4, 1956	8.62	7,420
1953	May 3, 1953	13.7	22,500	1957	June 27, 1957	11.73	14,700
1954	May 1, 1954	11.22	14,600	1958	Mar. 18, 1958	9.47	8,720

2945. Homochitto River near Doloroso, Miss.

Location.--Lat 31°19'53", long 91°21'37", in sec.10, T.4 N., R.2 W., Washington meridian, at bridge on U. S. Highways 61 and 65, about 1,200 ft downstream from Second Creek, 2.2 miles north of Doloroso, 10 miles upstream from mouth (through Armstrong Canal), 16 miles north of Woodville, and 16 miles south of Natchez.

Drainage area.--1,120 sq mi.

Gage.--Nonrecording prior to Jan. 31, 1940, and since November 1949; recording Jan. 31, 1940, to Sept. 30, 1946. Prior to Oct. 1, 1944, at datum 15.00 ft higher. Datum of present gage is 42.23 ft above mean Gulf level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to shifts.

Bankfull stage.--25 ft.

Remarks.--Gage-height records since 1952, furnished by Corps of Engineers. Base for partial-duration series, 19,000 cfs. Only annual peaks are shown for 1953-58.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 7, 1938	23.4	-	1946	Feb. 15, 1946	23.78	19,700
1940	May 2, 1940	18.71	22,200	1946	May 16, 1946	26.10	24,100
	July 4, 1940	21.23	35,300				
	July 13, 1940	18.30	20,200	1949	Mar. 31, 1949	26.44	b34,800
1941	Dec. 14, 1940	19.54	27,300	1950	Jan. 7, 1950	32.11	62,300
	Dec. 17, 1940	17.85	19,400	1951	Mar. 29, 1951	22.22	35,300
	Dec. 28, 1940	18.28	21,800				
1942	Dec. 24, 1941	18.80	24,300	1953	May 19, 1953	33.00	79,000
1943	Mar. 27, 1943	15.54	17,100	1954	Sept. 17, 1954	19.35	25,000
1944	Mar. 24, 1944	12.90	23,900	1955	Apr. 13, 1955	30.87	69,000
	Mar. 30, 1944	18.56	a44,400	1956	Feb. 4, 1956	18.50	23,000
1945	Feb. 6, 1945	24.52	17,900	1957	June 28, 1957	21.50	31,800
1946	Feb. 7, 1946	25.23	22,300	1958	Sept. 22, 1958	16.05	17,000

a Maximum daily.

b Record incomplete; yearly maximum probably occurred in November.

BUFFALO RIVER BASIN

2950. Buffalo River near Woodville, Miss.
(Published as "Buffalo Bayou" prior to 1951)

Location.--Lat 31°13'35", long 91°17'45", in SW $\frac{1}{4}$ sec. 21, T.3 N., R.2 W., Washington meridian, at bridge on U. S. Highway 61, 1 $\frac{1}{2}$ miles downstream from Fords Creek, 2 $\frac{3}{4}$ miles west of Wilkinson, and 8 $\frac{1}{2}$ miles north of Woodville.

Drainage area.--182 sq mi.

Gage.--Nonrecording prior to June 1, 1942; recording thereafter. Datum of gage is 97.52 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended on basis of velocity-area study.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 11,000 cfs.

BUFFALO RIVER BASIN

Peak stages and discharges of Buffalo River near Woodville, Miss.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 9, 1942	10.00	12,000	1950	Jan. 6, 1950	12.82	25,200
1943	Dec. 27, 1942	10.00	12,500	1951	Apr. 22, 1951	12.18	22,200
	Feb. 5, 1943	11.87	20,700		June 17, 1951	13.26	27,700
	Mar. 20, 1943	11.18	16,100	1952	May 19, 1952	7.17	5,460
	Mar. 26, 1943	11.78	18,000		Mar. 11, 1953	9.76	12,700
1944	Mar. 19, 1944	9.48	11,100	1953	May 4, 1953	15.66	37,200
1945	Jan. 6, 1945	9.98	12,500		May 13, 1953	11.32	18,200
	Feb. 5, 1945	10.92	15,100		May 18, 1953	9.38	11,400
1946	Feb. 6, 1946	11.85	18,000	1954	Mar. 27, 1954	7.50	6,500
	Feb. 13, 1946	10.56	14,200		Feb. 5, 1955	9.36	11,500
	Mar. 15, 1946	11.65	17,300	1955	Feb. 21, 1955	11.64	19,300
	May 15, 1946	9.72	11,600		Apr. 10, 1955	11.76	20,100
	May 17, 1946	12.50	23,700		Apr. 13, 1955	16.09	39,400
	May 31, 1946	11.20	16,100		July 30, 1955	11.10	17,300
1947	Nov. 11, 1946	15.00	33,900	1956	Mar. 11, 1956	10.56	15,300
	Jan. 13, 1947	9.90	12,200		Mar. 15, 1956	12.68	23,700
	Mar. 13, 1947	11.05	15,400	1957	Dec. 22, 1956	11.18	17,700
1948	Jan. 27, 1948	9.84	11,900		June 28, 1957	10.42	14,500
	Mar. 2, 1948	16.2	39,900	1958	Nov. 14, 1957	11.93	20,500
	Sept. 13, 1948	10.26	13,400		June 22, 1958	12.24	21,700
1949	Nov. 19, 1948	10.45	13,700		Sept. 22, 1958	14.43	30,900
	Nov. 26, 1948	11.86	19,600				
	Dec. 16, 1948	13.40	27,000				
	Mar. 21, 1949	11.34	17,200				

RED RIVER BASIN

2955. Tierra Blanca Creek at reservoir, near Umbarger, Tex.

Location.--Lat 34°55', long 102°96', at conduit tower just upstream from dam, 2 miles south of Umbarger, Randall County, and 20 miles upstream from Palo Duro Creek.

Drainage area.--2,075 sq mi, of which about 575 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 3,515.6 ft above mean sea level, datum of 1929. Auxiliary recording gage and weir 9 miles upstream from dam. Prior to Aug. 29, 1940, weir located about 7 miles upstream from dam.

Stage-discharge relation.--Peak inflow computed from rate of change in reservoir contents.

Historical data.--Flood of May 30, 1937, was highest known prior to completion of dam in 1938.

Remarks.--Reservoir capacity, 18,150 acre-ft. Reservoir used for recreational purposes. No regulation upstream from reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 30, 1937		a6,100	1947	May 15, 1947		2,200
1941	June 6, 1941		11,300	1948	June 24, 1948		43
	Oct. 24, 1941		2,580	1949	May 7, 1949		2,200
1942	Oct. 2, 1942		1,000	1950	July 18, 1950		3,500
1943	June 13, 1944		332	1951	May 17, 1951		9,760
1944	Aug. 15, 1945		1,700	1952	July 18, 1952		239
1945				1953	Apr. 5, 1953		764
				1954	June 11, 1954		3,600
1946	Sept. 13, 1946		1,280				

a By slope-area measurement.

2975. Prairie Dog Town Fork Red River near Canyon, Tex.

Location.--Lat 35°01', long 101°54', 1.2 miles downstream from confluence of Palo Duro and Tierra Blanca Creeks, 2 miles upstream from Palo Duro Club Dam, and 3½ miles northeast of Canyon, Randall County.

Drainage area.--3,369 sq mi, of which about 711 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 12, 1924, 2.3 miles downstream at different datum; recording thereafter. Sept. 13, 1924, to Oct. 21, 1926, and Apr. 6, 1938, to May 20, 1942, at site 0.8 mile downstream at present datum. Datum of present gage is 3,455.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,000 cfs and by critical-depth determination at 15,200 cfs.

Historical data.--Highest known flood prior to reconstruction of Palo Duro Club Dam in May 1941, occurred May 30, 1937, when river reached a stage of 9.7 ft, from floodmarks, at site 0.8 mile downstream. According to local residents, the flood of May 16, 1951, was greatest since at least 1904 or 1905.

Remarks.--Flow partly regulated by several reservoirs upstream; the principal ones being Tierra Blanca Creek Reservoir near Umbarger (capacity, 18,150 acre-ft), and Amarillo City Lake on Palo Duro Creek (capacity, 5,120 acre-ft). The major portion of floodwater originating above these reservoirs ordinarily will be retained in them. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	July 4, 1924	1.70	800	1943	July 9, 1943	10.96	1,230
1925	June 24, 1925	2.62	500	1944	July 12, 1944	10.43	910
1926	May 27, 1926	3.82	1,460	1945	Aug. 15, 1945	9.14	219
1938	May 18, 1938	4.38	1,180	1946	-	-	0
1939	June 21, 1939	5.10	1,520	1947	Oct. 7, 1946 May 15, 1947	13.39 11.86	3,090 1,870
1940	May 7, 1940	4.86	1,420	1948	Sept. 21, 1948	9.18	237
1941	May 31, 1941 June 7, 1941 June 9, 1941 July 3, 1941	8.12 10.30 9.35 7.33	1,270 3,890 2,610 573	1949	Nov. 1, 1948 May 7, 1949 June 9, 1949	10.75 10.02 10.87	1,000 608 827
1942	Oct. 4, 1941 Oct. 24, 1941	9.67 12.03	3,000 6,850	1951	May 16, 1951	a20.31	15,200

a Annual peak only.

2980. North Tule Draw at reservoir, near Tulia, Tex.

Location.--Lat 34°33', long 101°42', at walkway to conduit intake valve, 250 ft to left of concrete spillway, 1 mile upstream from mouth, and 3.2 miles northeast of Tulia, Swisher County.

Drainage area.--About 189 sq mi, of which about 65 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Nov. 26, 1940; recording thereafter. Prior to Sept. 29, 1939, at datum 70.5 ft higher. Altitude of present gage is 3,310 ft (by barometer).

Stage-discharge relation.--Peak inflow is based on change in reservoir contents, flow over spillway (computed from spillway rating curve), and computed flow through conduit.

Remarks.--Dam completed Jan. 15, 1939. Reservoir capacity, 654 acre-ft. No regulation upstream from reservoir. Only annual peaks are shown.

RED RIVER BASIN

Peak stages and discharges of North Tule Draw at reservoir, near Tulia, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 6, 1941	-	985	1951	May 15, 1951	-	5,430
1942	Oct. 4, 1941	-	3,110	1952	July 17, 1952	-	38
1943	July 9, 1943	-	1,140	1953	Apr. 5, 1953	-	987
1944	July 11, 1944	-	389	1954	June 9, 1954	-	4,680
1945	July 5, 1945	-	80	1955	May 31, 1955	-	1,390
1947	Oct. 5, 1946	-	1,370	1956	Oct. 2, 1955	-	54
1948	Aug. 3, 1948	-	390	1957	June 18, 1957	-	984
1949	Apr. 19, 1949	-	1,380	1958	Aug. 1, 1958	-	122

2985. Prairie Dog Town Fork Red River near Brice, Tex.

Location.--Lat 34°37'45", long 100°58'30", at upstream side of county road bridge in Briscoe County, 1 mile upstream from Byrnes (Battle) Creek, 3.4 miles upstream from Mulberry Creek, and 7½ miles southwest of Brice, Hall County.

Drainage area.--5,972 sq mi, of which about 1,493 sq mi contributes directly to surface runoff.

Gage.--Recording prior to June 30, 1944, 1,200 ft upstream at datum 6.0 ft higher; nonrecording Aug. 10, 1949, to July 30, 1951. Datum of last used gage was 2,070.08 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 5,000 cfs at both sites. At site used prior to 1944, extended by logarithmic plotting and slope-area measurements at gage heights 3.7 and 4.8 ft. At site used 1949 to 1951, extended by logarithmic plotting and slope-area measurement at gage height, 10.32 ft.

Historical data.--According to local residents, the flood in 1933 was greatest known since 1906.

Remarks.--Slight regulation from three reservoirs on tributary streams (total capacity, 23,900 acre-ft). Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933		14.8	-	1943	Oct. 16, 1942	4.70	28,100
1937	May 1937	14.3	-		Apr. 16, 1943	4.00	19,000
1939	June 20, 1939	4.12	20,100	1944	June 29, 1944	3.20	10,400
1940	Sept. 4, 1940	4.84	30,300	1950	July 5, 1950	8.50	9,730
1941	June 9, 1941	3.75	22,100	1951	May 16, 1951	10.32	41,700
	June 15, 1941	4.25	25,400		May 16, 1951	9.10	24,500
1942	Oct. 4, 1941	5.18	42,100		May 17, 1951	8.63	19,300

a Site and datum used 1949-51.

2995. Prairie Dog Town Fork Red River near Estelline, Tex.

Location.--Lat 34°35', long 100°36', at downstream side of bridge on U. S. Highway 287, 180 ft upstream from Fort Worth and Denver Railway Co. bridge, 1.7 miles northwest of Estelline, Hall County, and 6.9 miles upstream from Baylor Creek.

Drainage area.--7,293 sq mi, of which about 2,524 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 16, 1938; recording and nonrecording gages thereafter. Jan. 10, 1924, to Sept. 10, 1925, at site 410 ft downstream. Datum of all gages is 1,754.60 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 14,000 cfs and extended above.

Historical data.--Maximum stage known, about 14 ft in May 1908, from information by local residents.

Remarks.--Slight regulation from three reservoirs on tributary streams (total capacity, 23,900 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Aug. 22, 1924	5.50	19,700	1942	Oct. 4, 1941	6.78	24,100
1925	July 30, 1925	5.60	21,500	1943	Oct. 17, 1942	8.50	51,200
				1944	July 12, 1944	5.96	5,360
1938	June 16, 1938	8.30	40,000	1945	July 10, 1945	6.50	12,600
1939	Jan. 8, 1939	6.00	9,500				
1940	Sept. 5, 1940	7.15	24,100	1946	Aug. 28, 1946	6.7	18,100
				1947	Oct. 7, 1946	8.08	38,600
1941	June 9, 1941	8.86	56,000				

3000. Salt Fork Red River near Wellington, Tex.

Location.--Lat 34°57'25", long 100°13'30", near center of stream on downstream side of bridge on U. S. Highway 83, 4 miles downstream from Fort Worth and Denver (Burlington) Railway Co. bridge, 4.5 miles south of Lutie, and 6.5 miles north of Wellington, Collingsworth County.

Drainage area.--1,222 sq mi, of which about 1,013 sq mi contributes directly to surface runoff.

Gage.--Recording and nonrecording. Datum of gage is 1,941.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 12,000 cfs and extended on basis of slope-area measurement at 63,400 cfs.

Bankfull stage.--20 ft.

Remarks.--Small diversions above station for irrigation. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	-	17.5	-	1956	May 27, 1956	8.50	18,400
1953	July 19, 1953	13.90	63,400	1957	Oct. 15, 1956	6.30	6,660
					Apr. 28, 1957	8.86	21,000
1954	May 11, 1954	7.01	6,080		May 16, 1957	19.00	146,000
	May 24, 1954	7.65	8,640		May 24, 1957	7.01	10,800
	June 10, 1954	16.00	95,900		Aug. 4, 1957	6.00	5,460
					Aug. 29, 1957	6.05	6,260
1955	May 19, 1955	9.25	23,000				
	June 2, 1955	7.62	12,800	1958	May 13, 1958	12.50	51,700
	June 8, 1955	6.37	6,870		July 6, 1958	6.15	7,080
	June 19, 1955	9.30	23,700				

3005. Salt Fork Red River at Mangum, Okla.

Location.--Lat 34°52', long 99°31', in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.5 N., R.22 W., near left bank on downstream side of pier of bridge on State Highway 34, half a mile south of Mangum, 13 miles downstream from Fish Creek, and at mile 35.5.

Drainage area.--1,566 sq mi, of which about 1,357 sq mi contributes directly to surface runoff.

Gage.--Nonrecording at site a quarter of a mile upstream at unknown datum during 1905-6 and at present site Oct. 1, 1937, to Nov. 8, 1938; recording thereafter. Datum of present gage is 1,490.87 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended above.

Bankfull stage.--9 ft.

Historical data.--Local residents indicate that flood in 1938 is maximum known.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 19, 1938	9.74	10,400	1949	Feb. 6, 1949	9.51	6,320
	June 10, 1938	9.20	6,900		May 13, 1949	9.65	6,540
	June 16, 1938	14.7	60,000		May 18, 1949	10.56	11,900
1939	June 21, 1939	10.44	15,400	1950	Sept. 11, 1950	9.31	5,690
1940	July 12, 1940	8.71	6,850	1951	May 17, 1951	10.79	13,200
					July 2, 1951	10.32	12,100
1941	Apr. 28, 1941	11.18	23,300	1952	Apr. 21, 1952	8.62	3,030
	May 3, 1941	9.70	11,400		June 5, 1953	10.13	9,100
	May 20, 1941	10.50	17,400	1953	July 19, 1953	13.75	44,800
	May 24, 1941	9.32	7,610				
	June 6, 1941	10.54	17,800	1954	May 12, 1954	8.95	7,180
	June 8, 1941	12.20	32,500		May 24, 1954	9.19	8,240
	June 29, 1941	9.80	11,400		June 10, 1954	13.30	38,100
	Sept. 17, 1941	9.31	8,790	1955	May 11, 1955	9.02	7,390
1942	Oct. 4, 1941	8.86	5,700		May 16, 1955	9.08	7,180
	Oct. 23, 1941	9.47	8,370		May 19, 1955	10.77	16,600
1943	Oct. 15, 1942	10.45	15,800		June 3, 1955	9.21	7,600
	Oct. 17, 1942	8.92	6,000		June 8, 1955	9.75	10,300
1944	June 1, 1944	9.92	9,240	1956	June 19, 1955	10.61	15,400
	June 13, 1944	10.95	16,900		Sept. 18, 1955	8.81	6,190
1945	June 5, 1945	8.77	6,160		Oct. 4, 1955	10.20	13,100
1946	Apr. 29, 1946	9.68	10,500	1957	May 2, 1956	11.34	19,800
					May 27, 1956	12.20	35,900
1947	May 12, 1947	11.35	21,400		July 17, 1956	10.10	19,100
	May 15, 1947	9.00	9,200		Apr. 20, 1957	8.95	6,380
	May 20, 1947	8.96	8,660		Apr. 28, 1957	10.30	11,500
	May 12, 1947	9.26	7,240		May 8, 1957	9.30	7,390
	June 22, 1947	9.1	6,420		May 16, 1957	14.55	72,000
	June 25, 1947	8.9	8,080		May 25, 1957	8.90	10,200
	July 18, 1947	9.70	8,660	1958	May 13, 1958	12.18	32,500
					May 17, 1958	8.23	6,100
1948	June 21, 1948	11.77	21,500				

3015. North Fork Red River near Carter, Okla.

Location.--Lat 35°10', long 99°30', in NW¹SE¹ sec.15, T.8 N., R.22 W., near left bank on downstream side of pier of bridge on State Highway 34, 3 miles south of Carter, 10.8 miles downstream from Timber Creek, and at mile 110.5.

Drainage area.--2,337 sq mi, of which about 1,938 sq mi contributes directly to surface runoff.

Gage.--Recording. Datum of gage is 1,673.71 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended above.

Bankfull stage.--11 ft.

Remarks.--Base for partial-duration series, 3,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 21, 1945	8.63	6,360	1951	May 21, 1951	8.96	9,930
	Aug. 15, 1945	7.49	4,040		June 2, 1951	8.70	9,490
1946	May 31, 1946	6.54	1,580		June 6, 1951	9.26	11,400
1947	Oct. 7, 1946	8.50	6,120	1952	Apr. 22, 1952	6.62	2,010
	May 12, 1947	10.37	15,000		July 20, 1953	8.20	4,190
	May 15, 1947	7.01	4,080	1954	Oct. 23, 1953	9.01	5,550
	May 20, 1947	9.75	12,800		Apr. 30, 1954	10.51	9,070
	June 7, 1947	8.03	7,010		May 11, 1954	8.71	5,360
	June 20, 1947	7.24	4,920		May 24, 1954	11.24	12,700
	June 25, 1947	7.53	5,680				
1948	Mar. 1, 1948	7.21	4,800	1955	May 16, 1955	8.75	5,170
	May 25, 1948	8.11	6,070		May 19, 1955	9.59	6,910
	June 21, 1948	8.33	7,010		June 5, 1955	7.86	3,390
1949	Nov. 2, 1948	6.96	3,400		June 9, 1955	8.09	3,840
	Feb. 6, 1949	8.10	6,330		June 18, 1955	8.42	4,410
	May 7, 1949	9.30	10,400	1956	Oct. 4, 1955	10.14	9,450
	May 17, 1949	7.45	5,050		May 1, 1956	9.00	6,510
	May 27, 1949	7.81	6,070		May 28, 1956	9.82	8,080
	June 3, 1949	7.07	4,800	1957	Apr. 19, 1957	10.39	10,600
1950	May 13, 1950	8.55	7,010		Apr. 23, 1957	9.80	9,470
	May 18, 1950	10.34	16,400		Apr. 26, 1957	8.03	4,360
	June 2, 1950	6.84	3,290		May 4, 1957	9.68	9,110
	June 11, 1950	7.35	4,440		May 11, 1957	8.86	6,240
	July 5, 1950	8.50	8,580		May 17, 1957	11.95	25,300
	July 20, 1950	8.35	7,430	1958	May 13, 1958	8.10	5,360
	Aug. 1, 1950	7.60	4,920		June 21, 1958	8.63	6,660
	Aug. 17, 1950	8.67	8,000		June 24, 1958	7.64	5,240
1951	May 18, 1951	9.45	18,300		July 5, 1958	7.58	3,920
					July 22, 1958	7.86	3,500

3020. North Fork Red River near Granite, Okla.
(Published as "Red River (North Fork) near Granite" 1903-4, and as "North Fork Red River at Lugert Dam" 1930-32)

Location.--Lat 34°58', long 99°20', on south line of sec.20, T.6 N., R.20 W., near center of span on downstream side of pier of bridge on State Highway 9, 2½ miles east of Granite, 6.4 miles upstream from Lugert Dam, and at mile 80.0.

Drainage area.--2,494 sq mi, of which about 2,095 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to 1938; recording thereafter. July 1903 to March 1908 at site 50 ft downstream at datum 4.90 ft lower. Apr. 19, 1930, to Dec. 31, 1932, at old Lugert Dam, 6.5 miles downstream at datum 1,504.31 ft above mean sea level, unadjusted. Datum of last used gage was 1,534.85 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1903-8: Defined by current-meter measurements below 6,000 cfs.

1930-32: Defined by current-meter measurements below 360 cfs and extended by computation of flow over dam.

1937-44: Defined by current-meter measurements below 14,000 cfs.

Bankfull stage.--8 ft.

Historical data.--In 1931, the Corps of Engineers reported that the maximum flood known occurred in 1903. A stage of 16 ft shown on bridge plans (last used site and datum) may have occurred at that time.

Remarks.--Base for partial-duration series, 3,200 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	May 3, 1904	8.5	9,500	1941	May 1, 1941	5.51	6,180
1905	May 27, 1905	12.0	18,800		May 4, 1941	6.52	7,180
1906	Nov. 24, 1905	10.0	9,000		May 21, 1941	8.72	16,400
1907	June 21, 1907	11.0	10,000		May 24, 1941	8.30	13,500
					May 27, 1941	4.52	4,160
1928	May 16, 1928	14.5	14,300		June 2, 1941	4.46	4,050
1930	May 7, 1930	13.70	10,400		June 6, 1941	4.74	4,200
1931	Oct. 13, 1930	12.10	4,390		June 9, 1941	8.21	12,800
1932	June 26, 1932	11.5	2,680		June 23, 1941	4.95	4,300
1935	May 18, 1935	9.8	28,000		June 30, 1941	4.68	3,820
1938	Apr. 27, 1938	5.00	5,120		Aug. 27, 1941	7.08	8,550
	May 19, 1938	7.11	9,770	1942	Oct. 24, 1941	8.12	12,200
	June 16, 1938	4.22	3,790		Apr. 19, 1942	5.84	5,050
1939	May 8, 1939	6.75	8,960		Apr. 24, 1942	6.70	7,090
	June 19, 1939	4.68	4,490		Apr. 27, 1942	9.55	23,900
	June 22, 1939	6.84	9,080		June 9, 1942	7.08	8,230
	July 2, 1939	4.45	3,990		June 22, 1942	8.38	14,200
1940	July 2, 1940	4.50	4,090	1943	Oct. 15, 1942	6.51	6,290
					Oct. 17, 1942	7.52	7,080
				1944	June 1, 1944	7.37	5,220
					June 13, 1944	8.6	10,400
					July 25, 1944	6.91	3,920
					July 30, 1944	7.07	4,410
					Sept. 28, 1944	6.52	3,260

3030. North Fork Red River below Altus Dam, near Lugert, Okla.
(Published as "at Lugert Dam" 1930-32)

Location.--Lat 34°53'26", long 99°18'22", in SW $\frac{1}{4}$ sec.22, T.15 N., R.20 W., on right bank 3,500 ft downstream from Altus Dam, 1.9 miles upstream from Elm Fork of North Fork, 2 miles west of Lugert, and at mile 72.8.

Drainage area.--2,515 sq mi, of which about 2,116 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 31, 1932, at old Lugert Dam, 0.7 mile upstream at datum 1,504.31 ft above mean sea level, unadjusted; recording thereafter at present site and datum. Datum of present gage is 1,471.81 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended above.

Bankfull stage.--18 ft.

Remarks.--Flow regulated since 1943 by Lake Altus (capacity, 148,600 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1928	May 16, 1928	14.5	14,300	1952	Apr. 21, 1952	1.95	24	
1930	May 7, 1930	13.70	10,400	1953	June 5, 1953	3.16	(a)	
				1954	-	-	No flow	
				1955	-	-	No flow	
1931	Oct. 13, 1930	12.10	4,390	1956	-	-	No flow	
1932	June 26, 1932	11.5	2,680		1957	-	-	No flow
1951	May 18, 1951	12.70	16,100		1958	-	-	No flow

a Negligible flow.

3035. Elm Fork of North Fork Red River near Mangum, Okla.
(Published 1905-8 as "Elm Fork of Red River")

Location.--Lat 34°56', long 99°30', on east line of sec.10, T.5 N., R.22 W., near right bank on downstream side of pier of bridge on U. S. Highway 283, 3 miles north of Mangum, 5 miles downstream from Haystack Creek, and at mile 17.8.

Drainage area.--838 sq mi.

Gage.--Nonrecording 1905-8 at unknown datum and 1930-31 at datum 4.22 ft lower than last used gage; recording thereafter at datum 1,530.77 ft above mean sea level, datum of 1929 (Bureau of Reclamation bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11 ft.

Remarks.--Base for partial-duration series, 2,400 cfs. Only annual peaks are shown prior to 1930.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 27, 1905	15.0	23,000	1930	June 10, 1930	9.2	2,550
1906	Sept. 17, 1906	8.0	6,200	1931	Oct. 14, 1930	9.0	2,440
1907	June 9, 1907	10.2	10,900				
1908	Oct. 3, 1907	a13.0	17,500	1938	May 16, 1938	6.44	4,180
1921	-	b16.4	-		May 19, 1938	7.38	6,860
					June 10, 1938	8.07	10,400
					June 16, 1938	9.15	18,600
					June 25, 1938	6.59	4,470
1930	May 6, 1930	9.7	2,860	1939	Jan. 8, 1939	7.76	8,580

a Maximum observed; may have been exceeded in May or June 1908.

b At present datum, from information by State Highway Commission.

RED RIVER BASIN

Peak stages and discharges of Elm Fork of North Fork Red River
near Mangum, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 27, 1939	5.37	2,500	1942	June 23, 1942	6.11	2,900
	May 26, 1939	9.00	17,200	1943	Oct. 15, 1942	7.66	5,050
	June 21, 1939	8.53	13,800		Oct. 18, 1942	6.61	3,380
1940	Sept. 23, 1940	4.93	1,690	1944	Mar. 15, 1944	5.77	2,430
1941	Apr. 16, 1941	5.98	3,410		June 1, 1944	5.73	2,470
	Apr. 19, 1941	5.28	2,440		June 13, 1944	7.00	3,760
	Apr. 29, 1941	7.77	8,580		July 13, 1944	8.12	6,200
	May 2, 1941	8.10	8,000	1945	June 16, 1945	8.70	7,580
	May 21, 1941	11.17	21,200		July 10, 1945	6.77	3,300
	May 24, 1941	8.54	9,250	1946	May 31, 1946	6.07	2,670
	June 6, 1941	7.36	4,920		Oct. 6, 1946	7.58	4,610
	June 9, 1941	11.05	20,400		Apr. 15, 1947	6.27	2,840
	June 16, 1941	6.42	3,600		May 12, 1947	13.52	30,600
	June 23, 1941	6.54	3,760		May 15, 1947	8.02	5,470
	June 29, 1941	8.04	6,530		May 20, 1947	8.96	6,710
	Aug. 27, 1941	7.01	7,700		May 24, 1947	6.32	2,780
	Sept. 18, 1941	6.38	3,400		June 5, 1947	6.40	3,000
1942	Oct. 22, 1941	7.80	5,860		June 20, 1947	6.08	3,000
	Apr. 24, 1942	6.97	4,380		June 25, 1947	5.66	2,460
	Apr. 27, 1942	11.18	27,800				
	May 11, 1942	6.17	3,950				

3045. Elk Creek near Hobart, Okla.

Location.--Lat 34°55', long 99°07', in NE $\frac{1}{4}$ sec.17, T.5 N., R.18 W., near right bank on downstream side of pier of county highway bridge, 7 miles downstream from Little Elk Creek, 7 $\frac{1}{2}$ miles south of Hobart, and 10.9 miles upstream from mouth.

Drainage area.--549 sq mi.

Gage.--Nonrecording 1904-8, June 6, 1951, to Oct. 23, 1952, and May 7, 1953, to Apr. 28, 1954; recording during remainder of period. Prior to Apr. 13, 1905, at site 3 miles southwest of Hobart at unknown datum. Apr. 13, 1905, to Mar. 31, 1908, at present site at datum 1,430.56 ft above mean sea level, unadjusted. Datum of present gage is 1,429.4 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended on basis of field estimate at 22,400 cfs.

Bankfull stage.--27 ft.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 28, 1905	25.0	3,500	1954	Oct. 23, 1953	19.64	2,240
1906	July 11, 1906	16.0	1,310		May 24, 1954	18.60	1,870
1907	June 9, 1907	28.9	-	1955	May 9, 1955	18.76	2,040
1949	May 1949	a28.63	8,400		May 16, 1955	18.08	1,920
					May 19, 1955	23.30	3,270
1950	July 17, 1950	19.00	2,200	1956	Oct. 4, 1955	30.75	22,400
	July 22, 1950	21.15	3,320		May 28, 1956	18.70	2,130
	July 26, 1950	17.05	2,170		July 17, 1956	19.54	2,300
	Aug. 2, 1950	15.66	1,860	1957	Apr. 3, 1957	18.67	2,080
					Apr. 21, 1957	18.21	2,140
1951	May 18, 1951	27.89	6,090		Apr. 24, 1957	23.55	3,790
	May 21, 1951	18.89	2,650		May 3, 1957	20.50	2,800
	May 23, 1951	23.87	3,860		May 5, 1957	25.78	4,570
	June 7, 1951	20.5	2,990		May 10, 1957	22.53	3,100
	June 10, 1951	21.11	3,180		May 18, 1957	21.90	2,860
1952	Apr. 22, 1952	17.5	2,040			May 25, 1957	20.08
1953	Apr. 6, 1953	17.82	2,120	1958	June 21, 1958	18.50	2,220
	June 6, 1953	25.2	4,050				

a Annual peak only.

3050. North Fork Red River near Headrick, Okla.
(Published as "near Snyder" April to June 1905)

Location.--Lat 34°38', long 99°06', in center of N $\frac{1}{2}$ sec.21, T.2 N., R.18 W., near right bank on downstream side of pier of bridge on U. S. Highway 62, 2 $\frac{1}{2}$ miles east of Headrick, 12.9 miles upstream from Otter Creek, and at mile 33.0.

Drainage area.--4,244 sq mi, of which about 3,845 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to 1938 at different sites and unknown datum; recording thereafter at present site. Datum of gage is 1,299.83 ft above mean sea level, datum of 1929 (Bureau of Reclamation bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 28,000 cfs at present site. Peak discharge for 1907 obtained from curve extended above 9,600 cfs on basis of runoff comparisons. Peaks for historic flood which reached a stage of 16.1 ft and flood of May 18, 1935, computed by logarithmic extension above 28,000 cfs. Rating has been stable for several years.

Bankfull stage.--7 ft.

Remarks.--Some regulation since December 1943 by Lake Altus (capacity, 142,900 acre-ft), 39.5 miles above station. Base for partial-duration series, 5,000 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
-	-	a16.1	b85,000	1946	June 2, 1946	5.17	3,830
1905	May 27, 1905	8.0	29,000	1947	May 13, 1947	9.85	21,700
1906	Nov. 24, 1905	7.0	12,500		May 16, 1947	7.98	12,200
1907	June 9, 1907	10.1	30,000		May 21, 1947	7.83	13,000
					May 25, 1947	6.75	7,760
					June 1, 1947	8.08	13,000
1935	May 18, 1935	a14.8	b60,000		June 26, 1947	6.20	6,040
1938	May 4, 1938	6.22	5,810	1948	June 22, 1948	7.24	8,980
	May 20, 1938	7.09	9,800	1949	May 19, 1949	9.55	20,600
	June 10, 1938	6.70	8,900		May 28, 1949	6.47	5,340
	June 16, 1938	7.54	12,500		June 4, 1949	6.86	6,480
	June 26, 1938	6.09	6,230	1950	July 21, 1950	7.61	12,600
1939	Jan. 9, 1939	7.19	11,400		July 26, 1950	6.51	6,940
	May 26, 1939	7.01	9,800		Aug. 3, 1950	6.68	7,100
	June 22, 1939	7.70	13,400	1951	May 19, 1951	9.96	24,900
1940	Apr. 29, 1940	4.57	1,580		May 23, 1951	7.63	12,300
1941	May 5, 1941	8.52	16,100		May 25, 1951	6.27	7,160
	May 21, 1941	9.60	21,200		June 7, 1951	9.36	19,300
	May 23, 1941	8.16	15,200		June 12, 1951	6.42	6,690
	May 24, 1941	8.82	17,500		June 19, 1951	6.06	5,370
	June 7, 1941	8.34	13,400	1952	Apr. 23, 1952	5.71	4,560
	June 10, 1941	10.85	27,400	1953	June 6, 1953	9.08	17,900
	June 16, 1941	5.89	6,200		July 20, 1953	8.46	11,700
	June 24, 1941	5.68	7,200	1954	Oct. 23, 1953	7.88	10,100
	June 30, 1941	5.90	5,650		May 12, 1954	6.42	5,080
	Aug. 28, 1941	6.15	6,600		May 25, 1954	9.40	17,300
1942	Oct. 23, 1941	8.95	18,900	1955	May 17, 1955	6.88	7,510
	Apr. 25, 1942	7.33	10,200		May 20, 1955	7.96	11,400
	Apr. 28, 1942	8.33	15,700	1956	Oct. 5, 1955	11.50	30,700
	Apr. 30, 1942	6.38	6,400		May 3, 1956	8.25	13,700
	May 12, 1942	6.01	5,320		May 28, 1956	10.10	24,500
	June 10, 1942	6.54	7,410		July 18, 1956	6.00	6,110
	June 23, 1942	8.50	15,200	1957	Apr. 23, 1957	8.93	18,300
	Sept. 19, 1942	5.91	5,360		May 4, 1957	9.36	20,100
1943	Oct. 15, 1942	7.26	9,740		May 10, 1957	8.31	13,500
	Oct. 18, 1942	7.41	10,600		May 12, 1957	9.05	17,700
1944	Mar. 16, 1944	5.79	5,190		May 19, 1957	8.04	12,000
	June 14, 1944	7.44	13,600		May 26, 1957	7.16	7,600
1945	Mar. 11, 1945	5.61	5,250		July 24, 1957	6.76	6,000
	Apr. 11, 1945	6.41	8,010	1958	June 22, 1958	6.61	5,910
	Apr. 14, 1945	6.50	8,400				
	June 16, 1945	6.97	10,500				
	July 11, 1945	5.62	5,250				

a At present site and datum, from information by State Highway Commission and Corps of Engineers. The stage of 16.1 occurred sometime prior to 1927.

RED RIVER BASIN

3055. Otter Creek at Snyder Lake, near Mountain Park, Okla.
(Published as "near Mountain Park" 1903-8)

Location.--Lat 34°44', long 98°59', in NE¹/₄ sec.16, T.3 N., R.17 W., at intake tower at Snyder Dam on Otter Creek, 0.8 mile upstream from small tributary, 3 miles northwest of Mountain Park, and at mile 26.0.

Drainage area.--132 sq mi.

Gage.--Nonrecording prior to 1952 at site 1.8 miles upstream at different datum; recording since October 1951 at present site and datum. Datum of present gage is 1,360.99 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Outflow discharge defined by current-meter measurements below 1,600 cfs and extended on basis of computation of flow-over-dam in 1953.

Bankfull stage.--14 ft, at present site.

Remarks.--Some regulation by Snyder Lake (capacity, 1,353 acre-ft). Base for partial-duration series, 1,400 cfs. Only annual peaks are shown prior to 1952.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	Apr. 11, 1903	22.0	3,200	1954	May 24, 1954	14.29	1,850
1904	June 10, 1904	11.0	1,140	1955	May 19, 1955	15.83	4,440
1905	May 27, 1905	21.0	3,400		June 19, 1955	13.98	1,450
1906	Apr. 4, 1906	18.5	2,830	1956	Oct. 4, 1955	15.74	4,240
1907	June 9, 1907	22.8	5,000	1957	Apr. 21, 1957	14.27	1,780
1952	May 17, 1952	14.24	1,940		Apr. 23, 1957	14.34	1,920
	May 23, 1952	14.35	2,140		May 4, 1957	15.05	2,960
1953	June 6, 1953	19.50	14,200		May 13, 1957	14.62	2,260
1954	Oct. 23, 1953	14.83	2,640		May 18, 1957	15.73	4,240
	May 1, 1954	14.19	1,710		May 25, 1957	14.28	1,850
	May 11, 1954	14.13	1,630		June 2, 1957	14.34	1,920
					July 24, 1957	16.26	5,310
				1958	June 21, 1958	13.29	741

3065. Otter Creek at Mountain Park, Okla.

Location.--Lat 34°42', long 98°59', in NW¹/₄ sec.34, T.3 N., R.17 W., at county highway bridge 500 ft upstream from Horse Creek, 1½ miles west of Mountain Park, 3.0 miles downstream from Snyder Lake, and at mile 23.0.

Drainage area.--164 sq mi, includes that of Horse Creek.

Gage.--Nonrecording prior to Oct. 19, 1946; recording thereafter. Datum of gage is 1,329.90 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Remarks.--Some regulation by Snyder Lake (capacity, 1,355 acre-ft). Base for partial-duration series, 1,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 23, 1946	14.32	1,440	1949	June 3, 1949	18.30	4,800
	May 28, 1946	16.08	2,380		June 10, 1949	17.59	4,330
1947	Apr. 15, 1947	16.04	2,300	1950	July 18, 1950	17.74	4,700
	May 12, 1947	17.30	3,730		Aug. 2, 1950	17.09	3,430
	May 16, 1947	17.89	5,110	1951	May 18, 1951	17.65	4,450
	June 1, 1947	17.20	3,570		May 20, 1951	16.90	3,180
1948	Dec. 4, 1947	14.82	1,620		June 7, 1951	16.30	2,550
	June 23, 1948	17.39	3,910		July 2, 1951	15.21	1,800
1949	May 18, 1949	14.77	1,620				

3075. Quitaque Creek near Quitaque, Tex.

Location.--Lat 34°14', long 101°07', on right bank about three-quarters of a mile upstream from W. F. Saul's ranchhouse, 1 mile downstream from Wilson Creek, 1½ miles upstream from Turkey Creek, 10 miles southwest of Quitaque, Briscoe County, and at mile 22.3.

Drainage area.--293 sq mi, of which about 35 sq mi contributes directly to surface runoff.

Gage.--Recording gage and concrete control. Datum of gage is 2,633.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended on basis of slope-area measurements at gage heights 2.70, 3.00, 5.59, and 8.62 ft.

Bankfull stage.--9 ft.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept. 19, 1946	2.77	423	1953	Aug. 15, 1953	4.67	1,240
1947	May 8, 1947	3.57	720	1954	May 10, 1954	4.11	970
	May 10, 1947	5.59	1,720		June 1, 1954	3.61	740
	May 16, 1947	3.40	660		Aug. 23, 1954	3.37	680
1948	Sept. 8, 1948	3.00	520	1955	May 11, 1955	3.75	1,040
1949	May 28, 1949	3.66	785		May 18, 1955	6.15	2,000
	June 7, 1949	3.35	640		June 1, 1955	6.47	2,290
1950	June 11, 1950	3.03	536		June 2, 1955	4.37	1,350
	July 23, 1950	3.20	600		June 28, 1955	8.62	4,470
	Sept. 4, 1950	5.57	1,700	1956	May 27, 1956	3.28	700
1951	May 17, 1951	3.08	556		June 17, 1956	3.01	536
	Sept. 9, 1951	3.69	780	1957	May 11, 1957	3.70	900
1952	July 14, 1952	2.07	152		May 31, 1957	7.50	2,900
					Aug. 4, 1957	6.33	6,060
				1958	June 23, 1958	2.32	812

3080. Pease River near Crowell, Tex.

Location.--Lat 34°06', long 99°41', at bridge on State Highway 283, 4 miles upstream from Raggedy Creek, 7 miles upstream from Kansas City, Mexico and Orient Railway (Santa Fe) bridge, 8 miles north of Crowell, Foard County, and at mile 43.9.

Drainage area.--3,037 sq mi approximately, of which about 2,478 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Apr. 12, 1930, and May 18, 1935, to Feb. 11, 1939; recording Apr. 12, 1930, to May 17, 1935, and since Feb. 12, 1939. Datum of gage is 1,330.44 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Subject to frequent shifts. Defined by current-meter measurements below 100,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	June 4, 1891	19.6	-	1929	May 12, 1929	8.88	37,200
				1930	Apr. 29, 1930	5.43	3,000
1924	Aug. 22, 1924	8.20	29,700	1931	June 9, 1931	8.85	36,900
1925	Sept. 14, 1925	8.50	33,000		July 6, 1932	8.90	37,400
1926	Sept. 28, 1926	6.40	-	1933	July 6, 1933	8.50	33,000
1927	Oct. 3, 1926	9.92	48,800	1934	Sept. 14, 1934	7.10	18,000
1928	May 16, 1928	6.10	7,900	1935	May 17, 1935	12.06	74,700

Peak stages and discharges of Pease River near Crowell, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Sept. 18, 1936	13.00	86,000	1942	Apr. 28, 1942	10.95	75,800
1937	Aug. 22, 1937	9.00	38,500	1943	June 5, 1943	8.08	40,600
1938	June 25, 1938	8.1	40,000	1944	June 14, 1944	9.85	52,300
1939	June 21, 1939	11.00	63,200	1945	July 10, 1945	11.20	81,000
1940	May 28, 1940	7.62	24,400				
				1946	Sept. 13, 1946	7.70	19,200
1941	June 6, 1941	11.88	106,000	1947	May 16, 1947	8.43	30,400

3110. Cache Creek near Walters, Okla.

Location.--Lat 34°20', long 98°17', in SE $\frac{1}{4}$ sec. 19, T.2 S., R.10 W., on downstream side of central pier of bridge on State Highway 53, 1 $\frac{1}{2}$ miles east of Walters, 12.2 miles upstream from West Cache Creek, and at mile 19.7.

Drainage area.--675 sq mi.

Gage.--Nonrecording prior to Jan. 8, 1939; recording thereafter. Datum of gage is 938.2 ft above mean sea level (State Highway Commission bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Historical data.--According to local residents, the flood in 1906 was similar to that of May 17, 1947.

Remarks.--Some regulation by reservoirs in basin of tributary, Medicine Creek. Base for partial-duration series, 1,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	-	a29.6	-	1945	May 31, 1945	22.52	3,130
1939	Aug. 9, 1939	8.90	657		Apr. 12, 1945	19.32	2,240
					Apr. 14, 1945	23.23	3,400
1940	July 3, 1940	17.42	2,020		Apr. 17, 1945	26.62	6,420
	July 23, 1940	18.41	2,240		June 13, 1945	22.87	3,280
1941	Nov. 27, 1940	19.16	2,690		July 15, 1945	23.40	3,490
	Feb. 2, 1941	16.43	1,990		Sept. 28, 1945	26.39	6,010
	May 1, 1941	15.18	1,730		Sept. 30, 1945	27.45	9,500
	May 6, 1941	25.60	4,860	1946	Oct. 5, 1945	19.16	2,090
	May 24, 1941	20.51	3,040		Feb. 19, 1946	19.84	2,300
	June 3, 1941	17.42	2,230		May 30, 1946	24.26	3,950
	June 8, 1941	28.18	11,300		June 2, 1946	26.87	7,100
	June 11, 1941	24.57	3,990		July 1, 1946	20.99	2,620
	June 17, 1941	24.40	3,890	1947	Dec. 12, 1946	21.44	2,740
1942	Oct. 2, 1941	26.28	5,570		Apr. 16, 1947	26.09	5,840
	Oct. 16, 1941	18.03	2,000		May 14, 1947	26.14	5,550
	Oct. 31, 1941	25.97	5,200		May 17, 1947	29.62	25,600
	Apr. 9, 1942	24.94	4,150		May 24, 1947	25.16	4,580
	Apr. 25, 1942	20.45	2,480		June 3, 1947	26.64	6,420
	June 24, 1942	25.32	4,500	1948	Dec. 6, 1947	24.96	4,420
	Aug. 27, 1942	22.66	3,230		Feb. 27, 1948	16.54	1,600
	Sept. 21, 1942	21.66	2,940		Mar. 2, 1948	20.17	2,420
1943	Apr. 12, 1943	16.60	1,840		Mar. 16, 1948	17.25	1,750
	May 11, 1943	27.34	8,750		Mar. 23, 1948	24.75	4,280
	May 18, 1943	25.69	5,100		Apr. 26, 1948	25.03	4,420
	May 21, 1943	27.02	7,100		June 25, 1948	19.5	2,250
	May 28, 1943	28.06	11,100	1949	Feb. 9, 1949	22.96	3,320
	June 5, 1943	16.50	1,640		May 2, 1949	17.38	1,740
1944	Apr. 12, 1944	25.76	5,240		May 20, 1949	21.47	2,770
					May 31, 1949	25.42	4,760
1945	Oct. 4, 1944	23.60	3,580		June 5, 1949	25.03	4,420
	Mar. 4, 1945	23.15	3,400		June 11, 1949	17.85	1,870
	Mar. 12, 1945	27.45	9,500	1950	May 12, 1950	27.56	6,420
	Mar. 16, 1945	17.83	2,000		June 4, 1950	24.34	3,280
	Mar. 20, 1945	17.97	2,040		June 22, 1950	24.18	3,240

a Annual peak only.

Peak stages and discharges of Cache Creek near Walters, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 19, 1950	20.22	2,050	1954	May 13, 1954	27.80	10,200
1951	May 18, 1951	29.72	28,200	1955	May 20, 1955	28.38	14,200
	May 26, 1951	17.47	1,610		May 27, 1955	22.71	2,740
	June 8, 1951	25.71	4,340		June 10, 1955	25.21	3,880
	June 10, 1951	21.43	2,390		Sept. 27, 1955	26.33	5,050
	June 12, 1951	27.23	7,150	1956	Oct. 6, 1955	27.79	10,200
	June 20, 1951	26.76	5,790				
	July 3, 1951	25.66	4,290	1957	Apr. 24, 1957	24.75	3,610
1952	May 18, 1952	28.07	11,800		Apr. 26, 1957	23.90	3,130
	May 24, 1952	19.36	1,920		May 1, 1957	18.30	1,690
	June 2, 1952	22.44	2,650		May 4, 1957	27.53	8,820
1953	Mar. 15, 1953	20.79	2,230		May 10, 1957	21.58	2,440
	Mar. 31, 1953	23.81	3,090		May 19, 1957	26.51	5,350
	June 7, 1953	26.52	5,350		May 23, 1957	20.56	2,110
	July 21, 1953	20.94	2,250		May 26, 1957	28.80	15,000
					June 1, 1957	25.62	3,970
1954	Oct. 24, 1953	27.00	6,400		June 5, 1957	25.23	3,610
	Oct. 27, 1953	23.80	3,090		June 19, 1957	19.26	1,750
	Nov. 20, 1953	26.62	5,500		Sept. 23, 1957	23.86	3,020
	Dec. 4, 1953	25.80	4,440	1958	May 4, 1958	24.24	3,120
	May 2, 1954	22.11	2,620				

3115. Deep Red Run near Randlett, Okla.

Location.--Lat 34°13', long 98°27', in SW $\frac{1}{4}$ sec.10, T.4 S., R.12 W., near right bank on downstream side of pier of bridge on U. S. Highway 277, 2 $\frac{1}{2}$ miles north of Randlett and 4.8 miles upstream from mouth.

Drainage area.--617 sq mi.

Gage.--Recording. Datum of gage is 924.49 ft above mean sea level, datum of 1929 (State Highway Commission bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs and extended above.

Bankfull stage.--20 ft.

Historical data.--During crest of 1951, local resident indicated "highest rise since 1908 when stage was somewhat higher."

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 11, 1950	24.18	9,400	1955	May 20, 1955	23.99	8,190
	May 27, 1950	21.40	2,710		Sept. 26, 1955	23.00	5,680
	June 4, 1950	20.84	2,360	1956	Oct. 6, 1955	24.44	10,800
	June 23, 1950	21.02	2,450				
1951	May 18, 1951	27.10	20,300	1957	Apr. 23, 1957	22.01	3,170
	June 6, 1951	21.87	3,470		Apr. 26, 1957	22.69	4,870
1952	May 18, 1952	24.92	12,800		May 1, 1957	22.00	3,470
	May 30, 1952	19.74	2,040		May 4, 1957	23.71	7,870
					May 11, 1957	21.00	2,620
1953	Apr. 1, 1953	15.91	1,290		May 20, 1957	23.74	8,050
					May 27, 1957	22.91	5,380
1954	Oct. 24, 1953	23.63	7,030		June 2, 1957	22.13	3,730
	Oct. 26, 1953	22.58	4,870		June 20, 1957	20.20	2,400
	May 13, 1954	23.98	7,590	1958	May 4, 1958	20.23	2,330
	May 27, 1954	19.23	2,080		July 8, 1958	20.00	2,270

3125. Wichita River at Wichita Falls, Tex.

Location.--Lat 33°54'30", long 98°32'05", near center of stream on downstream side of bridge on Beverly Drive in Wichita Falls, Wichita County, 4 miles upstream from Fort Worth and Denver Railway Co. bridge, about 7 miles upstream from Holliday Creek, and at mile 55.3.

Drainage area.--3,140 sq mi, of which 2,099 sq mi is above Lake Kemp Dam.

Gage.--Nonrecording. Prior to February 1902, at highway bridge about 4 miles downstream at different datum. Datum of present gage is 924.26 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--18 ft.

Historical data.--Flood of June 18, 1915, is greatest known. Maximum stage between beginning of storage in Lake Kemp Oct. 1, 1922, and establishment of station Mar. 30, 1938, was that of Sept. 18, 1936.

Remarks.--Flow largely regulated by Lake Kemp (capacity, 438,000 acre-ft). Lake Kemp was completed in 1923 and has never filled. Floods listed herein since 1923 originated downstream from Lake Kemp. Water is diverted at diversion dam (capacity of diversion reservoir, about 40,000 acre-ft) about 50 miles upstream for irrigation in the vicinity of Wichita Falls. Forty-two thousand acres of land are available for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	July 21, 1900	12.10	16,740	1946	Sept. 14, 1946	7.18	1,470
1901	May 17, 1901	19.40	37,440	1947	May 21, 1947	16.39	6,100
				1948	June 1, 1948	12.60	4,040
1915	June 8, 1915	-	a50,000	1949	May 26, 1949	7.71	1,500
				1950	Aug. 4, 1950	21.42	9,000
1936	Sept. 18, 1936	20.6	-	1951	May 20, 1951	18.98	6,670
1938	June 10, 1938	17.00	7,240	1952	May 28, 1952	6.76	1,210
1939	Aug. 10, 1939	9.42	2,430	1953	July 2, 1953	9.60	2,400
1940	Aug. 15, 1940	10.17	2,830	1954	May 13, 1954	14.83	4,710
1941	June 4, 1941	22.71	15,500	1955	Sept. 27, 1955	18.12	7,200
1942	Oct. 3, 1941	24.00	17,800	1956	Oct. 5, 1955	20.88	9,510
1943	Apr. 18, 1943	11.20	3,510	1957	May 3, 1957	18.27	7,200
1944	Mar. 1, 1944	5.42	720	1958	May 4, 1958	14.90	5,280
1945	Sept. 30, 1945	14.82	5,170				

a Computed by Big Wichita River Irrigation Co.

3130. Little Beaver Creek near Duncan, Okla.

Location.--Lat 34°30', long 98°07', in NE $\frac{1}{4}$ sec. 11, T.1 S., R.9 W., on downstream side of right pier of county highway bridge, three-quarters of a mile downstream from Stage Stand Creek, 8 $\frac{1}{4}$ miles west of Duncan, and 11.9 miles upstream from mouth.

Drainage area.--158 sq mi.

Gage.--Recording. Prior to Oct. 1, 1954, at datum 2.00 ft higher. Datum of present gage is 1,001.39 ft above mean sea level, unadjusted (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 5,000 cfs and extended on basis of computations of overflow at gage heights 18.39 and 18.87 ft.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Little Beaver Creek near Duncan, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 18, 1949	13.19	1,880	1953	June 6, 1953	16.20	10,200
1950	May 11, 1950	16.03	12,200	1954	Oct. 23, 1953	17.13	31,800
	May 26, 1950	15.81	8,900		Oct. 25, 1953	15.90	5,560
	June 3, 1950	14.59	2,080		Nov. 19, 1953	14.39	2,330
	June 11, 1950	15.49	3,460		May 2, 1954	17.14	32,000
	July 4, 1950	15.83	4,890	1955	May 19, 1955	19.46	39,800
	Sept. 13, 1950	15.36	3,090				
1951	May 1, 1951	15.13	2,500	1956	June 3, 1956	16.03	2,120
	May 17, 1951	16.87	25,200				
	May 20, 1951	15.97	5,990	1957	Apr. 21, 1957	17.01	2,720
	June 6, 1951	15.84	4,950		Apr. 23, 1957	17.30	3,180
	June 11, 1951	16.49	16,000		May 4, 1957	17.28	3,180
	June 18, 1951	15.05	2,370		May 13, 1957	16.40	2,380
	July 2, 1951	15.57	3,710		May 18, 1957	19.16	32,500
1952	Oct. 27, 1951	15.67	3,650		May 25, 1957	19.74	47,500
	May 17, 1952	16.40	15,000		May 30, 1957	16.58	2,480
	May 23, 1952	15.05	2,370		June 18, 1957	16.00	2,050
	June 1, 1952	15.67	4,000	1958	May 3, 1958	17.43	3,500
1953	May 16, 1953	14.58	2,080				

3135. Beaver Creek near Waurika, Okla.

Location.--Lat 34°13', long 98°03', on north line of NW¼NW¼ sec.16, T.4 S., R.8 W., on left bank on downstream side of bridge on State Highway 5, 4.5 miles northwest of Waurika, 6.2 miles upstream from Cow Creek, and at mile 25.8.

Drainage area.--563 sq mi.

Gage.--Recording. Datum of gage is 879.17 ft above mean sea level, datum of 1929 (levels by State Highway Commission).

Stage-discharge relation.--Defined by current-meter measurements since 1953. Peak discharge of 1951 was determined by slope-area measurement.

Bankfull stage.--17 ft.

Historical data.--According to local residents, a flood similar to that of 1951 occurred in 1889 or earlier. A flood in 1908 was reported to have been 1.3 ft lower than the 1951 flood at a site 2 miles upstream.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 18, 1951	-	a65,300	1956	July 4, 1956	20.14	6,870
1953	June 8, 1953	19.70	a4,820	1957	Apr. 23, 1957	19.46	4,350
1954	Oct. 24, 1953	21.34	11,500		Apr. 26, 1957	19.10	3,750
	Oct. 27, 1953	19.54	4,320		May 4, 1957	20.30	7,000
	May 3, 1954	20.99	10,200		May 18, 1957	21.16	14,600
	May 12, 1954	20.46	7,800		May 26, 1957	21.82	22,500
1955	May 20, 1955	22.42	32,200		June 1, 1957	19.63	4,820
	June 10, 1955	17.96	2,540	1958	May 5, 1958	17.92	2,560

a Annual peak only.

RED RIVER BASIN

3145. Little Wichita River near Archer City, Tex.

Location.--Lat 33°40', long 98°36', near left bank on upstream side of pier of bridge on State Highway 79, 1.5 miles downstream from confluence of North and Middle Forks, 4.8 miles north of Archer City, Archer County, and at mile 45.5.

Drainage area.--481 sq mi, of which 275 sq mi is above Lake Kickapoo near Archer City.

Gage.--Recording gage and concrete control prior to Aug. 17, 1954, on downstream side of bridge; nonrecording thereafter at present site. Datum of gage is 934.72 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--22 ft.

Remarks.--Some regulation since Feb. 1, 1946, by Lake Kickapoo on North Fork (capacity, 106,000 acre-ft). Diversions from Lake Kickapoo for Wichita Falls municipal use. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	June	a28	-	1944	Feb. 29, 1944	15.57	1,060
				1945	July 10, 1945	21.50	2,030
1932	July 7, 1932	21.88	2,380	1946	Oct. 1, 1945	21.46	2,150
1933	May 26, 1933	25.01	7,840	1947	Dec. 12, 1946	22.82	2,680
1934	Mar. 3, 1934	22.50	2,510	1948	Oct. 26, 1947	15.50	1,140
1935	May 6, 1935	24.81	5,940	1949	June 26, 1949	17.33	1,380
				1950	Aug. 2, 1950	25.91	15,100
1936	Sept. 17, 1936	25.67	13,000				
1937	Mar. 14 or 15	17.1	1,470	1951	May 20, 1951	18.81	1,330
1938	Mar. 30, 1938	22.46	2,780	1952	May 28, 1952	10.32	426
1939	May 17, 1939	16.98	1,660	1953	July 24, 1953	10.63	450
1940	June 17, 1940	21.58	2,610	1954	Oct. 26, 1953	24.48	4,400
				1955	Sept. 26, 1955	25.50	9,600
1941	June 11, 1941	24.77	4,350				
1942	Oct. 31, 1941	26.18	17,900	1956	Oct. 4, 1955	23.63	b2,570
1943	Oct. 19, 1942	22.42	2,620				

a From information by State Highway Department.

b Records incomplete, probably maximum for year.

3150. Little Wichita River near Henrietta, Tex.

Location.--Lat 33°50'00", long 98°12'30", on left bank at downstream side of bridge on State Highway 148, 1.5 miles northwest of Henrietta, Clay County, 4 miles upstream from Turkey Creek, and 5 miles upstream from Dry Fork Little Wichita River.

Drainage area.--1,037 sq mi.

Gage.--Nonrecording prior to June 26, 1953; recording gage and concrete control thereafter. Datum of gage is 831.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Remarks.--Some regulation by Lake Kickapoo since 1946. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908	-	a21	-	1956	Oct. 1, 1955	17.44	4,080
				1957	May 2, 1957	18.36	6,390
1953	July 25, 1953	9.78	623	1958	Nov. 10, 1957	17.23	3,390
1954	Oct. 26, 1953	17.91	5,890				
1955	Sept. 28, 1955	17.78	5,430				

a From information by State Highway Department.

3155. Red River near Terral, Okla.

Location.--Lat 33°52'50", long 97°56'15", near center of stream on downstream side of pier of bridge on U. S. Highway 81, a quarter of a mile downstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 1.2 miles south of Terral, Jefferson County, 3.2 miles downstream from Little Wichita River, and at mile 872.

Drainage area.--28,723 sq mi, of which about 22,787 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 12, 1939; recording and nonrecording thereafter. Datum of gage is 770.31 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Subject to frequent shifts.

Historical data.---Floods in 1891 and May 1, 1908, are reported to have reached about the same stage as flood of May 19, 1935.

Remarks.--Some regulation since 1923 by Lake Kemp on Wichita River, in Baylor County, Tex. (capacity, 648,000 acre-ft), since 1946 by Lake Kickapoo on North Fork Little Wichita River in Archer County, Tex. (capacity, 106,000 acre-ft), and since 1943 by Lake Altus on North Fork Red River in Kiowa County, Okla. (capacity, 142,000 acre-ft). Base for partial-duration series, 21,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 19, 1935	a27.2	-	1947	May 19, 1947	20.14	82,000
1938	May 5, 1938	16.95	29,600	May 21, 1947	18.72	57,000	
	May 24, 1938	17.85	43,700	May 24, 1947	17.78	44,400	
	June 10, 1938	17.65	40,900	June 3, 1947	16.05	25,500	
	June 18, 1938	17.48	39,500	1948	June 25, 1948	16.27	18,000
	June 27, 1938	16.60	28,400				
	1939	June 23, 1939	18.14	43,000	1949	May 21, 1949	18.00
1940			July 2, 1940	16.62	22,400	1950	May 12, 1950
	Aug. 19, 1940	16.63	21,800	July 24, 1950	16.90		21,700
	1941	May 2, 1941	18.35	43,500	July 26, 1950		17.58
May 5, 1941		25.57	134,000	Aug. 2, 1950	17.36	26,200	
May 13, 1941		19.27	37,800	Sept. 14, 1950	17.65	22,400	
May 23, 1941		20.70	74,600	1951	May 19, 1951	26.68	164,000
May 25, 1941		19.82	62,500		June 3, 1951	15.83	21,200
June 3, 1941		19.40	54,700		June 7, 1951	19.47	44,600
June 8, 1941		28.12	197,000		June 13, 1951	16.71	25,500
June 11, 1941		22.97	119,000		June 21, 1951	16.21	24,700
June 16, 1941	21.50	73,200	July 4, 1951	16.60	27,100		
1942	Oct. 3, 1941	20.26	76,000	1952	May 19, 1952	17.00	30,300
	Oct. 6, 1941	18.15	43,500	1953	Aug. 20, 1953	14.87	13,000
	Oct. 24, 1941	18.35	47,900				
	Oct. 31, 1941	21.45	91,000				
	Nov. 2, 1941	18.05	50,100	1954	Oct. 25, 1953	19.55	57,300
	Apr. 9, 1942	18.90	54,900		May 14, 1954	21.42	85,800
	Apr. 21, 1942	17.63	32,700		May 26, 1954	18.40	36,800
	Apr. 26, 1942	18.70	46,800	1955	May 21, 1955	22.44	109,000
	Apr. 30, 1942	18.80	47,900		June 22, 1955	19.51	42,800
	Sept. 21, 1942	17.00	30,300		Sept. 26, 1955	16.62	24,000
1943	Oct. 17, 1942	16.78	39,300	1956	Oct. 7, 1955	23.30	111,000
	Oct. 19, 1942	16.50	32,700		May 29, 1956	18.43	49,400
	May 12, 1943	17.38	41,300	1957	Apr. 22, 1957	17.73	41,400
	May 20, 1943	16.34	28,700		Apr. 27, 1957	18.26	45,800
	May 29, 1943	17.58	43,500		Apr. 30, 1957	19.39	62,500
	June 6, 1943	16.58	31,100		May 6, 1957	19.42	72,500
1944	June 16, 1944	17.20	38,700		May 10, 1957	18.12	52,800
		1945	Apr. 17, 1945	16.60	28,200	May 13, 1957	18.82
July 12, 1945	16.42		26,100	May 20, 1957	21.00	87,800	
Sept. 27, 1945	16.86		34,400	May 23, 1957	18.11	46,200	
1946	Oct. 1, 1945		19.62	66,200	May 27, 1957	20.06	71,900
			1947	Apr. 17, 1947	16.25	29,100	May 31, 1957
May 14, 1947	17.85	40,800		June 4, 1957	22.72	110,000	
1948	June 25, 1948	16.27	18,000	1949	May 21, 1949	18.00	33,700
1951	June 3, 1951	15.83	21,200				
				1952	June 7, 1951	19.47	44,600
1953	June 13, 1951	16.71	25,500				
				1954	June 21, 1951	16.21	24,700
1955	July 4, 1951	16.60	27,100				
				1956	May 19, 1952	17.00	30,300
1957	Aug. 20, 1953	14.87	13,000				
				1958	Oct. 25, 1953	19.55	57,300
1959	May 14, 1954	21.42	85,800				
				1960	May 26, 1954	18.40	36,800
1961	May 21, 1955	22.44	109,000				
				1962	June 22, 1955	19.51	42,800
1963	Sept. 26, 1955	16.62	24,000				
				1964	Oct. 7, 1955	23.30	111,000
1965	May 29, 1956	18.43	49,400				
				1966	Apr. 22, 1957	17.73	41,400
1967	Apr. 27, 1957	18.26	45,800				
				1968	Apr. 30, 1957	19.39	62,500
1969	May 6, 1957	19.42	72,500				
				1970	May 10, 1957	18.12	52,800
1971	May 13, 1957	18.82	60,800				
				1972	May 20, 1957	21.00	87,800
1973	May 23, 1957	18.11	46,200				
				1974	May 27, 1957	20.06	71,900
1975	May 31, 1957	16.73	27,100				
				1976	June 4, 1957	22.72	110,000
1977	May 4, 1958	15.27	16,700				
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a Annual peak only.

RED RIVER BASIN

3160. Red River near Gainesville, Tex.

Location.--Lat 33°44', long 97°10', in SW $\frac{1}{4}$ sec.36, T.9 S., R.1 E., near center of span on downstream side of bridge on U. S. Highway 77, a quarter of a mile downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 5 miles downstream from Fish Creek, 7 miles north of Gainesville, and at mile 791.5.

Drainage area.--30,782 sq mi, of which about 24,846 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Jan. 17, 1939; recording thereafter. Datum of gage is 627.91 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--25 ft.

Remarks.--Information on peaks during short periods of no record in 1936-37 obtained from inspection of records for downstream stations. Some regulation since 1923 by Lake Kemp on Wichita River, since 1943 by Lake Altus on North Fork Red River, and since 1946 by Lake Kickapoo on North Fork Little Wichita River. Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 24,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Dec. 5, 1935	-	{a}	1942	May 1, 1942	14.21	53,000
	May 9, 1936	-	{a}		Sept. 22, 1942	11.26	31,000
	May 30, 1936	12.38	32,600	1943	Oct. 20, 1942	11.96	35,500
	June 8, 1936	11.60	26,300		May 12, 1943	13.80	47,200
	Sept. 19, 1936	12.74	36,200		May 21, 1943	12.00	32,000
	Sept. 21, 1936	13.40	42,500		May 30, 1943	13.37	45,100
	Sept. 28, 1936	15.95	67,900		June 7, 1943	12.30	33,100
1937	June 1, 1937	11.4	24,500	1944	June 16, 1944	12.43	34,000
	June 10, 1937	14.9	54,400		Mar. 15, 1945	14.40	52,000
	Aug. 24, 1937	-	{a}	1945	Mar. 19, 1945	12.65	40,000
1938	Oct. 14, 1937	-	{a}		Apr. 2, 1945	12.05	28,000
	Feb. 17, 1938	15.67	65,400		Apr. 7, 1945	13.10	31,700
	Mar. 30, 1938	14.20	50,400		July 12, 1945	12.89	24,000
	Mar. 6, 1938	11.80	29,000		Sept. 28, 1945	13.00	35,000
	May 22, 1938	12.00	30,800	1946	Oct. 2, 1945	17.75	83,500
	May 24, 1938	15.82	67,600		May 31, 1946	12.60	28,200
	June 11, 1938	13.8	46,400	1947	Oct. 10, 1946	11.75	24,000
	June 18, 1938	12.70	35,300		Dec. 12, 1946	12.71	33,800
	June 28, 1938	11.70	26,300		Apr. 16, 1947	12.65	33,000
1939	June 24, 1939	13.07	38,900		May 15, 1947	14.25	41,800
	May 30, 1940	12.31	27,600		May 20, 1947	17.90	71,000
1940	July 3, 1940	13.23	37,500	1948	May 26, 1947	15.48	52,300
	Aug. 16, 1940	11.95	24,300		June 26, 1948	13.80	24,400
	Aug. 20, 1940	11.98	24,300	1949	May 22, 1949	14.44	44,000
					June 12, 1949	13.90	32,000
1941	Feb. 3, 1941	12.19	28,400	1950	May 13, 1950	15.73	51,200
	Apr. 18, 1941	12.58	28,000		July 24, 1950	13.54	25,700
	May 3, 1941	13.59	40,800		July 27, 1950	14.36	35,500
	May 6, 1941	20.43	116,000		Aug. 3, 1950	14.80	39,900
	May 13, 1941	13.27	36,600		Aug. 24, 1950	13.94	27,700
	May 24, 1941	16.20	68,400		Aug. 28, 1950	14.98	46,000
	June 3, 1941	14.53	51,000		Sept. 13, 1950	15.14	46,000
	June 9, 1941	24.15	168,000	1951	May 21, 1951	26.53	146,000
	June 17, 1941	16.61	73,000		June 4, 1951	15.74	39,100
	June 28, 1941	13.06	35,600		June 8, 1951	17.50	55,300
	July 3, 1941	12.28	28,500		June 14, 1951	15.63	38,300
1942	Oct. 4, 1941	22.32	156,000		June 22, 1951	13.86	24,700
	Oct. 25, 1941	13.66	44,000		July 4, 1951	15.11	34,000
	Nov. 1, 1941	20.36	136,000				
	Apr. 9, 1942	16.11	87,700				
	Apr. 21, 1942	13.35	47,000				
	Apr. 24, 1942	15.65	72,000				

a A peak higher than the base probably occurred this date.

Peak stages and discharges of Red River near Gainesville, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 20, 1952	13.00	32,300	1957	Apr. 23, 1957	15.76	43,600
1953	Aug. 22, 1953	11.00	9,820		Apr. 27, 1957	17.83	62,800
1954	Oct. 26, 1953	16.20	50,800		May 1, 1957	18.57	68,500
	May 15, 1954	19.32	74,200		May 7, 1957	18.96	69,500
	May 27, 1954	15.67	41,800		May 11, 1957	16.66	48,100
1955	May 22, 1955	21.08	96,900		May 14, 1957	18.06	60,900
	June 22, 1955	16.90	49,900		May 20, 1957	b22.80	100,000
1956	Oct. 8, 1955	21.70	106,000		May 28, 1957	b21.95	75,000
	May 30, 1956	15.12	36,000	1958	June 5, 1957	b25.14	102,000
					May 5, 1958	14.36	21,600

b Backwater from Lake Texoma.

3165. Washita River near Cheyenne, Okla.

Location.--Lat 35°38', long 99°40', on line between SE $\frac{1}{4}$ and SW $\frac{1}{4}$ sec.5, T.13 N., R.23 W., near left bank on downstream side of pier of bridge on U. S. Highway 283, half a mile downstream from Sergeant Major Creek, 1 mile north of Cheyenne, 5.2 miles upstream from Dead Indian Creek, and at mile 543.9.

Drainage area.--794 sq mi.

Gage.--Nonrecording prior to Jan. 12, 1948; recording thereafter. Datum of gage is 1,905.98 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs and extended on basis of contracted-opening measurement at 69,800 cfs.

Bankfull stage.--7 ft.

Historical data.--According to local residents the flood in 1934 was the highest known for 40 years.

Remarks.--Records 1938-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Apr. 3, 1934	a16.9	bc52,000	1944	May 27, 1944	6.25	1,240
1938	May 18, 1938	10.2	c14,600		June 13, 1944	6.20	1,180
1939	Apr. 5, 1939	5.08	1,340		July 30, 1944	5.92	1,120
	Jan. 8, 1939	6.62	3,070	1945	Oct. 1, 1944	7.58	4,000
	May 7, 1939	6.50	2,940		Apr. 14, 1945	6.37	1,740
	May 12, 1939	5.84	2,090		June 11, 1945	7.51	4,000
	June 21, 1939	6.06	2,090		Aug. 15, 1945	8.99	9,900
1940	Aug. 29, 1940	5.50	1,080		Sept. 28, 1945	5.72	1,120
1941	Apr. 19, 1941	7.00	2,840	1946	May 10, 1946	7.00	2,500
	Apr. 30, 1941	7.00	3,200		May 28, 1946	6.60	1,890
	May 4, 1941	5.40	1,170		July 1, 1946	9.16	8,900
	May 20, 1941	7.60	3,400		Aug. 20, 1946	6.45	2,500
	May 23, 1941	13.5	40,000	1947	Oct. 6, 1946	8.80	d7,100
	May 27, 1941	4.76	1,280	1948	June 28, 1948	7.58	3,580
	June 9, 1941	10.00	13,300		July 30, 1948	6.94	2,340
	June 22, 1941	8.90	7,550		Aug. 15, 1948	9.21	8,900
	July 26, 1941	5.93	1,240	1949	Nov. 1, 1948	6.32	1,750
1942	Oct. 23, 1941	10.11	14,000		Mar. 30, 1949	8.25	5,150
	Apr. 23, 1942	7.50	3,400		Apr. 27, 1949	7.86	4,380
	June 8, 1942	7.90	4,250		May 6, 1949	9.80	8,900
	June 22, 1942	7.00	2,500		May 20, 1949	8.72	3,780
	June 29, 1942	6.80	2,190		May 28, 1949	7.25	2,160
1943	Oct. 14, 1942	6.45	1,590		June 4, 1949	10.60	11,900
	Oct. 17, 1942	6.8	2,190	1950	May 18, 1950	8.71	6,500
	Oct. 20, 1942	6.1	1,180		July 5, 1950	9.10	8,450
	June 16, 1943	6.36	1,520		July 12, 1950	7.87	4,120

a At right bank above highway fill where flood in 1954 reached a stage of 18.0 ft.

b Estimated from present rating to indicate approximate magnitude.

c Annual peak only.

d Maximum recorded during year; flow may have been somewhat higher in May 1947.

Peak stages and discharges of Washita River near Cheyenne, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Aug. 1, 1950	7.05	2,430	1955	June 5, 1955	6.87	4,370
1951	May 18, 1951	9.16	5,040		June 8, 1955	6.22	3,280
	June 2, 1951	7.72	2,900		June 17, 1955	7.72	5,830
	June 7, 1951	9.29	4,700	1956	July 10, 1956	6.60	3,890
	June 10, 1951	7.53	2,470				
	June 15, 1951	7.37	2,230	1957	Apr. 3, 1957	5.33	2,160
1952	June 1, 1952	5.30	465		Apr. 18, 1957	4.80	1,640
					Apr. 22, 1957	4.57	1,280
1953	June 6, 1953	8.25	3,550		Apr. 26, 1957	5.03	1,800
					May 3, 1957	4.52	1,230
1954	Apr. 29, 1954	15.24	69,800		May 17, 1957	6.77	4,210
	May 1, 1954	5.60	3,580		May 24, 1957	6.35	3,500
	May 17, 1954	5.25	2,660	1958	Oct. 13, 1957	5.00	1,750
	May 24, 1954	5.21	1,980		June 21, 1958	4.78	1,530
	May 30, 1954	7.57	5,630				

3245. Barnitz Creek near Arapaho, Okla.

Location.--Lat 35°35', long 99°02', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.13 N., R.17 W., on right bank on downstream side of pier of county highway bridge, half a mile downstream from confluence of East and West Barnitz Creeks, $\frac{1}{2}$ miles west of Arapaho, and 6 miles upstream from mouth.

Drainage area.--243 sq mi.

Gage.--Recording. Datum of gage is 1,529.12 ft above mean sea level, unadjusted (Bureau of Reclamation bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs and extended on basis of field estimate at 7,700 cfs.

Bankfull stage.--20 ft.

Historical data.--Local residents indicated during 1951 field survey that similar stages had occurred in previous years and that maximum known occurred in April 1934.

Remarks.--Runoff affected by continuing developments in basin by Soil Conservation Service. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 30, 1946	17.77	1,420	1951	May 16, 1951	20.67	7,700
1947	Oct. 7, 1946	16.58	1,240	1952	Apr. 22, 1952	9.38	168
	Oct. 10, 1946	18.99	1,610	1953	Aug. 18, 1953	10.86	252
	Apr. 8, 1947	20.8	6,000				
	May 12, 1947	17.94	1,760	1954	Apr. 30, 1954	18.32	1,880
	May 16, 1947	18.08	1,850		May 17, 1954	16.19	1,190
1948	May 10, 1948	17.90	1,600		May 24, 1954	16.10	1,290
				1955	June 8, 1955	15.49	1,020
1949	Nov. 1, 1948	19.65	2,360		June 15, 1955	15.38	1,000
	Feb. 8, 1949	15.4	1,240	1956	Oct. 4, 1955	15.56	1,050
	May 19, 1949	17.88	1,860				
	May 21, 1949	18.81	2,120	1957	May 1, 1957	16.07	1,160
1950	July 20, 1950	18.29	1,810				
	Aug. 1, 1950	19.47	2,240	1958	June 20, 1958	17.58	1,290

3250. Washita River near Clinton, Okla.

Location.--Lat 35°31', long 98°57', in center of sec.11, T.12 N., R.17 W., near right bank on downstream side of pier of bridge on U. S. Highway 183, half a mile north of Clinton, three-quarters of a mile upstream from Beaver Creek, 4.8 miles downstream from Barnitz Creek, and at mile 447.4.

Drainage area.--1,977 sq mi.

Gage.--Nonrecording prior to Feb. 7, 1939, and Mar. 26, 1940, to Mar. 18, 1941; recording during remainder of period. Mar. 26 to May 13, 1940, at site 75 ft upstream at present datum. May 14, 1940, to Mar. 18, 1941, at railway bridge 1 mile downstream at datum 4.55 ft lower. Datum of present gage is 1,467.60 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,900 cfs and extended on basis of contracted-opening measurement at 66,800 cfs.

Bankfull stage.--18 ft.

Remarks.--Probably some reduction in peak discharges in recent years from Soil Conservation Service detention reservoirs on several tributaries. Base for partial-duration series, 3,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Apr. 3-4, 1934	a33.9	-	1947	May 12, 1947	21.24	8,110
1935	May or June 1935	a28	25,000		May 16, 1947	19.32	5,930
1936	Apr. 27, 1936	20.88	3,900		May 20, 1947	16.32	4,180
	May 1, 1936	23.23	8,750		June 5, 1947	15.64	3,800
	June 5, 1936	28.5	26,900	1948	Aug. 16, 1948	16.08	3,960
1937	May 30, 1937	20.5	3,650	1949	Nov. 1, 1948	21.41	8,110
1938	May 19, 1938	24.90	13,000		Feb. 6, 1949	17.19	4,670
1939	May 9, 1939	17.82	3,430		May 21, 1949	18.34	5,300
1940	Apr. 11, 1940	25.5	15,000		June 5, 1949	14.86	3,450
	July 2, 1940	20.05	6,520		June 26, 1949	15.95	4,010
1941	Apr. 19, 1941	16.65	3,810	1950	July 21, 1950	18.36	5,060
	May 4, 1941	21.84	9,320		Aug. 2, 1950	17.88	4,670
	May 21, 1941	22.36	11,000	1951	May 16, 1951	31.09	66,800
	May 25, 1941	21.24	8,000		May 20, 1951	18.48	5,230
	June 10, 1941	22.86	12,500		May 22, 1951	15.49	3,740
1942	Oct. 25, 1941	22.13	10,100		June 14, 1951	15.44	3,720
	Apr. 17, 1942	17.79	4,590	1952	Apr. 22, 1952	10.51	1,260
	Apr. 25, 1942	15.81	3,590	1953	June 8, 1953	14.06	2,470
	Apr. 27, 1942	21.34	8,200	1954	May 1, 1954	23.99	13,100
	June 23, 1942	16.87	4,140		May 24, 1954	21.29	5,960
1943	May 27, 1943	16.19	3,860	1955	June 8, 1955	20.93	6,270
1944	June 13, 1944	18.18	4,930	1956	Oct. 4, 1955	23.21	7,550
	June 24, 1944	16.06	3,700	1957	Apr. 20, 1957	19.88	4,440
1945	Apr. 10, 1945	22.19	10,400		Apr. 23, 1957	20.63	4,900
	Apr. 15, 1945	16.09	3,700		May 4, 1957	17.82	3,400
1946	July 2, 1946	15.61	3,430		May 12, 1957	18.49	3,700
1947	Apr. 8, 1947	21.70	9,060		May 25, 1957	17.98	3,480
					May 30, 1957	19.84	4,380
				1958	June 20, 1958	20.68	4,100

a Annual peak only, from floodmarks pointed out by local residents.

3255. Washita River at Carnegie, Okla.

Location.--Lat 35°07', long 98°34', near center of north line of sec.3, T.7 N., R.13 W., on downstream side of right pier of bridge on State Highway 9, 1,300 ft upstream from Running Creek, 2.7 miles east of Carnegie, and at mile 353.9.

Drainage area.--3,129 sq mi, includes that of Running Creek.

Gage.--Recording. Prior to October 1942 at site 8 miles upstream at datum 24.57 ft higher. Datum of present gage is 1,249.23 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 36,000 cfs and extended on basis of contracted-opening measurement at 50,000 cfs. At former site defined by current-meter measurements below 8,600 cfs and extended on basis of peak stage and interpolated discharge for flood of 1951 (reach, Clinton to Carnegie).

Bankfull stage.--18 ft. At former site, 5 ft.

Historical data.--Data for 1903 obtained in 1952 from approximate marks pointed out by local residents at two independent sites. Data for 1913-36 obtained in 1942 from chiseled marks of all major floods occurring since 1912 at Southwestern Light and Power Co. plant at Carnegie; tabulated stages contain 0.5-foot allowance for slope in reach.

Remarks.--Base for partial-duration series, 3,000 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 23, 1903	29.	-	1943	May 28, 1943	19.12	6,690
1913	Oct. 27, 1912	12.20	8,700	1944	Apr. 11, 1944	19.54	6,670
1921	Apr. 5, 1921	13.96	12,000		June 14, 1944	22.74	14,000
					June 26, 1944	17.05	4,570
1923	June 10, 1923	12.89	10,000	1945	Apr. 13, 1945	19.01	6,670
					Apr. 16, 1945	21.00	9,810
1924	Oct. 14, 1923	13.78	11,600		June 12, 1945	14.43	3,040
					June 16, 1945	14.76	3,080
1934	Apr. 5, 1934	16.39	18,500		July 27, 1945	16.93	3,830
					Sept. 29, 1945	15.67	3,100
1935	May 19, 1935	16.28	18,000	1946	June 26, 1946	16.10	3,310
1936	June 6, 1936	17.16	21,500		July 1, 1946	17.77	4,460
1938	May 23, 1938	11.14	7,080	1947	Apr. 11, 1947	15.89	3,200
					Apr. 16, 1947	16.27	3,410
1939	June 22, 1939	7.69	2,950		May 14, 1947	21.49	9,200
					May 17, 1947	22.20	10,600
1940	Apr. 14, 1940	8.50	3,790		May 23, 1947	16.24	4,000
	July 4, 1940	9.01	4,250		June 3, 1947	17.97	4,440
1941	May 5, 1941	12.51	9,030	1948	June 25, 1948	14.22	2,660
	May 23, 1941	11.94	8,330				
	May 28, 1941	8.69	4,660	1949	Feb. 10, 1949	15.39	3,330
	June 6, 1941	12.29	9,050		May 18, 1949	26.21	50,000
	June 10, 1941	9.83	5,960		May 26, 1949	16.36	4,040
	June 13, 1941	11.67	8,320		May 29, 1949	15.06	3,350
1942	Oct. 23, 1941	13.16	10,300		June 4, 1949	22.31	14,900
	Oct. 27, 1941	11.98	8,700		June 10, 1949	17.00	4,320
	Apr. 11, 1942	7.60	3,500	1950	July 18, 1950	17.63	4,920
	Apr. 20, 1942	9.39	5,480		July 21, 1950	18.45	5,590
	Apr. 26, 1942	10.72	7,080		July 25, 1950	17.61	5,000
	Apr. 29, 1942	11.53	8,080		Aug. 3, 1950	19.89	6,870
	June 24, 1942	8.99	5,000	1951	May 18, 1951	25.50	40,900
1943	May 18, 1943	18.93	5,770		June 13, 1951	15.94	4,150
					June 16, 1951	14.11	3,100

Peak stages and discharges of Washita River at Carnegie, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 25, 1952	14.60	3,120	1956	Oct. 5, 1955	24.04	23,900
1953	July 19, 1953	20.29	8,550		May 28, 1956	12.78	3,120
1954	Oct. 23, 1953	14.02	3,550	1957	Apr. 3, 1957	17.60	4,330
	May 2, 1954	14.04	3,300		Apr. 24, 1957	21.41	12,600
	May 27, 1954	19.28	6,720		May 3, 1957	21.40	11,600
1955	May 10, 1955	12.21	3,020		May 11, 1957	15.57	3,810
	May 12, 1955	12.83	3,250		May 13, 1957	16.20	4,100
	May 21, 1955	15.00	4,160		May 20, 1957	15.61	3,810
	June 8, 1955	16.67	4,880		May 25, 1957	15.80	3,950
	Sept. 23, 1955	13.32	3,380	1958	June 4, 1957	18.68	6,200
					June 23, 1958	14.20	3,580

3260. Pond Creek near Fort Cobb, Okla.
(Known locally as Cobb Creek)

Location.--Lat 35°08', long 98°27', in NW¹SE¹ sec. 26, T.8 N., R.12 W., on left bank 100 ft downstream from county highway bridge, 2.7 miles north of Fort Cobb, and 5.0 miles upstream from mouth.

Drainage area.--319 sq mi.

Gage.--Nonrecording prior to Aug. 30, 1940; recording thereafter. Datum of gage is 1,252.57 ft above mean sea level, datum of 1929 (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 4,300 cfs and extended to 35,000 cfs on basis of contracted-opening measurements at gage heights 16.62, 17.58, and 18.72 ft.

Bankfull stage.--14 ft.

Historical data.--Data for flood in 1937 based on floodmark pointed out by local resident who stated that higher floods had occurred in previous years.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 15, 1937	19.3	-	1949	May 17, 1949	18.72	35,000
1940	July 2, 1940	15.81	3,290		May 20, 1949	14.95	2,300
1941	Apr. 18, 1941	14.97	1,820		May 26, 1949	14.68	2,090
	June 7, 1941	14.79	1,640		June 3, 1949	14.72	2,090
1942	Oct. 23, 1941	15.42	2,610	1950	July 20, 1950	14.92	1,940
1943	May 18, 1943	14.50	1,440		July 25, 1950	14.33	1,720
1944	Apr. 10, 1944	16.62	8,500		Aug. 1, 1950	14.46	1,820
	June 13, 1944	17.22	12,700	1951	May 18, 1951	13.93	1,640
	June 24, 1944	14.95	1,760		May 20, 1951	15.92	4,540
1945	Apr. 11, 1945	14.60	1,860		June 12, 1951	14.95	2,300
	Apr. 15, 1945	15.21	2,560	1952	May 24, 1952	15.98	4,900
	June 11, 1945	17.58	16,000	1953	Apr. 5, 1953	13.73	1,520
	July 14, 1945	15.71	3,160		July 19, 1953	16.10	5,400
	Sept. 29, 1945	14.30	1,550	1954	May 24, 1954	14.30	1,620
1946	July 1, 1946	16.05	4,700	1955	May 19, 1955	16.97	7,950
1947	May 16, 1947	16.06	4,760		June 19, 1955	16.03	2,950
	July 1, 1947	14.17	1,640	1956	Aug. 10, 1955	15.57	2,330
1948	June 23, 1948	16.71	6,110	1957	Apr. 21, 1957	14.08	1,550
1949	Feb. 8, 1949	13.75	1,620	1958	June 20, 1958	14.48	1,760

a Annual peak only.

RED RIVER BASIN

3265. Washita River at Anadarko, Okla.
(Published as "near Anadarko" 1902-8)

Location.--Lat 35°05', long 98°14', in NW $\frac{1}{4}$ sec.15, T.7 N., R.10 W., at upstream handrail of bridge on U. S. Highway 281, half a mile north of Anadarko, 8 miles upstream from Sugar Creek, and at mile 305.0.

Drainage area.--3,656 sq mi.

Gage.--Nonrecording. Prior to 1936, at site 75 ft downstream at datum estimated to be 0.9 ft higher. Datum of last used gage was 1,151.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 9,600 cfs and extended above.

Bankfull stage.--19 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 25, 1903	26.8	29,000	1907	June 14, 1907	20.7	11,600
1904	July 14, 1904	14.7	3,240	1908	Oct. 9, 1907	22.9	28,100
1905	May 31, 1905	18.9	6,480				
1906	Sept. 18, 1906	13.0	3,150	1936	June 8, 1936	21.69	10,800
				1937	June 19, 1937	17.55	4,660

3275. Little Washita River at Ninnekah, Okla.

Location.--Lat 34°57'24", long 97°55'34", at center of north line of sec.34, T.6 N., R.7 W., at center of span on downstream side of pier of Chicago, Rock Island and Pacific Railroad Co. bridge, half a mile north of Ninnekah, 1.2 miles downstream from Rock Creek, and 6.2 miles upstream from mouth.

Drainage area.--227 sq mi.

Gage.--Recording. Datum of gage is 1,058.52 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 5,500 cfs and extended on basis of contracted-opening measurement at 25,200 cfs.

Bankfull stage.--17 ft.

Historical data.--According to local residents, a notable flood occurred in April 1927.

Remarks.--Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 16, 1947	-	336,000	1956	Oct. 3, 1955	14.23	3,480
1952	Apr. 19, 1952	12.80	2,000		Oct. 4, 1955	13.82	3,260
	May 18, 1952	16.62	3,670		May 26, 1956	11.72	2,200
	June 1, 1952	17.15	3,950	1957	Apr. 21, 1957	10.84	1,840
1953	Mar. 14, 1953	11.80	1,590		Apr. 23, 1957	11.73	2,120
	Sept. 3, 1953	11.79	1,590		May 2, 1957	11.64	2,070
1954	Oct. 23, 1953	12.57	1,910		May 13, 1957	10.72	1,660
	Oct. 25, 1953	14.34	2,640		May 17, 1957	18.80	7,410
	Dec. 3, 1953	12.82	2,000		May 22, 1957	10.40	1,800
	May 2, 1954	13.95	2,510		May 24, 1957	22.20	25,200
	May 10, 1954	14.49	2,730		May 30, 1957	12.43	3,230
1955	May 19, 1955	17.09	4,860		Sept. 21, 1957	16.04	5,560
	Sept. 22, 1955	13.73	3,100	1958	July 21, 1958	7.18	910

a Annual peak only. Contracted-opening measurement of peak discharge at State Highway 19, $4\frac{1}{2}$ miles downstream.

3280. Washita River near Tabler, Okla.

Location.--Lat 34°58', long 97°51', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T.6 N., R.6 W., on downstream side of left pier of abandoned county highway bridge, 1 mile downstream from Little Washita River, 5 miles south of Tabler, and at mile 243.0.

Drainage area.--4,706 sq mi.

Gage.--Nonrecording prior to June 6, 1940; recording thereafter. Datum of gage is 1,022.38 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements of main channel and by computation of flow in flood plain by special methods.

Bankfull stage.--21 ft.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	-	a28.7	b36,200	1945	Sept. 29, 1945	24.20	10,900
1927	Apr. 7, 1927	a29.9	b53,600	1946	May 29, 1946	19.89	5,650
1940	July 5, 1940	13.54	3,380		May 31, 1946	19.30	5,350
1941	Apr. 18, 1941	16.31	4,410		June 30, 1946	24.60	10,400
	May 2, 1941	16.94	4,510	1947	Apr. 10, 1947	16.93	4,200
	May 5, 1941	20.75	6,460		Apr. 13, 1947	20.32	5,850
	May 23, 1941	22.05	7,330		Apr. 15, 1947	19.09	5,250
	May 29, 1941	18.50	5,160		May 12, 1947	21.30	6,230
	June 7, 1941	26.02	15,800		May 16, 1947	29.08	38,000
	June 10, 1941	24.31	10,900		May 21, 1947	24.06	10,400
	June 15, 1941	21.58	6,960		June 1, 1947	24.05	10,100
1942	Oct. 2, 1941	19.60	5,690	1948	Mar. 1, 1948	20.5	6,680
	Oct. 7, 1941	15.96	4,010		June 22, 1948	22.16	7,950
	Oct. 30, 1941	24.06	10,600	1949	May 1, 1949	18.78	5,640
	Apr. 8, 1942	20.94	6,430		May 20, 1949	29.72	50,000
	Apr. 19, 1942	22.18	7,480		May 29, 1949	22.06	8,130
	Apr. 25, 1942	21.30	6,650		June 3, 1949	23.65	11,100
	May 3, 1942	17.59	4,460		June 7, 1949	23.27	10,200
	Aug. 26, 1942	18.93	5,350		June 10, 1949	20.17	7,100
	Sept. 19, 1942	16.49	4,690	1950	May 10, 1950	20.94	8,300
1943	May 10, 1943	24.13	10,600		July 20, 1950	23.35	12,300
	May 19, 1943	22.34	7,840		July 25, 1950	20.87	8,300
	May 31, 1943	16.64	4,270		Aug. 6, 1950	14.78	4,570
	June 4, 1943	23.28	9,020	1951	May 18, 1951	27.14	24,800
1944	Apr. 14, 1944	17.68	4,610		May 20, 1951	26.72	22,800
	June 12, 1944	18.40	5,050		June 9, 1951	16.54	5,340
	June 18, 1944	17.39	4,710		June 12, 1951	21.64	9,180
1945	Oct. 3, 1944	19.18	5,400	1952	May 18, 1952	14.51	4,560
	Mar. 11, 1945	23.19	9,090		June 1, 1952	15.15	4,900
	Apr. 16, 1945	25.19	13,300	1955	-	a28.8	37,300
	Apr. 20, 1945	22.70	8,940				
	June 8, 1945	21.37	7,170	1957	May, 1957	a29.6	48,300
	June 12, 1945	24.77	12,300				
	July 10, 1945	22.58	8,640				

a Annual peak only.

b Approximate discharge.

RED RIVER BASIN

3285. Washita River near Pauls Valley, Okla.

Location.--Lat 34°45', long 97°15', in SE $\frac{1}{4}$ sec.1, T.3 N., R.1 W., on downstream side of right pier of bridge on U. S. Highway 77, 2 miles northwest of Pauls Valley, 6 miles downstream from Owl Creek, 7 miles upstream from Washington Creek, and at mile 146.5.

Drainage area.--5,330 sq mi.

Gage.--Nonrecording prior to Jan. 26, 1939; recording thereafter. Prior to Oct. 7, 1948, at site 0.7 mile upstream at datum 1.53 ft higher. Datum of present gage is 854.61 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 18,000 cfs and extended above.

Bankfull stage.--24 ft. At upstream site, 25 ft.

Historical data.--According to local residents in 1938, the flood in 1908 was maximum known and in 1941, it was reported as similar to flood of June 10, 1941. In 1938, local residents reported that a notable flood occurred in 1923.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 16, 1938	-	10,000	1947	Apr. 25, 1947	20.99	7,870
	Mar. 29, 1938	23.90	7,800		May 12, 1947	21.02	7,870
	May 7, 1938	22.41	6,570		May 19, 1947	28.04	15,200
	May 23, 1938	24.92	8,880		May 25, 1947	27.52	14,500
1939	June 30, 1939	16.93	4,260		May 29, 1947	17.67	5,220
1940	July 4, 1940	23.42	7,150		June 2, 1947	26.25	12,500
1941	May 10, 1941	19.13	5,120		June 24, 1947	25.41	12,100
	May 25, 1941	19.61	5,450	1948	July 3, 1947	17.67	5,540
	June 2, 1941	22.3	6,610		Mar. 3, 1948	16.23	5,600
	June 10, 1941	30.60	22,000		May 26, 1948	16.15	5,040
	Sept. 9, 1941	20.50	5,550		June 21, 1948	17.02	5,600
					June 25, 1948	24.00	12,100
1942	Oct. 5, 1941	23.35	7,070	1949	May 1, 1949	21.62	10,400
	Oct. 15, 1941	21.7	6,150		May 22, 1949	26.42	21,700
	Oct. 31, 1941	29.15	16,200		May 30, 1949	17.48	7,200
	Apr. 9, 1942	25.34	9,000		June 9, 1949	18.78	9,180
	Apr. 20, 1942	24.70	7,840	1950	May 11, 1950	29.88	30,000
	Apr. 25, 1942	24.50	7,700		May 26, 1950	15.64	8,600
1943	Oct. 30, 1942	18.94	5,180		June 12, 1950	12.10	5,390
	May 11, 1943	27.75	14,000		July 22, 1950	15.74	9,200
	May 18, 1943	25.33	9,890		July 26, 1950	18.11	11,400
	May 20, 1943	23.47	7,850		Sept. 14, 1950	11.84	5,600
	June 6, 1943	23.63	7,990	1951	May 1, 1951	16.60	11,700
1944	June 9, 1944	21.18	8,010		May 23, 1951	23.00	20,100
	June 14, 1944	20.26	7,280		May 27, 1951	13.80	6,480
1945	Mar. 3, 1945	18.53	5,430		June 11, 1951	17.24	11,100
	Mar. 15, 1945	23.56	8,170		June 14, 1951	15.27	8,410
	Mar. 19, 1945	19.59	5,990	1952	May 18, 1952	18.29	15,100
	Apr. 20, 1945	23.20	8,100		May 28, 1952	13.41	8,120
	June 8, 1945	21.70	7,680	1953	July 23, 1953	10.14	3,830
	June 15, 1945	26.23	9,770	1954	Oct. 23, 1953	19.15	17,400
	June 17, 1945	24.21	8,380		Oct. 26, 1953	15.39	10,700
	June 22, 1945	19.21	5,430		May 2, 1954	15.60	11,000
	July 10, 1945	23.28	8,600		May 12, 1954	14.25	9,200
1946	Oct. 1, 1945	29.70	18,600	1955	May 21, 1955	17.65	14,500
	May 23, 1946	22.06	7,750		June 16, 1955	12.30	5,860
	May 31, 1946	26.19	9,860		June 19, 1955	12.80	6,530
	June 30, 1946	23.1	8,600		Sept. 26, 1955	12.98	6,950
1947	Dec. 11, 1946	21.92	8,590	1956	Oct. 5, 1955	16.71	13,000
	Apr. 15, 1947	23.80	10,400				

Peak stages and discharges of Washita River near Pauls Valley, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Apr. 21, 1957	16.90	12,900	1957	May 26, 1957	24.64	29,300
	Apr. 23, 1957	17.00	12,400		May 30, 1957	21.18	21,500
	Apr. 26, 1957	15.22	9,760		June 4, 1957	16.35	11,600
	May 1, 1957	12.18	5,260		June 15, 1957	17.08	13,200
	May 3, 1957	13.59	7,360		June 23, 1957	13.84	7,360
	May 9, 1957	14.95	9,760		Sept. 21, 1957	19.10	18,600
	May 13, 1957	17.16	13,600				
	May 18, 1957	27.34	35,800	1958	June 21, 1958	13.75	8,890
	May 22, 1957	16.10	10,800				

3290. Rush Creek at Purdy, Okla.

Location.--Lat 34°42', long 97°35', in center of NE $\frac{1}{4}$ sec. 26, T.3 N., R.4 W., on right bank 20 ft downstream from low-water bridge on State Highway 76, three-quarters of a mile south of Purdy, 8 $\frac{1}{2}$ miles south of Lindsay, and at mile 26.1.

Drainage area.--145 sq mi.

Gage.--Nonrecording prior to Aug. 23, 1943, and May 11, 1950, to Sept. 18, 1952; recording during remainder of record. Prior to Oct. 1, 1942, at datum 5.00 ft higher. Datum of last used gage was 989.7 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements to 14,500 cfs and extended on basis of conveyance studies.

Bankfull stage.--23 ft.

Historical data.--According to local residents, the flood of May 10, 1950, was the highest known since flood in 1908, which exceeded it by 1 or 2 ft.

Remarks.--Records 1939-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 3, 1940	15.95	10,400	1946	June 29, 1946	14.30	6,500
1941	Apr. 29, 1941	12.47	7,200	1947	Dec. 11, 1946	11.92	6,400
	June 1, 1941	15.60	9,990		Apr. 24, 1947	11.85	5,040
	June 6, 1941	21.00	15,200	1948	June 24, 1948	15.25	6,600
	June 9, 1941	16.80	11,400		May 1, 1949	11.60	3,950
	June 15, 1941	13.60	8,480	1950	May 10, 1950	27.0	30,000
1942	Oct. 2, 1941	13.10	8,440		May 26, 1950	18.20	14,300
	Oct. 4, 1941	13.80	4,950		Aug. 24, 1950	16.10	11,400
	Oct. 30, 1941	15.30	10,300		Sept. 13, 1950	19.70	16,400
	Apr. 8, 1942	10,000		1951	May 1, 1951	19.90	18,400
	June 22, 1942	13.40	8,750		May 18, 1951	18.89	17,000
1943	May 10, 1943	26.10	15,300		June 9, 1951	12.0	7,600
	May 16, 1943	18.50	9,100		June 11, 1951	10.9	6,160
1944	June 9, 1944	17.40	8,250		July 2, 1951	11.1	6,020
1945	Mar. 11, 1945	18.00	8,700	1952	May 17, 1952	14.1	11,200
	June 8, 1945	19.43	9,820		Mar. 28, 1952	11.5	7,860
	June 12, 1945	15.40	6,750	1953	Mar. 30, 1953	9.54	5,320
	July 27, 1945	16.20	7,350		July 20, 1953	10.10	6,110
	Sept. 28, 1945	17.50	9,750	1954	Oct. 22, 1953	20.19	a20,000
1946	May 23, 1946	15.60	6,900				
	May 31, 1946	14.60	6,150				

a Annual peak only.

3295. Rush Creek near Maysville, Okla.

Location.--Lat 34°44', long 97°24', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.3 N., R.2 W., near right bank on downstream side of pier of bridge on State Highway 74, 2 $\frac{1}{2}$ miles downstream from Panther Creek, 5.3 miles south of Maysville, and at mile 14.2.

Drainage area.--206 sq mi.

Gage.--Recording. Datum of gage is 903.04 ft above mean sea level, datum of 1929 (levels by State Highway Commission).

Stage-discharge relation.--Defined by current-meter measurements below 5,300 cfs and extended on basis of contracted-opening measurement at 38,500 cfs.

Bankfull stage.--20 ft.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	15.40	12,400	1957	Apr. 23, 1957	12.90	8,890
	May 10, 1954	14.70	11,200		May 13, 1957	13.81	10,200
	May 12, 1954	12.65	7,820		May 18, 1957	23.62	38,500
1955	Apr. 26, 1955	13.45	9,040		May 22, 1957	10.70	6,620
	May 19, 1955	16.12	13,700		May 25, 1957	18.73	18,700
	June 16, 1955	12.65	8,420		May 30, 1957	13.02	9,600
1956	Oct. 5, 1955	7.78	2,790		June 15, 1957	17.30	16,800
	Apr. 21, 1957	14.30	11,000	1958	May 3, 1958	9.75	5,060

3305. Caddo Creek near Ardmore, Okla.

Location.--Lat 34°15', long 97°06', on west line of NW $\frac{1}{4}$ sec.4, T.4 S., R.2 E., at middle of downstream handrail of county highway bridge, 5 miles north of Ardmore and 10 miles upstream from mouth.

Drainage area.--298 sq mi.

Gage.--Nonrecording. Datum of gage is 709.48 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 15,000 cfs and extended above.

Bankfull stage.--19 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Mar. 12, 1937	23.0	4,750	1941	Apr. 15, 1941	20.2	2,670
	Apr. 21, 1937	23.6	5,850		Apr. 30, 1941	22.0	3,750
	Aug. 22, 1937	-	7,000		May 21, 1941	20.2	2,620
1938	Feb. 16, 1938	27.94	18,800		June 10, 1941	19.9	2,550
	Mar. 29, 1938	24.00	6,880		June 15, 1941	21.7	3,450
1939	June 12, 1939	11.79	710	1942	Oct. 5, 1941	26.90	14,800
1940	May 9, 1940	22.10	3,490		Oct. 31, 1941	25.60	10,800
	May 18, 1940	22.50	3,970		Apr. 8, 1942	24.90	8,940
	May 22, 1940	25.16	9,700		Apr. 20, 1942	26.20	12,500
	May 28, 1940	21.50	2,970		Apr. 25, 1942	24.20	7,320
	June 10, 1940	25.10	9,440		May 18, 1942	21.80	3,490
	Aug. 17, 1940	22.70	4,250		June 22, 1942	20.5	2,750
					June 30, 1942	21.10	2,920
1941	Nov. 26, 1940	22.2	3,930	1943	Oct. 30, 1942	21.50	3,280
					Nov. 8, 1942	24.70	8,460

Peak stages and discharges of Caddo Creek near Ardmore, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 11, 1943	19.95	2,560	1947	Dec. 11, 1946	26.00	11,900
	Apr. 17, 1943	24.50	7,980		Apr. 15, 1947	23.42	5,820
	May 10, 1943	27.6	17,500		May 17, 1947	23.80	6,020
	May 28, 1943	23.20	6,240		May 20, 1947	23.50	5,820
1944	Feb. 28, 1944	21.50	3,280		May 25, 1947	24.55	8,230
					June 23, 1947	21.00	2,980
1945	Feb. 21, 1945	19.80	2,510	1948	May 10, 1948	20.03	2,560
	Apr. 2, 1945	20.00	2,560		July 12, 1948	20.31	2,650
	Apr. 15, 1945	23.80	6,440	1949	Mar. 21, 1949	21.60	3,350
	June 12, 1945	23.50	5,820		May 23, 1949	20.45	2,680
	June 17, 1945	22.50	4,130		May 27, 1949	23.90	6,660
	Mar. 15, 1945	28.60	22,300		June 13, 1949	26.00	11,900
	Mar. 19, 1945	25.55	10,600	1950	Oct. 24, 1949	21.45	3,220
	Apr. 24, 1945	24.60	8,230		Feb. 13, 1950	21.28	3,160
	July 10, 1945	25.53	10,600		Apr. 29, 1950	23.83	6,440
	Aug. 7, 1945	24.20	7,320		May 2, 1950	22.00	3,630
	Sept. 27, 1945	25.25	9,830		May 11, 1950	20.42	2,630
1946	Oct. 1, 1945	25.50	10,500		July 23, 1950	20.00	2,560
	Jan. 5, 1946	25.90	11,600		Aug. 2, 1950	21.55	3,350
	Feb. 18, 1946	23.70	6,230		Aug. 23, 1950	23.82	6,440
	Aug. 19, 1946	21.30	3,160		Sept. 13, 1950	19.83	2,510
	Aug. 26, 1946	23.80	6,440				
	Aug. 29, 1946	22.00	3,630				

3310. Washita River near Durwood, Okla.

Location.--Lat 34°14', long 96°58', in SE $\frac{1}{4}$ sec.3, T.4 S., R.3 E., near left bank on downstream side of pier of bridge on State Highway 18, 1.3 miles downstream from Caddo Creek, 4 miles north of Durwood, and at mile 63.4.

Drainage area.--7,202 sq mi.

Gage.--Nonrecording prior to Feb. 16, 1939, and Dec. 15, 1950, to Feb. 19, 1952; recording for remainder of record. Dec. 15, 1950, to Feb. 19, 1952, at site 500 ft upstream at present datum. Datum of present gage is 650.57 ft above mean sea level (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--27 ft.

Historical data.--Data for 1927 obtained from local residents in 1928, and for 1908 in 1938.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1908	May 1908	42	a71,000	1933	Dec. 24, 1933	26.55	15,700	
1927	April 1927	38	a43,500		Mar. 6, 1933	25.68	14,800	
					May 16, 1933	32.03	23,300	
					May 25, 1933	33.92	27,600	
1929	May 12, 1929	26.24	15,300		Aug. 3, 1933	22.10	11,500	
	May 16, 1929	23.16	12,500					
	June 1, 1929	26.3	15,400	1934	Mar. 2, 1934	17.61	8,020	
1930	May 11, 1930	22.90	12,200	1935	May 6, 1935	28.89	19,000	
	May 16, 1930	27.94	16,900			May 19, 1935	37.22	36,400
	May 23, 1930	22.06	11,500			June 16, 1935	25.40	14,600
1931	Mar. 20, 1931	23.32	11,700	1936	Dec. 7, 1935	24.95	14,200	
1932	Oct. 23, 1931	21.02	10,600		May 9, 1936	31.97	24,500	
	Nov. 24, 1931	28.20	17,300		Sept. 28, 1936	27.02	16,400	
	Jan. 6, 1932	27.58	16,700	1937	Apr. 21, 1937	20.4	10,200	
	Jan. 17, 1932	20.4	10,100			Aug. 22, 1937	22.5	11,800
	Jan. 23, 1932	21.26	10,800					
	June 28, 1932	21.02	10,600	1938	Feb. 17, 1938	41.20	68,000	
	July 7, 1932	27.05	16,100			Mar. 30, 1938	30.95	21,600

a Annual peak only.

Peak stages and discharges of Washita River near Durwood, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 9, 1938	25.33	13,700	1947	June 24, 1947	29.01	23,400
	May 25, 1938	28.21	17,000				
1939	July 1, 1939	10.04	3,870	1948	Feb. 26, 1948	22.99	17,500
					June 25, 1948	24.25	19,100
1940	May 22, 1940	22.85	11,700		June 28, 1948	17.75	11,500
	May 28, 1940	22.08	11,200	1949	Mar. 21, 1949	16.14	10,400
	July 3, 1940	23.63	12,300		May 2, 1949	23.90	20,400
1941	Apr. 16, 1941	21.33	10,900		May 24, 1949	24.40	21,100
	June 13, 1941	31.56	21,000		May 27, 1949	23.01	19,200
	Sept. 10, 1941	24.38	13,100		June 13, 1949	26.18	23,800
1942	Oct. 6, 1941	38.27	38,800	1950	May 12, 1950	42.57	80,100
	Oct. 16, 1941	21.58	10,600		May 27, 1950	16.24	10,600
	Oct. 31, 1941	44.37	85,000		July 23, 1950	17.55	12,600
	Apr. 9, 1942	38.25	44,900		July 26, 1950	18.14	13,900
	Apr. 21, 1942	35.41	32,500		Aug. 24, 1940	17.66	13,200
	Apr. 25, 1942	34.68	30,200		Sept. 15, 1950	16.26	12,600
	May 4, 1942	22.52	11,000	1951	May 2, 1951	16.40	11,700
	June 10, 1942	23.30	13,000		May 21, 1951	24.41	25,900
	June 23, 1942	30.38	18,800		May 28, 1951	16.30	11,600
1943	Oct. 31, 1942	23.08	12,200		June 7, 1951	19.00	14,700
	Nov. 8, 1942	26.23	15,200		June 12, 1951	27.08	28,700
	Apr. 12, 1943	26.18	15,700	1952	May 18, 1952	22.16	18,500
	Apr. 17, 1943	23.30	12,800		May 29, 1952	16.17	11,800
	May 11, 1943	44.35	91,300	1953	Apr. 24, 1953	16.93	11,800
	May 19, 1943	24.54	13,900		May 12, 1953	20.10	17,800
	May 28, 1943	25.65	15,100		July 20, 1953	21.20	20,000
	June 6, 1943	20.33	10,400	1954	Oct. 24, 1953	26.26	30,300
	June 15, 1944	21.20	11,800		Oct. 26, 1953	23.17	23,800
1945	Mar. 3, 1945	21.10	11,700		May 1, 1954	18.57	15,300
	Mar. 12, 1945	23.20	13,400		May 3, 1954	24.11	26,200
	Mar. 16, 1945	38.51	50,500		May 13, 1954	26.28	31,500
	Mar. 20, 1945	34.38	32,500		June 8, 1954	16.93	12,500
	Apr. 16, 1945	25.31	15,400	1955	May 20, 1955	23.34	26,200
	Apr. 24, 1945	31.63	25,000		June 17, 1955	15.70	11,200
	June 10, 1945	32.19	25,900		Sept. 27, 1955	25.39	31,100
	June 13, 1945	33.58	29,300	1956	Oct. 6, 1955	17.20	13,500
	June 18, 1945	31.37	23,400				
	July 11, 1945	31.65	25,900	1957	Apr. 3, 1957	21.00	19,100
	Aug. 8, 1945	21.61	11,100		Apr. 21, 1957	25.37	30,300
	Sept. 28, 1945	31.34	26,100		Apr. 24, 1957	26.08	32,100
1946	Oct. 1, 1945	41.54	64,800		Apr. 26, 1957	26.11	29,300
	Jan. 5, 1946	33.30	29,800		May 1, 1957	19.65	18,600
	Feb. 19, 1946	26.54	18,300		May 4, 1957	19.45	17,400
	June 1, 1946	29.74	22,800		May 14, 1957	24.54	26,800
	June 30, 1946	19.98	12,500		May 19, 1957	42.30	98,000
					May 23, 1957	23.00	28,500
1947	Dec. 12, 1946	34.12	31,800		May 26, 1957	27.32	41,000
	Apr. 10, 1947	17.60	10,700		May 31, 1957	24.30	33,300
	Apr. 16, 1947	31.22	27,400		June 15, 1957	21.36	22,200
	Apr. 25, 1947	19.45	12,700		Sept. 22, 1957	24.10	25,300
	May 13, 1947	23.85	17,500	1958	May 3, 1958	15.88	11,900
	May 17, 1947	26.85	21,000		June 22, 1958	14.94	10,500
	May 21, 1947	32.23	29,300				
	May 25, 1947	35.22	35,800				
	June 2, 1947	19.77	12,700				

3320. Red River near Colbert, Okla.
(Published as "near Denison, Tex." prior to 1934)

Location.--Lat 33°49', long 96°31', in E½ sec.36, T.8 S., R.7 E., near center of span on downstream side of pier of former toll bridge, 1.3 miles downstream from Sand Creek, 2 miles south of Colbert, 2.9 miles downstream from Denison Dam, and at mile 723.0.

Drainage area.--39,777 sq mi, of which about 33,841 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 25, 1934; recording thereafter. Datum of gage was 13.00 ft higher 1906-8, 9.49 ft higher Oct. 1, 1923, to Sept. 30, 1931, and 9.71 ft higher Oct. 1, 1931, to Sept. 24, 1934. At site 0.6 mile upstream, datum was 13.00 ft higher 1909-17 and 10.00 ft higher during 1918-23 and Sept. 25, 1934, to July 28, 1942. Datum of present gage is 497.36 ft above mean sea level, datum of 1929. All stages adjusted to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 180,000 cfs and extended above.

Bankfull stage.--35 ft.

Historical data.--In 1906, it was determined that highest stage known was 36.6 ft, date unknown (probably July 1876). According to local resident, the flood of May 26, 1908, was greatest known since at least 1837.

Remarks.--Gage-height records prior to 1924 collected by U. S. Weather Bureau. Stage-relation curve furnished by Corps of Engineers. Flow completely regulated since Oct. 31, 1943, by Lake Texoma (capacity, 5,530,300 acre-ft), with some prior regulation by construction operations. Base for partial-duration series, 38,000 cfs. Only annual peaks are shown prior to 1924 and subsequent to 1942.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Aug. 11, 1906	26.4	-	1927	Apr. 18, 1927	24.7	99,600
1907	May 27, 1907	25.1	-		Apr. 21, 1927	20.5	47,800
1908	May 26, 1908	45.5	-		July 14, 1927	24.3	94,400
1909	June 27, 1909	21.1	-	1928	May 19, 1928	25.3	107,000
1912	June 20, 1912	21.8	-		June 18, 1928	20.2	45,400
1914	Dec. 5, 1913	25.4	-		June 21, 1928	20.0	42,000
1915	June 9, 1915	35.5	-	1929	May 14, 1929	24.7	99,600
1916	Oct. 19, 1915	29.8	-		Sept. 12, 1929	21.3	57,500
1918	Apr. 15, 1918	23.6	-	1930	May 9, 1930	19.8	45,700
1919	Oct. 29, 1918	26.1	-		May 18, 1930	20.0	46,400
1920	(a)	25.4	-		June 18, 1930	19.7	39,800
1921	Oct. 25, 1920	23.8	-	1931	Oct. 16, 1930	22.3	66,900
1922	May 11, 1922	27.7	-		Dec. 7, 1930	20.2	46,500
1923	June 12, 1923	21.8	-	1932	Jan. 7, 1932	19.5	38,600
1924	Oct. 17, 1923	29.1	158,000		Feb. 16, 1932	23.3	81,500
	Oct. 28, 1923	22.0	62,000		June 29, 1932	21.0	52,500
	Nov. 15, 1923	20.3	42,200		July 9, 1932	19.8	40,800
	Apr. 26, 1924	20.7	48,800	1933	Dec. 26, 1932	19.8	38,600
	Apr. 29, 1924	20.3	44,400		May 16, 1933	20.8	49,500
1925	Sept. 16, 1925	27.1	133,000		May 25, 1933	25.2	106,000
1926	Aug. 17, 1926	19.8	39,700	1934	Mar. 1, 1934	18.6	27,300
1927	Oct. 6, 1926	26.2	122,000	1935	May 4, 1935	20.5	44,500
	Oct. 12, 1926	24.0	91,800		May 12, 1935	20.2	39,500
	Apr. 11, 1927	21.3	53,700		May 19, 1935	28.6	154,000
	Apr. 14, 1927	23.5	80,200		May 21, 1935	31.8	201,000
					May 29, 1935	22.7	71,500
					June 2, 1935	21.9	61,600
					June 15, 1935	24.6	97,400
					June 18, 1935	22.3	67,100
				1936	Dec. 6, 1935	20.7	46,600
					May 9, 1936	21.4	61,600
					Sept. 22, 1936	20.5	41,500
					Sept. 28, 1936	23.4	86,600

a Oct. 11, 1919, May 18, 1920.

Peak stages and discharges of Red River near Colbert, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 11, 1937	21.6	57,200	1945	May 3, 1945	22.12	47,700
1938	Feb. 18, 1938	27.3	138,000	1946	Oct. 8, 1945	21.44	40,600
	Mar. 29, 1938	23.8	93,800	1947	May 29, 1947	24.00	69,200
	May 25, 1938	20.4	60,000				
	June 11, 1938	19.4	47,000	1948	July 12, 1948	18.57	34,500
1939	June 24, 1939	19.5	39,100	1949	June 14, 1949	18.35	32,800
1940	July 4, 1940	20.4	44,400				
1941	Apr. 18, 1941	20.5	45,100	1950	Aug. 10, 1950	20.04	40,100
	May 3, 1941	19.9	40,600	1951	May 26, 1951	21.02	48,300
	May 7, 1941	26.4	117,000				
	May 24, 1941	22.3	67,000	1952	Apr. 28, 1952	11.60	10,400
	June 4, 1941	21.2	59,000	1953	Aug. 10, 1953	11.33	9,650
	June 10, 1941	31.8	182,000				
	June 17, 1941	24.3	94,600	1954	May 16, 1954	18.92	37,700
1942	Oct. 5, 1941	30.0	162,000	1955	June 23, 1955	19.45	42,300
	Oct. 25, 1941	21.6	59,000				
	Nov. 1, 1941	28.3	149,000	1956	Oct. 8, 1955	19.56	41,400
	Apr. 9, 1942	25.2	106,000				
	Apr. 25, 1942	32.0	183,000	1957	June 5, 1957	26.26	102,000
	May 1, 1942	22.0	66,200				
	May 6, 1942	19.9	44,300	1958	May 9, 1958	18.31	44,100
1943	May 15, 1943	21.34	60,000				
1944	June 22, 1944	12.33	5,640				

3325. Blue River near Blue, Okla.

Location.--Lat 33°59', long 96°15', on south line of SW¹/₄ sec.34, T.6 S., R.10 E., near right bank on downstream side of pier of bridge on old U. S. Highway 70, 2 miles southwest of Blue, 6.5 miles upstream from Caddo Creek, 8 miles east of Durant, and at mile 37.6.

Drainage area.--478 sq mi.

Gage.--Nonrecording prior to Mar. 13, 1945; recording thereafter. Datum of gage is 498.36 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--23 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 15, 1937	22.00	3,370	1942	Oct. 31, 1941	22.33	4,150
1938	Jan. 24, 1938	23.30	4,470	1943	Apr. 9, 1942	27.20	10,100
	Feb. 17, 1938	31.81	34,400		Apr. 25, 1942	31.69	33,600
	Mar. 30, 1938	25.60	6,940		June 11, 1942	24.40	5,480
1939	Apr. 16, 1939	21.50	3,320	1944	Nov. 9, 1942	26.00	7,500
1940	Apr. 7, 1940	24.82	5,940		Apr. 18, 1943	24.80	5,850
	May 23, 1940	26.82	9,000		May 11, 1943	28.73	15,300
	June 18, 1940	25.10	6,290		May 29, 1943	28.00	12,500
1941	July 23, 1940	24.30	5,390		June 6, 1943	26.40	8,260
	Apr. 16, 1941	22.87	4,480	1945	Feb. 25, 1944	22.36	4,200
	Apr. 23, 1941	23.97	5,170		Feb. 28, 1944	27.25	10,100
1942	Oct. 4, 1941	25.30	6,430		Mar. 20, 1944	22.52	4,250
	Oct. 26, 1941	24.50	5,570		May 2, 1944	22.78	4,420
					May 27, 1944	27.20	10,100
					Feb. 21, 1945	28.70	15,300

Peak stages and discharges of Blue River near Blue, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 28, 1945	25.00	6,060	1950	May 12, 1950	24.30	4,750
	Mar. 3, 1945	23.06	4,600		July 28, 1950	23.48	4,150
	Mar. 12, 1945	25.40	6,250	1951	June 13, 1951	24.92	5,270
	Mar. 16, 1945	27.08	9,300		Apr. 23, 1952	27.33	8,530
	Mar. 19, 1945	29.59	17,300	1953	Apr. 24, 1953	25.00	5,360
	Mar. 31, 1945	27.94	11,300		July 20, 1953	27.07	8,090
	Apr. 3, 1945	25.30	6,130	1954	July 25, 1953	24.06	4,590
	Apr. 14, 1945	27.83	11,000		May 2, 1954	25.45	6,000
	Apr. 16, 1945	26.73	8,440		May 12, 1954	26.32	7,260
	May 16, 1945	22.67	4,200	1955	May 21, 1955	23.72	4,350
1945	June 13, 1945	26.30	7,660		Apr. 30, June 1	12.19	978
	June 17, 1945	31.35	28,900	1957	Apr. 4, 1957	24.25	5,100
	July 8, 1945	24.49	5,330		Apr. 20, 1957	24.25	5,100
				1957	Apr. 24, 1957	25.92	6,980
1946	Feb. 14, 1946	24.04	4,780		Apr. 27, 1957	29.21	13,700
	Feb. 19, 1946	27.40	9,530	1958	May 25, 1957	29.43	14,300
	June 1, 1946	24.28	5,100		June 2, 1957	28.10	11,000
1947	Nov. 4, 1946	23.42	4,420	1958	Sept. 22, 1957	31.14	19,900
	Nov. 6, 1946	29.32	16,000		Nov. 6, 1957	25.08	5,980
	Dec. 12, 1946	29.96	19,200	1958	Nov. 8, 1957	26.56	8,070
	May 22, 1947	23.17	4,480		May 2, 1958	31.70	26,000
1948	May 26, 1948	25.74	6,650				
	July 12, 1948	24.40	5,250				
1949	May 18, 1949	24.20	5,000				
1950	Feb. 13, 1950	25.45	5,750				
	May 2, 1950	27.42	8,770				

3340. Muddy Boggy Creek near Farris, Okla.

Location.--Lat 34°16', long 95°55', in NW $\frac{1}{4}$ sec. 26, T.3 S., R.13 E., on downstream side of right pier of main span of bridge on State Highway 3, 1.3 miles downstream from McGee Creek, 2 $\frac{1}{2}$ miles northwest of Farris, and 33.3 miles above confluence with Clear Boggy Creek.

Drainage area.--1,087 sq mi.

Gage.--Nonrecording prior to Mar. 13, 1945; recording thereafter. Datum of gage is 446.58 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 37,000 cfs and extended above.

Bankfull stage.--36 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 24, 1938	30.60	12,300	1942	Apr. 25, 1942	42.19	41,200
	Feb. 17, 1938	43.10	52,500		June 10, 1942	38.19	22,300
	Mar. 29, 1938	35.70	17,800		July 12, 1942	31.00	11,400
	May 23, 1938	28.00	10,000	1943	Dec. 27, 1942	33.15	14,900
1939	Apr. 16, 1939	32.64	14,200		May 13, 1943	40.00	28,800
1940	Apr. 7, 1940	36.6	19,600	1944	Feb. 28, 1944	33.40	15,100
	May 22, 1940	32.6	14,200		Mar. 20, 1944	31.50	13,200
	May 28, 1940	29.37	11,200		May 2, 1944	34.50	16,200
1941	Apr. 16, 1941	36.3	18,400	1945	Feb. 21, 1945	39.20	26,200
1942	Oct. 31, 1941	34.40	15,700		Feb. 27, 1945	31.25	12,000
	Apr. 9, 1942	37.60	21,000		Mar. 3, 1945	31.40	12,200
					Mar. 19, 1945	38.48	24,100

Peak stages and discharges of Muddy Boggy Creek near Farris, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Mar. 30, 1945	34.41	16,200	1951	June 7, 1951	31.22	12,600
	Apr. 18, 1945	36.33	19,400		June 12, 1951	41.78	38,800
	May 15, 1945	33.99	15,600	1952	Apr. 13, 1952	32.17	13,000
	June 12, 1945	35.50	18,000		Apr. 23, 1952	29.80	11,400
	June 17, 1945	44.94	61,900	1953	Mar. 18, 1953	29.74	11,300
	Aug. 17, 1945	34.56	16,500		Apr. 24, 1953	36.30	18,500
	Sept. 27, 1945	34.07	15,700		Apr. 29, 1953	35.08	16,400
1946	Feb. 13, 1946	33.56	14,500		May 13, 1953	34.39	15,500
	Feb. 19, 1946	34.92	16,600		July 21, 1953	40.37	27,000
	June 1, 1946	29.21	10,200	1954	May 10, 1954	36.86	19,600
1947	Nov. 6, 1946	38.35	23,900	1955	Mar. 22, 1955	30.88	12,200
	Dec. 12, 1946	39.57	29,500		Sept. 23, 1955	29.45	10,300
	Apr. 11, 1947	30.25	11,600		Sept. 26, 1955	31.67	11,800
	May 20, 1947	33.39	15,800	1956	May 25, 1956	19.26	5,240
1948	July 12, 1948	27.90	9,710	1957	Apr. 3, 1957	37.06	19,200
1949	May 1, 1949	35.91	19,200		Apr. 26, 1957	40.40	26,600
					May 25, 1957	40.09	25,900
1950	Jan. 14, 1950	30.34	11,000		June 4, 1957	36.88	18,800
	Feb. 13, 1950	31.63	12,300		Sept. 22, 1957	41.00	28,200
	May 1, 1950	30.17	10,900	1958	Nov. 8, 1957	36.60	18,300
	May 15, 1950	35.04	17,400		May 2, 1958	39.79	25,100
	July 30, 1950	31.35	12,100				
	Aug. 2, 1950	31.20	11,900				
	Sept. 16, 1950	37.81	23,400				

3350. Clear Boggy Creek near Caney, Okla.

Location.--Lat 34°15', long 96°12', in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.3 S., R.10 E., on downstream side of left pier of bridge on U. S. Highways 69 and 75, half a mile downstream from Caney Creek, 1.5 miles north of Caney, and at mile 24.1.

Drainage area.--720 sq mi.

Gage.--Nonrecording prior to Mar. 13, 1945; recording thereafter. Datum of gage is 485.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and extended above.

Bankfull stage.--19 ft.

Remarks.--Records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	February 1938	26.91	54,600	1945	June 18, 1945 Sept. 28, 1945	25.20 23.63	31,100 12,800
1942	April 1942	26.8	52,800	1946	Feb. 20, 1946	23.76	14,700
1943	May 11, 1943	26.30	46,000	1947	Nov. 6, 1946 Dec. 11, 1946 Apr. 5, 1947	24.14 26.77 22.52	18,000 52,800 7,300
1944	Feb. 28, 1944 Mar. 19, 1944 May 2, 1944 May 29, 1944	23.10 23.60 23.50 23.36	7,370 9,870 9,170 8,570	1948	Feb. 29, 1948 May 25, 1948 June 26, 1948	23.00 24.28 23.60	9,000 20,200 12,800
1945	Feb. 21, 1945 Mar. 4, 1945 Mar. 12, 1945 Mar. 16, 1945 Mar. 20, 1945 Mar. 30, 1945 Apr. 16, 1945 May 15, 1945 June 12, 1945	25.00 23.00 22.70 24.87 24.52 23.61 25.12 23.04 23.39	28,600 9,000 7,620 27,300 22,500 12,800 29,800 9,000 11,300	1949	May 3, 1949	24.00	16,600
				1950	May 2, 1950 May 13, 1950 July 13, 1950	23.29 23.75 22.92	10,600 14,600 8,600
				1951	June 12, 1951	23.63	12,800

Peak stages and discharges of Clear Boggy Creek near Caney, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 22, 1952	23.21	10,000	1957	Apr. 4, 1957	22.50	8,580
1953	Apr. 24, 1953	22.62	7,700		Apr. 23, 1957	23.40	15,700
	July 21, 1953	22.68	8,050		Apr. 26, 1957	23.78	18,600
1954	May 3, 1954	23.30	11,000		May 2, 1957	22.13	7,330
	May 13, 1954	23.05	9,570		May 20, 1957	22.35	8,000
1955	Mar. 22, 1955	21.93	6,220		May 25, 1957	24.02	19,000
					June 4, 1957	23.25	12,700
1956	Feb. 18, 1956	15.86	2,540		Sept. 23, 1957	24.54	21,700
				1958	Nov. 7, 1957	22.69	8,420
					May 2, 1958	23.14	10,200

3355. Red River at Arthur City, Tex.

Location.--Lat 33°53', long 95°30', in NW $\frac{1}{4}$ sec.11, T.8 S., R.17 E., near right bank on downstream side of pier of bridge on U. S. Highway 271 at Arthur City, 10.6 miles downstream from Muddy Boggy River, 26.0 miles upstream from Kiamichi River, and at mile 633.1.

Drainage area.--44,531 sq mi, of which about 38,595 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Mar. 25, 1940; recording thereafter. Prior to 1935, at railroad bridge 200 ft upstream at present datum. Datum of present gage is 380.07 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined in recent years by current-meter measurements below 200,000 cfs. Rating for 1906-11 extended above 41,000 cfs on basis of records for later years.

Bankfull stage.--26 ft.

Remarks.--Considerable regulation since 1943 by Lake Texoma, 92.8 miles above station. Records for 1936-58 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 50,000 cfs. Only annual peak stages are shown 1891-1905, 1912-35.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	June 10, 1891	30.0	-	1907	July 12, 1907	20.8	52,000
1892	May 19, 1892	34.8	-	1908	Apr. 12, 1908	22.0	60,000
1893	Mar. 9, 1893	15.5	-		May 14, 1908	21.0	53,300
1894	Mar. 21, 1894	22.2	-		May 28, 1908	43.2	400,000
					June 7, 1908	32.1	170,000
1895	July 13, 1895	25.0	-		June 20, 1908	28.6	121,000
				1909	Dec. 2, 1908	20.0	47,000
1897	May 14, 1897	21.9	-	1910	Dec. 3, 1909	18.0	35,600
1898	May 8, 1898	21.1	-	1911	July 24, 1911	16.5	28,200
1900	Nov. 25, 1899	28.6	-	1912	Apr. 2, 1912	21.0	-
1901	Apr. 20, 1901	25.6	-	1913	July 5, 1913	16.7	-
1902	June 1, 1902	27.3	-	1914	Dec. 7, 1913	26.7	-
1903	July 5, 1903	28.8	-	1915	June 10, 1915	33.7	-
1904	June 13, 1904	24.0	-	1916	Oct. 20, 1915	29.8	-
1905	May 31, 1905	25.1	-	1917	June 2, 1917	16.0	-
1906	May 4, 1906	26.1	93,800	1918	Apr. 16, 1918	22.0	-
	Aug. 13, 1906	23.0	67,200	1919	Oct. 30, 1918	22.0	-
1907	May 29, 1907	23.2	68,800	1920	May 19, 1919	24.2	-
	June 2, 1907	21.0	53,300				

Peak stages and discharges of Red River at Arthur City, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Oct. 27, 1920	21.7	-	1943	May 15, 1943	22.40	94,400
1922	May 12, 1922	26.2	-		May 18, 1943	21.20	81,200
					May 31, 1943	19.56	63,000
1923	Sept. 23, 1923	20.0	-	1944	May 3, 1944	15.93	34,700
1924	Oct. 18, 1923	28.2	-	1945	Feb. 22, 1945	21.25	80,000
1925	Sept. 18, 1925	25.0	-		Feb. 28, 1945	19.68	66,000
1926	Aug. 18, 1926	25.0	-		Mar. 18, 1945	20.00	65,500
					Mar. 31, 1945	19.17	62,800
1927	Apr. 16, 1927	27.0	-		Apr. 21, 1945	19.60	61,700
					June 13, 1945	21.92	91,000
1928	May 21, 1928	24.7	-		June 18, 1945	21.60	88,000
					July 11, 1945	18.60	51,100
1929	May 15, 1929	26.7	-	1946	Oct. 6, 1945	18.86	59,800
					Oct. 9, 1945	19.70	68,000
1930	May 19, 1930	21.7	-		Feb. 19, 1946	17.89	57,500
					Feb. 23, 1946	17.82	56,500
1931	Oct. 17, 1930	18.8	-	1947	Nov. 7, 1946	23.60	104,000
1932	Feb. 18, 1932	25.0	-		Dec. 2, 1946	21.67	86,700
					June 4, 1947	20.16	68,500
1933	May 27, 1933	25.0	-	1948	Feb. 26, 1948	18.02	57,700
1934	Mar. 3, 1934	18.5	-		May 12, 1948	20.46	75,000
					July 13, 1948	19.42	64,500
1935	June 17, 1935	31.7	-	1949	Jan. 25, 1949	17.34	55,900
1936	Sept. 29, 1936	22.8	95,200	1950	Jan. 14, 1950	17.55	50,000
1937	June 12, 1937	20.6	71,800		Feb. 13, 1950	20.02	69,400
1938	Jan. 24, 1938	19.2	58,100		May 3, 1950	18.26	55,200
	Feb. 19, 1938	34.3	222,000		July 27, 1950	18.40	52,800
	Mar. 30, 1938	25.9	148,000	1951	June 8, 1951	19.70	60,600
	May 26, 1938	18.8	54,500		June 12, 1951	19.50	58,500
1939	Apr. 17, 1939	19.6	58,100		June 17, 1951	21.01	74,500
1940	Apr. 7, 1940	17.82	51,000	1952	Apr. 23, 1952	21.74	93,400
	May 24, 1940	18.35	55,200	1953	Apr. 30, 1953	18.54	53,800
1941	Apr. 19, 1941	19.13	63,800	1954	May 17, 1954	18.80	57,000
	Apr. 24, 1941	22.92	95,200	1955	June 24, 1955	17.30	42,200
	May 4, 1941	18.16	57,000	1956	Oct. 9, 1955	17.12	40,400
	May 8, 1941	24.27	108,000	1957	Apr. 28, 1957	23.70	99,200
	May 15, 1941	17.26	50,200		May 5, 1957	22.62	76,400
	May 25, 1941	19.56	67,800		May 14, 1957	22.30	79,200
	June 5, 1941	18.56	64,600		May 23, 1957	23.30	88,700
	June 12, 1941	31.27	183,000		May 27, 1957	25.00	105,000
1942	Oct. 7, 1941	28.00	148,000		June 6, 1957	28.35	136,000
	Oct. 27, 1941	19.13	61,000		Sept. 23, 1957	18.73	52,800
	Nov. 3, 1941	27.65	141,000	1958	Nov. 6, 1957	19.45	55,200
	Apr. 10, 1942	27.85	142,000		May 3, 1958	26.35	120,000
	Apr. 21, 1942	24.12	115,000				
	Apr. 26, 1942	31.55	199,000				
	May 7, 1942	19.57	53,900				
	June 11, 1942	18.90	58,000				

3365. Kiamichi River near Belzoni, Okla.

Location.--Lat 34°12', long 95°29', in SE $\frac{1}{4}$ sec.14, T.4 S., R.17 E., near right bank on downstream side of pier of bridge on State Highway 7, $1\frac{3}{4}$ miles north-west of Belzoni, 6.5 miles downstream from Cedar Creek, 10 miles upstream from Possum Creek, and at mile 47.7.

Drainage area.--1,423 sq mi.

Gage.--Nonrecording prior to Aug. 14, 1940; recording thereafter. Datum of gage is 389.91 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs and extended above.

Bankfull stage.--28 ft.

Remarks.--Records 1932-35, 1937-58 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	October 1916	44.2	72,000	1941	Apr. 18, 1941	32.31	25,400
1926	Jan. 17, 1926	26.7	18,000	1941	Apr. 23, 1941	29.32	21,400
	May 7, 1926	29.9	22,200	1942	Apr. 8, 1942	37.13	35,800
1927	Jan. 25, 1927	32.60	25,900		Apr. 25, 1942	39.75	45,200
	Apr. 15, 1927	39.60	43,800	1943	Dec. 27, 1942	37.02	35,500
	Apr. 20, 1927	35.76	31,500		May 11, 1943	41.60	55,300
	Apr. 23, 1927	32.70	26,000	1944	Feb. 28, 1944	33.40	27,300
1928	Dec. 14, 1927	41.24	51,600		May 2, 1944	36.40	31,000
	Apr. 6, 1928	40.3	46,900		May 29, 1944	29.20	21,300
	Apr. 23, 1928	36.7	33,600		June 6, 1944	32.45	25,700
	June 15, 1928	35.31	30,500	1945	Feb. 21, 1945	40.40	47,900
1929	Dec. 17, 1928	27.16	18,700		Feb. 27, 1945	36.70	32,600
	Jan. 25, 1929	32.30	25,400		Mar. 21, 1945	34.55	29,200
	May 14, 1929	36.65	32,700		Mar. 30, 1945	33.48	27,300
	May 18, 1929	29.40	21,500		May 18, 1945	37.65	36,200
	May 27, 1929	33.04	26,500		June 12, 1945	41.72	54,600
1930	May 4, 1930	33.16	25,800		June 17, 1945	43.90	70,600
	May 23, 1930	29.40	21,500		Sept. 29, 1945	32.39	25,600
1931	Feb. 9, 1931	25.6	16,700	1946	Feb. 13, 1946	34.45	27,800
1932	January 1932	-	(b)		Feb. 19, 1946	27.60	19,200
	Feb. 17, 1932	41.0	50,400		Apr. 24, 1946	32.00	24,100
	July 2, 1932	36.	34,500		June 1, 1946	31.37	23,300
1933	Dec. 24, 1932	34.37	31,400	1947	Nov. 4, 1946	35.32	29,700
	Mar. 6, 1933	27.00	19,600		Nov. 6, 1946	38.83	40,600
1934	Apr. 5, 1934	35.00	32,500		Nov. 10, 1946	30.52	22,000
	May 5, 1934	25.8	18,000		Dec. 12, 1946	40.33	46,900
1935	Jan. 21, 1935	26.9	18,200		Apr. 30, 1947	34.00	27,100
	Mar. 12, 1935	29.80	21,300	1948	Feb. 28, 1948	28.33	18,900
	Mar. 23, 1935	30.00	21,500		May 12, 1948	28.44	19,100
	Apr. 29, 1935	27.0	18,300		May 17, 1948	32.77	25,200
	May 5, 1935	41.40	52,800	1949	Jan. 25, 1949	42.93	67,200
	May 16, 1935	33.0	25,800		Feb. 15, 1949	30.00	21,600
	June 18, 1935	42.2	57,800		May 1, 1949	40.68	51,200
1936	Dec. 7, 1935	36.81	36,700		June 15, 1949	26.29	18,200
	Sept. 28, 1936	36.70	36,300	1950	Jan. 13, 1950	32.70	26,400
1937	Jan. 9, 1937	31.53	23,900		Feb. 12, 1950	38.17	38,800
1938	Jan. 24, 1938	35.60	31,100		July 7, 1950	29.84	22,200
	Feb. 18, 1938	44.00	71,400		July 31, 1950	30.50	23,200
	Mar. 29, 1938	31.40	24,200		Aug. 3, 1950	29.22	21,500
	Mar. 31, 1938	32.60	25,900		Sept. 17, 1950	40.02	47,000
1939	Apr. 18, 1939	36.53	35,500	1951	Feb. 20, 1951	36.52	35,400
1940	Apr. 7, 1940	24.10	14,700		June 12, 1951	40.05	49,400
1941	Apr. 16, 1941	32.55	26,000		July 3, 1951	28.05	20,600
				1952	Apr. 12, 1952	31.80	25,600
					Apr. 23, 1952	33.20	27,800
				1953	Mar. 19, 1953	27.12	20,000
					Apr. 6, 1953	26.08	18,700

a Annual peak only.

b No record; maximum may have been slightly higher than that of Feb. 17.

Peak stages and discharges of Kiamichi River near Belzoni, Okla.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Apr. 24, 1953	36.52	37,200	1957	Feb. 7, 1957	26.10	18,700
	Apr. 29, 1953	35.08	33,600		Apr. 4, 1957	31.41	26,200
	May 13, 1953	30.58	24,800		Apr. 26, 1957	36.86	38,400
	July 21, 1953	35.92	35,600		May 1, 1957	30.33	24,400
1954	May 10, 1954	26.06	18,700	1958	May 14, 1957	26.08	18,700
					May 26, 1957	37.60	40,500
1955	Feb. 20, 1955	28.68	22,100		June 4, 1957	36.74	37,800
	Mar. 22, 1955	30.70	25,000		Sept. 22, 1957	38.23	42,300
	Sept. 23, 1955	27.48	20,500				
	Sept. 26, 1955	32.22	27,600				
1956	Feb. 18, 1956	20.00	12,000				

3370. Red River at Index, Ark.

Location.--Lat 33°33'05", long 94°02'25", in SW $\frac{1}{4}$ sec. 7, T.14 S., R. 28 W., on downstream side of pier of bridge on U. S. Highway 71 at Index, $2\frac{1}{4}$ miles south of Ogden, 20.6 miles upstream from Little River, and at mile 485.3.

Drainage area.--48,030 sq mi, of which about 42,094 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Dec. 12, 1939, at present site or at Kansas City Southern Railway Co. bridge 1,100 ft upstream; recording at present site thereafter. Datum of gage is 246.87 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements since 1937.

Bankfull stage.--25 ft.

Remarks.--Considerable regulation by Lake Texoma, 241 miles above station since July 1942 (capacity, 5,530,300 acre-ft). Prior to 1951, records computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 70,000 cfs. Only annual peak stages are shown prior to 1937.

Peak stages and discharges of Red River at Index, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	Apr. 19, 1918	24.5	-	1942	Nov. 5, 1941	b25.90	128,000
1919	Oct. 31, 1918	22.0	-		Apr. 14, 1942	28.33	145,000
1920	May 21, 1920	27.6	-		Apr. 23, 1942	25.33	107,000
1921	June 27, 1921	23.5	-	1943	May 1, 1942	29.85	178,000
1922	May 15, 1922	26.3	-		May 16, 1943	b24.35	112,000
1923	Sept. 24, 1923	23.3	-	1944	May 4, 1944	21.88	87,800
1924	Dec. 18, 1923	27.0	-	1945	Feb. 24, 1945	23.25	105,000
1925	May 1, 1925	20.5	-		Mar. 2, 1945	24.17	120,000
1926	Aug. 21, 1926	23.5	-		May 20, 1945	22.63	110,000
1927	Apr. 23, 1927	30.8	-		Apr. 1, 1945	28.05	152,000
1928	May 23, 1928	25.0	-		June 14, 1945	23.90	101,000
1929	May 21, 1929	27.2	-		June 22, 1945	c24.37	120,000
1930	May 21, 1930	27.2	-	1946	Oct. 11, 1945	20.80	76,400
1931	Dec. 9, 1930	20.2	-	1947	Nov. 9, 1946	23.74	110,000
1932	Feb. 21, 1932	27.4	-		Dec. 15, 1946	23.47	108,000
1933	May 29, 1933	24.7	-		May 2, 1947	20.40	76,500
1934	Mar. 4, 1934	20.5	-	1948	June 4, 1947	20.50	74,700
1935	May 25, 1935	31.1	-		May 13, 1948	21.40	84,000
1936	Dec. 9, 1935	a22.1	-	1949	Jan. 29, 1949	24.56	112,000
1937	Oct. 1, 1936	24.00	88,100	1950	Jan. 16, 1950	20.98	78,800
1938	Jan. 26, 1938	25.95	114,000		Feb. 3, 1950	20.52	71,200
	Feb. 23, 1938	34.25	297,000		Feb. 15, 1950	23.48	108,000
	Apr. 2, 1938	27.55	139,400		May 4, 1950	22.78	87,000
1939	Apr. 19, 1939	21.2	70,600		July 29, 1950	20.00	75,400
1940	May 26, 1940	19.7	70,100		Sept. 18, 1950	21.23	74,000
1941	Apr. 20, 1941	b20.29	74,000	1951	June 18, 1951	23.64	102,000
	Apr. 26, 1941	24.27	108,000	1952	Apr. 25, 1952	24.50	112,000
	May 10, 1941	23.36	94,100	1953	May 2, 1953	22.48	91,700
	June 16, 1941	27.83	145,000		May 17, 1953	20.50	76,400
1942	Oct. 9, 1941	24.55	106,000	1954	May 13, 1954	20.50	76,200
				1955	Mar. 23, 1955	17.88	56,500
				1956	Feb. 20, 1956	d15.94	41,800
				1957	Apr. 30, 1957	26.92	128,000
					May 16, 1957	24.03	86,000
					May 29, 1957	26.75	132,000
					June 8, 1957	28.56	154,000
				1958	May 6, 1958	25.32	145,000

a Maximum crest stage. Maximum stage occurred Sept. 30 on rise that crested Oct. 1, 1936.

b Occurred on following day.

c Occurred on preceding day.

d Occurred Oct. 14, 1955.

3375. Little River near Wright City, Okla.

Location.--Lat 34°04', long 95°03', on north edge of NW $\frac{1}{4}$ sec.6, T.6 S., R.22 E., at left bank on downstream side of bridge on county road, $1\frac{1}{2}$ miles upstream from White Oak Creek, 2 miles west of Wright City, and at mile 140.6.

Drainage area.--645 sq mi.

Gage.--Nonrecording prior to July 31, 1951; recording thereafter. Oct. 12, 1929, to Sept. 30, 1931, at site 1 mile downstream at datum 4.27 ft higher. Datum of present gage is 346.76 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 63,000 cfs and extended above.

Bankfull stage.--32 ft.

Remarks.--Records 1944-50 computed by Corps of Engineers and reviewed by Geological Survey. Due to effect of slope the peak discharge frequently occurs at different time than peak stage. Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Dec. 16, 1929	32.66	30,000	1950	May 1, 1950	35.89	20,200
	May 4, 1930	27.84	23,400		July 5, 1950	29.80	11,700
	May 7, 1930	30.80	27,300		July 30, 1950	38.30	26,900
	May 11, 1930	31.52	28,300		Aug. 2, 1950	38.83	28,700
	May 16, 1930	25.00	18,700		Sept. 16, 1950	45.77	75,400
	May 19, 1930	20.50	12,400	1951	Feb. 15, 1951	31.60	13,700
	May 23, 1930	29.60	25,500		Feb. 18, 1951	35.00	18,600
1931	Feb. 9, 1931	22.86	15,700		Feb. 20, 1951	33.38	16,100
	Feb. 13, 1931	24.5	18,000		Apr. 21, 1951	29.30	11,100
1945	Feb. 21, 1945	41.30	40,700		June 10, 1951	34.80	18,300
	Feb. 27, 1945	41.30	40,700		June 12, 1951	41.51	43,200
	Mar. 3, 1945	31.0	13,000		June 14, 1951	28.00	9,860
	Mar. 18, 1945	38.0	25,300		July 1, 1951	40.50	37,000
	Mar. 25, 1945	29.0	10,800	1952	Nov. 1, 1951	32.50	14,800
	Mar. 29, 1945	43.65	54,800		Mar. 11, 1952	27.83	10,400
	May 16, 1945	41.80	43,500		Apr. 12, 1952	38.00	25,800
	June 12, 1945	43.21	52,100		Apr. 22, 1952	39.62	32,300
	June 17, 1945	39.00	29,500	1953	Mar. 18, 1953	34.57	18,000
	Sept. 29, 1945	29.00	10,800		Apr. 6, 1953	36.90	22,500
1946	Jan. 9, 1946	30.27	12,200		Apr. 24, 1953	37.74	26,900
	Feb. 13, 1946	39.00	29,500		Apr. 29, 1953	39.26	30,900
	Apr. 24, 1946	37.73	24,900		May 12, 1953	37.84	25,500
	May 16, 1946	28.00	9,860		July 20, 1953	43.30	55,800
	May 25, 1946	39.90	33,300	1954	Jan. 20, 1954	30.97	13,500
1947	Nov. 4, 1946	34.20	17,300		May 29, 1954	35.79	21,400
	Nov. 6, 1946	37.00	22,900	1955	Oct. 1, 1954	35.00	18,000
	Nov. 10, 1946	34.00	17,000		Oct. 12, 1954	29.08	13,700
	Dec. 12, 1946	42.40	47,000		Oct. 22, 1954	25.45	10,500
	Apr. 28, 1947	38.30	26,900		Oct. 24, 1954	28.54	12,100
	May 13, 1947	40.00	33,800		Mar. 21, 1955	34.25	17,800
	May 17, 1947	27.00	9,060		Sept. 23, 1955	32.13	17,100
					Sept. 25, 1955	25.72	10,300
1948	Dec. 8, 1947	31.70	13,800	1956	Feb. 18, 1956	32.62	15,200
	Jan. 1, 1948	37.50	24,300				
	Feb. 27, 1948	27.00	9,060	1957	Feb. 6, 1957	27.66	10,300
	May 12, 1948	39.70	32,400		Apr. 4, 1957	37.90	26,200
1949	Jan. 25, 1949	45.04	69,000		Apr. 23, 1957	36.92	23,100
	Feb. 14, 1949	31.94	14,100		Apr. 26, 1957	35.34	19,800
	Mar. 27, 1949	32.70	15,100		May 1, 1957	27.53	10,200
	Apr. 10, 1949	27.17	9,220		May 13, 1957	36.56	23,100
	May 1, 1949	44.67	67,000		May 26, 1957	38.24	27,300
	June 15, 1949	29.00	10,800		June 4, 1957	35.68	20,800
1950	Oct 25, 1949	27.98	9,860		Sept. 22, 1957	39.92	35,200
	Jan. 3, 1950	36.25	20,800	1958	Nov. 8, 1957	24.99	9,070
	Jan. 13, 1950	39.70	32,700		Nov. 18, 1957	37.86	25,500
	Feb. 1, 1950	36.21	20,800		Mar. 7, 1958	25.93	9,300
	Feb. 12, 1950	44.04	61,100		May 2, 1958	41.63	44,600
	Apr. 29, 1950	26.50	11,100				

3380. Little River near Idabel, Okla.

Location.--Lat 33°56', long 94°49', in NE $\frac{1}{4}$ sec.19, T.7 S., R.24 E., on downstream side of former bridge on U. S. Highway 70, 3 miles north of Idabel, 7.8 miles upstream from Lukfata Creek, 16.5 miles downstream from Glover Creek, and at mile 111.4.

Drainage area.--1,173 sq mi.

Gage.--Nonrecording. Datum of gage is 318.52 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 54,000 cfs and extended on basis of high-water data collected in 1949 at described site and at current gaging station 8 miles downstream.

Bankfull stage.--30 ft.

Remarks.--Records 1932-33, 1937-46 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Dec. 17, 1929	32.70	24,600	1939	Feb. 21, 1939	28.63	12,600
	May 8, 1930	32.28	22,600		Feb. 27, 1939	31.40	18,700
	May 12, 1930	32.80	25,200		Mar. 30, 1939	26.0	10,000
	May 19, 1930	29.80	14,400		Apr. 7, 1939	28.93	13,000
	May 25, 1930	29.30	13,600		Apr. 17, 1939	35.4	44,600
1931	Feb. 15, 1931	26.90	10,600	1940	May 19, 1940	30.20	15,100
1932	Jan. 24, 1932	35.20	42,800		May 25, 1940	31.71	19,900
	Feb. 17, 1932	34.0	33,000	1941	Dec. 13, 1940	27.60	11,500
	July 1, 1932	31.96	21,100		Dec. 17, 1940	27.10	11,000
1933	Dec. 26, 1932	32.8	25,200		Apr. 20, 1941	29.50	13,900
	Jan. 23, 1933	27.5	11,400		Apr. 25, 1941	29.90	14,500
	Mar. 7, 1933	27.8	11,700		June 12, 1941	29.60	14,100
	Apr. 22, 1933	28.0	11,900	1942	Nov. 2, 1941	29.10	13,200
	May 17, 1933	27.4	11,300		Apr. 10, 1942	34.00	32,800
1934	Apr. 6, 1934	33.8	31,600	1943	Dec. 29, 1942	31.20	17,800
1935	Nov. 22, 1934	29.4	13,700		Apr. 19, 1943	28.38	12,300
	Jan. 22, 1935	32.26	22,600		May 12, 1943	32.96	26,300
	Mar. 6, 1935	30.26	15,300	1944	Feb. 10, 1944	26.25	10,200
	Mar. 13, 1935	31.28	18,300		Mar. 1, 1944	32.00	20,500
	Mar. 23, 1935	28.0	11,900		May 3, 1944	34.34	35,500
	Apr. 27, 1935	29.7	14,200	1945	Nov. 9, 1944	27.90	11,800
	May 6, 1935	36.46	55,000		Feb. 22, 1945	35.16	41,000
	May 17, 1935	33.90	32,300		Feb. 28, 1945	34.20	35,200
	June 18, 1935	36.0	50,000		Mar. 20, 1945	34.30	36,200
	June 22, 1935	34.10	33,800		Mar. 26, 1945	28.70	12,700
1936	Dec. 8, 1935	33.14	27,000		Mar. 30, 1945	37.60	71,000
1937	Jan. 10, 1937	28.40	12,400		May 17, 1945	34.20	35,200
	Jan. 16, 1937	27.70	11,600		June 13, 1945	35.56	43,200
	Apr. 22, 1937	29.5	13,900		June 19, 1945	31.34	18,300
	Aug. 24, 1937	28.6	12,600		Sept. 30, 1945	28.70	12,700
1938	Dec. 19, 1937	26.70	10,600	1946	Jan. 10, 1946	30.86	15,900
	Jan. 25, 1938	35.80	48,200		Feb. 7, 1946	26.11	10,100
	Feb. 18, 1938	39.3	86,000		Feb. 15, 1946	32.42	20,500
	Mar. 30, 1938	33.80	31,600		Apr. 26, 1946	32.30	20,400
	Apr. 9, 1938	27.96	11,900		May 18, 1946	28.28	12,200
	Apr. 17, 1938	29.30	13,600		May 26, 1946	32.77	25,700

3385. Little River below Lukfata Creek, near Idabel, Okla.

Location.--Lat 33°56', long 94°45', in SE $\frac{1}{4}$ sec.14, T.7 S., R.24 E., on left bank at downstream side of bridge on U. S. Highway 70, just downstream from Lukfata Creek, 5 miles northeast of Idabel and at mile 103.4.

Drainage area.--1,226 sq mi.

Gage.--Nonrecording prior to Oct. 27, 1950; recording thereafter. Datum of gage is 312.08 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--27 ft.

Remarks.--Records 1946-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	February 1938	a39.7	86,000	1952	Nov. 3, 1951	26.09	10,800
					Apr. 14, 1952	32.46	24,200
1947	Nov. 8, 1946	31.10	18,500		Apr. 23, 1952	35.04	40,800
	Dec. 13, 1946	36.35	56,100				
	Apr. 30, 1947	32.80	25,100	1953	Mar. 20, 1953	27.74	12,200
	May 15, 1947	32.60	24,100		Apr. 8, 1953	30.12	15,900
1948	Dec. 9, 1947	26.85	11,000		Apr. 26, 1953	28.88	13,700
	Jan. 3, 1948	32.80	25,100		Apr. 30, 1953	34.00	33,200
	Feb. 28, 1948	27.85	11,800		May 14, 1953	32.88	26,400
	May 13, 1948	32.60	24,100		July 22, 1953	34.07	34,000
1949	Jan. 26, 1949	39.22	76,000	1954	May 31, 1954	25.27	10,100
	Feb. 16, 1949	26.17	11,300	1955	Oct. 2, 1954	28.53	13,200
	Mar. 28, 1949	27.56	12,000		Mar. 23, 1955	29.55	14,900
	May 3, 1949	35.00	40,500	1956	Feb. 20, 1956	27.98	12,600
	June 16, 1949	27.50	12,000	1957	Feb. 8, 1957	25.23	10,600
1950	Jan. 5, 1950	31.60	20,000		Apr. 6, 1957	29.89	16,400
	Jan. 15, 1950	34.01	33,200		Apr. 26, 1957	33.34	29,100
	Feb. 3, 1950	32.12	22,200		May 15, 1957	29.57	15,800
	Feb. 13, 1950	37.00	61,900		May 27, 1957	32.97	27,500
	May 3, 1950	32.82	25,900		June 6, 1957	30.53	17,800
	May 17, 1950	26.27	10,900		Sept. 24, 1957	29.56	15,800
	Aug. 1, 1950	30.98	18,000	1958	Nov. 20, 1957	28.17	13,600
	Sept. 17, 1950	37.30	66,100		Mar. 10, 1958	26.58	11,800
1951	Feb. 20, 1951	30.56	17,000		May 4, 1958	35.01	40,700
	June 14, 1951	33.51	30,000				
	July 3, 1951	34.08	34,000				

a Annual peak only.

3390. Mountain Fork River near Eagletown, Okla.
(Published as "near Broken Bow" 1924-25)

Location.--Lat 34°03', long 94°37', in SE $\frac{1}{4}$ sec.7, T.6 S., R.26 E., near center of span on downstream side of pier of bridge on U. S. Highway 70, 2 miles west of Eagletown and 8.9 miles upstream from mouth.

Drainage area.--787 sq mi.

Gage.--Nonrecording prior to Aug. 3, 1940, and Jan. 31 to July 22, 1950; recording during remainder of period. During 1924-25 at site 300 ft downstream at datum 0.70 ft lower. Oct. 9, 1929, to Jan. 30, 1950, at site 300 ft downstream at same datum. Datum of present gage is 333.87 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 65,000 cfs and extended by logarithmic plotting.

Bankfull stage.--18 ft.

Remarks.--Records 1932-35, 1937-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 22,000 cfs.

Peak stages and discharges of Mountain Fork River near Eagletown, Okla.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Aug. 18-19, 1915	26.4	92,000	1945	Mar. 29, 1945	25.80	88,500
1925	June 13, 1925	22.0	67,500		May 15, 1945	20.32	51,800
1930	May 7, 1930	15.5	27,200		June 12, 1945	18.07	39,200
	May 11, 1930	21.0	56,000		Sept. 29, 1945	16.93	33,200
1931	July 26, 1931	12.75	18,200	1946	Oct. 1, 1945	15.13	25,600
1932	Feb. 17, 1932	22.50	65,800		Jan. 9, 1946	17.97	38,700
	July 8, 1932	14.18	22,400		Feb. 14, 1946	17.77	37,700
1933	Dec. 24, 1932	17.49	36,100		May 25, 1946	23.30	71,100
	Dec. 30, 1933	17.1	34,200		May 31, 1946	16.60	31,800
	Jan. 22, 1933	14.52	23,400	1947	Dec. 12, 1946	20.50	53,000
	May 15, 1933	15.0	25,200		May 13, 1947	20.00	50,000
1934	Apr. 5, 1934	14.0	21,700		Aug. 28, 1947	25.7	87,800
1935	Nov. 20, 1934	16.04	29,200	1948	Dec. 7, 1947	17.62	36,600
	Jan. 20, 1935	17.04	33,700		Jan. 1, 1948	21.73	60,600
	Mar. 22, 1935	15.5	27,100		May 12, 1948	16.34	30,500
	May 5, 1935	22.68	67,100	1949	Jan. 24, 1949	24.77	81,400
	May 16, 1935	18.74	42,500		May 1, 1949	21.85	61,200
	June 16, 1935	21.5	59,300		June 14, 1949	18.66	42,500
1936	Dec. 7, 1935	17.54	36,100	1950	Jan. 3, 1950	17.27	35,200
1937	Jan. 10, 1937	14.1	22,000		Jan. 13, 1950	20.62	56,700
	Aug. 23, 1937	15.0	25,200		Feb. 1, 1950	18.92	46,000
1938	Jan. 24, 1938	25.4	85,700		Feb. 12, 1950	25.66	91,500
	Feb. 18, 1938	23.50	72,500		May 2, 1950	14.60	23,700
	Mar. 29, 1938	17.05	33,700		May 7, 1950	14.60	23,700
	Apr. 16, 1938	15.47	27,100		Aug. 2, 1950	14.50	23,700
1939	Feb. 20, 1939	14.22	22,400		Sept. 16, 1950	20.59	48,800
	Feb. 25, 1939	15.48	27,100	1951	Feb. 16, 1951	15.34	26,400
	Apr. 6, 1939	16.86	33,200	1952	Nov. 1, 1951	15.32	27,800
	Apr. 17, 1939	23.0	69,100		Apr. 12, 1952	19.23	45,400
1940	May 18, 1940	17.93	38,200		Apr. 22, 1952	21.08	57,400
	July 1, 1940	14.42	23,000	1953	Nov. 26, 1952	15.13	25,500
	Aug. 17, 1940	16.23	29,100		Mar. 18, 1953	14.20	23,100
1941	June 11, 1941	11.40	14,500		Apr. 6, 1953	15.29	26,900
1942	Oct. 31, 1941	19.90	49,400		Apr. 29, 1953	20.24	51,500
	Apr. 8, 1942	17.60	34,900		May 11, 1953	16.76	32,800
1943	Dec. 27, 1942	15.98	28,400		May 15, 1953	18.36	40,600
1944	Feb. 28, 1944	14.10	22,100	1954	July 20, 1953	17.00	33,700
	May 2, 1944	18.33	40,500		July 25, 1953	15.10	26,200
1945	Feb. 21, 1945	21.30	58,000	1954	May 3, 1954	17.07	34,100
	Feb. 27, 1945	19.55	47,600	1955	Oct. 1, 1954	14.89	24,100
	Mar. 19, 1945	20.20	51,200		Mar. 21, 1955	14.08	22,800
				1956	Feb. 18, 1956	14.38	23,800
				1957	Apr. 25, 1957	17.50	36,000
				1958	May 3, 1958	18.52	41,300

a Annual peak only.

3395. Rolling Fork near De Queen, Ark.

Location.--Lat 34°03', long 94°25', in SW $\frac{1}{4}$ sec. 21, T.8 S., R.32 W., near center of span on downstream side of pier of bridge on U. S. Highway 70, 4 miles west of DeQueen, 6 miles upstream from Rock Creek, and 17 miles upstream from mouth.

Drainage area.--181 sq mi.

Gage.--Nonrecording prior to Dec. 16, 1948; recording thereafter. Datum of gage is 318.24 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs and contracted-opening measurement at 110,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Base for partial-duration series, 6,000 cfs.

RED RIVER BASIN

Peak stages and discharges of Rolling Fork near De Queen, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Aug. 27, 1947	25.6	110,000	1953	May 11, 1953	21.96	34,000
1949	Jan. 24, 1949	20.16	19,200	1954	July 20, 1953	17.60	10,200
	May 1, 1949	17.20	8,800		Apr. 16, 1954	16.11	7,040
	June 14, 1949	18.96	14,100		May 2, 1954	15.94	6,700
1950	Dec. 12, 1949	15.80	6,420	1955	Oct. 1, 1954	16.54	7,220
	Jan. 2, 1950	16.63	7,660		Mar. 21, 1955	17.67	10,500
	Jan. 13, 1950	21.04	23,700		Apr. 21, 1955	17.11	9,020
	Feb. 1, 1950	18.28	11,700		May 27, 1955	18.75	14,000
	Feb. 12, 1950	20.52	20,800	1956	Feb. 2, 1956	15.88	6,220
	May 1, 1950	18.65	12,700		Feb. 18, 1956	17.03	8,800
	July 30, 1950	15.64	6,150	1957	Mar. 18, 1957	17.80	10,700
	Sept. 16, 1950	20.49	20,800		Apr. 4, 1957	16.77	8,400
	Sept. 20, 1950	17.56	9,720		Apr. 23, 1957	16.97	8,800
1951	Jan. 14, 1951	16.01	6,700		Apr. 25, 1957	17.78	10,700
	July 2, 1951	16.35	7,320		Apr. 27, 1957	18.38	12,600
1952	Jan. 3, 1952	16.45	7,000		May 23, 1957	16.98	8,800
	Apr. 12, 1952	18.80	14,000		May 26, 1957	15.92	6,700
	Apr. 22, 1952	18.80	14,000	1958	Apr. 27, 1958	16.73	8,200
1953	Nov. 25, 1952	19.86	19,200		May 2, 1958	18.73	13,800
	Apr. 6, 1953	18.06	11,500		Sept. 19, 1958	16.21	7,220
	Apr. 29, 1953	18.98	14,700				

a Annual peak only.

3400. Little River near Horatio, Ark.

Location.--Lat 33°55'10", long 94°23'15", in NE $\frac{1}{4}$ sec. 10, T. 10 S., R. 32 W., on left bank on downstream side of bridge on State Highway 41, 0.9 mile downstream from Rolling Fork, 2 miles southwest of Horatio, 28.5 miles upstream from Cossatot River, and at mile 72.0.

Drainage area.--2,674 sq mi.

Gage.--Nonrecording prior to Feb. 5, 1935; recording thereafter. Datum of gage is 272.89 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 93,000 cfs.

Bankfull stage.--26 ft.

Remarks.--Base for partial-duration series, 25,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	August 1915	38.0	a124,000	1938	Apr. 17, 1938	29.10	33,300
1930	May 20, 1930	36.0	a97,700	1939	Feb. 26, 1939	28.05	31,500
1931	July 27, 1931	24.84	20,700		Apr. 7, 1939	29.00	36,400
1932	Jan. 6, 1932	31.5	48,400		Apr. 18, 1939	32.12	56,500
	Jan. 18, 1932	28.6	31,000	1940	May 19, 1940	28.50	28,200
	Jan. 24, 1932	31.84	50,800		July 2, 1940	30.62	37,500
	Feb. 18, 1932	31.3	46,800	1941	Apr. 24, 1941	26.90	23,900
1933	Jan. 1, 1933	27.2	24,800	1942	Nov. 1, 1941	b27.58	25,400
1934	Apr. 9, 1934	27.36	25,100		Apr. 9, 1942	31.77	50,800
1935	Jan. 21, 1935	31.2	46,000	1943	Dec. 28, 1942	26.45	24,700
	May 6, 1935	34.80	82,100	1944	Mar. 1, 1944	c28.16	29,200
	May 21, 1935	29.14	33,300		May 3, 1944	32.64	57,900
	June 19, 1935	33.56	68,200	1945	Feb. 22, 1945	32.78	59,900
1936	Dec. 8, 1935	28.85	31,800		Feb. 28, 1945	32.65	57,900
1937	Jan. 11, 1937	28.15	26,700		Mar. 21, 1945	31.15	44,900
1938	Jan. 25, 1938	36.93	110,000		Mar. 30, 1945	37.70	120,000
	Feb. 19, 1938	36.65	106,000		May 17, 1945	30.80	41,700
	Apr. 1, 1938	30.48	41,100	1946	June 15, 1945	30.90	42,500
					Oct. 2, 1945	29.30	32,500

a Annual peak only.

b Occurred on following day.

c Occurred at different time than peak discharge.

Peak stages and discharges of Little River near Horatio, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 10, 1946	31.29	45,700	1951	Feb. 21, 1951	29.48	33,500
	Feb. 7, 1946	29.16	32,000		June 16, 1951	29.40	33,000
	Feb. 15, 1946	29.67	34,500		July 4, 1951	31.47	47,500
	May 26, 1946	31.74	49,300	1952	Apr. 13, 1952	31.84	53,300
1947	Nov. 8, 1946	28.25	28,000		Apr. 23, 1952	34.26	83,900
	Dec. 14, 1946	31.82	50,200	1953	Nov. 26, 1952	27.46	26,400
	May 1, 1947	29.98	36,200		Apr. 7, 1953	28.12	29,500
	May 14, 1947	32.00	52,000		Apr. 30, 1953	32.02	55,700
	May 18, 1947	30.87	42,500		May 12, 1953	32.32	59,000
	Aug. 29, 1947	32.99	61,900		July 24, 1953	28.75	31,800
				1954	May 4, 1954	28.16	29,800
1948	Dec. 9, 1947	28.99	31,100		Mar. 22, 1955	30.10	37,200
	Jan. 2, 1948	32.29	54,900	1956	Feb. 19, 1956	27.84	28,500
	Mar. 3, 1948	28.86	30,700		Mar. 19, 1957	27.46	27,600
	May 13, 1948	29.36	33,000	1957	Apr. 5, 1957	29.86	37,800
1949	Jan. 27, 1949	35.58	97,900		Apr. 29, 1957	33.13	68,300
	May 2, 1949	30.50	39,500		May 15, 1957	28.35	30,500
	June 15, 1949	30.47	39,500		May 27, 1957	30.92	44,500
					June 6, 1957	28.50	30,900
1950	Jan. 5, 1950	29.25	32,000	1958	Mar. 9, 1958	26.48	25,200
	Jan. 14, 1950	32.66	59,700		May 3, 4, 1958	32.72	63,600
	Feb. 2, 1950	31.42	46,600				
	Feb. 13, 1950	34.06	82,500				
	May 3, 1950	31.78	50,200				
	July 31, 1950	28.65	29,500				
	Sept. 17, 1950	32.80	60,800				

3405. Cossatot River near De Queen, Ark.

Location.--Lat 34°03', long 94°13', on south edge of SE $\frac{1}{4}$ sec.20, T.8 S., R.30 W., on downstream side of pier of bridge on U. S. Highway 71, just downstream from Hale Creek, 7 miles east of De Queen.

Drainage area.--361 sq mi.

Gage.--Nonrecording prior to Nov. 9, 1938; recording thereafter. Datum of gage is 335.48 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 42,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 24, 1938	19.70	36,300	1944	May 2, 1944	18.70	29,100
	Feb. 17, 1938	19.40	34,000				
	Mar. 29, 1938	16.30	14,800	1945	Feb. 21, 1945	18.14	24,900
	Apr. 16, 1938	17.10	18,900		Feb. 27, 1945	18.18	25,600
1939	Feb. 25, 1939	15.86	13,000		Mar. 19, 1945	16.78	17,100
	Apr. 6, 1939	17.43	20,700		Mar. 30, 1945	20.20	43,300
	Apr. 16, 1939	19.70	36,300		May 16, 1945	15.25	11,300
				1946	Jan. 5, 1946	15.19	11,300
1940	Apr. 29, 1940	17.46	21,300		Jan. 9, 1946	17.37	20,400
	May 18, 1940	17.94	23,700		Feb. 6, 1946	16.83	17,100
	July 1, 1940	16.78	18,300		Feb. 14, 1946	15.78	13,000
1941	July 13, 1941	15.08	10,100		Mar. 6, 1946	14.87	10,700
					Apr. 30, 1946	16.74	16,600
1942	Apr. 8, 1942	18.42	27,000		May 25, 1946	19.96	41,200
	Apr. 26, 1942	16.10	14,000	1947	Dec. 12, 1946	17.86	23,500
	Sept. 9, 1942	18.56	28,400		Aug. 28, 1947	20.47	46,900
1943	Dec. 27, 1942	14.30	9,520	1948	Oct. 31, 1947	17.29	22,800
1944	Feb. 9, 1944	15.90	14,000		Dec. 7, 1947	18.28	26,300
	Mar. 16, 1944	16.66	17,400		Jan. 1, 1948	18.30	26,500

Peak stages and discharges of Cossatot River near De Queen, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 24, 1949	19.76	39,400	1953	Apr. 6, 1953	16.97	18,000
	Jan. 27, 1949	15.67	12,600		Apr. 24, 1953	14.52	10,100
	May 1, 1949	16.29	14,800		Apr. 29, 1953	17.37	20,200
1950	Dec. 12, 1949	15.56	12,300		May 12, 1953	19.16	33,100
	Jan. 3, 1950	16.40	15,200		July 21, 1953	14.74	10,400
	Jan. 10, 1950	15.80	13,000	1954	May 2, 1954	16.57	16,100
	Jan. 13, 1950	18.97	31,700				
	Feb. 1, 1950	17.48	21,000	1955	Oct. 25, 1954	14.62	10,200
	Feb. 12, 1950	19.36	35,400		Mar. 21, 1955	17.25	19,200
	May 2, 1950	14.98	10,900	1956	Feb. 2, 1956	16.33	13,600
	Sept. 16, 1950	18.94	30,900		Feb. 18, 1956	16.20	14,400
	Sept. 20, 1950	20.14	42,500	1957	Jan. 22, 1957	15.59	12,300
					Mar. 18, 1957	16.37	15,200
1951	Jan. 14, 1951	15.78	13,000		Apr. 4, 1957	17.33	19,800
	July 3, 1951	16.49	15,600		Apr. 25, 1957	15.15	11,300
1952	Jan. 3, 1952	15.10	11,300		Apr. 27, 1957	17.82	22,800
	Mar. 22, 1952	14.54	10,100		May 26, 1957	15.30	11,600
	Apr. 12, 1952	17.94	23,500	1958	Nov. 13, 1957	16.46	16,500
	Apr. 22, 1952	18.00	34,200		Mar. 7, 1958	14.48	10,300
1953	Nov. 25, 1952	19.02	31,700		Apr. 27, 1958	15.55	13,000
	Dec. 4, 1952	15.54	12,100		May 3, 1958	18.56	29,200
	Mar. 18, 1953	14.94	10,800				

3407. Little River near White Cliffs, Ark.

Location.--Lat 33°45'25", long 94°03'30", in SW $\frac{1}{4}$ sec.36, T.11 S., R.29 W., at Graysonia, Nashville and Ashdown Railway bridge, 1.9 miles upstream from Hurricane Creek, $2\frac{1}{4}$ miles south of White Cliffs, and at mile 35.8.

Drainage area.--3,471 sq mi.

Gage.--Nonrecording. Datum of gage is 236.81 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Bankfull stage.--25 ft.

Remarks.--Records furnished by U. S. Weather Bureau. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1905	May 16, 1905	26.8	-	1932	Jan. 26, 1932	27.8	-
1906	May 6, 1906	28.1	-	1933	Jan. 2, 1933	25.6	-
1907	Jan. 5, 1907	28.2	-	1934	Apr. 11, 1934	25.3	-
1908	May 16, 1908	29.0	-	1935	May 8, 1935	29.6	-
1909	Mar. 12, 1909	22.9	-	1936	Dec. 10, 1936	23.1	-
1910	Apr. 15, 1910	25.8	-	1937	Jan. 25, 1937	26.4	-
1911	Apr. 21, 1911	27.7	-	1938	Jan. 26, 1938	31.0	-
1912	Apr. 5, 1912	29.0	-	1939	Apr. 20, 1939	27.8	-
1913	Dec. 10, 1913	28.0	-	1940	July 4, 1940	27.1	-
1914	Apr. 2-3, 1914	27.7	-	1941	Apr. 26, 1941	25.5	-
1915	Aug. 21, 1915	32.0	-	1942	Apr. 11, 1942	28.0	-
1916	Feb. 3, 1916	28.4	-	1943	Apr. 21, 1943	24.8	-
1917	Mar. 5, 1917	24.0	-	1944	May 4, 1944	29.2	-
1918	Dec. 16, 1918	28.7	-	1945	Apr. 1, 1945	33.5	-
1919	Oct. 14, 1919	27.4	-	1946	Dec. 16, 1946	27.6	-
1920	May 14, 1920	30.0	-	1947	May 16, 1947	27.6	-
1921	Apr. 29, 1921	29.0	-	1948	Jan. 4-5, 1948	27.2	-
1922	Apr. 30, 1922	26.1	-	1949	Jan. 28, 1949	31.1	-
1923	May 17, 1923	27.9	-	1950	Feb. 15, 1950	29.1	-
1924	Apr. 29, 1924	23.2	-	1951	July 5, 1951	27.9	-
1925	Oct. 20, 1925	22.5	-	1952	Apr. 25, 1952	29.5	-
1926	Dec. 24, 1926	28.9	-	1953	May 14, 1953	29.0	-
1927	Apr. 24, 1927	29.9	-	1954	May 5, 1954	25.4	-
1928	Dec. 20, 1928	27.4	-	1955	Mar. 24, 1955	27.0	-
1929	May 22, 1929	26.4	-	1956	Feb. 21, 1956	25.7	-
1930	May 14, 1930	27.6	-	1957	Apr. 29, 1957	29.9	-
1931	Dec. 21, 1931	24.7	-	1958	May 5, 1958	29.5	-

3410. Saline River near Dierks, Ark.

Location.--Lat 34°06', long 94°05', in W $\frac{1}{2}$ sec.3, T.8 S., R.29 W., near left bank on downstream side of bridge on U. S. Highway 70, 3 $\frac{1}{2}$ miles upstream from Holly Creek and 4 miles southwest of Dierks.

Drainage area.--124 sq mi.

Gage.--Nonrecording prior to Aug. 10, 1940; recording thereafter. Prior to Aug. 31, 1951, at site 100 ft upstream at present datum. Datum of gage is 353.09 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 16,000 cfs and extended by velocity-area studies.

Bankfull stage.--15 ft.

Remarks.--Records for the period 1938-50 computed by Corps of Engineers and reviewed by Geological Survey. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1920	-	a21.9	-	1950	Feb. 12, 1950	14.82	6,860		
1939	Apr. 16, 1939	17.10	12,000		May 2, 1950	13.72	5,520		
	May 19, 1939	14.50	6,400		May 6, 1950	13.79	5,620		
					Sept. 16, 1950	15.32	7,610		
1940	Apr. 29, 1940	15.20	7,350		Sept. 20, 1950	14.30	6,180		
	May 18, 1940	17.00	11,700	1951	Jan. 14, 1951	13.83	5,630		
	July 2, 1940	14.70	6,670			July 1, 1951	13.08	5,090	
	July 21, 1940	13.85	5,500	1952	Mar. 21, 1952	13.50	5,720		
1941	Nov. 23, 1940	17.94	15,200			Apr. 12, 1952	14.90	7,520	
	July 14, 1941	18.75	20,100			Apr. 22, 1952	16.54	11,000	
1942	Apr. 8, 1942	17.07	12,000	1953	Nov. 25, 1952	15.62	8,720		
	Sept. 9, 1942	13.50	5,260			Dec. 4, 1952	15.90	9,360	
1943	Dec. 27, 1942	12.04	3,940			Apr. 6, 1953	14.07	6,330	
						Apr. 24, 1953	13.64	5,860	
1944	Mar. 16, 1944	14.38	6,280			Apr. 29, 1953	16.78	11,500	
	Apr. 10, 1944	14.34	6,150			May 11, 1953	18.56	16,500	
	May 1, 1944	16.68	10,800			July 21, 1953	14.02	6,250	
1945	Feb. 21, 1945	15.35	7,730	1954	May 2, 1954	11.15	3,640		
	Feb. 27, 1945	15.72	8,330		1955	Oct. 1, 1954	13.32	5,320	
	Mar. 30, 1945	19.93	31,200			Oct. 12, 1954	13.50	5,720	
1946	Jan. 8, 1946	14.93	7,880			Mar. 20, 1955	16.82	11,600	
	Feb. 5, 1946	14.56	7,470			July 17, 1955	13.76	5,920	
	Apr. 30, 1946	16.23	10,100		Sept. 23, 1955	17.23	12,600		
	May 25, 1946	16.43	10,600	1956	Apr. 30, 1956	17.71	14,000		
1947	May 17, 1947	13.97	5,830		1957	Mar. 17, 1957	14.25	6,490	
	Aug. 28, 1947	15.00	7,160				Apr. 3, 1957	13.60	5,820
1948	Mar. 1, 1948	13.21	5,050				Apr. 25, 1957	13.66	5,920
							Apr. 27, 1957	13.38	5,620
1949						May 26, 1957	13.62	6,370	
	Jan. 24, 1949	16.65	9,800	1958	Nov. 13, 1957	15.80	9,140		
	May 1, 1949	13.27	5,140			Apr. 27, 1958	13.84	6,030	
June 15, 1949	13.21	5,050			May 1, 1958	14.70	7,150		
1950	Jan. 10, 1950	14.03	5,830			May 3, 1958	13.30	5,820	
	Jan. 13, 1950	13.83	5,620						

a Annual peak only.

3415. Red River at Fulton, Ark.

Location.--Lat 33°37', long 93°49', in NE $\frac{1}{4}$ sec.20, T.13 S., R.26 W., on downstream side of bridge on U. S. Highway 67 at Fulton, 0.3 mile downstream from Missouri Pacific Railroad Co. bridge, 2 $\frac{1}{2}$ miles downstream from Little River, and at mile 463.0.

Drainage area.--52,380 sq mi, of which about 46,444 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Prior to Oct. 16, 1942, on railroad bridge 0.3 mile upstream at same datum. Datum of gage is 224.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--See Red River at Garland.

Bankfull stage.--28 ft.

Remarks.--Some regulation since July 1942 by Lake Texoma, 261 miles upstream (capacity, 5,530,300 acre-ft). Discharges for October 1937 to September 1942 and January 1946 to date are published by Mississippi River Commission. Since discharges for this station are comparable to those for station at Garland, they are not listed in following tables (see Red River at Garland for peak discharges since 1949).

Gage-height records from publications of U. S. Weather Bureau and Mississippi River Commission. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1876	July 17, 1876	35.8	-	1922	Apr. 9, 1922	28.5	-
1886	Apr. 21, 1886	20.9	-	1923	Dec. 19, 1923	31.4	-
1887	Dec. 12, 1887	27.5	-	1924	May 1-2, 1924	26.2	-
1888	May 7, 1888	31.8	-	1925	May 2, 1925	23.1	-
1889	Jan. 20, 1889	30.8	-	1926	Dec. 25, 1926	27.5	-
1890	May 3, 1890	34.0	-	1927	Apr. 24, 1927	35.0	-
1891	Apr.27-28, 1891	30.3	-	1928	May 24, 1928	25.9	-
1892	May 23-24, 1892	34.8	-	1929	May 23, 1929	31.1	-
1893	Mar. 13, 1893	26.8	-	1930	May 22, 1930	32.5	-
1894	Mar. 24, 1894	32.9	-	1931	Feb.17,27, 1931	18.5	-
1895	July 18, 1895	31.4	-	1932	Jan.28,29, 1932	31.6	-
1896	Feb. 7, 1896	a20.5	-	1933	May 30, 1933	24.4	-
1897	Mar. 23, 1897	28.6	-	1934	Mar. 5, 1934	21.3	-
1898	May 11, 1898	27.9	-	1935	June 24, 1935	34.8	-
1899	Nov. 28, 1899	26.0	-	1936	Oct. 2, 1936	23.7	-
1900	Nov. 4, 1900	23.0	-	1937	Jan. 17, 1937	22.4	-
1901	May 25, 1901	27.7	-	1938	Feb. 24, 1938	36.4	-
1902	Dec. 1, 1902	32.2	-	1939	Apr.20,21, 1939	24.0	-
1903	Mar. 14, 1903	31.2	-	1940	May 31, 1940	24.6	-
1904	June 15-14, 1904	31.6	-	1941	June 17, 1941	29.6	-
1905	June 1-3, 1905	31.5	-	1942	May 2, 1942	33.3	-
1906	May 10, 1906	31.2	-	1943	May 17, 1943	26.0	-
1907	June 4, 1907	31.4	-	1944	May 5, 1944	28.2	-
1908	June 2, 1908	34.1	-	1945	Apr. 2, 1945	37.4	-
1909	June 21, 1909	20.6	-	1946	Dec. 17, 1946	27.34	-
1910	Apr. 19, 1910	22.6	-	1947	May 24, 1947	25.58	-
1911	Apr. 21, 1911	24.1	-	1948	May 14, 1948	23.85	-
1912	Apr. 6, 1912	30.9	-	1949	Jan. 30, 1949	32.03	-
1913	Dec. 12, 1913	33.2	-	1950	Feb. 16, 1950	28.24	-
1914	May 9, 1914	31.5	-	1951	June 19, 1951	26.16	-
1915	May 2, 1915	34.1	-	1952	Apr. 26, 1952	28.22	-
1916	Feb. 4, 1916	32.2	-	1953	May 18, 1953	27.01	-
1917	May 1, 1917	19.9	-	1954	May 14, 1954	21.65	-
1918	Apr. 21, 1918	28.1	-	1955	Mar. 24, 1955	20.54	-
1919	Oct. 26, 1919	29.8	-	1956	Feb. 21, 1956	18.03	-
1920	May 18, 19, 1920	33.6	-	1957	June 9, 1957	31.12	-
1921	Apr. 30, 1921	26.6	-	1958	May 6, 1958	29.41	-

a Maximum crest stage; maximum stage of 21.8 ft observed Jan. 1, 1896, following crest of Dec. 30, 1895.

3420. Red River at Garland, Ark.
(Published as "at Garland City" prior to 1935)

Location.--Lat 33°21', long 93°42', in SE $\frac{1}{4}$ sec.17, T.16 S., R.25 W., on line between Miller and Lafayette Counties at bridge on U. S. Highway 82 at Garland, at mile 424.0.

Drainage area.--52,630 sq mi, of which about 46,694 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Oct. 1, 1934 on railroad bridge 0.2 mile upstream at same datum; recording Oct. 1, 1934, to Sept. 30, 1943, at described site. Datum of gage is 203.08 ft above mean sea level, datum of 1929. Since Oct.1, 1949, records are from Corps of Engineers nonrecording gage at Fulton, 39 miles upstream. Datum of Fulton gage is 224.94 ft above mean sea level, datum of 1929, supplementary datum of 1941.

Stage-discharge relation.--Defined by current-meter measurements at both sites. Considerable shifting occurs.

Bankfull stage.--30 ft at Garland and 28 ft at Fulton.

Remarks.--Records prior to 1934 furnished by Mississippi River Commission or Corps of Engineers. Records since 1950 furnished by Corps of Engineers and reviewed by Geological Survey. Some regulation by Lake Texoma, 326 miles upstream, since July 1942. Base for partial-duration series, 75,000 cfs. Only annual peaks are shown prior to 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1885	-	28.3	-	1916	Feb. 4, 1916	30.3	-
1890	Apr. 30, 1890	28.2	-	1917	May 2, 1917	21.3	-
1891	Apr. 28, 1891	27.6	-	1918	Apr. 22, 1918	30.4	-
1892	May 24-25, 1892	28.4	-	1920	May 17, 1920	34.7	-
1893	Dec. 18, 1892	27.3	-	1921	Apr. 30, 1921	27.5	-
1894	Mar. 24, 1894	28.5	-	1922	May 16-17, 1922	29.6	-
1895	July 19, 1895	28.4	-	1923	June 15, 1923	26.5	-
1896	Dec. 31, 1895	24.6	-	1924	Dec.21-22, 1923	30.8	-
1897	Mar. 24, 1897	27.6	-	1925	May 2, 1925	23.5	-
1898	May 11, 1898	27.7	-	1926	Aug. 22, 1926	23.4	-
1899	July 26, 1899	24.6	-	1927	Apr. 23, 1927	35.4	-
1904	June 11, 1904	28.9	-	1928	May 24, 1928	25.8	78,900
1905	May 31 to June 2	29.0	-	1929	May 24, 1929	30.2	105,000
1906	May 10, 1906	29.5	-	1930	May 22-23, 1930	32.5	119,000
1907	June 5, 1907	30.5	-	1931	Dec. 10, 1930	21.85	57,100
1908	Apr. 15, 1908	31.1	-	1932	Jan.28-30, 1932	31.5	131,000
1909	June 21, 1909	22.3	-	1933	May 30, 1933	24.42	80,000
1910	Apr. 20, 1910	24.8	-	1934	Mar. 5, 1934	20.8	56,000
1911	Apr. 21, 1911	26.0	-	1935	May 12, 1935	32.6	132,000
1912	Apr. 6, 1912	30.9	-		May 27, 1935	33.6	138,000
					June 25, 1935	34.37	143,000
1913	May 25, 1913	25.8	-	1936	Dec. 11, 1935	22.90	73,700
1914	Dec. 12, 1913	31.7	-	1937	Oct. 2, 1936	22.95	74,200
1915	May 1, 1915	34.0	-	1938	Jan. 28, 1938	31.25	160,000

Peak stages and discharges of Red River at Garland, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Feb. 25, 1938 Apr. 4, 1938	a35.97 29.65	327,000 139,000	1948	Mar. 4, 1948 May 14, 1948	19.77 20.75	78,400 88,000
1939	Apr. 20, 1939	22.9	85,000	1949	Jan. 31, 1949 Feb. 27, 1949 June 16, 1949	30.18 20.66 19.35	185,000 84,700 76,400
1940	May 30, 1940	b22.91	86,900				
1941	Apr. 27, 1941 May 10, 1941 June 17, 1941	25.66 25.56 b27.11	119,000 99,000 130,000	1950	Jan. 17, 1950 Feb. 16, 1950 May 5, 1950 May 18, 1950 Sept. 20-21, 1950	c25.8 28.20 26.6 23.1 25.6	108,000 136,000 114,000 82,000 113,000
1942	Oct. 9, 1941 Nov. 6, 1941 Apr. 15, 1942 May 2, 1942	b23.70 b24.80 b31.10 32.45	93,400 110,000 175,000 185,000	1951	Feb. 22-23, 1951 June 19, 1951 July 10, 1951	23.80 26.16 22.09	91,700 123,000 76,000
1943	May 17, 1943 June 1, 1943	b24.25 b20.99	112,000 76,000	1952	Apr. 15-16, 1952 Apr. 26, 1952	22.22 28.22	87,400 150,000
1944	May 5, 1944	b25.58	122,000	1953	May 2, 1953 May 17, 1953	25.07 b27.01	117,000 127,000
1945	Mar. 3, 1945 Mar. 25, 1945 Apr. 3, 1945 June 23, 1945	b28.72 26.73 36.87 27.10	150,000 118,000 280,000 130,000	1954	May 14, 1954	21.65	86,000
1946	Oct. 11, 1945 Feb. 21, 1946 June 3, 1946	21.50 22.20 20.98	80,300 93,600 79,600	1955	Mar. 24, 1955	20.54	83,100
1947	Nov. 10, 1946 Dec. 18, 1946 May 3, 1947 May 25, 1947	23.86 24.26 21.17 22.50	119,000 123,000 85,500 97,000	1956	Feb. 21, 1956	18.03	59,500
				1957	May 1, 1957 June 9, 1957 Sept. 26, 1957	30.41 31.12 20.44	220,000 228,000 90,500
				1958	May 6, 1958	29.41	214,000

a Occurred Feb. 24, 1938, just prior to levee break.

b Occurred on following day.

c Occurred Jan. 16, 1950.

3423.5. McKinney Bayou near Garland, Ark.
(Published as "East of Texarkana" by Corps of Engineers)

Location.--Lat 33°24'47", long 93°48'26", in SE $\frac{1}{4}$ sec. 29, T.15 S., R.26 W., at bridge on U. S. Highway 82, 1.0 mile downstream from Red Chute and 6.7 miles northwest of Garland.

Drainage area.--169 sq mi.

Gage.--Nonrecording prior to June 14, 1950; recording thereafter. Datum of gage is 215.05 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 6,100 cfs. Affected by backwater from Red River at times.

Bankfull stage.--18 ft.

Remarks.--Gage-height records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 2, 1940	22.0	-	1949	Jan. 28, 1949	a19.8	-
1941	Apr. 25, 1941	a19.8	-	1950	May 3-4, 1950	a20.45	-
1942	Apr. 10, 1942	a20.3	-	1951	Feb. 17, 1951	17.18	-
1943	Apr. 19, 1943	a16.0	-	1952	Apr. 13, 1952	19.37	-
1944	May 3-4, 1944	a20.3	-	1953	May 19, 1953	19.96	-
1945	Apr. 2, 1945	21.3	-	1954	May 14, 1954	18.28	-
				1955	Mar. 22, 1955	19.0	-
1946	May 20, 1946	a20.4	-				
1947	May 15, 1947	a16.6	-	1956	May 4, 1956	16.98	-
1948	Mar. 23, 1948	a19.5	-	1957	Apr. 5, 1957	20.25	-
				1958	Apr. 27, 1958	20.72	-

a 8 a.m. readings.

3425. South Sulphur River near Cooper, Tex.

Location.--Lat 33°21', long 95°36', on left bank of cut channel at downstream side of pile bent of bridge on State Highway 154, 0.6 mile downstream from Big Creek, 1.0 mile upstream from Brushy Creek, 3.5 miles downstream from Doctors Creek, and 5.7 miles southeast of Cooper, Delta County.

Drainage area.--527 sq mi.

Gage.--Nonrecording prior to Nov. 9, 1949; recording thereafter. Prior to May 14, 1955, at site 700 ft upstream at present datum. Datum of gage is 374.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Levees broke during flood of Apr. 29, 1953, at a gage height of 23 ft.

Historical data.--Levees were broken by floods in 1935, 1939.

Remarks.--Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 7, 1943	18.55	7,390	1952	Apr. 23, 1952	20.49	13,300
1944	May 2, 1944	20.40	13,000	1953	Apr. 29, 1953	23.00	23,800
1945	Feb. 21, 1945	19.20	9,560	1954	May 13, 1954	18.01	6,100
	Mar. 30, 1945	21.50	16,400	1955	Oct. 25, 1954	19.19	10,000
	June 13, 1945	20.00	11,800				
1946	Feb. 6, 1946	18.58	7,930	1956	May 3, 1956	17.02	3,700
1947	Nov. 4, 1946	21.02	14,800	1957	Apr. 4, 1957	18.68	10,300
1948	May 12, 1948	18.60	7,930		Apr. 27, 1957	22.37	23,200
					May 14, 1957	21.19	18,400
1949	Jan. 27, 1949	20.60	13,600		May 27, 1957	19.63	13,000
	Feb. 25, 1949	19.60	10,700		June 5, 1957	19.43	12,400
1950	Feb. 3, 1950	20.76	14,100		Sept. 23, 1957	17.90	8,040
		22.09	18,300	1958	Nov. 6, 1957	22.36	23,200
		20.16	12,300		Apr. 28, 1958	18.73	10,300
1951	June 13, 1951	19.47	10,300		May 1, 1958	20.93	17,400
				May 3, 1958	20.28	15,200	

3430. North Sulphur River near Cooper, Tex.

Location.--Lat 33°28', long 95°35', on left bank at downstream side of bridge on State Highway 24, 4.9 miles upstream from Auds Creek, 7.3 miles upstream from Click Creek, and 8.6 miles northeast of Cooper, Delta County.

Drainage area.--276 sq mi.

Gage.--Nonrecording prior to Nov. 8, 1949; recording thereafter. Datum of gage is 381.42 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Historical data.--Flood in 1944 was highest known since at least 1915; flood in 1932 reached about the same stage, from information by Corps of Engineers and local residents.

Remarks.--No regulation. This gage is on a rectified channel which extends 28 miles upstream and 15 miles downstream. The natural channel was greatly shortened in this reach resulting in high-peak discharges and rapid runoff. Base for partial-duration series, 20,000 cfs.

Peak stages and discharges of North Sulphur River near Cooper, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 2, 1944	a26.6	-	1954	May 12, 1954	20.13	28,000
1950	Jan. 12, 1950	18.45	21,700	1955	Oct. 23, 1954	17.70	22,400
	Jan. 31, 1950	21.30	28,000		Mar. 20, 1955	21.34	31,000
	Feb. 12, 1950	23.15	32,000	1956	Feb. 17, 1956	21.8	32,300
	May 2, 1950	22.55	30,700		May 1, 1956	18.25	23,600
	Sept. 16, 1950	22.36	31,900	1957	Apr. 1, 1957	19.15	31,500
1951	Feb. 20, 1951	18.10	22,400		Apr. 26, 1957	22.50	39,800
	June 3, 1951	21.80	32,300		May 13, 1957	22.30	39,200
	June 12, 1951	22.25	33,400		May 23, 1957	25.0	41,000
1952	Apr. 12, 1952	18.55	24,500		May 26, 1957	17.8	28,000
	Apr. 22, 1952	21.15	30,800		Sept. 22, 1957	16.17	24,000
1953	Apr. 29, 1953	25.86	42,800	1958	Nov. 4, 1957	20.90	35,800
					May 2, 1958	22.35	39,500
					June 16, 1958	17.55	27,500

a Annual peak only.

3435. Whiteoak Creek near Talco, Tex.

Location.--Lat 33°19', long 95°05', near center of main channel on downstream side of pier of bridge on U. S. Highway 271, 2 miles upstream from Ripley Creek, 2.7 miles south of Talco, Titus County, and 2.8 miles downstream from Lick Creek.

Drainage area.--494 sq mi.

Gage.--Recording. Datum of gage is 286.45 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--15 ft.

Historical data.--According to local residents, the flood in 1945 was highest since at least 1870.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Mar. 21, 1945	a25.3	-	1954	Oct. 27, 1953	17.08	4,040
1950	Feb. 3, 1950	18.97	23,300	1955	Jan. 17, 1955	17.26	5,000
	Feb. 13, 1950	18.73	20,100		May 4, 1956	14.80	1,660
1951	Feb. 20, 1951	17.15	5,250	1957	Apr. 28, 1957	18.32	14,900
1952	Apr. 23, 1952	18.68	19,700		May 15, 1957	18.41	15,800
1953	Apr. 30, 1953	18.38	15,800	1958	Nov. 6, 1957	19.13	21,600
	May 18, 1953	17.90	10,700		Apr. 28, 1958	19.52	26,600

a Annual peak only.

3438. Whiteoak Creek below Talco, Tex.

Location.--Lat 33°18', long 95°01', at bridge on county road, about 4 miles downstream from Ripley Creek, 5 miles upstream from Green Creek, and 6 miles southeast of Talco, Titus County.

Drainage area.--579 sq mi.

Gage.--Nonrecording. Datum of gage is 274.34 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood in 1945 is highest known since at least 1870.

Remarks.--Current-meter measurements and gage-height records furnished by Corps of Engineers. Base for partial-duration series, 8,900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Dec. 29, 1937	-	24,200	1945	Feb. 23, 1945	-	11,900
	Jan. 23, 1938	20.40	44,000		Mar. 1, 1945	-	20,200
	Feb. 20, 1938	-	16,400		Mar. 31, 1945	24.1	83,100
	Mar. 30, 1938	-	11,900		June 13, 1945	-	23,700
	Apr. 10, 1938	-	11,200		July 13, 1945	-	13,700
	Apr. 17, 1938	-	17,200				
1939	Feb. 28, 1939	16.30	9,000	1946	Oct. 10, 1945	-	24,500
					Jan. 12, 1946	-	11,000
1940	Apr. 9, 1940	16.24	8,580		Feb. 7, 1946	-	23,700
					May 25, 1946	-	15,300
1941	Dec. 29, 1940	-	13,800		June 1, 1946	18.51	26,100
	Mar. 9, 1941	-	14,500	1947	Nov. 7, 1946	18.22	23,700
	May 1, 1941	17.73	19,800		May 19, 1947	-	13,700
1942	Apr. 9, 1942	19.40	34,000	1948	Dec. 19, 1947	-	13,700
	Apr. 23, 1942	-	10,000		May 13, 1948	18.20	23,700
	Apr. 27, 1942	-	9,700				
1943	June 8, 1943	17.38	17,200	1949	Jan. 28, 1949	17.70	19,800
					Feb. 26, 1949	-	14,400
1944	Mar. 21, 1944	-	13,000		May 1, 1949	-	12,200
	May 3, 1944	18.62	26,700	1950	Oct. 9, 1949	-	23,700
					Oct. 25, 1949	18.35	24,900

3440. Sulphur River near Darden, Tex.

Location.--Lat 33°15', long 94°37', near left bank on upstream side of bridge on U. S. Highway 67, 0.6 mile upstream from St. Louis Southwestern Railway bridge, 1 mile southwest of Darden, Bowie County, and at mile 105.

Drainage area.--2,774 sq mi.

Gage.--Nonrecording prior to Oct. 26, 1934, 0.6 mile downstream, and since Feb. 12, 1942, at present site; recording at site 780 ft downstream Oct. 26, 1934, to Feb. 12, 1942. Datum of all gages is 220.61 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--24 ft.

Historical data.--Flood in 1945 is highest known since at least 1865.

Remarks.--Gage-height record prior to Oct. 26, 1934, furnished by U. S. Weather Bureau (published as "near Naples"). Peaks prior to 1924 were obtained from publication "Floods in Louisiana, Magnitude and Frequency," December 1952. Only annual peaks are shown.

Peak stages and discharges of Sulphur River near Darden, Tex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Apr. 10, 1910	21.8	4,200	1932	Jan. 9, 1932	29.10	34,700
1911	Apr. 23, 1911	23.0	5,900	1933	Mar. 11, 1933	25.86	15,500
1912	Apr. 20, 1912	25.0	12,000	1934	Apr. 10, 1934	26.1	16,300
1913	Apr. 16, 1913	22.1	4,500	1935	Jan. 23, 1935	30.16	40,300
1914	Mar. 31, 1914	29.6	46,300	1936	May 15, 1936	26.04	14,000
1915	Apr. 28, 1915	31.4	63,600	1937	Mar. 29, 1937	26.58	16,100
				1938	Jan. 25, 1938	34.9	92,900
1916	Feb. 3, 1916	27.0	23,600	1939	Apr. 1, 1939	27.42	20,300
1917	Mar. 8, 1917	23.7	7,400	1940	Apr. 11, 1940	27.23	19,700
1918	Apr. 21, 1918	26.6	20,600				
1919	Dec. 17, 1918	27.9	31,000	1941	May 3, 1941	31.5	60,600
1920	May 17, 1920	29.2	42,700	1942	Apr. 11, 1942	32.71	68,900
				1943	Mar. 17, 1943	27.8	23,000
1921	June 30, 1921	28.7	38,000	1944	May 5, 1944	31.71	57,900
1922	Apr. 30, 1922	28.2	33,400	1945	Apr. 1, 1945	37.56	157,000
1923	Feb. 7, 1923	24.7	10,800				
1924	Dec. 18, 1923	27.9	28,600	1946	Feb. 9, 1946	29.95	40,000
1925	May 4, 1925	25.1	13,000	1947	Nov. 9, 1946	32.22	63,200
				1948	May 15, 1948	29.43	34,400
1926	July 19, 20, 1926	26.1	17,800	1949	Jan. 30, 1949	30.77	44,000
1927	Dec. 26, 1926	29.0	36,500	1950	Feb. 5, 1950	31.27	51,100
1928	June 29, 1928	29.0	36,500				
1929	Dec. 21, 1928	30.3	46,200	1951	June 19, 1951	28.10	21,800
1930	May 19, 1930	31.7	67,200	1952	Apr. 25, 1952	31.45	54,400
				1953	May 2, 1953	30.70	47,000
1931	Mar. 10, 1931	23.5	8,100	1954	May 15, 1954	29.56	36,000

3443.5. Red River at Springbank, Ark.

Location.--Lat 33°05'30", long 93°51'40", in NW $\frac{1}{4}$ sec.24, T.19 S., R.27 W., at Ferry landing on State Highway 160 at Springbank, 0.5 mile downstream from Sulphur River, 2.6 miles east of Doddridge, and at mile 377.8.

Drainage area.--56,903 sq mi, of which about 50,967 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 172.39 ft above mean sea level, datum of 1929. Prior to Jan. 1, 1919, at datum 8 ft higher. Peaks for this report referred to present datum.

Stage-discharge relation.--Not defined.

Bankfull stage.--37 ft.

Historical data.--Data for floods in 1866, 1879, 1892, and 1908, authority, Corps of Engineers (Red River Report, House Document 387).

Remarks.--Records furnished by U. S. Weather Bureau November 1904 to September 1905 and January 1909 to December 1943, and by Corps of Engineers since April 1945. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1866	-	41.7	-	1917	May 3, 1917	23.7	-
1879	-	39.1	-	1918	Apr. 24, 1918	33.3	-
				1919	Oct.29-30, 1919	37.5	-
1892	-	43.7	-	1920	May 23, 1920	41.4	-
1905	June 1-3, 1905	40.8	-	1921	May 1, 1921	29.4	-
				1922	May 4, 1922	32.7	-
1908	-	43.0	-	1923	Dec.24-27, 1923	34.0	-
1909	June 22, 1909	26.8	-	1924	May 3, 1924	25.9	-
1910	Apr. 20, 1910	29.8	-	1925	May 2, 1925	26.5	-
				1926	Dec. 26, 1926	28.1	-
1911	Apr. 24, 1911	29.9	-	1927	Apr.27-28, 1927	40.2	-
1912	Apr. 13, 1912	36.6	-	1928	Apr. 28, 1928	26.9	-
1913	Dec. 18, 1913	36.8	-	1929	May 25, 1929	31.6	-
1914	Apr. 8-9, 1914	39.5	-	1930	May 24, 1930	37.7	-
1915	May 6, 1915	41.5	-				
1916	Feb. 7, 1916	39.4	-	1931	Mar. 11, 1931	21.8	-
				1932	Jan. 31, 1932	33.2	-

a Maximum peak stage. Maximum stage of 28.8 ft on Jan. 1, 1924, following a crest of Dec. 24-27, 1923.

Peak stages and discharges of Red River at Springbank, Ark.--Continued

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1933	May 31, 1933	24.4	-	1946	Feb. 22, 1946	26.3	-
1934	Apr. 10-11, 1934	21.7	-	1947	May 26, 1947	24.9	-
1935	June 27, 1935	36.3	-	1948	Mar. 5-6, 1948	23.0	-
				1949	Feb. 1, 1949	30.9	-
1936	Oct. 3, 1936	23.4	-	1950	Feb. 17, 1950	30.1	-
1937	Jan. 29, 1937	23.7	-				
1938	Feb. 27, 1938	38.0	-	1951	June 19-20, 1951	26.4	-
1939	Apr. 21, 1939	24.4	-	1952	Apr. 27, 1952	29.0	-
				1953	May 19, 1953	28.83	-
1941	May 11, 1941	29.8	-	1954	May 15, 1954	22.7	-
1942	May 4, 1942	34.7	-	1955	May 25, 1955	22.3	-
1943	May 18, 1943	24.1	-				
1945	Apr. 6, 1945	42.0	-	1956	Feb. 21, 1956	20.4	-
				1957	May 2-4, 1957	31.6	-
				1958	May 8, 1958	26.5	-

3445. Cypress Creek near Pittsburg, Tex.

Location.--Lat 33°01'10", long 94°52'40", near center of stream at downstream side of pile bent of bridge on State Highway 11, 1,800 ft upstream from Louisiana & Arkansas Railway Co. bridge, 5.2 miles east of Pittsburg, Camp County, and at mile 110.

Drainage area.--366 sq mi.

Gage.--Recording. Prior to Nov. 12, 1954, at site 1,300 ft downstream at present datum. Datum of gage is 247.49 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended by logarithmic plotting.

Bankfull stage.--12 ft.

Historical data.--Flood in 1945 is highest since at least 1910.

Remarks.--Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	24	-	1950	May 3, 1950	17.57	15,100
					May 7, 1950	15.02	7,190
1943	June 8, 1943	14.62	6,570		Sept. 17, 1950	15.42	8,170
1944	May 2, 1944	18.73	19,200	1951	Feb. 19, 1951	13.75	4,280
1945	Feb. 22, 1945	15.44	8,510	1952	Apr. 13, 1952	15.07	7,380
	Feb. 28, 1945	14.41	6,140		Apr. 23, 1952	18.03	16,600
	Mar. 30, 1945	27.32	58,500		May 29, 1952	14.77	6,680
	June 13, 1945	20.69	27,100	1953	May 16, 1953	17.78	13,700
1946	Oct. 10, 1945	14.40	6,140				
	Jan. 9, 1946	15.38	8,510	1954	Jan. 16, 1954	12.78	3,140
	May 20, 1946	16.56	11,900				
	May 31, 1946	15.70	9,290	1955	Mar. 22, 1955	13.46	2,550
1947	Nov. 10, 1946	14.02	5,300	1956	Feb. 4, 1956	12.31	1,110
1948	Dec. 16, 1947	14.87	6,680	1957	Apr. 27, 1957	17.09	9,220
	May 12, 1948	17.27	14,100		May 27, 1957	16.63	8,260
1949	Jan. 27, 1949	15.95	9,800		June 5, 1957	15.70	6,460
1950	Oct. 25, 1949	17.45	14,600	1958	Nov. 6, 1957	17.46	10,200
	Jan. 13, 1950	16.12	10,200		Apr. 27, 1958	24.80	35,700
	Feb. 2, 1950	17.02	13,100		May 1, 1958	19.73	16,100
	Feb. 13, 1950	18.08	16,900		May 4, 1958	15.94	6,820

3450. Boggy Creek near Daingerfield, Tex.

Location.--Lat 33°02'05", long 94°47'10", on right bank at downstream side of bridge on State Highway 11, a quarter of a mile upstream from Louisiana & Arkansas Railway Co. bridge, 3.8 miles west of Daingerfield, Morris County, 9 miles upstream from mouth, and at mile 11.5.

Drainage area.--72 sq mi.

Gage.--Recording. Prior to Oct. 1, 1954, at site 1,700 ft downstream at present datum. Datum of gage is 256.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--10 ft.

Historical data.--The flood in January 1938 is the second highest since at least 1900, from information by local residents.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	a16	-	1950	Oct. 8, 1949	10.02	2,180
1944	Feb. 29, 1944	9.33	1,240		Oct. 22, 1949	11.59	6,410
	Mar. 19, 1944	9.82	1,880		Oct. 25, 1949	11.62	6,510
	Apr. 9, 1944	9.66	1,620		Jan. 13, 1950	11.20	5,090
	May 2, 1944	12.40	9,650		Feb. 2, 1950	11.10	4,770
	May 27, 1944	9.93	2,080		Feb. 12, 1950	12.59	10,100
1945					Mar. 13, 1950	9.36	1,260
	Dec. 29, 1944	9.91	2,040		May 2, 1950	12.10	8,240
	Feb. 22, 1945	10.68	4,080		May 7, 1950	11.83	7,250
	Feb. 28, 1945	10.25	2,820		May 14, 1950	9.23	1,040
	Mar. 4, 1945	9.85	1,930		May 31, 1950	9.57	1,510
	Mar. 20, 1945	9.60	1,540		Sept. 17, 1950	12.97	10,100
	Mar. 30, 1945	14.10	15,900	1951	Feb. 16, 1951	9.15	1,160
	Apr. 2, 1945	11.10	5,070		Feb. 19, 1951	9.20	1,210
	May 16, 1945	9.18	1,240	1952	Apr. 13, 1952	10.93	4,610
	June 12, 1945	10.82	5,010		Apr. 23, 1952	10.68	3,700
1946	June 23, 1945	10.15	2,960		May 30, 1952	9.00	1,070
	Jan. 10, 1946	9.28	1,000	1953	Apr. 30, 1953	9.49	1,290
	May 1, 1946	9.55	1,250		May 16, 1953	11.05	4,290
	May 14, 1946	10.50	2,860	1954	May 30, 1954	10.50	3,100
	May 19, 1946	10.20	2,120	1955	Mar. 22, 1955	10.80	2,540
1947	June 1, 1946	10.22	2,160		Feb. 17, 1956	9.13	350
	Nov. 7, 1946	9.80	1,540	1957	Apr. 24, 1957	11.34	2,160
	Nov. 11, 1946	9.65	1,360		Apr. 27, 1957	11.59	2,600
1948	Nov. 27, 1946	9.70	1,420		June 23, 1957	10.53	1,260
	Nov. 23, 1947	9.45	1,160	1958	Nov. 6, 1957	12.09	3,600
	Dec. 8, 1947	9.95	1,750		Nov. 13, 1957	11.88	3,200
	Dec. 16, 1947	10.29	2,300		Jan. 21, 1958	11.13	1,900
	Jan. 2, 1948	9.50	1,200		Apr. 27, 1958	17.80	28,900
	Mar. 2, 1948	10.67	3,250		May 1, 1958	13.02	5,750
	Mar. 23, 1948	9.30	1,160		May 4, 1958	10.48	1,220
	Apr. 14, 1948	8.88	1,070				
1949	May 12, 1948	10.87	3,990				
	Jan. 27, 1949	10.48	3,100				

a Annual peak only.

3460. Cypress Creek near Jefferson, Tex.

Location.--Lat 32°45', long 94°29', at bridge on Farm Road 726, 1,500 ft downstream from Lake O' the Pines Dam, 8 miles west of Jefferson, Marion County, 14 miles upstream from Black Cypress Creek, and at mile 72.2.

Drainage area.--850 sq mi.

Gage.--Nonrecording prior to Nov. 2, 1933; recording thereafter. Prior to Dec. 9, 1955, at site 1,500 ft upstream at datum 183.7 ft higher. Datum of present gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 29,000 cfs and extended above.

Bankfull stage.--22 ft.

Remarks.--Flow slightly regulated by Ellison Creek Reservoir since January 1943 (capacity, 24,700 acre-ft), and completely regulated by Lake O' the Pines Dam since August 1957. Records for 1958 furnished by Corps of Engineers. Base for partial-duration series, 1,800 cfs. Only annual peaks are shown prior to 1925 and subsequent to 1955.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Mar. 23, 1913	a13.2	2,000	1931	Apr. 5, 1931	11.40	1,300
1914	Apr. 4, 1914	a20.0	10,900	1932	Dec. 24, 1931	15.85	4,000
1915	Apr. 28-29, 1915	a21.2	15,200		Jan. 8, 1932	21.10	15,600
1916	Feb. 5, 1916	a16.3	4,600		Jan. 17, 1932	16.40	4,880
1917	Apr. 30, 1917	a10.9	1,200		Jan. 28, 1932	16.65	5,180
1918	Apr. 24, 1918	a16.6	4,900		Feb. 20, 1932	17.85	7,350
1919	Mar. 25, 1919	a13.5	2,200		Mar. 11, 1932	14.80	2,830
1920	Nov. 14, 1919	a20.1	11,000	1933	Jan. 5, 1933	15.32	3,550
1921	Apr. 27, 1921	a17.1	5,500		Jan. 28, 1933	12.80	1,840
1922	Apr. 4, 1922	a19.2	8,900		Mar. 13, 1933	12.85	1,840
1923	Feb. 5, 1923	a16.3	4,700		May 5, 1933	15.05	3,250
1924	Jan. 1, 1924	a16.7	5,000	1934	Mar. 8, 1934	15.50	4,030
1925	May 5, 1925	12.80	1,820		Mar. 31, 1934	16.13	4,870
1926	Jan. 23, 1926	13.42	1,990		May 12, 1934	12.84	1,970
	Mar. 17, 1926	14.01	2,160	1935	May 8, 1935	20.31	13,200
	Mar. 31, 1926	12.97	1,870		May 27, 1935	13.33	2,020
	Apr. 5, 1926	13.40	1,990	1936	May 19, 1936	12.65	1,790
	July 17, 1926	16.70	5,900	1937	Jan. 26, 1937	17.30	6,430
1927	Dec. 28, 1926	14.75	3,120		Mar. 12, 1937	14.70	3,010
	Jan. 26, 1927	14.20	2,560	1938	Dec. 30, 1937	21.51	17,400
	Feb. 14, 1927	13.40	2,050		Jan. 26, 1938	24.94	35,200
	Mar. 13, 1927	16.90	6,200		Feb. 23, 1938	16.62	5,540
	Apr. 11, 1927	17.50	6,820		Apr. 4, 1938	14.70	2,820
1928	Apr. 29, 1928	13.40	2,050		Apr. 13, 1938	15.08	3,200
	May 20, 1928	18.00	7,910		Apr. 21, 1938	16.80	5,250
	June 28, 1928	18.10	8,060	1939	Mar. 2, 1939	16.65	5,250
1929	Dec. 20, 1928	21.4	17,000	1940	Apr. 17, July 4	11.33	1,320
	Jan. 10-11, 1929	16.1	4,960	1941	Jan. 2, 1941	15.80	3,720
	Jan. 20, 1929	12.90	1,840		Mar. 15, 1941	15.44	3,500
	Feb. 2, 1929	13.55	2,280		May 7, 1941	14.57	3,200
	Mar. 10, 1929	13.75	2,400		June 25, 1941	14.16	2,460
	May 21, 1929	14.10	2,560		June 29, 1941	14.02	2,370
1930	Feb. 12, 1930	13.90	2,380	1942	Jan. 1, 1942	13.42	2,010
	May 20, 1930	25.37	37,900		Apr. 11, 1942	21.96	19,800
					May 21, 1942	18.49	8,290
				1943	June 15, 1943	12.42	1,770
				1944	Mar. 4, 1944	15.65	3,710
					Mar. 25, 1944	15.85	3,910

a These values from gage-height relation curve between Geological Survey and U. S. Weather Bureau gage at Jefferson 12 miles downstream.

Peak stages and discharges of Cypress Creek near Jefferson, Tex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Apr. 14, 1944	16.28	4,410	1949	Feb. 1, 1949	17.72	6,120
	May 4, 1944	24.13	30,800		Mar. 5, 1949	12.90	1,940
	May 23, 1944	15.14	3,340	1950	Oct. 15, 1949	14.07	2,730
	June 2, 1944	14.38	2,760		Oct. 28, 1949	20.56	12,900
1945	Jan. 1, 1945	18.32	7,040		Jan. 17, 1950	20.50	12,700
	Feb. 27, 1945	18.20	7,040		Feb. 6, 1950	18.55	7,580
	Mar. 4, 1945	19.22	9,400		Feb. 15, 1950	22.29	20,400
	Apr. 1, 1945	28.78	57,100		Mar. 19, 1950	15.18	3,580
	May 23, 1945	12.46	1,880		May 5, 1950	20.90	14,100
	June 16, 1945	21.02	15,200		May 10, 1950	19.90	10,700
1946	Jan. 14, 1946	17.48	5,840		Sept. 20, 1950	20.34	12,100
	Feb. 15, 1946	16.03	4,200	1951	Feb. 24, 1951	17.06	5,570
	Mar. 14, 1946	13.45	2,200		Apr. 28, 1951	13.17	2,180
	May 6, 1946	14.70	3,060	1952	Apr. 17, 1952	18.02	6,750
	May 19, 1946	18.07	6,720		Apr. 27, 1952	19.63	9,860
	May 24, 1946	19.44	9,400		June 4, 1952	15.20	3,600
1947	June 3, 1946	21.08	15,600	1953	May 6, 1953	14.61	3,100
	Nov. 15, 1946	16.17	4,400		May 19, 1953	21.67	17,500
	Dec. 2, 1946	14.73	3,060	1954	Jan. 24, 1954	13.15	2,090
	Jan. 26, 1947	13.12	2,100		May 20, 1954	13.08	2,040
	Mar. 20, 1947	12.51	1,810	1955	Mar. 23, 1955	14.12	2,210
	Apr. 9, 1947	13.09	2,100		Mar. 28, 1955	15.10	2,530
1948	Apr. 21, 1947	12.56	1,850		Apr. 14, 1955	13.02	1,860
	Dec. 13, 1947	15.45	3,620	1956	May 4, 1956	195.50	1,220
	Dec. 21, 1947	17.06	5,320		Apr. 27, 1957	205.61	16,000
	Jan. 8, 1948	14.59	3,060	1958	Apr. 29, 1958	201.30	5,190
	Feb. 13, 1948	15.96	4,200				
	Mar. 6, 1948	17.79	6,880				
	Mar. 23, 1948	14.92	3,460				
	May 13, 1948	20.14	12,000				

3464.5. Black Bayou at Rodessa, La.

Location.-- Lat 32°57'30", long 93°59'40", in W $\frac{1}{2}$ sec.26, T.23 N., R.16 W., Caddo Parish, at bridge on State Highway 1, 0.7 mile south of Rodessa.

Drainage area.--177 sq mi.

Gage.--Nonrecording. Datum of gage is 174.62 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. High-water shifts have occurred.

Bankfull stage.--10 ft.

Remarks.--Gage-height records and occasional discharge measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 3, 1940	12.5	5,230	1946	Jan. 9, June 1	12.2	2,440
1941	May 7, 1941	10.4	2,300	1947	Nov. 11, 1946	11.3	2,600
1942	Aug. 23, 1942	12.4	5,060	1948	Mar. 28, 1948	9.8	1,600
1943	Apr. 20, 1943	8.2	400	1949	Jan. 29, 1949	9.8	1,300
1944	May 3, 1944	12.9	6,100	1950	Jan. 15, 1950	12.4	5,020
1945	Apr. 1, 1945	12.2	4,600	1951	Feb. 20, 1951	9.1	820

3465. Black Bayou near Hosston, La.

Location.--Lat 32°52'55", long 93°53'55", in SE $\frac{1}{4}$ sec.22, T.22 N., R.15 W., Caddo Parish, at bridge on State Highway 2, 75 ft downstream from Black Bayou Dam, 1 mile upstream from an unnamed tributary, and $1\frac{1}{4}$ miles west of Hosston.

Drainage area.--231 sq mi.

Gage.--Nonrecording. Datum of gage is 171.09 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements made 1939-44; affected by fall.

Remarks.--Gage-height records April 1943 to September 1944 by U. S. Geological Survey. Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 4, 1940	12.5	3,520	1946	Jan.11-12, 1946	11.0	2,800
1941	May 8-9, 1941	9.3	2,010	1947	Nov. 13, 1946	10.9	2,760
1942	Apr. 12, 1942	10.8	2,710	1948	Feb. 15, 1948	8.6	1,520
1943	(a)	6.0	491	1949	Jan. 31, 1949	7.9	1,380
1944	May 4, 1944	13.0	3,780	1950	Jan. 17, 1950	11.1	2,850
1945	Apr. 3-4, 1945	13.4	3,980	1951	Feb.20-21, 1951	6.9	-

a Jan. 3-17, Mar. 27, Apr. 1, 1943.

3470. Kelly Bayou near Hosston, La.

Location.--Lat 32°51'25", long 93°52'20", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.22 N., R.15 W., near center of span on downstream side of bridge on U. S. Highway 71, 0.4 mile downstream from Willow Lake lateral, 2.0 miles south of Hosston, and 2.7 miles upstream from mouth.

Drainage area.--116 sq mi.

Gage.--Nonrecording prior to Feb. 2, 1953; recording thereafter. Datum of gage is 165.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Recording gage for station on Black Bayou near Gilliam used as an auxiliary gage for this station.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall.

Remarks.--Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Dec. 29, 1944	14.73	1,740	1948	Feb. 12, 1948	12.70	1,020
	Jan. 18, 1945	11.05	937		Mar. 2, 1948	12.33	962
	Feb. 20, 1945	9.85	758		Mar. 23, 1948	10.82	752
	Feb. 29, 1945	10.62	892		May 11, 1948	11.48	850
	Mar. 3, 1945	15.55	1,800		May 26, 1948	12.57	1,000
	Apr. 1, 1945	a16.20	1,600				
	Apr. 24, 1945	10.32	804	1949	Jan. 18, 1949	11.41	836
1946	Nov. 12, 1945	10.24	814		Jan. 27, 1949	10.97	780
	Jan. 9, 1946	a13.29	1,270		Apr. 26, 1949	11.30	822
	Feb. 10, 1946	10.76	815	1950	Jan. 16, 1950	13.73	967
	Mar. 7, 1946	13.46	1,460		Feb. 13, 1950	14.47	1,110
	Mar. 15, 1946	10.21	768		May 2, 1950	14.16	1,100
	May 13, 1946	14.68	1,730				
	May 25, 1946	14.31	1,550	1951	Jan. 14, 1951	10.01	513
	May 31, 1946	a14.61	1,470	1952	Feb. 20, 1952	10.29	809
1947	Nov. 5, 1946	11.18	966		Apr. 13, 1952	11.34	994
	Nov. 11, 1946	14.40	1,660	1953	Mar. 12, 1953	13.55	1,520
	Nov. 26, 1946	10.40	805		Apr. 24, 1953	10.24	837
	Mar. 13, 1947	11.60	1,050		Apr. 29, 1953	11.69	955
	Mar. 23, 1947	12.93	1,330		May 15, 1953	a14.53	1,340
	Apr. 11, 1947	10.33	786				
	May 17, 1947	11.94	1,120				

a Occurred on different date.

Peak stages and discharges of Kelly Bayou near Hosston, La.--Continued.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Jan. 15, 1954	11.31	1,040	1957	Apr. 4, 1957	11.64	1,040
	May 12, 1954	9.50	714		Apr. 29, 1957	17.18	1,720
1955	Mar. 21, 1955	11.07	1,050	1958	June 5, 1957	12.62	1,070
	May 20, 1955	10.15	870		Nov. 8, 1957	11.58	916
	May 24, 1955	13.44	1,520		Nov. 15, 1957	a13.10	970
					Jan. 22, 1958	11.96	921
1956	Feb. 2, 1956	11.86	1,200		Apr. 28, 1958	a22.72	4,460
					July 7, 1958	11.40	962
1957	Feb. 1, 1957	10.25	880				

a Occurred on different date.

3475. Black Bayou near Gilliam, La.

Location.--Lat 32°48'55", long 93°52'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.13, T.21 N., R.15 W., near left bank on downstream side of bridge on State Highway 170, 0.2 mile downstream from Red Bayou and 2 miles southwest of Gilliam.

Drainage area.--364 sq mi.

Gage.--Nonrecording prior to Dec. 12, 1948; recording thereafter. Datum of gage is 155.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Auxiliary nonrecording gage Jan. 26, 1945, to Oct. 25, 1949, and recording gage thereafter at site 5.5 miles downstream at same datum.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall.

Remarks.--Base for partial-duration series, 2,000 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 19, 1943	a9.96	983	1951	Feb. 20, 1951	b15.75	1,560
1944	May 4, 1944	22.60	6,270	1952	Mar. 10, 1952	14.40	2,240
1945	Apr. 2, 1945	25.73	5,830		Apr. 13, 1952	14.78	2,120
1946	June 1, 1946	20.37	3,610	1953	Mar. 12, 1953	16.03	2,630
					Apr. 29, 1953	15.89	2,570
1947	Nov. 12, 1946	18.04	4,010		May 19, 1953	20.52	4,090
1948	Feb. 11, 1948	16.72	2,820	1954	Jan. 16, 1954	13.50	1,760
	Mar. 26, 1948	14.96	2,740	1955	May 24, 1955	16.63	3,150
	May 12, 1948	14.15	3,050		Feb. 3, 1956	13.60	1,650
	May 25, 1948	16.05	2,710	1957	Apr. 6, 1957	16.51	2,980
1949	Jan. 27, 1949	15.18	2,740		Apr. 29, 1957	22.00	8,200
	Apr. 27, 1949	13.93	2,070		June 5, 1957	17.34	3,830
1950	Jan. 17, 1950	18.46	3,790		Nov. 18, 1957	19.36	3,770
	Feb. 16, 1950	19.87	3,650	1958	Jan. 23, 1958	16.58	2,470
	May 5, 1950	17.07	3,180		Apr. 29, 1958	27.50	17,700

a Occurred Jan. 8, 1943.

b Occurred Oct. 1, 1950.

Note.--Peak stage frequently occurs at different time or on different date than peak discharge.

3480. Twelvemile Bayou near Dixie, La.

Location.--Lat 32°38'45", long 93°52'40", in NW¹/₄ NW¹/₄ sec.14, T.19 N., R.15 W., near right bank on downstream side of pier of bridge on State Highway 173, 0.1 mile downstream from Cottonwood Bayou, 4.2 miles southwest of Dixie, 5.5 miles downstream from Caddo Lake, and 17.3 miles upstream from mouth.

Drainage area.--3,137 sq mi.

Gage.--Nonrecording prior to Sept. 5, 1947; recording thereafter. Prior to Sept. 30, 1950, at datum 2.0 ft higher. Datum of present gage is 143.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Discharge computed by using submergence, as determined from auxiliary gage, as a factor during periods of backwater from Red River. Moderate shifts occur.

Bankfull stage.--24 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Jan. 9, 1943	14.82	4,070	1950	Jan. 22, 1950	25.04	14,200
1944	Mar. 6, 1944	23.93	11,400		Feb. 21, 1950	27.31	18,600
	Apr. 1, 1944	23.77	11,200		May 15, 1950	24.56	13,600
	May 9, 1944	30.21	26,600		Sept.25, 1950	24.36	13,300
1945	Jan. 7, 1945	25.46	13,800	1951	Oct. 1, 1950	24.78	11,200
	Mar. 13, 1945	27.57	a18,000		Mar. 2, 1951	21.83	a8,060
	Apr. 5, 1945	33.65	34,900	1952	Feb.13-14, 1952	17.6	a5,500
	June 24, 1945	22.31	a9,370		Mar. 11, 1952	19.19	6,310
1946	Jan. 21, 1946	24.61	12,900		Apr.26-27, 1952	23.60	a9,790
	Feb. 23, 1946	23.28	11,100	1953	Mar. 14, 1953	20.89	7,360
	Mar. 30, 1946	17.40	6,220		May 1, 1953	21.17	7,580
	May 1, 1946	17.48	6,270		May 24, 1953	29.83	19,800
	June 9, 1946	27.90	19,500	1954	May 13, 1954	14.90	a4,270
1947	Nov. 19, 1946	22.59	10,400	1955	Apr. 1, 1955	20.13	a6,850
	Jan. 23, 1947	17.87	6,630		Apr. 14, 1955	18.82	a6,100
	Mar. 16, 1947	18.41	6,930		May 25, 1955	22.30	8,490
	Mar. 23, 1947	18.50	6,990	1956	Feb. 9, 1956	15.41	4,580
	Apr. 12, 1947	20.65	8,480				
	May 22, 1947	18.00	6,690	1957	May 4, 1957	32.59	a26,100
1948	Dec. 26, 1947	17.80	6,570		June 16, 1957	25.60	a10,100
	Feb. 19, 1948	22.26	10,600				
	Mar. 11, 1948	23.08	11,500	1958	Oct. 24, 1957	15.98	a5,600
	May 22, 1948	22.40	10,700		Nov.21-25, 1957	26.05	a14,200
1949	Feb. 6, 1949	20.18	8,400		Jan.26,27, 1958	22.41	a9,450
	Apr. 3, 1949	15.28	5,260		Mar. 24, 1958	14.72	a5,000
	Apr. 28, 1949	15.91	5,550		May 5, 1958	35.65	38,400
1950	Nov. 5, 1949	20.41	8,580		June 27, 1958	19.00	a7,240

a Mean daily discharge.

Note.--Peak stage frequently occurs at different time or on different date than peak discharge.

3481. McCain Creek near Shreveport, La.

Location.--Lat 32°35'50", long 93°50'00", in SW¹/₄ NE¹/₄ sec.31, T.19 N., R.14 W., at bridge on State Highway 1, 7.0 miles northwest of Shreveport.

Drainage area.--13.8 sq mi.

Gage.--Crest-stage gage. Datum of gage is 148.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

RED RIVER BASIN

Peak stages and discharges of McCain Creek near Shreveport, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	37.10		1956	May 5, 1956	37.99	
1955	May 24, 1955	43.82		1957	Apr. 28, 1957	40.76	
				1958	Apr. 25, 1958	41.10	

3485. Red River at Shreveport, La.

Location.--Lat 32°30'55", long 93°44'25", in SE $\frac{1}{4}$ sec.30, T.18 N., R.13 W., on second pier from east bank, at Illinois Central Railroad bridge at Shreveport, half a mile downstream from Cross Bayou and at mile 310.2.

Drainage area.--60,613 sq mi, of which about 54,677 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to Sept. 29, 1939; recording thereafter. Datum of gage is 131.48 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Stage-discharge relation.--Variable; discharge maxima based on occasional current-meter measurements made 1872-1905, and loop curves defined by frequent current-meter measurements since August 1928.

Bankfull stage.--39 ft.

Remarks.--Current-meter measurements and computations of daily discharge furnished by Corps of Engineers. Some current-meter measurements made, gage-height records collected, and records reviewed by Geological Survey. Prior to 1929, gage-height records and occasional current-meter measurements furnished by Mississippi River Commission and Weather Bureau. Base for partial-duration series, 70,000 cfs. Only annual peaks are shown prior to 1940.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1849	August 1849	45.9	-	1892	May 28, 1892	45.6	242,000
1873	June 8, 1873	35.5	57,000	1893	Jan. 1-2, 1893	39.1	108,000
1874	Apr. 29, 1874	37.9	88,000	1894	Apr. 2, 1894	44.4	215,000
1875	Apr. 22, 1875	35.8	61,000	1895	July 29-30, 1895	40.3	129,000
1876	July 28, 1876	41.9	160,000	1896	Feb. 25-26, 1896	27.5	35,000
1877	May 11-12, 1877	39.8	120,000	1897	Apr. 11-13, 1897	34.10	53,000
1878	Jan. 31, 1878	38.4	97,000	1898	May 21, 1898	25.00	30,000
1879	May 16, 1879	34.9	53,000	1899	Jan. 24, 1899	25.60	31,000
1880	Apr. 4, 1880	33.2	42,000	1900	May 8, 1900	25.00	30,000
1881	Mar. 7, 1881	37.3	80,000	1901	June 7, 1901	26.4	33,000
1882	Feb. 21, 1882	41.4	150,000	1902	June 14, 1902	27.6	35,000
1883	Mar. 11-12, 1883	35.3	57,000	1903	Dec. 15-16, 1902	44.10	208,000
1884	May 14, 1884	42.7	177,000	1904	June 24-25, 1904	38.5	98,000
1885	May 11-12, 1885	40.5	132,000	1905	June 9, 1905	43.6	197,000
1886	Apr. 29, 1886	28.3	31,000	1906	Jan. 2-3, 1906	32.6	54,000
1887	Mar. 19, 1887	28.4	33,000	1907	June 13, 1907	36.9	90,000
1888	May 19, 1888	40.3	129,000	1908	June 15, 1908	45.1	256,000
1889	Feb. 3, 1889	41.9	160,000	1909	Dec. 7, 1908	22.0	33,000
1890	May 8, 1890	44.7	221,000	1910	Apr. 21, 1910	23.86	40,000
1891	Feb. 12, 1891	35.2	59,000	1911	Apr. 25, 27, 1911	23.42	41,000

Peak stages and discharges of Red River at Shreveport, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 14, 1912	29.3	68,000	1943	June 2, 1943	20.50	77,800
1913	May 28, 1913	22.2	41,000	1944	Feb. 14, 1944	16.49	-
1914	Apr. 10, 1914	32.93	102,000		Feb. 22, 1944	17.76	-
1915	May 9, 1915	39.0	185,000		Mar. 3, 1944	21.90	89,800
1916	Feb. 10, 1916	35.5	140,000		Mar. 24, 1944	20.91	80,800
1917	May 4, 1917	20.4	41,000		Mar. 20, 1944	21.22	a80,600
1918	Apr. 25-26, 1918	26.9	77,000		Apr. 6, 1944	19.88	-
1919	Dec. 29, 1918	23.8	62,000		Apr. 26, 1944	15.48	-
1920	May 26, 1920	36.2	178,000		May 9, 1944	27.70	163,000
1921	May 3, 1921	28.4	99,000		May 27, 1944	17.72	-
1922	May 5-6, 1922	31.3	132,000		June 1, 1944	21.88	78,900
1923	Feb 8, 1923	24.3	75,000		June 10, 1944	18.42	-
1924	Dec. 26-27, 1923	30.4	133,000	1945	Mar. 8, 1945	30.30	173,000
1925	May 3, 1925	21.8	63,000		Mar. 26, 1945	28.15	147,000
1926	July 30-31, 1926	23.2	75,000		Apr. 7, 1945	37.90	303,000
1927	Apr. 29-30, 1927	37.4	248,000		Apr. 24, 1945	24.25	94,100
1928	Apr. 28, 1928	25.1	95,000	1946	May 13, 1945	19.68	-
1929	May 26-27, 1929	27.48	121,000		May 21, 1945	21.50	a85,800
1930	May 26-28, 1930	35.91	243,000		May 17, 1945	23.64	118,000
1931	Dec. 11, 1930	22.74	62,600		June 23, 1945	26.43	140,000
1932	Feb. 3, 1932	31.79	168,000		Oct. 12, 1945	20.35	a83,500
1933	May 31, 1933	22.82	75,600	1947	Jan. 16, 1946	20.10	84,000
1934	Apr. 11, 1934	21.78	71,400		Feb. 22, 1946	23.15	117,000
1935	May 29, 1935	32.65	181,000		May 22, 1946	20.65	89,000
1936	Dec. 12, 1935	22.32	86,400		June 5, 1946	23.75	a123,000
1937	Jan. 29, 1937	23.15	93,600	1948	Dec. 17, 1946	21.67	127,000
1938	Mar. 1, 1938	35.50	211,000		May 4, 1947	19.87	101,000
1939	Apr. 21, 1939	22.47	88,500		May 19, 1947	20.50	106,000
1940	June 1, 1940	21.49	89,600	1949	May 26, 1947	21.22	101,000
1941	July 8, 1940	22.04	95,600		Mar. 6, 1948	20.00	99,500
	Feb. 7, 1941	19.12	70,900		May 15, 1948	19.60	93,500
	Apr. 28, 1941	23.88	a112,000	1950	May 22, 1948	19.15	82,200
	May 12, 1941	27.93	143,000		Feb. 1-2, 1949	25.80	171,000
	June 8, 1941	19.73	70,600		Feb. 28, 1949	19.29	89,100
	June 18, 1941	24.99	a125,000		Mar. 31, 1949	18.27	75,900
1942	Oct. 11, 1941	21.01	90,000	1951	Jan. 18, 1950	22.70	a129,000
	Nov. 8, 1941	22.46	a107,000		Feb. 5-6, 1950	20.80	102,000
	Apr. 18, 1942	29.65	a170,000		Feb. 18, 1950	26.20	163,000
	May 5, 1942	31.47	a183,000		May 7, 1950	22.86	110,000
	May 18, 1942	23.32	90,100		May 19, 1950	22.55	a103,000
	May 23, 1942	23.55	a90,900		Aug. 3, 1950	18.67	75,800
1943	Apr. 22, 1943	20.28	a74,400	1952	Sept. 24, 1950	22.55	123,000
	May 18, 1943	21.86	93,300		Feb. 24, 1951	20.88	104,000
					June 20, 1951	22.15	111,000
					July 8, 1951	19.48	a82,100
				1953	Apr. 17, 1952	20.56	102,000
					Apr. 28, 1952	25.45	154,000
				1954	Apr. 11, 1953	17.60	a72,600
					May 4, 1953	23.17	129,000
					May 20, 1953	27.32	173,000
				1955	May 16, 1954	20.53	94,700
					Mar. 26, 1955	20.15	92,400
				1956	Feb. 22, 1956	16.72	62,200
				1957	Apr. 9, 1957	22.80	a106,000
					May 3, 1957	b33.91	230,000
					May 31, 1957	30.25	173,000
					Sept. 28, 1957	20.80	a74,700
				1958	Nov. 22, 1957	21.92	a96,200
					Jan. 25, 1958	18.6	a76,900
					May 8, 1958	33.70	a249,000

a Mean daily.

b Observed May 4, 1957.

3487.2. Bayou Dorcheat near Sarepta, La.

Location.--Lat 32°55'20", long 93°22'25", in SW $\frac{1}{4}$ sec.2, T.22 N., R.10 W., Webster Parish, at bridge on State Highway 2, 1.2 miles upstream from Indian Creek, 2.4 miles downstream from Cypress Creek, and 4.8 miles northeast of Sarepta.

Drainage area.--718 sq mi.

Gage.--Nonrecording. Datum of gage is 167.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 7,700 cfs and extended above.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 5, 1939	17.9	10,800	1946	Jan. 10, 1946	17.8	10,500
1940	July 5, 1940	17.6	9,800	1947	Mar. 15, 1947	15.5	4,280
				1948	Mar. 26, 1948	16.9	7,570
1941	May 6, 1941	18.1	11,500	1949	Jan.30-31, 1949	17.0	7,860
1942	Apr.29-30, 1942	17.9	10,800	1950	Jan. 16, 1950	18.3	12,000
1943	Apr. 24, 1943	14.9	3,360				
1944	May 5, 1944	18.5	13,000	1951	Feb. 22, 1951	15.1	4,100
1945	Mar. 5, 1945	18.0	11,200				

3487.4. Bayou Dorcheat near Cotton Valley, La.

Location.--Lat 32°50'35", long 93°21'15", at bridge on State Highway 160, Webster Parish, 1.0 mile upstream from Davis Slough, 1.5 miles upstream from Wildcat Slough, 1.8 miles upstream from Black Bayou, and 4.0 miles northeast of town of Cotton Valley.

Drainage area.--818 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 16, 1950	45.29		1955	Mar. 23, 1955	45.45	
1951	Feb. 23, 1951	42.54		1956	Feb. 18, 1956	42.14	
1952	Feb. 11, 1952	43.17		1957	May 2, 1957	46.60	
1953	May 20, 1953	45.16		1958	Apr. 29, 1958	46.74	
1954	May 16, 1954	(a)					

a Below 41.1 ft, bottom of gage.

3487.6. Black Bayou at Leton, La.

Location.--Lat 32°51'10", long 93°15'05", in SW $\frac{1}{4}$ sec.36, T.22 N., R.9 W., at bridge on State Highway 2, 0.5 mile south of Leton.

Drainage area.--49.8 sq mi.

Gage.--Crest-stage gage. Datum of gage is 163.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Fairly well defined below 3,350 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Black Bayou at Leton, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	45.32	1,670	1956	Feb. 5, 1956	45.11	1,480
1955	Mar. 21, 1955	47.22	-	1957	Apr. 28, 1957	45.96	2,400
				1958	Apr. 26, 1958	49.34	-

3488. Flat Lick Bayou near Leton, La.

Location.--Lat 32°46'10", long 93°16'00", in NW $\frac{1}{4}$ sec.35, T.21 N., R.9 W., near left bank on downstream side of bridge on State Highway 159, half a mile downstream from Cypress Creek, 6 miles upstream from mouth, and 6 $\frac{1}{2}$ miles south of Leton.

Drainage area.--66.9 sq mi.

Gage.--Crest-stage gage prior to September 1956; recording thereafter. Datum of gage is 183.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 3,300 cfs.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	6.78	228	1958	Nov. 7, 1957	8.86	806
					Nov. 14, 1957	10.00	2,600
1955	May 24, 1955	9.48	21,700		Nov. 18, 1957	9.46	1,670
					Nov. 23, 1957	8.65	610
1956	Feb. 6, 1956	7.09	259		Jan. 21, 1958	8.93	892
					Apr. 26, 1958	12.95	10,200
1957	Apr. 4, 1957	8.98	962		Apr. 28, 1958	10.27	3,160
	Apr. 27, 1957	9.92	2,340		Apr. 30, 1958	10.89	4,620
	May 14, 1957	9.52	1,740		May 20, 1958	9.62	2,450
	June 24, 1957	8.84	784		June 26, 1958	8.79	731

a Annual peak only.

3489. Brushy Creek near Hortman, La.

Location.--Lat 32°41'40", long 93°22'40", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.20 N., R.10 W., Webster Parish, at bridge on State Highway 7, 2.4 miles south of Hortman and 7.5 miles northwest of Minden.

Drainage area.--16.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is 161.00 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurement below 1,600 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Feb. 23, 1951	9.53	395	1955	May 24, 1955	13.42	2,400
1952	Apr. 13, 1952	12.40	1,290				
1953	Apr. 29, 1953	12.75	1,580	1956	Apr. 5, 1956	9.48	385
1954	May 1, 1954	8.72	305	1957	May 13, 1957	11.73	910
				1958	Apr. 26, 1958	12.94	1,800

3490. Bayou Dorcheat near Minden, La.

Location.--Lat 32°35'55", long 93°20'00", in NW $\frac{1}{4}$ sec.31, T.19 N., R.9 W., on left bank 500 ft upstream from bridge on U. S. Highway 80, three-quarters of a mile upstream from Louisiana & Arkansas Railway Co. bridge, 3 miles west of Minden, and 28 miles upstream from Bistineau Dam.

Drainage area.--1,097 sq mi.

Gage.--Nonrecording prior to Mar. 1, 1940; recording thereafter. Datum of gage is 133.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Low-stage recording gage since July 29, 1953, 4.6 miles upstream at different datum.

Stage-discharge relation.--Defined by current-meter measurements. High-water shifts have occurred.

Bankfull stage.--19 ft.

Remarks.--Records furnished by Corps of Engineers October 1929 to September 1931 and December 1935 to September 1938. Base for partial-duration series, 5,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Apr. 29-30, 1929	12.50	2,910	1946	Jan. 12, 1946	18.85	14,500
1930	Jan. 15, 1930	16.04	a7,200		Feb. 13, 1946	18.04	11,800
	May 21, 1930	22.95	40,000		May 18, 1946	17.39	10,000
					May 27, 1946	16.82	8,490
1931	Jan. 12, 1931	11.46	2,640	1947	Mar. 16, 1947	15.38	6,220
1933	July 26, 1933	21.12	25,000	1948	Feb. 17, 1948	17.13	9,180
					Mar. 30, 1948	-	6,830
1936	May 15, 1936	9.10	878	1949	Jan. 31, Feb. 1	17.44	9,110
1937	Jan. 26, 1937	18.70	14,500		Mar. 31, 1949	14.84	5,510
1938	Dec. 31, 1937	20.50	22,300	1950	Jan. 18, 1950	19.85	15,900
	Apr. 12, 1938	17.64	a10,600		Feb. 18, 1950	18.22	10,900
1939	Feb. 5-7, 1939	18.80	14,300		May 4, 1950	17.60	9,490
	Mar. 3, 1939	17.18	a9,680	1951	Feb. 24, 1951	13.79	4,120
1940	July 8, 1940	17.04	8,750	1952	Jan. 30, 1952	15.40	5,700
1941	Jan. 3, 1941	18.38	13,000		Feb. 17, 1952	15.36	5,700
	Mar. 13, 1941	16.37	8,250	1953	Mar. 17, 1953	16.81	7,300
	May 8, 1941	19.63	17,000		May 2, 1953	19.63	12,400
1942					May 18, 1953	20.78	16,900
	Apr. 13, 1942	17.72	10,900	1954	May 17, 1954	11.67	3,020
	Apr. 27, 1942	17.68	10,900	1955	Mar. 25, 1955	15.64	5,940
	May 1, 1942	18.47	12,900	1956	Feb. 16, 1956	12.48	2,810
1943	May 21, 1942	17.89	11,400				
	Apr. 27, 1943	12.76	3,830	1957	Apr. 10, 1957	19.52	12,200
1944	Feb. 29, 1944	18.21	11,400		May 2, 1957	22.12	23,100
	Mar. 31, 1944	17.72	9,560	1958	Nov. 20, 1957	15.29	5,690
	May 7, 1944	20.36	20,800		Nov. 25, 1957	15.41	5,800
1945					Jan. 26, 1958	15.37	5,800
	Jan. 4, 1945	18.43	12,200		May 1, 1958	24.90	44,800
	Feb. 24, 1945	16.03	7,700				
	Mar. 5, 1945	20.84	21,600				
	Apr. 4, 1945	b18.38	13,000				

a Mean daily.

b Occurred Apr. 6, 1945.

3492. Clark Bayou near Haughton, La.

Location.--Lat 32°34'05", long 93°29'10", in NE $\frac{1}{4}$ sec.10, T.18 N., R.11 W., Bossier Parish, at bridge on U. S. Highways 79 and 80, 2.5 miles northeast of Haughton, 3 miles upstream from Illinois Central Railroad bridge and bridge on State Highway 164, and 12 miles southwest of Minden.

Drainage area.--35.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is 184.85 ft above mean sea level (Louisiana Department of Highway bench mark).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 29, 1951	9.55		1955	May 24, 1955	11.26	
1952	Apr. 13, 1952	9.72					
1953	May 24, 1953	10.12		1956	Apr. 6, 1956	8.38	
1954	May 13, 1954	8.87		1957	June 6, 1957	9.31	
				1958	Apr. 29, 1958	10.52	

3493. Shell Bayou (Flat River) near Shreveport, La.

Location.--Lat 32°32'35", long 93°38'25", in SE $\frac{1}{4}$ sec.18, T.18 N., R.12 W., Bossier Parish, at bridge on U. S. Highway 80, 6.4 miles northeast of Shreveport.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 9, 1952, at datum 148.08 ft higher; recording thereafter. Datum of present gage is at mean sea level, datum of 1929. Gage heights given herein converted to present datum.

Stage-discharge relation.--Not defined; shifts of considerable magnitude have occurred.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made on Bayou during 1948-49. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	July 26, 1933	167.0	-	1948	Feb. 21, 1948	162.9	1,910
				1949	Feb. 7, 1949	161.3	-
1939	Mar. 13, 1939	163.9	1,480	1950	Feb. 20, 1950	159.5	-
1940	July 10, 1940	164.7	2,060				
				1951	Feb. 19, 1951	155.6	-
1941	Jan. 4-6, 1941	165.1	2,630	1952	Mar. 11, 1952	158.4	-
1942	May 5-6, 1942	164.5	2,940	1953	May 18-19, 1953	163.1	-
1943	Apr. 28-29, 1943	159.7	-	1954	May 12, 1954	154.8	-
1944	May 10, 1944	165.3	-	1955	May 24, 1955	158.5	-
1945	Mar. 8-9, 1945	165.5	-				
				1956	Apr. 5, 1956	155.4	-
1946	Jan. 19, 1946	165.2	-	1957	May 2, 1957	161.23	-
1947	Apr. 13-16, 1947	161.8	-	1958	May 4-5, 1958	163.15	-

3493.5. Alligator Bayou near Shreveport, La.

Location.--Lat 32°32'25", long 93°39'05", in NW $\frac{1}{4}$ sec.19, T.18 N., R.12 W., Bossier Parish, at bridge on U. S. Highway 80, 5.7 miles northwest of Shreveport.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 9, 1952; recording thereafter. Datum of gage is 152.14 ft above mean sea level.

Stage-discharge relation.--Not defined.

Bankfull stage.--7 ft.

Remarks.--Gage-height records and current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	July 26, 1933	14.8	-	1949	Feb. 7-8, 1949	8.6	-
1940	July 12-14, 1940	12.5	-	1950	Oct. 5, 1949	7.5	-
1941	Jan. 5, 1941	12.8	-	1951	Dec. 8, 1950	4.4	-
1942	May 6, 1942	12.1	-	1952	Mar. 10, 1952	7.2	-
1943	Mar. 26, 28, 1943	9.5	-	1953	May 18-19, 1953	10.6	-
1944	May 10-11, 1944	12.9	-	1954	May 12, 1954	5.6	-
1945	Mar. 9, 1945	13.3	-	1955	May 23, 1955	7.7	-
1946	Jan. 19-21, 1946	12.9	-	1956	Apr. 5, 1956	6.4	-
1947	Feb. 20, Mar. 13	9.1	-	1957	May 2, 1957	9.28	-
1948	Feb. 23, 1948	10.1	-	1958	May 5, 1958	10.95	-

3495. Bayou Bodcau near Sarepta, La.

Location.--Lat 32°54'15", long 93°28'55", in NW $\frac{1}{4}$ sec.15, T.22 N., R.11 W., on left bank on downstream side of bridge on State Highway 2, 2 miles west of Sarepta and 9.5 miles upstream from Caney Creek.

Drainage area.--546 sq mi.

Gage.--Recording. Datum of gage is 173.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Rate of change in stage used as a factor.

Bankfull stage.--17 ft.

Historical data.--Flood in 1905 may have reached a stage of 27 ft, from information by local residents. Flood of May 22, 23, 1930, exceeded 25 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 5, 1939	17.49	3,930	1945	Jan. 3, 1945	18.61	5,580
	Mar. 1, 1939	18.47	5,050		Mar. 4, 1945	a19.82	7,820
1940	July 6, 1940	22.16	12,600		Apr. 3, 1945	a19.00	6,680
					June 19, 1945	17.08	3,880
1941	Dec. 29, 1940	18.50	5,450	1946	Jan. 11, 1946	19.87	7,990
	Mar. 10, 1941	17.36	4,140		Feb. 11, 1946	17.32	3,900
	May 7, 1941	19.88	7,470		Mar. 17, 1946	16.85	3,480
1942	Apr. 14, 1942	20.10	7,830		May 15, 1946	18.25	5,420
	May 1, 1942	20.82	9,170		May 21, 1946	a18.61	5,760
	May 21, 1942	17.52	4,250	1947	May 19, 1947	16.16	2,830
1943	Apr. 22, 1943	16.08	2,830	1948	Feb. 15, 1948	17.71	4,360
					Mar. 29, 1948	18.00	4,740
1944	Feb. 27, 1944	18.11	5,160	1949	Jan. 29, 1949	18.70	5,700
	Mar. 30, 1944	a18.46	5,810		Feb. 2, 1949	18.34	5,140
	May 7, 1944	20.28	8,170				

a Occurred on different date.

Peak stages and discharges of Bayou Podcau near Sarepta, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 16, 1950	20.36	8,340	1954	May 16, 1954	13.46	1,540
	Feb. 14, 1950	19.66	7,170	1955	Apr. 21, 1955	15.28	2,340
	Feb. 18, 1950	19.72	7,170				
	Mar. 20, 1950	17.07	3,680				
	May 3, 1950	18.80	5,840	1956	Feb. 11, 1956	14.52	1,750
1951	Feb. 20, 1951	15.67	2,480	1957	Apr. 10, 1957	18.45	5,150
1952	Mar. 14, 1952	17.17	3,730		Apr. 28, 1957	a20.49	8,890
					May 3, 1957	19.09	6,060
1953	Mar. 14, 1953	16.49	3,150	1958	Nov. 20, 1957	16.95	3,440
	Apr. 30, 1953	a19.05	6,020		May 2, 1958	25.14	18,600
	May 18, 1953	a19.04	5,950				

a Occurred on different date.

3497. Bayou Bodcau near Bellevue, La.

Location.--Lat 32°41'10", long 93°33'10", in NE $\frac{1}{4}$ sec.36, T.20 N., R.12 W., Bossier Parish, at bridge on State Highways 162 and 157, 2.0 miles northwest of Bellevue.

Drainage area.--693 sq mi.

Gage.--Nonrecording. Datum of gage is 150.74 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by fall through Bodcau Lake.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 1930	20.8	-	1940	July 10-11, 1940	17.2	-
1938	Jan. 4-5, 1938	16.9	-	1941	Jan. 4, 1941	17.1	-
1939	Mar. 4-6, 1939	16.6	-	1942	May 3-4, 1942	16.8	-

3497.1. Bayou Bodcau at Hodges Camp, near Bellevue, La.

Location.--Lat 32°38'55", long 93°34'40", in SW $\frac{1}{4}$ sec.11, T.19 N., R.12 W., Bossier Parish, on south side of private road, three-quarters of a mile northwest of Hodges Camp, 3.0 miles downstream from bridge on State Highways 162 and 157, and 3.5 miles southwest of Bellevue.

Drainage area.--704 sq mi.

Gage.--Nonrecording. Datum of gage is 153.34 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 4, 1939	13.9	-	1946	Jan. 17-20, 1946	14.1	-
1940	July 11, 1940	14.3	-				
1941	Jan. 4, 1941	14.4	-	1948	Feb. 22, 1948	12.2	-
1942	May 3-5, 1942	13.9	-	1949	Feb. 6-7, 1949	12.5	-
1943	Apr. 26-30, 1943	9.5	-	1950	Feb. 17-19, 1950	11.6	-
1944	May 10-11, 1944	14.2	-	1951	Feb. 22-26, 1951	9.3	-
1945	Mar. 7-8, 1945	14.4	-				
				1952	Feb. 22-23, 25	10.2	-

3498. Cypress Bayou near Benton, La.

Location.--Lat 32°42'20", long 93°41'15", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.23, T.20 N., R.13 W., near right bank on downstream side of bridge on State Highway 162, 2 miles upstream from Little Caney Bayou and 3 miles east of Benton.

Drainage area.--133 sq mi.

Gage.--Nonrecording prior to Oct. 31, 1952; recording since Oct. 1, 1956. Datum of gage is 165.98 ft above mean sea level, datum of 1929 (authority, Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--12 ft.

Remarks.--November 1938 to November 1946 and January 1948 to October 1952 gage-height records and occasional current-meter measurements collected by Corps of Engineers. Base for partial-duration series, 1,000 cfs. Only annual peaks are shown prior to 1956.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 4, 1939	11.7	1,950	1950	May 3, 1950	12.4	2,700
1940	July 2, 1940	15.4	9,000	1951	Feb. 9-10, 1951	10.0	750
1941	Dec. 28, 1940	12.8	3,250	1952	Apr. 15, 1952	11.9	2,150
1942	May 19, 1942	12.9	3,400	1956	Feb. 11, 1956	8.26	396
1943	Apr. 18, 1943	13.3	4,070	1957	Apr. 6, 1957	10.51	1,270
1944	Mar. 30, 1944	13.6	4,650		Apr. 28, 1957	15.08	8,130
1945	Apr. 2, 1945	12.6	2,970		May 3, 1957	11.89	2,540
1946	Jan. 6-9, 1946	12.8	3,250		June 7, 1957	10.78	1,460
1948	Mar. 6, 1948	11.9	2,150	1958	Nov. 21, 1957	10.19	1,060
					June 23, 1958	10.14	1,030
					Apr. 27, 1958	15.18	8,350
1949	Jan. 29-30, 1949	11.0	1,370		Apr. 30, 1958	13.23	4,490

3498.5. Red Chute Bayou near Shreveport, La.

Location.--Lat 32°33'15", long 93°37'30", in NE $\frac{1}{4}$ sec.17, T.18 N., R.12 W., Bossier Parish, at bridge on U. S. Highway 80, 7.5 miles northeast of Shreveport.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 14, 1952; recording thereafter. Datum of gage is 133.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall and by shifting-control. Change in relation occurred in December 1955 due to extensive channel changes.

Bankfull stage.--30 ft.

Remarks.--Gage read twice daily. Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Red Chute Bayou near Shreveport, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	July 26, 1933	33.1	-	1949	Feb. 6, 1949	29.3	2,360
1940	July 13, 1940	31.0	3,980	1950	Feb.16,17, 1950	28.1	2,140
1941	Jan.4-5, 1941	31.1	3,110	1951	Feb.22-23, 1951	26.0	1,580
1942	May 5, 1942	30.7	3,210	1952	Mar. 10, 1952	27.2	1,880
1943	Apr.26-30, 1943	26.6	1,540	1953	May 18, 1953	30.1	2,980
1944	May 13, 1944	30.8	3,110	1954	May 22, 1954	22.4	940
1945	Mar.8-9, 1945	31.0	3,340	1955	June 5, 1955	26.2	1,630
1946	Jan.19-21, 1946	30.8	3,260	1956	Feb. 20, 1956	19.1	1,140
1947	Apr. 12, 1947	28.6	2,220	1957	May 1, 1957	26.31	3,060
1948	Feb. 21, 1948	29.2	2,640	1958	May 4-5, 1958	27.62	3,450

3500. Loggy Bayou near Ninock, La.

Location.--Lat 32°14'10", long 93°25'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.15 N., R.10 W., near center of span on downstream side of bridge on U. S. Highway 71, a quarter of a mile downstream from Flat River, 2 miles southeast of Ninock, and 6 miles downstream from Lake Bistineau Dam.

Drainage area.--2,628 sq mi.

Gage.--Nonrecording prior to Mar. 29, 1949, and June 30 to Sept. 24, 1951; recording Mar. 29, 1949, to June 29, 1951, and since Sept. 25, 1951. Datum of gage is 100.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Auxiliary gage 6 miles downstream. Nonrecording prior to Sept. 14, 1955; recording thereafter. Prior to Sept. 23, 1953, at datum 9.79 ft higher. Datum of present gage is 100.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements; affected by fall. Insufficient data for computation of peak discharge prior to 1949.

Remarks.--Some regulation by Lake Bistineau Dam. Base for partial-duration series, 6,000 cfs. Only annual peak stages are shown prior to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 24, 1943	31.12	-	1952	Mar. 12, 1952	27.43	a7,700
1944	May 11, 1944	44.45	-		Mar. 21, 1952	27.20	a7,470
1945	Apr. 8, 1945	50.20	-		Apr. 23, 1952	38.20	a8,080
1946	Jan. 18, 1946	41.90	-	1953	May 21-22, 1953	43.95	a20,000
1947	Nov. 13, 1946	35.20	-	1954	May 12, 1954	31.50	5,850
1948	Mar.6-7, 1948	33.40	-	1955	Mar. 29, 1955	31.76	a6,900
					Apr. 13, 1955	27.48	7,010
1949	Feb. 7, 1949	40.00	14,300		May 26, 1955	29.65	9,760
	Apr. 5, 1949	30.70	a8,550		June 8, 1955	24.83	a6,750
1950	Jan. 23, 1950	40.74	14,000	1956	Apr. 7, 1956	28.67	10,100
	Mar. 23, 1950	28.05	a8,200	1957	Apr. 13, 1957	35.33	a11,700
	May 9, 1950	36.80	9,980		May 15, 1957	47.08	17,000
1951	Feb. 21, 1951	33.75	7,250		June 20, 1957	44.14	a12,500
	Mar. 29, 1951	24.43	a6,140	1958	Nov. 23, 1957	35.56	a11,700
1952	Feb. 3, 1952	25.96	7,930		Jan. 22, 1958	30.08	a8,060
	Feb. 14, 1952	28.76	10,100		May 4, 1958	47.83	a32,600
	Feb. 22, 1952	27.93	a9,380		June 18, 1958	24.94	a6,000
					June 27, 1958	26.92	a7,640
					July 13, 1958	28.08	a8,240

a Mean daily.

Note.--Peak stage frequently occurs at different time or date than peak discharge.

3505. Red River at Coushatta, La.

Location.--Lat 32°00'45", long 93°21'10", in lot 23, T.12 N., R.10 W., near center of span on downstream side of bridge on U. S. Highway 84 at Coushatta, 11 miles downstream from Coushatta Bayou and at mile 242.4.

Drainage area.--63,362 sq mi, of which about 57,426 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 95.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Stage-discharge relation.--Variable; discharge maxima from loop curves defined by frequent discharge measurements since April 1937. Discharge maxima for period 1889-94 not determined.

Bankfull stage.--30 ft.

Remarks.--Some regulation by upstream dams. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1889	Feb.12-13, 1889	26.5	-	1942	May 6, 1942	35.25	178,000
1890	May 15-16, 1890	38.1	-	1943	May 19, 1943	23.05	91,800
				1944	May 11, 1944	31.2	141,000
1891	Feb.15-17, 1891	22.5	-	1945	Apr. 7, 1945	39.9	a275,000
1892	June 5, 1892	39.2	-				
1893	Jan.4-5, 1893	27.4	-	1946	June 5, 1946	28.9	132,000
1894	Apr.7-9, 1893	31.9	-	1947	Nov.12-13, 1946	26.75	124,000
				1948	Mar. 6, 1948	23.85	113,000
1938	Mar.2-3, 1938	34.30	181,000	1949	Feb.3-4, 1949	30.75	157,000
1939	Mar. 3, 1939	24.10	99,000	1950	Feb. 19, 1950	31.75	162,000
1940	July 9, 1940	23.36	92,700				
				1951	Feb. 25, 1951	25.20	112,000
1941	May 11, 1941	31.18	158,000	1952	Apr. 28, 1952	29.80	149,000

a Includes bypass flow through Bayou Pierre from levee crevasse upstream.

Note.--Peak stage frequently occurs on different date than peak discharge.

3506. Bayou Pierre at Ochley Drive, Shreveport, La.

Location.--Lat 32°27'50", long 93°44'10", in sec.18, T.17 N., R.13 W., Caddo Parish, at bridge on Ochley Drive in Shreveport.

Drainage area.--5.7 sq mi.

Gage.--Recording prior to Mar. 3, 1945, and since Nov. 4, 1946; nonrecording Mar. 20, 1945, to Nov. 3, 1946. Datum of gage is 140.24 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 2, 1944	17.9		1947	Mar. 12, 1947	18.5	
1945	Mar. 3, 1945	20.4		1948	May 11, 1948	16.4	
				1949	Jan. 27, 1949	17.4	
1946	Oct. 5, 1945	20.9					

3507.3. Bayou Pierre at 70th Street, Shreveport, La.

Location.--Lat 32°26'35", long 93°43'50", between lots 32 and 38, T.17 N., R.13 W., Caddo Parish, at bridge on 70th Street in Shreveport.

Drainage area.--8.5 sq mi.

Gage.--Nonrecording prior to July 27, 1949; recording thereafter. Datum of gage is 145.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; severe channel shifts have occurred.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. No gage-height record Dec. 19, 1951, to July 17, 1952. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 2, 1944	12.2	-	1950	Oct. 4, 1949	12.0	-
1945	July 12, 1945	14.5	-	1951	Dec. 14, 1950	7.7	-
1946	Jan. 5, 1946	13.4	-	1953	Apr. 28, 1953	15.2	-
1947	Nov. 10, 1946	9.1	-	1954	May 12, 1954	8.6	-
1948	Feb. 8, 1948	9.2	-				
1949	Feb. 24, 1949	11.0	-				

3509.5. Bayou Pierre near Gayles, La.

Location.--Lat 32°18'00", long 93°37'35", in SW $\frac{1}{4}$ sec.8, T.15 N., R.12 W., Caddo Parish, at bridge on gravel road between Caspiana and Forbing, 0.1 mile east of intersection of this road and State Highway 175, 1.0 mile upstream from Cypress (Wallace) Bayou, 3.2 miles south of Gayles, and 64.9 miles above mouth.

Drainage area.--44 sq mi.

Gage.--Nonrecording prior to July 22, 1952; recording thereafter. Datum of gage is 126.95 ft above mean sea level.

Stage-discharge relation.--Not defined; severely affected by backwater from Cypress (Wallace) Bayou.

Bankfull stage.--23 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	August 1933	28.2	-	1949	Jan. 28, 1949	10.8	-
				1950	Oct. 12, 1949	16.1	-
1939	Feb. 4, 1939	18.2	-	1951	Feb. 19, 1951	8.5	-
1942	May 20, 1942	18.8	-	1952	Feb. 13, 1952	12.5	-
1943	Mar. 26, 1943	8.0	-	1953	Apr. 29, 1953	16.7	-
1944	May 4, 1944	20.3	-	1954	May 14, 1954	12.6	-
1945	Mar. 5, 1945	19.4	-	1956	Apr. 6, 1956	15.8	-
1946	Jan. 6, 1946	22.7	-	1957	Apr. 29, 1957	11.44	-
1947	Mar. 13, 1947	12.0	-	1958	May 1, 1958	10.28	-
1948	Feb. 13, 1948	11.8	-				

3510. Boggy Bayou near Keithville, La.

Location.--Lat 32°22'35", long 93°49'20", in NW 1/4 sec. 17, T.16 N., R.14 W., near right bank on downstream side of bridge on U. S. Highway 171, 0.4 mile downstream from Gilmer Bayou, 3 miles north of Keithville, and 5 miles upstream from mouth.

Drainage area.--79 sq mi.

Gage.--Nonrecording prior to Sept. 7, 1949; recording thereafter. Datum of gage is 145.13 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 7,300 cfs and extended by velocity area studies. Shifts in relation occur.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 1,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1933	-	a26.70	-	1946	Jan. 16, 1946	17.21	1,820	
1939	Jan. 13, 1939	18.00	4,410	Feb. 10, 1946	17.71	2,960		
	Feb. 3, 1939	19.00	8,380	Feb. 19, 1946	17.13	1,740		
	Feb. 26, 1939	17.40	2,840	Mar. 7, 1946	16.96	1,440		
	Feb. 28, 1939	16.80	1,620	Mar. 28, 1946	17.10	1,660		
1940				May 13, 1946	19.02	8,380		
	Dec. 23, 1939	17.63	3,360	June 1, 1946	17.51	2,420		
	Feb. 10, 1940	16.85	1,500	1947	Feb. 20, 1947	17.30	1,770	
	Apr. 7, 1940	17.29	2,590		Mar. 13, 1947	17.95	3,840	
Apr. 29, 1940	17.34	2,720	Apr. 8, 1947		17.98	4,030		
1941	Nov. 23, 1940	18.60	6,520	1948	Feb. 9, 1948	17.12	1,610	
	Dec. 7, 1940	18.57	6,520	May 12, 1948	17.00	1,420		
	Dec. 13, 1940	16.98	1,830	1949	Jan. 27, 1949	17.10	1,610	
	Dec. 27, 1940	18.95	8,380		1950	Oct. 5, 1949	18.78	5,100
	Jan. 2, 1941	17.78	3,880	Jan. 1, 1950		17.67	2,480	
	Feb. 21, 1941	17.67	4,140	Jan. 12, 1950		17.38	1,920	
	Mar. 7, 1941	17.28	2,590	Feb. 13, 1950		17.82	2,740	
	May 5, 1941	18.21	4,990	1951	Mar. 29, 1951	16.65	845	
June 11, 1941	17.17	1,870	1952		Jan. 28, 1952	17.54	2,860	
Nov. 1, 1941	17.50	2,780			Feb. 12, 1952	19.45	6,980	
Nov. 23, 1941	18.16	4,970			Mar. 10, 1952	17.18	2,050	
Apr. 9, 1942	17.45	2,640		Apr. 13, 1952	17.58	2,970		
Apr. 26, 1942	17.15	1,870	1953	Apr. 29, 1953	18.82	7,320		
May 18, 1942	19.24	9,370		May 14, 1953	17.70	4,280		
1943	Mar. 26, 1943	15.67		435	1954	May 12, 1954	17.10	2,780
	Feb. 26, 1944	17.75		3,500		1955	Apr. 13, 1955	17.04
Mar. 29, 1944	17.45	2,640	May 24, 1955	17.64	4,150			
May 2, 1944	18.43	5,670	Aug. 4, 1955	18.67	6,840			
1945	Jan. 1, 1945	18.04	4,180	1956	Apr. 6, 1956		16.44	1,450
	Jan. 19, 1945	18.35	5,390		May 2, 1956	17.12	2,830	
	Feb. 21, 1945	17.04	1,700	1957	Apr. 28, 1957	17.62	4,070	
	Mar. 4, 1945	18.76	7,430		June 13, 1957	16.60	1,730	
	Mar. 20, 1945	17.05	1,700		1958	Jan. 21, 1958	16.56	1,730
	Apr. 2, 1945	18.00	4,000			May 4, 1958	16.46	1,550
1946	Oct. 5, 1945	18.30	5,230					
	Dec. 4, 1945	17.51	2,420					
	Jan. 5, 1946	20.20	14,800					
	Jan. 9, 1946	17.29	2,000					
	Jan. 12, 1946	17.05	1,580					

a Annual peak only.

3515. Cypress Bayou near Keithville, La.

Location.--Lat 32°18'00", long 93°49'40", in SW $\frac{1}{4}$ sec.8, T.15 N., R.14 W., near center of span on downstream side of bridge on U. S. Highway 171, immediately downstream from Texas and Pacific Railway Co. bridge, 2 miles south of Keithville and 6 miles upstream from mouth of Boggy Bayou.

Drainage area.--66 sq mi.

Gage.--Nonrecording prior to Dec. 28, 1939; recording Dec. 28, 1939, to Sept. 30, 1957; crest-stage gage since Apr. 23, 1958. Datum of gage is 162.13 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 7,500 cfs and extended by logarithmic plotting and velocity-area studies.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 3,000 cfs. Only annual peaks are shown for period 1940-45.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	-	18.0	-	1948	May 12, 1948	10.43	3,200
1939	Jan. 13, 1939	10.40	3,760	1949	Jan. 28, 1949	10.45	3,200
	Feb. 3, 1939	11.50	7,720	1950	Oct. 5, 1949	12.15	8,010
1940	Dec. 23, 1939	10.80	5,170		Feb. 13, 1950	10.85	3,540
1941	Dec. 27, 1940	11.55	8,050	1951	Mar. 28, 1951	9.86	1,130
1942	Oct. 31, 1941	11.28	6,970	1952	Feb. 12, 1952	10.90	3,700
1943	May 31, 1943	6.69	220		Mar. 10, 1952	10.73	3,190
1944	Apr. 30, 1944	11.60	8,250	1953	Mar. 12, 1953	10.80	4,950
1945	Mar. 4, 1945	11.26	7,050		Apr. 29, 1953	12.36	13,900
1946	Jan. 5, 1946	13.32	14,700		May 15, 1953	10.44	3,310
	Feb. 6, 1946	10.36	3,580	1954	May 12, 1954	11.30	7,450
	Feb. 10, 1946	10.23	3,220	1955	Mar. 21, 1955	10.83	5,100
	Feb. 19, 1946	10.19	3,040		Apr. 12, 1955	10.67	4,320
	Mar. 26, 1946	10.29	3,400		May 24, 1955	10.38	3,080
	May 13, 1946	10.31	3,400		Aug. 3, 1955	13.62	23,700
1947	Mar. 13, 1947	10.69	4,840	1956	Apr. 6, 1956	12.17	12,500
1948	Feb. 9, 1948	10.42	3,020		May 2, 1956	10.72	4,450
				1957	May 1, 1957	10.05	2,020

a Annual peak only.

3515.6. Cypress (Wallace) Bayou near Frierson, La.

Location.--Lat 32°18'25", long 93°39'05", in NE $\frac{1}{4}$ sec.12, T.15 N., R.13 W., on line between Caddo and DeSoto Parishes, at bridge on parish road, 1.4 miles downstream from Wallace Lake Dam, 1.8 miles upstream from confluence with Bayou Pierre, and 4.5 miles northeast of Frierson.

Drainage area.--268 sq mi.

Gage.--Nonrecording prior to July 17, 1952; recording thereafter. Datum of gage is 100.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Peak discharges defined by current-meter measurements made at or near annual maximum stages. Stage affected by backwater from Bayou Pierre.

Remarks.--Gage-height records and occasional discharge measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Cypress (Wallace) Bayou near Frierson, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	-	53.7	-	1950	Oct. 7, 1949	42.8	2,070
1938	Apr. 9, 1938	43.4	4,360	1951	Feb. 21, 1951	37.9	1,190
1947	Mar. 15, 1947	40.4	1,650	1952	Feb. 14, 1952	40.0	1,950
1948	Feb. 13, 1948	40.5	1,500	1953	Apr. 30, 1953	43.3	2,780
1949	Jan. 30, 1949	39.7	1,310	1954	May 14, 1954	40.1	1,370
				1955	Aug. 4, 1955	42.0	-

3516. Bayou Pierre near Grand Bayou, La.

Location.--Lat 32°04'40", long 93°30'40", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.13 N., R.11 W., on line between Red River and DeSoto Parishes, at bridge on State Highway 84, 2.3 miles west of town of Grand Bayou and 43.4 miles from mouth.

Drainage area.--674 sq mi.

Gage.--Nonrecording prior to July 15, 1952; recording thereafter. Datum of gage is 101.13 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	August 1933	35.4	-	1951	Mar. 31, 1951	14.3	-
				1952	Feb. 14, 1952	19.2	-
1947	Jan. 19, 1947	22.0	-	1953	May 19, 1953	30.8	-
1948	Feb. 14, 1948	21.8	-	1954	May 14, 1954	20.7	-
1949	Jan. 22, 1949	17.0	-				
1950	Feb. 15, 1950	25.2	-	1956	Apr. 7, 1956	24.5	-
				1957	May 1, 1957	23.11	-

3517.4. Bayou Pierre at Evelyn, La.

Location.--Lat 31°59'20", long 93°26'30", in NE corner sec.36, T.12 N., R.11 W., on line between DeSoto and Red River Parishes, at bridge on State Highway 177 at Evelyn, 2.8 miles upstream from Shell Bayou and 6 miles west of Coushatta.

Drainage area.--707 sq mi.

Gage.--Crest-stage gage. Datum of gage is 81.45 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 3, 1950	41.29	-	1955	Aug. 4, 1955	41.00	-
1951	Feb. 23, 1951	(a)	-	1956	Apr. 6, 1956	(a)	-
1952	Feb. 14, 1952	(a)	-	1957	Apr. 28, 1957	(a)	-
1953	May 20, 1953	46.11	-	1958	Sept.20, 1958	45.43	-
1954	May 12, 1954	(a)	-				

a Stage below 39 ft; bottom of gage.

3517.45. Bayou Pierre near Hanna, La.

Location.--Lat 31°57'15", long 93°22'20", in SE $\frac{1}{4}$ sec.10, T.11 N., R.10 W., on line between Red River and DeSoto Parishes, at bridge on State Highway 487, 1.6 miles southwest of Hanna.

Drainage area.--729 sq mi.

Gage.--Nonrecording. Datum of gage is 94.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by backwater from Red River.

Bankfull stage.--34 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	August 1933	35.2	-	1946	Feb. 11, 1946	26.5	-
				1947	Jan. 20, 1947	21.4	-
1939	Feb. 7, 1939	21.5	-	1948	Feb. 14, 1948	21.5	-
1940	Feb. 11, 1940	22.9	-	1949	Feb. 6, 1949	19.7	-
				1950	June 4, 1950	27.2	-
1941	Nov. 26, 1940	31.0	-				
1942	Nov. 2, 1941	25.7	-	1951	Mar. 31, 1951	15.7	-
1943	Mar. 28, 1943	10.5	-	1952	Feb. 15, 1952	19.3	-
1944	May 5, 1944	28.0	-				
1945	Apr. 13, 1945	36.4	-				

a Estimated on basis of stages for station near Lake End.

3517.5. Bayou Pierre near Lake End, La.

Location.--Lat 31°54'35", long 93°21'10", in W $\frac{1}{2}$ sec.25, T.11 N., R.10 W., on line between Natchitoches and Red River Parishes, at Jims Island Bridge on parish road, 3.0 miles southwest of Lake End and 23.4 miles above mouth.

Drainage area.--739 sq mi.

Gage.--Nonrecording prior to July 29, 1952. Recording July 29, 1952, to Nov. 22, 1954, and intermittently since Aug. 2, 1956. Datum of gage is 83.14 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by backwater from Red River.

Bankfull stage.--42 ft.

Remarks.--Gage-height records and occasional current-meter measurements since April 1938, collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	August 1933	45.8	-	1948	Feb. 14, 1948	30.9	-
				1949	Feb. 5, 1949	30.0	-
1940	Feb. 11, 1940	32.8	-	1950	June 4, 1950	36.8	-
1941	Nov. 26, 1940	40.5	-	1951	Mar. 31, 1951	24.2	-
1942	Nov. 2, 1941	35.4	-				
1943	May 20-21, 1943	19.4	-	1953	May 20, 1953	41.5	-
1944	May 5, 1944	37.8	-				
1945	Apr. 13, 1945	47.2	-	1956	Apr. 7, 1956	32.2	-
				1957	May 10, 1957	36.41	-
1946	Feb. 11, 1946	36.2	-	1958	Sept. 23, 1958	39.67	-
1947	Jan. 21, 1947	30.9	-				

3517.55. Bayou Pierre at Powhatan, La.

Location.--Lat 31°58'36", long 93°12'20", in SE $\frac{1}{4}$ sec.22, T.10 N., R.8 W., Natchitoches Parish, at bridge on State Highway 485, 1.0 mile southwest of Powhatan and 12.2 miles upstream from mouth.

Drainage area.--879 sq mi.

Gage.--Nonrecording. Datum of gage is 80.80 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by backwater from Red River.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Nov. 13, 1946	25.9	-	1950	Feb.22-23, 1950	33.3	-
1948	Feb. 15, 1948	24.9	-				
1949	Feb. 5, 1949	31.2	-	1951	June 21-22, 1951	24.1	-

3519.2. Bayou Pierre near Natchitoches, La.

Location.--Lat 31°48'10", long 93°09'15", between secs. 47 and 48, T.10 N., R.8 W., Natchitoches Parish, at bridge on State Highway 1, 4.7 miles upstream from mouth and 5.0 miles northwest of Natchitoches.

Drainage area.--1,122 sq mi.

Gage.--Nonrecording prior to Oct. 27, 1952; recording thereafter. Datum of gage is 71.94 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by backwater from Red River.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Nov. 14, 1946	34.2	-	1953	May 22, 1953	45.1	-
1948	Mar. 8, 1948	32.6	-	1954	May 16, 1954	31.6	-
1949	Feb. 5, 1949	39.5	-				
1950	Feb. 22, 1950	41.6	-	1956	Apr. 8, 1956	24.6	-
				1957	May 7, 1957	46.59	-
1951	June 22, 1951	32.7	-	1958	May 15, 1958	46.49	-
1952	Apr. 30, May 1	38.0	-				

a Records incomplete; probably maximum for year.

3519.3. Red River at Grand Ecore, La.

Location.--Lat 31°49'05", long 93°05'05", in lot 51, T.10 N., R.7 W., Natchitoches Parish, at bridge on State Highway 6 at Grand Ecore, 3.5 miles downstream from Bayou Pierre, 3.7 miles upstream from Cane River, 4.0 miles north of Natchitoches, and at mile 206.4.

Drainage area.--64,575 sq mi, of which about 58,639 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 75.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Variable; defined by current-meter measurements for 1938, 1945-49. Discharge maxima for other years obtained from records for stations at Shreveport and Alexandria or from average rating curve. Discharge since 1950 not determined.

Bankfull stage.--33 ft.

Remarks.--Gage-height records since December 1913 and occasional current-meter measurements April 1937 to September 1938 and since April 1945 furnished by Corps of Engineers. Some regulation by upstream dams. Only annual peaks are shown.

Peak stages and discharges of Red River at Grand Ecore, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 12-13, 1914	31.8	132,000	1936	Dec. 13, 1935	24.9	73,000
1915	May 13, 1915	34.7	162,000	1937	Jan. 31, 1937	29.7	113,000
1916	Feb. 12-13, 1916	35.7	139,000	1938	Mar. 4, 1938	38.2	188,000
1917	May 5, 1917	17.5	29,000	1939	Mar. 4, 1939	28.4	101,000
1918	Apr. 27-28, 1918	25.6	78,000	1940	July 10, 1940	26.9	89,000
1919	Dec. 31, 1918	22.5	57,000	1941	May 15, 1941	36.0	150,000
1920	May 29-30, 1920	35.1	166,000	1942	May 8, 1942	39.7	170,000
1921	May 4-5, 1921	27.9	97,000	1943	May 21, 1943	25.6	78,000
1922	May 7, 1922	33.3	148,000	1944	May 12, 1944	36.3	150,000
1923	June 17, 1923	23.8	65,000	1945	Apr. 10, 1945	44.7	280,000
1924	Dec. 28-30, 1923	32.0	134,000	1946	Feb. 23, 1946	33.4	138,000
1925	May 3-14, 1925	19.7	40,000	1947	Nov. 17, 1946	29.7	132,000
1926	May 15, 1926	23.6	64,000	1948	Mar. 8, 1948	28.3	115,000
1927	May 7, 1927	40.2	224,000	1949	Feb. 4, 1949	35.2	174,000
1928	May 2, 1928	28.0	98,000	1950	Feb. 22, 1950	37.1	194,000
1929	May 28, 1929	30.2	117,000	1951	Feb. 26-27, 1951	29.2	-
1930	May 31, 1930	39.3	214,000	1952	Apr. 30, 1952	33.9	-
1931	Feb. 19-20, 1931	21.9	53,000	1953	May 22-23, 1953	40.5	-
1932	Feb. 2-3, 1932	38.9	209,000	1954	May 17, 1954	27.1	-
1933	Mar. 12-13, 1933	26.3	84,000	1955	Mar. 28, 1955	25.35	-
1934	Mar. 8, 1934	26.8	88,000	1956	Feb. 23, 1956	21.74	-
1935	May 31, 1935	37.9	198,000	1957	May 10, 1957	41.95	-
				1958	May 11, 1958	41.92	-

3520. Saline Bayou near Lucky, La.

Location.--Lat 32°15'00", long 92°58'35", in SW¹/₄SW¹/₄ sec. 27, T.15 N., R.6 W., near center of span on downstream side of bridge on State Highway 4, 0.7 mile downstream from Sixmile Creek and 1.0 mile east of Lucky.

Drainage area.--154 sq mi.

Gage.--Nonrecording prior to Feb. 27, 1949; recording thereafter. Datum of gage is 152.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 6,400 cfs and extended on basis of records for nearby stations. Shifts in relation occur.

Historical data.--A stage of about 13 ft occurred some time prior to installation of gage; date unknown.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Nov. 26, 1940	7.81	1,770	1945	Mar. 5, 1945	8.13	2,020
	Dec. 10, 1940	7.12	1,070		Mar. 14, 1945	7.51	1,380
	Dec. 14, 1940	7.39	1,340		Apr. 2, 1945	11.99	10,200
	Dec. 28, 1940	9.51	4,380		June 16, 1945	7.20	1,090
	Jan. 4, 1941	7.03	1,050	1946	Oct. 7, 1945	8.65	2,620
	Mar. 9, 1941	7.27	1,290		Jan. 6, 1946	8.30	2,250
	May 6, 1941	9.84	5,070		Jan. 10, 1946	8.71	2,750
1942	Nov. 1, 1941	8.20	2,180		Jan. 17, 1946	7.56	1,480
	Nov. 24, 1941	8.00	1,940		Feb. 10, 1946	10.10	5,100
	Apr. 10, 1942	8.42	2,450		Mar. 29, 1946	8.14	2,020
	May 15, 1942	7.95	1,940		May 15, 1946	7.27	1,140
	May 19, 1942	11.62	8,920		May 21, 1946	7.58	1,480
					June 2, 1946	7.86	1,800
1943	Mar. 30, 1943	6.71	737	1947	Jan. 4, 1947	8.04	1,760
1944	Feb. 28, 1944	10.60	6,200		Jan. 19, 1947	8.50	2,380
	Mar. 31, 1944	8.98	3,060		Mar. 14, 1947	-	1,500
	May 5, 1944	8.69	2,630	1948	Feb. 13, 1948	8.49	2,380
1945	Jan. 1, 1945	12.90	13,500		Apr. 15, 1948	8.45	2,250
	Jan. 21, 1945	7.62	1,480				

Peak stages and discharges of Saline Bayou near Lucky, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 28, 1949	7.06	815	1955	Mar. 24, 1955	7.61	1,420
1950	Jan. 8, 1950	7.36	1,060		Apr. 15, 1955	7.21	1,070
	Feb. 14, 1950	8.71	2,510		May 20, 1955	7.78	1,600
	May 4, 1950	7.60	1,300		May 25, 1955	9.28	3,410
	June 4, 1950	9.67	4,080		June 8, 1955	7.56	1,380
	June 23, 1950	7.38	1,080		July 19, 1955	7.36	1,200
1951	Jan. 16, 1951	8.69	2,510		Aug. 6, 1955	7.12	1,010
	Mar. 30, 1951	7.47	1,170	1956	Mar. 16, 1956	7.30	1,150
1952					Apr. 7, 1956	10.02	4,880
	Apr. 15, 1952	7.59	1,290	1957	Apr. 6, 1957	7.25	1,110
1953	Feb. 22, 1953	7.73	1,460	1958	Nov. 19, 1957	7.91	1,700
	Mar. 13, 1953	9.71	4,280		Jan. 23, 1958	7.19	1,060
	Apr. 30, 1953	9.52	3,940		May 1, 1958	8.98	2,890
	May 5, 1953	8.78	2,740		May 21, 1958	8.51	2,290
	May 17, 1953	11.58	8,830		Sept. 22, 1958	8.52	2,290
1954	May 14, 1954	7.57	1,270				

3522. Black Lake Bayou near Minden, La.

Location.--Lat 32°34'50", long 93°10'35", in N $\frac{1}{2}$ sec.3, T.18 N., R.8 W., on line between Bienville and Webster Parishes, at bridge on U. S. Highway 80, 2.8 miles upstream from Yazoo and Mississippi Valley Railway bridge, 3 miles upstream from Bear Creek, and 7 miles southeast of Minden.

Drainage area.--38.6 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Feb. 22, 1951	(a)	-	1956	Apr. 6, 1956	15.97	1,390
1952	Feb. 11, 1952	15.53	1,100	1957	Apr. 28, 1957	17.74	-
1953	May 20, 1953	17.12	-	1958	Oct. 22, 1957	16.37	-
1954	May 4, 1954	(a)	-				
1955	Mar. 21, 1955	16.28	-				

a Below 14.0 ft; bottom of gage.

3523. Black Lake Creek near Gibsland, La.

Location.--Lat 32°32'45", long 93°05'10", in SE $\frac{1}{4}$ sec.16, T.18 N., R.7 W., Bienville Parish, at bridge on Illinois Central Railroad just upstream from U. S. Highway 80, 1.8 miles upstream from confluence with Leathermans Creek and 2.0 miles west of Gibsland.

Drainage area.--46.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is 160.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges of Black Lake Creek near Gibsland, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 6, 1950	44.46	-	1955	May 24, 1955	45.35	-
1951	Mar. 29, 1951	44.37	-	1956	Apr. 6, 1956	45.77	-
1952	Apr. 14, 1952	44.29	-	1957	Apr. 28, 1957	45.79	-
1953	Apr. 30, 1953	45.48	-	1958	Sept. 21, 1958	46.74	-
1954	May 4, 1954	45.51	-				

3523.5. Leatherman's Creek near Gibsland, La.

Location.--Lat 32°32'40", long 93°06'20", in SE $\frac{1}{4}$ sec.17, T.18 N., R.7 W., Bienville Parish, at bridge on Illinois Central Railroad just upstream from U. S. Highway 80, 0.7 mile upstream from Black Lake Creek and 3.2 miles west of Gibsland.

Drainage area.--57 sq mi.

Gage.--Crest-stage gage. Datum of gage is 156.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 3, 1950	47.70	-	1955	June 4, 1955	43.81	-
1951	Feb. 22, 1951	(a)	-	1956	Feb. 5, 1956	45.00	-
1952	Feb. 11, 1952	43.15	-	1957	May 13, 1957	43.93	-
1955	Apr. 30, 1953	44.94	-	1958	Sept. 21, 1958	46.40	-
1954	May 4, 1954	(a)	-				

a Below 43.1 ft; bottom of gage.

3524. Kepler Creek near Sparta, La.

Location.--Lat 32°22'05", long 93°05'35", in SW $\frac{1}{4}$ sec.16, T.16 N., R 7 W., at bridge on State Highway 507, 0.8 mile west of Sparta.

Drainage area.--21.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is 139.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	43.88	-	1956	Apr. 6, 1956	44.45	-
1955	July 11, 1955	43.78	-	1957	Apr. 28, 1957	(a)	-
				1958	Apr. 27, 1958	42.94	-

a Below 42.10 ft; bottom of gage.

3525. Black Lake Bayou near Castor, La.

Location.--Lat 32°15'40", long 93°12'50", in NW¼ sec.29, T.15 N., R.8 W., near center of span on downstream side of bridge on State Highway 4, 2.8 miles downstream from Fourmile Bayou, 2.8 miles northwest of Castor, and 6.0 miles southeast of Ringgold.

Drainage area.--423 sq mi.

Gage.--Nonrecording prior to May 12, 1952; recording thereafter. Altitude of gage is 135 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 6,900 cfs and extended above.

Bankfull stage.--8 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 16, 1940	9.71	a3,150	1947	Jan. 22, 1947	9.79	3,400
1941	Nov. 25, 1940	10.30	4,410		Mar. 17, 1947	9.82	3,400
	Nov. 28, 1940	10.03	3,750	1948	Feb. 16, 1948	10.50	4,710
	Dec. 30, 1940	11.73	7,950	1949	Jan. 31, 1949	9.71	3,070
	Jan. 4, 1941	11.25	6,580	1950	Jan. 6, 1950	10.22	4,020
	Mar. 11, 1941	9.72	3,150		Jan. 17, 1950	9.78	3,420
	May 8, 1941	12.17	9,480		Feb. 16, 1950	10.37	4,360
1942	Oct. 31, 1941	10.44	4,640		June 5, 1950	10.78	5,490
	Apr. 12, 1942	9.99	3,760	1951	Apr. 2, 1951	8.86	2,010
	May 20, 1942	12.57	11,000	1952	Feb. 16, 1952	10.11	3,990
1943	Apr. 1, 1943	8.38	1,370	1953	Mar. 15, 1953	10.98	5,630
1944	Feb. 28, 1944	12.36	10,300		May 1, 1953	12.87	11,500
	Mar. 31, 1944	12.65	11,000		May 17, 1953	12.31	9,240
	May 5, 1944	11.92	8,610	1954	May 16, 1954	9.56	2,780
1945	Jan. 3, 1945	13.05	13,000	1955	Mar. 26, 1955	10.03	3,700
	Jan. 23, 1945	10.18	4,190		May 27, 1955	10.72	5,000
	Mar. 6, 1945	11.94	8,560		June 10, 1955	9.72	3,270
	Mar. 17, 1945	9.70	3,180	1956	Apr. 9, 1956	11.31	6,380
	Apr. 3, 1945	13.20	14,100	1957	May 1, 1957	10.91	5,430
1946	Oct. 8, 1945	10.14	3,980		May 18, 1957	9.67	3,200
	Jan. 9, 1946	12.10	9,270	1958	Sept.20, 1958	12.37	9,480
	Mar. 30, 1946	11.25	6,580				
	May 16, 1946	10.13	3,990				
	June 3, 1946	11.70	7,950				
1947	Jan. 7, 1947	9.69	3,220				

a Record incomplete; not maximum for year.

3527. Castor Creek at Castor, La.

Location.--Lat 32°14'35", long 93°09'30", in SE¼ sec.35, T.15 N., R.8 W., at bridge on State Highway 153, 0.8 mile southeast of Castor.

Drainage area.--27.9 sq mi.

Gage.--Crest-stage gage. Datum of gage is 114.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 27, 1954	46.72	-	1956	Apr. 6, 1956	47.89	-
1955	May 24, 1955	48.70	-	1957	Jan. 30, 1957	47.11	-
				1958	Sept.20, 1958	47.84	-

3530. Saline Bayou near Clarence, La.

Location.--Lat 31°49'05", long 92°56'55", in SE $\frac{1}{4}$ sec.26, T.10 N., R.6 W., near center of span on downstream side of bridge on U. S. Highway 84, 1.8 miles downstream from Bayou Boubeau, 4.0 miles downstream from Saline Lake conservation dam, 4.6 miles east of Clarence, and 6.7 miles upstream from mouth.

Drainage area.--1,382 sq mi.

Gage.--Nonrecording prior to Nov. 3, 1954; recording thereafter. Altitude of gage is 73 ft (from river-profile survey). Auxiliary gage 5.3 miles downstream at same datum. Nonrecording prior to Nov. 3, 1949; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements below 12,700 cfs and extended above; affected by fall. Shifts in relation occur.

Bankfull stage.--32 ft.

Remarks.--Some regulation by Saline Lake 4.0 miles above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	April 1945	43.60	-	1954	May 25, 1954	24.92	4,230
				1955	May 29, 1955	24.33	6,340
1950	June 8, 1950	34.60	7,880	1956	Apr. 13, 1956	22.27	5,860
1951	Jan. 21, 1951	26.23	4,700	1957	June 29, 1957	38.08	6,980
1952	Apr. 24, 1952	30.26	4,120	1958	May 26, 1958	37.30	8,880
1953	May 19, 1953	40.49	14,200				

Note.--Peak stage usually occurred on different date than peak discharge.

3535. Nantachie Creek near Montgomery, La.

Location.--Lat 31°41'15", long 92°52'40", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.8 N., R.5 W., near center of span on upstream side of bridge on State Highway 34, 1.4 miles downstream from Kadesh Branch and 1.5 miles northeast of Montgomery.

Drainage area.--47 sq mi.

Gage.--Nonrecording prior to July 25, 1945; recording thereafter. Datum of gage is 107.43 ft above mean sea level, datum of 1929 (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 9,700 cfs and extended above. Moderate shifts in relation occur.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Mar. 27, 1943	6.26	217	1949	Jan. 3, 1949	9.44	1,150
					Mar. 26, 1949	9.56	1,250
1944	Jan. 15, 1944	11.19	3,780				
	May 2, 1944	11.80	5,460	1950	Jan. 12, 1950	8.44	618
					Feb. 13, 1950	10.56	2,750
1945	Apr. 1, 1945	12.6	6,620		Feb. 23, 1950	8.68	715
	July 29, 1945	11.70	5,130		Mar. 1, 1950	9.73	1,400
					May 2, 1950	9.65	1,300
1946	Jan. 8, 1946	9.31	1,020		May 15, 1950	9.74	1,410
	Jan. 16, 1946	9.04	790		June 3, 1950	10.68	3,030
	Feb. 9, 1946	11.80	5,460				
				1951	Mar. 28, 1951	9.53	1,200
1947	Jan. 2, 1947	8.88	690				
	Jan. 17, 1947	10.01	1,740	1952	Apr. 24, 1952	8.41	560
	Mar. 13, 1947	8.82	630				
	Apr. 7, 1947	11.55	4,680	1953	Mar. 11, 1953	10.10	1,950
	Apr. 11, 1947	10.41	2,280		Apr. 29, 1953	13.34	8,030
	May 21, 1947	9.95	1,680		May 5, 1953	9.15	920
					May 13, 1953	10.16	2,060
1948	Feb. 9, 1948	9.34	1,060		May 17, 1953	14.63	10,500
	Apr. 13, 1948	9.62	1,300				

Peak stages and discharges of Nantachie Creek near Montgomery, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	7.19	321	1958	Nov. 8, 1957	9.55	1,200
1955	Aug. 3, 1955	7.68	395		Nov. 14, 1957	9.40	1,080
					Nov. 19, 1957	9.65	1,300
1956	Feb. 9, 1956	5.76	196		Nov. 23, 1957	10.21	2,150
					Jan. 21, 1958	8.50	600
1957	Apr. 29, 1957	9.36	1,050		Apr. 27, 1958	9.83	1,560
	June 28, 1957	9.00	840		June 22, 1958	10.34	2,410
					July 23, 1958	9.55	1,200
					Sept. 21, 1958	10.76	3,150

3540. Little Sandy Creek at Kisatchie, La.

Location.--Lat 31°24'30", long 93°10'15", in SE $\frac{1}{4}$ sec.15, T.5 N., R.8 W., on right bank at downstream side of bridge on State Highway 117, 0.5 mile south of Kisatchie and 2 miles upstream from mouth.

Drainage area.--21.4 sq mi.

Gage.--Recording. Datum of gage is 204.44 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended by logarithmic plotting and area-velocity studies. Moderate shifts in relation occur.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Oct. 4, 1949	6.90	1,120	1953	May 17, 1953	13.00	4,100
	Dec. 17, 1949	7.40	1,280				
	Feb. 9, 1950	6.60	1,030	1954	Dec. 3, 1953	9.34	2,060
	Feb. 12, 1950	12.44	3,740		Apr. 16, 1954	7.10	1,190
	May 1, 1950	9.77	2,300				
	May 13, 1950	7.01	1,160	1955	Feb. 5, 1955	7.25	1,220
	May 30, 1950	6.69	1,060		Apr. 12, 1955	8.40	1,650
	June 1, 1950	12.93	4,040		July 13, 1955	6.56	1,030
	June 3, 1950	15.00	5,590		Aug. 3, 1955	13.54	4,430
1951	Nov. 3, 1950	10.29	2,550	1956	Feb. 8, 1956	5.59	729
	Jan. 2, 1951	11.22	3,040				
	Mar. 27, 1951	8.29	1,610	1957	Mar. 24, 1957	8.25	1,590
	May 2, 1951	10.25	2,500		Apr. 28, 1957	7.10	1,190
1952	Apr. 23, 1952	10.83	2,820	1958	Nov. 8, 1957	8.50	1,700
1953	Mar. 11, 1953	7.17	1,220		Nov. 18, 1957	6.64	1,030
	Mar. 14, 1953	8.03	1,500		Apr. 28, 1958	6.66	1,060
	Apr. 29, 1953	15.36	5,880		Apr. 30, 1958	6.58	1,030
	May 4, 1953	8.75	1,810		June 22, 1958	8.57	1,740
	May 13, 1953	6.60	1,030		Aug. 24, 1958	9.82	2,300
					Sept. 21, 1958	9.65	2,450

3547. Kisatchie Bayou at Cypress, La.

Location.--Lat 31°35'50", long 93°02'30", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.13, T.7 N., R.7 W., Natchitoches Parish, at bridge on State Highway 494, 0.5 mile south of Cypress and 1.5 miles upstream from confluence with Old River (tributary to Cane River).

Drainage area.--360 sq mi.

Gage.--Nonrecording. Datum of gage is 69.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; severely affected by backwater.

Bankfull stage.--20 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Occasional current-meter measurements November 1944 to April 1948 collected by Geological Survey. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 9, 1938	29.3	-	1946	Feb. 11, 1946	33.3	-
1939	Mar. 31, 1939	27.0	-	1947	Jan. 20, 1947	28.0	-
1940	Aug. 11, 1940	24.2	-	1948	Apr. 15, 1948	25.9	-
				1949	Feb. 11, 1949	25.4	-
1941	May 7-8, 1941	26.0	-	1950	June 4, 1950	32.3	-
1942	May 11-14, 1942	28.7	-				
1943	Mar. 28, 1943	16.6	-	1951	Jan. 5, 1951	25.4	-
1944	May 6, 1944	30.6	-	1952	May 2, 1952	23.0	-
1945	Apr. 17, 1945	34.9	-				

3549. Cane River near Galbraith, La.

Location.--Lat 31°29'30", long 92°50'00", between lots 38 and 40, T.6 N., R.5 W., Natchitoches Parish, at bridge on State Highway 1, 2.0 miles northwest of Galbraith, 4.3 miles downstream from Bayou Barbue, and 12 miles upstream from mouth.

Drainage area.--687 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	-	105	-	1953	Apr. 29, 1953	102.16	-
1949	-	(a)	-	1954	May 12, 1954	(a)	-
1950	Feb. 12, 1950	96.78	-	1955	Apr. 13, 1955	(a)	-
				1956	Feb. 9, 1956	(a)	-
1951	Feb. 23, 1951	(a)	-	1957	Apr. 30, 1957	98.88	-
1952	Apr. 24, 1952	92.79	-	1958	May 5, 1958	98.67	-

a Below 89 ft; bottom of gage.

3549.1. Cane River, Lena Station, near Galbraith, La.

Location.--Lat 31°30'30", long 92°45'55", between lots 54 and 55, T.6 N., R.4 W., Natchitoches Parish, at bridge on State Highway 431, 2.7 miles upstream from mouth and 3 miles northeast of Galbraith.

Drainage area.--729 sq mi.

Gage.--Nonrecording. Datum of gage is 54.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by backwater from Red River

Bankfull stage.--46 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 22, 1938	29.7	-	1949	Feb. 6, 1949	39.8	-
1939	Mar. 4, 1939	33.9	-	1950	Feb. 23, 1950	43.0	-
1940	July 10, 1940	32.2	-				
				1951	Feb. 28, 1951	33.2	-
1941	May 15, 1941	41.1	-	1952	May 1, 1952	38.5	-
1942	May 9-10, 1942	44.1	-	1953	May 23, 1953	47.7	-
1943	May 21-22, 1943	29.9	-	1954	May 16, 1954	30.8	-
1944	May 12-14, 1944	42.8	-	1955	Aug. 5, 1955	28.4	-
1945	Apr. 16-18, 1945	49.9	-				
				1956	Feb. 8-9, 1956	24.7	-
1946	Feb. 24, 1946	40.5	-	1957	May 12, 1957	44.75	-
1947	Nov. 15-17, 1946	35.0	-	1958	May 13, 1958	44.31	-
1948	Mar. 8, 1948	33.5	-				

3549.5. Red River at Colfax, La.

Location.--Lat 31°31'00", long 92°43'15", on line between lot 12, T 6 N., R.4 W., and lot 7, T.6 N., R.5 W., in Natchitoches Parish, at ferry landing on State Highway 490 at mouth of Cane River opposite town of Colfax, Grant Parish, and 140.7 miles above mouth.

Drainage area.--66,860 sq mi, of which about 60,924 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 50.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Feb. 23-24, 1946	44.5	-	1953	May 23, 1953	51.4	-
1947	Nov. 16-17, 1946	39.1	-	1954	May 17, 1954	35.4	-
1948	Mar. 9, 1948	37.5	-	1955	Mar. 28, 1955	33.2	-
1949	Feb. 5, 1949	43.9	-				
1950	Feb. 22-23, 1950	46.4	-	1956	Feb. 24, 1956	28.6	-
				1957	May 11-12, 1957	50.85	-
1951	Feb. 26-27, 1951	37.2	-	1958	May 12-13, 1958	50.85	-
1952	May 1, 1952	42.6	-				

3550. Hemphill Creek near Hot Wells, La.

Location.--Lat 31°17'50", long 92°44'10", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T.4 N., R.4 W., near left bank on downstream side of bridge on State Highway 1200, a quarter of a mile upstream from Dyer Creek and $3\frac{1}{4}$ miles southwest of Hot Wells.

Drainage area.--18.0 sq mi.

Gage.--Recording. Datum of gage is 87.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 3,900 cfs and extended above; affected by backwater from Red River.

Bankfull stage.--10 ft.

Remarks.--During periods of high flow, there is an interchange with Dyer Creek above station. Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Nov. 18, 1948	11.32	2,580	1953	May 16, 1953	10.01	1,280
	Nov. 26, 1948	9.54	940		May 18, 1953	12.50	4,100
	Feb. 10, 1949	9.58	970	1954	Dec. 3, 1953	9.36	825
	Mar. 21, 1949	9.46	880		Apr. 16, 1954	9.08	715
	Mar. 27, 1949	10.71	1,930		May 1, 1954	10.32	1,530
	Mar. 31, 1949	9.59	970		May 3, 1954	9.85	1,150
1950	Dec. 18, 1949	10.07	1,310	1955	Feb. 6, 1955	10.05	1,310
	Feb. 13, 1950	12.40	3,970		Apr. 13, 1955	11.46	2,760
	Apr. 29, 1950	9.42	850		Aug. 3, 1955	9.85	1,150
	May 2, 1950	9.17	735	1956	Jan. 22, 1956	9.17	743
	June 3, 1950	11.77	3,120		Feb. 9, 1956	10.23	1,470
1951	Jan. 3, 1951	10.24	1,480		Mar. 16, 1956	9.40	850
	Mar. 28, 1951	9.38	850	1957	Dec. 22, 1956	9.39	845
1952	Feb. 2, 1952	10.36	1,580		Mar. 21, 1957	9.11	719
	Apr. 23, 1952	12.25	3,710		June 28, 1957	9.52	922
1953	Feb. 24, 1953	9.45	880	1958	Nov. 13, 1957	10.32	1,530
	Mar. 11, 1953	9.96	1,240		Nov. 18, 1957	9.33	825
	Apr. 29, 1953	15.51	8,320		Mar. 24, 1958	9.27	755
	May 4, 1953	10.55	1,780		Aug. 24, 1958	10.36	1,580
	May 13, 1953	9.22	764				

3550.5. Bayou Jean de Jean at Hot Wells, La.

Location.--Lat 31°20'35", long 92°43'05", between lots 115 and 117, T.4 N., R.3 W., Rapides Parish, at intersection of levee and State Highway 121, 0.3 mile northwest of Hot Wells.

Drainage area.--41.0 sq mi.

Gage.--Nonrecording prior to Apr. 4, 1951; recording thereafter. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 20, 1947	a87.4		1951	May 3, 1951	86.5	
1948	Apr. 14, 1948	b82.8		1952	Apr. 23, 1952	89.6	
1949	Feb. 7, 1949	88.5		1953	May 18, 1953	95.4	
1950	Feb. 23, 1950	91.8		1954	May 3, 1954	84.7	
				1955	Apr. 13, 1955	86.78	

a Maximum observed; gage-height record intermittent.

b Maximum observed; no gage-height record Nov. 4, 1947, to Feb. 21, 1948.

3554.7. Bayou Rapides near McNutt, La.

Location.--Lat 31°18'42", long 92°36'54", on line between lots 58 and 66, T.4 N., R.2 W., Rapides Parish, at Lemothe Bridge on State Highway 596, 2.0 miles east of McNutt.

Drainage area.--Indeterminate.

Gage.--Nonrecording intermittently prior to Dec. 16, 1949; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 20, 1947	81.8		1950	Feb. 14, 1950	82.4	
1948	June 30, 1948	a72.7		1951	Jan. 4, 1951	80.0	
1949	Mar. 28-31, 1949	81.4		1952	Apr. 24, 1952	79.7	

a May not be maximum for the year.

3554.8. Bayou Rapides at Alexandria, La.

Location.--Lat 31°18'50", long 92°27'55", in lot 15, T.4 N., R.1 W., Rapides Parish, at bridge on State Highway 1 in Alexandria.

Drainage area.--Indeterminate.

Gage.--Recording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 5, 1950	75.24		1955	Feb. 6, 1955	73.78	
1951	Feb. 23, 1951	70.00		1956	Feb. 9, 1956	68.70	
1952	Apr. 24, 1952	73.98		1957	Apr. 8, 1957	72.76	
1953	May 21, 1953	78.32		1958	May 1, 1958	69.72	
1954	May 17, 1954	71.60					

3555. Red River at Alexandria, La.

Location.--Lat 31°18'46", long 92°26'34", in SE $\frac{1}{4}$ sec. 10, T.4 N., R.1 W., near center of span of old bridge on U. S. Highway 165 between Alexandria and Pineville, 1.7 miles downstream from Bayou Rigolette and at mile 122.3.

Drainage area.--67,500 sq mi, of which about 61,564 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 44.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941, or 44.18 ft above mean Gulf level, datum of Mississippi River Commission (levels by Corps of Engineers).

Stage-discharge relation.--Variable, discharge maxima prior to 1928 computed on basis of occasional current-meter measurements made between 1879 and 1927, and since January 1928 from loop curves defined by frequent current-meter measurements.

Bankfull stage.--32 ft.

Remarks.--Gage-height records and current-meter measurements furnished by Corps of Engineers and reviewed by Geological Survey. Prior to 1929, gage heights and occasional current-meter measurements furnished by Mississippi River Commission and U. S. Weather Bureau. Base for partial-duration series, 50,000 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges of Red River at Alexandria, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1849	-	35.36	-	1913	Apr. 6, 1913	24.2	54,000
1866	-	36.46	-	1914	Apr. 15, 1914	34.75	117,000
1872	Apr. 29, May 1	33.30	127,000	1915	May 17, 1915	36.08	129,000
1873	June 19-20, 1873	30.2	104,000	1916	Feb. 16, 1916	36.89	136,000
1874	May 8-10, 1874	34.9	140,000	1917	May 6, 1917	18.47	34,000
1875	Apr. 27, 1875	23.9	66,000	1918	Apr. 30, 1918	27.87	70,000
1876	Apr. 17, 1876	32.8	123,000	1919	Jan. 1, 1919	24.5	55,000
1877	May 18-19, 1877	25.45	73,000	1920	June 2, 1920	37.15	152,000
1878	Mar. 13, 1878	27.1	83,000	1921	May 6, 1921	32.7	103,000
1879	May 26, 1879	19.2	50,000	1922	May 10, 1922	37.4	130,000
1880	Apr. 11-13, 1880	21.8	57,000	1923	Feb. 11, 1923	30.1	84,000
1881	Mar. 20, 1881	27.85	88,000	1924	Jan. 2, 1924	37.1	139,000
1882	Mar. 17, 19, 1882	34.85	139,000	1925	May 5, 1925	20.4	48,000
1883	Mar. 27, 1883	25.45	73,000	1926	May 15-16, 1926	25.8	70,000
1884	May 30-31, June 1, 1884	35.25	142,000	1927	May 8, 1927	42.35	173,000
1885	Jan. 25, 1885	34.3	135,000	1928	May 2-3, 1928	31.8	93,000
1886	June 17, 1886	27.9	89,000	1929	May 27-28, 1929	33.30	103,000
1887	Mar. 24, 1887	14.92	34,000	1930	June 3-4, 1930	41.20	151,000
1888	Mar. 27-28, 1888	29.6	100,000	1931	Dec. 13, 1930	25.60	73,800
1889	Feb. 13, 1889	31.5	113,000	1932	Feb. 3-5, 1932	43.65	186,000
1890	May 19, 1890	36.8	157,000	1933	Mar. 13, 1933	29.86	85,300
1891	Feb. 17, 1891	30.0	103,000	1934	Mar. 9, 1934	29.8	82,500
1892	June 12-13, 1892	38.25	175,000	1935	June 4, 1935	41.22	151,000
1893	Jan. 7, 1893	32.25	118,000	1936	Dec. 13, 15, 1935	26.58	75,000
1894	Apr. 12, 1894	35.15	142,000	1937	Feb. 2, 1937	33.02	107,000
1895	Aug. 5, 1895	28.2	93,000	1938	Mar. 5-6, 1938	39.77	143,000
1896	Feb. 6, 1896	26.5	79,000	1939	Mar. 5-6, 1939	31.8	91,500
1897	Apr. 14-15, 1897	26.25	78,000	1940	July 9, 1940	29.1	88,900
1898	Jan. 23, 1898	17.4	41,000	1941	May 15, 1941	38.04	132,000
1899	Jan. 27, 1899	18.2	44,000	1942	May 9-10, 1942	40.65	156,000
1900	Apr. 25, 1900	19.8	50,000	1943	May 21, 1943	26.91	84,400
1901	Apr. 26, 1901	14.6	33,000	1944	May 14, 1944	38.51	146,000
1902	Apr. 21, 1902	19.8	50,000	1945	Apr. 17, 1945	45.23	233,000
1903	Mar. 28, 1903	36.05	149,000	1946	Feb. 24, 1946	35.93	137,000
1904	June 30, 1904	29.5	99,000	1947	May 28, 1947	30.44	131,000
1905	June 17, 1905	35.55	145,000	1948	Mar. 8-10, 1948	28.86	123,000
1906	Jan. 5, 1906	29.65	100,000	1949	Feb. 4, 1949	34.6	145,000
1907	June 17-18, 1907	32.5	120,000	1950	Feb. 21-22, 1950	38.0	157,000
1908	July 6, 1908	41.84	205,000	1951	Feb. 27, 1951	28.57	115,000
1909	June 4, 1909	22.3	47,000		June 22, 1951	27.8	112,000
1910	Apr. 23, 1910	22.38	48,000		July 9-10, 1951	23.7	81,000
1911	Apr. 30, 1911	25.38	59,000	1952	Apr. 30, 1952	33.80	138,000
1912	Apr. 22, 1912	33.56	108,000	1953	Mar. 16, 1953	22.85	73,600
					Mar. 25, 1953	23.29	77,200
					Apr. 13, 1953	21.49	64,800

Note.--Peak stage frequently occurs on different date than peak discharge.

RED RIVER BASIN

Peak stages and discharges of Red River at Alexandria, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 6, 1953	35.27	157,000	1957	Mar. 27, 1957	18.08	a59,600
	May 19, 1953	42.05	195,000		Apr. 11, 1957	28.59	a103,000
	Aug. 1, 1953	21.23	67,900		May 7, 1957	40.70	197,000
					June 17, 1957	40.65	a172,000
1954	May 17, 1954	26.66	95,100		Sept.30, 1957	22.24	a78,800
	June 3, 1954	18.99	55,000				
1955	Mar. 28, 1955	24.67	89,800	1958	Nov. 25, 1957	30.93	a143,000
	Apr. 15, 1955	20.89	60,000		Jan. 1, 1958	19.87	a64,400
	May 28, 1955	17.63	54,800		Jan. 26, 1958	23.74	a93,200
					Mar. 14, 1958	19.98	a72,500
1956	Feb. 11, 1956	18.32	61,300		Mar. 30, 1958	18.26	a63,200
	Feb.23-24, 1956	20.76	71,300		May 12, 1958	40.18	a200,000
	May 8, 1956	17.14	56,700				

a Maximum daily.

Note.--Peak stage frequently occurs on different date than peak discharge.

3556. Red River at Moncla, La.

Location.--Lat 31°12'40", long 92°07'35", between lots 36 and 55, T.3 N., R.3 E., in Avoyelles Parish, at old bridge on State Highway 115, 0.8 mile northwest of Moncla.

Drainage area.--67,625 sq mi, of which about 61,689 sq mi contributes directly to surface runoff.

Gage.--Nonrecording prior to June 29, 1950; recording thereafter. Datum of gage is 23.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements 1938-42. Shifting channel and variable fall preclude computation of discharge maxima for other years.

Bankfull stage.--44 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 2, 1935	47.0	-	1947	May 28, 1947	35.6	-
1936	Dec. 15, 1935	34.4	-	1948	Mar. 8, 1948	35.9	-
1937	Feb. 3, 1937	42.2	-	1949	Feb. 6-7, 1949	40.2	-
1938	Mar. 8-10, 1938	46.0	146,000	1950	Feb. 24, 1950	43.0	-
1939	Mar. 6-7, 1939	41.0	92,000	1951	Feb. 27, 1951	35.0	-
1940	July 11, 1940	37.0	83,000	1952	May 2, 1952	39.8	-
				1953	May 25, 1953	44.5	-
1941	May 17, 1941	44.9	137,000	1954	May 18, 1954	31.0	-
1942	May 10-13, 1942	44.6	168,000	1955	Mar. 29, 1955	30.7	-
1943	May 22, 1943	32.7	-				
1944	May 15-16, 1944	43.1	-	1956	Feb. 24, 1956	27.6	-
1945	Mar. 15, 18, 20	43.7	-	1957	May 13, 1957	43.00	-
				1958	May 14, 1958	42.55	-
1946	Feb.23-25, 1946	42.8	-				

3556.1. Red River at Barbin Landing, La.

Location.--Lat 31°10'45", long 92°03'15", on lot 78, T.2 N., R.4 E., Avoyelles Parish, on right bank of river at Barbin Landing, 3.8 miles north of Marks-ville.

Drainage area.--67,730 sq mi, of which about 61,794 sq mi contributes directly to surface runoff.

Gage.--Nonrecording. Datum of gage is 0.05 ft below mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by high stages on Mississippi River.

Remarks.--Gage-height records June 1928 to Dec. 31, 1942, collected by Mississippi River Commission. Gage-height records January 1932 to December 1942 and March to April 1945 collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 29-31, 1929	63.0	-	1937	Feb. 3-4, 1937	62.5	-
1930	June 4-7, 1930	65.8	-	1938	Mar. 8-10, 1938	65.4	-
				1939	Mar. 6, 1939	61.6	-
1931	Dec. 13, 1930	54.0	-	1940	July 11-12, 1940	56.6	-
1932	Feb. 1, 1932	66.9	-				
1933	June 2-3, 1933	61.1	-	1941	May 17-18, 1941	63.5	-
1934	Apr. 13-14, 1934	59.2	-	1942	May 13, 1942	63.4	-
1935	May 31, June 5	66.2	-				
				1945	Mar. 22, 1945	62.7	-
1936	Dec. 15, 1935	54.9	-				

3560. Ouachita River near Mount Ida, Ark.

Location.--Lat 34°36'40", long 93°41'45", in sec. 32, T.1 S., R.25 W., on right bank 350 ft upstream from bridge on U. S. Highway 270, 4½ miles upstream from Fiddler's Creek, and 5½ miles northwest of Mount Ida.

Drainage area.--410 sq mi.

Gage.--Nonrecording prior to Dec. 3, 1941, and Mar. 1, 1945, to Apr. 1, 1946; recording during remainder of period. Prior to Nov. 3, 1949, at site 350 ft downstream at same datum. Datum of gage is 655.14 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs.

Bankfull stage.--22 ft.

Remarks.--Records prior to Oct. 1, 1949, furnished by Corps of Engineers. Base for partial-duration series, 18,000 cfs. Only annual peaks are shown prior to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 28, 1942	18.68	20,500	1951	July 3, 1951	21.70	24,400
1943	Apr. 18, 1943	8.84	4,890	1952	Apr. 13, 1952	20.14	21,000
1944	May 3, 1944	17.30	17,700		Apr. 23, 1952	24.26	30,200
1945	Mar. 30, 1945	27.80	48,500	1953	Nov. 26, 1952	21.66	23,600
1946	Jan. 9, 1946	20.00	20,400		May 13, 1953	20.46	21,800
1947	Dec. 12, 1946	19.20	18,600	1954	May 3, 1954	23.48	28,400
1948	Jan. 1, 1948	25.65	39,800	1955	Mar. 21, 1955	14.40	10,500
1949	Jan. 25, 1949	30.80	54,800	1956	Feb. 18, 1956	17.46	15,800
1950	Jan. 13, 1950	24.80	31,300	1957	Apr. 4, 1957	20.83	22,500
	Feb. 1, 1950	19.00	18,800		Apr. 27, 1957	20.40	21,600
	Feb. 12, 1950	24.84	31,300	1958	May 3, 1958	22.04	25,100

3565. South Fork Ouachita River at Mount Ida, Ark.

Location.--Lat 34°34', long 93°38', in NW $\frac{1}{4}$ sec.24, T.2 S., R.25 W., on downstream side of bridge on U. S. Highway 270 at Mount Ida, $2\frac{3}{4}$ miles upstream from Williams Creek and 22.5 miles upstream from mouth.

Drainage area.--64 sq mi.

Gage.--Recording. Datum of gage is 612.05 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 6,900 cfs and extended on basis of slope-area measurement at 10,800 cfs.

Bankfull stage.--10 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Dec. 11, 1949	8.15	3,120	1953	Dec. 4, 1952	9.50	4,160
	Jan. 10, 1950	8.83	3,860		Mar. 18, 1953	9.50	4,160
	Jan. 13, 1950	10.00	6,120		Apr. 29, 1953	8.68	3,220
	Feb. 1, 1950	9.18	4,520		May 12, 1953	12.02	8,380
	Feb. 12, 1950	10.59	7,540	1954	May 2, 1954	10.60	6,320
	Sept. 16, 1950	9.71	5,000				
1951	Feb. 20, 1951	8.75	3,860	1955	Mar. 20, 1955	8.36	2,920
	July 2, 1951	9.80	5,200	1956	Jan. 29, 1956	9.23	3,780
	Sept. 27, 1951	8.45	3,040		Feb. 2, 1956	10.52	5,640
1952	Nov. 24, 1951	8.44	3,040		Feb. 17, 1956	9.47	4,160
	Jan. 2, 1952	9.05	3,750	1957	Jan. 22, 1957	8.77	3,890
	Mar. 10, 1952	11.44	7,600		Mar. 17, 1957	9.03	4,130
	Mar. 21, 1952	9.16	4,010		Apr. 3, 1957	10.38	5,870
	Apr. 1, 1952	12.61	10,500		Apr. 27, 1957	8.13	3,110
	Apr. 12, 1952	9.92	4,960	1958	Nov. 13, 1957	9.78	5,030
	Apr. 22, 1952	8.94	3,620		Nov. 18, 1957	8.54	3,550
					May 2, 1958	9.92	5,970
1953	Nov. 25, 1952	13.24	10,800				

3570. Ouachita River near Mountain Pine, Ark.

Location.--Lat 34°36', long 93°12', in NW $\frac{1}{4}$ sec.1, T.2 S., R.21 W., on left bank three-quarters of a mile downstream from Mill Creek, 2 miles downstream from Blakely Creek, and 4 miles northwest of Mountain Pine.

Drainage area.--1,100 sq mi.

Gage.--Recording. Datum of gage is 404.16 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 92,000 cfs and extended by logarithmic plotting.

Remarks.--Station discontinued Sept. 30, 1950, due to backwater from Blakely Mountain Dam. Base for partial-duration series, 25,000 cfs.

Peak stages and discharges of Ouachita River near Mountain Pine, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 1923	37.0	all 12,000	1945	Mar. 20, 1945	19.78	30,400
1937	Jan. 23, 1937	22.38	39,100		Mar. 30, 1945	38.55	123,000
1938	Jan. 24, 1938	26.8	57,400		May 16, 1945	18.48	26,500
	Feb. 18, 1938	32.2	83,200		June 12, 1945	20.60	32,900
1939	Apr. 17, 1939	34.54	94,900	1946	Jan. 9, 1946	21.55	36,200
1940	Apr. 29, 1940	13.36	13,700		Apr. 30, 1946	18.62	26,800
1941	Nov. 23, 1940	20.10	31,300		May 25, 1946	23.10	41,800
1942	Apr. 9, 1942	21.12	34,500	1947	Dec. 12, 1946	18.76	27,400
	Apr. 28, 1942	23.90	44,900	1948	Jan. 2, 1948	20.54	32,600
1943	Dec. 27, 1942	18.46	26,500	1949	Jan. 26, 1949	29.28	69,100
1944	Apr. 23, 1944	26.50	56,000		May 1, 1949	20.99	34,200
	May 2, 1944	20.90	33,900	1950	Jan. 10, 1950	19.31	28,900
1945	Feb. 22, 1945	24.67	48,200		Jan. 14, 1950	21.30	35,300
	Feb. 28, 1945	23.36	42,900		Feb. 1, 1950	19.87	30,700
					Feb. 15, 1950	23.69	44,100
					Sept. 15, 1950	b29.68	30,000

a Annual peak only.

b Backwater from Blakely Mountain Dam.

3580. Ouachita River near Hot Springs, Ark.

Location.--Lat 34°26'20", long 93°04'10", in SW $\frac{1}{4}$ sec. 29, T.3 S., R.19 W., half a mile upstream from Fourche a Loup Creek and 5 miles south of Hot Springs.

Drainage area.--1,405 sq mi.

Gage.--Nonrecording. Datum of gage is 304.8 ft above mean sea level (unadjusted).

Stage-discharge relation.--Defined by current-meter measurements below 43,000 cfs and extended by velocity-area study of main channel flow and slope-area measurement of overflow.

Remarks.--Station discontinued Sept. 30, 1930, due to construction of Carpenter Dam. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 16, 1923	43.9	143,000	1927	Apr. 21, 1927	42.4	134,000
1924	Dec. 13, 1923	18.08	23,400	1928	Apr. 6, 1928	27.36	59,000
1925	Feb. 23, 1925	14.62	13,500	1929	Dec. 17, 1928	23.25	41,600
				1930	May 18, 1930	29.0	66,000
1926	Jan. 21, 1926	27.10	57,600				

3595. Ouachita River near Malvern, Ark.
(Published as "at Remmel Dam, near Malvern" January 1925 to March 1937)

Location.--Lat 34°23'10", long 92°50'20", in NW $\frac{1}{4}$ sec.16, T.4 S., R.17 W., on downstream side of bridge on State Highway 84, 2 miles northwest of Malvern and 5.8 miles downstream from Remmel Dam.

Drainage area.--1,562 sq mi.

Gage.--Nonrecording prior to 1925; recording thereafter. March 1903 to April 1904 at present site at datum 2.00 ft higher. January 1925 to March 1937 at site 5.8 miles upstream at datum 20.11 ft higher. Datum of present gage is 228.05 ft above mean sea level, datum of 1929. Gage-height records for 1903-4 adjusted to present datum.

Stage-discharge relation.--Defined by current-meter measurements below 120,000 cfs at present site and extended by logarithmic plotting. Defined by current-meter measurements below 44,000 cfs at Remmel Dam.

Remarks.--Flow regulated by Lake Catherine since 1925 (capacity, 13,950 acre-ft), by Lake Hamilton since 1932 (capacity, 70,560 acre-ft), and by Lake Ouachita since July 1952 (capacity, 2,768,000 acre-ft). Peaks not seriously affected prior to regulation by Lake Ouachita. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	Mar. 10, 1903	24.0	66,500	1940	Apr. 30, 1940	15.82	22,000
1904	Mar. 18, 1904	20.0	39,500	1941	Nov. 23, 1940	13.72	16,500
1923	May 15, 1923	30.3	140,000	1942	Apr. 8, 1942	21.77	56,000
1924	Dec. 13, 1923	-	226,000	1943	May 31, 1943	14.76	19,200
1925	Feb. 23, 1925	-	216,000	1944	Apr. 23, 1944	25.20	83,000
1926	Jan. 21, 1926	24.3	60,900	1945	Mar. 30, 1945	27.20	132,000
1927	Apr. 21, 1927	35.7	138,000	1946	May 23, 1946	24.90	40,000
1928	Apr. 6, 1928	24.43	60,000	1947	Dec. 12, 1946	18.60	35,100
1929	Dec. 17, 1928	21.72	48,100	1948	Jan. 2, 1948	18.80	36,100
1930	May 10, 1930	24.0	58,200	1949	Jan. 26, 1949	24.89	90,700
1931	Oct. 7, 1930	20.22	41,600	1950	Feb. 13, 1950	21.72	57,100
1932	Jan. 5, 1932	26.0	67,400	1951	July 3, 1951	20.70	49,800
1933	Dec. 30, 1932	27.55	74,400	1952	Apr. 23, 1952	18.40	38,600
1934	Mar. 26, 1934	25.2	63,700	1953	Dec. 4, 1952	20.90	54,400
1935	May 5, 1935	28.97	70,500	1954	May 2, 1954	17.36	31,400
1936	Dec. 9, 1935	12.5	13,200	1955	May 27, 1955	14.36	20,000
1937	Jan. 22, 1937	24.67	53,800	1956	Feb. 18, 1956	12.75	15,500
1938	Feb. 18, 1938	26.74	103,000	1957	Apr. 4, 1957	16.14	27,400
1939	Apr. 16, 1939	27.00	108,000	1958	May 2, 1958	21.16	55,200

a Discharge estimated on basis of records for Ouachita River near Hot Springs.

3597. Caddo River at Glenwood, Ark.

Location.--Lat 34°19'20", long 93°32'30", in NE $\frac{1}{4}$ sec.10, T.5 S., R.24 W., on downstream side of bridge on U. S. Highway 70 and State Highway 27 at Glenwood, 700 ft downstream from Sweetwater Creek.

Drainage area.--192 sq mi.

Gage.--Nonrecording prior to Nov. 26, 1946; recording thereafter. Datum of gage is 514.41 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs since 1946.

Bankfull stage.--14 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Caddo River at Glenwood, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 16, 1939	15.6	-	1949	Jan. 24, 1949	22.4	42,000
1940	Nov. 23, 1940	13.1	-	1950	Feb. 12, 1950	15.9	20,000
1941	Dec. 23, 1941	9.9	-	1951	July 3, 1951	15.4	19,000
1942	Apr. 8, 1942	14.4	-	1952	Dec. 4, 1952	19.6	32,000
1943	May 20, 1943	12.1	-	1953	May 12, 1953	18.8	29,000
1944	May 1, 1944	14.2	-	1954	May 2, 1954	16.9	23,000
1945	Mar. 30, 1945	27.0	65,000	1955	Mar. 20, 1955	18.5	28,000
1946	May 25, 1946	19.4	31,000	1956	Feb. 2, 1956	16.4	21,500
1947	Apr. 30, 1947	11.7	9,500	1957	Nov. 13, 1957	17.6	25,000
1948	Mar. 1, 1948	13.6	14,000	1958	Nov. 15, 1958	17.3	16,500

3598. Caddo River near Alpine, Ark.

Location.--Lat 34°16', long 93°22', in SE¹ sec.28, T.5 S., R.22 W., at Runyan Bridge on gravel road between Alpine and Bismark, 7.1 miles below Sugar Fork Creek and 33.8 miles above mouth.

Drainage area.--312 sq mi.

Gage.--Nonrecording prior to Jan. 29, 1947; recording thereafter. Datum of gage is 394.85 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 38,000 cfs.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	-	22.0	43,000	1949	Jan. 24, 1949	23.50	46,900
1939	Apr. 16, 1939	20.3	37,700	1950	Feb. 12, 1950	15.75	26,900
1940	Apr. 29, 1940	7.86	8,150	1951	July 3, 1951	13.66	20,800
1941	Nov. 23, 1940	20.6	39,400	1952	Apr. 23, 1952	15.97	27,400
1942	Apr. 8, 1942	19.4	36,200	1953	Dec. 4, 1952	19.95	37,800
1945	Mar. 30, 1945	30.2	64,200	1954	May 2, 1954	13.80	21,900
				1955	Mar. 21, 1955	16.25	27,900
1947	Apr. 30, 1947	10.0	12,500	1956	Feb. 2, 1956	12.15	17,900
1948	Mar. 2, 1948	12.39	18,300	1957	Apr. 4, 1957	13.70	19,400
				1958	May 3, 1958	20.18	36,500

3600. Ouachita River at Arkadelphia, Ark.

Location.--Lat 34°07'16", long 93°02'46", in sec.17, T.7 S., R.19 W., at bridge on State Highway 7 at Arkadelphia, 5.4 miles downstream from Caddo River.

Drainage area.--2,311 sq mi.

Gage.--Nonrecording prior to Mar. 31, 1946; recording thereafter. September 1905 to December 1906 at site 800 ft downstream at different datum. January 1914 to Sept. 28, 1934, at present site at datum 5.00 ft higher (adjusted to present datum). Datum of present gage is 160.30 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 130,000 cfs.

Bankfull stage.--17 ft.

Remarks.--All records except those for 1906 furnished by Corps of Engineers. Slight regulation by Lake Catherine since 1925 and by Lake Hamilton since 1932. Considerable regulation by Lake Ouachita since 1952. See remarks for Ouachita River near Malvern. Only annual peaks are shown. Prior to 1929, peaks are shown on calendar year basis.

Peak stages and discharges of Ouachita River at Arkadelphia, Ark.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	May 4, 1906	20.6	33,800	1935	May 6, 1935	26.97	94,000
1914	Apr. 29, 1914	26.2	-	1936	Dec. 7, 1935	17.72	23,200
1915	Aug. 22, 1915	26.3	-	1937	Jan. 22, 1937	26.03	81,400
1916	Jan. 28, 1916	23.2	-	1938	Feb. 19, 1938	28.97	133,000
1917	Mar. 4, 1917	20.8	-	1939	Apr. 17, 1939	28.87	131,000
1918	Dec. 14, 1918	23.8	-	1940	May 1, 1940	17.40	20,800
1919	Oct. 12, 1919	25.7	-	1941	Nov. 24, 1940	18.15	22,700
1920	May 12, 1920	27.9	-	1942	Apr. 9, 1942	26.75	94,700
1921	Apr. 27, 1921	26.5	-	1943	Apr. 19, 1943	18.49	22,000
1922	Apr. 1, 1922	22.8	-	1944	May 2, 1944	25.90	86,400
1923	May 15, 1923	28.3	-	1945	Mar. 30, 1945	30.3	170,000
1924	May 1, 1924	15.3	-	1946	Apr. 30, 1946	27.83	122,000
1925	Oct. 18, Nov. 8	19.0	-	1947	Dec. 13, 1946	21.90	36,800
1926	Dec. 22, 1926	27.8	-	1948	Mar. 2, 1948	23.68	47,300
1927	Apr. 21, 1927	29.2	133,000	1949	Jan. 27, 1949	28.15	139,000
1928	Dec. 18, 1928	24.9	-	1950	Feb. 13, 1950	25.92	76,600
Water year				1951	July 3, 1951	26.20	81,100
1929	Jan. 26, May 15	19.1	26,600	1952	Apr. 24, 1952	22.85	41,800
1930	Jan. 10, 1930	25.4	68,500	1953	Dec. 4, 1952	25.15	73,100
1931	Oct. 8, 1930	21.02	35,400	1954	May 3, 1954	23.30	45,200
1932	Jan. 5, 1932	26.72	89,100	1955	Mar. 21, 1955	23.90	51,100
1933	Dec. 31, 1932	24.80	61,700	1956	Feb. 18, 1956	20.60	31,700
1934	Mar. 27, 1934	24.28	56,800	1957	Apr. 4, 1957	24.20	55,100
				1958	May 3, 1958	27.65	119,000

Note.--Calendar year basis prior to 1929; water year thereafter.

3608. Muddy Fork Creek near Murfreesboro, Ark.

Location.--Lat 34°05'00", long 93°45'05", in NE $\frac{1}{4}$ sec.3, T.8 S., R.26 W., 1.8 miles upstream from mouth and 3 miles northwest of Murfreesboro.

Drainage area.--121 sq mi.

Gage.--Nonrecording prior to Mar. 4, 1940; recording thereafter. Datum of gage is 337.29 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 24,000 cfs.

Bankfull stage.--15 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 18, 1940	13.25	6,200	1949	Jan. 24, 1949	21.75	24,700
1941	Nov. 23, 1940	17.2	11,800	1950	Sept. 16, 1950	18.1	13,200
1942	Apr. 8, 1942	18.3	13,500	1951	July 2, 1951	14.85	8,310
1943	Mar. 12, 1943	10.2	3,400	1952	Apr. 22, 1952	19.44	15,800
1944	May 1, 1944	16.6	10,900	1953	May 11, 1953	22.56	24,800
1945	Mar. 30, 1945	29.7	47,100	1954	May 2, 1954	13.40	6,620
1946	Feb. 5, 1946	14.6	8,560	1955	Mar. 21, 1955	16.72	11,900
1947	Apr. 30, 1947	12.40	5,480	1956	Apr. 30, 1956	15.18	9,470
1948	Mar. 2, 1948	13.40	6,680	1957	May 26, 1957	14.35	8,190
				1958	May 2, 1958	26.28	35,100

3610. Little Missouri River near Murfreesboro, Ark.

Location.--Lat 34°03', long 93°43', in SE $\frac{1}{4}$ sec.13, T.8 S., R.26 W., on downstream side of bridge on State Highway 27, 1.9 miles downstream from Muddy Fork, 2 miles southwest of Murfreesboro, and 4.6 miles upstream from Prairie Creek.

Drainage area.--380 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1931; recording thereafter. Datum of gage is 324.28 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 38,000 cfs and extended on basis of contracted-opening measurement of 120,000 cfs.

Bankfull stage.--17 ft.

Remarks.--Peak discharge seriously regulated by Lake Greeson since November 1949 (capacity, 408,000 acre-ft, drainage area, 237 sq mi). Base for partial-duration series, 15,000 cfs. Only annual peaks are shown prior to 1938 and subsequent to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	21.0	-	1945	Mar. 30, 1945	19.84	120,000
1928	Apr. 21, 1928	a7.75	8,740	1946	Jan. 8, 1946	13.71	17,500
1929	Dec. 17, 1928	a12.52	21,600		Feb. 5, 1946	15.12	24,500
1930	May 3, 1930	a14.00	26,000		Apr. 30, 1946	16.78	41,500
					May 25, 1946	14.36	20,700
1931	Feb. 13, 1931	a6.80	6,290	1947	Apr. 30, 1947	12.62	13,500
1938	Jan. 24, 1938	17.50	54,300	1948	Mar. 2, 1948	14.53	21,200
	Feb. 18, 1938	16.60	38,600	1949	Jan. 24, 1949	18.05	65,700
	Mar. 29, 1938	15.60	28,000		Mar. 9, 1949	14.83	21,900
1939	Apr. 16, 1939	14.73	21,800		Mar. 26, 1949	13.26	15,100
1940	May 18, 1940	13.49	16,800	1950	Sept. 16, 1950	13.74	16,600
1941	Nov. 23, 1940	17.03	44,800	1951	July 2, 1951	11.34	9,220
1942	Dec. 23, 1941	14.07	19,600	1952	Apr. 22, 1952	14.19	17,600
	Apr. 8, 1942	16.52	37,200	1953	May 11, 1953	15.60	25,800
	Sept. 9, 1942	16.80	32,500	1954	May 2, 1954	9.10	6,080
1943	Dec. 27, 1942	14.24	20,000	1955	Mar. 21, 1955	12.55	13,300
1944	Apr. 23, 1944	12.69	15,000	1956	Apr. 30, 1956	10.15	8,180
	May 1, 1944	16.60	38,600	1957	Apr. 3, 1957	10.75	9,020
1945	Dec. 6, 1944	13.11	15,200	1958	May 2, 1958	15.74	30,300
	Feb. 21, 1945	15.05	23,800				
	Feb. 27, 1945	15.08	24,500				

a Maximum observed. Peak could be much higher.

3612. Ozan Creek near McCaskill, Ark.

Location.--Lat 33°52'35", long 93°35'35", in NW $\frac{1}{4}$ sec.17, T.10 S., R.24 W., on downstream side of bridge on State Highway 24, 1 mile upstream from Haley Branch, 3 $\frac{1}{2}$ miles southeast of McCaskill, and 14.5 miles upstream from mouth.

Drainage area.--148 sq mi.

Gage.--Nonrecording prior to May 14, 1948; recording thereafter. Datum of gage is 281.07 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not adequately defined.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

RED RIVER BASIN

Peak stages and discharges of Ozan Creek near McCaskill, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 7, 1940	13.3	-	1949	Jan. 25, 1949	16.4	-
1941	Apr. 23, 1941	14.5	-	1950	Feb. 13, 1950	15.42	-
1942	Apr. 8, 1942	15.1	-	1951	Jan. 3, 1951	14.83	-
1943	Mar. 12, 1943	16.7	-	1952	Apr. 12, 1952	15.02	-
1944	May 2, 1944	16.4	-	1953	May 11, 1953	18.08	-
1945	Mar. 30, 1945	19.9	-	1954	May 2, 1954	13.88	-
				1955	Mar. 21, 1955	15.23	-
1946	Feb. 6, Mar. 6	14.5	-				
1947	May 13, 1947	17.96	-	1956	Feb. 18, 1956	14.17	-
1948	Mar. 22, 1948	14.5	-	1957	Apr. 3, 1957	16.10	-
				1958	May 13, 1958	16.95	-

3615. Antoine River at Antoine, Ark.

Location.--Lat 34°02'20", long 93°25'05", in NW $\frac{1}{4}$ sec.24, T 8 S., R.23 W., near right bank on downstream side of pier of bridge on State Highway 26 at Antoine, 1.6 miles downstream from Brushy Creek, 1.9 miles downstream from Suck Creek, and 8.5 miles upstream from mouth.

Drainage area.--181 sq mi.

Gage.--Recording. Prior to Oct. 22, 1954, at site 75 ft upstream at same datum. Datum of gage is 229.33 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 28,000 cfs.

Historical data.--Floods in 1905, 1945 are highest known prior to 1951.

Remarks.--Gage-height records prior to 1955 furnished by Corps of Engineers. Base for partial-duration series, 4,000 cfs. Only annual peaks are shown prior to 1955.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 1905	a29.7	40,000	1956	Feb. 18, 1956	15.62	4,580
1945	Mar. 31, 1945	b24.6	18,800		Apr. 30, 1956	19.80	8,320
1951	Jan. 13, 1951	20.0	8,100	1957	Mar. 18, 1957	17.77	6,000
1952	Apr. 27, 1952	22.1	10,500		Apr. 3, 1957	24.00	16,600
1953	May 11, 1953	23.6	15,300		Apr. 27, 1957	20.70	8,870
					May 24, 1957	18.64	6,720
1954	May 2, 1954	19.0	7,100		May 26, 1957	19.80	7,900
1955	Mar. 21, 1955	23.52	14,900	1958	Nov. 8, 1957	15.52	4,320
	May 27, 1955	19.87	8,000		Nov. 13, 1957	19.59	7,700
1956	Feb. 2, 1956	18.03	6,540		Jan. 20, 1958	19.44	7,500
	Feb. 8, 1956	16.86	5,580		Apr. 27, 1958	21.24	9,510
					May 2, 1958	28.75	35,500
					June 26, 1958	16.62	4,780
					July 5, 1958	19.20	7,000
					Sept. 19, 1958	19.64	7,700

a From information by Arkansas Highway Department.

b From floodmark by Corps of Engineers.

3616. Little Missouri River near Boughton, Ark.

Location.--Lat 33°52'32", long 93°18'16", in NE $\frac{1}{4}$ sec.13, T.10 S., R.22 W., on downstream side of bridge on U. S. Highway 67, 1.5 miles northeast of Boughton, 5.9 miles downstream from Howard Creek, and 10.2 miles downstream from Antoine River.

Drainage area.--1,068 sq mi.

Gage.--Nonrecording prior to Mar. 19, 1947; recording thereafter. Datum of gage is 182.13 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 62,000 cfs.

Bankfull stage.--20 ft.

Remarks.--Records furnished by Corps of Engineers. Peak discharge regulated to some extent since November 1949 by Lake Greeson (capacity, 408,000 acre-ft, drainage area, 237 sq mi). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	-	a26.9	-	1948	Mar. 4, 1948	20.71	20,700
1938	Feb. 19, 1938	23.55	57,000	1949	Jan. 26, 1949	23.90	62,000
1939	Apr. 18, 1939	21.28	22,600	1950	Feb. 13, 1950	22.18	36,500
1940	May 2, 1940	17.05	7,350	1951	Jan. 15, 1951	21.40	25,600
1941	Apr. 25, 1941	20.5	17,400	1952	Apr. 24, 1952	21.28	24,700
1942	Apr. 9, 1942	23.35	54,000	1953	May 12, 1953	23.35	54,000
1943	Mar. 14, Apr. 19	21.4	25,000	1954	May 3, 1954	18.50	11,000
1944	May 2-3, 1944	23.4	54,000	1955	Mar. 22, 1955	21.58	28,000
1945	Mar. 31, 1945	27.2	111,000	1956	May 3, 1956	19.72	14,700
1946	Feb. 7, 1946	21.8	30,000	1957	Apr. 4, 1957	21.58	29,100
1947	May 14, 1947	22.06	37,500	1958	May 3, 1958	24.22	66,000

a From information by Corps of Engineers.

3618. Terre Noire Creek East of Gurdon, Ark.

Location.--Lat 33°54'50", long 93°02'10", in SW $\frac{1}{4}$ sec.27, T.9 S., R.19 W., on downstream side of highway bridge, 6 $\frac{1}{2}$ miles east of Gurdon and 13.6 miles upstream from mouth.

Drainage area.--250 sq mi.

Gage.--Nonrecording prior to Nov. 3, 1949; recording thereafter. Prior to Jan. 1, 1947, at datum 5 ft higher. Datum of present gage is 133.65 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). All gage heights adjusted to present datum.

Stage-discharge relation.--Not adequately defined.

Bankfull stage.--16 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 29, 1940	16.7	-	1950	Feb. 13, 1950	19.54	-
1941	May 6, 1941	19.5	-	1951	Jan. 14, 1951	19.25	-
1942	Apr. 9, 1942	21.9	-	1952	Apr. 13, 1952	18.76	-
1944	May 2, 1944	20.5	-	1953	May 12, 1953	20.06	-
1945	Mar. 30, 1945	22.8	-	1954	May 2, 1954	17.94	-
				1955	Mar. 21, 1955	19.3	-
1947	May 13, 1947	19.1	-	1956	Feb. 9, 1956	18.08	-
1948	Mar. 22, 1948	18.0	-	1957	Apr. 4, 1957	21.24	-
1949	June 14, 1949	18.07	-	1958	May 3, 1958	22.85	-

RED RIVER BASIN

3620. Ouachita River at Camden, Ark.
(Published as "near Camden" August 1928 to September 1929)

Location.--Lat 33°35'49", long 92°49'12", in SE $\frac{1}{4}$ sec.14, T.13 S., R.17 W., at bridge on U. S. Highway 79 at Camden, 3 $\frac{1}{2}$ miles downstream from Ecore Fabre Bayou and 7 $\frac{1}{2}$ miles upstream from Two Bayou Creek.

Drainage area.--5,391 sq mi.

Gage.--Nonrecording prior to Oct. 28, 1947; recording thereafter. Datum of gage is 71.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 230,000 cfs.

Bankfull stage.--30 ft.

Historical data.--Flood in 1882 reached a stage of 46.0 ft, from information by Corps of Engineers.

Remarks.--Records furnished by Corps of Engineers except for August 1928 to September 1929. Slight regulation by Lake Catherine since 1925, by Lake Hamilton since 1932, and by Lake Greeson since November 1949. Some regulation by Lake Ouachita since 1952. See remarks for Ouachita River near Malvern. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1882	May 12, 1882	46.0	-	1923	May 19, 1923	40.1	-
				1924	Mar. 24, 1924	26.5	-
1886	Nov. 27, 1886	26.8	-	1925	Nov. 11, 1925	29.7	-
1887	Dec. 13, 1887	35.7	-				
1888	Jan. 18, 1888	34.2	-	1926	Dec. 26, 1926	39.1	-
1889	Jan. 21, 1889	37.7	-	1927	Apr. 24, 1927	41.8	-
1890	Apr. 7, 1890	38.5	-				
				Water year			
1891	Feb. 5, 1891	35.6	-				
1892	Dec. 17, 1892	38.0	-	1928	Apr. 11, 1928	30.4	-
1893	Jan. 6, 1893	34.8	-	1929	Dec. 22, 1928	35.41	62,400
1894	Mar. 23, 1894	43.25	-	1930	May 21, 1930	40.84	138,000
1895	Mar. 18, 1895	30.7	-				
				1931	Oct. 10, 1930	24.91	14,500
1896	Feb. 6-7, 1896	34.0	-	1932	Jan. 9, 1932	38.42	102,000
1897	Mar. 23, 1897	38.75	-	1933	Jan. 5, 1933	32.46	36,700
1898	Jan. 25, 1898	33.7	-	1934	Mar. 31, 1934	35.32	38,800
1899	Jan. 18, 1899	39.1	-	1935	May 9, 1935	39.33	126,000
1900	Mar. 4, 1900	26.2	-				
				1936	Dec. 13, 1935	25.2	22,700
1901	Apr. 23, 1901	33.9	-	1937	Jan. 25, 1937	41.71	151,000
1902	Dec. 1, 1902	36.2	-	1938	Feb. 22, 1938	41.1	158,000
1903	Feb. 20, 1903	39.6	-	1939	Apr. 21, 1939	37.71	102,000
1904	June 12, 1904	35.6	-	1940	July 4, 1940	a28.66	24,400
1905	July 1, 1905	42.0	-				
				1941	May 11, 1941	31.78	37,500
1906	Jan. 27, May 8	35.2	-	1942	Apr. 12, 1942	40.17	124,000
1907	Jan. 6, 1907	42.9	-	1943	Mar. 17, 1943	30.14	39,000
1908	May 19, 1908	36.1	-	1944	May 5, 1944	39.10	144,000
1909	Mar. 13, 1909	31.0	-	1945	Apr. 3, 1945	44.82	243,000
1910	Apr. 17, 1910	33.1	-				
				1946	May 29, 1946	b37.46	89,900
1911	Apr. 22, 1911	38.2	-	1947	(d)	c29.71	33,500
1912	Apr. 5, 1912	39.4	-	1948	Mar. 6, 1948	35.41	57,000
1913	Apr. 14, 1913	37.1	-	1949	Jan. 30, 1949	44.15	185,000
1914	Apr. 4, 1914	36.9	-	1950	Feb. 17, 1950	39.63	110,000
1915	Aug. 25, 1915	36.5	-				
				1951	Jan. 20, 1951	34.40	53,400
1916	Feb. 1, 1916	39.0	-	1952	Apr. 18, 1952	35.45	58,400
1917	Mar. 8, 1917	31.7	-	1953	May 16, 1953	a38.82	126,000
1918	Apr. 23, 1918	35.5	-	1954	May 6, 1954	28.78	32,900
1919	Oct. 16, 1919	37.4	-	1955	Mar. 25, 1955	a34.51	58,200
1920	May 20, 1920	38.6	-				
				1956	Feb. 21, 1956	a29.28	32,000
1921	Apr. 30, 1921	38.8	-	1957	May 1, 1957	36.92	98,900
1922	Apr. 3, 1922	37.0	-	1958	May 5, 1958	43.87	181,000

a Occurred on following day.

b Occurred Jan. 13, 1946.

c Occurred Nov. 11, 1946.

d Nov. 13, Dec. 17, 1946.

Note.--Calendar year basis prior to 1928; water year thereafter.

3621. Smackover Creek near Smackover, Ark.

Location.--Lat 33°22'40", long 92°46'45", in SE $\frac{1}{4}$ sec.32, T.15 S., R.16 W., on downstream side of bridge on State Highway 7, 0.1 mile downstream from Camp Creek, 3 miles northwest of Smackover, and 23 miles above mouth.

Drainage area.--377 sq mi.

Gage.--Nonrecording prior to Aug. 27, 1948; recording thereafter. Datum of gage is 97.56 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs.

Bankfull stage.--10 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 4, 1939	18.7	12,200	1949	Jan. 28, 1949	16.8	7,000
1940	July 3, 1940	17.8	9,400	1950	Jan. 14, 1950	19.3	14,500
1941	May 7, 1941	15.5	4,700	1951	Feb. 9, 1951	13.2	2,300
1942	Apr. 27, 1942	18.7	12,200	1952	Apr. 14, 1952	14.9	3,900
1943	Mar. 28, 1943	14.5	3,500	1953	May 1, 1953	17.0	7,400
1944	May 3, 1944	18.2	10,600	1954	May 5, 1954	12.2	1,600
1945	Apr. 3, 1945	19.8	16,500	1955	Mar. 24, 1955	13.1	2,200
1946	Jan.10, 1946a/	15.8	5,100	1956	Feb. 9, 1956	13.0	2,100
1947	Apr. 13, 1947	15.2	4,200	1957	Apr. 29, 1957	19.6	16,000
1948	Mar. 24, 1948	16.2	5,800	1958	Apr. 27, 1958	21.21	25,000

a And other dates.

3624. Ouachita River at lock and dam 8, Champagnolle Landing, Ark.

Location.--Lat 33°18'45", long 92°28'05", in NE $\frac{1}{4}$ sec.29, T.16 S., R.13 W., $6\frac{1}{2}$ miles west of Moro Bay, 10.9 miles upstream from Moro Creek, and at mile 297.9.

Drainage area.--6,569 sq mi.

Gage.--Nonrecording. Datum of gage is 56.07 ft above mean sea level, datum of 1929.

Bankfull stage.--23 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1910	Apr. 20, 1910	29.7	-	1926	Dec. 30, 1926	34.1	-
1911	Apr. 25, 1911	34.3	-	1927	Apr. 27, 1927	38.9	-
1912	Apr. 8, 1912	35.5	-	1928	Dec. 27, 1928	29.6	-
1913	Apr. 18, 1913	31.2	-	1929	Feb. 3, 1929	27.9	-
1914	Apr. 8, 1914	32.0	-	1930	May 23-24, 1930	37.5	-
1915	Feb. 10, 1915	30.7	-	1931	Dec. 25, 1931	32.7	-
1916	Feb. 5, 1916	35.7	-	1932	Feb. 1, 1932	34.6	-
1917	Mar.13-14, 1917	27.4	-	1933	Jan.10-11, 1933	26.7	-
1918	Apr. 27, 1918	30.2	-	1934	Apr. 4, 1934	29.3	-
1919	Oct. 30, 1919	33.1	-	1935	May 13, 1935	34.4	-
1920	May 22, 1920	34.7	-	1936	Dec. 13, 1936	20.7	-
1921	May 4, 1921	33.7	-	1937	Jan. 28, 1937	38.2	-
1922	Apr. 6, 1922	33.5	-	1938	Jan. 31, 1938	36.4	-
1923	May 22-23, 1923	33.4	-	1939	Apr. 25, 1939	32.5	-
1924	Jan. 1, 1924	26.1	-	1940	July 8-9, 1940	27.8	-
1925	Nov. 15, 1925	26.5	-	1941	May 14-15, 1941	28.0	-

RED RIVER BASIN

Peak stages and discharges of Ouachita River at lock and dam 8,
Champagnolle Landing, Ark.--Continued

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 16, 1942	34.6	-	1951	Mar. 1, 1951	29.7	-
1943	Mar. 23, 1943	28.1	-	1952	Apr. 22-23, 1952	30.6	-
1944	May 9, 1944	37.2	-	1953	May 21, 1953	35.4	-
1945	Apr. 6, 1945	40.2	-	1954	May 10, 1954	27.0	-
				1955	Mar. 31, 1955	29.2	-
1946	Jan. 16, 1946	34.5	-				
1947	May 25, 1947	26.7	-	1956	Feb. 25-26, 1956	27.2	-
1948	Mar. 10, 1948	31.7	-	1957	May 5, 1957	34.8	-
1949	Feb. 2, 1949	39.0	-	1958	May 8, 1958	40.4	-
1950	Feb. 20, 1950	35.3	-				

3625. Moro Creek near Fordyce, Ark.

Location.--Lat 33°47', long 92°20', in NW¹ sec. 3, T. 11 S., R. 12 W., on downstream side of bridge on State Highway 8, 1,100 ft upstream from Caney Creek, 4 miles southeast of Fordyce, and 12 miles upstream from White Water Creek.

Drainage area.--216 sq mi.

Gage.--Recording. Datum of gage is 160.63 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 19,000 cfs.

Bankfull stage.--11 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	415.1	15,800	1955	Mar. 23, 1955	12.27	4,360
					Apr. 14, 1955	11.30	2,120
1952	Mar. 12, 1952	11.23	2,150	1956	Feb. 22, 1956	10.22	1,060
	Apr. 15, 1952	11.88	3,290				
1953	Mar. 22, 1953	12.20	4,230	1957	Feb. 3, 1957	14.26	10,700
	Apr. 9, 1953	11.49	2,570		Apr. 5, 1957	14.35	11,100
	May 2, 1953	11.68	2,950		Apr. 29, 1957	13.38	7,440
	May 5, 1953	11.13	2,000				
	May 14, 1953	12.55	5,340	1958	Nov. 14, 1957	11.57	2,350
	May 18, 1953	12.54	5,340		Dec. 10, 1957	11.71	2,610
1954	May 4-5, 1954	10.94	1,760		Jan. 24, 1958	11.40	2,130
					Apr. 28, 1958	13.26	6,790
					May 2, 1958	16.47	26,800

a Annual peak only, from information by Arkansas Highway Department.

3630. Saline River at Benton, Ark.

Location.--Lat 34°34'05", long 92°36'40", in NE¹ sec. 9, T. 2 S., R. 15 W., on left bank three-quarters of a mile west of Benton and 3 miles downstream from confluence of North Fork and Alum Fork.

Drainage area.--569 sq mi.

Gage.--Nonrecording July 6, 1938, to July 29, 1948, and Feb. 14, to Mar. 24, 1950; recording during remainder of period. Prior to Mar. 26, 1950, at site 0.4 mile downstream at datum 3.00 ft lower. Datum of present gage is 260.91 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood in April 1927 reached a stage of 32.0 ft former site and datum, from information by State Highway Department, or about 30.5 ft present site and datum.

Remarks.--Peaks prior to 1948 computed from graph based on once-daily or more frequent gage readings of U. S. Weather Bureau and will not necessarily agree with maximum in their publications. Gage-height records for 1948-51 furnished by Corps of Engineers. Base for partial-duration series, 10,000 cfs. Only annual peaks are shown prior to 1951.

Peak stages and discharges of Saline River at Benton, Ark.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	32.0	-	1952	Apr. 23, 1952	17.54	13,300
1938	Jan. 22, 1938	23.52	34,000	1953	Nov. 26, 1952	19.77	18,600
1939	Apr. 17, 1939	27.5	67,000		Dec. 4, 1952	25.28	49,500
1940	Apr. 7, 1940	15.4	7,800		Jan. 23, 1953	18.00	14,200
1941	May 9, 1941	15.4	7,800		Mar. 18, 1953	19.18	17,000
1942	Apr. 9, 1942	25.0	45,000		Apr. 6, 1953	16.72	11,900
1943	Mar. 12, 1943	20.1	17,300		Apr. 24, 1953	17.52	13,300
1944	Apr. 23, 1944	26.72	58,000		May 12, 1953	19.22	18,100
1945	Mar. 30, 1945	27.0	59,000	1954	May 2, 1954	24.49	48,000
1946	May 24, 1946	26.2	50,000	1955	Mar. 21, 1955	19.51	19,700
1947	Apr. 11, 1947	16.4	8,800		May 27, 1955	23.16	38,800
1948	Mar. 2, 1948	23.0	25,500	1956	Jan. 30, 1956	22.36	33,200
1949	Jan. 25, 1949	24.50	32,000		Feb. 2, 1956	21.43	27,400
1950	Feb. 13, 1950	24.50	32,000		Feb. 9, 1956	17.44	14,100
1951	Jan. 15, 1951	20.27	14,700		Feb. 18, 1956	20.77	24,400
	Feb. 16, 1951	17.80	10,500	1957	Jan. 23, 1957	18.23	16,000
	Feb. 21, 1951	22.60	21,500		Jan. 28, 1957	16.76	12,900
	Apr. 7, 1951	18.16	11,000		Apr. 4, 1957	22.68	35,200
	July 3, 1951	18.22	14,700		Apr. 28, 1957	18.58	17,100
1952	Jan. 4, 1952	15.44	10,000		May 24, 1957	19.84	20,700
	Apr. 13, 1952	20.42	20,500		May 26, 1957	18.34	16,300
					June 14, 1957	15.50	10,600
					Aug. 18, 1957	15.67	10,200
				1958	Nov. 14, 1957	18.70	17,900
					Jan. 21, 1958	17.8	15,500
					Apr. 29, 1958	14.95	10,100
					May 3, 1958	21.40	28,400
					May 5, 1958	15.70	11,200
					June 26, 1958	16.55	12,900

3632. Saline River and Gamble Creek near Sheridan, Ark.

Location.--Lat 34°06'40", long 92°24'10", in sec.15, T.7 S., R.13 W., on downstream side of bridge on U. S. Highway 167, 1 mile upstream from Gamble Creek, 1.6 miles downstream from Lost Creek, 6.4 miles upstream from Hurricane Creek, and 13½ miles south of Sheridan.

Drainage area.--1,129 sq mi.

Gage.--Nonrecording prior to Nov. 23, 1948; recording thereafter. Datum of gage is 152.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 54,000 cfs.

Bankfull stage.--14 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 24, 1938	21.0	-	1949	Jan. 28, 1949	20.1	61,000
1939	Apr. 19, 1939	19.4	-	1950	Feb. 15, 1950	19.7	56,000
1940	Apr. 13, 1940	13.2	-				
1941	Dec. 29, 1941	14.9	-	1951	Jan. 16, 1951	16.8	22,000
1942	Apr. 11, 1942	19.3	-	1952	Dec. 7, 1952	17.3	27,000
1943	Mar. 18, 1943	15.2	-	1953	May 15, 1953	17.2	26,000
1944	May 5, 1944	17.6	-	1954	May 5, 1954	17.8	34,000
1945	Apr. 2, 1945	19.8	-	1955	Mar. 24, 1955	16.9	23,000
1946	Mar. 30, 1946	18.8	-	1956	Feb. 21, 1956	17.2	26,000
1947	Apr. 14, 1947	15.1	-	1957	Apr. 6, 1957	18.3	40,000
1948	Mar. 5, 1948	16.4	18,500	1958	May 3, 1958	18.97	48,000

3634. Hurricane Creek near Sheridan, Ark.

Location.--Lat 34°13'30", long 92°21'45", in sec.1, T.6 S., R.13 W., on downstream side of bridge on State Highway 35, 5½ miles southeast of Sheridan and 11.0 miles upstream from mouth.

Drainage area.--270 sq mi.

Gage.--Nonrecording prior to Nov. 29, 1948; recording thereafter. Datum of gage is 180.10 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not adequately defined.

Bankfull stage.--11 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 22, 1938	14.7	-	1951	Jan. 14, 1951	14.2	-
1939	Feb. 4, 1939	14.0	-	1952	Apr. 14, 1952	12.2	-
1940	June 23, 1940	10.6	-	1953	May 13, 1953	12.7	-
				1954	May 5, 1954	11.5	-
1947	Apr. 12, 1947	14.7	-	1955	May 28, 1955	14.0	-
1948	Mar. 23, 1948	14.3	-				
1949	Jan. 28, 1949	14.1	-	1956	Feb. 19, 1956	12.4	-
1950	Feb. 13, 1950	15.4	-	1957	Apr. 4, 1957	14.0	-
				1958	May 3, 1958	14.48	-

3635. Saline River near Rye, Ark.

Location.--Lat 33°42', long 92°02', on line between secs.3 and 4, T.12 S., R.9 W., on downstream side of bridge on State Highway 15, 4 miles southwest of Rye and 5 miles upstream from Hudgin Creek.

Drainage area.--2,062 sq mi.

Gage.--Nonrecording prior to May 30, 1939; recording thereafter. Altitude of gage is 95 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 68,000 cfs.

Bankfull stage.--20 ft.

Historical data.--Flood in April 1927 is greatest known, from information by State Highway Department.

Remarks.--Base for partial-duration series, 10,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	30.5	a73,000	1944	Mar. 29, 1944	24.20	16,100
					May 8, 1944	26.77	32,800
1938	Jan. 27, 1938	28.0	42,300				
	Feb. 23, 1938	27.81	40,700	1945	Jan. 6, 1945	23.29	12,600
	Apr. 8, 1938	24.05	16,500		Mar. 6, 1945	26.05	26,900
1939	Feb. 9, 1939	26.05	27,700		Apr. 5, 1945	28.43	47,600
	Feb. 17, 1939	24.90	21,200		May 21, 1945	25.95	26,900
	Mar. 5, 1939	23.60	15,500		June 18, 1945	25.53	23,500
	Apr. 16, 1939	22.50	12,100	1946	Jan. 14, 1946	26.91	36,100
	Apr. 23, 1939	26.50	31,400		Feb. 14, 1946	24.62	20,400
1940	July 3, 1940	20.91	9,040		Apr. 2, 1946	27.01	37,100
1941	Apr. 28, 1941	21.60	9,050		May 8, 1946	22.91	13,300
1942	Apr. 14, 1942	27.65	39,600		May 30, 1946	25.62	26,500
	May 4, 1942	24.92	19,800	1947	June 26, 1947	21.94	10,700
1943	Mar. 16, 1943	22.29	10,100	1948	Feb. 19, 1948	23.75	14,400

a Annual peak only.

Peak stages and discharges of Saline River near Rye, Ark.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 9, 1948	25.02	20,400	1953	May 5, 1953	23.72	15,300
	Mar. 27, 1948	24.97	20,400		May 19, 1953	27.16	36,100
1949	Jan. 31, 1949	29.19	57,400	1954	May 11, 1954	23.30	14,600
	Apr. 2, 1949	24.36	17,100		Mar. 29, 1955	24.30	17,600
1950	Jan. 17, 1950	26.70	32,000	1956	Feb. 11, 1956	24.32	17,600
	Feb. 7, 1950	26.33	29,000		Feb. 24, 1956	25.10	21,300
	Feb. 18, 1950	28.26	46,500	1957	Feb. 6, 1957	24.29	17,600
	Mar. 16, 1950	22.93	11,500		Apr. 9, 1957	26.50	33,000
	Apr. 5, 1950	22.38	10,300		May 3, 1957	27.00	37,000
	May 14, 1950	23.86	14,800		June 3, 1957	23.66	16,700
1951	Jan. 21, 1951	25.10	21,000	1958	Nov. 20, 1957	25.70	27,200
	Mar. 2, 1951	22.32	10,100		Jan. 30, 1958	22.46	12,600
1952	Apr. 21, 1952	23.92	14,800		May 3, 1958	30.31	70,500
					May 21, 1958	22.23	11,800
1953	Mar. 25, 1953	24.96	20,800				

3640. Saline River near Warren, Ark.

Location.--Lat 33°35', long 92°01', in sec.15, T 13 S., R.9 W., at bridge on State Highway 4, 3 miles downstream from Cypress Creek and 3½ miles south-east of Warren.

Drainage area.--2,476 sq mi.

Gage.--Nonrecording. Datum of gage is 86.02 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 60,000 cfs.

Bankfull stage.--22 ft.

Remarks.--Records since September 1929 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 27, 1927	28.0	-	1931	Apr. 3-6, 1931	12.00	4,270
1929	Mar. 11-13, 1929	20.22	11,900	1938	Jan. 28, 1938	25.72	57,100
1930	Mar. 19, 1930	25.90	61,500	1939	Feb. 10, 1939	24.39	32,200
				1940	July 3, 1940	22.49	16,400

3640.8. Ouachita River at lock and dam No. 6, near Felsenthal, Ark.

Location.--Lat 33°01'55", long 92°05'15", in SW¼NE¼ sec.25, T.19 S., R.10 W., in upper pool of lock and dam No. 6, 2.5 miles upstream from Arkansas-Louisiana State line, 3.7 miles downstream from Missouri Pacific Railroad Co. bridge, 4.5 miles southeast of Felsenthal, and at mile 239.4.

Drainage area.--10,787 sq mi.

Gage.--Nonrecording. Datum of gage is 44.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Bankfull stage.--21 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Ouachita River at lock and dam No. 6, near Felsenthal, Ark.

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 16-18, 1912	39.0	-	1936	Feb. 5, 1936	18.5	-
1913	Apr. 24-26, 1913	30.8	-	1937	Feb. 4-5, 1937	38.8	-
1914	Apr. 15-16, 1914	32.2	-	1938	Mar. 4, 1938	34.8	-
1915	Mar. 17-19, 1915	29.7	-	1939	Mar. 10-13, 1939	34.6	-
				1940	July 15, 1940	24.2	-
1916	Feb. 12-13, 1916	35.0	-				
1917	Mar. 22-24, 1917	23.1	-	1941	Mar. 21-23, 1941	25.5	-
1918	May 5-6, 1918	24.1	-	1942	May 10-11, 1942	32.8	-
1919	Dec. 16-17, 1919	30.9	-	1943	Apr. 7-10, 1943	25.2	-
1920	May 29, 1920	34.5	-	1944	May 15-16, 1944	39.2	-
				1945	Apr. 11-12, 1945	44.2	-
1921	May 12-13, 1921	32.8	-				
1922	Apr. 13-16, 1922	35.0	-	1946	Feb. 22-24, 1946	37.7	-
1923	May 29-30, 1923	32.2	-	1947	Apr. 21-24, 1947	25.2	-
1924	Jan. 3-5, 1924	26.0	-	1948	Apr. 3-5, 1948	33.5	-
1925	Nov. 20-22, 1925	26.2	-	1949	Feb. 10-12, 1949	36.0	-
				1950	Feb. 25-26, 1950	40.0	-
1926	Apr. 18-19, 1926	26.2	-				
1927	Apr. 30, May 1	43.0	-	1951	Mar. 8-9, 1951	28.8	-
1928	May 7-8, 1928	27.1	-	1952	May 5-7, 1952	29.2	-
1929	Mar. 23-24, 1929	26.4	-	1953	May 28-29, 1953	39.4	-
1930	May 30-31, 1930	36.6	-	1954	May 19, 1954	23.2	-
				1955	Apr. 20-23, 1955	26.1	-
1931	Apr. 6-7, 1931	419.9	-				
1932	Feb. 3-4, 1932	42.7	-	1956	Mar. 3-5, 1956	26.8	-
1933	Apr. 11-15, 1933	26.2	-	1957	May 11-14, 1957	35.8	-
1934	Apr. 17-20, 1934	29.0	-	1958	May 14-16, 1958	43.0	-
1935	May 21, 1935	31.2	-				

a Maximum crest stage. Maximum stage occurred Dec. 31, 1931, on rise that crested Feb. 3-4, 1932.

3641.2. Bayou Bartholomew near Star City, Ark.

Location.--Lat 33°57'40", long 91°47'05", in SW $\frac{1}{4}$ sec. 1, T.9 S., R.7 W., on downstream side of bridge on State Highway 11, 3 $\frac{1}{2}$ miles northeast of Star City and 10.7 miles upstream from Deep Bayou.

Drainage area.--215 sq mi.

Gage.--Nonrecording prior to July 13, 1948; recording thereafter. Datum of gage is 153.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--28 ft.

Remarks.--Records furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 3-4, 1942	21.7	2,200	1951	Jan. 21, 1951	18.7	1,440
1943	Mar. 20, 1943	20.8	1,960	1952	Feb. 4, 1952	17.9	1,240
1944	Mar. 31, 1944	18.9	1,480	1953	May 18, 1953	24.0	2,860
1945	Apr. 3-4, 1945	21.8	2,220	1954	Jan. 23, 1954	15.4	740
				1955	Mar. 27, 1955	19.1	1,520
1946	Jan. 12, 1946	23.1	2,580				
1947	June 4, 1947	16.8	1,000	1956	Feb. 10, 1956	18.4	1,360
1948	Feb. 16, 1948	21.3	2,080	1957	Feb. 8, 1957	21.5	2,140
1949	Jan. 30, 1949	18.8	1,460	1958	May 2, 1958	26.29	4,000
1950	Jan. 16, 1950	21.4	2,120				

3641.5. Bayou Bartholomew near McGehee, Ark.

Location.--Lat 33°37'40", long 91°26'45", in sec.30, T.12 S., R.3 W., on downstream side of bridge on State Highway 4, 2 $\frac{3}{4}$ miles west of McGehee and 17.5 miles downstream from Ables Creek.

Drainage area.--592 sq mi.

Gage.--Nonrecording prior to Sept. 7, 1949; recording thereafter. Datum of gage is 121.48 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--20 ft.

Remarks.--Records prior to 1957 furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	-	19.4	4,300	1947	June 5, 1947	13.7	2,100
1932	-	22.4	5,600	1948	Feb. 22, 1948	20.0	4,600
				1949	Feb. 6-7, 1949	16.2	3,000
				1950	Jan. 21, 23, 1950	20.0	4,600
1939	Feb. 28, 1939	19.4	4,300	1951	Jan. 24-25, 1951	14.8	2,450
1940	July 15, 1940	11.1	1,350	1952	Feb. 9, 1952	14.8	2,450
1941	Mar. 13, 1941	12.4	1,700	1953	May 25, 1953	22.5	5,700
1942	May 10-11, 1942	15.5	2,700	1954	Feb. 1, 1954	12.0	1,600
1943	Mar. 27, 1943	17.0	3,300	1955	Apr. 19, 1955	16.6	3,150
1944	Apr. 3-4, 1944	17.7	3,600				
1945	Apr. 8, 1945	20.7	4,900	1956	Feb. 14, 1956	17.3	3,450
				1957	Feb. 14, 1957	16.79	3,070
1946	Jan. 20-21, 1946	21.3	5,200	1958	May 11, 1958	24.49	6,870

3641.9. Bayou Bartholomew at Wilmot, Ark.

Location.--Lat 33°04'10", long 91°34'40", in SW $\frac{1}{4}$ sec.1, T.19 S., R 5 W., on downstream side of bridge on State Highway 52, 0.9 mile northwest of Wilmot and 19.7 miles upstream from Overflow Creek.

Drainage area.--1,170 sq mi.

Gage.--Nonrecording prior to Nov. 28, 1949; recording thereafter. Prior to September 1943 at Smith's Ferry, 1 mile upstream at same datum. Datum of gage is 85.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by occasional current-meter measurements made since 1939 below 8,000 cfs.

Bankfull stage.--25 ft.

Remarks.--Gage-height records and results of current-meter measurements furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Nov. 16-17, 1925	23.8	5,950	1943	Apr. 4-5, 1943	19.7	4,200
1927	May 10-11, 1927	25.9	6,920	1944	Apr. 9-11, 1944	24.7	6,360
1928	May 3-5, 1928	18.9	3,890	1945	Apr. 8-15, 1945	25.2	6,590
1929	Mar. 14-15, 1929	17.3	3,290				
1930	May 27-28, 1930	24.9	6,440	1946	Feb. 14-22, 1946	25.3	6,640
				1947	Apr. 18, 1947	18.1	3,580
1931	Mar. 16-18, 21	8.6	990	1948	Mar. 11-12, 1948	23.9	6,000
1932	Jan. 12, 1932	26.3	7,100	1949	Apr. 3-5, 1949	22.3	5,310
1933	Apr. 8-10, 1933	20.4	4,480	1950	Apr. 2-3, 1950	25.0	6,500
1934	Mar. 13-16, 1934	18.0	3,550				
1935	Jan. 31-Feb. 6	24.8	6,400	1951	Feb. 16, 1951	20.2	4,180
				1952	Feb. 22, 1952	18.6	3,580
1936	July 17-18, 1936	8.8	1,020	1953	May 28-29, 1953	25.3	6,240
1937	Feb. 2-8, 1937	24.8	6,400	1954	May 13, 1954	17.7	3,440
1938	Jan. 8, 1938	19.6	4,160	1955	Apr. 24-25, 1955	20.9	4,400
1939	Mar. 5-6, 1939	24.0	6,040				
1940	July 17-20, 1940	18.9	3,890	1956	Apr. 23-25, 1956	20.8	4,360
				1957	Mar. 7, 1957	19.6	3,940
1941	Mar. 17, 1941	18.1	3,580	1958	May 23, 1958	26.16	8,000
1942	Apr. 19-20, 1942	20.0	4,330				

3645. Bayou Bartholomew near Beekman, La.

Location.--Lat 32°52'20", long 91°52'04", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.22 N., R.6 E., near center of span on downstream side of bridge on State Highway 139, 0.8 mile downstream from Bayou De Glaize, 4 miles south of Beekman, and 7 miles north of Bastrop.

Drainage area.--1,645 sq mi.

Gage.--Nonrecording prior to Aug. 18, 1955; recording thereafter. Datum of gage is 70.60 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements. Considerable shifting has occurred at high stages.

Remarks.--Records furnished by Corps of Engineers September 1929 to October 1938. Base for partial-duration series, 4,500 cfs. Only annual peaks are shown 1927, 1932-38.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 1, 1927	a26.75	-	1947	Jan. 23, 1947	17.50	4,960
1929	Mar. 27, 1929	19.20	5,230		Mar. 17, 1947	17.41	4,910
					Apr. 13, 1947	20.80	6,700
1930	Feb. 1, 1930	21.44	7,120	1948	Feb. 16, 1948	23.34	7,380
	May 21, 1930	23.64	9,130		Mar. 7, 1948	22.62	7,070
					Apr. 18, 1948	20.05	5,900
1931	Jan. 13, 1931	9.08	1,560				
1932	Jan. 12, 1932	25.78	12,400	1949	Feb. 9, 1949	20.28	6,030
					Mar. 29, 1949	23.35	7,800
1933	Apr. 4, 1933	21.70	7,400	1950	Jan. 17, 1950	21.82	7,120
1934	Mar. 6, 1934	21.40	7,200		Feb. 16, 1950	25.76	9,380
1935	Feb. 15, 1935	22.80	8,400		Mar. 17, 1950	22.71	7,620
					May 4, 1950	22.00	7,230
1936	Feb.11-12, 1936	7.40	1,260		Sept. 4, 1950	18.23	5,140
1937	Jan. 27, 1937	23.60	9,100	1951	Jan. 7, 1951	18.32	b5,490
					Feb.11-12, 1951	20.50	6,560
1938	Apr. 11, 1938	19.20	5,820		Apr. 1, 1951	17.22	b4,970
1939	Mar.2-3, 1939	22.07	7,560	1952	Feb. 2, 1952	17.32	4,760
	Apr. 10, 1939	19.96	6,290	1953	Mar. 16, 1953	18.70	b5,060
1940	Apr. 22, 1940	19.06	b5,610		May 20, 1953	25.09	8,540
	July 16, 1940	23.83	8,570	1954	May 6, 1954	20.30	5,680
1941	Jan. 7, 1941	17.25	b4,750	1955	Mar. 24, 1955	22.48	7,510
	Mar. 11, 1941	18.81	5,470		Apr. 17, 1955	20.26	b6,420
1942	Apr. 12, 1942	21.29	6,860	1956	Feb.21-22, 1956	18.05	b5,000
1943	Apr. 4, 1943	16.86	4,610		Mar. 17, 1956	17.77	b4,920
1944	Feb. 29, 1944	21.93	6,790		Mar. 23, 1956	17.51	b4,720
	Mar. 31, 1944	25.33	8,780		Apr. 9, 1956	18.14	5,030
	May 7, 1944	23.94	7,940	1957	Feb. 6, 1957	17.19	b4,680
1945	Jan. 4, 1945	21.50	7,080		Mar. 4, 1957	17.97	b5,000
	Feb. 23, 1945	22.10	7,410		Apr. 7, 1957	21.08	6,480
	Apr. 5, 1945	26.45	9,890		May 6, 1957	18.24	b4,960
1946	Feb. 12, 1946	27.23	10,400	1958	Nov. 21, 1957	24.59	b8,500
					Jan. 26, 1958	18.70	b5,250
					May 2, 1958	28.30	14,700
					May 23, 1958	26.71	b10,300
					Sept.23, 1958	23.92	b8,060

a Affected by Mississippi River overflow.

b Mean daily.

3645.5. Ouachita River at lock and dam No. 5, at Sterlington, La.

Location.--Lat 32°42'05", long 92°05'05", in SW¹SW¹ sec.20, T.20 N., R.4 E., on line between Union and Ouachita Parishes, in upper pool of lock and dam No.5, 0.4 mile upstream from Sterlington and bridge on State Highway 2, 0.9 mile upstream from Missouri Pacific Railroad Co. bridge, and at mile 151.7.

Drainage area.--12,954 sq mi.

Gage.--Nonrecording. Datum of gage is 38.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	Apr.4-6, 1919	31.7	-	1939	Mar.12-13, 1939	38.8	-
1920	May 30-31, 1920	37.9	-	1940	July 17, 1940	27.2	-
1921	May 15, 1921	36.0	-	1941	Mar.22,24, 1941	28.6	-
1922	Apr.18-19, 1922	38.7	-	1942	May 10-12, 15	36.4	-
1923	May 30, June 5	35.2	-	1943	Apr.8-10, 1943	28.2	-
1924	Jan.4-5, 1924	29.0	-	1944	May 15-17, 1944	43.3	-
1925	Dec.14-15, 1924	15.5	-	1945	Apr.12-13, 1945	48.2	-
1926	Nov. 18, 1925	29.8	-	1946	Feb.19,Mar. 1	42.0	-
1927	May 1-3, 1927	45.8	-	1947	Apr.20-23, 1947	29.6	-
1928	May 6-8, 1928	30.0	-	1948	Apr.3-6, 1948	37.8	-
1929	Mar.26-27, 1929	29.8	-	1949	Feb.13-14, 1949	40.1	-
1930	May 31, June 2	39.2	-	1950	Feb. 26, 1950	44.7	-
1931	Mar.15-17, 1931	17.8	-	1951	Mar. 9-10, 1951	32.5	-
1932	Feb.3-4, 1932	46.8	-	1952	May 3-7, 1952	32.7	-
1933	Apr.9-11, 1933	30.2	-	1953	May 28-30, 1953	45.9	-
1934	Apr. 19, 1934	32.0	-	1954	May 19-21, 1954	26.7	-
1935	May 23, 1935	34.5	-	1955	Apr.21-23, 1955	29.9	-
1936	Feb. 4, 1936	15.4	-	1956	Mar.5-6, 1956	29.9	-
1937	Feb. 5, 1937	42.6	-	1957	May 15, 1957	40.2	-
1938	Mar. 6, 1938	38.5	-	1958	May 21-22, 1958	47.7	-

3647.5. Bayou de Loutre at De Loutre, La.

Location.--Lat 32°50'16", long 92°18'57", in W¹NW¹ sec.6, T.22 N., R.2 E., on downstream side of new Highway 33 bridge over Bayou de Loutre, 6 miles north-east of Farmerville, near De Loutre, and 22.8 miles above mouth.

Drainage area.--302 sq mi.

Gage.--Nonrecording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Bankfull stage.--83 ft.

Remarks.--Gage-height records collected by Corps of Engineers. Annual peak stages shown are 8 a.m. readings.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Feb. 15, 1948	88.8	-	1954	May 6, 1954	89.2	-
1949	Mar. 29, 1949	87.7	-	1955	Mar. 22, 1955	88.9	-
1950	May 3, 1950	89.2	-	1956	Apr. 7, 1956	88.25	-
1951	Jan. 16, 1951	88.0	-	1957	Apr. 30, 1957	88.8	-
1952	Jan. 30, 1952	88.0	-	1958	Apr. 28, 1958	98.55	-
1953	May 19, 1953	90.7	-				

a Gage overtopped; stage was higher.

3648. Bayou D'Arbonne at Homer, La.

Location.--Lat 32°48'30", long 93°03'20", in SE $\frac{1}{4}$ sec.14, T.21 N., R.7 W., at bridge on U. S. Highway 79, 0.2 mile north of Homer.

Drainage area.--30.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 159.40 ft above mean sea level (Louisiana Department of Highways reference mark).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Apr. 15, 1954	45.06	-	1956	Feb. 18, 1956	45.11	-
1955	May 25, 1955	47.09	-	1957	Apr. 28, 1957	46.95	-
				1958	Apr. 29, 1958	47.75	-

3649. Big Creek near Vienna, La.

Location.--Lat 32°37'50", long 92°43'25", in SW $\frac{1}{4}$ sec.18, T.19 N., R.3 W., at bridge on State Highway 146, 5.3 miles northwest of Vienna.

Drainage area.--68.9 sq mi.

Gage.--Crest-stage gage. Datum of gage is 88.52 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Fairly well defined above 600 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 14, 1954	47.74	3,260	1956	Mar. 13, 1956	45.32	2,660
1955	May 15, 1955	45.60	3,050	1957	June 1, 1957	45.75	3,280
				1958	Nov. 14, 1957	45.10	2,390

3650. Bayou D'Arbonne near Dubach, La.

Location.--Lat 32°40'50", long 92°39'10", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.20 N., R.3 W., near left bank on downstream side of bridge on U. S. Highway 167, 1 $\frac{1}{2}$ miles south of Dubach and 8 miles upstream from Middle Fork Bayou D'Arbonne.

Drainage area.--355 sq mi.

Gage.--Nonrecording prior to Dec. 4, 1952; recording thereafter. Prior to May 7, 1952, at site 1,000 ft upstream at same datum. Datum of gage is 83.25 ft above mean sea level, datum of 1929 (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--19 ft.

Remarks.--Base for partial-duration series, 3,500 cfs.

Peak stages and discharges of Bayou D'Arbonne near Dubach, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	July 1933	a24.0	-	1950	Jan. 6, 1950	19.82	6,850
1941	Dec. 28, 1940	20.48	9,340		Feb. 14, 1950	18.96	3,890
	Jan. 2, 1941	19.95	7,760		May 3, 1950	20.20	8,570
	Mar. 8, 1941	18.56	3,970		June 4, 1950	19.40	5,210
	May 6, 1941	21.08	13,100		Sept. 1, 1950	19.58	6,020
1942	Apr. 10, 1942	19.16	5,130	1951	Jan. 16, 1951	18.33	2,900
	Apr. 27, 1942	20.05	7,760	1952	Jan. 30, 1952	18.36	3,960
	May 19, 1942	19.59	6,300		Feb. 14, 1952	18.90	4,970
1943	Mar. 27, 1943	18.17	3,210		Apr. 15, 1952	18.50	4,130
1944	Feb. 26, 1944	21.25	13,600	1953	Mar. 13, 1953	19.51	6,950
	Mar. 29, 1944	21.47	15,400		May 1, 1953	20.09	9,410
	May 5, 1944	19.86	7,400		May 5, 1953	19.49	6,910
1945	Jan. 1, 1945	21.50	15,400		May 16, 1953	19.74	7,960
	Jan. 21, 1945	18.50	3,700	1954	May 14, 1954	18.25	3,520
	Feb. 22, 1945	18.85	4,280	1955	Mar. 23, 1955	18.86	4,920
	Mar. 5, 1945	21.22	13,600		May 26, 1955	19.17	5,660
	Mar. 14, 1945	18.42	3,540	1956	Apr. 7, 1956	19.70	7,800
	Apr. 2, 1945	22.83	23,400	1957	Apr. 5, 1957	18.39	3,810
1946	Jan. 9, 1946	20.23	8,820		Apr. 29, 1957	20.16	9,650
	Feb. 10, 1946	20.56	10,200		May 15, 1957	20.27	10,200
	Mar. 29, 1946	19.58	6,350	1958	Nov. 10, 1957	18.97	5,150
	May 15, 1946	18.70	4,070		Nov. 15, 1957	19.29	6,350
	June 1, 1946	19.40	5,750		Nov. 18, 1957	19.10	5,650
1947	Jan. 5, 1947	18.55	3,790		Apr. 28, 1958	20.90	13,400
	Mar. 14, 1947	20.20	8,610		May 1, 1958	20.03	9,440
	Apr. 12, 1947	19.30	5,480		May 21, 1958	19.24	6,140
1948	Feb. 14, 1948	19.48	6,040		Sept. 21, 1958	19.34	6,550
1949	Jan. 30, 1949	17.39	2,400				

a Annual peak only, from information by local residents.

3651. Cypress Creek near Unionville, La.

Location.--Lat 32°39'35", long 92°35'15", in SW corner sec.4, T.19 N., R.2 W., at bridge on State Highway 822, 3.2 miles east of Unionville.

Drainage area.--63.3 sq mi.

Gage.--Crest-stage gage. Datum of gage is 57.84 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 14, 1954	41.39	700	1956	Apr. 5, 1956	43.15	3,390
1955	July 3, 1955	43.52	4,200	1957	June 4, 1957	42.91	2,900
				1958	Dec. 6, 1957	43.16	3,400

3653. Middle Fork Bayou D'Arbonne near Colquitt, La.

Location.--Lat 32°55'40", long 92°59'40", in NE $\frac{1}{4}$ sec.4, T.22 N., R.6 W., at bridge on State Highway 520, 2.0 miles southwest of Colquitt.

Drainage area.--43.9 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	44.06	-	1956	Feb. 18, 1956	44.53	-
1955	Mar. 21, 1955	45.50	-	1957	Apr. 28, 1957	45.70	-
				1958	Apr. 26, 1958	49.68	-

3655. Middle Fork Bayou D'Arbonne near Bernice, La.

Location.--Lat 32°45'50", long 92°39'30", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.21 N., R.3 W., near center of channel on downstream side of bridge on U. S. Highway 167, 4 miles south of Bernice and 8 miles upstream from mouth.

Drainage area.--178 sq mi.

Gage.--Nonrecording prior to July 8, 1947, and Jan. 23, 1951, to July 7, 1952; recording July 8, 1947, to Jan. 22, 1951, and July 8, 1952, to Oct. 3, 1957; crest-stage gage thereafter. Datum of gage is 97.08 ft above mean sea level, datum of 1929 (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs.

Bankfull stage.--8 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Dec. 29, 1940	8.61	3,910	1949	Jan. 31, 1949	7.71	1,440
	Jan. 2, 1941	8.54	3,320				
	Mar. 9, 1941	8.05	2,260	1950	Jan. 5, 1950	8.14	2,140
	May 7, 1941	9.36	5,180		Jan. 17, 1950	8.48	2,900
					Feb. 14, 1950	8.14	2,140
1942	Apr. 11, 1942	8.60	3,330		May 3, 1950	9.62	5,400
	Apr. 28, 1942	8.24	2,520		Aug. 31, 1950	8.78	3,530
1943	Mar. 29-30, 1943	7.45	1,120	1951	Feb. 9-10, 1951	7.76	1,380
1944	Feb. 28, 1944	8.94	3,920	1952	Jan. 29, 1952	8.96	3,950
	Mar. 30, 1944	10.00	6,400		Feb. 15, 1952	8.27	2,410
	May 4, 1944	9.18	4,460		Apr. 15, 1952	8.12	2,120
1945	Jan. 1, 1945	-	7,500	1953	Mar. 15, 1953	8.60	3,110
	Feb. 22, 1945	8.30	2,510		May 1, 1953	9.10	4,170
	Mar. 5, 1945	11.45	10,500		May 5, 1953	8.72	3,360
	Apr. 2, 1945	11.07	9,590		May 15, 1953	8.82	3,570
	July 29, 1945	8.32	2,510	1954	May 14, 1954	7.87	1,560
1946	Jan. 8, 1946	9.60	5,390	1955	Mar. 24, 1955	8.80	3,510
	Feb. 10, 1946	8.60	3,100		May 26, 1955	8.33	2,420
	Mar. 29, 1946	8.60	3,100	1956	Apr. 7, 1956	8.17	1,720
	May 15, 1946	8.43	2,690	1957	Apr. 29, 1957	10.31	6,360
1947	Mar. 16, 1947	-	3,000	1958	Apr. 27, 1958	13.86	a28,000
	Apr. 11, 1947	8.80	3,530				
1948	Feb. 14, 1948	8.85	3,640				

a Annual peak only.

3660. Corney Bayou near Lillie, La.
(Published as "Cornie Bayou" prior to 1956)

Location--Lat 32°53'15", long 92°39'25", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T 22 N., R.3 W., near left bank on downstream side of bridge on U. S. Highway 167, 2 miles upstream from Little Corney Bayou and 3 miles south of Lillie.

Drainage area--462 sq mi.

Gage--Nonrecording prior to Aug. 4, 1952; recording Aug. 4, 1952, to Sept. 30, 1957; crest-stage gage thereafter. Datum of gage is 84.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Defined by current-meter measurements. Minor high-water shifts have occurred.

Bankfull stage--15 ft.

Historical data--According to local residents, the flood in April 1958 was the highest for at least 100 years.

Remarks--Some regulation by Corney Lake (capacity, 8,000 acre-ft), about 6 miles above station. Storage began in 1935. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Dec. 30, 1940	16.07	9,050	1948	Feb. 15, 1948	15.30	5,740
	Jan. 4, 1941	15.18	5,770				
	Mar. 10, 1941	14.84	4,550	1949	Jan. 31, 1949	14.85	4,440
	Apr. 7, 1941	15.02	5,140				
	May 7, 1941	17.48	15,100	1950	Jan. 17, 1950	15.54	6,440
1942	Apr. 11, 1942	16.48	10,300		Feb. 16, 1950	15.22	5,470
	Apr. 29, 1942	15.42	6,330		Mar. 16, 1950	14.82	4,440
					May 4, 1950	15.24	5,600
1943	Mar. 30, 1943	14.26	3,230	1951	Feb. 11, 1951	13.75	2,520
1944	Feb. 29, 1944	15.09	5,360	1952	Jan. 30, 1952	14.86	4,690
	Mar. 31, 1944	16.78	11,000		Feb. 15, 1952	15.16	5,470
	May 4, 1944	16.27	9,000		Apr. 16, 1952	14.85	4,440
1945	Jan. 4, 1945	16.23	8,590	1953	Mar. 15, 1953	15.40	6,020
	Feb. 24, 1945	14.84	4,440		May 2, 1953	16.03	7,980
	Mar. 1, 1945	15.02	4,940		May 16, 1953	16.28	8,890
	Mar. 5, 1945	18.20	17,200	1954	May 6, 1954	12.90	1,700
	Apr. 3, 1945	18.00	16,200				
1946	Jan. 11, 1946	15.44	6,020	1955	Mar. 25, 1955	14.36	3,540
	Feb. 12, 1946	15.82	7,210	1956	Feb. 9, 1956	13.43	2,320
	Mar. 30, 1946	15.25	5,470				
	May 16, 1946	15.42	6,020	1957	Apr. 6, 1957	14.67	4,010
	May 23, 1946	14.72	4,200		Apr. 30, 1957	17.06	11,500
1947	Mar. 16, 1947	14.70	4,200	1958	Apr. 27, 1958	25.20	a46,300
	Apr. 14, 1947	15.39	6,020				

a Annual peak only.

3663. Bayou D'Arbonne near Farmerville, La.

Location--Lat 32°45'27", long 92°28'54", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.20 N., R.1 W., Union Parish, at bridge on State Highway 15, 1 mile downstream from Big Corney Bayou, 1.5 miles south of Farmerville, and 36.1 miles upstream from mouth.

Drainage area--1,470 sq mi.

Gage--Nonrecording prior to July 20, 1949; recording thereafter. November 1925 to April 1929 at site 1.5 miles downstream at same datum. Datum of gage is 39.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Not defined; affected severely by backwater from Ouachita River.

Bankfull stage--27 ft.

Remarks--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges of Bayou D'Arbonne near Farmerville, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Nov. 6, 1925	37.0	-	1943	Apr. 2, 1943	31.3	-
1927	May 3, 1927	44.5	-	1944	May 7, 1944	36.0	-
1928	Apr. 9, 1928	32.5	-	1945	Apr. 4-14, 1945	43.1	-
1929	Mar. 5, 1929	30.1	-				
1930	May 21, 1930	36.6	-	1946	Feb. 2, 1946	38.5	-
				1947	Apr. 15, 1947	34.0	-
1931	Jan. 12-14, 1931	31.8	-	1948	Feb. 17, 1948	34.6	-
1932	Dec. 19, 1931	43.2	-	1949	Feb. 17-18, 1949	34.5	-
1933	July 27, 1933	40.3	-	1950	Mar. 1, 1950	39.5	-
1934	Mar. 30, 1934	35.5	-				
1935	Jan. 25, 1935	34.8	-	1951	Feb. 13, 1951	31.9	-
				1952	Feb. 3, 1952	32.8	-
1936	Dec. 10, 1935	21.4	-	1953	May 19, 1953	39.2	-
1937	Feb. 8-11, 1937	36.9	-	1954	May 17, 1954	31.6	-
1938	Jan. 1, 1938	37.1	-	1955	Mar. 27, 1955	32.8	-
1939	Feb. 8, 1939	35.4	-				
1940	June 22, 1940	30.8	-	1956	Apr. 10, 1956	32.8	-
				1957	May 3, 1957	37.02	-
1941	May 10, 1941	35.6	-	1958	Apr. 29, 1958	45.71	67,000
1942	Apr. 14, 1942	34.0	-				

a Occurred on following day.

3663.5. Stowe Creek near Farmerville, La.

Location.--Lat 32°40'20", long 92°28'20", in SE $\frac{1}{4}$ sec. 33, T.20 N., R.1 W., at bridge on State Highway 151, 8 miles southwest of Farmerville.

Drainage area.--29.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 61.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	44.03	-	1956	Apr. 6, 1956	46.38	-
				1957	Sept. 17, 1957	45.70	-
1955	Apr. 12, 1955	45.52	-	1958	July 13, 1958	46.37	-

3670. Ouachita River at Monroe, La.

Location.--Lat 32°30'19", long 92°07'32", in lot 50, T.18 N., R.3 E., near center of span on downstream side of bridge on U. S. Highway 80 at Monroe, 0.4 mile upstream from Illinois Central Railroad bridge and 5 $\frac{1}{2}$ miles upstream from Lock and Dam No. 4.

Drainage area.--15,298 sq mi.

Gage.--Nonrecording. June 1884 to Jan. 5, 1937, at several sites within half a mile of present gage at same datum. Datum of gage is 31.40 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers). Since June 26, 1941, auxiliary nonrecording gage 5 $\frac{1}{2}$ miles downstream. Datum of auxiliary gage is 29.39 ft above mean sea level.

Stage-discharge relation.--Defined by frequent current-meter measurements affected by fall. Discharges computed from discharge hydrographs giving consideration to gage heights at auxiliary gage.

Remarks.--Gage-height records and current-meter measurements furnished by Corps of Engineers and U. S. Weather Bureau. Stages above 15 ft are not affected by operation of lock 5 $\frac{1}{2}$ miles downstream. Base for partial-duration series, 30,000 cfs. Only annual peaks are shown prior to 1938.

Peak stages and discharges of Ouachita River at Monroe, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1874	-	49.1	93,300	1922	May 9-11, 1922	42.3	63,100
1882	-	48.9	92,200	1923	June 5-6, 1923	37.8	52,000
1884	June 3-4, 1884	46.3	75,700	1924	Jan. 5, 1924	32.4	40,200
1885	Jan. 19, 1885	48.3	87,800	1925	Mar. 17, 1925	15.9	15,400
1886	May 24, 1886	30.1	35,400	1926	Nov. 14-15, 1925	32.8	41,000
1887	Mar. 31 to Apr. 4	33.6	42,700	1927	May 4, 1927	48.2	78,000
1888	Apr. 6-13, 1888	34.2	44,000	1928	May 5-8, 1928	32.8	37,900
1889	Feb. 9-14, 1889	34.0	43,500	1929	Mar. 26, 1929	33.0	36,600
1890	May 14-15, 1890	43.2	65,400	1930	June 1, 1930	40.6	60,900
1891	Mar. 16-18, 1891	38.5	53,700	1931	Mar. 10, 1931	20.1	18,900
1892	June 27-29, 1892	41.1	60,000	1932	Feb. 2-4, 1932	49.7	101,000
1893	Jan. 9-11, 1893	40.2	57,800	1933	May 11-12, 1933	33.6	39,400
1894	Apr. 10-11, 1894	45.0	70,600	1934	Apr. 20-21, 1934	34.6	40,900
1895	Apr. 1-3, 1895	26.1	28,000	1935	Feb. 13, 1935	37.3	45,500
1896	Apr. 21-22, 1896	33.0	41,400	1936	Dec. 19-21, 1935	16.4	16,000
1897	Apr. 9-12, 1897	37.9	52,300	1937	Feb. 6, 1937	44.7	72,800
1898	Feb. 12-13, 1898	35.9	47,700	1938	Jan. 9, 1938	33.8	47,100
1899	Feb. 5-7, 1899	32.3	39,900		Feb. 11, 1938	37.7	53,600
1900	May 2-3, 1900	31.0	37,200		Mar. 7, 1938	40.6	58,200
1901	May 7-9, 1901	24.6	25,500		Apr. 22, 1938	41.4	58,100
1902	Apr. 27-28, 1902	35.1	45,900	1939	Mar. 8-11, 1939	41.3	60,800
1903	Mar. 26, 29, 1903	44.5	69,100		May 4-5, 1939	39.1	54,500
1904	Apr. 15-20, 1904	29.5	34,200	1940	July 17, 1940	29.1	36,600
1905	May 31 to June 2	44.0	67,800	1941	Jan. 7-9, 1941	31.2	36,500
1906	Feb. 9-10, 1906	35.0	45,700		Mar. 17-20, 1941	30.8	40,400
1907	Jan. 23-26, 1907	38.5	53,700		May 14-15, 1941	30.3	36,100
1908	May 22-25, 1908	35.6	47,000	1942	May 8, 1942	39.8	54,800
1909	Mar. 29, 1909	30.5	36,200	1943	Apr. 8, 1943	30.4	39,100
1910	May 2, 1910	28.7	32,700	1944	Mar. 7-8, 1944	31.2	40,500
1911	May 9-13, 1911	36.9	50,000		Apr. 12-14, 1944	40.2	56,700
1912	Apr. 22, 1912	46.2	75,200		May 19, 1944	45.46	72,200
1913	Apr. 29-30, 1913	36.9	50,000	1945	Jan. 21-24, 1945	36.22	47,800
1914	Apr. 19-23, 1914	38.3	53,200		Apr. 12, 1945	50.42	100,000
1915	Mar. 11-19, 1915	35.7	47,200		June 30 to July 1	36.61	44,300
1916	Feb. 19-20, 1916	40.6	58,700	1946	Feb. 22, 1946	45.3	67,700
1917	Apr. 9, 1917	28.4	32,200		Apr. 3, 1946	42.4	58,600
1918	May 6-10, 1918	26.5	28,700		June 7-8, 1946	39.8	51,400
1919	Apr. 4-8, 1919	34.1	43,700	1947	Mar. 22-23, 1947	27.6	31,000
1920	June 5, 1920	41.0	59,800		Apr. 17-18, 1947	33.45	38,100
1921	May 18, 1921	38.8	54,400	1948	Mar. 16-17, 1948	40.2	54,200
					Apr. 4-6, 1948	40.2	51,900
				1949	Feb. 12, 1949	42.48	59,400
					Apr. 9, 1949	40.31	51,700
				1950	Feb. 2, 1950	42.20	61,800
					Feb. 27, 1950	47.25	77,400
					May 8, 1950	38.72	47,900
				1951	Mar. 11, 1951	34.88	41,900
				1952	Mar. 26, 1952	31.70	37,200
					May 6, 1952	35.15	42,200

Note.--Peak stage frequently occurs at different time or on different day than peak discharge.

Peak stages and discharges of Ouachita River at Monroe, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Mar. 4, 1953	27.97	31,800	1956	Mar. 7-8, 1956	31.67	38,600
	Apr. 4-6, 1953	32.76	40,200	1957	Feb. 23-24, 1957	29.38	34,800
	May 30-June 1	45.94	68,700		May 19, 1957	42.65	59,500
1954	May 20-21, 1954	29.45	36,000	1958	Dec. 7, 1957	38.08	46,400
1955	Apr. 21, 1955	32.50	38,800		Feb. 1, 1958	32.35	39,600
					May 22, 1958	50.45	97,200

Note.--Peak stage frequently occurs at different time or on different day than peak discharge.

3670.5. Ouachita River at lock and dam No. 4, at Monroe, La.

Location--Lat 32°28'00", long 92°06'55", in S $\frac{1}{2}$ sec. 12, T. 17 N., R. 3 E., Ouachita Parish, in upper pool of lock and dam No. 4 at Monroe, 4.7 miles downstream from Illinois Central Railroad bridge and at mile 121.5.

Drainage area--15,319 sq mi.

Gage--Nonrecording. Datum of gage is 29.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Not defined.

Remarks--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 21-22, 1912	47.0	-	1936	Dec. 20, 1935	17.7	-
1913	Apr. 28, May 2	37.8	-	1937	Feb. 9-12, 1937	45.5	-
1914	Apr. 19-20, 1914	39.3	-	1938	Apr. 23-28, 1938	42.4	-
1915	Mar. 13-18, 1915	37.7	-	1939	Mar. 12-16, 1939	42.1	-
				1940	July 18-20, 1940	50.1	-
1916	Feb. 18-22, 1916	42.4	-	1941	Jan. 8-10, 1941	32.2	-
1917	Apr. 9-11, 1917	28.6	-		May 19-20, 1942	40.9	-
1918	May 9-10, 1918	27.5	-	1943	Apr. 9-11, 1943	31.4	-
1919	Apr. 4-8, 10-11	35.0	-	1944	May 17-20, 22	46.3	-
1920	June 5-6, 1920	42.0	-	1945	Apr. 14-17, 1945	51.1	-
				1946	Feb. 24, 26-27	46.2	-
1921	May 17-19, 1921	39.6	-		Apr. 19-21, 1947	34.6	-
1922	May 8-11, 1922	45.3	-	1948	Mar. 21-25, Apr. 4-7	41.1	-
1923	June 4, 1923	39.0	-	1949	Feb. 17-19, 1949	43.4	-
1924	Jan. 4-7, 1924	33.4	-	1950	Mar. 1-2, 1950	48.0	-
1925	Mar. 20-22, 1925	18.0	-				
1926	Nov. 14-15, 1925	33.7	-	1951	Mar. 12-13, 1951	35.8	-
1927	May 4, 1927	48.9	-	1952	May 3-9, 1952	36.2	-
1928	May 4-9, 1928	33.8	-	1953	May 31, June 1	46.8	-
1929	Mar. 26-27, 1929	34.1	-	1954	May 20-21, 1954	30.6	-
1930	June 6-7, 1930	41.5	-	1955	Apr. 20-24, 1955	33.6	-
1931	Mar. 8-17, 1931	21.0	-	1956	Mar. 5-8, 1956	32.7	-
1932	Feb. 3-4, 1932	50.1	-				
1933	May 10-12, 1933	34.7	-	1957	May 19, 1957	43.5	-
1934	Apr. 19-20, 1934	35.6	-	1958	May 23-24, 1958	51.18	-
1935	May 25-27, 1935	38.5	-				

3673. North Cheniere Creek at Cheniere, La.

Location--Lat 32°29'35", long 92°15'40", in NE $\frac{1}{4}$ sec.4, T.17 N., R.2 E., at bridge on State Highway 546, 1 mile south of Cheniere.

Drainage area--38.0 sq mi.

Gage--Crest-stage gage. Datum of gage is 41.63 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Not defined.

Remarks--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 13, 1954	42.98	-	1956	Apr. 5, 1956	43.68	-
1955	Mar. 21, 1955	45.89	-	1957	June 27, 1957	42.86	-
				1958	Nov. 18, 1957	43.22	-

3676. Cypress Creek near Vixen, La.

Location--Lat 32°17'20", long 92°14'50", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.15 N., R.2 E., at bridge on State Highway 557, 4 miles northeast of Vixen.

Drainage area--16 sq mi.

Gage--Crest-stage gage.

Stage-discharge relation--Not defined.

Remarks--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	46.14	-	1956	Feb. 11, 1956	46.83	-
1955	Aug. 4, 1955	46.76	-	1957	June 28, 1957	46.51	-
				1958	Apr. 30, 1958	46.91	-

3676.5. Ouachita River at lock and dam No. 3, near Riverton, La.

Location--Lat 32°10'45", long 92°06'11", between lot 41 and sec.19, T.14 N., R.4 E., Caldwell Parish, in upper pool of lock and dam No. 3, 1.3 miles northwest of Riverton, 4.8 miles upstream from Missouri Pacific Railroad Co. bridge, and at mile 77.5.

Drainage area--15,632 sq mi.

Gage--Nonrecording. Datum of gage is 14.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Not defined.

Bankfull stage--50 ft.

Remarks--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

RED RIVER BASIN

Peak stages and discharges of Ouachita River at lock and dam No. 3, near Riverton, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 14-17, 1913	47.6	-	1936	May 6-7, 1936	28.3	-
1914	Apr. 20-22, 1914	47.5	-	1937	Feb. 12-13, 1937	51.5	-
1915	Mar. 17-20, 1915	44.3	-	1938	Apr. 24-29, 1938	49.3	-
				1939	Mar. 15-18, 1939	48.5	-
1916	Mar. 1-2, 1916	50.9	-	1940	May 9-10, 1940	37.5	-
1917	Apr. 13-15, 1917	37.4	-				
1918	May 9-11, 1918	34.5	-	1941	Jan. 9-11, 1941	38.7	-
1919	Apr. 16-19, 1919	42.3	-	1942	May 19-20, 1942	47.7	-
1920	June 6, 1920	49.5	-	1943	Apr. 11, 14, 1943	38.5	-
				1944	May 22-23, 1944	52.6	-
1921	May 8-10, 1921	46.5	-	1945	Apr. 14-18, 1945	55.3	-
1922	May 13-15, 1922	52.7	-				
1923	Apr. 14-17, 1923	47.9	-	1946	Feb. 25-28, 1946	52.6	-
1924	Jan. 11-12, 1924	42.5	-	1947	Apr. 21-23, 1947	42.9	-
1925	Mar. 21-22, 1925	24.0	-	1948	Mar. 22-25, 1948	47.7	-
				1949	Feb. 20-22, 1949	49.8	-
1926	Apr. 18-19, 1926	39.8	-	1950	Mar. 3-5, 1950	54.3	-
1927	May 15-17, 1927	57.0	-				
1928	May 8-10, 1928	42.8	-	1951	Mar. 11-13, 1951	42.9	-
1929	Mar. 28-31, 1929	42.5	-	1952	May 5-10, 1952	44.0	-
1930	June 9, 1930	47.6	-	1953	May 30, June 4	52.8	-
				1954	May 20-22, 1954	37.6	-
1931	Mar. 9-12, 1931	27.9	-	1955	Apr. 21-22, 1955	41.4	-
1932	Jan. 30, Feb. 10	54.3	-				
1933	May 11-14, 1933	43.5	-	1956	Mar. 6-8, 1956	39.4	-
1934	Apr. 17-22, 1934	42.3	-	1957	May 20-22, 1957	49.0	-
1935	May 27-30, 1935	46.5	-	1958	May 25, 1958	56.36	-

3676.8. Boeuf River near Eudora, Ark.

Location.--Lat 33°07'25", long 91°20'55", on line between secs. 18 and 19, T. 18 S., R. 2 W., on downstream side of bridge on State Highway 8, 1.4 miles downstream from Canal No. 2, 5 miles west of Eudora, and at mile 205.7.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to May 3, 1951; recording thereafter. Datum of gage is 83.24 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined at high stages by current-meter measurements.

Bankfull stage.--21 ft.

Remarks.--Gage-height records and current-meter measurements furnished by Corps Engineers. Major channel improvements made in 1955. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 31, 1939	17.7	5,060	1949	Mar. 28, 1949	19.7	7,450
1940	July 8, 1940	18.7	6,220	1950	Feb. 14, 1950	20.2	8,080
1941	Mar. 9, 1941	16.8	4,080	1951	Jan. 3, 1951	20.8	8,870
1942	Apr. 9, 1942	20.0	7,830	1952	Jan. 28, 1952	17.60	4,980
1943	Mar. 27, 1943	17.5	4,840	1953	May 17, 1953	19.26	6,940
1944	Mar. 29, 1944	21.0	9,110	1954	May 3, 1954	20.03	7,870
1945	Jan. 1, 1945	21.5	9,760	1955	Mar. 22, 1955	21.52	9,830
1946	Feb. 10, 1946	20.5	8,470	1956	Feb. 4, 1956	15.24	9,030
1947	Apr. 11, 1947	20.3	8,210	1957	Feb. 2, 1957	15.2	8,980
1948	Feb. 13, 1948	20.9	8,980	1958	Sept. 22, 1958	19.69	14,600

3677. Boeuf River near Kilbourne, La.

Location.--Lat 32°58'35", long 91°26'20", in SW $\frac{1}{4}$ sec.15, T.23 N., R.10 E., on line between Morehouse and West Carroll Parishes, on left bank of river, 200 ft upstream from ferry crossing of Whitefield Lake section, 2 miles south of Arkansas-Louisiana State line, 7 $\frac{1}{2}$ miles southwest of Kilbourne, and at mile 190.1.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 74.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--25 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made on river during 1954-55. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 13, 1947	22.7	-	1953	May 18-19, 1953	22.3	-
1948	Feb.14-15, 1948	22.8	-	1954	May 4, 1954	22.7	-
1949	Mar. 29, 1949	22.3	-	1955	Mar. 23, 1955	22.0	-
1950	Feb.15-17, 1950	22.4	-				
				1956	Feb. 4, 1956	18.4	-
1951	Jan. 5, 1951	22.6	-	1957	Feb. 2, 1957	18.1	-
1952	Jan.30-31, 1952	21.5	-	1958	Sept.22, 1958	22.7	-

3678. Boeuf River near Oak Grove, La.

Location.--Lat 32°46'20", long 91°35'45", in SE $\frac{1}{4}$ sec.25, T.21 N., R.8 E., on line between Morehouse and West Carroll Parishes, at bridge on State Highway 2, 13 $\frac{1}{2}$ miles southwest of Oak Grove and at mile 167.2.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to December 1954; recording thereafter. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur. Annual discharge maxima computed from average rating curves based on all available high-water measurements.

Bankfull stage.--90 ft.

Historical data.--A discharge of 10,700 cfs was measured Jan. 8, 1945 (gage height not determined).

Remarks.--Gage-height records since October 1946 and occasional current-meter measurements, February 1939 and since April 1944 collected by Corps of Engineers. Major channel improvements made during 1953. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 17, 1947	88.3	8,740	1953	May 17, 1953	87.4	7,750
1948	Feb. 21, 1948	89.6	10,100	1954	May 12, 1954	82.2	9,200
1949	Apr.3-4, 1949	87.4	7,750	1955	Mar. 24, 1955	84.9	17,700
1950	Feb. 22, 1950	87.7	8,060				
				1956	Feb. 4, 1956	84.95	17,700
1951	Jan. 13, 1951	87.4	7,750	1957	Feb. 2, 1957	82.7	14,500
1952	Feb.3-5, 1952	84.4	5,650	1958	May 5, 1958	88.60	21,500

RED RIVER BASIN

3679.5. Boeuf River near Oak Ridge, La.

Location.--Lat 32°36'55", long 91°41'10", in NW¼SE¼ sec.19, T.19 N., R.8 E., on line between Morehouse and Richland Parishes, at bridge on State Highway 134, 0.6 mile upstream from La Fourche cut-off, 1.5 miles downstream from Bayou Bonne Idee, 5 miles downstream from Oak Ridge, and at mile 151.5.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to December 1954; recording thereafter. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements; shifts in relation occur. Annual discharge maxima computed from average rating curves based on all available high-water measurements.

Bankfull stage.--92 ft.

Remarks.--At stages above 68.5 ft, part of flow diverts into La Fourche cut-off. Gage-height records since October 1946 and occasional current-meter measurements since May 1936 collected by Corps of Engineers. Major channel improvements made during 1953. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	December 1931	81.4	13,600	1952	Apr. 26, 1952	76.2	7,500
				1953	May 17, 1953	76.2	11,300
1947	Apr. 11, 1947	79.8	11,700	1954	May 12, 1954	73.2	10,800
1948	Feb. 21, 1948	78.9	10,600	1955	Mar. 24, 1955	77.8	16,500
1949	Apr. 2, 1949	76.5	7,840				
1950	Feb.15-16, 1950	77.6	9,100	1956	Feb. 4, 1956	77.62	17,800
				1957	Feb. 2, 1957	75.7	16,600
1951	Jan.17-18, 1951	77.3	8,760	1958	May 5, 1958	80.52	23,300

3680. Boeuf River near Girard, La.

Location.--Lat 32°28'50", long 91°47'55", on line between sec.1, T.17 N., R.6 E., and sec.6, T.17 N., R.7 E., on upstream side of pier on Illinois Central Railroad bridge, 0.5 mile east of Girard.

Drainage area.--1,226 sq mi. (See Remarks.)

Gage.--Nonrecording prior to Nov. 2, 1955; recording thereafter. July 11, 1944, to Nov. 2, 1955, at site 200 ft upstream at same datum. Datum of gage is 51.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers). Auxiliary nonrecording gage Feb. 15, 1945, to Dec. 8, 1952, at site 6.4 miles downstream at different datum; at site 8.1 miles downstream at different datum thereafter.

Stage-discharge relation.--Defined by current-meter measurements since October 1938. Discharge computed by using fall as a factor since Feb. 15, 1945. Stage-discharge relation affected at times by backwater from Ouachita River. Moderate high-water shifts have occurred.

Remarks.--Small diversions above station for irrigation. Interconnecting systems of bayous and drainage ditches produced an interchange of flow under varying conditions; hence, the drainage limits were arbitrarily determined. Boeuf River and Bayou Lafourche basins are connected by canal systems. Base for partial-duration series, 1,500 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Nov.20-23, 1925	13.6	2,350	1933	Mar. 1, 1933	13.3	2,280
1927	May 7, 1927	29.5	(a)	1934	Mar.10-12, 1934	13.8	2,400
1928	Apr.29-30, 1928	12.9	2,180	1935	Dec. 4, 1934	17.5	3,580
1929	Mar. 24, 1929	14.3	2,530	1936	Feb. 9-10, 1936	9.4	1,410
1930	May 29-30, 1930	15.8	2,970	1937	Jan.26,31, Feb.3	14.3	2,530
1931	Jan.15-16, 1931	8.7	1,270	1938	Apr.18-19, 1938	14.0	2,450
1932	Dec. 26, 1931	19.6	4,400	1939	Jan. 20, 1939	11.6	1,940

a Affected by overflow from Mississippi River; discharge indeterminate.

Note.--Peak gage height frequently occurred on different day than peak discharge.

Peak stages and discharges of Boeuf River near Girard, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Jan. 31, 1939	10.7	b1,640	1948	Feb. 25, 1948	17.06	2,690
	Feb.10-13, 1939	13.0	b2,310		Apr. 21, 1948	11.12	1,500
	Apr. 11, 1939	12.2	b2,030	1949	Nov. 20, 1948	13.50	1,950
1940	Feb.19-20, 1940	10.5	b1,620		Dec.18-19, 1948	10.95	1,550
	Apr. 19-20, 30	13.9	2,340		Jan. 5, 1949	14.26	2,160
	May 1, 1940	15.0	2,580		Jan. 23, 1949	13.25	1,820
	July 23-25, 1940	13.7	b2,290		Feb.5-6, 1949	13.94	1,590
1941	Nov. 26, 1940	10.78	b1,650		Apr. 10, 1949	15.41	2,220
	Dec.8-9, 1940	11.60	1,820		May 12, 1949	10.94	1,590
	Dec. 28, 1940	10.66	b1,620	1950	Jan. 28, 1950	13.89	2,010
	Jan. 11, 1941	10.41	b1,560		Feb. 14, 1950	17.70	2,470
	Mar. 17, 1941	11.18	b1,730		Apr.1-3, 1950	14.52	1,860
1942	Nov. 11, 1941	11.65	b1,890		May 4, 1950	13.31	1,840
	Nov. 27, 1941	9.98	b1,530	1951	Jan. 5, 1951	15.14	2,340
	Mar. 17, 1942	11.15	b1,780		Jan.14-15, 1951	16.05	2,320
	Apr. 19, 1942	15.02	b2,730		Feb. 8, 1951	12.27	1,710
1943	Mar. 22, 1943	10.49	b1,650		Feb.16-17, 1951	12.33	1,720
	Apr. 4, 1943	10.91	b1,720	1952	Apr. 6, 1951	11.30	1,590
1944	Mar. 8, 1944	14.19	2,270		Dec. 22, 1951	12.95	1,880
	Apr.11-12, 1944	16.00	2,540		Feb. 5, 1952	13.53	2,050
	May 5, 1944	15.68	b2,460	1953	Apr. 27, 1952	13.57	1,920
1945	Jan.13-14, 1945	16.47	b2,890		Feb. 26, 1953	14.55	2,110
	Mar.20-21, 1945	17.30	b2,690		May 6, 1953	12.85	1,750
	Apr. 3, 1945	16.82	2,410	1954	May 18, 1953	17.22	2,370
1946	Jan. 22, 1946	17.35	2,840		May 13-14, 1954	9.68	1,220
	Feb. 10, 1946	18.37	2,780	1955	Mar. 25, 1955	13.15	1,910
	Mar. 17, 1946	12.70	1,540		Feb. 6, 1956	12.94	1,650
	Mar. 30, 1946	11.95	1,550	1956	Feb. 3, 1957	12.37	1,650
	May 27, 1946	10.63	1,500		Nov.21-22, 1957	15.04	1,850
1947	Jan. 19, 1947	14.94	2,320	1958	May 2, 1958	19.31	3,070
	Mar. 15, 1947	11.72	1,700		Sept.26, 1958	-	2,270
	Apr. 12, 1947	18.80	2,970				

b Mean daily.

Note.--Peak gage height frequently occurred on different day than peak discharge.

3681. Boeuf River near Alto, La.

Location.--Lat 32°22'25", long 91°52'50", in NW $\frac{1}{4}$ sec.17, T.16 N., R 6 E., Richland Parish, at bridge on State Highway 15, 1.6 miles northwest of Alto and at mile 102.5.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 36.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by backwater from Ouachita River.

Bankfull stage.--25 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	January 1932	28.1	-	1950	Feb. 15, 1950	27.5	-
1939	(a)	22.0	-	1951	Jan. 15, 1951	24.6	-
1940	May 1, 1940	25.3	-	1952	Apr. 26, 1952	22.8	-
				1953	May 19, 1953	27.4	-
1941	Nov.28, Dec.7	20.4	-	1954	May 14, 1954	19.2	-
				1955	Mar. 27, 1955	21.5	-
1942	Apr. 21, 1942	23.9	-	1956	Feb. 9, 1956	22.81	-
1947	Apr. 13, 1947	27.5	-	1957	Feb. 4, 1957	21.8	-
1948	Mar.2-3, 1948	26.0	-	1958	May 6-7, 1958	28.14	-
1949	Apr. 11, 1949	25.4	-				

a Feb. 18, Mar. 1, Apr. 8, 1939.

3684.5. Lyon Bayou at Forest, La.

Location.--Lat 32°47'00", long 91°24'30", in NE corner of sec.26, T.21 N., R.10 E., at bridge on parish road, 0.5 mile southeast of Forest.

Drainage area.--9.79 sq mi.

Gage.--Crest-stage gage. Datum of gage is 48.74 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	(a)	-	1956	Mar. 16, 1956	(a)	-
1955	Mar. 21, 1955	47.30	-	1957	June 28, 1957	41.67	-
				1958	Nov. 18, 1957	43.64	-

a Less than 38.94 ft; bottom of gage.

3685. Big Colewa Bayou near Oak Grove, La.

Location.--Lat 32°47'55", long 91°30'05", in NE $\frac{1}{4}$ sec.24, T.21 N., R.9 E., on downstream side near center of bridge on State Highway 2, 0.1 mile downstream from Little Colewa Bayou and 8 miles southwest of Oak Grove.

Drainage area.--42 sq mi. (See Remarks.)

Gage.--Nonrecording prior to Oct. 20, 1949, and July 1952 to Jan. 20, 1954; recording during remainder of period. Prior to Jan. 28, 1953, at datum 87.29 ft higher. Datum of present gage is at mean sea level, datum of 1929, with 1941 Alluvial Valley and 1944 Birmingham-Corinth supplementary adjustment (levels by Corps of Engineers). Auxiliary gage 5.7 miles downstream at same datum. Nonrecording Jan. 1, to Oct. 7, 1954; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements. Since Jan. 1, 1954, high-water discharge computed by using fall as a factor. Discharge prior to 1950 not determined. High-water shifts have occurred.

Bankfull stage.--90 ft.

Remarks.--Interconnecting systems of bayous and drainage ditches produce an interchange of flow under varying conditions; hence, the drainage limits were arbitrarily determined. Extensive channel enlargement by Corps of Engineers in 1955. Gage-height records and some current-meter measurements furnished by Corps of Engineers. Only annual peak stages are shown prior to 1950. Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Dec. 9, 1940	5.4	-	1951	Jan. 4, 1951	7.93	972
1942	Apr. 11, 1942	7.5	-	1952	Dec. 21, 1951	7.22	811
1943	Mar. 16, 1943	5.3	-	1953	Feb. 21, 1953	91.9	1,600
1944	Mar. 30, 1944	6.9	-		Mar. 12, 1953	91.02	1,080
1945	Jan.2-4, 1945	7.3	-		Apr. 29, 1953	90.80	1,200
					May 5, 1953	90.55	1,100
					May 16, 1953	a92.60	1,400
1946	Feb. 11, 1946	7.4	-	1954	May 2, 1954	a90.73	1,060
1947	Apr. 12, 1947	8.2	-		May 13, 1954	b91.20	c700
1948	Feb. 14, 1948	7.8	-	1955	Mar. 22, 1955	94.13	2,050
1949	Jan.5-6, 1949	7.1	-		Apr. 13, 1955	91.00	c865
1950	Feb. 14, 1950	7.64	864	1956	Feb. 4, 1956	92.53	1,360
					Mar. 14, 1956	91.77	c1,180
					Apr. 6, 1956	91.00	c1,030

a Occurred on following day.

b Occurred on preceding day.

c Mean daily.

Peak stages and discharges of Big Colewa Bayou near Oak Grove, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Jan. 31, 1957	91.47	944	1958	Apr. 27, 1958	91.60	c850
	Apr. 4, 1957	91.30	c873		May 1, 1958	91.93	c900
1958	Nov. 17, 1957	91.64	c800		May 5, 1958	91.48	c1,010
		91.30	c952		May 21, 1958	b90.59	c705
	Mar. 24, 1958				Sept. 23, 1958	94.10	c1,600

b Occurred on preceding day.

c Mean daily.

3685.2. Big Creek at Holly Ridge, La.

Location.--Lat 32°28'00", long 91°36'40", in SE $\frac{1}{4}$ sec.11, T.17 N., R.8 E., Richland Parish, at Illinois Central Railroad trestle 225 ft downstream from bridge on U. S. Highway 80, 0.5 mile east of Holly Ridge, and 46.8 miles above mouth.

Drainage area.--171 sq mi.

Gage.--Nonrecording. Datum of gage is 70.6 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; trend of current-meter measurements made since 1947 indicate severe shifting of channel, probably due to channel improvement work.

Bankfull stage.--8 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Nov. 27, 29, 1940	8.0	-	1950	Feb. 14-17, 1950	7.5	-
1942	Apr. 19-20, 1942	8.8	-				
1943	Jan. 2-4, 1943	7.4	-	1951	Mar. 29, 1951	8.0	-
1944	May 7, 1944	8.8	-	1952	Apr. 24, 1952	7.0	-
1945	Jan. 8, Mar. 21-28	8.3	-	1953	May 19, 1953	10.0	-
				1954	May 16, 1954	8.3	-
1946	Feb. 10-11, 1946	9.5	-	1955	Mar. 26-27, 1955	8.4	-
1947	Apr. 12-13, 1947	10.6	-				
1948	Feb. 17-19, 1948	9.1	-	1956	Feb. 6, 1956	8.9	-
1949	Nov. 22-24, 1949	8.5	-	1957	Feb. 4, 1957	8.4	-
				1958	May 2, 1958	9.5	-

3685.4. Big Creek near Mangham, La.

Location.--Lat 32°17'30", long 91°45'50", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.15 N., R.7 E., on line between Richland and Franklin Parishes, at bridge on State Highway 15 at town of Big Creek, immediately downstream from Missouri Pacific Railroad Co. bridge, 1.4 miles southeast of Mangham and 21.39 miles above mouth.

Drainage area.--345 sq mi.

Gage.--Nonrecording. Datum of gage is 40.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--24 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1956. Only annual peak stages are shown.

Peak stages and discharges of Big Creek near Mangham, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 11, 1941	218.9	-	1950	Feb. 14, 1950	23.6	-
1942	Apr. 10, 1942	21.6	-				
1943	Dec. 30, 1942	19.4	-	1951	Jan. 4, 1951	23.6	-
1944	May 8, 1944	21.9	-	1952	Apr. 25, 1952	21.7	-
1945	Apr. 23-25, 1945	21.6	-	1953	May 19, 1953	23.6	-
				1954	May 15, 1954	21.5	-
1946	Feb. 12, 1946	23.4	-	1955	July 17, 1955	22.6	-
1947	Apr. 12-13, 1947	24.5	-				
1948	Feb. 14-16, 1948	21.2	-	1956	Feb. 6, 1956	22.64	-
1949	Nov. 20, 1948	23.5	-	1957	Feb. 2, 1957	18.0	-
				1958	May 3, 1958	21.05	-

a Maximum for period Feb. 6 to Sept. 30, 1941.

3685.8. Big Creek near Sligo, La.

Location.--Lat 32°12'20", long 91°49'10", in SE¹/₄SE¹/₄ sec. 11, T 14 N., R. 6 E., on line between Richland and Franklin Parishes, at bridge on State Highway 135, 3.8 miles east of Sligo, 6.5 miles northwest of Winnsboro, and 9.9 miles upstream from mouth (confluence with Boeuf River).

Drainage area.--497 sq mi.

Gage.--Nonrecording. Datum of gage is 37.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by backwater from Boeuf River.

Bankfull stage.--18 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1954. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 11, 1941	214.4	-	1950	Mar. 6-9, 1950	22.7	-
1942	Apr. 12-13, 1942	18.9	-				
1943	Dec. 30, 1942	17.1	-	1951	Jan. 4, 1951	20.9	-
1944	May 25-29, 1944	20.2	-	1952	Apr. 26, 1952	19.1	-
1945	Apr. 26, 1945	225.5	-	1953	May 31, June 1	21.7	-
				1954	May 16, 1954	18.3	-
1946	Feb. 12-13, 1946	21.3	-	1955	Apr. 15, 1955	18.0	-
1947	Apr. 12, 1947	21.3	-				
1948	Feb. 14-16, Mar. 4	18.8	-	1956	Feb. 10, 1956	17.77	-
1949	Nov. 20, 1948	21.0	-	1957	June 30, 1957	18.76	-
				1958	May 29-30, 1958	22.40	-

a Maximum for period Feb. 6 to Sept. 30, 1941.

b Approximate; water over gage Apr. 17 to May 4, 1945.

3686. Bayou La Fourche cutoff near Oak Ridge, La.

Location.--Lat 32°36'45", long 91°42'10", in SE¹/₄ sec. 24, T. 19 N., R. 7 E., on line between Morehouse and Richland Parishes, at bridge on parish road, 0.5 mile southeast of its intersection with State Highway 134, 0.9 mile downstream from Boeuf River, 4.3 miles southeast of Oak Ridge, and 73.5 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Jan. 1, 1955; recording thereafter. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Moderate shifts have occurred. Annual discharge maxima computed from rating curves separately drawn on basis of current-meter measurements made in each year.

Remarks.--Bayou La Fourche cut-off receives its flow from Boeuf River when stages on Boeuf River exceed approximately 68.5 ft above mean sea level. Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1953. Only annual peaks are shown.

Peak stages and discharges of Bayou La Fourche cutoff near Oak Ridge, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 24, 1946	79.5	-	1953	Feb. 21, 1953	76.3	4,500
1947	Apr. 11, 1947	78.8	8,600	1954	May 12, 1954	72.2	10,400
1948	Feb. 22, 1948	77.8	6,900	1955	Mar. 24, 1955	76.6	15,400
1949	Jan. 4, 1949	75.7	5,200				
1950	Feb. 13, 1950	77.2	6,300	1956	Feb. 4, 1956	76.60	15,700
1951	Jan. 3, 1951	76.6	5,800	1957	Feb. 2, 1957	74.4	13,500
1952	Feb. 3, 1952	74.8	4,000	1958	May 5, 1958	79.28	22,200

3688. Bayou Galion north of Oak Ridge, La.

Location.--Lat 32°42'30", long 91°47'00", in NE $\frac{1}{4}$ sec.19, T.20 N., R.7 E., Morehouse Parish, at bridge on State Highway 133, 5.5 miles north of Oak Ridge and 14.4 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 70.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--12 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1950. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 11, 1942	12.2	-	1951	Jan. 3, 1951	11.6	-
1943	Dec. 28, 1942	9.7	-	1952	Jan. 28, 1952	9.8	-
1944	Mar. 30, 1944	10.9	-	1953	May 17, 1953	10.0	-
1945	Jan. 2, 1945	11.9	-	1954	May 2, 1954	11.0	-
				1955	Mar. 22, 1955	12.8	-
1946	Feb. 11, 1946	12.7	-				
1947	Apr. 12, 1947	13.8	-	1956	Feb. 4, 1956	10.7	-
1948	Feb. 13, 1948	10.9	-	1957	Apr. 4, 1957	11.05	-
1949	Jan. 4, 1949	10.6	-	1958	Sept.22, 1958	11.21	-
1950	Feb. 13, 1950	11.4	-				

a Records incomplete; probably maximum for year.

3689. Little Bayou Boeuf near Collinston, La.

Location.--Lat 32°29'35", long 91°56'10", in SE $\frac{1}{4}$ sec.3, T.19 N., R.5 E., on line between Morehouse and Ouachita Parishes, at bridge on State Highway 139, 3.0 miles downstream from Sandy Lick Bayou, 4.5 miles southwest of Collinston, and 13 miles upstream from mouth (confluence with Bayou LaFourche).

Drainage area.--67 sq mi. Due to interchange of flow between basins, the limits of drainage are arbitrarily determined.

Gage.--Crest-stage gage. Datum of gage is 30.70 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Not defined; one current-meter measurement made to date.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Mar. 12, 1950	44.24	-	1954	May 1, 1954	44.52	-
				1955	Apr. 15, 1955	45.01	-
1951	Jan. 3, 1951	44.34	-				
1952	Jan. 30, 1952	43.33	-	1956	Apr. 6, 1956	43.42	-
1953	May 22, 1953	44.20	-	1957	Apr. 4, 1957	43.29	-
				1958	May 1, 1958	44.37	-

3690. Bayou LaFourche near Crew Lake, La.

Location.--Lat 32°29'55", long 91°55'05", in SW $\frac{1}{4}$ sec.36, T.18 N., R.5 E., near center of span on downstream side of bridge on U. S. Highway 80, 1.1 miles upstream from Illinois Central Railroad bridge and 2.5 miles west of town of Crew Lake.

Drainage area.--361 sq mi. (See Remarks.)

Gage.--Nonrecording prior to Aug. 11, 1944, and June 6 to Sept. 29, 1952; recording during remainder of time. Prior to Sept. 30, 1952, at datum 19.00 ft higher. Datum of present gage is 37.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Corps of Engineers). Since Oct. 1, 1957, auxiliary recording gage 9.5 miles downstream. Datum of auxiliary gage is at mean sea level.

Stage-discharge relation.--Defined by current-meter measurements; affected occasionally by backwater. Moderate high-water shifts have occurred. Discharge computed by using fall as a factor since October 1957.

Bankfull stage.--21 ft.

Remarks.--Major channel improvements made during 1952-53. Interconnecting system of bayous and drainage ditches produce an interchange of flow; hence, the drainage limits were arbitrarily determined. Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	December 1931	a9.30	b17,800	1949	Feb. 6, 1949	7.34	5,880
1939	Jan.17-20, 1939	6.60	c3,920		Feb. 11, 1949	7.35	5,880
	Feb. 7-11, 1939	7.00	4,870		Apr. 5, 1949	7.46	6,240
	Mar.1-5, 1939	6.80	c4,370	1950	Jan. 8, 1950	6.97	3,960
1940	Apr.13-14, 1940	7.50	7,490		Jan. 14, 1950	7.18	4,840
	May 2, 1940	7.27	c6,770		Jan. 28, 1950	7.03	4,300
	July 16, 1940	6.98	c5,690		Feb. 3, 1950	7.00	4,120
1941	Nov.28-29, 1940	6.60	4,040		Feb. 15, 1950	8.73	11,300
	Dec. 10, 1940	6.44	c3,520		Feb. 23, 1950	7.86	7,440
	Mar. 9, 1941	6.36	c3,520		Mar. 2, 1950	7.73	7,020
1942	Nov. 11, 1941	6.53	c3,860	1951	Mar. 29, 1950	6.81	3,510
	Nov. 29, 1941	6.60	c4,040		May 4, 1950	7.64	6,620
	Mar.14-16, 1942	6.50	c4,010	1952	Jan. 6, 1951	8.53	10,400
	Apr. 12, 1942	7.90	9,230		Feb. 8, 1951	7.17	c4,760
1943	Mar.20-21, 1943	5.98	2,130		Dec. 23, 1951	7.36	c6,570
1944	Mar.1-3, 1944	7.30	c6,750	1953	Jan. 30, 1952	7.39	c6,730
	Apr. 4-12, 1944	7.60	c8,040		Apr. 25, 1952	7.65	8,200
	May 6-7, 1944	7.70	8,480		Feb. 22, 1953	24.74	c7,650
1945	Jan.10-11, 1945	8.03	c9,640		Mar. 13, 1953	24.32	c7,170
	Mar. 6, 1945	7.54	c6,920		Apr. 30, 1953	24.21	8,340
	Mar. 21, 1945	8.14	10,200		May 6, 1953	25.19	9,910
	Apr. 4, 1945	8.08	c9,920		May 18, 1953	26.56	12,000
	Apr. 17, 1945	7.62	c5,790	1954	Jan. 11, 1954	18.78	c3,800
1946	Jan. 20, 1946	8.26	10,800		Jan. 31, 1954	18.60	c3,800
	Feb. 12, 1946	8.78	13,500		May 4, 1954	21.94	c11,400
					May 13, 1954	24.06	13,800
1947	Jan. 21, 1947	8.02	8,530	1955	Feb. 7, 1955	17.62	c6,300
	Mar. 16, 1947	7.01	4,660		Feb. 22, 1955	16.64	c5,610
	Apr. 13, 1947	9.72	16,900		Mar. 25, 1955	25.28	20,800
					Apr. 14, 1955	22.28	c11,900
1948	Feb. 15, 1948	8.44	10,700		July 15, 1955	16.20	c5,350
	Mar. 4, 1948	7.67	7,010	1956	Feb. 6, 1956	25.25	20,600
1949	Nov. 23, 1948	6.85	4,170		Feb. 20, 1956	20.14	10,900
	Dec. 19, 1948	6.87	4,170		Mar. 16, 1956	22.53	13,600
	Jan. 6, 1949	7.52	6,430		Apr. 7, 1956	23.59	16,200
				1957	Dec. 14, 1956	13.01	3,930

a From floodmark.

b Annual peak only.

c Mean daily.

Peak stages and discharges of Bayou LaFourche near Crew Lake, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Dec. 23, 1956	17.50	6,950	1958	Feb. 16, 1958	e15.30	4,330
	Jan. 6, 1957	17.30	6,800		Feb. 28, 1958	13.90	3,960
	Feb. 2, 1957	24.40	c15,800		Mar. 10, 1958	15.72	5,490
	Feb. 19, 1957	16.90	c5,000		Mar. 25, 1958	-	c6,000
	Feb. 26, 1957	20.56	c9,500		May 2, 1958	g27.50	26,800
	Apr. 5, 1957	d24.20	17,000		May 22, 1958	25.60	c15,100
1958	Nov. 9, 1957	e16.24	5,800		June 17, 1958	22.21	4,620
	Nov. 20, 1957	f26.19	c22,800		June 23, 1958	21.03	4,620
	Dec. 8, 1957	18.92	c4,900		June 28, 1958	19.34	4,050
	Jan. 16, 1958	d16.60	5,270		July 10, 1958	e17.37	c4,450
	Jan. 22, 1958	22.36	10,700		Sept. 14, 1958	17.52	7,240
					Sept. 24, 1958	26.54	c23,400

c Mean daily.

d Occurred on following day.

e Occurred on preceding day.

f Occurred Nov. 23, 1957.

g Occurred May 6, 1958.

3690.5. Bayou LaFourche near Alto, La.

Location.--Lat 32°23'50", long 91°59'35", in SE $\frac{1}{4}$ sec.6, T.16 N., R.5 E., on line between Ouachita and Richland Parishes, at bridge on State Highway 15, 8 miles northwest of Alto and 40.2 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 8, 1947; recording thereafter. Prior to Jan. 1, 1952, at datum 47.58 ft higher. Datum of present gage is at mean sea level, datum of 1929, supplementary adjustment of 1941. All gage heights adjusted to present datum.

Stage-discharge relation.--Not defined.

Bankfull stage.--59 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1952. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb.10-12, 1939	60.2	-	1950	Feb. 16, 1950	61.7	-
1940	May 3-4, 1940	60.8	-	1951	Jan. 8, 1951	61.4	-
1941	(a)	59.8	-	1952	Apr. 26, 1952	53.4	-
1942	Apr. 14, 1942	60.9	-	1953	May 21, 1953	59.6	-
1946	Feb. 16, 1946	62.0	-	1954	May 13, 1954	57.4	-
1947	Apr. 23, 1947	63.8	-	1955	Mar. 26, 1955	58.8	-
1948	Feb.16-17, 1948	61.6	-	1956	Feb. 6, 1956	58.95	-
1949	Apr. 7, 1949	60.6	-	1957	Feb. 3, 1957	58.1	-
				1958	May 8, 1958	61.27	-

a Dec. 1-3, 7, 11-12, 1940.

3691. Bayou LaFourche cutoff near Columbia, La.

Location.--Lat 32°09'21", long 92°00'41", in NE $\frac{1}{4}$ sec.36, T.14 N., R.5 E., Caldwell Parish, at bridge on State Highway 133, 5 miles northeast of Columbia and 8.4 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Oct. 9, 1951; recording thereafter. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--56 ft.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Bayou LaFourche cutoff near Columbia, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Apr. 2, 1951	52.85	-	1955	Mar. 28, 1955	53.18	-
1952	Apr. 27, 1952	52.73	-				
1953	June 1, 1953	59.03	-	1956	Feb. 10, 1956	53.88	-
1954	May 14, 1954	51.99	-	1957	June 30, 1957	55.80	-
				1958	May 30, 1958	59.62	-

3693.2. Ouachita River at Stafford Point Landing, La.

Location.--Lat 31°51'20", long 91°47'15", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.10 N., R.7 E., Catahoula Parish, at Stafford Point Landing, immediately downstream from Boeuf River at mile 24.3.

Drainage area.--18,610 sq mi.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar.26-28, 1948	52.8	-	1954	May 20-22, 1954	45.7	-
1949	Feb.26, Mar.2	55.2	-	1955	Apr.17-19, 1955	50.3	-
1950	Mar. 8, 1950	59.2	-				
1951	Mar.31, Apr.3	51.7	-	1956	Mar.19-20, 1956	48.0	-
1952	May 3-10, 1952	52.2	-	1957	June 28-30, 1957	55.5	-
1953	May 28, June 1	58.2	-	1958	May 30-31, 1958	58.2	-

3693.3. Black Bayou near Sicily Island, La.

Location.--Lat 31°49'40", long 91°42'45", in lot 42, T.10 N., R.7 E., at bridge on State Highway 8, 3.5 miles southwest of Sicily Island.

Drainage area.--6.5 sq mi.

Gage.--Crest-stage gage. Datum of gage is 18.37 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	43.60	-	1956	Feb. 9, 1956	44.03	-
1955	Apr. 13, 1955	43.83	-	1957	Apr. 1, 1957	43.13	-
				1958	June 14, 1958	43.74	-

3693.4. Ouachita River at lock and dam No. 2, at Harrisonburg, La.

Location.--Lat 31°46'30", long 91°48'55", in lot 42, T.9 N., R.6 E., Catahoula Parish, in upper pool of lock and dam No. 2, 0.3 mile upstream from bridge on State Highway 8, 0.4 mile northeast of Harrisonburg, and at mile 16.7.

Drainage area.--18,793 sq mi.

Gage.--Nonrecording. Datum of gage is 0.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records since September 1908 and occasional current-meter measurements December 1931 to March 1932 at site 7 miles upstream, and June 1933 and February and March 1937 at bridge on State Highway 8 collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 9-12, 1909	49.9	-	1934	Apr. 16-20, 1934	48.0	-
1910	Mar. 22-27, 1910	41.9	-	1935	May 23-27, 1935	54.2	-
1911	May 15-18, 1911	47.8	-	1936	May 5-8, 1936	42.6	-
1912	May 14, 1912	64.3	-	1937	Mar. 5-8, 1937	57.9	-
1913	May 14-15, 1913	57.7	-	1938	Apr. 23-24, 1938	55.0	-
1914	Apr. 21, 26, 1914	51.4	-	1939	Mar. 30, Apr. 6	53.6	-
1915	Mar. 20-23, 1915	51.0	-	1940	May 8-12, 1940	47.6	-
1916	Mar. 3-7, 1916	60.7	-	1941	May 17-19, 1941	44.8	-
1917	May 2-8, 1917	49.7	-	1942	May 19-22, 1942	52.5	-
1918	May 8-11, 1918	42.6	-	1943	June 17, 1943	48.1	-
1919	Apr. 18, 1919	49.4	-	1944	May 23, 26, 1944	55.8	-
1920	June 3-4, 1920	56.3	-	1945	Apr. 24, May 2	60.5	-
1921	Apr. 1-3, May 7-12	52.7	-	1946	Feb. 20-23, 1946	55.8	-
1922	May 21, 1922	62.6	-	1947	Apr. 25-28, 1947	51.0	-
1923	Apr. 15-19, 1923	54.0	-	1948	May 19-23, 1948	52.2	-
1924	Jan. 16-17, 1924	51.3	-	1949	Mar. 31, Apr. 4	54.5	-
1925	Mar. 10-11, 1925	33.0	-	1950	Mar. 6-8, 1950	58.2	-
1926	Apr. 12-16, 23-24	46.6	-	1951	Apr. 2-3, 1951	51.3	-
1927	May 17-19, 1927	67.2	-	1952	May 5-8, 1952	51.9	-
1928	May 21-22, 1928	50.3	-	1953	May 26-31, 1953	57.4	-
1929	June 14, 17, 1929	54.6	-	1954	May 20-22, 1954	44.9	-
1930	June 11-14, 1930	51.7	-	1955	Apr. 17-19, 1955	49.7	-
1931	Mar. 9, 1931	35.6	-	1956	Mar. 19, 1956	47.2	-
1932	Mar. 5-8, 1932	58.5	-	1957	June 28-30, 1957	54.8	-
1933	May 9-14, 1933	52.4	-	1958	May 28-31, 1958	56.4	-

3693.8. Tensas Bayou near Transylvania, La.

Location.--Lat 32°42'50", long 91°16'10", between secs. 17 and 20, T.20 N., R. 12 E., East Carroll Parish, at bridge on State Highway 581, 500 ft downstream from Swan Lake and 5½ miles northwest of Transylvania.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 67.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 700 cfs and extended above. Annual discharge maxima computed from average rating curve based on all available high-water current-meter measurements.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel improvements made during 1956. Only annual peaks are shown.

Peak stages and discharges of Tensas Bayou near Transylvania, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Nov. 29, 1940	11.0	425	1950	Feb. 15, 1950	15.0	720
1942	Apr. 10, 1942	12.5	535				
1943	Mar. 28, 1943	9.0	285	1951	Jan. 5-7, 1951	14.5	680
1944	May 8, 1944	12.9	565	1952	Apr. 23, 1952	8.8	270
1945	Apr. 3, 1945	13.1	575	1953	May 19, 1953	16.0	790
				1954	May 13, 1954	11.5	460
1946	Feb. 11, 1946	17.5	910	1955	Mar. 24, 1955	10.0	350
1947	Apr. 13-14, 1947	16.8	855				
1948	Feb. 15, 1948	14.9	710	1956	Apr. 7, 1956	11.8	310
1949	Jan. 6, 1949	17.0	870	1957	Feb. 2, 1957	10.5	440
				1958	May 2, 1958	14.7	1,600

3694. Tensas Bayou near Alsatia, La.

Location.--Lat 32°36'40", long 91°17'50", between secs. 24 and 25, T.19 N., R.11 E., at bridge on State Highway 580 at Ditch No. 2, 0.7 mile upstream from Maiden Doe Bayou and 6½ miles west of Alsatia.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not adequately defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 12, 1947	80.1	-	1953	May 18, 1953	79.0	-
1948	Feb. 14, 1948	78.5	-	1954	May 13, 1954	77.2	-
1949	Nov. 20, 1948	80.4	-	1955	Apr. 13, 1955	76.0	-
1950	Feb. 13, 1950	78.5	-				
				1956	Feb. 4, 1956	78.0	-
1951	Mar. 28, 1951	78.5	-	1957	Feb. 2, 1957	76.4	-
1952	Apr. 24, 1952	74.4	-	1958	May 2, 1958	79.4	-

3695. Tensas River at Tendal, La.

Location.--Lat 32°25'55", long 91°22'00", in NW¼ sec. 29, T.17 N., R.11 E., near left bank on upstream side of bridge on U. S. Highway 80 at Tendal, 200 ft upstream from Illinois Central Railroad bridge and 3 miles east of Waverly.

Drainage area.--309 sq mi.

Gage.--Nonrecording prior to Sept. 14, 1954; recording thereafter. Prior to July 11, 1944, at site 1,000 ft upstream at same datum. Datum of gage is 50.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Auxiliary nonrecording gage since Feb. 19, 1945. Prior to Nov. 28, 1951, at site 9.5 miles downstream at different datum. Nov. 28, 1951, to Sept. 30, 1957, at site 8.5 miles downstream at datum 0.31 ft lower. Since Oct. 1, 1957, at site 8.5 miles downstream at same datum.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall and shifts. Since 1946, high-water discharge computed by using fall as a factor.

Remarks.--Record prior to 1943 computed by Corps of Engineers and reviewed by Geological Survey. Small diversions above station for irrigation. Interconnecting systems of bayous and drainage ditches produce an interchange of flow; hence, the drainage limits were arbitrarily determined. Base for partial-duration series, 1,400 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges of Tensas River at Tendam, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	May 15, 1927	834.02	-	1949	Nov. 19, 1948	24.78	b4,610
1931	December 1931	25.2	-		Dec. 18, 1948	15.19	b1,530
1936	May 2, 1936	18.1	2,200		Jan. 5, 1949	22.52	3,640
1937	Jan. 26, 1937	16.3	1,640		Jan. 23, 1949	16.24	1,750
1938	Apr. 10, 1938	19.5	2,720		Feb. 5, 1949	14.38	b1,400
1939	Feb. 28, 1939	15.4	b1,460		Feb. 11, 1949	16.13	1,730
	Mar. 31, 1939	17.0	1,650		Mar. 28, 1949	21.55	2,910
	Apr. 7, 1939	16.1	b1,500	1950	Feb. 16, 1950	22.35	3,550
1940	May 2, 1940	19.18	b2,320		Mar. 2, 1950	15.54	1,590
	July 15, 1940	19.56	2,440		Mar. 14, 1950	16.45	2,040
1941	Nov. 27, 1940	16.50	1,600		May 3, 1950	17.49	2,160
	Dec. 17, 1940	15.46	b1,400	1951	Jan. 5, 1951	21.23	2,700
1942	Mar. 10, 1942	15.88	b1,560		Jan. 15, 1951	16.37	1,500
	Apr. 11-12, 1942	17.00	1,850		Feb. 8, 1951	18.90	2,610
1943	Mar. 28, 1943	14.20	1,200		Mar. 29, 1951	24.10	4,020
1944	Feb. 26-27, 1944	16.58	b1,640	1952	Mar. 12, 1952	14.26	b1,560
	Mar. 31, 1944	21.50	2,270		Apr. 25, 1952	15.75	1,940
	May 7, 1944	18.00	2,040	1953	Feb. 22, 1953	15.83	1,480
1945	Mar. 22-23, 1945	20.20	b2,280		Mar. 13, 1953	17.91	2,120
	Apr. 3-4, 1945	19.95	b2,050		May 3-5, 1953	18.69	2,000
	June 17-18, 1945	17.16	1,520		May 18, 1953	24.00	2,910
1946	Jan. 11, 1946	23.5	3,050	1954	May 14-15, 1954	-	b1,400
	Feb. 12-13, 1946	24.2	b2,980	1955	Feb. 7, 1955	15.43	b1,530
	Mar. 18, 1946	17.50	b1,530		Apr. 14, 1955	17.32	1,780
	Mar. 28, 1946	17.22	b1,590	1956	Feb. 5, 1956	21.77	3,210
	May 21, 1946	17.80	b2,050		Mar. 16, 1956	18.47	b2,240
	May 26, 1946	18.41	b2,140		Mar. 23, 1956	15.22	b1,420
1947	Jan. 19, 1947	21.94	b2,830		Apr. 7, 1956	20.00	b2,600
	Apr. 11, 1947	22.20	b2,920	1957	Dec. 24, 1956	15.44	b1,740
	May 22, 1947	16.32	b1,640		Feb. 2, 1957	17.70	2,220
1948	Feb. 14, 1948	18.86	b1,680		Apr. 5, 1957	17.21	b1,880
	Mar. 7, 1948	19.34	b1,590		June 29, 1957	18.56	1,830
	Aug. 10, 1948	15.96	b1,980	1958	Nov. 19, 1957	21.14	2,850
					Jan. 25, 1958	15.34	1,480
					Feb. 28, 1958	14.93	1,490
					Mar. 25, 1958	17.49	b2,040
					May 1, 1958	23.07	3,900
					Sept. 23, 1958	20.33	b2,550

a Affected by overflow from Mississippi River.

b Mean daily.

Note.--Peak stage frequently occurs on different day than peak discharge.

3696. Tensas River near Tendam, La.

Location.--Lat 32°15'55", long 91°25'55", in SW $\frac{1}{4}$ sec. 22, T. 15 N., R 10 E., Madison Parish, on west bank of Tensas River immediately east of gravel road, 12 miles southwest of Tendam and at mile 104.7.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 21, 26, 1947	66.3	-	1953	May 19, 1953	68.0	-
1948	Mar. 8, 1948	63.3	-	1954	May 5, 1954	56.5	-
1949	Nov. 22, 1948	a67.5	-	1955	Apr. 15, 1955	60.5	-
1950	Feb. 15, 1950	64.9	-	1956	Feb. 6, 1956	64.2	-
1951	Mar. 30, 1951	68.2	-	1957	June 30, 1957	59.0	-
1952	Apr. 25, 1952	56.6	-	1958	May 6, 1958	64.9	-

a Records incomplete; probably maximum for year.

3696.2. Alligator Bayou near Tallulah, La.

Location.--Lat 32°17'20", long 91°13'05", in NE corner of sec.22, T.15 N., R.12 E., at bridge on U. S. Highway 65, 8.5 miles south of Tallulah.

Drainage area.--28 sq mi.

Gage.--Crest-stage gage. Datum of gage is 31.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	42.12	-	1956	Feb. 17, 1956	34.92	-
1955	May 14, 1955	34.00	-	1957	Apr. 4, 1957	32.99	-
				1958	Nov. 19, 1957	43.07	-

3696.4. Bayou Vidal at Quimby, La.

Location.--Lat 32°14'00", long 91°12'55", on line between secs.4 and 5, T.15 N., R.12 E., at bridge on U. S. Highway 65, on Tensas-Madison Parish line.

Drainage area.--160 sq mi.

Gage.--Crest-stage gage. Datum of gage is 24.00 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	45.18	-	1956	Feb. 11, 1956	45.53	-
1955	Apr. 11, 1955	45.35	-	1957	Apr. 4, 1957	42.90	-
				1958	May 1, 1958	45.44	-

3696.45 Tensas River at Newlight, La.

Location.--Lat 32°06'10", long 91°26'00", in S½ sec.15, T.13 N., R.10 E., Tensas Parish, on left bank at Newlight, 100 ft east of center of line of ferry road, 200 ft north of Newlight store, 1 mile upstream from Mound Bayou, and 66.3 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 24.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--40 ft.

Remarks.--Gage-height records since April 1942 and occasional current-meter measurements at site 5 miles downstream at bridge on State Highway 4, since January 1947 collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Tensas River at Newlight, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 16, 1942	28.8	-	1951	Mar. 30, 1951	34.9	-
1943	June 15-18, 1943	24.3	-	1952	May 3-8, 1952	27.1	-
1944	May 23, 1944	31.9	-	1953	May 20-21, 1953	36.1	-
1945	Apr. 28, May 2	36.5	-	1954	May 15, 1954	20.2	-
				1955	Apr. 14, 1955	28.2	-
1946	Feb. 12-15, 1946	34.9	-				
1947	Apr. 22, 1947	30.9	-	1956	Mar. 18, 1956	24.60	-
1948	Mar. 7-18, 1948	27.8	-	1957	July 1, 1957	30.50	-
1949	Apr. 1, 1949	35.9	-	1958	May 29-30, 1958	31.40	-
1950	Mar. 5-9, 16, 1950	34.0	-				

a Maximum for period Apr. 18 to Sept. 30, 1942.

3696.8. Bayou Macon at Eudora, Ark.

Location.--Lat 33°06'00", long 91°15'10", on line between and near south edge of secs. 25 and 30, T. 18 S., R. 12 E., on downstream side of bridge on new U. S. Highway 65, 0.9 mile southeast of Eudora.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 23, 1948; recording thereafter. Prior to July 17, 1952, at bridge on old U. S. Highway 65, 0.2 mile upstream at present datum. Datum of gage is 80.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements. Affected by fall and shifts.

Bankfull stage.--18 ft.

Remarks.--Gage-height records and discharge measurements furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	December 1931	26.2	3,570	1948	Feb. 14, 1948	23.5	3,110
1938	Apr. 8, 1938	19.0	2,260	1949	Feb. 5, 1949	22.4	2,790
1939	Feb. 28, 1939	20.4	2,600	1950	Mar. 30, 1950	24.9	3,300
1940	July 9, 1940	17.4	1,830	1951	Jan. 4, 1951	21.0	2,530
1941	Mar. 9, 1941	14.6	1,360	1952	Jan. 29, 1952	18.0	1,930
1942	Apr. 10, 1942	23.0	2,620	1953	May 23-24, 1953	24.9	3,680
1943	Mar. 27, 1943	19.3	1,850	1954	May 4, 1954	19.0	2,260
1944	Apr. 11, 1944	22.7	2,550	1955	Mar. 22, 1955	22.0	2,750
1945	Apr. 11, 1945	24.1	2,910	1956	Feb. 21, 1956	21.4	2,620
1946	Jan. 23-25, 1946	25.9	3,420	1957	Feb. 2, 1957	18.7	2,050
1947	Apr. 12, 1947	23.6	3,130	1958	May 22, 1958	27.43	5,100

3697.2. Bayou Macon near Oak Grove, La.

Location.--Lat 32°51'35", long 91°20'30", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 22 N., R. 11 E., on line between East Carroll and West Carroll Parishes, at bridge on State Highway 2, 2.8 miles east of Oak Grove and 125.1 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 68.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not adequately defined.

Bankfull stage.--27 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 11, 1947	24.7	-	1950	Feb. 14, 1950	22.5	-
1948	Feb. 13-14, 1948	22.1	-				
1949	Jan. 4, 1949	21.5	-	1951	Jan. 4, 1951	21.7	-

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Peak stages and discharges of Bayou Macon near Oak Grove, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Jan. 28, 1952	18.9	-	1956	Mar. 14, 1956	19.77	-
1953	May 17, 1953	22.2	-	1957	Feb. 2, 1957	19.4	-
1954	May 4, 1954	17.8	-	1958	Sept. 21, 1958	23.55	-
1955	Mar. 22, 1955	22.6	-				

3698.3. Bayou Macon near Floyd, La.

Location.--Lat 32°42'00", long 91°22'40", on line between secs.19 and 20, T.20 N., R.11 E., on line between East Carroll and West Carroll Parishes, on right bank of bayou at dead end of parish road, 2.2 miles northeast of Floyd, 4.1 miles southeast of Pioneer, and 4.6 miles northeast of Darnell.

Drainage area.--Indeterminate.

Gage.--Crest-stage gage. Datum of gage is 63.97 ft above mean sea level (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 3, 1951	17.84	-	1955	Mar. 28, 1955	18.75	-
1952	Jan. 31, 1952	14.80	-				
1953	May 23, 1953	19.66	-	1956	Mar. 16, 1956	17.18	-
1954	May 1, 1954	8.22	-	1957	Apr. 7, 1957	16.91	-
				1958	Apr. 30, 1958	21.88	-

3700. Bayou Macon near Delhi, La.

Location.--Lat 32°27'20", long 91°28'30", in SE¹/₄ sec.18, T.17 N., R.10 E., near right bank on downstream side of pier of bridge on U. S. Highway 80, 150 ft upstream from Illinois Central Railroad bridge and 1 mile east of Delhi.

Drainage area.--782 sq mi. (See Remarks.)

Gage.--Nonrecording prior to Mar. 15, 1949; recording thereafter. Prior to July 13, 1944, at railroad bridge 150 ft upstream at same datum. Datum of gage is 50.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Auxiliary nonrecording gage since Feb. 16, 1945, at site 7.5 miles upstream.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall and by shifts.

Historical data.--A stage of 37.5 ft occurred in 1882, caused by overflow from Mississippi River, from information by U. S. Weather Bureau.

Remarks.--Records furnished by U. S. Weather Bureau 1885-95 and by Corps of Engineers 1926-38. Interconnecting system of bayous and drainage ditches produce an interchange of flow under varying conditions; hence, the drainage limits are arbitrarily determined. Base for partial-duration series, 2,500 cfs. Only annual peaks are shown prior to 1937.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	-	37.50	-	1893	June 5-7, 1893	33.50	-
1885	May 21, 1885	24.80	-	1894	Mar. 25-26, 1894	19.80	-
1886	May 10-13, 1886	31.20	-	1895	Mar. 20, 1895	10.80	-
1887	Mar. 29-31, 1887	30.70	-	1926	Nov. 7, 1925	18.00	3,750
1888	May 6-7, 1888	22.00	-	1927	May 10-11, 1927	a34.60	-
1889	Jan. 29-30, 1889	11.40	-	1928	Apr. 24-25, 1928	18.80	11,070
1890	Apr. 6-8, 25-27	31.70	-	1929	Mar. 25-26, 1929	21.60	5,190
1891	Apr. 15-23, 1891	26.70	-	1930	May 22-23, 1930	23.30	5,900
1892	June 7-10, 1892	30.40	-	1931	Apr. 2, 1931	8.50	1,300

a Affected by overflow from Mississippi River; discharge not determined.

Note.--Peak stage frequently occurs on different day than peak discharge.

Peak stages and discharges of Bayou Macon near Delhi, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan.15-16, 1932	24.20	6,280	1948	Feb. 16, 1948	22.76	4,560
1933	Mar. 3, 1933	19.70	4,430		Mar. 7, 1948	21.94	b4,160
					Apr. 17, 1948	15.48	2,740
1934	Mar. 6, 1934	19.70	4,430	1949	Nov. 20, 1948	24.23	b4,060
1935	Mar. 13, 1935	18.70	4,030		Dec. 19, 1948	18.07	b3,330
1936	May 1-2, 1936	12.50	2,180		Jan. 6, 1949	23.90	4,730
1937	Jan. 27, 1937	18.00	3,760		Jan. 24, 1949	19.44	b3,610
					Feb. 10, 1949	20.89	b3,950
1938	Jan. 3, 1938	15.10	b2,700		Mar. 31, 1949	22.12	b3,540
	Apr.10-11, 1938	20.70	4,830		May 5, 1949	15.22	b2,670
1939	Feb.3-4,28,1939	17.40	b3,590	1950	Jan. 14, 1950	19.15	3,460
	Mar.1-2, 1939	17.90	3,760		Feb. 14, 1950	25.02	4,240
	Apr. 1, 1939	15.10	b2,830		Mar.15-16, 1950	20.13	b3,100
	Apr. 9, 1939	16.50	b3,280		Apr. 1, 1950	19.72	b3,410
					May 4, 1950	20.35	b3,690
1940	Apr. 22, 1940	14.93	b2,610		June 6, 1950	17.05	b3,010
	May 2, 1940	17.92	b3,150	1951	Jan. 7, 1951	22.96	4,230
	July 14, 1940	19.05	3,350		Feb. 10, 1951	20.84	b3,790
1941	Nov. 26, 1940	15.03	2,620		Mar. 7, 1951	14.87	2,560
1942	Apr.13-14, 1942	21.95	5,330		Mar. 30, 1951	22.31	3,450
1943	Mar. 30, 1943	15.05	2,760	1952	Dec. 23, 1951	16.10	b2,990
1944	Feb. 29, 1944	17.83	3,700		Jan. 30, 1952	18.26	3,290
	Mar.30-31, 1944	21.55	4,420		Mar. 12, 1952	17.07	b3,050
	Apr. 26, 1944	17.86	b3,740		Apr. 26, 1952	18.20	b3,190
	May 5-6, 1944	20.89	b4,240	1953	Feb. 22, 1953	19.93	b3,370
	May 24, 1944	17.19	b3,460		Mar. 15, 1953	19.75	3,310
1945	Jan. 8, 1945	19.45	4,380		May 17, 1953	25.88	4,060
	Jan. 22, 1945	17.22	b3,480	1954	May 5, 1954	16.49	2,760
	Feb. 24, 1945	18.90	3,540		May 14, 1954	20.23	3,490
	Mar. 21, 1945	22.49	4,450	1955	Mar. 24, 1955	21.73	4,360
	Apr. 4, 1945	21.85	b3,950		Apr. 14, 1955	20.69	b3,570
	May 19, 1945	16.60	b2,600	1956	Feb. 17, 1956	21.86	b3,470
1946	Jan. 13, 1946	24.39	4,960		Mar. 16, 1956	21.60	b3,910
	Feb. 10, 1946	25.55	4,930		Apr. 7, 1956	19.54	b3,260
	Mar. 20, 1946	17.98	b3,160	1957	Feb. 2, 1957	20.70	b3,860
	May 27, 1946	15.34	2,600		Feb. 27, 1957	17.51	b3,080
1947	Jan. 21, 1947	22.78	4,330		Apr. 2, 1957	21.09	b3,580
	Mar. 16, 1947	15.99	b2,850	1958	Nov. 19, 1957	24.83	b4,220
	Apr. 14, 1947	25.58	5,460		Jan. 25, 1958	18.04	b2,900
					Mar. 26, 1958	19.17	b3,360
					May 1, 1958	26.00	b4,760

b Mean daily.

Note.--Peak stage frequently occurs on different day than peak discharge.

3701. Bayou Macon at Warsaw Bridge, near Delhi, La.

Location.--Lat 32°17'45", long 91°31'45", in SE¹ sec.10, T.15 N., R.9 E., on line between Franklin and Madison Parishes, at Warsaw Bridge on State Highway 577, 1.2 miles southeast of Lamar, 11 miles south of Delhi, and 63.1 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not adequately defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

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Peak stages and discharges of Bayou Macon at Warsaw Bridge near Delhi, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 1-3, 1939	61.4	-	1951	Mar. 31, 1951	67.2	-
1940	May 3, 1940	62.4	-	1952	Apr. 27, 1952	61.2	-
1941	Nov. 27, 1940	58.6	-	1953	May 19, 1953	70.5	-
1942	Apr. 17, 1942	64.3	-	1954	May 16, 1954	62.4	-
				1955	Apr. 17, 1955	63.8	-
1947	Apr. 20-21, 1947	68.2	-	1956	Feb. 11, 1956	65.49	-
1948	Mar. 6-8, 1948	64.9	-	1957	Apr. 8-9, 1957	63.7	-
1949	Nov. 22-23, 1948	68.0	-	1958	May 19, 1958	69.76	-
1950	Feb. 23, 1950	69.3	-				

3701.3. Tensas River at Kirks Ferry Landing, La.

Location.--Lat 31°51'50", long 91°34'20", in N $\frac{1}{2}$ sec. 8, T. 10 N., R. 9 E., on line between Catahoula and Tensas Parishes, at junction with Big Choctaw Bayou at Kirks Ferry Landing, 37.8 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--60 ft.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 22-23, 1947	53.0	-	1953	May 24-27, 1953	57.5	-
1948	Mar. 15-20, 1948	51.6	-	1954	May 20, 1954	44.0	-
1949	Mar. 31, Apr. 1	55.6	-	1955	Apr. 16, 1955	50.8	-
1950	Mar. 6-8, 1950	58.1	-				
				1956	Mar. 19, 1956	47.5	-
1951	Mar. 31, Apr. 1	54.5	-	1957	June 27-30, 1957	54.5	-
1952	May 6-8, 1952	51.4	-	1958	May 29 to June 1	55.4	-

3701.8. Tensas River at Clayton, La.

Location.--Lat 31°43'25", long 91°32'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T 9 N., R. 9 E., on line between Catahoula and Concordia Parishes, at bridge on State Highway 15 at Clayton, 27.3 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is 0.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected severely by backwater from Ouachita River. Reverse flows have occurred.

Bankfull stage.--55 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Tensas River at Clayton, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	May 4-8, 1917	45.5	-	1938	Apr. 21-22, 1938	54.4	-
1918	May 8-9, 1918	37.9	-	1939	Mar. 30, Apr. 1	53.6	-
1919	Apr. 19, 1919	44.9	-	1940	Apr. 20, 1940	50.0	-
1920	June 3-6, 1920	52.0	-				
1921	Apr. 27-29, 1921	49.5	-	1941	May 15-19, 1941	43.5	-
1922	Apr. 23, 1922	52.3	-	1942	May 17-19, 1942	51.7	-
1923	Apr. 15-16, 1923	54.3	-	1943	June 15-18, 1943	47.8	-
1924	Jan. 17-18, 1924	51.5	-	1944	May 24, 1944	55.2	-
1925	Mar. 10-12, 1925	32.5	-	1945	Apr. 26, May 2	60.1	-
1926	Apr. 11-14, 1926	45.9	-	1946	Feb. 20, 1946	55.5	-
1927	May 17-18, 1927	67.3	-	1947	Apr. 24, 1947	57.5	-
1928	May 26-27, 1928	49.4	-	1948	Mar. 17-18, 1948	51.2	-
1929	June 13-15, 1929	54.0	-	1949	Mar. 31, Apr. 1	54.7	-
1930	June 9-14, 1930	50.0	-	1950	Mar. 6, 1950	57.7	-
1931	Mar. 8-10, 1931	35.0	-	1951	Apr. 1-2, 1951	52.8	-
1932	Mar. 5-8, 1932	57.6	-	1952	May 6-9, 1952	51.0	-
1933	May 6, 1933	52.2	-	1953	May 25-27, 1953	57.0	-
1934	Apr. 21, 1934	46.4	-	1954	May 20, 1954	43.5	-
1935	May 24-25, 1935	54.2	-	1955	Apr. 16, 1955	49.9	-
1936	May 3-4, 1936	43.0	-	1956	Mar. 19, 1956	46.65	-
1937	Mar. 5-8, 1937	57.5	-	1957	June 29, 1957	54.16	-
				1958	June 1, 1958	54.86	-

a Gage overtopped; crest probably only slightly higher.

b Affected by overflow from Mississippi River.

3702. Castor Creek at Chatham, La.

Location.--Lat 32°19'10", long 92°26'15", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.15 N., R.1 W., Jackson Parish at bridge on State Highway 34, 0.2 mile upstream from Tremont and Gulf Railway Co. bridge, 0.6 mile upstream from Edwards Branch, and 1.0 mile northeast of Chatham.

Drainage area.--60.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 116.71 ft above mean sea level.

Stage-discharge relation.--Not defined; three discharge measurements made to date.

Historical data.--Maximum stage known, about 46.8 ft, from floodmarks, date unknown.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 24, 1950	44.10	-	1954	Dec. 2, 1953	(a)	-
				1955	Apr. 10, 1955	45.18	-
1951	Jan. 3, 1951	43.98	-				
1952	May 12, 1952	(a)	-	1956	Apr. 6, 1956	44.17	-
1953	May 17, 1953	46.09	-	1957	June 28, 1957	44.34	-
				1958	July 23, 1958	45.39	-

a Less than 43.1 ft; bottom of gage.

3703. Edwards Branch at Chatham, La.

Location.--Lat 32°18'40", long 92°26'45", in SW $\frac{1}{4}$ sec. 2, T.15 N., R.1 W., Jackson Parish, at bridge on State Highway 34, 100 ft upstream from Tremont and Gulf Railway Co. bridge, 0.5 mile northeast of Chatham, and 0.8 mile upstream from confluence with Bayou Castor.

Drainage area.--11.3 sq mi.

Gage.--Crest-stage gage. Datum of gage is 113.73 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges of Edwards Branch at Chatham, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 4, 1950	44.46	-	1954	Dec. 2, 1953	44.00	-
				1955	Apr. 10, 1955	45.26	-
1951	Jan. 3, 1951	44.67	-				
1952	May 12, 1952	(a)	-	1956	Apr. 5, 1956	44.65	-
1953	May 17, 1953	45.18	-	1957	June 28, 1957	44.74	-
				1958	July 23, 1958	45.30	-

a Less than 43.1 ft; bottom of gage.

3705. Castor Creek near Grayson, La.
(Published as "Bayou Castor" prior to 1958)

Location.--Lat 32°04'55", long 92°12'25", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.13 N., R.3 E., near center of span on downstream side of bridge on State Highway 126, 6 miles upstream from Beaucoup Creek and 6 $\frac{1}{2}$ miles northwest of Grayson.

Drainage area.--271 sq mi.

Gage.--Nonrecording prior to July 15, 1947; recording thereafter. Datum of gage is 89.89 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended by velocity-area studies.

Bankfull stage.--13 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Nov. 26, 1940	13.20	6,690	1950	Feb. 13, 1950	13.78	9,000
	Dec. 29, 1940	12.39	3,860		May 3, 1950	12.88	5,730
					June 5, 1950	12.20	4,000
1942	Nov. 3, 1941	11.78	3,060	1951	Jan. 5, 1951	12.40	4,450
	Nov. 26, 1941	11.85	3,060		Mar. 30, 1951	-	3,300
	Apr. 9, 1942	13.45	7,250				
	May 20, 1942	13.66	7,980	1952	Apr. 24, 1952	11.84	3,240
1943	Apr. 2, 1943	8.19	397				
1944	Mar. 31, 1944	12.05	3,520	1953	Feb. 24, 1953	11.62	2,730
	May 5, 1944	13.32	6,970		Mar. 14, 1953	12.61	4,920
					May 1, 1953	12.74	5,280
1945	Jan. 3, 1945	12.36	4,450		May 6, 1953	11.82	3,180
	Mar. 20, 1945	12.22	4,000		May 17, 1953	15.65	18,000
	Apr. 3, 1945	15.30	16,100	1954	May 5, 1954	11.66	2,830
1946	Jan. 10, 1946	12.68	5,170	1955	Mar. 24, 1955	12.38	4,450
	Jan. 17, 1946	11.90	3,350		Apr. 15, 1955	11.63	2,830
	Feb. 10, 1946	14.30	11,100				
	June 4, 1946	11.50	2,530	1956	Feb. 5, 1956	11.50	2,530
1947	Jan. 5, 1947	11.50	2,530		Apr. 8, 1956	11.58	2,690
	Jan. 14, 1947	11.70	2,930	1957	Feb. 3, 1957	11.21	2,000
	Jan. 19, 1947	13.10	6,370		Apr. 5, 1957	11.42	2,260
	Mar. 13, 1947	12.10	3,780		Apr. 21, 1957	11.72	2,800
	Apr. 11, 1947	16.25	21,200		June 30, 1957	12.30	4,120
1948	Feb. 13, 1948	12.72	5,170	1958	Nov. 14, 1957	12.38	4,360
1949	Nov. 19, 1948	11.26	2,160		Nov. 23, 1957	12.12	3,660
	Jan. 3, 1949	12.77	5,300		May 3, 1958	13.12	6,370
	Jan. 30, 1949	11.38	2,300		July 25, 1958	12.12	3,660
	Mar. 26, 1949	13.10	6,370		Sept. 21, 1958	12.66	5,000

3706. Beaucoup Creek near Cotton Plant, La.

Location.--Lat 32°06'40", long 92°19'20", in sec.13, T.13 N., R.1 E., Winn Parish, at bridge on State Highway 126, 3.3 miles west of Cotton Plant, 9.3 miles upstream from mouth (confluence with Castor Creek), and 13 miles northwest of Grayson.

Drainage area.--127 sq mi.

Gage.--Crest-stage gage. Datum of gage is 104.87 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; two discharge measurements made to date.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 5, 1951	10.54	-	1955	July 14-15, 1955	10.17	-
1952	May 12, 1952	9.62	-				
1953	May 17, 1953	13.18	-	1956	Apr. 6, 1956	9.82	-
1954	May 1, 1954	10.36	-	1957	June 22, 1957	10.67	-
				1958	Sept.21, 1958	11.56	-

3706.5. Flat Creek near Sikes, La.

Location.--Lat 32°04'45", long 92°27'50", in sec.27, T.13 N., R.1 W., Winn Parish, at bridge on State Highway 126, 1.5 miles east of Sikes and 4.4 miles upstream from Turkey Creek.

Drainage area.--41.5 sq mi.

Gage.--Crest-stage gage. Datum of gage is 122.27 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 30, 1951	9.85	-	1955	July 14, 1955	9.66	-
1952	May 12, 1952	9.46	-				
1953	May 17, 1953	12.56	-	1956	Apr. 6, 1956	9.76	-
1954	May 1, 1954	9.55	-	1957	June 22, 1957	9.76	-
				1958	Sept.21, 1958	11.43	-

3707. Beech Creek near Olla, La.

Location.--Lat 31°54'55", long 92°23'35", in SW $\frac{1}{4}$ sec.20, T.11 N., R.1 E., at bridge on State Highway 124, 9.0 miles west of Olla.

Drainage area.--58.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 51.80 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	41.30	-	1956	Feb. 13, 1956	41.63	-
1955	May 30, 1955	42.04	-	1957	June 29, 1957	42.27	-
				1958	Sept.21, 1958	44.46	-

3707.5. Big Chickasaw Creek near Olla, La.

Location.--Lat 31°52'30", long 92°13'35", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.10 N., R.2 E., at bridge on State Highway 127, 2 miles southeast of Olla.

Drainage area.--86.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 64.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	41.08	-	1956	Feb. 13, 1956	38.95	-
1955	Apr. 13, 1955	40.22	-	1957	June 22, 1957	40.58	-
				1958	Nov. 17, 1957	40.04	-

3708. Castor Creek at Tullos, La.

Location.--Lat 31°49'45", long 92°20'20", in sec.23, T.10 N., R.1 E., on line between LaSalle and Grant Parishes, at bridge on U. S. Highway 84, 0.9 mile west of Tullos and 3.8 miles upstream from confluence with Dugdemona River.

Drainage area.--923 sq mi.

Gage.--Crest-stage gage. Datum of gage is 42.93 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 28, 1951	27.20	-	1955	Apr. 13, 1955	20.84	-
1952	May 12, 1952	23.41	-				
1953	May 18, 1953	33.05	-	1956	Feb. 13, 1956	20.08	-
1954	May 1, 1954	21.17	-	1957	June 22, 1957	13.09	-
				1958	Nov. 17, 1957	24.74	-

3710. Garrett Creek at Jonesboro, La.

Location.--Lat 32°13'55", long 92°43'35", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.14 N., R.4 W., near right bank on downstream side of bridge on State Highway 4, 0.3 mile southwest of Jonesboro town limits and 0.9 mile upstream from Little Dugdemona River.

Drainage area.--2.14 sq mi.

Gage.--Recording. Datum of gage is 171.86 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Fairly well defined below 1,000 cfs and extended by section ratings.

Remarks.--Base for partial-duration series, 300 cfs.

Peak stages and discharges of Garrett Creek at Jonesboro, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Jan. 31, 1953	7.54	424	1957	May 23, 1957	7.84	536
	Feb. 20, 1953	7.72	488		June 27, 1957	7.41	368
	Apr. 24, 1953	9.87	1,670		Sept. 15, 1957	7.66	464
	May 4, 1953	7.74	496	1958	Nov. 7, 1957	7.83	530
	May 16, 1953	9.07	1,190		Nov. 16, 1957	7.82	525
1954	Dec. 3, 1953	7.74	496		Nov. 18, 1957	8.41	830
					Apr. 30, 1958	7.59	440
1955	Mar. 21, 1955	8.95	1,120		May 1, 1958	8.40	830
	Apr. 12, 1955	8.37	790		July 13, 1958	8.38	310
	May 24, 1955	8.41	820		July 22, 1958	9.43	1,510
	July 14, 1955	8.52	870		July 23, 1958	7.87	650
					Aug. 22, 1958	8.02	715
1956	Apr. 5, 1956	7.73	492		Sept. 17, 1958	7.55	532
					Sept. 18, 1958	6.76	320
1957	Apr. 27, 1957	7.78	512		Sept. 20, 1958	8.49	960

3715. Dugdemona River near Jonesboro, La.

Location.--Lat 32°12'25", long 92°48'05", in SW¹ sec. 8, T. 14 N., R. 4 W., on left bank just downstream from bridge on State Highway 4, 200 ft downstream from Brush Creek, 1.5 miles downstream from McDonald Creek, and 6 miles southwest of Jonesboro.

Drainage area.--347 sq mi.

Gage.--Recording. Datum of gage is 116.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs and extended on basis of records for station near Winnfield. Shifts in relation occur.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 5, 1939	13.99	4,290	1946	July 8, 1946	16.79	13,500
	Feb. 28, 1939	13.85	4,600				
1940	Feb. 10, 1940	13.95	4,690	1947	Jan. 5, 1947	13.71	4,220
	May 1, 1940	14.42	5,680		Jan. 10, 1947	13.23	3,300
	June 1, 1940	14.21	5,240		Jan. 19, 1947	15.16	8,040
	June 19, 1940	14.21	5,240		Mar. 15, 1947	14.09	5,120
1941	Nov. 26, 1940	14.00	4,800		Apr. 10, 1947	14.77	6,760
	Dec. 9, 1940	13.39	3,560	1948	Apr. 12, 1947	14.84	7,030
	Dec. 29, 1940	14.86	6,830		Feb. 11, 1948	14.18	5,360
	Mar. 9, 1941	13.27	3,370		Feb. 14, 1948	14.29	5,600
	May 7, 1941	15.06	7,210		Apr. 15, 1948	14.16	5,240
1942	Nov. 2, 1941	16.03	10,200	1949	Mar. 26, 1949	13.06	2,940
	Nov. 25, 1941	13.64	4,030				
	Apr. 11, 1942	14.28	5,560	1950	Feb. 14, 1950	15.90	9,460
	May 16, 1942	15.67	9,290		May 3, 1950	14.68	6,020
	May 19, 1942	17.64	16,600		June 5, 1950	15.25	7,320
1943	Mar. 31, 1943	11.56	1,270		June 23, 1950	14.86	6,390
1944	Feb. 28, 1944	15.52	7,820	1951	Jan. 5, 1951	13.68	4,080
	Mar. 31, 1944	14.59	5,380		Mar. 30, 1951	13.34	3,560
	May 4, 1944	15.37	7,520	1952	Jan. 31, 1952	13.23	3,310
					Apr. 15, 1952	13.06	3,000
1945	Jan. 1, 1945	19.87	30,600		Apr. 25, 1952	13.04	3,000
	Jan. 8, 1945	13.50	3,470	1953	Mar. 13, 1953	16.06	10,300
	Jan. 22, 1945	13.90	4,180		Apr. 30, 1953	17.39	15,400
	Mar. 6, 1945	13.94	4,200		May 6, 1953	13.88	4,370
	Apr. 2, 1945	18.72	23,000		May 17, 1953	18.78	23,500
1946	Jan. 9, 1946	15.91	10,300	1954	May 15, 1954	12.65	2,420
	Feb. 10, 1946	17.64	16,600				
	Mar. 29, 1946	14.13	5,240	1955	Mar. 23, 1955	14.75	6,280
	May 16, 1946	13.10	3,030		Apr. 14, 1955	13.94	4,500
	June 3, 1946	13.56	3,900				

Peak stages and discharges of Dugdemona River near Jonesboro, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 26, 1955	15.06	7,100	1956	Apr. 7, 1956	16.29	11,000
	July 16, 1955	13.45	3,640				
1956	Feb. 6, 1956	14.38	5,390	1957	Apr. 6, 1957	13.52	3,720
					Apr. 30, 1957	14.02	4,630
					June 30, 1957	13.10	3,070

3718. Big Creek near Dodson, La.

Location.--Lat 32°05'40", long 92°41'25", SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.13 N., R.3 W., at bridge on State Highway 126, 2 miles northwest of Dodson.

Drainage area.--81.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 86.75 ft above mean sea level, datum of 1929. (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Fairly well defined between 800 and 5,000 cfs and extended by logarithmic plotting.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	47.30	3,300	1956	Apr. 6, 1956	46.92	2,000
1955	July 14, 1955	47.20	2,870	1957	July 24, 1957	46.98	2,180
				1958	July 23, 1958	47.97	7,800

3720. Dugdemona River near Winnfield, La.

Location.--Lat 31°58'30", long 92°39'10", on line between secs.34 and 35, T.12 N., R.3 W., on right bank just downstream from bridge on U. S. Highway 167, 300 ft upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, 2.4 miles downstream from Kyiales Creek, and 3.5 miles north of Winnfield.

Drainage area.--654 sq mi.

Gage.--Nonrecording prior to Dec. 19, 1950; recording thereafter. Datum of gage is 81.14 ft above mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs and extended above. Moderate shifts in relation occur.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Feb.11-12, 1940	18.04	6,370	1946	Jan. 11, 1946	20.45	14,700
	May 5, 1940	17.10	4,520		Feb. 12, 1946	21.42	18,600
1941	Nov. 25, 1940	19.46	11,500		Mar. 31, 1946	17.76	6,310
	Dec. 14, 1940	16.97	4,350		May 16, 1946	16.95	4,620
	Dec. 31, 1940	18.30	7,250		July 11, 1946	18.25	7,450
	May 10, 1941	17.53	5,500	1947	Jan. 8, 1947	17.65	5,810
1942	Nov. 4, 1941	18.88	8,310		Jan. 21, 1947	18.88	9,640
	Apr. 13, 1942	17.50	5,280		Mar. 15, 1947	17.67	6,050
	May 21, 1942	20.10	13,900		Apr. 13, 1947	18.58	8,680
1943	Apr. 5, 1943	11.88	1,130	1948	Feb. 14, 1948	18.14	7,150
1944	Mar. 2, 1944	17.98	6,370		Feb. 22, 1948	17.78	6,310
	Apr. 2, 1944	17.78	5,870		Apr. 18, 1948	16.74	4,150
	May 6, 1944	19.79	12,700	1949	Jan. 6, 1949	17.07	4,790
1945	Jan. 3, 1945	22.86	25,000		Jan. 29, 1949	17.24	4,970
	Jan. 25, 1945	16.89	4,360		Mar. 27, 1949	18.73	9,000
	Apr. 4, 1945	22.26	22,300	1950	Jan. 15, 1950	16.68	4,150
					Feb. 16, 1950	19.45	11,300

Peak stages and discharges of Dugdemona River near Winnfield, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 6, 1950	17.93	6,580	1955	Apr. 18, 1955	16.85	4,690
	June 6, 1950	19.86	13,000		May 28, 1955	18.55	9,280
1951	Jan. 8, 1951	17.06	4,790		July 18, 1955	16.39	5,020
	Apr. 2, 1951	16.55	4,000	1956	Feb. 9, 1956	17.65	6,670
1952	Feb. 5, 1952	15.51	2,720		Apr. 9, 1956	19.14	10,800
1953	Feb. 27, 1953	16.68	4,270	1957	May 2, 1957	17.91	7,140
	Mar. 15, 1953	20.08	11,900		June 6, 1957	16.72	4,550
	May 1, 1953	21.94	18,800	1958	Nov. 18, 1957	19.36	11,200
	May 19, 1953	23.78	27,100		Nov. 22, 1957	19.56	11,800
1954	May 14-15, 1954	15.12	2,630		May 4, 1958	20.50	15,000
					May 24, 1958	17.37	6,010
1955	Mar. 27, 1955	16.97	4,910		July 25, 1958	19.20	10,600
					Sept. 22, 1958	21.16	17,400

3721. Port de Luce Creek at Winnfield, La.

Location.--Lat 31°56'15", long 92°39'05", in sec.14, T.11 N., R.3 W., Winn Parish, at bridge on U. S. Highway 167, 0.9 mile north of Winnfield, 1.2 miles upstream from Chicago, Rock Island and Pacific Railroad Co. bridge, and 3.2 miles upstream from mouth (confluence with Dugdemona River).

Drainage area.--31.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is 86.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Fairly well defined by current-meter measurements. May be subject to backwater from Dugdemona River.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 2, 1951	12.09	430	1955	Apr. 13, 1955	12.50	540
1952	May 12, 1952	13.66	940				
1953	May 17, 1953	16.88	7,140	1956	Feb. 12, 1956	12.74	600
1954	May 12, 1954	12.48	530	1957	Mar. 12, 1957	13.72	970
				1958	July 22, 1958	17.29	8,450

3721.9. Little River at Rochelle, La.

Location.--Lat 31°47'35", long 92°21'40", in sec.3, T 9 N., R.1 E., on line between Grant and LaSalle Parishes, at bridge on U. S. Highway 165, 0.1 mile downstream from confluence of Dugdemona River and Bayou Castor, 0.5 mile northeast of Rochelle, 3 miles southwest of Tullos, and 90.0 miles above mouth.

Drainage area.--1,871 sq mi.

Gage.--Nonrecording. Datum of gage is 24.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined; affected by backwater.

Bankfull stage.--31 ft.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Little River at Rochelle, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 30-31, 1939	38.8	-	1949	Mar. 27, 1949	41.5	-
1940	May 4, 1940	37.4	-	1950	Feb. 15, 1950	40.6	-
1941	Nov. 28, 1940	38.6	-	1951	Mar. 30, 1951	39.0	-
1942	Apr. 11, 1942	38.6	-	1952	Apr. 26, 1952	36.5	-
1943	Apr. 11, 1943	26.1	-	1953	May 19, 1953	50.9	-
1944	May 7, 1944	40.2	-	1954	May 6, 1954	34.2	-
1945	Apr. 5, 1945	42.2	-	1955	Apr. 16, 1955	34.2	-
1946	Feb. 11, 1946	43.0	-	1956	Feb. 13, 1956	34.70	-
1947	Jan. 23, 1947	38.2	-	1957	July 2, 1957	35.7	-
1948	Feb. 19, 1948	36.0	-	1958	Sept. 24, 1958	40.28	-

3723. Bear Creek near Packton, La.

Location.--Lat 31°47'05", long 92°34'40", in S½ sec. 4, T.9 N., R.2 W., at bridge on U. S. Highway 167, 0.9 mile south of Packton.

Drainage area.--11 sq mi.

Gage.--Crest-stage gage. Datum of gage is 88.50 ft above mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	44.02	-	1956	Feb. 13, 1956	(a)	-
1955	Apr. 13, 1955	44.10	-	1957	Apr. 28, 1957	45.87	-
				1958	July 22, 1958	48.33	-

a Less than 41.0 ft; bottom of gage.

3725. Bayou Funny Louis near Trout, La.

Location.--Lat 31°43'00", long 92°13'20", in SE¼NW¼ sec. 36, T.9 N., R.2 E., near left bank on downstream side of bridge on U. S. Highway 84, 0.4 mile downstream from Jumping Gully Creek, 3 miles northwest of Trout, and 12 miles upstream from mouth.

Drainage area.--92 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 4, 1945; recording thereafter. Datum of gage is 81.51 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended by logarithmic plotting.

Bankfull stage.--20 ft.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Feb. 6, 1940	15.80	1,820	1944	May 5, 1944	15.94	1,990
	Apr. 30, 1940	15.99	2,120	1945	Feb. 5, 1945	15.99	2,090
1941	Nov. 24, 1940	16.15	2,160		Mar. 4, 1945	15.97	2,090
	Dec. 27, 1940	15.82	2,020		Mar. 20, 1945	16.80	3,060
	May 6, 1941	15.59	1,940		Apr. 2, 1945	16.37	2,530
	May 31, 1941	16.18	2,170		June 15, 1945	16.52	2,660
1942	Feb. 16, 1942	16.67	2,920	1946	Jan. 9, 1946	16.33	2,470
	Mar. 8, 1942	15.83	1,900		Jan. 11, 1946	16.50	2,660
	Apr. 9, 1942	16.98	3,320		Jan. 16, 1946	15.87	1,940
1943	Apr. 9, 1943	16.88	2,170		Feb. 9, 1946	19.91	9,730
					Mar. 28, 1946	15.67	1,900

Peak stages and discharges of Bayou Furry Louis near Trout, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 18, 1947	16.77	2,970	1952	Apr. 23, 1952	16.84	3,250
	Apr. 11, 1947	17.13	3,560		Mar. 11, 1953	16.73	3,100
	Apr. 20, 1947	16.20	2,300		Mar. 15, 1953	16.73	3,100
1948	Apr. 14, 1948	16.35	2,460	1953	Apr. 29, 1953	20.55	13,600
					May 17, 1953	23.26	32,700
1949	Nov. 19, 1948	19.70	9,190	1954	May 1, 1954	18.03	5,170
	Nov. 28, 1948	15.81	1,960		Apr. 13, 1955	17.12	3,650
	Jan. 3, 1949	15.79	1,960	1956	Feb. 9, 1956	14.33	1,390
	Mar. 27, 1949	16.60	2,770		Dec. 23, 1956	15.91	2,110
	Apr. 30, 1949	15.86	2,000	1957	Apr. 1, 1957	15.48	1,970
1950	Feb. 13, 1950	18.21	5,530		June 28, 1957	15.40	1,940
	May 2, 1950	17.12	3,480	1958	November 1957	16.52	2,730
	June 3, 1950	16.46	2,580				
1951	Jan. 3, 1951	15.73	1,860				
	Mar. 28, 1951	19.73	9,190				

3730. Big Creek at Pollock, La.

Location.--Lat 31°32'10", long 92°24'30", in SW $\frac{1}{4}$ sec. 31, T.7 N., R.1 E., near right bank on downstream side of bridge on U. S. Highway 165, 0.5 mile upstream from Sugar Branch, 0.7 mile upstream from Missouri Pacific Railroad bridge and water-supply diversion dam, 0.8 mile north of Pollock, and 1.3 miles downstream from Dyson Creek.

Drainage area.--51 sq mi, approximately.

Gage.--Nonrecording prior to Feb. 25, 1942; recording thereafter. Prior to June 22, 1955, at site 0.3 mile downstream at same datum. Datum of gage is 76.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs and extended above. Shifts in relation occur.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 650 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Feb. 16, 1942	10.12	2,110	1951	Jan. 3, 1951	10.79	2,770
	Mar. 8, 1942	11.38	3,640		Feb. 7, 1951	8.56	1,150
	Apr. 9, 1942	11.82	4,460		Mar. 28, 1951	11.51	3,820
1943	Mar. 25, 1943	5.07	426		May 2, 1951	7.57	866
1944	May 5, 1944	7.71	865	1952	Feb. 2, 1952	7.70	891
					Apr. 23, 1952	12.64	5,940
1945	Apr. 1-2, 1945	9.46	1,610		May 24, 1952	6.64	657
1946	Jan. 8, 1946	10.70	2,660	1953	Mar. 1, 1953	9.95	1,880
	Jan. 11, 1946	8.03	1,010		Mar. 15, 1953	6.84	694
	Jan. 15, 1946	7.89	985		Apr. 24, 1953	16.90	23,500
	Feb. 9, 1946	11.95	4,870		May 4, 1953	10.49	2,420
	Mar. 28, 1946	6.87	775		May 17, 1953	16.17	20,100
	May 15, 1946	10.94	2,960	1954	May 1, 1954	9.13	1,320
1947	Jan. 16, 1947	10.10	2,110	1955	Feb. 5, 1955	6.58	653
	Apr. 11, 1947	13.65	10,100		Apr. 12, 1955	11.20	3,310
	Apr. 20, 1947	7.15	835	1956	Feb. 9, 1956	7.43	712
1948	Dec. 15, 1947	5.47	526		Apr. 1, 1957	8.30	915
1949	Nov. 18, 1948	9.96	1,980	1957	June 28, 1957	7.78	792
	Feb. 21, 1949	7.17	777		Nov. 14, 1957	8.02	831
	Mar. 25, 1949	7.20	777	1958	Nov. 15, 1957	9.33	1,160
	Mar. 27, 1949	10.95	2,960		Nov. 18, 1957	8.62	970
	Apr. 25, 1949	6.83	694		Apr. 26, 1958	15.14	10,200
1950	Feb. 13, 1950	14.52	13,700		Apr. 28, 1958	8.80	1,020
	Mar. 1, 1950	8.77	1,210		Apr. 30, 1958	8.18	876
	May 2, 1950	10.88	2,890		Aug. 23, 1958	7.09	650
	May 13, 1950	8.73	1,180		Aug. 24, 1958	9.49	1,220
	June 3, 1950	10.50	2,430		Sept. 23, 1958	8.42	922

3731. Big Creek at Fishville, La.

Location--Lat 31°31'25", long 92°21'45", in sec.3, T.6 N., R.1 E., Grant Parish, at bridge on State Highway 8 at Fishville, 2.7 miles east of Pollock, 3.0 miles downstream from Missouri Pacific Railroad Co. bridge, and 5.3 miles upstream from mouth (confluence with Little River).

Drainage area--66.5 sq mi.

Gage--Crest-stage gage. Datum of gage is 53.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation--Not defined.

Historical data--According to local residents, the flood in 1933 was greatest known since 1886. The flood in February 1950 was greatest known between 1933-50.

Remarks--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	-	16.40	-	1954	May 1, 1954	10.76	-
1950	February 1950	15.70	-	1955	Apr. 13, 1955	11.80	-
1951	Mar. 28, 1951	12.18	-	1956	Feb. 13, 1956	9.46	-
1952	Apr. 23, 1952	12.87	-	1957	Apr. 1, 1957	10.06	-
1953	Apr. 29, 1953	16.45	-	1958	Mar. 28, 1958	13.87	-

3732.6. Black River at Jonesville, La.

Location--Lat 31°37'25", long 91°48'45", between lots 37 and 39, T.8 N., R.6 E., on line between Catahoula and Concordia Parishes, at bridge on U. S. Highway 84 at Jonesville, 0.3 mile downstream from Little River, 0.6 mile downstream from Tensas River, and 56.3 miles above mouth.

Drainage area--24,158 sq mi. (Variable due to interchanging drainage).

Gage--Nonrecording. Datum of gage is 1.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1941, or 1.17 ft above mean Gulf level.

Stage-discharge relation--Not defined; affected by fall.

Bankfull stage--50 ft.

Remarks--Gage-height records since June 1928 and occasional current-meter measurements April 1903 to January 1924 collected by Mississippi River Commission. Gage-height records since June 1928 and occasional current-meter measurements since February 1937 collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	May 17-18, 1927	64.1	-	1943	June 15-18, 1943	46.2	-
1928	May 17, 1928	47.4	-	1944	May 23-25, 1944	53.4	-
1929	June 15-16, 1929	52.9	-	1945	Apr. 24, May 2	58.5	-
1930	Feb. 19-21, 1930	48.5	-	1946	Feb. 21-24, 1946	52.9	-
1931	Mar. 7, 1931	32.5	-	1947	Apr. 28, 1947	47.8	-
1932	Mar. 5-8, 1932	55.6	-	1948	Mar. 19-20, 1948	49.1	-
1933	May 11-13, 1933	50.0	-	1949	Apr. 2, 1949	51.9	-
1934	Apr. 17-18, 1934	44.8	-	1950	Mar. 6, 1950	55.8	-
1935	May 22-29, 1935	51.9	-	1951	Apr. 3, 1951	48.2	-
1936	May 7, 1936	40.8	-	1952	May 6-7, 1952	49.3	-
1937	Mar. 5, 1937	55.9	-	1953	May 27-28, 1953	54.8	-
1938	Apr. 23-25, 1938	52.4	-	1954	May 22, 1954	41.2	-
1939	Apr. 6, 1939	51.1	-	1955	Apr. 17, 1955	46.6	-
1940	May 10, 1940	44.9	-	1956	Mar. 22, 1956	43.25	-
1941	May 17-18, 1941	41.9	-	1957	June 28, 1957	52.34	-
1942	May 17-20, 1942	49.6	-	1958	May 29, 1958	52.96	-

3732.7. Black River near Acme, La.

Location.--Lat 31°16'00", long 91°49'55", in lot 1, T.3 N., R.6 E., on line between Catahoula and Concordia Parishes, on left bank 0.1 mile upstream from mouth and 1.3 miles southwest of Acme.

Drainage area.--24,237 sq mi. (Variable due to interchanging drainage).

Gage.--Nonrecording. Datum of gage is 0.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Not defined.

Bankfull stage.--48 ft.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Jan. 8-9, 1924	48.9	-	1941	May 9, 1941	40.5	-
1925	Mar. 9-12, 1925	32.8	-	1942	May 4-7, 1942	48.4	-
				1943	June 16-17, 1943	47.5	-
1926	Apr. 29-30, May 1-3	43.7	-	1944	May 22-24, 1944	53.5	-
1927	May 14-17, 1927	62.7	-	1945	Apr. 24, May 2	59.4	-
1928	May 23-25, 1928	47.3	-				
1929	June 15-19, 1929	53.7	-	1946	Feb. 28, Mar. 6	51.2	-
1930	Feb. 16-19, 1930	46.9	-	1947	May 8-9, 1947	46.9	-
				1948	(a)	47.4	-
1931	Mar. 8, 1931	31.2	-	1949	Mar. 2-5, 1949	51.2	-
1932	Mar. 6-9, 1932	55.8	-	1950	Mar. 4-6, 1950	56.0	-
1933	May 8-14, 1933	49.8	-				
1934	Apr. 17-18, 1934	43.5	-	1951	Apr. 2, 1951	45.6	-
1935	June 8-18, 1935	51.2	-	1952	May 3-6, 1952	48.7	-
				1953	May 26-30, 1953	52.8	-
1936	May 6, 1936	41.8	-	1954	May 18, 1954	38.7	-
1937	Mar. 1-7, 1937	56.8	-	1955	Apr. 15, 1955	45.6	-
1938	Apr. 25-29, 1938	51.5	-				
1939	Apr. 6-7, 1939	50.7	-	1956	Feb. 27, 1956	41.6	-
1940	May 10-12, 1940	43.4	-	1957	June 15-22, 1957	51.3	-
				1958	May 23-24, 1958	51.1	-

a Mar. 15-18, Apr. 21-23, 1948.

LITTLE BAYOU SARA BASIN

3733. Little Bayou Sara near Turnbull, La.

Location.--Lat 30°58'15", long 91°28'50", between lots 73 and 76, T.1 S., R.4 W., St. Helena meridian, West Feliciana Parish, at bridge on State Highway 66, 1.2 miles northwest of Turnbull, 1.6 miles downstream from Caney Creek, 2.0 miles south of Louisiana-Mississippi State line, and 2.4 miles upstream from Clapp Creek.

Drainage area.--22.3 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 22, 1949	14.32	-	1954	May 4, 1954	(a)	-
1950	Jan. 6, 1950	(a)	-	1955	Apr. 12, 1955	16.96	-
1951	Apr. 30, 1951	(a)	-	1956	Feb. 5, 1956	14.36	-
1952	May 20, 1952	13.04	-	1957	Dec. 22, 1956	14.78	-
1953	May 18, 1953	12.87	-	1958	Sept. 24, 1958	15.52	-

a Below 12.3 ft; bottom of gage.

3736. Thompson Creek at Jackson, La.

Location.--Lat 30°50'25", long 91°13'35", in lot 75, T.2 S., R.1 W., St. Helena meridian, at bridges across Thompson Creek and West Fork Thompson Creek on State Highway 10, East Feliciana Parish, 0.5 mile west of Jackson, 0.5 mile upstream from junction of main channel and West Fork channel, 1.0 mile upstream from Vaughan Creek, and 1.8 miles upstream from Asylum Creek.

Drainage area.--166 sq mi, includes West Fork Thompson Creek (66.6 sq mi).

Gage.--Crest-stage gage. Datum of gage is 48.69 ft above mean sea level (levels by Bill Horton, Civil Engineer).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 22, 1949	42.40	-	1954	May 14, 1954	36.83	-
1950	Jan. 6, 1950	(a)	-	1955	Apr. 13, 1955	43.03	-
1951	Apr. 30, 1951	39.17	-	1956	Dec. 4, 1955	42.92	-
1952	May 19, 1952	36.47	-	1957	June 28, 1957	39.81	-
1953	May 18, 1953	41.85	-	1958	Nov. 17, 1957	37.22	-

a Below 35.6 ft; bottom of gage.

3737. Thompson Creek near Starhill, La.

Location.--Lat 30°44'55", long 91°17'05", in lot 71, West Feliciana Parish between West Feliciana and East Feliciana Parishes, at bridge on U. S. Highway 61, 1.7 miles southeast of Starhill, 2.4 miles upstream from Illinois Central Railroad bridge, and 8 miles upstream from mouth.

Drainage area.--249 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 22, 1949	42.92	-	1954	May 4, 1954	(a)	-
1950	Jan. 7, 1950	43.42	-	1955	Apr. 13, 1955	46.02	-
1951	Apr. 8, 1951	42.33	-	1956	Mar. 12, 1956	43.89	-
1952	May 19, 1952	(a)	-	1957	June 28, 1957	43.82	-
1953	May 18, 1953	46.10	-	1958	Nov. 17, 1957	(a)	-

a Below 42.1 ft; bottom of gage.

3738. Alexander Creek near St. Francisville, La.

Location.--Lat 30°42'55", long 91°22'05", between lots 51 and 67, T.3 S., R.2 W., at bridge on State Highway 10, 2.0 miles northeast of St. Francisville.

Drainage area.--23.9 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges of Alexander Creek near St. Francisville, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 18, 1953	14.18	-	1956	Mar. 12, 1956	10.93	-
1954	July 17, 1954	9.35	-	1957	June 28, 1957	(a)	-
1955	Apr. 12, 1955	12.55	-	1958	Mar. 24, 1958	9.20	-

a Below 8.24 ft; bottom of gage.

BAYOU BATON ROUGE BASIN

3739. Bayou Baton Rouge above Baker, La.

Location.--Lat 30°37'20", long 91°12'35", T.5. S., R.1 W., at bridge on parish road, 3.4 miles northwest of Baker.

Drainage area.--14.2 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 18, 1953	22.64	-	1956	Feb. 5, 1956	16.52	-
1954	Dec. 9, 1953	16.34	-	1957	Sept. 26, 1957	15.02	-
1955	Apr. 13, 1955	16.61	-	1958	Oct. 15, 1957	13.72	-

MISSISSIPPI RIVER DELTA

3747. Tchefuncta River near Franklinton, La.

Location.--Lat 30°45'22", long 90°15'55", in SE $\frac{1}{4}$ sec. 26, T.3 S., R.9 E., on line between Washington and Tangipahoa Parishes, at bridge on State Highway 16, immediately downstream from Taylor Creek, 0.8 mile downstream from Garman Creek and 9 miles southwest of Franklinton.

Drainage area.--53.1 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined; two discharge measurements made to date.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 23, 1949	44.05	-	1954	Dec. 4, 1953	45.17	-
1950	Feb. 13, 1950	45.42	-	1955	Feb. 7, 1955	43.24	-
1951	Mar. 29, 1951	44.84	-	1956	Feb. 5, 1956	44.83	-
1952	Feb. 16, 1952	(a)	-	1957	Apr. 5, 1957	45.05	-
1953	May 3, 1953	45.48	-	1958	Jan. 25, 1958	44.72	-

a Below 42.0 ft; bottom of gage.

MISSISSIPPI RIVER DELTA

3750. Tchefuncta River near Folsom, La.

Location.--Lat 30°36'55", long 90°14'55", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.13, T.5 S., R.9 E., St. Helena meridian, near center of span on downstream side of bridge on State Highway 40, 1.2 miles upstream from Bull Branch and 3.6 miles southwest of Folsom.

Drainage area.--95.5 sq mi.

Gage.--Nonrecording prior to June 9, 1944; recording thereafter. Datum of gage is 62.11 ft above mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 4,200 cfs and extended to 18,300 cfs by area-velocity studies.

Bankfull stage.--17 ft.

Remarks.--Base for partial-duration series, 1,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Mar. 24, 1944	16.41	2,300	1949	May 2, 1949	20.13	8,730
	Mar. 30, 1944	15.21	1,480		Aug. 2, 1949	15.02	1,390
1945					Aug. 15, 1949	15.64	1,670
	Nov. 27, 1944	15.78	1,840	1950	Feb. 14, 1950	19.34	6,500
	Mar. 18, 1945	17.46	3,390		Mar. 16, 1950	17.68	3,430
	Apr. 30, 1945	14.85	1,300	1951			
1946	Dec. 26, 1945	15.10	1,430		Feb. 2, 1951	17.00	2,630
	Jan. 6, 1946	15.50	1,650		Mar. 29, 1951	17.92	3,710
	Feb. 19, 1946	15.60	1,710		Apr. 23, 1951	14.75	1,500
	Mar. 17, 1946	15.34	1,530	1952			
	Mar. 28, 1946	14.98	1,390		Feb. 16, 1952	11.22	536
1947				1953			
	Jan. 4, 1947	15.18	1,470		May 3, 1953	22.26	18,300
	Jan. 14, 1947	15.10	1,430		May 19, 1953	17.23	2,860
	Jan. 21, 1947	15.78	1,770	1954	July 24, 1953	15.78	1,770
	Mar. 8, 1947	16.06	1,950				
	Mar. 14, 1947	18.25	4,240		Dec. 4, 1953	19.40	6,630
	Apr. 2, 1947	20.37	9,780		Dec. 9, 1953	18.12	4,010
	Apr. 11, 1947	18.35	4,400		Dec. 11, 1953	15.65	1,670
1948				1955			
	Dec. 10, 1947	20.62	10,500		Feb. 7, 1955	14.56	1,220
	Dec. 15, 1947	16.05	1,950	1956			
	Mar. 3, 1948	16.68	2,350		Feb. 5, 1956	18.68	4,980
	Mar. 6, 1948	18.30	4,320	1957	Mar. 11, 1956	14.68	1,310
1949	Sept. 5, 1948	15.68	1,720				
	Nov. 23, 1948	18.37	4,400		Apr. 5, 1957	17.21	2,840
	Nov. 27, 1948	21.59	15,000	1958	Apr. 18, 1957	15.36	1,580
	Mar. 23, 1949	17.51	3,160				
	Apr. 23, 1949	15.51	1,620		Nov. 15, 1957	17.57	3,220

3750.5. Tchefuncta River near Covington, La.

Location.--Lat 30°29'40", long 90°10'10", SW $\frac{1}{4}$ sec.26, T.6 S., R.10 E., St. Helena meridian, St. Tammany Parish, at bridge on U. S. Highway 190, 150 ft upstream from Illinois Central Railroad bridge, 1 mile downstream from Horse Branch, 1 mile upstream from Pruden Creek, and 4 miles west of Covington.

Drainage area.--145 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges of Tchefuncta River near Covington, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 30, 1951	15.10	-	1956	Feb. 6, 1956	14.04	-
1952	Feb. 16, 1952	10.65	-	1957	Mar. 6, 1957	12.98	-
1953	May 3, 1953	20.47	-	1958	Nov. 15, 1957	14.62	-
1954	Apr. 17, 1954	19.37	-				
1955	Apr. 16, 1955	11.83	-				

3753. Tangipahoa River near Kentwood, La.

Location.--Lat 30°56'15", long 90°29'25", between lots 43 and 45, T.1 S., R.7 E., St. Helena meridian, Tangipahoa Parish, at bridge on State Highway 38, 0.9 mile upstream from Terrys Creek, 1.1 miles east of Kentwood, and 1.7 miles downstream from Irving Branch.

Drainage area.--237 sq mi.

Gage.--Crest-stage gage. Datum of gage is 180.30 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 28, 1951	14.08	-	1956	Mar. 17, 1956	11.23	-
1952	Feb. 16, 1952	(a)	-	1957	Sept. 18, 1957	10.68	-
1953	May 3, 1953	12.14	-	1958	Mar. 10, 1958	11.37	-
1954	Dec. 4, 1953	(a)	-				
1955	Apr. 14, 1955	13.67	-				

a Below 9.2 ft; bottom of gage.

3754.3. Tangipahoa River near Amite, La.

Location.--Lat 30°43'40", long 90°29'05", in lot 50, Tangipahoa Parish, 0.7 mile upstream from Conners Creek, 1.5 miles east of Amite, and 1.8 miles downstream from Big Creek.

Drainage area.--482 sq mi.

Gage.--Crest-stage gage. Datum of gage is 59.03 ft above mean sea level.

Stage-discharge relation.--Fairly well defined between 5,800 and 8,300 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 4, 1949	45.26	-	1954	Dec. 14, 1953	41.04	7,800
1950	Jan. 8, 1950	42.40	-	1955	Apr. 15, 1955	42.55	-
1951	Mar. 30, 1951	42.62	-	1956	Feb. 5, 1956	40.57	6,700
1952	Feb. 16, 1952	41.90	-	1957	Sept. 18, 1957	(a)	-
1953	May 3, 1953	42.19	-	1958	Jan. 25, 1958	40.00	5,770

a Below 39.0 ft; bottom of gage.

3755. Tangipahoa River at Robert, La.

Location.--Lat 30°30'23", long 90°21'42", in lot 39, T.6 S., R.8 E., St. Helena meridian, on right bank just downstream from bridge on U. S. Highway 190, 1 mile west of Robert, 2 miles downstream from Chappepeela Creek, and 6 miles east of Hammond.

Drainage area.--646 sq mi.

Gage.--Nonrecording prior to Nov. 25, 1939; recording thereafter. Datum of gage is 6.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs and extended above. Rate of change in stage is a factor on some rises. Moderate shifts in relation have occurred.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	-	27.10	-	1949	Nov. 23, 1948	15.96	8,450
1939	June 6, 1939	14.72	6,000		Nov. 27, 1948	19.14	24,600
1940	May 2, 1940	15.44	7,690		Dec. 10, 1948	14.29	5,200
	July 7, 1940	14.15	5,460		Dec. 20, 1948	15.33	6,760
	July 13, 1940	15.10	6,970		Feb. 19, 1949	14.82	5,920
1941	Dec. 18, 1940	16.48	11,200		Mar. 24, 1949	16.69	11,200
	Dec. 28, 1940	13.90	5,100		Apr. 3, 1949	16.55	10,600
1942	Jan. 5, 1942	14.38	5,740		Apr. 24, 1949	14.89	6,080
	Sept. 13, 1942	14.72	6,250	1950	May 4, 1949	19.60	27,700
1943	Dec. 29, 1942	19.70	28,300		Jan. 10, 1950	16.16	8,960
	Feb. 8, 1943	16.61	12,000		Feb. 14, 1950	17.27	14,300
	Mar. 22, 1943	20.87	35,500		Mar. 6, 1950	14.17	5,070
	Sept. 22, 1943	13.87	5,220		Mar. 17, 1950	15.62	7,370
1944	Mar. 24, 1944	14.90	7,150	1951	June 7, 1950	16.68	11,200
	Mar. 31, 1944	15.55	8,860		Feb. 2, 1951	16.38	10,200
	May 6, 1944	14.00	5,390		Mar. 20, 1951	14.66	5,770
1945	Nov. 27, 1944	13.86	5,220		Mar. 31, 1951	16.74	11,500
	May 1, 1945	14.29	5,920		Apr. 25, 1951	16.33	9,740
1946	Jan. 7, 1946	14.32	5,920	1952	Apr. 5, 1952	11.55	2,800
	Mar. 18, 1946	15.28	8,080	1953	Feb. 27, 1953	14.84	5,920
	July 9, 1946	15.68	9,130		Mar. 16, 1953	14.18	5,070
	July 16, 1946	-	8,600		May 3, 1953	23.13	50,500
	Sept. 26, 1946	15.75	9,410		May 19 or May 20	20.10	30,700
1947	Jan. 4, 1947	13.89	5,220	1954	Dec. 4, 1953	16.93	12,400
	Jan. 16, 1947	15.32	8,080		Dec. 10, 1953	16.28	9,540
	Jan. 22, 1947	16.32	11,000	1955	Jan. 18, 1955	14.31	5,200
	Mar. 9, 1947	15.31	6,630		Feb. 8, 1955	16.55	10,600
	Mar. 14, 1947	17.64	16,000		Apr. 16, 1955	17.11	13,200
	Apr. 3, 1947	17.95	18,200	1956	Feb. 5, 1956	16.83	11,900
	Apr. 11, 1947	15.30	6,630		Feb. 12, 1956	14.55	5,550
1948	Dec. 11, 1947	17.14	13,500		Mar. 15, 1956	15.70	7,610
	Feb. 1, 1948	14.20	5,050	1957	Apr. 5, 1957	15.22	6,620
	Mar. 6, 1948	18.95	24,000		Sept. 19, 1957	15.73	7,690
	Sept. 6, 1948	15.93	8,150	1958	Nov. 16, 1957	16.29	9,540
					Mar. 10, 1958	15.35	6,950

3756. Washley Creek near Robert, La.

Location.--Lat 30°30'20", long 90°18'30", on line between secs.21 and 28, T.6 S., R.9 E., St. Helena meridian, Tangipahoa Parish, at bridge on U. S. Highway 190, 800 ft upstream from unnamed tributary, 900 ft upstream from Illinois Central Railroad bridge, 1 mile upstream from Holden Branch, and 2 miles east of Robert.

Drainage area.--25.3 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 30, 1951	11.75	-	1956	Feb. 5, 1956	11.08	-
1952	Feb. 16, 1952	9.93	-	1957	Sept. 18, 1957	9.18	-
1953	May 3, 1953	13.25	-	1958	Nov. 15, 1957	9.08	-
1954	Dec. 4, 1953	11.37	-				
1955	Apr. 15, 1955	10.54	-				

3758.5. Tickfaw River near Greensburg, La.

Location.--Lat 30°49'30", long 90°38'10", in lot 52, St. Helena Parish, at bridge on State Highway 10, 1.2 miles upstream from Josephs Branch and 1.8 miles southeast of Greensburg.

Drainage area.--136 sq mi.

Gage.--Crest-stage gage. Datum of gage is at mean sea level.

Stage-discharge relation.--Fairly well defined below 3,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 4, 1949	164.89	-	1954	Dec. 5, 1953	(a)	-
1950	Feb. 14, 1950	161.57	2,730	1955	Jan. 7, 1955	162.51	4,000
1951	Mar. 30, 1951	162.55	4,050	1956	Mar. 11, 1956	162.34	3,730
1952	Apr. 6, 1952	(a)	-	1957	Sept. 18, 1957	(a)	-
1953	May 3, 1953	163.02	4,950	1958	Jan. 12, 1958	162.03	3,300

a Below 161.5 ft; bottom of gage.

3759.6. Tickfaw River at Montpelier, La.

Location.--Lat 30°41'10", long 90°38'35", between lots 41 and 42, T.4 S., R.6 E., St. Helena meridian, St. Helena Parish, at bridge on State Highway 43, 0.5 mile northeast of Montpelier, 0.8 mile downstream from Twelvemile Creek, and 1.5 miles upstream from Killion Branch.

Drainage area.--220 sq mi.

Gage.--Crest-stage gage. Datum of gage is same as Corps of Engineers staff gage, possibly mean sea level.

Stage-discharge relation.--Not adequately defined.

Remarks.--Only annual peak stages are shown.

MISSISSIPPI RIVER DELTA

Peak stages and discharges of Tickfaw River at Montpelier, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 30, 1951	100.68	-	1956	Mar. 11, 1956	100.42	-
1952	Apr. 6, 1952	(a)	-	1957	Sept. 18, 1957	99.28	-
1953	May 3, 1953	103.93	-	1958	Jan. 12, 1958	100.46	-
1954	Dec. 6, 1954	99.09	-				
1955	Apr. 15, 1955	101.20	-				

a Below 97.4 ft; bottom of gage.

3760. Tickfaw River at Holden, La.

Location.--Lat 30°30'13", long 90°40'38", in sec.26, T.6 S., R.5 E., St. Helena meridian, near left bank on downstream side of bridge on U. S. Highway 190, half a mile west of Holden and 5.1 miles upstream from Big Branch.

Drainage area.--242 sq mi.

Gage.--Nonrecording prior to Sept.13, 1944; recording thereafter. Datum of gage is 19.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 6,500 cfs and extended above. Minor shifts in relation occur.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Dec. 17, 1940	16.87	5,740	1949	Apr. 24, 1949	13.66	2,310
	Dec. 29, 1940	12.70	2,030		May 4, 1949	-	6,000
1942	May 18, 1942	12.68	2,030	1950	Jan. 10, 1950	15.10	3,350
	Sept. 19, 1942	14.81	3,380		Feb. 16, 1950	14.78	3,440
1943	Dec. 30, 1942	16.27	4,740		Mar. 18, 1950	14.36	3,120
	Feb. 3, 1943	16.55	5,090		June 9, 1950	17.06	5,740
	Mar. 22, 1943	19.75	9,680	1951	Feb. 3, 1951	15.08	3,760
	Mar. 28, 1943	13.54	2,400		Mar. 21, 1951	12.50	2,040
1944	Mar. 25, 1944	13.30	2,280		Mar. 31, 1951	16.24	4,770
	Apr. 1, 1944	13.40	2,340	1952	Apr. 7, 1952	10.93	1,450
1945	May 2, 1945	13.17	2,230	1953	Feb. 28, 1953	12.86	2,240
1946	Mar. 18, 1946	15.25	3,650		Mar. 17, 1953	12.55	2,100
	May 20, 1946	12.80	2,030		Apr. 27, 1953	12.68	2,130
	July 9, 1946	13.59	2,460		May 3, 1953	18.01	6,940
	Sept. 26, 1946	13.94	2,650		May 20, 1953	18.97	8,400
1947	Jan. 17, 1947	13.63	2,460	1954	Dec. 6, 1953	14.44	3,200
	Jan. 23, 1947	14.80	3,320		Dec. 12, 1953	14.39	3,200
	Mar. 10, 1947	12.96	2,130	1955	Feb. 9, 1955	16.42	4,980
	Mar. 15, 1947	16.20	4,630		Apr. 15, 1955	16.57	5,180
	Apr. 3, 1947	17.76	6,640		Aug. 4, 1955	16.58	5,180
1948	Dec. 12, 1947	15.60	3,870	1956	Feb. 7, 1956	13.32	2,470
	Mar. 5, 1948	17.82	6,640		Mar. 14, 1956	16.04	4,610
1949	Nov. 29, 1948	15.68	3,980	1957	Sept. 21, 1957	12.83	2,520
	Dec. 21, 1948	13.96	2,500	1958	Nov. 16, 1957	15.33	4,170
	Feb. 19, 1949	14.15	2,630		Mar. 10, 1958	12.05	2,140
	Mar. 24, 1949	17.80	6,640		May 27, 1958	12.87	2,550
	Apr. 3, 1949	15.90	4,220				

3762. Hog Branch near Doyle, La.

Location.--Lat 30°30'10", long 90°42'20", on line between secs.21 and 28, T.6 S., R.5 E., St. Helena meridian, Livingston Parish, at bridge on U. S. Highway 190, 200 ft downstream from Illinois Central Railroad bridge, 0.5 mile upstream from Big Branch, 2.0 miles east of Doyle, 2.1 miles west of Holden, and 4 miles downstream from West Hog Branch.

Drainage area.--110 sq mi.

Gage.--Crest-stage gage. Datum of gage is 16.37 ft above mean sea level.

Stage-discharge relation.--Defined by four current-meter measurements, prior to 1957, below 8,100 cfs and extended to 15,100 cfs by logarithmic plotting. Channel dredged during 1957.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 30, 1951	16.68	2,200	1956	Feb. 4, 1956	15.58	1,550
1952	Apr. 12, 1952	13.98	1,000	1957	Sept. 18, 1957	(a)	-
1953	May 4, 1953	22.77	15,100	1958	Nov. 14, 1957	15.33	-
1954	Dec. 6, 1953	17.03	2,500				
1955	Feb. 7, 1955	17.51	2,950				

a Below 12.05 ft; bottom of gage.

3763. Tickfaw River near Springfield, La.

Location.--Lat 30°22'35", long 90°33'02", between lots 37 and 42, T.8 S., R.6 E., St. Helena meridian, in Livingston Parish, at bridge on State Highway 22, 0.2 mile downstream from Blood River, 3.7 miles south of Springfield, and 7.1 miles upstream from mouth.

Drainage area.--487 sq mi.

Gage.--Recording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 6, 1948	4.2	-	1954	Sept. 17, 1954	3.7	-
1949	Mar. 30, 1949	2.8	-	1955	Aug. 2, 1955	3.0	-
1950	Oct. 5, 1949	3.7	-				
1951	Mar. 29, 1951	2.5	-	1956	Sept. 25, 1956	3.7	-
1952	July 17, 1952	3.0	-	1957	June 27, 1957	3.21	-
1953	May 5, 1953	3.9	-	1958	Sept. 6, 1958	2.97	-

3765. Natalbany River at Baptist, La.

Location.--Lat 30°30'15", long 90°32'45", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.6 S., R.7 E., St. Helena meridian near right bank on downstream side of bridge on U. S. Highway 190, 0.7 mile downstream from Still Branch and 0.7 mile west of Baptist.

Drainage area.--79.5 sq mi.

Gage.--Nonrecording prior to June 4, 1948; recording thereafter. Prior to Apr. 14, 1950, at old highway bridge 100 ft upstream at present datum. Datum of gage is 11.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended above.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 1,000 cfs.

MISSISSIPPI RIVER DELTA

Peak stages and discharges of Natalbany River at Baptist, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Jan. 13, 1944	10.96	1,240	1952	Feb. 15, 1952	12.23	1,630
	Jan. 15, 1944	10.30	1,020		Apr. 4, 1952	11.93	1,450
	Mar. 23, 1944	10.75	1,170	1953	Jan. 23, 1953	11.77	1,400
	May 5, 1944	12.00	1,580		Feb. 15, 1953	12.15	1,630
1945	Nov. 26, 1944	10.80	1,170		Feb. 25, 1953	11.54	1,250
	Jan. 22, 1945	10.46	1,080		Mar. 15, 1953	12.63	1,900
	Feb. 5, 1945	10.75	1,170		Apr. 25, 1953	12.56	1,870
	July 27, 1945	10.60	1,110		May 3, 1953	19.73	9,550
1946	Jan. 5, 1946	11.10	1,270		May 18, 1953	14.05	3,120
	Mar. 8, 1946	11.15	1,500		June 29, 1953	13.00	2,210
	Mar. 16, 1946	12.64	2,040		July 24, 1953	11.28	1,230
	May 15, 1946	11.85	1,600	1954	Nov. 20, 1953	13.34	2,450
	May 18, 1946	10.40	1,080		Dec. 4, 1953	13.66	2,810
	June 1, 1946	11.70	1,510		Dec. 9, 1953	13.72	2,810
1947	Jan. 15, 1947	10.65	1,110		Dec. 12, 1953	12.74	1,980
	Jan. 21, 1947	11.00	1,100		Dec. 22, 1953	12.03	1,540
	Mar. 7, 1947	13.05	2,220		Apr. 16, 1954	12.40	1,770
	Mar. 13, 1947	15.70	4,960	1955	Jan. 16, 1955	11.71	1,390
	Apr. 2, 1947	13.46	2,670		Feb. 6, 1955	13.15	2,370
	Apr. 11, 1947	10.96	1,100		Apr. 10, 1955	12.44	1,770
	Sept. 19, 1947	12.52	1,820		Apr. 13, 1955	12.18	1,650
1948	Nov. 18, 1947	10.93	1,070		July 31, 1955	11.64	1,370
	Dec. 11, 1947	14.68	3,890		Aug. 2, 1955	12.98	2,210
	Dec. 15, 1947	12.18	1,640		Aug. 6, 1955	10.87	1,150
	Mar. 3, 1948	13.00	2,220	1956	Feb. 4, 1956	13.37	2,510
	Mar. 6, 1948	13.98	3,160		Feb. 10, 1956	11.28	1,220
1949	Nov. 22, 1948	12.76	2,040		Mar. 11, 1956	13.09	2,280
	Nov. 26, 1948	16.10	5,050		Mar. 14, 1956	11.14	1,170
	Mar. 23, 1949	12.05	1,530		May 5, 1956	11.24	1,210
	Apr. 22, 1949	12.05	1,470	1957	Dec. 23, 1956	11.65	1,370
	May 4, 1949	11.61	1,260		Apr. 1, 1957	11.03	1,130
1950	Feb. 13, 1950	14.53	3,530		Apr. 4, 1957	13.58	2,700
	Mar. 3, 1950	11.88	1,410		Apr. 17, 1957	11.74	1,410
	June 7, 1950	16.57	5,540	1958	Nov. 14, 1957	12.59	1,910
1951	Jan. 30, 1951	10.96	1,000		Feb. 6, 1958	11.72	1,390
	Feb. 1, 1951	12.74	1,960		Mar. 7, 1958	12.70	1,980
	Mar. 18, 1951	14.85	3,810		Mar. 24, 1958	11.50	1,310
	Mar. 29, 1951	13.04	2,200		Apr. 10, 1958	10.92	1,090
					May 24, 1958	10.78	1,060

3766. Ponchatoula Creek at Natalbany, La.

Location.--Lat 30°33'40", long 90°28'55", between secs.2 and 3, T.6 S., R.7 E., St. Helena meridian, Tangipahoa Parish, at bridge on U. S. Highway 51, 1.0 mile north of Natalbany and 1.1 miles south of Tickfaw.

Drainage area.--13.8 sq mi.

Gage.--Crest-stage gage. Datum of gage is 44.45 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 19, 1951	11.63	-	1956	Mar. 11, 1956	7.79	-
1952	Apr. 12, 1952	9.51	-	1957	Sept. 18, 1957	10.26	-
1953	Feb. 28, 1953	9.36	-	1958	Mar. 6, 1958	8.62	-
1954	Dec. 4, 1953	6.92	-				
1955	Feb. 5, 1955	6.71	-				

3766.1. Ponchatoula Creek east of Hammond, La.

Location.--Lat 30°30'26", long 90°26'51", in SW $\frac{1}{4}$ sec.19, T.6 S., R.8 E., Tangipahoa Parish, at bridge on U. S. Highway 190 in Hammond.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Oct. 19, 1949; recording thereafter. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Sept. 4, 1948	a33.8	-	1954	Dec. 4, 1953	a28.7	-
1949	Nov. 27, 1948	35.50	-	1955	Feb. 5, 1955	31.8	-
1950	June 7, 1950	37.17	-				
				1956	Feb. 4, 1956	32.6	-
1951	Mar. 18, 1951	35.95	-	1957	Apr. 17, 1957	34.00	-
1952	Feb. 15, 1952	32.11	-	1958	Sept. 18, 1958	30.78	-
1953	May 3, 1953	37.86	-				

a Records incomplete, might have been higher during the year.

3766.2. Ponchatoula Creek south of Hammond, La.

Location.--Lat 30°27'21", long 90°27'22", in sec.12, T.7 S., R.7 E., Tangipahoa Parish, at bridge on U. S. Highway 51, 1 $\frac{1}{2}$ miles northwest of Ponchatoula and 3.5 miles south of Hammond.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Apr. 1, 1949; recording thereafter. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Sept. 5, 1948	a15.00	-	1954	Dec. 4, 1953	b7.20	-
1949	Nov. 27, 1948	16.80	-	1955	Feb. 5, 1955	b11.40	-
1950	June 7, 1950	17.37	-				
				1956	Feb. 4, 1956	b12.60	-
1951	Mar. 18, 1951	15.80	-	1957	Apr. 17, 1957	b11.10	-
1952	Feb. 15, 1952	12.28	-	1958	Apr. 9, 1958	b8.70	-
1953	May 3, 1953	12.32	-				

a Records incomplete, might have been higher during the year.

b 8 a.m. reading.

3767. Yellow Water River Canal near Hammond, La.

Location.--Lat 30°31'25", long 90°29'00", on line between secs.14 and 15, T.6 S., R.7 E., St. Helena meridian, Tangipahoa Parish, at bridge on U. S. Highway 51, 0.5 mile downstream from Ponchatoula Creek, 1.6 miles south of Natabany, and 1.9 miles northwest of Hammond.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Nov. 21, 1950; crest-stage gage thereafter. Datum of gage is mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements prior to 1950 collected by Corps of Engineers. Major channel improvements made during 1953. Only annual peak stages are shown.

Peak stages and discharges of Yellow Water River Canal near Hammond, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Sept. 4, 1948	43.9	-	1954	Dec. 4, 1953	41.52	-
1949	Nov. 27, 1948	44.45	-	1955	Feb. 5, 1955	41.49	-
1950	June 7, 1950	45.82	-				
				1956	Mar. 11, 1956	41.59	-
1951	Mar. 29, 1951	43.97	-	1957	Apr. 6, 1957	43.4	-
1952	Feb. 16, 1952	37.22	-	1958	Nov. 15, 1957	41.10	-
1953	May 3, 1953	42.14	-				

3767.1. Yellow Water River Canal near Baptist, La.

Location.--Lat 30°30'16", long 90°30'30", in sec.28, T.6 S., R.7 E., Tangipahoa Parish, at culvert on U. S. Highway 190, 2 miles west of Hammond and 4½ miles east of Albany.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Apr. 12, 1951; recording thereafter. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Sept. 4, 1948	34.00	-	1951	Mar. 19, 1951	35.40	-
1949	Nov. 26, 1948	34.00	-	1952	Feb. 15, 1952	31.61	-
1950	June 7, 1950	36.10	-	1953	May 4, 1953	33.68	-

a Maximum for period Jan. 1 to Aug. 17, 1953, from floodmark.

3770. Amite River near Darlington, La.

Location.--Lat 30°53'20", long 90°50'40", in lot 72, T.2 S., R.4 E., St. Helena meridian on left bank just downstream from bridge on State Highway 10, 1.5 miles upstream from Collins Creek and 3.9 miles west of Darlington.

Drainage area.--580 sq mi.

Gage.--Crest-stage gage prior to Oct. 24, 1950; nonrecording gage Oct. 24, 1950, to Jan. 11, 1951; recording thereafter. Datum of gage is 148.80 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Stage-discharge relation.--Defined by current-meter measurements below 36,000 cfs and extended above. Moderate shifts in relation occur at medium and low stages.

Bankfull stage.--12 ft.

Remarks.--Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	March 1949	14.80	a20,000	1953	Feb. 22, 1953	11.20	5,840
					Feb. 26, 1953	13.05	10,200
1950	Jan. 7, 1950	17.21	a43,400		Mar. 13, 1953	12.00	7,330
					May 1, 1953	11.85	7,000
1951	Dec. 7, 1950	10.92	5,420		May 5, 1953	14.11	15,500
	Jan. 30, 1951	11.92	7,110		May 20, 1953	14.64	18,900
	Mar. 30, 1951	16.05	31,600				
	Apr. 23, 1951	15.63	27,100	1954	Jan. 16, 1954	8.58	3,280
	June 18, 1951	10.86	5,420				
1952	Dec. 21, 1951	8.23	3,180	1955	Feb. 7, 1955	15.32	24,200
					Feb. 23, 1955	13.04	10,200

a Annual peak only.

Peak stages and discharges of Amite River near Darlington, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Apr. 13, 1955	18.18	55,700	1957	May 4, 1957	10.82	5,350
1956	Dec 19, 1955	11.90	7,110		June 29, 1957	14.82	20,200
	Feb. 5, 1956	14.38	17,100		Sept. 29, 1957	11.18	5,820
	Feb. 11, 1956	11.40	6,160	1958	Nov. 16, 1957	13.78	13,800
	Mar. 12, 1956	14.85	20,400		Nov. 20, 1957	11.56	6,510
	Mar. 17, 1956	14.79	19,900		June 23, 1958	13.28	11,400
1957	Apr. 5, 1957	12.01	7,350		Sept. 23, 1958	15.06	22,400

3771.5. Amite River at Grangeville, La.

Location.--Lat 30°44'10", long 90°50'30", between lots 63 and 64, T.4 S., R.4 E., St. Helena meridian, on line between East Feliciana and St. Helena Parishes, at bridge on State Highway 37, 50 ft downstream from Lillies Creek and 0.5 mile southwest of Grangeville.

Drainage area.--741 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Historical data.--Maximum stage known, about 17.4 ft, from floodmarks, date unknown.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 31, 1951	13.99	-	1956	Mar. 12, 1956	12.74	-
1952	Dec. 21, 1951	(a)	-	1957	June 30, 1957	11.25	-
1953	May 20, 1953	13.74	-	1958	Nov. 16, 1957	10.55	-
1954	Jan. 15, 1954	(b)	-				
1955	Apr. 14, 1955	16.71	-				

a Below 7.5 ft.

b Below 9.0 ft.

3773. Amite River at Magnolia, La.

Location.--Lat 30°32'05", long 90°58'50", on parish line between East Baton Rouge Parish and Livingston Parish, at bridge on State Highway 64, 0.4 mile east of town of Magnolia, 2 miles upstream from mouth of Beaver Creek, and 8 miles upstream from mouth of Comite River.

Drainage area.--884 sq mi.

Gage.--Crest-stage gage. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 4, 1949	42.26	-	1954	Dec. 11, 1953	36.74	-
1950	Jan. 9, 1950	45.10	-	1955	Apr. 15, 1955	48.26	-
1951	Apr. 1, 1951	44.32	-	1956	Mar. 14, 1956	41.92	-
1952	Apr. 5, 1952	(a)	-	1957	July 1, 1957	37.71	-
1953	May 20, 1953	47.46	-	1958	Sept. 25, 1958	38.42	-

a Below 36.5 ft; bottom of gage.

MISSISSIPPI RIVER DELTA

3774. Comite River near Clinton, La.

Location.--Lat 30°51'30", long 91°02'20", between lots 86 and 87, T.2 S., R.2 E., St. Helena meridian, East Feliciana Parish, at bridge on State Highway 10, 1.3 miles west of Clinton and 2 miles upstream from Pretty Creek.

Drainage area.--88.0 sq mi.

Gage.--Crest-stage gage. Datum of gage is about 164.2 ft above mean sea level, as determined from Louisiana Department of Highways reference mark.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 4,200 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Mar. 21, 1949	13.75	-	1954	May 4, 1954	11.68	3,350
1950	Jan. 7, 1950	14.06	-	1955	Apr. 13-14, 1955	14.88	-
1951	Mar. 29, 1951	13.48	-	1956	Dec. 19, 1955	13.57	-
1952	Apr. 4, 1952	(a)	-	1957	June 29, 1957	11.89	3,720
1953	May 18, 1953	13.28	-	1958	Oct. 15, 1957	11.92	3,770

a Below 10.1 ft; bottom of gage.

3775. Comite River near Olive Branch, La.

Location.--Lat 30°45'35", long 91°02'50", between lots 41 and 42, T.3 S., R.2 E., St. Helena meridian, near center of span on downstream side of bridge on State Highway 67, 500 ft downstream from Knighton Bayou and 1.8 miles northeast of Olive Branch.

Drainage area.--149 sq mi.

Gage.--Nonrecording prior to Oct. 29, 1949; recording thereafter. Datum of gage is 115.65 ft above mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 10,000 cfs and extended above.

Bankfull stage.--18 ft.

Remarks.--Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Feb. 6, 1943	20.60	12,400	1949	Feb. 17, 1949	16.43	3,810
	Mar. 7, 1943	15.04	2,590		Mar. 22, 1949	19.44	10,600
	Mar. 21, 1943	18.98	7,150		Mar. 31, 1949	17.40	4,970
	Mar. 27, 1943	17.25	4,300		Apr. 24, 1949	16.20	3,640
					May 3, 1949	17.66	5,490
1944	Nov. 7, 1943	15.74	3,010	1950	Jan. 7, 1950	19.62	11,300
	Mar. 20, 1944	15.30	2,800				
	Apr. 24, 1944	15.92	3,110	1951	Jan. 31, 1951	16.34	3,720
1945	Jan. 8, 1945	15.04	2,740		Mar. 29, 1951	19.23	9,900
	Apr. 26, 1945	14.60	2,580				
	Apr. 29, 1945	16.58	3,460	1952	Apr. 4, 1952	10.61	1,530
1946	Mar. 16, 1946	15.30	2,870	1953	Feb. 26, 1953	15.62	3,220
	May 19, 1946	14.78	2,660		Mar. 12, 1953	15.73	3,280
1947	Jan. 14, 1947	17.04	4,490		May 6, 1953	17.20	4,680
	Jan. 21, 1947	14.70	2,830		May 18, 1953	20.12	13,300
	Mar. 14, 1947	17.60	5,240	1954	Dec. 9, 1953	11.53	1,780
	Apr. 2, 1947	17.54	5,100				
1948	Dec. 10, 1947	15.10	2,960	1955	Feb. 6, 1955	18.05	6,330
	Mar. 3, 1948	19.20	9,900		Feb. 23, 1955	13.94	2,960
	Mar. 6, 1948	17.00	4,420		Apr. 13, 1955	20.45	14,400
					May 20, 1955	13.32	2,700
1949	Nov. 28, 1948	15.85	3,350		Aug. 3, 1955	17.34	4,910
	Dec. 17, 1948	19.58	11,300	1956	Dec. 19, 1955	18.45	7,450

Peak stages and discharges of Comite River near Olive Branch, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Feb. 5, 1956	17.89	5,920	1957	June 29, 1957	16.53	4,270
	Mar. 12, 1956	18.68	8,140				
	Mar. 17, 1956	13.18	2,650	1958	Nov. 14, 1957	13.68	3,190
1957	Apr. 4, 1957	13.13	2,630		Sept. 24, 1958	15.07	3,510

3777.5. Comite River near Zachary, La.

Location.--Lat 30°38'35", long 91°05'40", between secs.3 and 37, T.5 S., R.1 E., St. Helena meridian, East Baton Rouge Parish, at bridge on State Highway 64, 0.7 mile southeast of Fred, 1.6 miles downstream from Redwood Creek, and 3.7 miles east of Zachary.

Drainage area.--228 sq mi.

Gage.--Crest-stage gage. Datum of gage is 87.55 ft above mean sea level (levels by Baton Rouge Department of Public Works).

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 29, 1951	21.39	-	1956	Mar. 12, 1956	20.93	-
1952	Apr. 4, 1952	(a)	-	1957	Apr. 4, 1957	14.95	-
1953	May 18, 1953	24.52	-	1958	Nov. 14, 1957	15.25	-
1954	Dec. 9, 1953	15.45	-				
1955	Apr. 13, 1955	22.41	-				

a Below 14.1 ft; bottom of gage.

3780. Comite River near Comite, La.

Location.--Lat 30°30'45", long 91°04'25", in NW $\frac{1}{4}$ sec.24, T.6 S., R.1 E., St. Helena meridian, near left bank on downstream side of bridge on State Highway 946, half a mile downstream from Blackwater Bayou and 2.6 miles west of Comite.

Drainage area.--332 sq mi.

Gage.--Nonrecording prior to Apr. 22, 1946; recording thereafter. Datum of gage is 28.85 ft above mean sea level (Louisiana Geodetic Survey bench mark; levels by Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements below 11,000 cfs and extended above. Rate of change in stage is a factor on some rises.

Bankfull stage.--16 ft.

Remarks.--Base for partial-duration series, 4,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Apr. 25, 1944	18.12	3,440	1948	Dec. 12, 1947	20.84	6,630
1945	Jan. 8, 1945	19.65	4,480	1949	Mar. 4, 1948	22.00	10,000
	May 1, 1945	19.80	4,820				
1946	Mar. 17, 1946	20.30	a5,470	1949	Nov. 28, 1948	20.95	7,150
	May 16, 1946	20.61	6,010		Dec. 19, 1948	21.39	8,270
	June 2, 1946	20.22	a4,940		Feb. 18, 1949	20.28	5,480
1947	Jan. 15, 1947	20.98	7,150		Mar. 24, 1949	22.14	10,300
	Jan. 21, 1947	19.94	4,700		Apr. 2, 1949	20.78	6,630
	Mar. 8, 1947	19.35	4,060		Apr. 23, 1949	20.86	6,890
	Mar. 14, 1947	22.16	10,600		May 4, 1949	21.32	7,980
	Apr. 3, 1947	20.25	5,270	1950	Jan. 8, 1950	22.07	10,100
					Feb. 15, 1950	20.10	5,070
					Mar. 17, 1950	19.80	4,540

a Mean daily.

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Peak stages and discharges of Comite River near Comite, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 8, 1950	20.43	5,690	1954	Dec. 10, 1953	21.02	7,150
1951	Feb. 1, 1951	21.22	7,670	1955	Feb. 7, 1955	22.45	9,090
	Mar. 20, 1951	20.27	5,480		Apr. 11, 1955	21.25	6,220
	Mar. 30, 1951	22.62	11,500		Apr. 15, 1955	23.07	10,900
1952	Apr. 5, 1952	18.83	3,630		Aug. 5, 1955	20.00	4,260
1953	Feb. 26, 1953	20.61	6,140	1956	Feb. 6, 1956	22.11	8,360
	Mar. 13, 1953	19.94	4,700		Feb. 11, 1956	20.16	4,410
	Mar. 24, 1953	19.67	4,390		Mar. 13, 1956	22.54	9,450
	Apr. 26, 1953	20.65	6,260	1957	Apr. 5, 1957	20.07	4,320
	May 4, 1953	21.15	7,540	1958	Nov. 15, 1957	19.52	4,530
	May 19, 1953	25.64	20,500		Jan. 14, 1958	18.78	4,120
1954	Dec. 4, 1953	20.15	5,270		Mar. 24, 1958	20.18	5,000

3785. Amite River near Denham Springs, La.

Location.--Lat 30°27'50", long 90°59'25", in lot 2, T.7 S., R.2 E., St. Helena meridian, on left bank just downstream from bridge on U. S. Highway 190, 1,000 ft downstream from Comite River, 3 miles southwest of town of Denham Springs, and 15 miles east of Baton Rouge.

Drainage area.--1,330 sq mi.

Gage.--Nonrecording prior to Aug. 8, 1939; recording thereafter. Datum of gage is 3.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1941. Auxiliary nonrecording gage 3 miles downstream, Oct. 1, 1945, to Dec. 23, 1952; recording thereafter. Datum of auxiliary gage is 3.12 ft above mean sea level.

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs and extended above; affected by fall.

Bankfull stage.--20 ft.

Remarks.--Base for partial-duration series, 10,000 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Mar. 15, 1921	a35.40	-	1949	Feb. 19, 1949	23.96	20,400
1939	June 6, 1939	21.96	12,100		Mar. 24, 1949	25.87	28,800
1940	July 7, 1940	23.09	16,000		Apr. 2, 1949	23.95	20,400
1941	Dec. 17, 1940	24.32	20,800		Apr. 25, 1949	23.56	18,600
1942	Sept. 19, 1942	21.77	12,200		May 4, 1949	25.46	27,400
1943	Mar. 23, 1943	28.63	40,200	1950	Jan. 9, 1950	28.18	40,800
1944	Mar. 23, 1944	21.17	11,000		Feb. 16, 1950	23.16	17,100
1945	Jan. 10, 1945	21.50	11,600		Mar. 6, 1950	21.36	11,200
1946	July 7, 1946	b22.94	15,500		Mar. 17, 1950	21.49	11,900
1947	Mar. 14, 1947	c25.73	27,800		June 9, 1950	22.78	15,800
1948	Dec. 12, 1947	22.50	14,300	1951	Feb. 2, 1951	23.85	20,900
	Feb. 1, 1948	22.25	13,800		Mar. 20, 1951	22.16	13,400
	Mar. 5, 1948	29.59	45,100		Apr. 1, 1951	28.19	36,900
1949	Nov. 30, 1948	24.93	24,500		Apr. 25, 1951	22.39	15,100
	Dec. 20, 1948	24.53	22,400	1952	Apr. 6, 1952	19.06	8,230
				1953	Feb. 27, 1953	23.43	18,100
					Mar. 15, 1953	21.88	12,900
					Apr. 27, 1953	20.95	11,600
					May 5, 1953	25.80	29,000
					May 20, 1953	32.46	67,000
				1954	Dec. 5, 1953	19.74	10,100

a Annual peak only.

b Occurred May 7, 1946.

c Occurred on following day.

Peak stages and discharges of Amite River near Denham Springs, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Dec. 11, 1953	22.36	15,200	1956	Mar. 14, 1956	26.20	23,400
1955	Jan. 18, 1955	20.61	10,800		Mar. 19, 1956	23.12	14,500
	Feb. 9, 1955	26.49	24,600	1957	Apr. 6, 1957	21.64	11,600
	Apr. 15, 1955	32.08	54,300		July 1, 1957	21.91	12,300
	Aug. 5, 1955	21.27	10,700	1958	Nov. 17, 1957	22.55	14,700
1956	Feb. 7, 1956	25.54	20,800		Mar. 9, 1958	20.63	10,500
	Feb. 12, 1956	22.73	13,400		Mar. 26, 1958	20.90	11,000
					Sept. 26, 1958	22.12	13,600

3800. Ward Creek at Siegens Lane, near Baton Rouge, La.

Location.--Lat 30°22'30", long 91°04'10", in lot 54, T.8 S., R.1 E., St. Helena meridian, East Baton Rouge Parish, at bridge on Siegens Lane, half a mile downstream from Dawson Creek and 8 miles southeast of Baton Rouge.

Drainage area.--41.1 sq mi.

Gage.--Recording prior to Mar. 21, 1954; crest-stage gage since Nov. 17, 1954. Datum of gage is at mean sea level (Louisiana Geodetic Survey bench mark; levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur.

Remarks.--Major channel improvements made during 1954. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Mar. 13, 1947	23.49	3,900	1953	May 3, 1953	24.70	3,840
1948	Mar. 6, 1948	21.49	1,900	1954	Dec. 10, 1953	19.92	a660
1949	Apr. 23, 1949	21.17	1,210	1955	Apr. 13, 1955	15.31	3,770
1950	June 7, 1950	22.02	1,950				
1951	Mar. 29, 1951	19.92	723	1956	Feb. 6, 1956	12.70	2,680
1952	Apr. 5, 1952	19.56	600	1957	Sept. 27, 1957	18.90	4,750
				1958	Jan. 12, 1958	15.05	2,970

a May not be maximum for the year.

3801.3. Colyell Creek at Livingston, La.

Location.--Lat 30°30'10", long 90°46'10", on line between secs. 24 and 25, T.6 S., R.4 E., St. Helena meridian, Livingston Parish, at bridge on U. S. Highway 190, 200 ft downstream from Illinois Central Railroad bridge, 0.2 mile downstream from Antioch Creek, 1.0 mile west of town of Livingston, and 2.4 miles upstream from Hornsby Creek.

Drainage area.--20.7 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Major channel improvements made during 1953-54. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 19, 1951	8.94	-	1956	Mar. 11, 1956	(a)	-
1952	Apr. 12, 1952	6.57	-	1957	Sept. 18, 1957	(a)	-
1953	May 4, 1953	11.86	-	1958	Nov. 14, 1957	6.00	-
1954	Jan. 16, 1954	(a)	-				
1955	Apr. 15, 1955	(a)	-				

a Below 5.5 ft; bottom of gage.

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3801.6. Middle Colyell Creek near Walker, La.

Location.--Lat 30°29'45", long 90°50'30", in NE $\frac{1}{4}$ sec.30, T.6 S., R.4 E., St. Helena meridian, Livingston Parish, at bridge on U. S. Highway 190, 0.2 mile downstream from Illinois Central Railroad bridge, 1.3 miles east of Walker, and 3.4 miles upstream from Dumplin Creek.

Drainage area.--22.4 sq mi.

Gage.--Crest-stage gage. Datum of gage is 37.18 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Major channel improvements made during 1952-53. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 19, 1951	6.10	-	1956	Mar. 11, 1956	(a)	-
1952	July 16, 1952	4.75	-	1957	Sept. 18, 1957	(a)	-
1953	May 4, 1953	6.72	-	1958	Nov. 14, 1957	(a)	-
1954	Jan. 16, 1954	6.99	-				
1955	Apr. 15, 1955	(a)	-				

a Below 3.0 ft, bottom of gage.

3801.8. West Colyell Creek near Walker, La.

Location.--Lat 30°29'05", long 90°53'35", in NE $\frac{1}{4}$ sec.34, T.6 S., R.3 E., St. Helena meridian, Livingston Parish, at bridge on U. S. Highway 190, 0.6 mile downstream from Illinois Central Railroad bridge and 2.0 miles west of Walker.

Drainage area.--29.5 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined since channel change in 1953.

Remarks.--Major channel improvements made during 1953. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Mar. 19, 1951	8.10	790	1955	Apr. 15, 1955	4.78	-
1952	Apr. 12, 1952	6.18	150				
1953	May 1953	10.00	4,800	1956	Mar. 11, 1956	8.01	-
1954	Apr. 23, 1954	7.58	-	1958	Nov. 14, 1957	5.91	-

3819. Bayou Cocodrie near Glenmora, La.

Location.--Lat 31°56'00", long 92°28'55", in sec.33, T.1 S., R.1 W., at bridge on parish road, 8.0 miles southeast of Glenmora.

Drainage area.--72.1 sq mi.

Gage.--Crest-stage gage. Datum of gage is about 48 ft above mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 1, 1954	10.66	-	1956	Feb. 9, 1956	10.42	-
1955	May 20, 1955	12.50	-	1957	July 1, 1957	10.64	-
				1958	Nov. 15, 1957	12.19	-

3820. Bayou Cocodrie near Clearwater, La.
(Published as "near Meeker" May 1922 to January 1925)

Location.--Lat 31°00'00", long 92°22'46", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.1 S., R.1 E., Louisiana meridian, on left bank just downstream from bridge on U. S. Highway 167, seven-eighths of a mile downstream from Chicago, Rock Island and Pacific Railroad Co. bridge, $1\frac{1}{2}$ miles east of Clearwater, 4 miles south of Meeker, and 5 miles downstream from Hurricane Creek.

Drainage area.--240 sq mi.

Gage.--Nonrecording prior to Mar. 28, 1940; recording thereafter. May 1922 to January 1925 at site 500 ft downstream at datum about $1\frac{1}{2}$ ft lower. Datum of present gage is 40.00 ft above mean Gulf level (datum of Corps of Engineers). Since Jan. 23, 1945, auxiliary nonrecording gage 6.6 miles downstream.

Stage-discharge relation.--Defined by current-meter measurement below 13,000 cfs and extended above; affected by fall.

Bankfull stage.--18 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Apr. 14, 1923	14.70	1,790	1947	Jan. 20, 1947	a18.00	1,800
1924	Dec. 24, 1923	13.65	1,520	1948	Mar. 3, 1948	c16.34	1,080
1938	Apr. 9, 1938	21.50	4,000	1949	Apr. 24, 1949	20.88	3,070
1939	Feb. 6-8, 1939	14.70	717	1950	June 6, 1950	17.42	1,300
1940	Aug. 11, 1940	18.41	2,000	1951	Feb. 9, 1951	12.17	633
1941	Dec. 14, 1940	a18.67	1,740	1952	Apr. 26, 1952	13.92	816
1942	Apr. 11, 1942	15.50	1,120	1953	May 18, 1953	26.72	28,200
1943	Mar. 29, 1943	12.03	586	1954	May 5, 1954	18.62	1,540
1944	Mar. 23-24, 1944	16.86	1,500	1955	Feb. 8, 1955	18.06	1,430
1945	Apr. 4, 1945	16.99	1,260	1956	Feb. 11, 1956	16.40	1,150
1946	May 19, 1946	b17.13	1,460	1957	Dec. 23, 1956	16.46	1,160
				1958	Nov. 16, 1957	19.90	1,470

a Occurred on following day.

b Occurred Jan. 22, 1946.

c Occurred Mar. 6, 1948.

3821. Bayou Cocodrie at Dossman, La.

Location.--Lat 30°51'35", long 92°17'00", in NE $\frac{1}{4}$ sec.30, T.2 S., R.2 E., Louisiana meridian, Evangeline Parish, at bridge on State Highway 115 at Dossman, 2 miles northwest of town of St. Landry.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 18, 1938	46.0	-	1946	May 19-20, 1946	a44.1	-
				1947	June 23, 1947	45.1	-
1940	Aug. 9, 1940	45.3	-	1948	Mar. 2-3, 1948	44.0	-
				1949	Apr. 23, 1949	45.8	-
1941	Dec. 14, 1940	45.4	-	1950	Feb. 14, 1950	44.1	-
1942	Mar. 9, 1942	43.7	-	1953	May 18, 1953	50.7	-

a Maximum for period Feb. 26 to Sept. 30, 1946.

3821.2. Bayou Cocodrie at St. Landry, La.

Location.--Lat 30°50'40", long 92°15'35", in NW $\frac{1}{4}$ sec.35, T.2 S., R.2 E., Louisiana meridian, Evangeline Parish, at bridge on State Highway 106 at town of St. Landry immediately downstream from Black Lake, 0.5 mile upstream from Texas and Pacific Railway Co. bridge.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 20, 1950; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,900 cfs and extended by logarithmic plotting; moderate shifts have occurred.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	June 24, 1947	43.8	3,110	1953	May 20, 1953	48.8	7,000
1948	Mar. 2, 1948	42.5	2,380	1954	May 3, 1954	44.0	3,200
1949	Apr. 23, 1949	44.0	2,970	1955	Feb. 6, 1955	44.5	3,480
1950	Feb. 14, 1950	42.8	2,100	1956	Feb. 5, 1956	42.3	2,270
1951	Mar. 29, 1951	40.6	1,180	1957	Apr. 17-18, 1957	41.9	2,050
1952	Apr. 24, 1952	41.2	1,450	1958	Nov. 23, 1957	43.64	3,000

3821.4. Bayou Cocodrie near Whiteville, La.

Location.--Lat 30°46'40", long 92°11'30", between lot 75 and sec.20, T.3 S., R.3 E., Louisiana meridian, on line between St. Landry and Evangeline Parishes, at bridge on State Highway 29, 2.4 miles southwest of Whiteville.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Nov. 18, 1948; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; severe shifts have occurred due to channel improvement work.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 10, 1940	36.3	-	1951	Mar. 29, 1951	31.7	-
1941	Dec. 16-17, 1940	35.8	-	1952	Apr. 24, 1952	30.6	-
1942	Dec. 27, 1941	35.9	-	1953	May 20, 1953	42.3	-
1946	May 18-19, 1946	35.6	-	1954	May 3, 1954	35.0	-
1947	Nov. 28, 1946	34.6	-	1955	Feb. 7, 1955	36.1	-
1948	Mar. 3, 1948	31.7	-	1956	Feb. 5, 1956	32.2	-
1949	Apr. 29, 1949	35.8	-	1957	Apr. 17, 1957	31.3	-
1950	Feb. 14, 1950	35.6	-	1958	Nov. 25, 1957	34.1	-

a Maximum for period Mar. 1 to Sept. 30, 1946.

3822.5. Bayou Boeuf at Twin Bridges, La.

Location.--Lat 31°14'35", long 92°33'10", on line between secs.11 and 14, T.3 N., R.2 W., Rapides Parish, at bridge on State Highway 278 at Twin Bridges.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Dec. 9, 1949; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 6, 1941	73.8	-	1951	Mar. 29, 1951	72.0	-
				1952	Apr. 23, 1952	72.4	-
1946	May 18, 1946	72.7	-	1953	May 18, 1953	74.6	-
1947	Jan.21, Apr.12	72.6	-	1954	May 3, 1954	72.8	-
				1955	Apr. 13, 1955	72.8	-
1948	Feb. 13, 1948	71.9	-				
1949	Mar. 28, 1949	72.5	-	1956	Feb. 9, 1956	72.4	-
1950	Feb. 14, 1950	72.7	-	1957	June 28, 1957	72.6	-
				1958	Aug. 24, 1958	72.6	-

3822.6. Bayou Boeuf near Lamourie, La.

Location.--Lat 31°09'10", long 92°25'55", between lots 57 and 74, T.2 N., R.1 W., Rapides Parish, at bridge on parish road, 0.8 mile upstream from Bayou Lamourie and 2 miles northwest of town of Lamourie.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined; affected by backwater.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr.9-11, 1938	69.3	-	1949	Apr. 1, 1949	69.2	-
1939	Jan.14-16, 1939	66.9	-	1950	Feb. 14, 1950	68.3	-
1940	Aug. 10, 1940	67.7	-				
				1951	Dec. 15, 1951	65.1	-
1941	Dec. 14, 1940	68.0	-	1952	Apr.25-26, 1952	66.0	-
1942	Nov.2-4, 1942	67.1	-	1953	May 18-19, 1953	72.4	-
1943	Apr. 19, 1943	65.8	-	1954	May 3, 1954	67.9	-
1944	May 6, 1944	66.7	-	1955	Feb. 7, 1955	67.4	-
1945	Apr. 2, 1945	68.0	-				
				1956	Feb.4-5, 1956	66.9	-
1946	May 18, 1946	68.5	-	1957	June 29, 1957	65.9	-
1947	Jan.19-22, 1947	68.3	-	1958	Nov. 14, 1957	67.7	-
1948	Mar. 3, 1948	67.3	-				

a May have been higher Nov. 27 to Dec. 1, 1948, when gage was overtopped at 69 ft.

3822.8. Bayou Boeuf near Lecompte, La.

Location.--Lat 31°06'41", long 92°26'11", in lot 36, T.2 N., R.1 W., Rapides Parish, 2 $\frac{3}{4}$ miles northwest of Lecompte and 3 $\frac{3}{4}$ miles above U. S. Highway 112.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	-	(a)	-	1954	May 3, 1954	67.2	-
1949	Mar. 31, Apr. 17	(a)	-	1955	Feb. 6-7, 1955	66.6	-
1950	Feb. 15, 1950	68.2	-	1956	Feb. 4, 1956	66.2	-
1951	Mar. 29, 1951	64.3	-	1957	June 30, 1957	64.9	-
1952	Apr. 25, 1952	65.0	-	1958	Nov. 14, 1957	67.2	-
1953	May 18-19, 1953	71.8	-				

a Above 69 ft.

3822.9. Bayou Boeuf at Lyles, La.

Location.--Lat 31°02'15", long 92°20'45", in lot 6, T.1 N., R.1 E., Rapides Parish, at The Texas and Pacific Railway Co. bridge at Lyles, about 200 ft upstream from U. S. Highway 71 and 4 miles northwest of Cheneyville.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Dec. 8, 1949; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Affected by fall or by channel shifts or by both. Annual discharge maxima defined from average rating curves based on current-meter measurements made in each year.

Remarks.--Daily gage heights May 1939 to June 1942 and May 1946 to Oct. 14, 1954, intermittent gage heights July 1942 to February 1946, 1955-56, and occasional current-meter measurements since 1939 collected by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 10, 1940	65.4	420	1949	Apr. 22, 1949	67.3	710
				1950	Feb. 15-16, 1950	66.1	600
1941	May 9, 1941	a66.0	500	1951	Mar. 30, 1951	62.0	275
1942	Mar. 9, 1942	64.8	475	1952	Apr. 26, 1952	62.7	275
1946	May 18-20, 1946	66.0	465	1953	May 18, 1953	68.9	800
1947	Jan. 20-21, 1947	66.4	565	1954	May 2, 1954	64.9	395
1948	Mar. 2-3, 1948	65.3	470				

a Occurred Dec. 13, 1940.

3825. Bayou Courtableau at Washington, La.

Location.--Lat 30°37'05", long 92°03'20", in lot 81, T.5 S., R.4 E., Louisiana meridian, near center of span on downstream side of bridge on State Highway 10, at Washington, a quarter of a mile upstream from Texas and New Orleans Railroad Co. bridge, 1¼ miles upstream from Bayou Carron, 3½ miles downstream from confluence of Bayou Cocodrie and Bayou Boeuf, and 6 miles north of Opelousas.

Drainage area.--715 sq mi.

Gage.--Nonrecording prior to Aug. 23, 1948; recording thereafter. Datum of gage is at mean sea level. Auxiliary nonrecording gage 3½ miles upstream Feb. 25, 1947, to Feb. 28, 1948; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements; affected by fall.

Bankfull stage.--18 ft.

Remarks.--Some flow diverted from Bayou Boeuf into Chatlin Lake Canal through Bayou Lamourie. Since April 1952, floodflow is diverted from 76.1 sq mi in Bayou Rapides basin into Bayou Boeuf when stages of Red River make it necessary to close gates at mouth of Bayou Rapides. In extreme floods, considerable flow bypasses station. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 12, 1940	20.3	-	1953	Feb. 16, 1953	23.17	3,220
					Feb. 26, 1953	26.66	4,350
1947	Jan. 29, 1947	26.66	3,600		Mar. 15, 1953	24.04	3,480
	Apr. 4, 1947	25.12	3,120		Mar. 24, 1953	25.63	3,040
	June 27, 1947	24.59	3,400		May 22, 1953	35.29	9,490
1948	Mar. 6, 1948	26.83	3,450	1954	May 8, 1954	27.55	5,570
1949	Dec. 2, 1948	23.54	3,230	1955	Feb. 12, 1955	30.70	6,330
	Jan. 19, 1949	24.59	3,010		Apr. 14, 1955	27.73	4,750
	Mar. 23, 1949	25.87	3,370		May 22, 1955	26.44	4,160
	Apr. 2, 1949	25.04	3,310	1956	Feb. 8, 1956	27.02	4,590
	Apr. 12, 1949	24.93	3,400		Mar. 16, 1956	27.00	3,510
	Apr. 29, 1949	27.85	4,520				
1950	Feb. 15, 1950	26.17	3,800	1957	Dec. 24, 1956	27.29	4,800
	Mar. 5, 1950	25.66	3,220		Mar. 23, 1957	24.26	3,260
	May 5, 1950	23.73	3,340		Apr. 6, 1957	22.30	3,080
	June 5, 1950	24.64	3,360		Apr. 18, 1957	25.26	3,810
1951	Mar. 30, 1951	24.57	3,210		June 29, 1957	26.77	4,190
	Apr. 1, 1951	25.18	3,260	1958	Nov. 28, 1957	27.54	4,960
1952	Feb. 3, 1952	25.10	3,160		Dec. 29, 1957	24.28	3,180
	Apr. 5, 1952	44.83	3,180		Jan. 25, 1958	23.72	3,200
	Apr. 25, 1952	25.20	3,510		Feb. 7, 1958	23.05	3,100
					Mar. 25, 1958	24.77	3,300
					Sept. 23, 1958	24.26	3,600

a Annual peak only.

Note.--Peak stage frequently occurs on different day than peak discharge.

3829. Bayou Lamourie at Lamourie, La.

Location.--Lat 31°08'20", long 92°25'25", in lot 59, T.2 N., R.1 W., Rapides Parish, at bridge on parish road, 0.5 mile south of junction of Bayou Lamourie and Bayou Boeuf and 1 mile northwest of town of Lamourie.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean Gulf level.

Stage-discharge relation.--Not defined; affected by fall.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Flow in Bayou Lamourie can be in either direction but is usually from Bayou Boeuf. Flow through Bayou Lamourie, depending upon stage in Bayou Boeuf, may be controlled by changing elevations of a sill at town of Lamourie. Only annual peak stages are shown.

MISSISSIPPI RIVER DELTA

Peak stages and discharges of Bayou Lamourie at Lamourie, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 9, 1938	68.8	-	1944	May 6, 1944	66.3	-
1939	Jan.14-16, 1939	66.4	-	1945	Apr. 2, 1945	67.6	-
1940	Aug. 9-10, 1940	67.3	-				
				1946	May 18, 1946	68.0	-
1941	Dec.14-15, 1940	67.5	-	1947	Jan.19-22, 1947	68.1	-
1942	Nov.2-4, 1941	66.7	-	1948	Mar. 3, 1948	66.8	-
1943	Apr. 19, 1943	65.4	-	1949	Apr. 1, 1949	68.8	-

3830. Chatlin Lake Canal near Lecompte, La.

Location.--Lat 31°07'10", long 92°20'40", in NW $\frac{1}{4}$ sec.26, T.2 N., R.1 E., near center of span on downstream side of State Highway 457, 1.2 miles downstream from Indian Bayou and 3.7 miles northeast of Lecompte.

Drainage area.--75.9 sq mi. Flow includes diversion from Bayou Boeuf through Bayou Lamourie which is a considerable portion of the low-water flow.

Gage.--Nonrecording prior to Oct. 21, 1944; recording thereafter. Prior to Sept. 3, 1953, at datum 3.00 ft higher. Datum of gage is 39.96 ft above mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Defined by current-meter measurements prior to channel dredging in fall of 1953; affected by fall. Relation not defined for present channel conditions.

Remarks.--Peak flows affected by diversion. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 19, 1943	13.44	1,430	1951	Mar. 29, 1951	13.55	1,560
1944	Mar. 19, 1944	16.60	2,280	1952	Feb. 2, 1952	14.22	1,520
1945	Mar. 18, 1945	16.7	2,370	1953	May 18, 1953	19.51	2,600
				1954	May 1, 1954	21.04	-
1946	May 18, 1946	16.26	2,110	1955	Feb. 6, 1955	20.09	-
1947	Jan. 19, 1947	16.52	2,080				
1948	Dec. 15, 1947	15.84	2,080	1956	Feb. 4, 1956	20.05	-
1949	Mar. 31, 1949	17.21	2,020	1957	Dec. 13, 1956	19.13	-
1950	Feb. 12, 1950	16.78	2,020	1958	Nov. 8, 1957	20.22	-

a Occurred on following day.

b Occurred Apr. 4, 1952.

3833.8. Coulie des Grues near Marksville, La.

Location.--Lat 31°06'30", long 92°03'50", in lot 65, T.2 N., R.4 E., Avoyelles Parish, at The Texas and Pacific Railway Co. trestle, about 200 ft upstream from bridge on State Highway 115 and 1.2 miles south of Marksville.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by backwater.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 25, 1945	a59.7	-	1952	Apr. 5, 1952	46.5	-
				1953	May 18-21, 1953	53.0	-
1947	Apr.13-14, 1947	50.3	-	1954	May 5, 1954	49.9	-
1948	Mar. 6, 1948	50.5	-	1955	Feb. 8, 1955	49.5	-
1949	Nov. 29, 1948	52.5	-				
1950	Feb.17-18, 1950	52.9	-	1956	Feb. 10, 1956	48.5	-
				1957	June 28, 1957	50.0	-
1951	Jan.3, Mar.29-30	46.0	-	1958	Nov.14-20, 1957	48.7	-

a Intermittent gage heights obtained October 1937 to July 1946; maximum stage observed during that period.

3833.9. Three Prong Lake at Belledeau, La.

Location.--Lat 31°04'45", long 92°11'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.1 N., R.3 E., Avoyelles Parish, at bridge on State Highway 114 at Belledeau.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Nov. 7, 1952; recording thereafter. Datum of gage is at mean Gulf level.

Stage-discharge relation.--Not defined; flow occurs in either direction, to Bayou du Lac or to Choctaw Bayou.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Jan. 23, 1947	53.0	-	1953	May 20-21, 1953	56.2	-
1948	Mar. 3, 1948	51.6	-	1954	May 4, 1954	53.6	-
1949	Dec. 1, 1948	53.2	-	1955	Feb. 8, 1955	52.4	-
1950	Feb. 16-17, 1950	52.9	-				
				1956	Feb. 6, 1956	51.9	-
1951	Mar. 29-30, 1951	50.6	-	1957	Apr. 5-6, 1957	51.2	-
1952	(a)	50.0	-	1958	Nov. 15, 1957	52.3	-

a Apr. 5-6, 24, May 25, 1952.

3834. Bayou du Lac near Hessmer, La.

Location.--Lat 31°01'15", long 92°08'55", between lots 35 and 51, T.1 N., R.3 E., Avoyelles Parish, at bridge on State Highway 115, 0.7 mile upstream from Lake Pearl and 3 miles southwest of Hessmer.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Dec. 16, 1949; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not determined; flow is usually toward Lake Pearl but has occurred in the opposite direction.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 18-22, 1938	53.4	-	1952	Apr. 7, 1952	45.2	-
				1953	May 21-22, 1953	54.4	-
1947	Jan. 23, 1947	49.5	-	1954	May 6, 1954	50.1	-
1948	Mar. 6-7, 1948	47.8	-	1955	Feb. 10, 1955	48.5	-
1949	(a)	49.8	-				
1950	Feb. 18, 1950	49.1	-	1956	Feb. 10-11, 1956	48.6	-
				1957	Apr. 7, 1957	46.0	-
1951	Mar. 31, 1951	45.0	-	1958	Nov. 18, 1957	49.7	-

a Nov. 30, Dec. 4, 1948, Apr. 23-25, 1949.

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3835. Bayou des Glaisses diversion channel at Moreauville, La.

Location.--Lat 31°01'59", long 91°58'57", in NE $\frac{1}{4}$ sec.29, T.1 N., R.5 E., near right bank on downstream side of bridge on State Highway 1 at Moreauville, 150 ft downstream from point of diversion from Bayou des Glaisses.

Drainage area.--270 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1950; recording thereafter. Datum of gage is 28.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1941 (levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended above. Frequent shifts in relation occur.

Bankfull stage.--25 ft.

Remarks.--Diversion channel carries natural flow of Bayou des Glaisses except when operation of floodgates, 12 miles downstream from point of diversion, regulates flow into or out of bayou depending on stage in Red River and Old River overflow area. Above 16 ft some flow bypasses station and is not included in the record. Base for partial-duration series, 1,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Jan. 18, 1944	10.11	1,580	1950	June 8, 1950	8.80	1,540
	Mar. 30, 1944	11.48	2,340				
	May 8, 1944	9.95	1,520	1951	Mar. 28, 1951	7.42	1,110
	May 23, 1944	10.32	1,680				
1945	Jan. 7, 1945	10.12	1,580	1952	Apr. 4, 1952	7.69	1,300
	Apr. 2, 1945	11.85	2,500				
	May 18, 1945	9.89	1,570	1953	Feb. 24, 1953	9.46	1,960
1946					Mar. 11, 1953	10.37	2,370
	Jan. 21, 1946	12.00	2,670		May 4, 1953	14.52	4,420
	May 18, 1946	11.50	2,390		May 15, 1953	13.92	4,090
	July 7, 1946	11.00	2,120	1954	May 18, 1953	17.64	a6,340
	July 22, 1946	9.35	1,400		May 1, 1954	13.05	3,590
1947					May 3, 1954	14.01	4,140
	Jan. 25, 1947	11.61	2,440	1955	Feb. 6, 1955	13.92	4,090
	Mar. 14, 1947	9.55	1,580		Feb. 21, 1955	9.52	1,870
	Apr. 2, 1947	9.55	1,580		Apr. 13, 1955	15.30	4,860
	Apr. 21, 1947	9.96	1,740		Aug. 6, 1955	7.79	1,360
	June 24, 1947	9.95	1,640	1956	Feb. 4, 1956	11.21	2,620
1948	Dec. 19, 1947	8.77	1,300		Feb. 9, 1956	10.02	2,120
	Mar. 2, 1948	10.60	2,010		Feb. 14, 1956	8.92	1,740
1949					Mar. 11, 1956	7.69	1,380
	Nov. 29, 1948	11.35	2,450	1957	Dec. 22, 1956	10.20	2,190
	Jan. 25, 1949	9.68	1,730		Apr. 17, 1957	7.68	1,380
	Feb. 10, 1949	9.80	1,770		June 28, 1957	11.99	3,030
	Apr. 23, 1949	13.30	3,680	1958	Nov. 8, 1957	12.26	3,180
1950					Nov. 14, 1957	14.21	4,250
	Jan. 17, 1950	8.60	1,440		Nov. 23, 1957	10.75	2,410
	Feb. 13, 1950	11.67	2,890		Jan. 24, 1958	7.76	1,400
	Mar. 16, 1950	10.13	2,130				
	Apr. 2, 1950	8.51	1,420				
	May 3, 1950	9.11	1,680				
	May 13, 1950	9.15	1,720				

a May 17-27, 1953, an estimated 5,000 acre-ft was diverted. Bypass flow not included.

3840. West Protection Levee borrow pit channel (Bayou Rouge)
near Palmetto, La.

Location.--Lat 30°45'20", long 91°54'40", in NW¹/₄NE¹/₄ sec.36, T.3 S., R.5 E., Louisiana meridian, St. Landry Parish, on left bank of borrow pit channel at its intersection with Bayou Rouge at levee station 1010+69, 2.6 miles north of Palmetto.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Mar. 16, 1937	a26.5	-	1948	Mar. 6-7, 1948	28.0	-
1938	Apr. 8-9, 1938	23.9	-	1949	Apr. 23, 1949	27.9	-
1939	May 21, 1939	26.6	-	1950	Feb. 14, 1950	27.0	-
1940	Aug. 9, 1940	30.2	-				
				1951	Feb. 4, 1951	24.3	-
1941	Dec. 16, 1940	26.2	-	1952	Apr. 5, 1952	24.0	-
1942	Dec. 26, 1941	24.0	-	1953	May 18, 1953	33.2	-
1943	Feb. 6, 1943	24.8	-	1954	May 4, 1954	27.8	-
1944	Mar. 23, 1944	24.9	-	1955	Feb. 7, 1955	30.6	-
1945	Apr. 2, 1945	25.6	-				
				1956	Feb. 5, 1956	26.6	-
1946	July 7-8, 1946	b27.0	-	1957	June 29, 1957	27.9	-
1947	Jan. 20-22, 1947	b27.0	-	1958	Nov. 15, 1957	27.8	-

a Maximum observed; no record Mar. 20 to May 31, 1937.

b May have been higher; gage overtopped at 27.0 ft.

3844.5. Bayou Courtableau at Port Barre, La.

Location.--Lat 30°33'30", long 91°57'20", in lot 4, T.6 S., R.5 E., Louisiana meridian, St. Landry Parish, 100 ft downstream from bridge on State Highway 103 at Port Barre, 0.2 mile southeast of head of Bayou Teche, and 0.6 mile downstream from The Texas and Pacific Railway Co. bridge.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean Gulf level.

Stage-discharge relation.--Not defined; subject to reverse flow.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Feb. 7-8, 1936	a20.9	-	1943	Feb. 7, 1943	22.3	-
1937	Jan. 21, 1937	23.8	-	1944	Mar. 20-21, 1944	21.4	-
1938	Apr. 21, 1938	21.9	-	1945	Apr. 3, 1945	21.3	-
1939	May 22, 1939	19.4	-				
1940	Aug. 10, 1940	26.4	-	1946	July 3, 1946	22.0	-
				1947	Jan. 14, 1947	22.5	-
1941	Dec. 16, 1940	21.8	-	1948	Mar. 5, 1948	22.5	-
1942	Jan. 3, 1942	21.0	-	1949	Apr. 29, 1949	21.7	-

a Maximum observed; gage-height record intermittent Jan. 20 to Mar. 15, 1936.

3852. West Protection Levee borrow pit channel at New Henderson Landing, La.

Location.--Lat 30°18'50", long 91°47'20", in NE¹ sec.31, T.8 S., R.7 E., Louisiana meridian, St. Martin Parish, at bridge on State Highway 349 at New Henderson Landing.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Feb. 3, 1949; recording thereafter. Datum of gage is at mean sea level, datum of 1929.

Stage-discharge relation.--Not defined; affected by backwater.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Mar. 11, 1932	a18.4	-	1946	July 9-11, 1946	9.3	-
1933	May 2-16, 1933	11.0	-	1947	Jan. 21-22, 1947	8.9	-
1934	Apr. 19-21, 1934	9.2	-	1948	Mar. 7-9, 1948	9.4	-
1935	June 8, 1935	11.3	-	1949	Apr. 1, 1949	8.3	-
				1950	Jan. 8, 1950	8.1	-
1936	Feb. 10, 1936	8.6	-				
1937	Jan. 25, 1937	9.9	-	1951	Mar. 30, 1951	7.3	-
1938	Apr. 27, 1938	9.3	-	1952	Apr. 13, 1952	6.1	-
1939	May 22, 1939	8.5	-	1953	May 29, 1953	13.1	-
1940	Aug. 12, 1940	12.5	-	1954	May 5, 1954	7.4	-
				1955	Feb. 11, 1955	10.0	-
1941	Dec. 17-19, 1940	9.0	-				
1942	Jan. 3-4, 1942	7.7	-	1956	Feb. 11, 1956	7.8	-
1943	Feb. 6, 1943	8.7	-	1957	July 3, 1957	5.55	-
1944	Jan. 17, 1944	8.0	-	1958	Oct. 17, 1957	4.0	-
1945	Apr. 4-5, 1945	8.0	-				

a Affected by overflow through West Protection Levee crevasse.

3855. Bayou Teche at Arnaudville, La.

Location.--Lat 30°23'50", long 91°55'50", in lot 63, T.7 S., R.5 E., Louisiana meridian, near center of span on upstream side of bridge on State Highway 31 at Arnaudville, 300 ft upstream from Bayou Fusilier.

Drainage area.--1,531 sq mi.

Gage.--Nonrecording prior to May 11, 1949; recording thereafter. Datum of gage is at mean sea level (Louisiana Geodetic Survey bench mark). Auxiliary non-recording gage 3.7 miles upstream at same datum Nov. 6, 1947, to June 22, 1949; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements since 1949; affected by fall.

Remarks.--Bayou Teche heads in Bayou Courtableau at Port Barr. At high stages, considerable flow bypasses station via Bayou Courtableau at Weirs near Krotz Springs. Some current-meter measurements furnished by Corps of Engineers. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Nov. 8-9, 1943	17.5	-	1951	Mar. 28, 1951	19.17	2,440
1945	Feb. 7-8, 1945	17.1	-	1952	Apr. 12, 1952	b17.06	2,020
				1953	May 24, 1953	c24.27	4,650
1946	May 16, July 8	19.25	-	1954	May 3, 1954	17.31	2,180
1947	Jan. 14, 1947	20.40	-	1955	Feb. 6, 1955	b22.79	2,970
1948	Mar. 6, 1948	19.62	-				
1949	May 5, 1949	18.60	a1,640	1956	Feb. 10, 1956	18.07	1,960
1950	Jan. 6, 1950	b21.37	2,260	1957	June 28, 1957	d19.75	2,330
				1958	Nov. 24, 1957	b17.01	1,630

a Maximum for period Apr. 18 to Sept. 30, 1949.

b Occurred on following day.

c Occurred May 23, 1953.

d Occurred June 30, 1957.

3857. Bayou Teche at Keystone lock, near St. Martinsville, La.

Location.--Lat 30°04'15", long 91°49'45", in lot 8, T.11 S., R.6 E., Louisiana meridian, St. Martin Parish, in upper pool of Keystone Lock, 3.5 miles south of St. Martinsville and 4 miles north of New Iberia.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean low Gulf.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Oct. 1, 1913	12.7	-	1936	Feb. 7-10, 1936	9.4	-
1915	Feb. 27, 1915	10.2	-	1937	Jan. 25, 1937	9.6	-
1916	May 23, 1916	9.4	-	1938	Apr. 18, 20-23	9.2	-
1917	Feb. 24-27, Mar. 4	a 8.4	-	1939	(d)	8.9	-
1918	Sept. 20, 1918	b 7.7	-	1940	Aug. 17, 1940	15.2	-
1919	Jan. 25, 1919	9.2	-	1941	Dec. 26, 1940	10.0	-
1920	Jan. 24, Feb. 12	8.8	-	1942	Apr. 8, 1942	10.6	-
1921	Dec. 22, 1920	9.4	-	1943	Apr. 1, 1943	9.7	-
1922	Mar. 28, 1922	9.1	-	1944	Dec. 28, 1943	9.8	-
1923	Dec. 18-19, 1922	10.6	-	1945	Feb. 5, 1945	9.9	-
1924	Jan. 16, 1924	10.9	-	1946	July 6, 1946	11.6	-
1925	(c)	8.3	-	1947	Mar. 13, 1947	14.8	-
1926	Mar. 29, 1926	9.7	-	1948	Mar. 5, 1948	11.5	-
1927	May 27, 1927	23.5	-	1949	Mar. 21, 1949	10.7	-
1928	June 3, 5, 1928	9.3	-	1950	Jan. 8, 1950	10.4	-
1929	Mar. 15-16, 1929	8.9	-	1951	Mar. 29, 1951	10.0	-
1930	Jan. 29, 1930	10.2	-	1952	Apr. 12, 1952	9.9	-
1931	Jan. 12, 17-19	9.0	-	1953	May 19, 1953	12.0	-
1932	Feb. 22, 1932	10.4	-	1954	July 29, 1954	11.5	-
1933	Mar. 6, 1933	9.8	-	1955	May 20, 1955	11.6	-
1934	June 16, 1934	10.9	-	1956	Feb. 3-4, 1956	10.3	-
1935	May 6, 1935	11.3	-	1957	June 30, July 1-2	11.2	-
				1958	Sept. 24-25, 1958	10.9	-

a No record June 1 to Sept. 30, 1917.

b No record Oct. 1 to May 31, 1918.

c Jan. 18-22, Mar. 19-20, 1925.

d Mar. 3-4, June 3-9, Aug. 5-8, 1939.

3860. Bayou Carencro near Sunset, La.

Location.--Lat 30°22'35", long 92°02'35", in lot 71, T 8 S., R.4 E., Louisiana meridian, near center of span on downstream side of bridge on U. S. Highway 167, 1½ miles downstream from Texas and New Orleans Railroad Co. bridge, 2¼ miles southeast of Sunset, and 4¼ miles upstream from mouth.

Drainage area.--37.1 sq mi.

Gage.--Nonrecording prior to Nov. 2, 1950; recording thereafter. Datum of gage is 12.77 ft above mean sea level (Louisiana Geodetic Survey bench mark; levels by Louisiana Department of Public Works).

Prior to Oct. 1, 1948, nonrecording gage for station on Bayou Teche at Arnaudville used as auxiliary gage; since that date, auxiliary nonrecording gage on Vermilion River 600 ft downstream from mouth of Bayou Carencro.

Stage-discharge relation.--Defined by current-meter measurements below 3,700 cfs and extended above. Discharge affected by submergence.

Bankfull stage.--10 ft.

Historical data.--A stage of 30 ft was reached in August 1940 (before channel was dredged), from floodmark.

Remarks.--Channel changes due to dredging in 1943. Base for partial-duration series, 1,500 cfs.

MISSISSIPPI RIVER DELTA

Peak stages and discharges of Bayou Carencro near Sunset, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	August 1940	a30.00	-	1950	Oct. 8, 1949	12.70	1,770
1944	Nov. 7, 1943	14.10	2,530	1950	Jan. 6, 1950	14.76	2,640
1945	May 16, 1945	13.00	1,940	1950	Jan. 27, 1950	12.57	1,720
1946	Mar. 8, 1946	12.70	1,790	1950	Feb. 13, 1950	12.20	1,570
1946	May 15, 1946	14.30	2,630	1950	Mar. 19, 1950	12.85	1,860
1946	May 18, 1946	12.70	1,670	1951	Mar. 27, 1951	13.00	1,990
1946	June 24, 1946	13.00	1,940	1952	Apr. 4, 1952	12.56	1,790
1946	July 6, 1946	14.40	2,690	1952	Apr. 23, 1952	12.25	1,600
1947	Nov. 11, 1946	12.30	1,610	1953	Apr. 25, 1953	13.98	2,510
1947	Jan. 13, 1947	16.50	3,870	1953	May 13, 1953	12.51	1,740
1947	Jan. 19, 1947	12.60	1,740	1953	May 18, 1953	14.86	2,660
1947	Mar. 7, 1947	13.00	1,940	1954	Dec. 9, 1953	11.96	1,520
1947	Mar. 13, 1947	17.10	4,220	1955	Feb. 5, 1955	16.14	3,720
1947	Apr. 11, 1947	13.10	1,990	1955	Feb. 21, 1955	12.53	1,740
1947	May 20, 1947	14.90	2,960	1955	Apr. 10, 1955	12.49	1,720
1948	Mar. 2, 1948	13.20	2,050	1956	Dec. 2, 1955	12.16	1,580
1949	Dec. 7, 1948	12.26	1,640	1957	June 28, 1957	14.63	2,130
1949	Feb. 8, 1949	12.00	1,520	1958	Oct. 16, 1957	11.16	1,210
1949	Mar. 30, 1949	13.41	2,100				
1949	Apr. 22, 1949	12.35	1,660				

a Annual peak only.

3865. Bayou Bourbeau at Shuteston, La.

Location.--Lat 30°25'40", long 92°05'30", in lot 174, T.7 S., R.4 E., Louisiana meridian, near center of span on downstream side of bridge on State Highway 178, three-quarters of a mile east of Shuteston, $\frac{1}{2}$ miles northwest of Sunset, and 2 miles upstream from Bayou Sylvain and Texas and New Orleans Railroad Co. bridge.

Drainage area.--19.0 sq mi.

Gage.--Nonrecording prior to Dec. 7, 1948; recording thereafter. Datum of gage is 27.14 ft above mean sea level (Louisiana Geodetic Survey bench mark; levels by Louisiana Department of Public Works).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs and extended above.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Dec. 22, 1942	8.55	830	1948	Feb. 9, 1948	8.55	830
1943	Feb. 5, 1943	8.48	775	1948	Mar. 2, 1948	8.90	1,020
1943	Mar. 25, 1943	9.65	1,620	1948	Mar. 5, 1948	8.52	775
1943	Sept. 17, 1943	8.74	890	1949	Mar. 22, 1949	8.51	775
1944	Nov. 7, 1943	8.50	775	1949	Mar. 23, 1949	8.86	985
1944	Jan. 2, 1944	9.22	1,260	1949	July 16, 1949	8.82	950
1944	Mar. 19, 1944	8.52	775	1950	Jan. 6, 1950	9.82	1,800
1945	June 13, 1945	9.00	1,100	1950	Jan. 27, 1950	8.58	830
1946	Dec. 27, 1945	8.80	950	1951	Dec. 6, 1950	8.43	700
1946	Jan. 7, 1946	9.10	1,180	1951	Mar. 27, 1951	8.89	919
1946	May 15, 1946	8.60	830	1952	Apr. 4, 1952	8.92	919
1946	July 6, 1946	8.95	1,100	1952	Apr. 23, 1952	8.50	721
1947	Jan. 1, 1947	9.00	1,100	1952	May 19, 1952	8.62	765
1947	Jan. 13, 1947	10.80	2,840	1953	Apr. 25, 1953	9.39	922
1947	Mar. 13, 1947	9.95	2,000	1953	May 18, 1953	10.41	1,310
1947	Apr. 11, 1947	8.50	775	1954	May 3, 1954	8.30	323
1947	May 21, 1947	8.65	830	1955	Jan. 16, 1955	8.56	710
1948	Dec. 10, 1947	8.75	950				
1948	Jan. 27, 1948	8.58	830				

Peak stages and discharges of Bayou Bourbeau at Shuteston, La.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Feb. 5, 1955	10.67	2,000	1957	Dec. 23, 1956	8.69	764
	Feb. 21, 1955	9.35	1,160		June 28, 1957	10.64	1,390
	Apr. 11, 1955	8.98	955	1958	Oct. 16, 1957	8.38	625
	May 20, 1955	8.87	872				
1956	Dec. 2, 1955	9.20	1,070				

3866.5. Vermilion River at Tontons Bridge, La.

Location.--Lat 30°21'00", long 91°58'50", between lots 61 and 88, T.8 S., R.5 E., Louisiana meridian, Lafayette Parish, at Tontons Bridge on State Highway 726, 2.2 miles downstream from confluence of Bayou Carencro and Bayou Fusilier, 4 miles southwest of Arnaudville, and 4.5 miles northeast of Carencro.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Sept. 15, 1954; recording thereafter. Datum of gage is at mean low Gulf (0.78 ft below mean sea level).

Stage-discharge relation.--Variable; affected by fall.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel changes made during 1950-51. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Mar. 6, 1948	18.9	-	1954	Jan. 11, 1954	14.1	-
1949	Mar. 31, 1949	19.6	-	1955	Feb. 10, 1955	17.6	-
1950	Jan. 7, 1950	20.3	-				
				1956	Feb. 11, 1956	14.6	-
1951	Mar. 29, 1951	17.3	-	1957	June 29, 1957	17.0	-
1952	Apr. 4, 1952	15.0	-	1958	Sept. 23, 1958	13.6	-
1953	May 19, 1953	21.1	-				

3866.6. Vermilion River at Long Bridge, La.

Location.--Lat 30°14'25", long 91°57'50", between lots 72 and 92, T.9 S., R.5 E., Louisiana meridian, on line between Lafayette and St. Martin Parishes, at bridge on State Highway 94 at town of Long Bridge, 2 miles upstream from Ruth Canal and 3 miles east of Lafayette.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Sept. 28, 1954; recording thereafter. Datum of gage is at mean low Gulf (0.78 ft below mean sea level).

Stage-discharge relation.--Not defined; severely affected by backwater.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Major channel changes made during 1950-51. Only annual peak stages are shown.

Peak stages and discharges of Vermilion River at Long Bridge, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 12-13, 1938	10.7	-	1949	Mar. 31, 1949	10.0	-
1939	June 5, 1939	11.6	-	1950	Jan. 7-8, 1950	10.6	-
1940	Aug. 15, 1940	19.6	-				
				1951	Mar. 29, 1951	9.1	-
1941	Dec. 28-29, 1940	13.6	-	1952	Feb. 23, 1952	9.7	-
1942	Apr. 8, 1942	14.3	-	1953	May 21, 1953	13.9	-
1943	Mar. 28, 1943	12.9	-	1954	Jan. 10-11, July 30	9.5	-
1944	Jan. 15-17, 1944	12.9	-	1955	Feb. 8, 1955	13.1	-
1945	Feb. 13, 1945	12.0	-				
				1956	Feb. 11, 1956	9.8	-
1946	Jan. 15-16, 1946	13.2	-	1957	June 28, 1957	10.4	-
1947	Mar. 13, 1947	13.1	-	1958	Oct. 17, 1957	8.7	-
1948	Mar. 6, 1948	10.2	-				

3868. Vermilion River at Ruth Canal, near Long Bridge, La.

Location.--Lat 30°13'35", long 91°56'35", in lot 19, T.9 S., R.5 E., Louisiana meridian, St. Martin Parish, on Ruth Canal 50 ft from Vermilion River, 1.6 miles southwest of town of Long Bridge, and 57.4 miles above mouth.

Drainage area.--Indeterminate.

Gage.--Nonrecording. Datum of gage is at mean low Gulf (0.78 ft below mean sea level).

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Jan. 12-15, 1938	9.4	-	1948	Mar. 6-7, 1948	10.1	-
1939	June 6-8, 1939	9.7	-	1949	Mar. 22, 1949	10.0	-
1940	August 1940	20.2	-				
				1952	Apr. 12, 1952	8.0	-
1941	Jan. 1-3, 1941	12.1	-	1953	May 18, 1953	12.9	-
1942	Apr. 10-12, 1942	12.7	-	1954	Jan. 10, July 30	8.7	-
1943	Mar. 29-30, 1943	11.2	-	1955	May 20, 1955	11.0	-
1944	Jan. 16-17, 1944	11.8	-				
1945	Feb. 13-16, 1945	11.2	-	1956	Feb. 11-12, 1956	9.3	-
				1957	June 28, 1957	9.7	-
1946	May 20, 1946	12.3	-	1958	Oct. 16, 1957	7.6	-
1947	Mar. 14, 1947	13.8	-				

3869. Vermilion River at Lafayette, La.

Location.--Lat 30°11'40", long 92°01'00", between lots 46 and 47, T.10 S., R.4 E., Louisiana meridian, Lafayette Parish, at Pin Hook Bridge on U. S. Highway 90, 0.9 mile south of Lafayette, 1.4 miles downstream from Southern Pacific Railroad bridge, and 50.6 miles upstream from mouth.

Drainage area.--Indeterminate.

Gage.--Recording. Datum of gage is 0.78 ft below mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Not defined; affected by tides and subject to occasional reverse flow.

Remarks.--Gage-height records since November 1941 and occasional current-meter measurements since March 1941 collected by Corps of Engineers. Major channel changes made during 1950-51. Only annual peak stages are shown.

Peak stages and discharges of Vermilion River at Lafayette, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 8, 1942	14.3	-	1951	Mar. 28, 1951	8.0	-
1943	Mar. 26, 1943	10.8	-	1952	Feb. 23, 1952	8.6	-
1944	Jan. 15, 1944	11.0	-	1953	May 19, 1953	11.4	-
1945	Feb. 5, 1945	10.8	-	1954	July 29, 1954	8.4	-
				1955	Feb. 6, 1955	11.2	-
1946	May 15, 1946	10.6	-				
1947	Mar. 13, 1947	14.7	-	1956	Feb. 4, 1956	8.1	-
1948	Mar. 5, 1948	9.9	-	1957	May 2, 1957	9.5	-
1949	Mar. 22, 1949	10.5	-	1958	Oct. 16, 1957	7.4	-
1950	June 21, 1950	a8.9	-				

a May have been slightly higher during period of no record Jan. 4-10, 1950.

3869.5. Bayou Ile des Cannes near Lafayette, La.

Location.--Lat 30°10'52", long 92°06'26", in lot 7, T.10 S., R.4 E., at bridge on State Highway 342, 6.5 miles southwest of Lafayette.

Drainage area.--30 sq mi.

Gage.--Crest-stage gage.

Stage-discharge relation.--Not defined.

Remarks.--Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 19, 1953	11.13	-	1956	Feb. 9, 1956	8.75	-
1954	July 29, 1954	9.58	-	1957	Dec. 23, 1956	10.71	-
1955	Apr. 15, 1955	11.46	-	1958	Oct. 16, 1957	8.22	-

3869.6. Vermilion River at Landry Bridge, near Milton, La.

Location.--Lat 30°03'55", long 92°04'45", between lots 29 and 52, T.11 S., R.4 E., Louisiana meridian, Vermilion Parish, at Landry Bridge on parish road, 2.5 miles south of Milton.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to July 25, 1951; recording thereafter. Datum of gage is 0.78 ft below mean sea level (Louisiana Geodetic Survey bench mark).

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Corps of Engineers. Only annual peak stages are shown.

Peak stages and discharges of Vermilion River at Landry Bridge, near Milton, La.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 8, 1942	12.6	-	1947	Mar. 13, 1947	14.5	-
1943	Sept. 19, 1943	9.7	-	1948	Mar. 6, 1948	8.8	-
1944	Jan. 14-15, 1944	7.9	-	1949	Mar. 22, 1949	10.2	-
1945	Jan. 7, 1945	8.5	-	1950	June 21, 1950	9.0	-
1946	May 15, 1946	10.0	-	1951	Mar. 29, 1951	6.9	-

3869.7. Vermilion River at Abbeville pumping plant, near Abbeville, La.

Location.--Lat 29°57'50", long 92°09'45", in lot 54, T.12 S., R.3 E., Vermilion Parish, at north intake of pumping plant on west bank of river, 1.4 miles downstream from Southern Pacific Railroad bridge and 1.5 miles southwest of Abbeville.

Drainage area.--Indeterminate.

Gage.--Nonrecording prior to Feb. 3, 1942; recording thereafter. Datum of gage is 0.78 ft below mean sea level.

Stage-discharge relation.--Not defined.

Remarks.--Gage-height records collected by Acadia Vermilion Rice Irrigation Co. prior to February 1942 and by Corps of Engineers thereafter. Only annual peak stages are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Jan. 24, 1932	6.1	-	1946	May 15, 1946	7.8	-
1933	Mar. 6, 1933	5.6	-	1947	Mar. 13, 1947	10.5	-
1934	July 28, 1934	5.5	-	1948	Mar. 5, 1948	7.1	-
1935	May 6, 1935	6.5	-	1949	Mar. 22, 1949	7.8	-
				1950	Oct. 5, 1949	7.2	-
1936	May 25, 1936	4.0	-				
1937	Jan. 19, 1937	5.1	-	1951	Mar. 29, 1951	5.4	-
1938	Aug. 14, 1938	4.8	-	1952	Feb. 23, 1952	6.1	-
1939	Oct. 16, 1939	3.6	-	1953	May 19, 1953	8.0	-
1940	Aug. 9, 1940	13.5	-	1954	July 29, 1954	6.1	-
				1955	Feb. 6, 1955	8.0	-
1941	May 31, 1941	7.8	-				
1942	Apr. 9, 1942	7.4	-	1956	Feb. 9, 1956	4.7	-
1943	Sept. 18, 1943	7.4	-	1957	June 28, 1957	7.6	-
1944	Jan. 14, 1944	5.0	-	1958	Oct. 16, 1957	5.6	-
1945	May 16, 1945	6.6	-				

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