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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

FLOODS IN ARKANSAS MAGNITUDE AND FREQUENCY

By

James L. Patterson

Prepared in cooperation with
ARKANSAS STATE HIGHWAY COMMISSION

Open-file report

Fort Smith, Arkansas
1961

Floods in Arkansas, Magnitude and Frequency

Use of Flood-frequency Curves

Refer to page 10 for step by step procedure.

Example # 1

Assume that it is desired to determine the magnitude of the 50-year flood for Hurricane Creek at U. S. Highway 270 east of Sheridan.

1. The drainage area above the site is 205 square miles.
2. From figure 2 we see that the site is in Region D and area 2.
3. From figure 5 the mean annual flood for 205 square miles for area 2 is determined as 12,000 cubic feet per second.
4. From figure 3 the ratio of the 50-year flood to the mean annual flood is determined as 2.43.
5. The magnitude of the 50-year flood is then computed as $12,000 \times 2.43 = 29,200$ cubic feet per second.

Example # 2

Assume that it is desired to determine the magnitude of the 25-year flood for Buffalo River at U. S. Highway 65, 4.5 miles southeast of St. Joe.

1. The drainage area above the site is 825 square miles.
2. From figure 2 we see that the site is in Region A and area 8.
3. From figure 5 the mean annual flood for 825 square miles for area 8 is determined as 42,000 cubic feet per second.
4. From figure 3 the ratio of the 25-year flood to the mean annual flood (for a drainage area of 100 square miles) is 3.36. The drainage area being greater than 100 square miles this ratio must be adjusted by figure 4. The adjustment to the ratio is determined as -0.47 for the 25-year flood and an 825 square mile drainage area. The adjusted ratio is then $3.36 - .47 = 2.89$.
5. The magnitude of the 25-year flood is then computed as $42,000 \times 2.89 = 121,000$ cubic feet per second.

(over)

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ABSTRACT

This report presents methods by which the magnitude and frequency of expected floods for most streams in Arkansas may be determined. Flood data have been used to define flood-frequency curves applicable to the State.

Composite frequency curves have been defined showing the relation of the mean annual flood to floods having recurrence intervals of 1.2 to 50 years. Other curves express the relation of the mean annual flood to drainage basin characteristics. For the northern part of the State, it was found that the slope of the composite frequency curve varies with drainage area size, and an adjustment curve was drawn for use in conjunction with the composite curve for this area.

By combining data from the composite and mean annual flood curves a flood-frequency curve may be drawn for any stream in Arkansas, not materially affected by works of man, within the limits of drainage area and recurrence interval defined by base data.

INTRODUCTION

Knowledge of the magnitude and frequency of floods is necessary for the proper design of structures located on flood plains of streams. Where the failure of a structure may result in the loss of human life or in great property damage, design is usually based on the maximum probable flood. However, in the design of structures such as bridges and highway fills, where the inundation or loss of the structure would cause only temporary inconvenience or moderate property loss, economy will be achieved by designing for floods with an average frequency of occurrence comparable to the expected life of the structure. Similarly, some land uses require complete protection from flooding while other uses permit relatively frequent inundation.

The purpose of this report is to describe methods by which the magnitude and frequency of floods at most sites in Arkansas may be determined. In addition to flood-frequency analysis, the accumulation of flood data in the report area is presented.

The frequency relations in this report are abstracted from a comprehensive report now being prepared by the author. The comprehensive report will describe the magnitude and frequency of floods in the Lower Mississippi River basin which includes all of Arkansas.

Acknowledgments

This report was prepared in the Fort Smith office of the U. S. Geological Survey under the administrative direction of John L. Saunders, district engineer, in cooperation with the Arkansas State Highway Commission, Floyd R. Oliver, director. Assistance was given by H. W. Sengel, Jr.

T. E. Lamb, and others in the Fort Smith office. Technical assistance was furnished by Tate Dalrymple and A. Rice Green of the Floods Section, U. S. Geological Survey, Washington, D. C.

Unless otherwise noted in the individual station manuscripts, the data were collected by the U. S. Geological Survey with the assistance of other agencies. The principal assistance has been furnished by the Arkansas Geological and Conservation Commission, Norman F. Williams, geologist-director.

DESCRIPTION OF THE AREA

Arkansas has an area of 53,335 square miles and ranks 23rd in size in conterminous United States. It is bounded on the east by the Mississippi River. Three major rivers cross the State; the White River in the north, the Arkansas River in central Arkansas, and the Red River in the southwest. The northeastern part of the State is drained by the St. Francis River. Major tributary streams are the Black River (tributary to White River), and Little and Ouachita Rivers (tributaries to Red River).

Topography

Arkansas is divided diagonally from the southwest corner to the northeast corner into the Gulf Coastal Plains comprising the southeastern half of the State and the Highlands comprising the northwestern half. The Highlands are divided into three areas; the Ozark Uplift in northern Arkansas, the Arkansas Valley along the Arkansas River, and the Ouachita Mountain Uplift of southern Arkansas, which extends from the Oklahoma border nearly to the center of the State.

The Ozark and Ouachita Mountains are quite rugged with some peaks rising above 2,800 feet. The Coastal Plain is relatively flat with minor relief being afforded by Crowley's Ridge, a narrow divide between the St. Francis and the White River basins in eastern Arkansas. Altitudes in the Coastal Plain range from 100 feet in the southeast corner of the State to 500 feet on Crowley's Ridge.

Climate

Arkansas climate is mild and fairly humid. The average annual precipitation is about 50 inches, varying from less than 45 inches in the northwestern part of the State to more than 50 inches in the southern part. Heaviest rainfall occurs in the Ouachita Mountains where the mean annual precipitation is about 55 inches. Rainfall is fairly uniformly distributed throughout the year with the extremes in average monthly precipitation ranging from 5.0 inches in May to 3.1 inches in August. About 50 percent of the precipitation occurs during the period January to May.

Floods may occur during any month of the year but occur most frequently from January to May and are usually caused by storms moving from the west Gulf region in a northeasterly direction. Intense thunderstorms of short duration frequently cause floods on the smaller streams. Snowfall does not play an important part in the occurrence of floods in Arkansas.

FLOOD-FREQUENCY ANALYSIS

Records Available

Peak data for 110 gaging stations in Arkansas having 5 or more years of record are included in this report. Records are also included for 5 gaging stations in Missouri, 5 in Oklahoma, and 8 in Louisiana. Figure 1, a bar graph, shows the period of record of annual peaks at each of these stations.

Flood-frequency relations developed in this report are based on an analysis of usable flood data for 85 gaging stations in Arkansas and for many stations in adjacent states. In general, records were not used for stations having less than 5 years of peak discharge data unaffected by regulation or diversion. In some cases where records were collected at two stations on the same stream with drainage areas differing by less than 25 percent, the records were either combined to form one long-term record or the longer of the two records was used.

Method

Methods used in the preparation of this report have been developed by engineers of the U. S. Geological Survey over a period of years. These methods have been outlined by Dalrymple (1960).

Flood-frequency relations are first defined at a point on a stream (at a gaging station) and, by combining a number of these point relations, regional relations that are applicable over a broad area may be defined. Using peak data collected on many streams in Arkansas and adjacent states, representing a wide range of drainage area sizes, two basic curves were defined: (1) A curve showing the ratio of a given flood to the mean annual flood, and (2) A curve showing the relation of the mean annual flood to drainage area. By combining data obtained from these two curves it is possible to estimate the magnitude-frequency relation on most streams, gaged or ungaged, in Arkansas.

Flood Frequency at a Gaging Station

Value

A flood-frequency curve based on records collected at one gaging station is an indication of what has happened at that site during a specific number of years in the past. It might be a poor basis for predicting future flood events if the past record is not typical. It is believed that a frequency curve based on regional characteristics is more reliable than one based on flood experiences at a particular site. Exceptions would be stations on large streams with flood-flow 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 essentially 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	
Annual flood series	Partial-duration series
1.16	0.5
1.58	1.0
2.00	1.45
2.54	2.0
5.52	5.0
10.5	10
20.5	20
50.5	50
100.5	100

Recurrence intervals for partial-duration series may be computed from curves based on annual series by use of the relation expressed in the above 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, 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. The largest flood has an order number of 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 plot as a straight line. After plotting the data, a curve is fitted to the points by inspection. Since most streamflow records are relatively short, this method is preferable to analytical curve fitting. Reliable historical data are used to aid in defining of 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.

FLOOD-FREQUENCY ANALYSIS

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No.	Gaging station	Annual peak records, water year									
		1880	1890	1900	1910	1920	1930	1940	1950	1960	
St. Francis River Basin											
401	St. Francis River at St. Francis, Ark.										
404.5	St. Francis River at Lake City, Ark.										
465	Big Lake Outlet near Manila, Ark.										
466	Right Hand Chute of Little River at Rivervale, Ark.										
470	St. Francis River floodway near Marked Tree, Ark.										
475	St. Francis River at Marked Tree, Ark.										
476	Tyronza River near Tyronza, Ark.										
478	St. Francis River at Parkin, Ark.										
479	St. Francis Bay at Riverfront, Ark.										
479.5	L'Anguille River at Palestine, Ark.										
White River Basin											
480	West Fork White River at Greenland, Ark.										
485	West Fork White River near Fayetteville, Ark.										
490	War Eagle Creek near Hindsville, Ark.										
495	White River near Rogers, Ark.										
500	White River at Beaver, Ark.										
505	Kings River near Berryville, Ark.										
530	White River near Reeds Spring, Mo.										
535	White River near Branson, Mo.										
550	White River near Flippin, Ark.										
560	Buffalo River near St. Joe, Ark.										
570	Buffalo River near Rush, Ark.										
590	North Fork River near Henderson, Ark.										
600	North Fork River at Norfork Dam near Norfork, Ark.										
605	White River at Calico Rock, Ark.										
610	White River at Batesville, Ark.										
630	Black River at Poplar Bluff, Mo.										
640	Black River near Corning, Ark.										
690	Black River at Pocahontas, Ark.										
695	Spring River at Imboden, Ark.										
715	Eleven Point River near Bardley, Mo.										
720	Eleven Point River near Ravenden Springs, Ark.										
725	Black River at Black Rock, Ark.										
730	Strawberry River near Evening Shade, Ark.										
735	Piney Fork Strawberry River at Evening Shade, Ark.										
740	Strawberry River near Poughkeepsie, Ark.										
745	White River at Newport, Ark.										
748.5	White River near Augusta, Ark.										
750	Middle Fork Little Red River at Shirley, Ark.										
755	South Fork Little Red River near Clinton, Ark.										
760	Little Red River near Heber Springs, Ark.										
767.5	White River at Georgetown, Ark.										
769	White River at Des Arc, Ark.										
770	White River at DeValls Bluff, Ark.										
775	Cache River at Patterson, Ark.										
777	Bayou DeView at Morton, Ark.										
778	White River at Clarendon, Ark.										
780	Lagru Bayou near Stuttgart, Ark.										
Arkansas River Basin											
1890	Elk River near Tiff City, Mo.										
1950	Osage Creek near Elm Springs, Ark.										
1965	Illinois River near Tahlequah, Okla.										
1970	Barren Fork at Eldon, Okla.										
2465	Arkansas River near Sallisaw, Okla.										
2470	Poteau River at Cauthron, Ark.										
2485	Poteau River near Wister, Okla.										
2490	Poteau River at Poteau, Okla.										
2494.5	Arkansas River at Fort Smith, Ark.										
2495	Cove Creek near Lee Creek, Ark.										
2500	Lee Creek near Van Buren, Ark.										
2505	Arkansas River at Van Buren, Ark.										
2510	Frog Bayou near Mountainburg, Ark.										
2515	Frog Bayou at Rudy, Ark.										
2520	Mulberry River near Mulberry, Ark.										

Figure 1. --Period of record of annual peaks at gaging station.

		Annual peak records, water year									
No.	Gaging station	1880	1890	1900	1910	1920	1930	1940	1950	1960	
Arkansas River Basin, --Cont.											
2524	Arkansas River at Ozark, Ark.										
2565	Spadra Creek at Clarksville, Ark.										
2570	Piney Creek near Dover, Ark.										
2575	Illinois Bayou near Scottsville, Ark.										
2580	Arkansas River at Dardanelle, Ark.										
2585	Petit Jean Creek near Booneville, Ark.										
2595	Petit Jean Creek near Waveland, Ark.										
2600	Dutch Creek at Waltreak, Ark.										
2605	Petit Jean Creek at Danville, Ark.										
2608	Arkansas River near Morrilton, Ark.										
2615	Fourche La Fave River near Gravelly, Ark.										
2625	Fourche La Fave River near Nimrod, Ark.										
2630	South Fourche La Fave River near Hollis, Ark.										
2635	Arkansas River at Little Rock, Ark.										
2637	Arkansas River at Pine Bluff, Ark.										
2639. 2	Bayou Meto near North Little Rock, Ark.										
2640	Bayou Meto near Lonoke, Ark.										
2645	Bayou Meto near Stuttgart, Ark.										
2650	Crooked Creek near Humphrey, Ark.										
Red River Basin											
3370	Red River at Index, Ark.										
3395	Rolling Fork near DeQueen, Ark.										
3400	Little River near Horatio, Ark.										
3405	Cossatot River near DeQueen, Ark.										
3407	Little River near White Cliffs, Ark.										
3410	Saline River near Dierks, Ark.										
3415	Red River at Fulton, Ark.										
3420	Red River at Garland, Ark.										
3423. 5	McKinney Bayou near Garland, Ark.										
3443. 5	Red River at Springbank, Ark.										
3464. 5	Black Bayou at Rodessa, La.										
3470	Kelly Bayou near Hosston, La.										
3487. 2	Bayou Dorcheat near Sarepta, La.										
3495	Bayou Bodcau near Sarepta, La.										
3560	Ouachita River near Mount Ida, Ark.										
3565	South Fork Ouachita River at Mount Ida, Ark.										
3570	Ouachita River near Mountain Pine, Ark.										
3580	Ouachita River near Hot Springs, Ark.										
3595	Ouachita River near Malvern, Ark.										
3597	Caddo River at Glenwood, Ark.										
3598	Caddo River near Alpine, Ark.										
3600	Ouachita River at Arkadelphia, Ark.										
3608	Muddy Fork Creek near Murfreesboro, Ark.										
3610	Little Missouri River near Murfreesboro, Ark.										
3612	Ozan Creek near McCaskill, Ark.										
3615	Antoine River at Antoine, Ark.										
3616	Little Missouri River near Boughton, Ark.										
3618	Terre Noire Creek east of Gurdon, Ark.										
3620	Ouachita River at Camden, Ark.										
3621	Smackover Creek near Smackover, Ark.										
3624	Ouachita River at Lock & Dam No. 8, Champagnolle Landing, Ark.										
3625	Moro Creek near Fordyce, Ark.										
3630	Saline River near Benton, Ark.										
3632	Saline River and Gamble Creek near Sheridan, Ark.										
3634	Hurricane Creek near Sheridan, Ark.										
3635	Saline River near Rye, Ark.										
3640	Saline River near Warren, Ark.										
3640. 8	Ouachita River at Lock & Dam No. 6 near Felsenthal, Ark.										
3641. 2	Bayou Bartholomew near Star City, Ark.										
3641. 5	Bayou Bartholomew near McGehee, Ark.										

Figure 1. --Period of record of annual peaks at gaging station. --Cont.


FLOOD-FREQUENCY ANALYSIS

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No.	Gaging station	Annual peak records, water year								
		1880	1890	1900	1910	1920	1930	1940	1950	1960
	Red River Basin. --Cont.									
3641.9	Bayou Bartholomew at Wilmot, Ark. _____									
3645	Bayou Bartholomew near Beekman, La. _____									
3660	Corney Bayou near Lillie, La. _____									
3676.8	Boeuf River near Eudora, Ark. _____									
3677	Boeuf River near Kilbourne, La. _____									
3696.8	Bayou Macon at Eudora, Ark. _____									
3697.2	Bayou Macon near Oak Grove, La. _____									

^a Combined with station 470.^b Combined with station 478.^c 1833 (stage only).^d 1833, 1844 (stage only).^e Combined with station 2645.^f 1866 (stage only).

Bar symbols

 Peak stage and discharge.


 Peak stage only.

Figure 1. --Period of record of annual peaks at gaging station.

The use of such a frequency curve is questionable, even for the site for which it was drawn, since 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, they should be from regions having similar flood-flow 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 frequency curve representing the ratio of the flood of any frequency to an index flood (the mean annual flood). The second step is defining 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 location, gaged or ungaged, can be drawn by use of the above set of 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 flood flow.

Adjustment to Base Period

In order that the mean annual floods at the various stations be comparable, records must be adjusted to the same time period. The period 1921-58 was selected as the base period for this report. Most gaging-station records in the State do not extend over this period and it was necessary to adjust the mean annual flood for short-term stations on basis of relations obtained from the stations having longer periods of record.

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 is expressed by the ratio of the 10-year flood to the mean annual flood. This ratio is used as 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

Arkansas was divided into 4 homogeneous regions (A-D) on the basis of the homogeneity test. Regional boundaries are shown on figure 2. Records for stations in each of these regions were combined to give 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 3. Curves for all regions except C were adjusted to the period 1921-58. There were no records

covering the long-term period in region C, therefore composite curve for region C was adjusted to the period 1929-58.

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 generally having steeper slopes than those for larger areas. This effect was investigated for each of the 4 frequency regions. The flood ratios for the various flood levels were plotted against drainage area. The effect of drainage area on the slope of the frequency curve proved to be significant only in region A.

A family of curves was drawn to show the adjustment which is applicable at the various flood levels for drainage areas greater than 100 square miles for region A. These curves are shown on figure 4.

Mean Annual Flood Relation

After deriving 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.

Excluding climatic factors, the more important physical characteristics of a drainage basin that affect the magnitude of the mean annual flood are size, topography, shape, and floodwater storage. The effect of topography may be measured in terms of land and stream slope and elevation. The most important and most readily measurable of these factors is size. A large part of Arkansas is inadequately covered by reliable topographic maps, and slopes cannot be determined accurately. Storage undoubtedly has an important effect, but cannot be measured directly.

Initially, the mean annual flood was graphically correlated with drainage area. On the basis of this correlation 9 hydrologic areas were defined. These areas are outlined on figure 2. Curves showing the relation of mean annual flood to drainage area for each of these hydrologic areas are shown on figures 5 and 6.

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 its width. A slight trend was noted in several areas but a material improvement was made only in area 6. This area is in the southeastern part of the State and is characterized by a wide variation of basin shapes, varying from long sinuous streams paralleling the Mississippi River to relatively short, wide tributary streams. A shape adjustment curve was drawn for use with the mean annual flood curve for area 6 and is shown on figure 7. The length used in the ratio of length to width is 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.

Data used to develop regional frequency relations are shown in table 1.

APPLICATION OF FLOOD-FREQUENCY DATA

Procedures for determining the magnitude of floods having recurrence intervals up to 50 years are outlined in this section. Mean annual flood curves

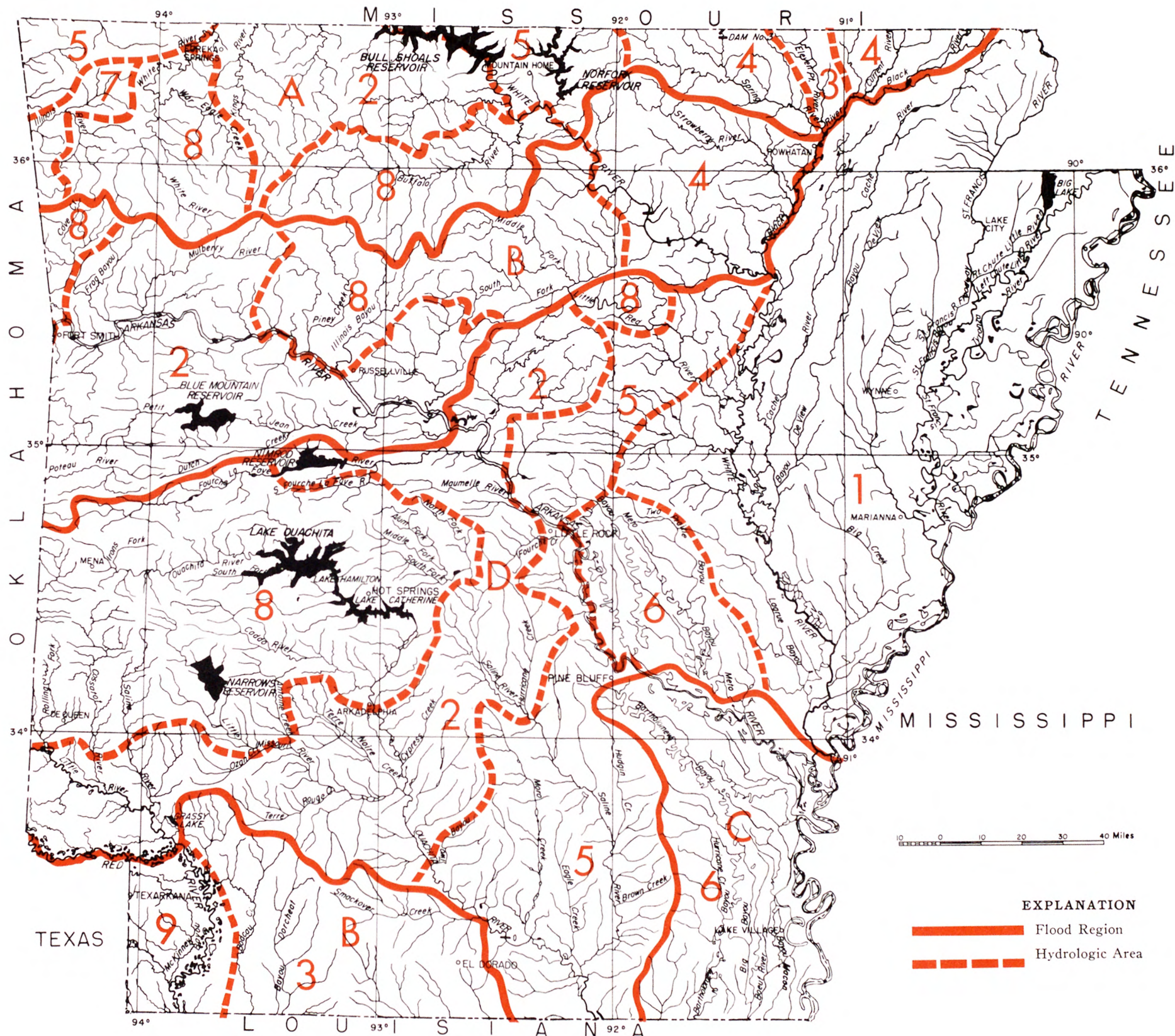


FIGURE 2 — MAP OF ARKANSAS SHOWING FLOOD-FREQUENCY REGIONS AND HYDROLOGIC AREAS

FLOODS IN ARKANSAS

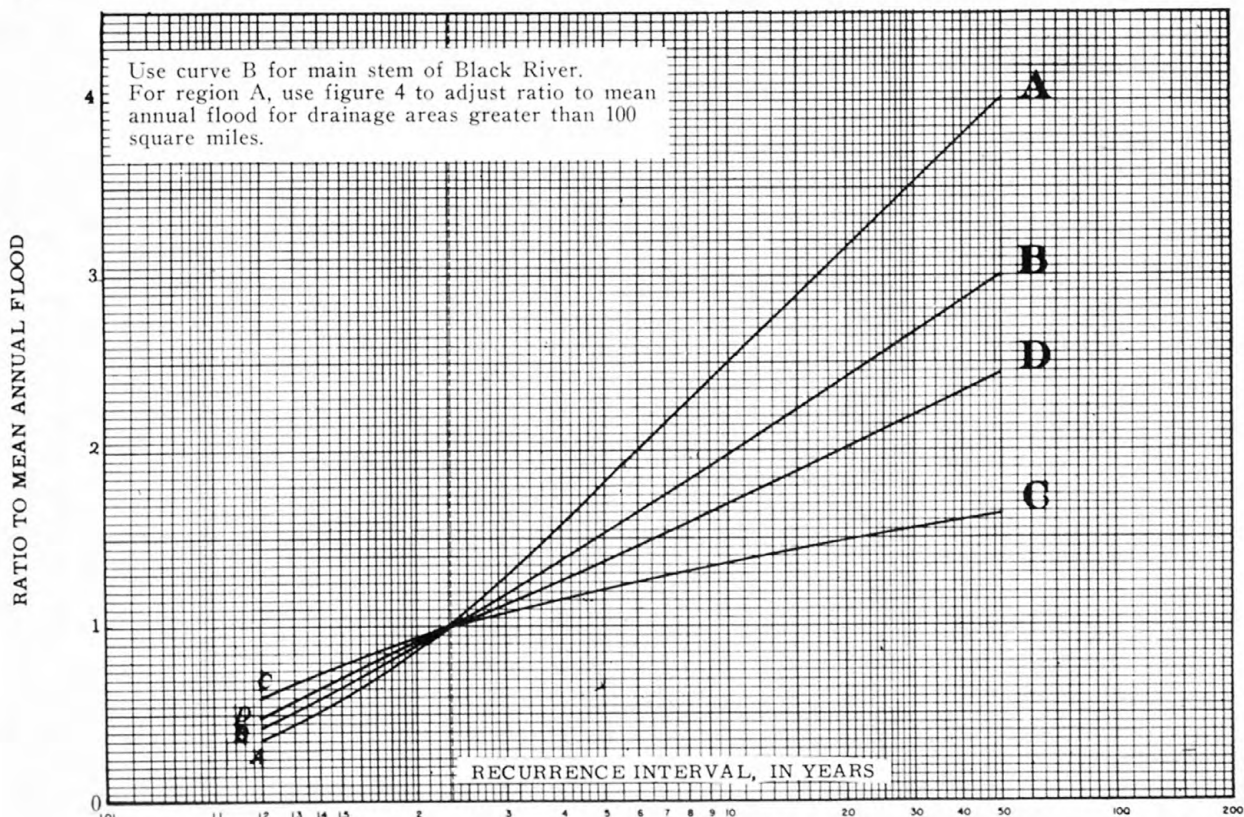


Figure 3.--Frequency of annual floods, regions A, B, D, period 1921-58, and region C, period 1929-58.

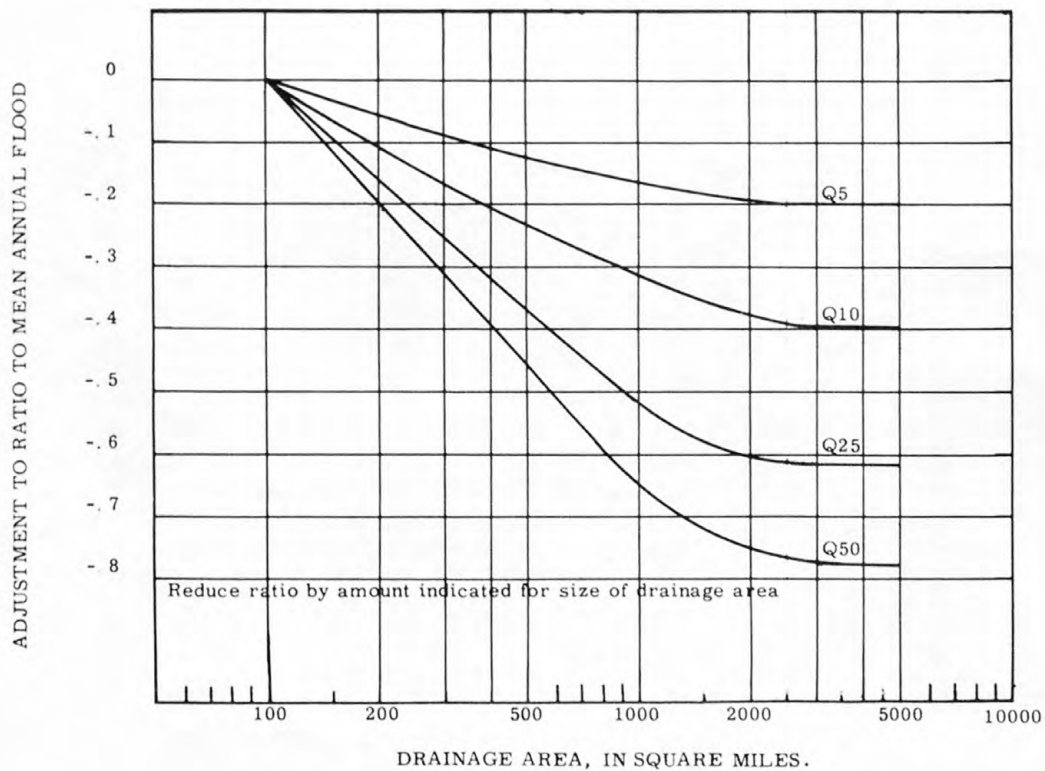


Figure 4.--Adjustment to ratio to mean annual flood for Region A on basis of drainage area size.

APPLICATION OF FLOOD-FREQUENCY DATA

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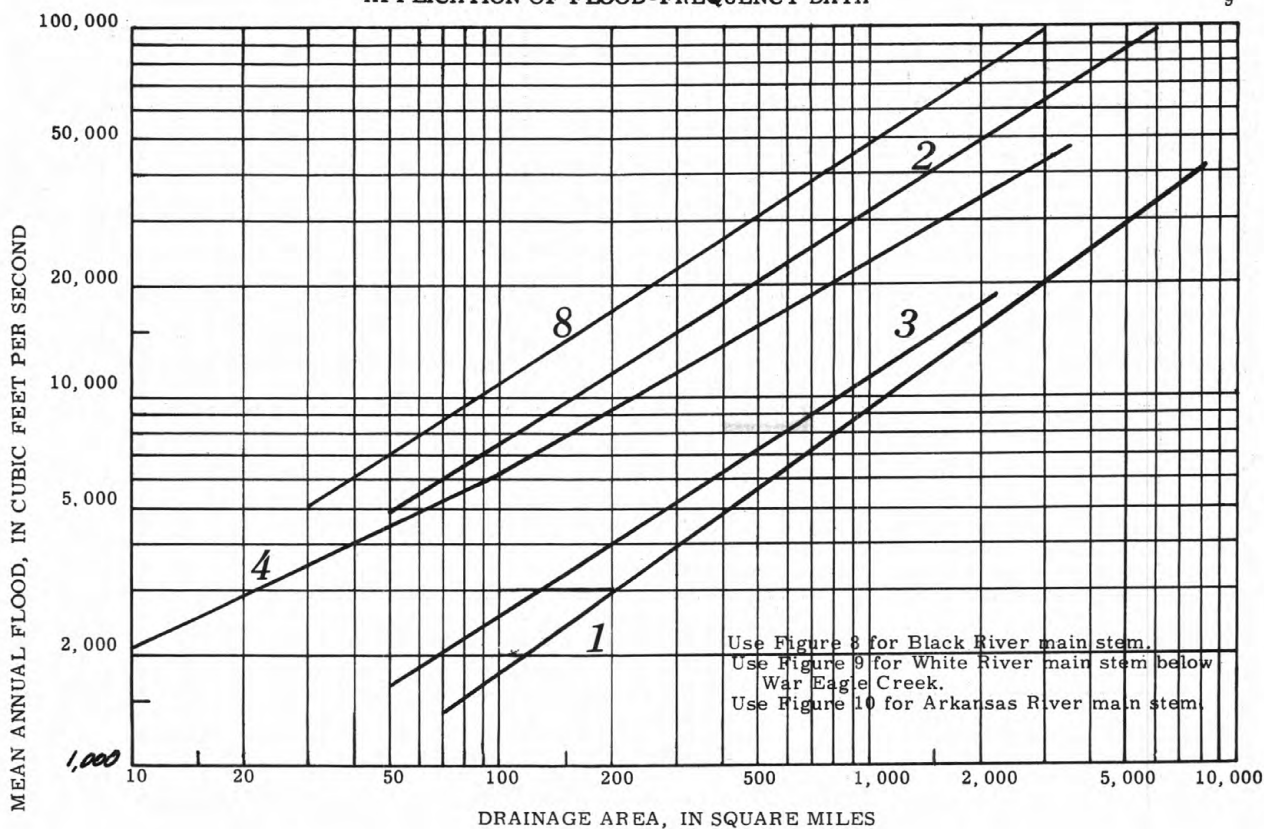


Figure 5. --Variation of mean annual flood with drainage area in hydrologic areas 1-4, 8.

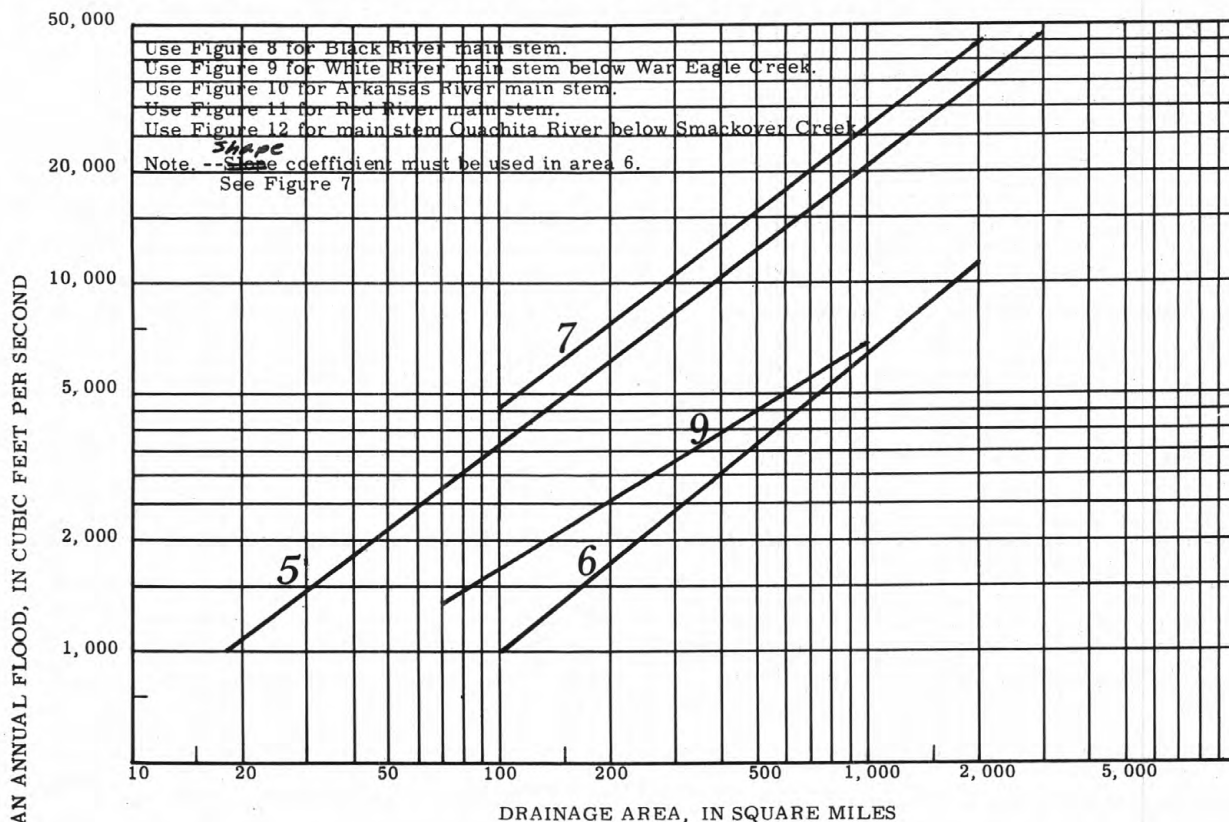


Figure 6. --Variation of mean annual flood with drainage area in hydrologic areas 5-7, 9.

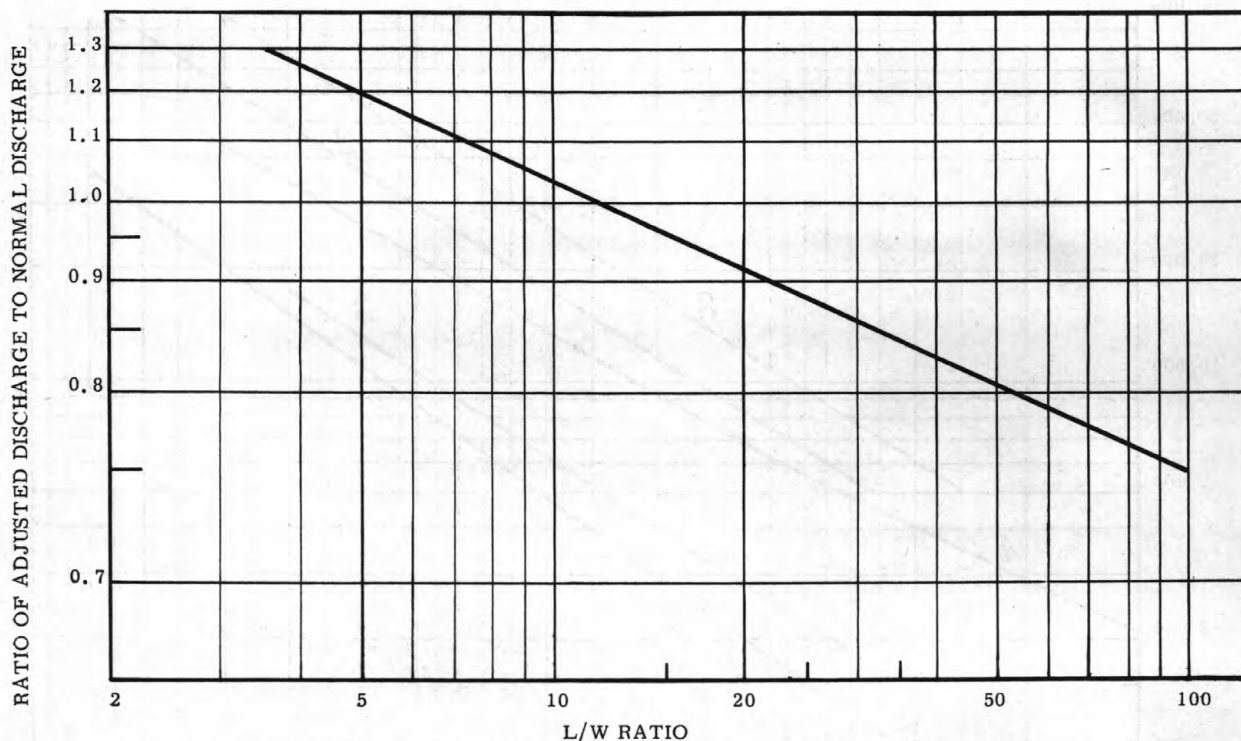


Figure 7.--Shape adjustment curve for area 6.

shown on figures 5 and 6 indicate the range of drainage area sizes for which the mean annual flood is defined in each hydrologic area. For example, on figure 5, the mean annual flood is defined between 10 and 3,500 square miles in hydrologic area 4, while in area 1, it is defined between 70 and 8,000 square miles. Neither the mean annual flood curves nor the ratio curves should be extrapolated beyond the limits shown.

Regional Application

The magnitude of floods having recurrence intervals up to 50 years may be determined for most streams in Arkansas by the following procedure:

1. Determine the size of the drainage area above the site.
2. From figure 2, determine the flood-frequency region and hydrologic area in which the site is located.
3. Determine the mean annual flood for the site from the appropriate hydrologic area curve, figure 5 or 6.
 - a. If the site is in hydrologic area 6, the L/W ratio must be computed and the appropriate coefficient from shape adjustment curve (fig. 7) applied to the mean annual flood.
4. From figure 3, determine the ratio to mean annual flood for the selected recurrence interval. If the point of determination lies within region A and the drainage area is more than 100 square miles, the ratio must be adjusted by use of figure 4.
5. Multiply the ratio to mean annual flood (step 4) by mean annual flood, step 3.

A complete frequency curve for a site can be drawn from points computed by repeating steps 4 and 5 for several selected recurrence intervals.

Special Application

Some streams do not lend themselves readily to regional analysis. These are usually large streams, traversing more than one hydrologic area or flood-frequency region, whose floodflow characteristics represent the integrated effect of two or more non-homogeneous regions. The streams in Arkansas given special treatment are the main stems of:

Black River
 White River below War Eagle Creek
 Arkansas River
 Red River
 Ouachita River below Smackover Creek

Composite curve B (fig. 3) is applicable for the Black River but the mean annual flood is determined from figure 8. Flood magnitudes for selected recurrence intervals at points on the Black River may be determined as outlined under Regional Application except that the value of the mean annual flood must be taken from curve on figure 8.

Neither regional nor mean annual flood curves are applicable for use with the other 4 rivers noted above. For this group, families of curves were drawn showing the relation of selected flood frequencies to drainage areas or, in the case of the Arkansas River, distance above mouth. These curves are shown in figures 9-12.

Flood magnitudes for selected recurrence intervals at sites on these rivers may be taken directly from the family of curves after first determining the

Table 1. --Data used to develop regional flood-frequency relations.

No.	Gaging station	Drainage area (sq mi)	Channel length (miles)	Mean annual flood	Flood region hydro-logic area
St. Francis River basin					
401	St. Francis River at St. Francis, Ark.	1,781		18,600	D-1
404.5	St. Francis River at Lake City, Ark.	2,385		16,500	D-1
466	Right Hand Chute of Little River at Rivervale, Ark.	2,113		15,400	D-1
470	St. Francis River floodway near Marked Tree, Ark.	5,258		24,700	D-1
475	St. Francis River at Marked Tree, Ark.				
478	St. Francis River at Parkin, Ark.	6,475		28,000	D-1
479	St. Francis Bay at Riverfront, Ark.				
479.5	L'Anguille River at Palestine, Ark.	807		9,790	D-1
White River basin					
485	West Fork White River near Fayetteville, Ark.	118		13,100	A-8
490	War Eagle Creek near Hindsville, Ark.	262		17,200	A-8
505	Kings River near Berryville, Ark.	532		17,600	A-2
570	Buffalo River near Rush, Ark.	1,091		42,500	A-8
590	North Fork River near Henderson, Ark.	1,612		33,500	A-5
630	Black River at Poplar Bluff, Mo.	1,245		20,000	B
640	Black River near Corning, Ark.	1,749		13,500	B
690	Black River at Pochontas, Ark.	4,843		26,200	B
695	Spring River at Imboden, Ark.	1,162		25,500	A-4
715	Eleven Point River near Bardley, Mo.	793		10,500	A-3
720	Eleven Point River near Ravenden Springs, Ark.	1,123		12,000	A-3
725	Black River at Black Rock, Ark.	7,323		43,500	B
730	Strawberry River near Evening Shade, Ark.	225		9,700	B-4
735	Piney Fork Strawberry River at Evening Shade, Ark.	99		5,500	B-4
740	Strawberry River near Poughkeepsie, Ark.	476		17,900	B-4
750	Middle Fork Little Red River at Shirley, Ark.	294		25,000	B-8
755	South Fork Little Red River near Clinton, Ark.	316		23,400	B-8
760	Little Red River near Heber Springs, Ark.	1,141		52,500	D-8
775	Cache River at Patterson, Ark.	1,041		7,600	D-1
777	Bayou DeView at Morton, Ark.	422		3,900	D-1
780	Lagru Bayou near Stuttgart, Ark.	175		2,820	D-1
Arkansas River basin					
1890	Elk River near Tiff City, Mo.	872		19,500	A-5
1950	Osage Creek near Elm Springs, Ark.	129		5,150	A-7
1965	Illinois River near Tahlequah, Okla.	959		28,000	A-7
1970	Barren Fork at Eldon, Okla.	307		19,700	A-7
2470	Poteau River at Cauthron, Ark.	200		12,700	B-2
2485	Poteau River near Wister, Okla.	993		33,100	B-2
2495	Cove Creek near Lee Creek, Ark.	36.9		6,720	B-8
2500	Lee Creek near Van Buren, Ark.	427		31,300	B-8
2510	Frog Bayou near Mountainburg, Ark.	74		5,610	B-2
2515	Frog Bayou at Rudy, Ark.	217		13,800	B-2
2520	Mulberry River near Mulberry, Ark.	372		19,300	B-2
2565	Spadra Creek at Clarksville, Ark.	54.8		6,990	B-8
2570	Piney Creek near Dover, Ark.	274		24,100	B-8
2575	Illinois Bayou near Scottsville, Ark.	242		20,200	B-8
2585	Petit Jean Creek near Booneville, Ark.	247		13,000	B-2
2595	Petit Jean Creek near Waveland, Ark.	517		18,200	B-2
2600	Dutch Creek at Waltreak, Ark.	74		6,810	B-2
2605	Petit Jean Creek at Danville, Ark.	741		22,000	B-2
2615	Fourche La Fave River near Gravelly, Ark.	413		23,700	D-8
2625	Fourche La Fave River near Nimrod, Ark.	680		23,600	D-2
2630	South Fourche La Fave River near Hollis, Ark.	211		22,400	D-8
2645	Bayou Meto near Stuttgart, Ark.	647	75	3,950	D-6

FLOODS IN ARKANSAS

Table 1. --Data used to develop regional flood-frequency relations. --Continued

No.	Gaging station	Drainage area (sq mi)	Channel length (miles)	Mean annual flood	Flood region hydro- logic area
Red River basin					
3395	Rolling Fork near De Queen, Ark.	181		17,200	D-8
3400	Little River near Horatio, Ark.	2,674		57,100	D-2
3405	Cossatot River near De Queen, Ark.	361		28,700	D-8
3410	Saline River near Dierks, Ark.	124		11,100	D-8
3464.5	Black Bayou at Rodessa, La.	177		3,030	B-9
3470	Kelly Bayou near Hosston, La.	116		1,470	B-9
3487.2	Bayou Dorcheat near Sarepta, La.	718		10,600	B-3
3495	Bayou Bodcau near Sarepta, La.	546		6,160	B-3
3560	Ouachita River near Mount Ida, Ark.	410		24,800	D-8
3565	South Fork Ouachita River at Mount Ida, Ark.	64		6,460	D-8
3570	Ouachita River near Mountain Pine, Ark.	1,100		52,500	D-8
3595	Ouachita River near Malvern, Ark.	1,562		62,200	D-8
3598	Caddo River near Alpine, Ark.	312		30,300	D-8
3600	Ouachita River at Arkadelphia, Ark.	2,311		73,000	D-8
3608	Muddy Fork Creek near Murfreesboro, Ark.	121		13,000	D-8
3610	Little Missouri River near Murfreesboro, Ark.	380		36,400	D-8
3615	Antoine River at Antoine, Ark.	181		16,200	D-8
3616	Little Missouri River near Boughton, Ark.	1,068		36,400	D-2
3620	Ouachita River at Camden, Ark.	5,391		92,000	D-2
3621	Smackover Creek near Smackover, Ark.	377		7,360	B-3
3625	Moro Creek near Fordyce, Ark.	216		5,980	D-5
3630	Saline River near Benton, Ark.	569		34,300	D-8
3632	Saline River and Gamble Creek near Sheridan, Ark.	1,129		37,100	D-2
3635	Saline River near Rye, Ark.	2,062		33,000	D-5
3641.2	Bayou Bartholomew near Star City, Ark.	215	72	1,980	C-6
3641.5	Bayou Bartholomew near McGehee, Ark.	592	157	3,470	C-6
3641.9	Bayou Bartholomew at Wilmot, Ark.	1,170	259	5,100	C-6
3645	Bayou Bartholomew near Beekman, La.	1,645	308	7,800	C-6
3660	Corney Bayou near Lillie, La.	462		7,180	B-3

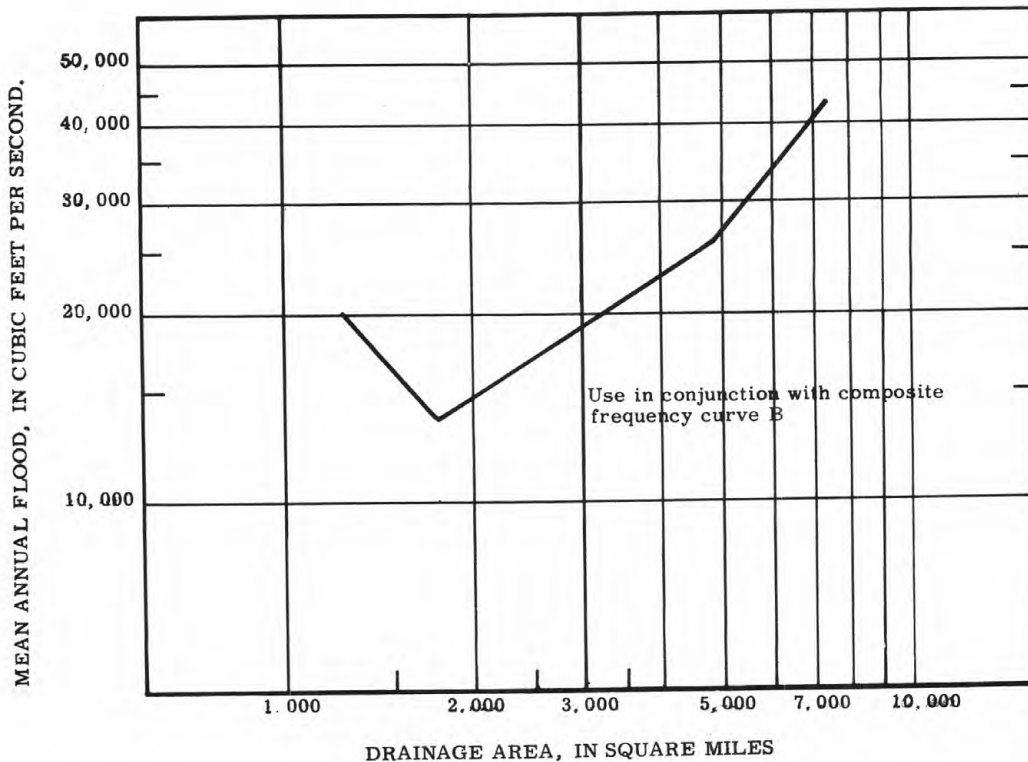


Figure 8.--Variation of mean annual flood with drainage area on the main stem of Black River in Arkansas.

drainage area above the site or the distance upstream from the mouth. Some of the area in the upper reaches of the Arkansas and Red Rivers does not contribute directly to surface runoff. As the contributing drainage area is used as a parameter in determining flood magnitudes for the main stem of the Red River, the non-contributing area, which has been determined as about 5,936 square miles, must be deducted from the gross area before using the curves on figure 11.

MAXIMUM FLOODS KNOWN

Maximum known flood stages and discharges are tabulated along with other station data in the tables of peak stages and discharges. The maxima may or may not have occurred during the period when a gage was in operation. A comparison of the maximum known floods, in each combination of hydrologic areas and flood-frequency regions, with the corresponding flood having a recurrence interval of 50 years is shown on figures 13-16.

Peak discharges exceeding previous maximum known have occurred at some stations since the cutoff date of this report (1958). These peaks are also plotted on the appropriate figures along with peaks determined at miscellaneous sites.

CONCLUSIONS

Methods outlined in this report may 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 not indicate that a flood having a specific recurrence interval will occur on schedule at regular time

intervals, and therefore it 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 natural flow of streams and are not applicable for streams whose flood flows are materially altered by manmade changes. Curves presented are based on all known flood data through the 1958 water year. Extrapolation beyond the limits indicated by these curves is not advised. Composite frequency curves (fig. 3) should not be used for recurrence intervals greater than 50 years nor should curves showing relation of drainage area to mean annual flood (figs. 5 and 6) be extended above or below the limits shown.

There is a great need for better definition of frequency relations for drainage areas below 50 square miles. Recognizing this deficiency, a program has been initiated to collect flood data on many of the smaller drainage areas in Arkansas. When a sufficient number of years have elapsed and additional data collected, a restudy should be made for the purpose of extending the curves of relation between mean annual flood and drainage area to include the smaller areas.

GAGING-STATION RECORDS

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

FLOODS IN ARKANSAS

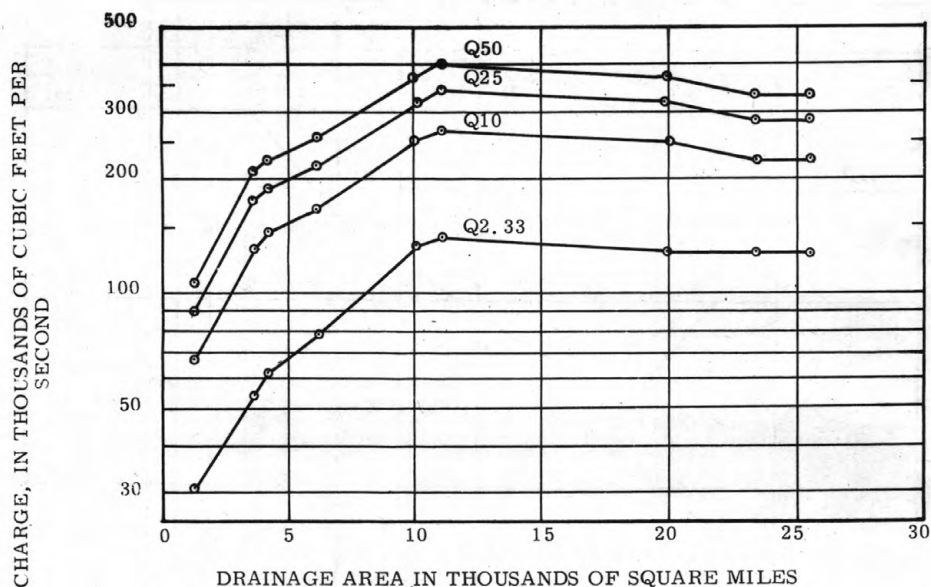


Figure 9. --Relation of selected flood frequency to drainage area, White River main stem below War Eagle Creek.

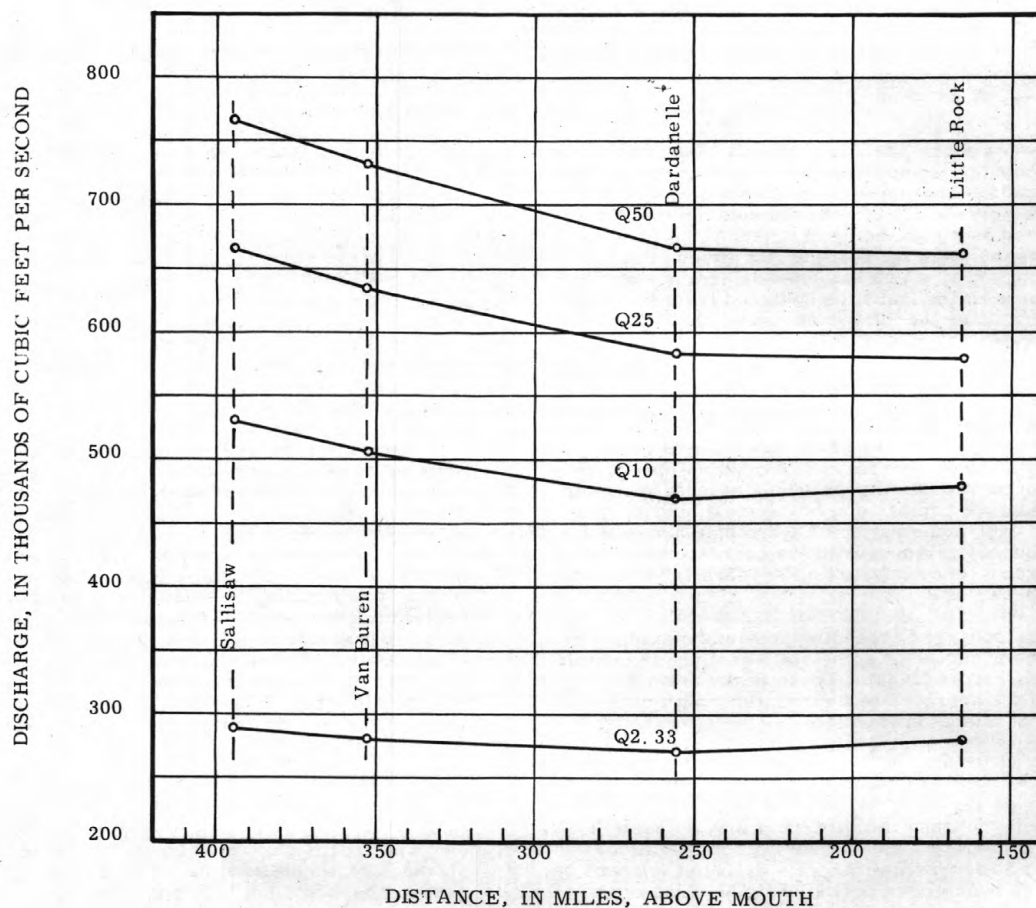
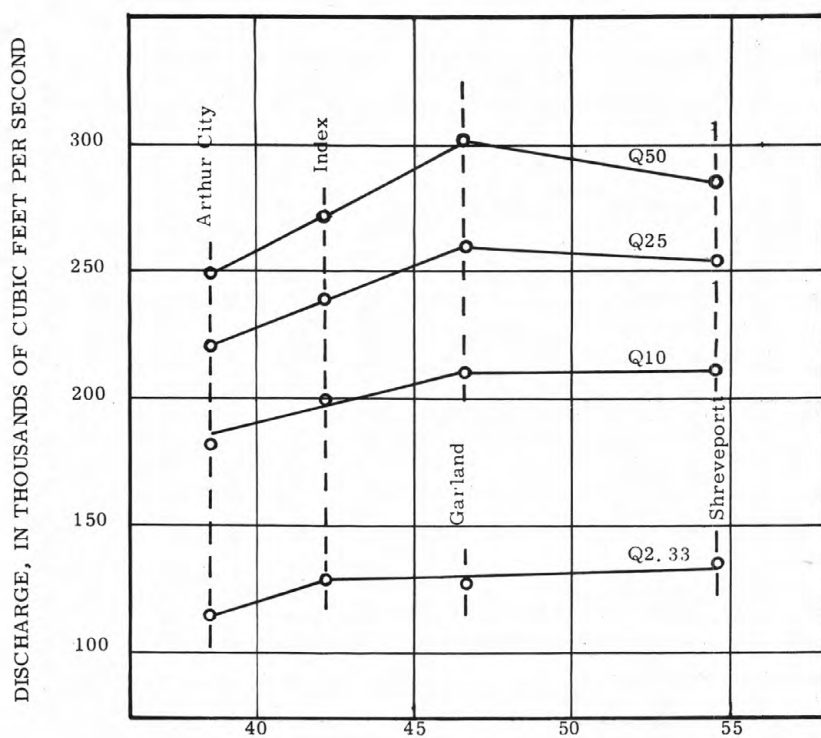


Figure 10. --Relation of selected flood frequencies to miles above mouth, Arkansas River main stem.



CONTRIBUTING DRAINAGE AREA, IN THOUSANDS OF SQUARE MILES

Figure 11. --Relation of selected flood frequencies to contributing drainage area, Red River main stem.

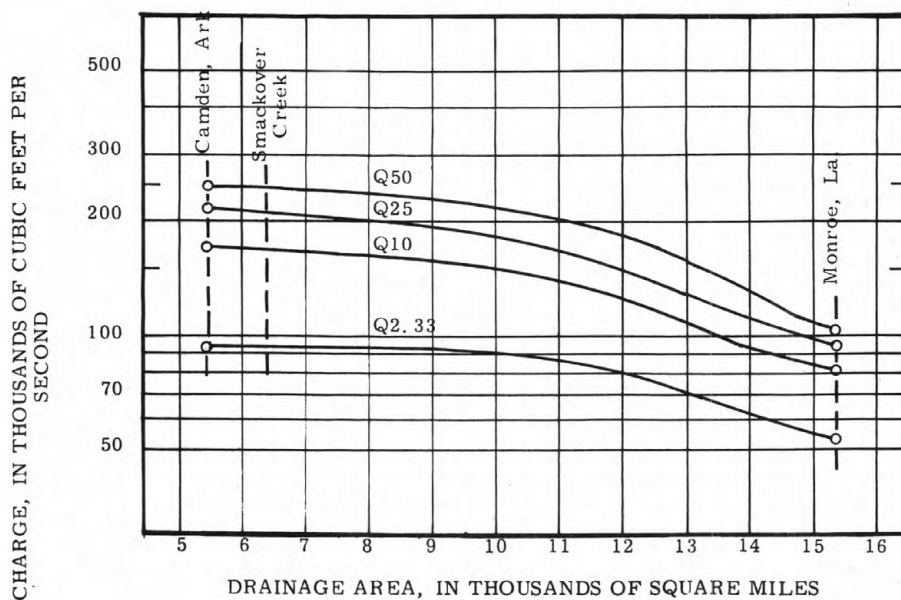
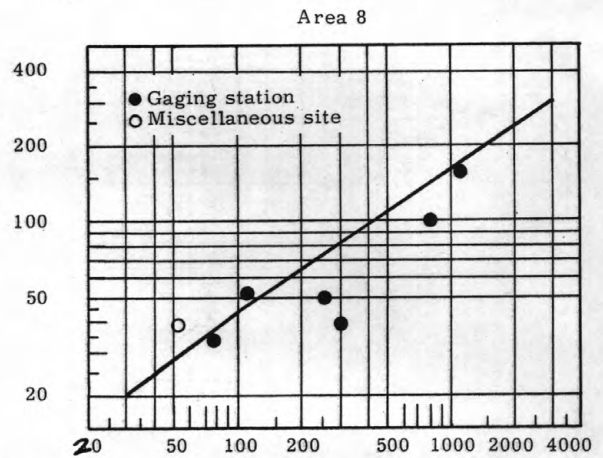
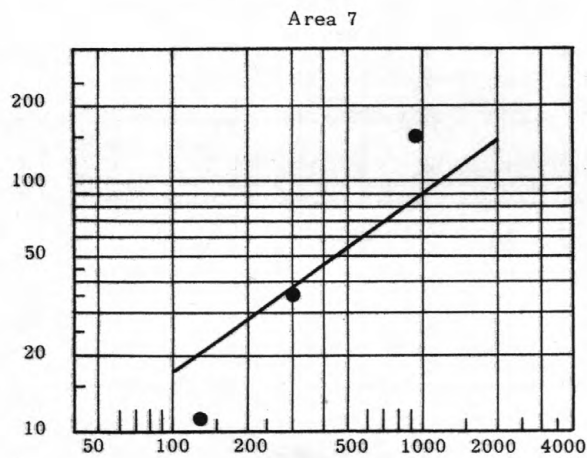
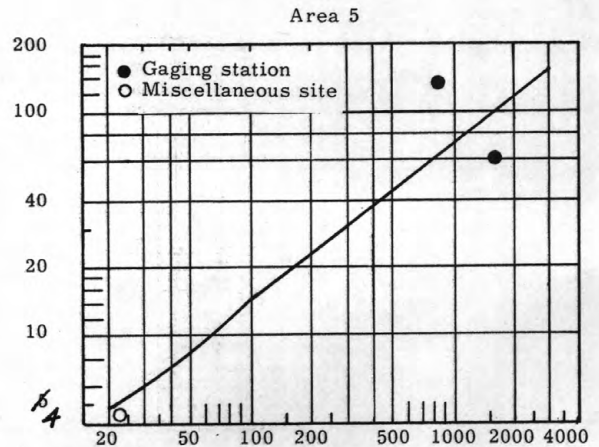
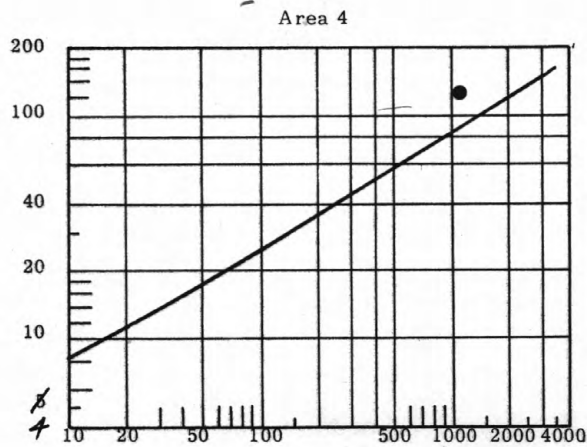
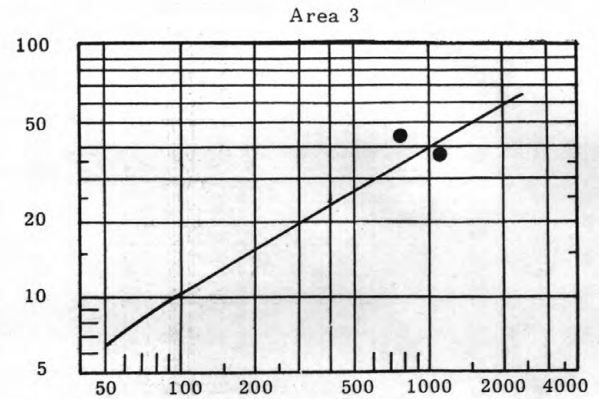
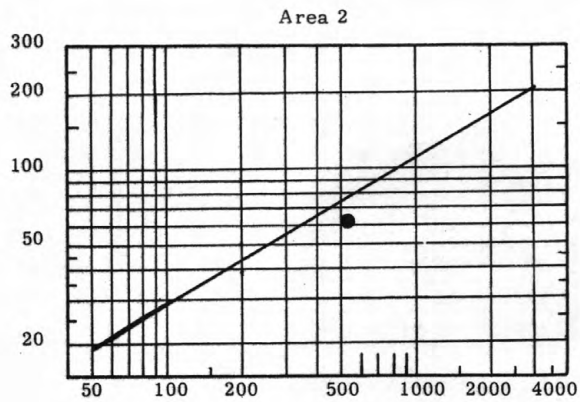


Figure 12. --Relation of selected flood frequency to drainage area, Ouachita River, main stem below Smackover Creek.

FLOODS IN ARKANSAS

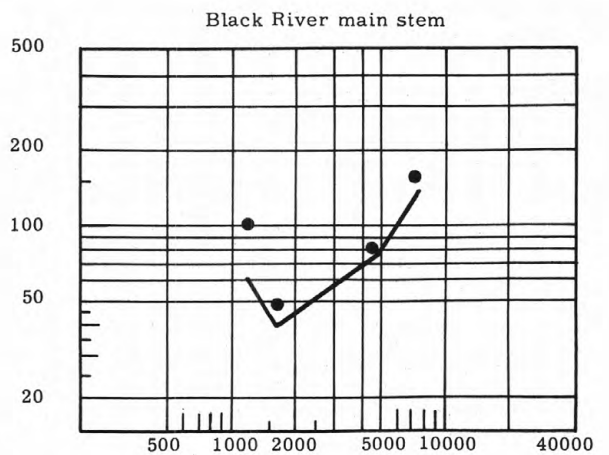
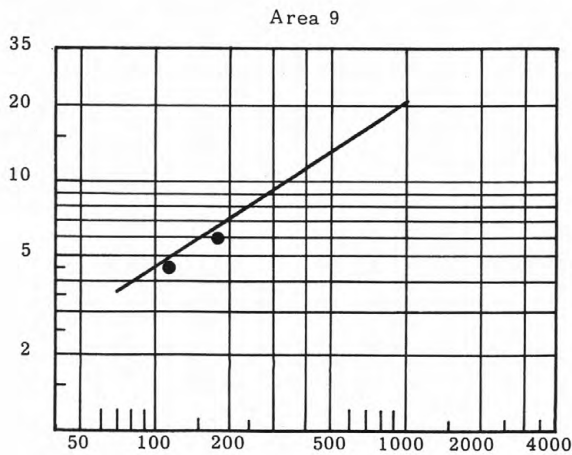
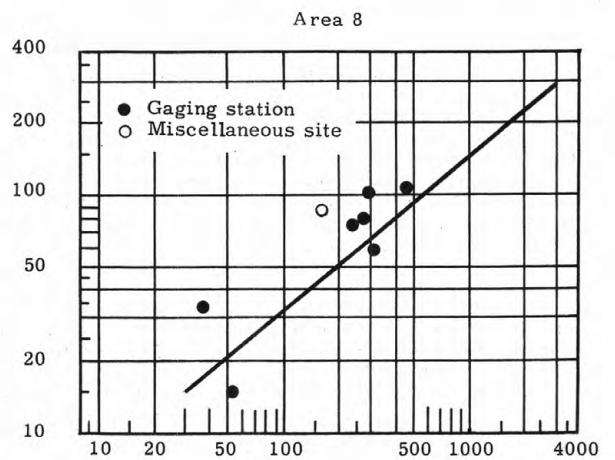
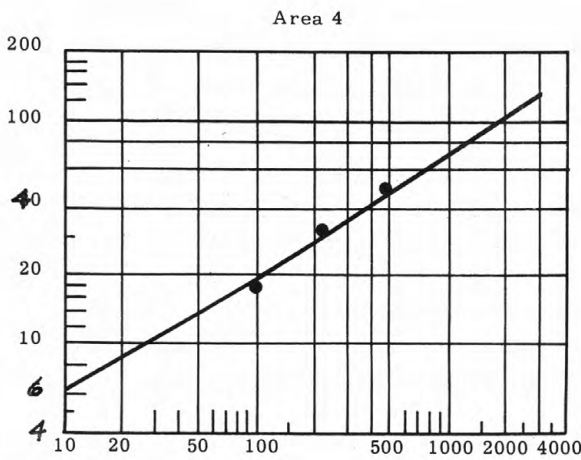
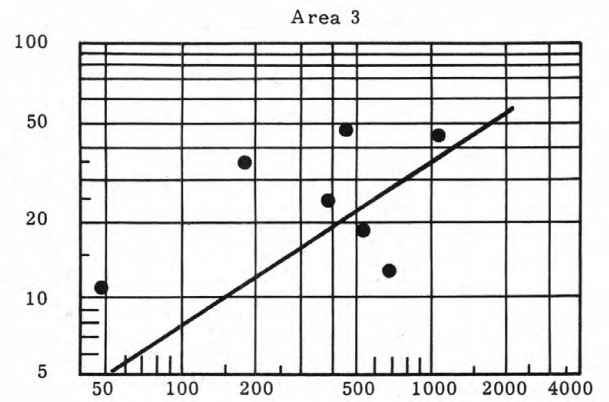
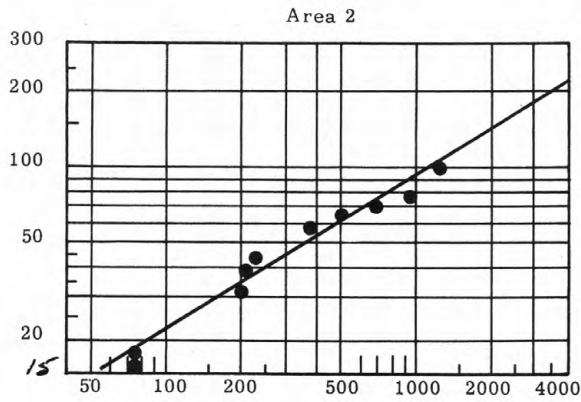
DISCHARGE, IN THOUSANDS OF CUBIC FEET PER SECOND



DRAINAGE AREA, IN SQUARE MILES

Figure 13.--Relation of maximum to 50-year floods in region A.

DISCHARGE, IN THOUSANDS OF CUBIC FEET PER SECOND



DRAINAGE AREA, IN SQUARE MILES

Figure 14.--Relation of maximum to 50-year floods in region B.

FLOODS IN ARKANSAS

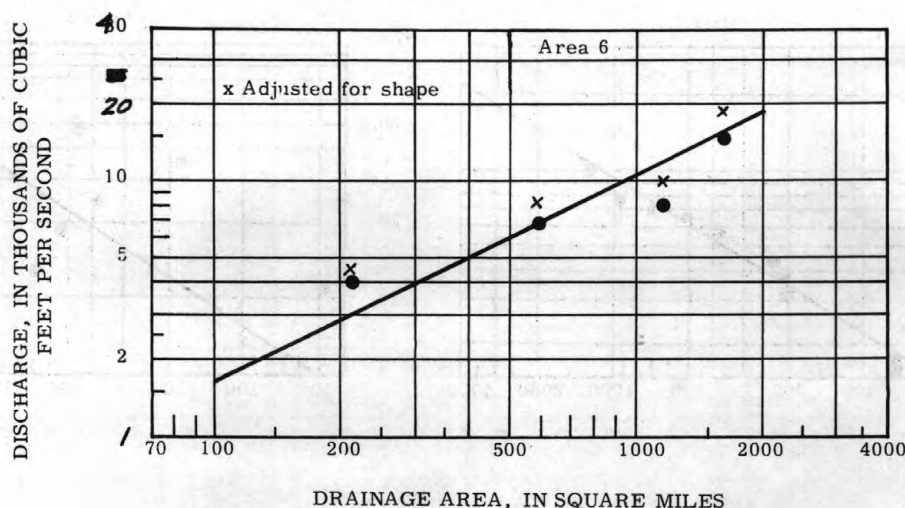


Figure 15. --Relation of maximum to 50-year floods in region C.

Station records are presented in downstream order corresponding to the system used in U. S. Geological Survey water-supply papers since 1951. Reference numbers used are permanent numbers and are the same as those used since 1958 in Survey water-supply papers. As all gaging stations are in Part 7, the prefix 7 has been omitted. The location and reference number of all gaging stations in Arkansas for which flood records are included in this report are shown in figure 17.

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 occurs in December 1942 would be listed in the 1943 water year.

Both peak stages and discharges are usually listed. Records have been included for some gaging stations where only peak stages have been determined. 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). In some cases, usually for records furnished by other agencies, only maximum daily discharges are available and are so listed with appropriate footnotes.

Underlining in the tables of peak stages and discharges have the following significance.

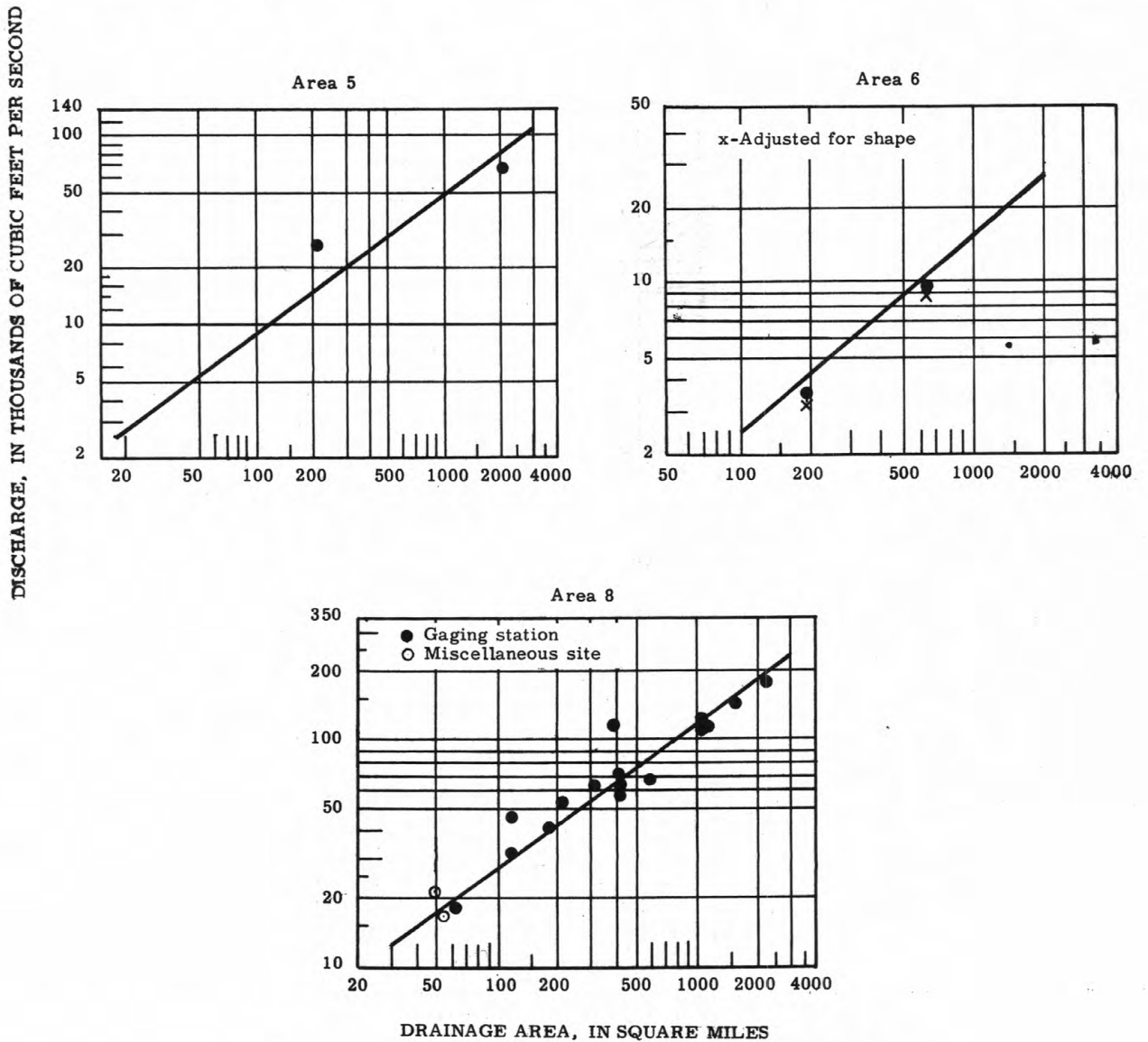
1. Line in "Water year" column means a discontinuous record.
2. Line beginning at "Date" column and continuing through "Discharge" column means a change in site and datum.
3. Line in "Date" and "Discharge" columns means a change in site without a change in datum.
4. Line in "Gage height" column means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

The bankfull stage has been noted in station description in most cases. 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.

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 Water-Supply Paper 888, entitled "Stream-Gaging Procedure".

Records for the following gaging stations in Arkansas established prior to October 1958 were not tabulated in this report because they are less than 5 years in length.

Station	Period of Record
Barren Fork at Dutch Mills	1958-
James Fork near Hackett	1958-
Six Mile Creek subwatershed No. 6 (Six Mile Creek) near Chismville	1954-
Six Mile Creek at Chismville	1954-
Six Mile Creek near Branch	1954-
Six Mile Creek subwatershed No. 5 (Little Caney Creek) near Chismville	1954-
Six Mile Creek subwatershed No. 2 (Shave Creek) near Caulksville	1954-
Six Mile Creek at Caulksville	1954-
Six Mile Creek subwatershed No. 23 (Kings Creek) near Branch	1955-
Hurricane Creek near Branch	1954-
Hurricane Creek near Caulksville	1954-
North Fork Cadron Creek near Guy	1954-
Bodcau Creek at Stamps	1958-
Cornie Bayou near Three Creeks	1956-
Three Creek near Three Creeks	1956-



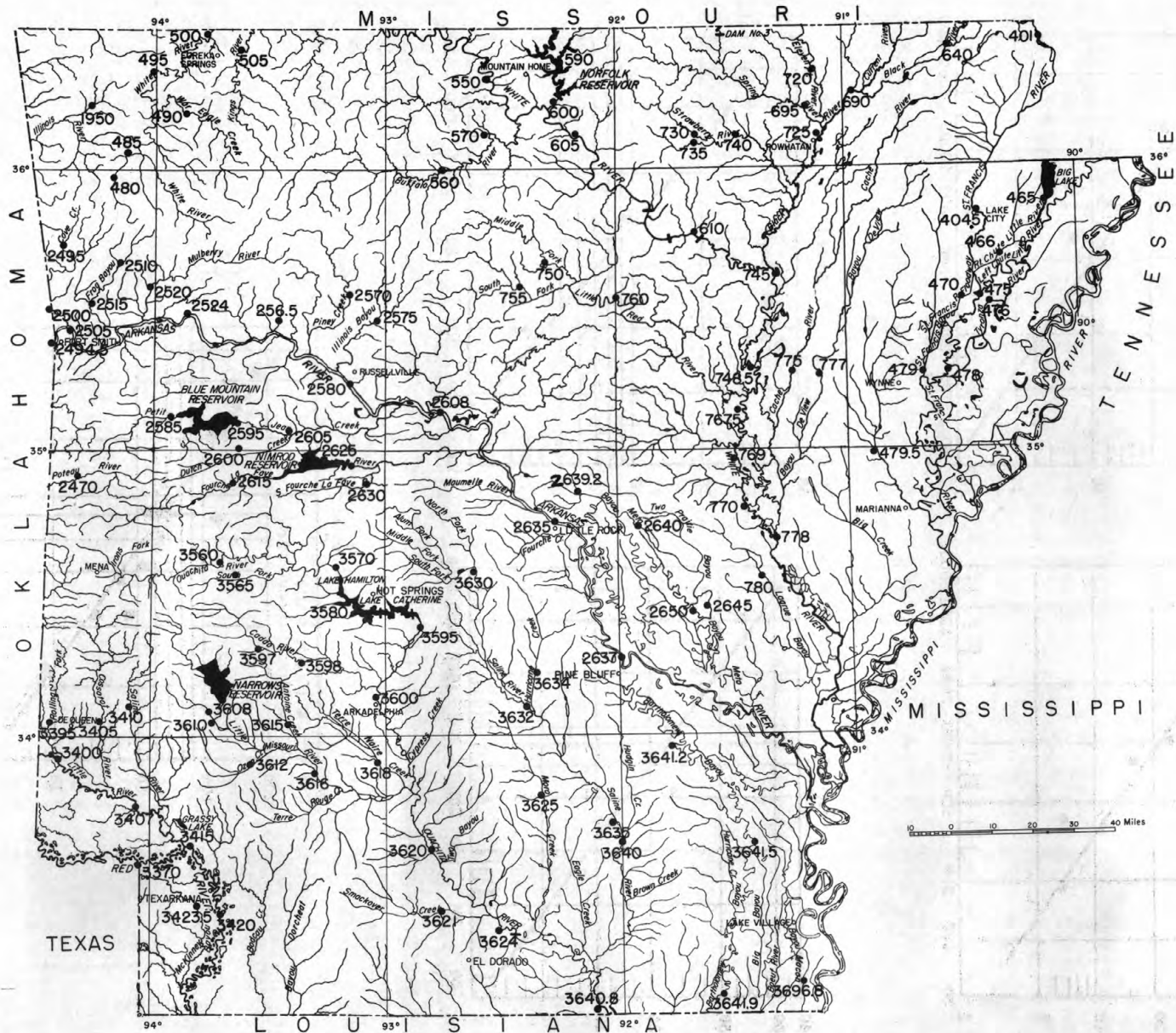


FIGURE 17.--LOCATION OF GAGING STATIONS FOR WHICH RECORDS ARE TABULATED IN THIS REPORT

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 this 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	Feb. 1916	23.16	—	1936	Nov. 12, 1936	19.2	6,190
1917	Apr. 9, 1917	20.5	—	1937	Jan. 19, 1937	^b 26.7	28,600
1918	May 18, 1918	22.1	—	1938	Apr. 4, 1938	23.6	18,600
1919	Nov. 11, 1919	20.6	—	1939	Apr. 23, 1939	22.7	14,900
1920	May 25, 1920	22.6	—	1940	Apr. 24, 1940	^c 21.0	9,720
1921	Nov. 27, 1921	23.3	—	1941	Nov. 13, 1941	17.9	4,820
1922	Apr. 6, 1922	23.6	—	1942	Apr. 15, 1942	20.2	8,930
1923	May 21, 1923	25.1	—	1943	Jan. 5, 1943	19.6	7,460
1924	June 6, 1924	18.3	—	1944	Apr. 12, 1944	19.6	7,600
1925	Nov. 14, 1925	22.9	—	1945	Apr. 20, 1945	23.5	20,500
1926	Mar. 5, 1926	20.3	—	1946	May 27-29, 1946	21.65	13,000
1927	Apr. 18, 1927	26.6	—	1947	May 3, 1947	^c 20.53	8,950
1928	June 26, 1928	26.7	—	1948	Jan. 12, 1948	^d 20.91	9,560
1929	May 19, 1929	25.2	—	1949	Feb. 15, 1949	22.82	17,000
1930	Jan. 18, 1930	26.5	33,100	1950	Jan. 14, 1950	23.42	20,000
1931	Mar. 15, 1931	19.4	6,540	1951	Feb. 25, 1951	—	12,000
1932	Jan. 23, 1932	^a 21.6	11,200	1952	Mar. 19, 1952	20.7	10,500
1933	May 18, 1933	27.1	31,000	1953	Mar. 23, 1953	19.1	6,250
1934	Apr. 3, 1934	18.5	5,350	1954	June 19, 1954	17.25	5,210
1935	Mar. 15, 1935	28.2	39,200	1955	Mar. 29, 1955	20.6	8,700
				1956	Feb. 26, 1956	18.65	6,330
				1957	May 27, 1957	23.00	17,300
				1958	Mar. 29, 1958	21.85	12,900

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.

ST. FRANCIS RIVER BASIN

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

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

^a Occurred on Jan. 17, 1950

465. Big Lake Outlet near Manila, Ark.

Location.--Lat 35°51'00", long 90°07'40", in SE¼ 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	^a 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.

on. --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.
ge area. --2, 113 sq mi.

--Nonrecording prior to Oct. 6, 1949; recording thereafter. Datum of gage is 213.15 ft above mean sea level, datum of 1929.

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

ill stage. --8 ft.

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

Peak stages and discharges

ar	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
	Mar. 12,13, 1939	11.2	—	1951	Jan. 22, 1951	10.6	14,900
	Apr. 28,29, 1940	7.85	—	1952	Jan. 10, 1952	11.82	20,600
				1953	Mar. 27, 1953	^c 9.27	8,540
	Feb. 1, 2, 1941	^a 4.85	—	1954	May 8, 1954	5.0	2,680
	Apr. 18,19, 1942	8.45	—	1955	Mar. 29,30, 1955	8.7	6,340
	May 21-24, 1943	8.4	—				
	Apr. 20,21, 1944	10.0	—	1956	Feb. 24, 1956	10.7	9,340
	June 22,23, 1945	12.9	23,000	1957	Nov. 23, 1957	13.55	31,400
				1958	Mar. 30, 1958	11.20	18,700
	Jan. 18, 1946	9.65	11,000				
	Apr. 19,20, 1947	7.8	5,800				
	Apr. 5, 1948	9.45	8,030				
	Feb. 2, 1949	12.6	23,100				
	Feb. 20, 1950	^b 13.57	29,200				

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

Occurred Jan. 19, 1950.

Occurred on the following day.

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

tion. --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.

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

. --Nonrecording. Datum of gage 198.71 ft above Memphis datum or 192.08 ft above mean sea level (Morgan Engineering Co. bench mark).

-discharge relation. --Defined by current-meter measurements below 47,000 cfs.

arks. --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.

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

tion. --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.

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

. --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.

ST. FRANCIS RIVER BASIN

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

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	—	^a 58,000	1949	Feb. 4, 1949	—	36,700
1938	Mar. 2, 3, 1938	—	24,000				
1939	Mar. 16, 1939	—	23,400	1950	Jan. 19, 1950	—	51,800
				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				
1944	Apr. 22, 1944	—	19,700	1955	Apr. 7, 1955	—	16,400
				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 two levee breaks above station estimated on basis of records for St. Francis Bay at Riverfront.

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	^a 29.2	4,040
1940	Apr. 20, 1940	18.0	—	1950	Feb. 16, 1950	31.61	5,660
				1951	July 6, 1951	^b 31.2	4,080
1941	Jan. 25, 1941	13.7	—	1952	Mar. 12, 1952	28.68	3,860
1942	Apr. 10, 1942	25.9	—	1953	May 20, 1953	31.45	5,240
1943	Mar. 22, 1943	23.5	—	1954	Jan. 17, 1954	28.5	3,370
1944	Feb. 19, 1944	25.88	—	1955	Apr. 14, 1955	29.1	4,470
1945	Apr. 3, 1945	29.6	—				
				1956	Jan. 31, 1956	^c 29.42	4,040
1946	Jan. 12, 1946	29.6	—	1957	Nov. 20, 1957	^b 30.80	4,080
1947	June 24, 1947	24.8	—	1958	May 4, 1958	^b 29.10	4,510

^a Occurred Jan. 17, 1949.

^b Occurred on following day.

^c Occurred Feb. 20, 1956.

ST. FRANCIS RIVER BASIN

25

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 Tyronza 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 flood flow is directed 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 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.

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 0.8 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.

Peak stages and discharges

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

ST. FRANCIS RIVER BASIN

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 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 by current-meter measurements below 13,700 cfs and extended above by logarithmic plotting. Affected by backwater from 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	—	1946	Jan. 12, 1946	26.75	—
1935	Apr. 1, 2, 1935	27.45	—	1947	May 26,27, 1947	22.9	—
1936	Apr. 23,24, 1936	28.87	—	1948	Mar.3,Apr.13,1948	25.4	—
1937	Feb. 13, 1937	39.7	—	1949	Jan. 29, 1949	26.6	13,500
1939	Mar. 3, 4, 1939	26.8	—	1950	Jan. 14, 1950	^a 30.92	12,400
1942	Dec. 31, 1942	20.9	—	1951	Jan. 18, 1951	24.7	9,000
1943	June 8, 1943	26.08	—	1952	Mar. 14, 1952	^b 24.65	6,430
1944	May 7, 8, 1944	25.2	—	1953	May 20, 1953	27.55	15,600
1945	Apr. 3, 1945	29.6	—	1954	Jan. 24, 1954	23.9	5,800
				1955	May 29, 1955	24.55	8,150
				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 on Feb. 3, 1950.

b Occurred on Apr. 4, 1952.

WHITE RIVER BASIN

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.

480. West Fork White River at Greenland, Ark.--Cont.

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
1948	June 1, 1947	9.76	6,660		Mar. 20, 1955	7.40	5,390
	Aug. 11, 1948	10.60	11,800		Apr. 21, 1955	8.35	7,180
1949	Aug. 14, 1948	12.10	18,600		May 21, 1955	6.38	3,840
	Jan. 24, 1949	9.16	8,050		May 26, 1955	6.43	3,840
1950	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
	Jan. 4, 1950	6.62	3,540	1957	Feb. 5, 1957	7.32	4,430
	Jan. 13, 1950	8.54	6,920		Apr. 3, 1957	13.54	27,700
1951	Feb. 12, 1950	7.06	4,290		Apr. 26, 1957	6.59	3,360
	May 11, 1950	9.71	9,900		May 17, 1957	9.52	8,700
	July 18, 1950	6.60	3,750		May 22, 1957	13.47	27,700
	July 22, 1950	6.98	4,380		May 25, 1957	7.62	4,940
1952	Feb. 20, 1951	8.72	7,410	1958	July 12, 1958	9.75	9,420
	Apr. 12, 1952	6.08	3,600		July 26, 1958	6.66	3,430
	May 23, 1952	7.60	5,700				

485. West Fork White River near Fayetteville, Ark.

Location. --Lat 36°03', long 94°07', in NE¼ sec. 24, T. 16 N., R. 30 W., at bridge on State Highway 16, 3 miles southeast of Fayetteville, and 3½ 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

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					Apr. 10, 1944	15.11	7,150
	Sept. 24, 1940	11.61	4,100		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					Mar. 19, 1945	17.05	10,900
	Oct. 16, 1941	13.60	5,780		Mar. 30, 1945	14.43	6,230
	Oct. 31, 1941	12.80	5,080		Apr. 14, 1945	21.50	53,000
	Apr. 8, 1942	13.12	5,340		June 10, 1945	17.66	13,700

WHITE RIVER BASIN

490. War Eagle Creek near Hindsville, Ark.

Location. --Lat 36°12'10", long 93°51'30", in NE¼ 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	^a 50,000	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
1954					May 14, 1957	11.10	7,080
	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
1956	Apr. 29, 1956	14.16	11,100	1958	June 18, 1957	10.13	6,120
	May 15, 1956	14.84	12,300		Mar. 9, 1958	9.80	5,140
					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 E½ 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 of May 1943 was highest known since at least 1892, according to information from local residents.

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)
1943	May 1943	52.9	^a 100,000	1956	Apr. 30, 1956	21.85	19,600
1945					May 16, 1956	29.58	32,200
	Apr. 1945	50.4	^a 89,000	1957	Apr. 4, 1957	43.73	65,700
1953	Mar. 15, 1953	27.04	27,800		Apr. 27, 1957	23.42	22,000
	Mar. 18, 1953	23.77	22,700		May 18, 1957	30.70	34,300
	May 13, 1953	27.34	28,300		May 24, 1957	42.66	62,700
1954					May 26, 1957	25.61	25,600
	May 3, 1954	16.58	11,600	1958			
1955	Dec. 29, 1954	21.72	18,600		Aug. 3, 1958	22.08	20,100
	Feb. 21, 1955	22.93	20,400				
	Mar. 21, 1955	25.42	24,500				

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, 2-3/4 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. readings at site 1, 500 ft upstream and corrected to datum of 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	^a 94,000	1941	Jan. 3, 1941	19.44	24,800
1910	May 17, 1910	17.35	^a 21,500		Apr. 20, 1941	26.3	39,500
1922	Apr. 6, 1922	10.50	9,400	1942	Nov. 1, 1941	20.5	27,200
1923	Feb. 2, 1923	21.08	28,200		Apr. 10, 1942	20.35	27,000
1924	May 1, 1924	18.35	23,500	1943	Dec. 29, 1942	31.95	59,500
1925	Dec. 20, 1924	18.12	22,900		May 12, 1943	42.33	105,000
1926	Oct. 11, 1925	12.3	^b 12,300	1944	June 16, 1944	22.3	31,300
1927	Jan. 25, 1927	21.70	29,400	1945	Feb. 23, 1945	23.00	33,000
	Apr. 16, 1927	37.0	80,200		Feb. 28, 1945	21.40	29,200
	Apr. 20, 1927	25.10	36,300		Mar. 4, 1945	19.96	26,100
1928	Oct. 2, 1927	25.65	39,700		Mar. 20, 1945	28.25	47,100
	Oct. 4, 1927	26.85	43,000		Apr. 1, 1945	22.65	32,000
	Dec. 15, 1927	30.60	48,900		Apr. 16, 1945	40.9	98,200
	Apr. 7, 1928	22.10	30,800		May 17, 1945	18.38	22,600
	Apr. 22, 1928	26.50	42,200		June 12, 1945	29.75	52,000
	June 14, 1928	23.73	34,800	1946	Feb. 15, 1946	22.55	32,000
	June 22, 1928	18.78	23,500		May 26, 1946	32.50	61,400
1929	Jan. 26, 1929	23.85	33,900	1947	Nov. 11, 1946	20.60	27,400
	Apr. 10, 1929	19.01	23,900		Dec. 12, 1946	20.97	28,300
	May 10, 1929	20.99	28,300	1948	Aug. 16, 1948	24.52	36,800
	July 9, 1929	22.00	30,600	1949	Jan. 26, 1949	26.3	41,600
1930	May 12, 1930	19.15	24,500		Feb. 16, 1949	28.5	48,000
1931	Feb. 10, 1931	19.69	25,100	1950	Jan. 6, 1950	19.9	25,900
1932	Jan. 18, 1932	16.15	19,100		Jan. 15, 1950	21.0	28,300
1933	Dec. 25, 1932	20.46	27,200		Feb. 14, 1950	20.1	26,300
	May 15, 1933	27.70	42,200		May 12, 1950	31.95	59,500
	Sept. 5, 1933	18.89	23,700		July 20, 1950	21.3	29,000
1934	Oct. 23, 1933	14.83	16,500		Aug. 7, 1950	20.1	26,300
1935	Mar. 13, 1935	22.74	32,300	1951	Feb. 20, 1951	27.75	45,900
	June 4, 1935	23.73	34,800	1952	Mar. 12, 1952	18.58	23,100
	June 9, 1935	21.70	29,900		Apr. 14, 1952	19.10	24,100
	June 19, 1935	27.55	41,100	1953	Mar. 16, 1953	21.10	25,900
1936	Dec. 8, 1935	12.32	12,000		May 14, 1953	21.65	27,100
1937	Jan. 16, 1937	18.58	23,400	1954	May 4, 1954	13.8	12,100
1938	Feb. 19, 1938	26.80	40,300	1955	Mar. 22, 1955	20.20	23,900
	May 24, 1938	19.82	25,700	1956	May 17, 1956	23.7	31,800
1939	Apr. 18, 1939	16.70	19,700	1957	Apr. 5, 1957	33.50	61,600
1940	Apr. 13, 1940	16.00	18,400		Apr. 28, 1957	19.3	22,000
					May 19, 1957	24.5	34,400
					May 25, 1957	33.0	59,700
				1958	Aug. 3, 1958	16.72	17,700

a Annual peak only.

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

WHITE RIVER BASIN

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, Oct. 1, 1951, to Oct. 22, 1952; recording July 12, 1939, to Sept. 30, 1951, Oct. 23, 1952 to present. Prior to Oct. 1, 1951 at site 5 miles upstream at datum 27.71 ft higher than present datum. Present datum of gage 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	^a 38.0	^b 62,000	1949	Jan.	25, 1949	18.24	20,600	
1939	Apr.	17, 1939	17.0	19,000		Jan.	28, 1949	12.40	9,980	
	May	12, 1939	13.3	11,300		Feb.	14, 1949	20.65	26,200	
1940	Apr.	11, 1940	13.93	12,400	1950	Jan.	4, 1950	17.48	19,100	
1941	Jan.	1, 1941	13.01	10,100			Jan.	13, 1950	^a 16.1	11,200
	Apr.	19, 1941	20.18	25,600			Feb.	13, 1950	16.00	16,200
1942							May	10, 1950	^a 24.32	39,400
	Oct.	31, 1941	15.30	14,000			May	21, 1950	^a 13.2	8,180
	Apr.	9, 1942	13.16	10,400			July	19, 1950	15.60	15,500
1943	Dec.	27, 1942	24.48	39,900	1951	Feb.	18, 1951	20.40	25,900	
	May	10, 1943	30.20	59,000	1952	Mar.	11, 1952	18.24	13,700	
1944							Apr.	12, 1952	17.43	12,700
	Feb.	29, 1944	12.22	8,840	1953	Mar.	15, 1953	13.68	8,680	
	June	15, 1944	13.23	10,400			Mar.	18, 1953	14.99	9,980
							May	13, 1953	17.50	12,800
1945	Feb.	21, 1945	18.68	20,500	1954	May	3, 1954	7.01	2,760	
	Feb.	26, 1945	16.40	15,300		1955	Mar.	21, 1955	16.80	12,000
	Mar.	3, 1945	13.88	11,000			May	21, 1955	17.07	12,300
	Mar.	19, 1945	22.35	32,100	1956		Apr.	29, 1956	20.32	17,500
	Mar.	31, 1945	16.74	15,900			May	15, 1956	20.50	17,900
	Apr.	2, 1945	21.16	27,900	1957	Feb.	26, 1957	13.68	8,180	
	Apr.	14, 1945	26.90	50,000			Apr.	4, 1957	33.28	46,300
	May	16, 1945	12.75	10,000			Apr.	27, 1957	17.53	13,000
	June	11, 1945	17.98	19,400			May	18, 1957	22.40	21,300
1946	Jan.	9, 1946	15.44	14,300			May	23, 1957	29.85	36,800
	Feb.	13, 1946	17.53	18,300			May	25, 1957	20.99	18,800
	May	25, 1946	17.82	18,900			June	2, 1957	15.35	10,400
1947	Nov.	10, 1946	13.25	10,700			June	9, 1957	19.05	15,300
	Dec.	12, 1946	15.64	15,500	1958	Mar.	9, 1958	13.66	8,680	
	May	14, 1947	10.60	8,000			Mar.	24, 1958	13.83	8,780
1948	Jan.	1, 1948	9.55	6,210			Aug.	2, 1958	13.44	8,380

^a Present site and datum.

^b Annual peak only.

530. White River near Reeds Spring, Mo.

Location. --Lat 36°37'20", long 93°25'20", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 22 N., R. 23 W., at bridge on State Highway 13, 5 3/4 miles downstream from James River, 12 miles south of Reeds Spring, and at mile 543.8.

Drainage area. --3,617 sq mi.

Gage. --Nonrecording Feb. 18, 1938, 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	^a 195,000	1945	Apr. 2, 1945	25.60	66,000
1938	Feb. 18, 1938	31.0	95,100	Cont.	Apr. 16, 1945	47.00	196,000
	Mar. 30, 1938	15.3	31,300		May 17, 1945	17.8	38,700
	May 24, 1938	19.9	47,400		June 12, 1945	27.75	75,000
1939	Feb. 21, 1939	15.03	30,300	1946	Feb. 15, 1946	20.95	49,600
	Apr. 18, 1939	18.55	42,700		May 27, 1946	26.94	71,200
	May 13, 1939	19.74	46,700	1947	Dec. 12, 1946	21.2	50,300
					Apr. 26, 1947	20.9	49,300
1940	Apr. 13, 1940	15.57	32,300	1948	Aug. 17, 1948	16.57	34,800
1941	Apr. 16, 1941	19.2	44,800	1949	Jan. 27, 1949	21.5	51,300
	Apr. 20, 1941	34.8	107,000		Feb. 16, 1949	26.56	70,000
1942	Nov. 1, 1941	22.35	53,800	1950	Jan. 5, 1950	17.62	38,000
	Apr. 10, 1942	19.1	42,200		Jan. 15, 1950	20.00	46,200
1943	Oct. 31, 1942	15.50	30,800		Feb. 14, 1950	18.04	39,400
	Dec. 28, 1942	32.15	94,300		May 12, 1950	38.65	135,000
	May 11, 1943	44.9	183,000		July 20, 1950	15.56	31,700
	May 20, 1943	30.05	84,200				
1944	Apr. 11, 1944	15.33	30,100	1951	Feb. 21, 1951	27.80	75,000
					July 2, 1951	18.76	42,100
1945	Feb. 23, 1945	20.09	46,500		July 5, 1951	18.71	41,800
	Feb. 28, 1945	17.57	38,000	1952	Mar. 12, 1952	15.90	32,600
	Mar. 4, 1945	23.52	58,200		Apr. 14, 1952	17.09	36,400
	Mar. 21, 1945	26.25	68,400				

a Annual peak only.

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 Railway 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 from and at datum 55.36 ft lower than present gage. 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".

WHITE RIVER BASIN

535. White River near Branson, Mo.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	—	38.80	^a 160,000	1945	Feb. 22, 1945	18.83	51,300
1927	Apr. 16, 1927	45.36	^a 212,000		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
1933	Dec. 25, 1932	19.18	47,400		Apr. 16, 1945	43.77	209,000
	May 15, 1933	29.3	84,600		May 18, 1945	16.00	39,500
1934	Apr. 7, 1934	11.25	21,300		June 13, 1945	23.83	73,800
1935	Mar. 11, 1935	35.23	127,000	1946	Feb. 15, 1946	18.63	50,500
	Mar. 25, 1935	18.57	50,700		May 27, 1946	22.90	69,800
	June 4, 1935	23.10	68,700	1947	Nov. 6, 1946	17.80	47,500
	June 8, 1935	23.68	71,100		Nov. 10, 1946	16.50	42,400
	June 19, 1935	26.31	81,600		Dec. 12, 1946	20.46	59,200
1936	Sept. 29, 1936	12.53	28,100		Apr. 26, 1947	18.40	50,100
1937	Jan. 16, 1937	18.49	50,600	1948	June 19, 1948	17.43	46,100
	Feb. 1, 1937	15.18	37,900	1949	Jan. 27, 1949	22.0	65,700
1938	Feb. 18, 1938	29.84	110,000		Feb. 17, 1949	23.37	72,000
	Mar. 29, 1938	15.22	37,600	1950	Jan. 5, 1950	16.28	41,500
	May 24, 1938	17.93	49,800		Jan. 15, 1950	18.17	49,400
1939	Apr. 19, 1939	16.19	42,000		Feb. 14, 1950	16.66	43,200
	May 13, 1939	18.83	54,100		May 12, 1950	38.75	161,000
1940	Apr. 12, 1940	16.32	42,500	1951	Feb. 20, 1951	25.64	82,400
1941	Apr. 16, 1941	20.17	56,900		July 2, 1951	16.88	44,000
	Apr. 20, 1941	30.57	106,000		July 4, 1951	17.10	44,800
1942	Nov. 1, 1941	20.00	56,000	1952	Mar. 12, 1952	14.22	36,100
	Apr. 11, 1942	17.15	44,000		Apr. 14, 1952	15.07	40,100
1943	Dec. 29, 1942	28.45	96,000	1953	Mar. 16, 1953	21.22	32,600
	May 12, 1943	42.0	193,000	1954	May 4, 1954	15.18	17,800
	May 20, 1943	28.68	97,500	1955	Dec. 30, 1954	21.91	35,500
1944	Mar. 22, 1944	14.76	34,600		Feb. 21, 1955	22.24	36,400
				1956	May 16, 1956	36.9	89,100
				1957	June 10-11, 1957	18.53	25,900
				1958	May 16, 1958	12.50	10,600

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 from and at datum 1.52 ft higher than present gage; recording gage at present site and datum thereafter. Datum of present gage is 419.66 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

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 since 1950.

WHITE RIVER BASIN

33

550. White River near Flippin, Ark.--Cont.

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.	^a 240,000	1942	Oct. 18, 1941	16.74	42,400
1929	Jan. 27, 1929	20.2	52,500		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	37,300	1943	Dec. 27, 1942	23.91	79,200
	Apr. 22, 1929	17.2	38,200		Dec. 30, 1942	28.72	110,000
	May 9, 1929	23.8	70,400		May 12, 1943	39.06	201,000
	May 14, 1929	20.2	52,500		May 21, 1943	29.89	118,000
	May 28, 1929	18.4	43,800	1944	Mar. 2, 1944	14.71	34,200
	June 8, 1929	17.0	37,300		Mar. 23, 1944	15.58	37,900
1930	Jan. 15, 1930	19.69	50,100		Apr. 12, 1944	14.75	34,600
	May 13, 1930	16.9	36,900	1945	Feb. 21, 1945	22.75	73,500
1931	Feb. 12, 1931	16.3	34,600		Feb. 26, 1945	24.13	80,500
	Aug. 7, 1931	17.3	38,800		Mar. 22, 1945	24.03	80,000
1932	Jan. 17, 1932	18.9	46,100		Apr. 3, 1945	28.56	108,000
	Jan. 25, 1932	18.2	42,800		Apr. 17, 1945	39.82	215,000
1933	Dec. 26, 1932	21.5	58,900		June 14, 1945	24.68	83,900
	Jan. 22, 1933	17.0	37,500	1946	Jan. 9, 1946	16.75	43,900
	Apr. 18, 1933	19.0	46,500		Feb. 16, 1946	19.62	57,200
	May 16, 1933	32.3	116,000		May 16, 1946	21.83	68,300
1934	Mar. 29, 1934	13.52	23,500		May 28, 1946	22.90	74,000
1935	Mar. 12, 1935	38.1	164,000	1947	Nov. 7, 1946	18.10	50,000
	Mar. 25, 1935	22.7	64,900		Nov. 10, 1946	22.82	73,500
	June 5, 1935	25.2	78,000		Dec. 13, 1946	22.13	69,800
	June 9, 1935	26.8	86,900		Apr. 12, 1947	15.58	38,500
	June 19, 1935	29.3	102,000		Apr. 27, 1947	19.01	54,300
1936	Sept. 29, 30, 1936	14.73	27,500	1948	Mar. 2, 1948	15.58	38,500
1937	Jan. 10, 1937	17.3	38,700		Mar. 27, 1948	14.82	35,000
	Jan. 17, 1937	21.54	58,900		June 19, 1948	20.57	62,200
	Feb. 2, 1937	18.7	45,300	1949	Jan. 25, 1949	21.10	64,700
	June 11, 1937	17.0	37,300		Jan. 28, 1949	24.89	85,000
1938	Jan. 27, 1938	17.4	37,200		Feb. 18, 1949	23.79	78,900
	Feb. 19, 1938	34.1	134,000	1950	Jan. 4, 1950	22.23	70,400
	Mar. 30, 1938	19.3	46,300		Jan. 16, 1950	18.98	54,300
	May 13, 1938	19.0	44,800		Feb. 15, 1950	17.63	47,600
	May 24, 1938	22.2	61,000		May 13, 1950	36.82	178,000
1939	Nov. 7, 1938	16.8	34,500	1951	Feb. 23, 24, 1951	16.54	43,900
	Apr. 19, 1939	17.44	44,200	1952	Apr. 25, 1952	11.70	21,500
	May 14, 1939	20.12	54,700		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		July 1, 1955	12.68	24,800
1940	Apr. 11, 1940	20.33	57,800	1955	Sept. 12, 1956	8.32	11,100
1941	Jan. 4, 1941	14.70	34,200	1956	July 25, 1957	13.30	27,200
	Apr. 17, 1941	22.20	69,200		Oct. 3, 1957	12.30	24,400
	Apr. 21, 1941	29.60	115,000	1958			

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 southeast 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 from and at datum 15.27 ft lower than present gage (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	Aug. 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
1940	Apr. 11, 1940	13.79	13,000		July 19, 1950	16.03	19,400
1941	Jan. 1, 1941	13.70	12,800	1951	Feb. 20, 1951	27.57	50,900
1942	Oct. 16, 1941	17.08	22,100	1952	Nov. 24, 1951	18.80	26,000
	Oct. 31, 1941	20.80	32,000		Mar. 11, 1952	21.87	34,300
	Apr. 8, 1942	17.58	23,400		Apr. 12, 1952	22.30	35,400
1943	Dec. 27, 1942	31.0	64,800		May 23, 1952	17.57	23,000
	May 10, 1943	39.7	96,900	1953	Nov. 25, 1952	19.60	28,100
1944	Feb. 28, 1944	15.95	19,300		Mar. 14, 1953	16.67	19,900
1945	Feb. 21, 1945	25.60	42,500		Mar. 18, 1953	20.63	29,400
	Feb. 26, 1945	19.04	26,400		Apr. 24, 1953	14.35	15,100
	Mar. 3, 1945	20.00	29,100		May 13, 1953	20.18	28,300
	Mar. 6, 1945	14.08	14,600	1954	Apr. 16, 1954	14.50	15,300
	Mar. 19, 1945	25.70	46,500		May 2, 1954	22.70	35,200
	Mar. 25, 1945	17.00	20,900	1955	Feb. 20, 1955	15.72	17,800
	Mar. 30, 1945	30.30	63,300		Mar. 21, 1955	25.11	42,200
	Apr. 2, 1945	24.00	41,000		Apr. 21, 1955	14.92	16,100
	Apr. 15, 1945	41.00	100,000		May 21, 1955	19.02	25,300
	May 15, 1945	16.08	18,600	1956	Feb. 2, 1956	16.10	18,700
	June 11, 1945	32.80	73,100		Feb. 18, 1956	15.82	18,000
1946	Jan. 9, 1946	19.42	27,900		May 15, 1956	15.00	15,900
	Feb. 13, 1946	23.90	40,600	1957	Apr. 4, 1957	31.30	62,600
	May 16, 1946	16.90	21,700		Apr. 30, 1957	18.10	23,100
	May 25, 1946	25.65	46,200		May 14, 1957	16.80	20,200
					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 from and at same datum as present gage; recording gage at present site and datum thereafter. Datum of present gage is 451.98 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

Stage-discharge relation. --Defined by current-meter measurements below 120,000 cfs and extended above by 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, 1915	45.5	^a 164,000	1941	Jan. 2, 1941	9.97	14,000
1927	Apr. 14, 1927	35.9	^a 110,000	1942	Oct. 17, 1941	14.13	21,200
1929	Jan. 25, 1929	22.2	50,100		Oct. 31, 1941	18.33	32,300
	Feb. 26, 1929	14.4	26,300		Apr. 9, 1942	14.86	23,100
	Apr. 9, 1929	14.5	26,600	1943	Dec. 27, 1942	27.24	62,200
	Apr. 21, 1929	15.0	28,000		May 11, 1943	37.38	120,000
	May 9, 1929	15.0	28,000	1944	Feb. 29, 1944	12.96	20,200
	July 8, 1929	15.0	28,000		Feb. 21, 1945	21.82	45,400
1930	Jan. 13, 1930	13.7	24,400		Feb. 27, 1945	17.28	30,800
	Feb. 4, 1930	10.2	15,100		Mar. 3, 1945	16.98	29,900
	May 11, 1930	22.7	51,800		Mar. 19, 1945	22.66	48,400
1931	Feb. 9, 1931	15.2	28,600		Mar. 30, 1945	27.68	66,700
	May 26, 1931	11.5	18,500		Apr. 2, 1945	20.86	42,400
1932	Feb. 17, 1932	10.0	15,200		Apr. 15, 1945	38.86	121,000
	July 6, 1932	9.9	14,900		May 16, 1945	12.74	18,800
1933	Dec. 24, 1932	10.5	16,700		June 11, 1945	31.10	81,800
	May 14, 1933	23.9	56,000		June 17, 1945	10.47	14,100
1934	Mar. 26, 1934	12.38	22,600	1946	Jan. 9, 1946	17.72	33,700
1935	Mar. 11, 1935	24.5	58,300		Feb. 14, 1946	20.90	44,000
	Mar. 22, 1935	12.6	21,200		May 16, 1946	13.98	22,800
	May 5, 1935	22.0	53,900		May 25, 1946	20.80	43,600
	May 15, 1935	10.2	14,700	1947	Nov. 10, 1946	13.49	21,500
	June 3, 1935	12.8	21,800		Dec. 12, 1946	19.23	38,400
	June 7, 1935	11.7	18,700		Apr. 11, 1947	11.90	17,600
	June 17, 1935	21.3	51,100	1948	Jan. 1, 1948	15.00	25,600
					Jan. 24, 1949	37.06	114,000
1936	Dec. 7, 1935	9.7	13,500		Jan. 28, 1949	14.36	23,700
1937	Oct. 26, 1936	10.9	16,500		Feb. 14, 1949	21.74	46,700
	Jan. 15, 1937	16.9	35,000	1950	Jan. 4, 1950	21.66	46,700
	May 2, 1937	14.8	28,000		Jan. 14, 1950	12.06	18,000
1938	Jan. 24, 1938	14.0	25,400		Feb. 13, 1950	20.32	42,000
	Feb. 15, 1938	17.6	37,400		Apr. 4, 1950	10.35	14,000
	Feb. 18, 1938	26.4	65,800		May 12, 1950	18.67	36,800
	Mar. 29, 1938	14.4	26,700		June 3, 1950	12.07	18,000
	Apr. 16, 1938	12.5	21,000		July 19, 1950	11.32	16,100
	May 23, 1938	11.2	17,300	1951	Feb. 20, 1951	24.35	56,000
					Apr. 22, 1951	10.61	14,500
1939	Jan. 30, 1939	11.34	17,300	1952	Nov. 24, 1951	16.13	28,800
	Feb. 20, 1939	12.08	19,300		Mar. 11, 1952	20.08	41,300
	Mar. 5, 1939	12.41	20,100		Apr. 12, 1952	19.40	39,100
	Apr. 17, 1939	26.46	58,900		May 24, 1952	14.06	23,100
	May 27, 1939	19.05	37,700				
1940	Apr. 12, 1940	9.98	14,000				

570. Buffalo River near Rush, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Nov. 25, 1952	16.52	30,000	1956	Feb. 2, 1956	12.87	19,900
	Mar. 15, 1953	13.60	21,700		Feb. 18, 1956	13.70	22,000
	Mar. 18, 1953	17.41	32,800		May 16, 1956	11.01	15,400
	Apr. 25, 1953	10.86	15,200	1957	Apr. 4, 1957	28.30	67,000
	May 13, 1953	16.36	29,700		Apr. 28, 1957	13.10	20,400
1954	Apr. 16, 1954	10.48	14,300		Apr. 30, 1957	14.60	24,400
	May 2, 1954	18.83	37,200		May 14, 1957	12.78	20,900
1955	Feb. 20, 1955	12.22	18,200		May 18, 1957	12.98	20,200
	Mar. 21, 1955	21.23	45,000		May 23, 1957	23.66	53,600
	Apr. 21, 1955	11.62	16,800		June 9, 1957	12.40	18,700
	May 21, 1955	16.48	30,000	1958	Mar. 9, 1958	13.14	21,300
					Mar. 24, 1958	11.93	18,300
					May 10, 1958	12.84	20,500
					Aug. 2, 1958	11.93	18,300

a Annual peaks only, furnished by Corps of Engineers.

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 $\frac{1}{2}$ miles northeast of Mountain Home, and 15 miles upstream from Norfolk 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 one quarter mile downstream from and at datum 2.00 ft lower than last used gage. 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 June 25, 1943, as a result of backwater from Norfolk Dam. 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)
1910	July 10, 1910	7.2	—	1934	Apr. 6, 1934	5.70	6,000
1915	Aug. 1915	29.5	—	1935	Mar. 11, 1935	22.2	50,400
1929	Jan. 24, 1929	17.0	33,700		June 2, 1935	13.5	24,000
	Feb. 25, 1929	9.7	14,200		June 7, 1935	11.2	18,000
	Apr. 8, 1929	12.0	20,000		June 17, 1935	11.4	18,500
	Apr. 14, 1929	7.9	10,100	1936	Dec. 7, 1935	7.56	10,300
	May 8, 1929	13.0	22,600		Nov. 3, 1936	7.5	10,000
	May 28, 1929	8.0	10,300	1937	Jan. 14, 1937	18.7	38,900
1930	Oct. 31, 1929	10.0	15,000		Apr. 24, 1937	10.5	16,200
	Jan. 13, 1930	12.2	20,600		May 2, 1937	11.8	19,500
1931	Oct. 7, 1930	10.4	16,000		June 10, 1937	10.8	17,000
	Nov. 19, 1930	7.7	10,500	1938	Jan. 24, 1938	7.6	10,300
	Feb. 7, 1931	9.3	13,300		Feb. 18, 1938	19.0	39,800
1932	Jan. 23, 1932	6.72	7,930		Mar. 29, 1938	13.85	24,800
1933	Dec. 30, 1932	8.5	11,400		Apr. 16, 1938	9.8	14,500
	Apr. 16, 1933	8.5	11,400		May 13, 1938	8.5	11,400
	May 14, 1933	14.6	26,900		May 24, 1938	14.8	27,500
					May 29, 1938	7.6	10,300

590. North Fork River near Henderson, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Nov. 8, 1938	8.5	11,400	1942	Oct. 17, 1941	9.36	16,200
	Jan. 30, 1939	9.27	16,200		Oct. 31, 1941	13.64	26,500
	Feb. 20, 1939	7.42	11,800		Nov. 4, 1941	6.92	10,500
	Mar. 4, 1939	10.97	20,300		Apr. 8, 1942	12.36	23,500
	Apr. 17, 1939	18.20	38,300		May 19, 1942	7.92	12,700
	July 3, 1939	9.62	16,900		June 18, 1942	8.57	14,400
1940	Apr. 11, 1940	15.22	30,600	1943	Nov. 17, 1942	7.89	12,700
1941	Apr. 4, 1941	8.43	14,100		Nov. 21, 1942	7.89	12,700
	Apr. 17, 1941	9.66	17,200		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	a	—	11,200		Mar. 23, 1956	—	2,660
1950	Apr. 10, 1950	—	10,200		Aug. 15, 1957	—	5,900
1951	July 31, 1951	—	5,450	1958	July 19, 1958	—	7,590

a Feb. 2-4, 7, 21, 23-28, 1949.

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, $3\frac{1}{4}$ 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 than present gage; recording thereafter. 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

WHITE RIVER BASIN

605. White River at Calico Rock, Ark.--Cont.

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	1942	Oct. 18, 1941	21.78	88,500
1906	Mar. 27, 1906	34.0	166,000		Nov. 1, 1941	27.40	122,000
1907	May 7, 1907	42.5	239,000		Apr. 10, 1942	19.30	74,300
1908	May 15, 1908	30.6	143,000	1943	Dec. 28, 1942	28.64	125,000
1909	Mar. 9, 1909	22.0	89,000		May 12, 1943	46.50	269,000
1910	June 10, 1910	14.3	45,800		May 21, 1943	29.52	131,000
1911	Aug. 15, 1911	26.6	117,000	1944	Feb. 29, 1944	15.23	48,900
1912	Apr. 27, 1912	27.7	123,000	1945	Feb. 22, 1945	27.21	120,000
1913	Jan. 24, 1913	15.6	52,600		Feb. 27, 1945	26.85	119,000
1914	Apr. 29, 1914	19.6	74,600		Mar. 20, 1945	27.97	125,000
1915	Aug. 21, 1915	49.5	318,000		Mar. 31, 1945	29.46	135,000
1916	Jan. 31, 1916	51.9	350,000		Apr. 3, 1945	32.97	160,000
1917	Apr. 2, 1917	24.2	102,000		Apr. 16, 1945	48.84	310,000
1918	May 12, 1918	36.0	182,000		June 12, 1945	33.43	162,000
1919	June 3, 1919	19.0	71,300	1946	Jan. 9, 1946	21.77	91,800
1920	Mar. 26, 1920	31.6	150,000		Feb. 14, 1946	24.05	106,000
1921	Apr. 27, 1921	36.2	183,000		May 16, 1946	24.61	110,000
1922	Apr. 11, 1922	15.6	52,600		May 26, 1946	22.06	93,700
1923	Feb. 2, 1923	28.3	127,000	1947	Nov. 11, 1946	21.41	89,200
1924	June 12, 1924	27.0	119,000		Dec. 13, 1946	24.94	112,000
1925	Apr. 28, 1925	21.5	86,000		Apr. 28, 1947	16.80	61,400
1926	Oct. 9, 1925	18.0	65,800	1948	June 20, 1948	17.49	65,400
1927	Apr. 15, 1927	50.5	332,000	1949	Jan. 25, 1949	37.14	190,000
1928	Dec. 14, 1927	40.5	220,000		Jan. 28, 1949	27.86	124,000
1929	Jan. 25, 1929	28.2	126,000		Feb. 16, 1949	24.14	102,000
1930	May 11, 1930	23.2	96,200	1950	Jan. 5, 1950	26.29	121,000
1931	Feb. 9, 1931	18.0	65,800		Jan. 16, 1950	18.56	71,900
1932	Jan. 23, 1932	17.8	64,700		Feb. 13, 1950	22.63	96,900
1933	May 16, 1933	37.4	193,000		May 13, 1950	38.25	211,000
1934	Mar. 27, 1934	14.2	45,300	1951	Feb. 21, 1951	24.56	110,000
1935	Mar. 12, 1935	42.8	242,000	1952	Mar. 11, 1952	17.66	66,600
1936	Sept. 29, 1936	14.5	46,800	1953	Mar. 18, 1953	14.07	46,900
1937	Jan. 15, 1937	28.4	128,000	1954	May 3, 1954	13.25	42,400
1938	Feb. 19, 1938	43.5	250,000	1955	Mar. 21, 1955	14.90	51,100
1939	Apr. 17, 1939	31.5	149,000	1956	Feb. 18, 1956	11.27	33,400
1940	Apr. 12, 1940	23.05	95,000	1957	Apr. 4, 1957	24.05	106,000
1941	Apr. 22, 1941	26.85	118,000	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 from and at same datum as present gage; recording gage at present site and datum thereafter. 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. --Annual flood heights for 1904-1938 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	1931	Feb. 9, 1931	16.2	81,100
1905	Aug. 2, 1905	20.8	141,000	1932	Jan. 24, 1932	15.9	77,500
1906	Mar. 28, 1906	23.9	199,000	1933	May 17, 1933	24.9	220,000
1907	May 8, 1907	26.7	259,000	1934	Mar. 26, 1934	15.0	66,400
1908	May 16, 1908	22.1	164,000	1935	Mar. 13, 1935	27.0	266,000
1909	Mar. 10, 1909	17.5	94,600	1936	Dec. 8, 1935	13.7	51,500
1910	June 10, 1910	13.7	51,500	1937	Jan. 16, 1937	20.4	134,000
1911	Aug. 15, 1911	20.2	130,000	1938	Feb. 19, 1938	27.4	260,000
1912	Apr. 27, 1912	20.1	129,000		Mar. 30, 1938	20.2	130,000
1913	Jan. 12, 1913	15.1	67,600		May 24, 1938	18.6	107,000
1914	Aug. 29, 1914	16.3	82,200	1939	Mar. 5, 1939	15.81	76,200
1915	Aug. 22, 1915	31.6	373,000		Apr. 18, 1939	21.65	165,000
1916	Feb. 1, 1916	31.9	382,000		May 28, 1939	17.95	100,000
1917	Apr. 2, 1917	18.7	108,000	1940	Apr. 12, 1940	16.66	93,600
1918	May 13, 1918	24.9	220,000	1941	Apr. 22, 1941	19.24	114,000
1919	June 3, 1919	16.5	84,200	1942	Oct. 18, 1941	16.65	85,200
1920	Mar. 27, 1920	22.7	175,000		Nov. 2, 1941	20.00	122,000
1921	Apr. 27, 1921	25.1	224,000		Apr. 10, 1942	16.34	82,200
1922	Mar. 31, 1922	15.7	74,900	1943	Dec. 29, 1942	25.81	213,000
1923	Feb. 3, 1923	21.5	153,000		May 12, 1943	28.01	281,000
1924	June 13, 1924	19.5	120,000		May 22, 1943	21.04	131,000
1925	Apr. 29, 1925	16.8	87,200	1944	Mar. 1, 1944	13.96	54,800
1926	Oct. 17, 1925	16.6	85,200	1945	Feb. 22, 1945	^a 19.69	121,000
1927	Apr. 15, 1927	31.4	369,000		Feb. 27, 1945	20.41	131,000
1928	Dec. 15, 1927	26.0	244,000		Mar. 21, 1945	20.58	134,000
1929	Jan. 26, 1929	20.4	134,000		Mar. 30, 1945	^a 22.07	160,000
1930	May 12, 1930	18.4	105,000		Apr. 4, 1945	23.06	177,000
					Apr. 16, 1945	29.43	324,000
					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	^a 18.52	106,000
					May 17, 1946	18.06	101,000
					May 26, 1946	17.54	95,000
				1947	Nov. 11, 1946	16.81	89,800
					Dec. 13, 1946	19.12	114,000
				1948	June 20, 1948	15.27	73,900

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610. White River at Batesville, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 26, 1949	25.72	236,000	1953	Mar. 18, 1953	14.48	63,500
	Feb. 16, 1949	18.79	107,000	1954	May 2, 1954	13.20	47,900
1950	Jan. 5, 1950	19.50	119,000	1955	Mar. 22, 1955	14.14	58,500
	Jan. 17, 1950	15.70	78,800	1956	Feb. 18, 1956	12.95	45,700
	Feb. 14, 1950	17.92	99,000	1957	Apr. 4, 1957	19.82	124,000
	May 13, 14, 1950	24.77	216,000	1958	May 9, 1958	13.87	56,100
	June 3, 1950	16.06	82,300				
1951	Feb. 21, 1951	18.80	107,000				
1952	Mar. 12, 1952	15.62	77,700				

a Occurred on following day.

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

630. Black River at Poplar Bluff, Mo.

Location.--Lat 36°45'35", long 90°23'15", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 24 N., R. 6 E., 1,500 ft upstream from bridge on U. S. Highway 60 in Poplar Bluff, 4 $\frac{3}{4}$ 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 from and at datum 1.89 ft higher than present gage. July 17, 1935, to Sept. 30, 1940, at present site at datum 2.00 ft higher than present gage. Datum of present gage is 317.38 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 by Clearwater Reservoir (capacity, 413,700 acre-ft) since June 3, 1948. Peaks for period prior to Oct. 1, 1936, and for period Oct. 1, 1937, to Sept. 30, 1939, computed from plotted U. S. Weather Bureau 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		^a 100,000	1928	Dec. 15, 1927	20.1	30,700
1915	August	^a 21.1	—		Apr. 8, 1928	18.5	17,700
					Apr. 23, 1928	17.9	13,900
1923	Jan. 21, 1923	16.3	7,260		June 15, 1928	19.9	29,000
	Feb. 3, 1923	19.3	23,900		June 23, 1928	19.8	28,100
	Mar. 17, 1923	18.5	17,700	1929	Jan. 27, 1929	18.5	17,700
	May 6, 1923	17.1	9,900		Apr. 11, 1929	18.0	14,500
	May 17, 1923	19.2	23,100		May 15, 1929	20.2	31,600
1924	May 31, 1924	14.8	5,000		June 15, 1929	17.2	10,300
1925	June 14, 1925	15.9	6,420	1930	Jan. 16, 1930	19.3	23,900
1926	Oct. 18, 1925	15.8	6,250	1931	Mar. 9, 1931	14.6	4,820
	Nov. 10, 1925	17.5	11,700	1932	Jan. 24, 1932	14.6	4,820
1927	Jan. 23, 1927	18.0	14,500	1933	Dec. 31, 1932	16.6	8,100
	Mar. 19, 1927	17.2	10,300		Jan. 23, 1933	16.8	8,760
	Apr. 2, 1927	19.8	28,100		Apr. 17, 1933	19.5	25,600
	Apr. 16, 1927	20.3	32,500		May 16, 1933	20.6	35,300
	May 10, 1927	16.7	8,420				
	May 27, 1927	19.3	23,900	1934	Mar. 27, 1934	10.0	2,880
	June 3, 1927	20.0	29,800				

630. Black River at Poplar Bluff, Mo.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 12, 1935	21.1	40,200	1945	Mar. 21, 1945	17.18	8,080
	May 6, 1935	15.7	6,090	Cont.	Apr. 1, 1945	19.85	28,800
	June 23, 1935	17.7	12,700		Apr. 16, 1945	20.54	43,400
1936	Apr. 6, 1936	12.6	3,796		June 10, 1945	20.80	50,800
					June 19, 1945	17.78	9,670
1937	Oct. 11, 1936	16.2	7,020	1946	Jan. 11, 1946	16.73	7,210
	Jan. 10, 1937	17.2	10,300		Feb. 15, 1946	19.53	23,500
	Jan. 16, 1937	19.66	27,300		May 3, 1946	17.77	9,670
	May 4, 1937	16.51	7,800		May 18, 1946	18.21	11,200
					May 26, 1946	20.02	32,600
1938	Feb. 20, 1938	19.42	24,800	1947	Apr. 13, 1947	16.29	6,620
	Mar. 31, 1938	17.81	13,300		Apr. 27, 1947	18.81	14,800
	May 26, 1938	15.9	6,420		June 29, 1947	16.25	6,490
1939	Feb. 1, 1939	16.3	7,260	1948	Jan. 3, 1948	18.09	10,800
	Mar. 7, 1939	17.9	13,900				
	Apr. 19, 1939	19.4	24,800	1949	Jan. 25, 1949	18.85	14,800
1940	Apr. 21, 1940	17.8	10,300	1950	Feb. 14, 1950		
1941	Apr. 19, 1941	13.6	4,880		June 5, 1950	17.9	10,000
1942	Nov. 3, 1941	17.38	8,520	1951	Feb. 21, 1951	16.81	6,060
	Feb. 2, 1942	16.26	6,770				
	Apr. 10, 1942	17.3	8,290	1952	Nov. 25, 1951	16.66	7,210
1943	Dec. 29, 1942	19.56	21,500	1953	Mar. 29, 1953	11.50	3,630
	May 12, 1943	20.77	52,600				
	May 21, 1943	17.53	8,770	1954	May 9, 1954	9.49	2,840
1944	Apr. 25, 1944	17.40	8,520	1955	Mar. 22, 1955	16.85	7,370
	May 5, 1944	15.68	6,190				
1945	Feb. 24, 1945	16.00	6,260	1956	Feb. 18, 1956	12.92	4,400
	Feb. 28, 1945	19.70	27,000	1957	Apr. 5, 1957	18.59	14,300
	Mar. 8, 1945	18.82	14,800	1958	Mar. 25, 1958	17.81	10,200

a Annual peak only, estimated.

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 on downstream side of bridge on U. S. Highway 62, $2\frac{1}{4}$ 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 benchmark).

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

Bankfull stage.--10 ft.

Remarks.--Flow partially regulated by Clearwater Reservoir 105 miles upstream since June 3, 1948. 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.

WHITE RIVER BASIN

640. Black River near Corning, Ark.--Cont.

Peak stages and discharges

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	^a 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	8,330		Feb. 17, 1949	^a 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
1939	Feb. 5, 1939	12.06	9,900		Feb. 25, 1950	11.31	6,200
	Mar. 10, 1939	12.48	12,600		Mar. 30, 1950	11.92	9,550
	Apr. 22, 1939	13.15	18,000		Apr. 7, 1950	11.74	8,350
1940	Apr. 22-26, 1940	11.62	6,900		May 3, 1950	11.09	5,340
1941	Jan. 7, 1941	9.00	2,800		May 15, 1950	11.95	10,200
1942	Feb. 6-8, 1942	11.24	5,120	1951	Jan. 18, 1951	11.79	8,330
	Apr. 12-14, 1942	12.09	9,900		Feb. 24, 1951	12.02	10,200
1943	Jan. 3, 1943	12.56	13,200		Mar. 14, 1951	11.56	7,800
	May 15-16, 1943	15.2	30,800		July 3, 1951	11.66	8,350
1944	Apr. 14-15, 1944	11.88	8,620	1952	Nov. 28, 1951	12.27	12,000
	Apr. 29, 1944	11.44	6,030		Jan. 8, 1952	11.80	8,950
					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.

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 U. S. 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	^a 80,000	1949	Jan. 29, 1949	24.07	53,800
1937	Jan. 21,22, 1937	24.0	31,600		Feb. 19, 1949	21.88	31,800
	May 8, 1937	16.6	13,800		Apr. 1, 1949	19.66	19,800
1938	Feb. 25, 1938	21.92	30,100	1950	Jan. 11, 1950	22.92	39,100
	Apr. 5,6, 1938	21.54	27,300		Feb. 18, 1950	21.58	28,600
1939	Feb. 11, 1939	17.87	15,200		Apr. 8, 1950	20.43	21,600
	Mar. 12, 1939	20.63	22,200		May 15, 1950	21.46	27,900
	Apr. 24, 1939	21.15	28,000	1951	Jan. 17, 1951	15.20	12,100
1940	Apr. 24, 1940	17.85	15,000		Feb. 25, 1951	20.83	23,600
					Mar. 18, 1951	17.88	15,300
1941	Jan. 25, 1941	^b 8.92	7,270		July 17, 1951	19.52	18,600
				1952	Dec. 1, 1951	20.78	23,600
1942	Nov. 5, 1941	15.86	12,800		Jan. 6, 1952	18.00	15,500
	Apr. 16, 1942	19.60	18,600		Mar. 18, 1952	20.27	21,100
1943	Jan. 2, 1943	20.36	21,600		Apr. 18, 1952	19.04	17,400
	May 18, 1943	22.46	39,500	1953	Mar. 24, 1953	17.37	14,500
1944	Apr. 26,27, 1944	19.07	17,300	1954	May 4, 1954	12.68	10,200
				1955	Mar. 26, 1955	18.38	16,200
1945	Mar. 7, 1945	22.45	38,500	1956	May 20, 1956	16.68	13,700
	Apr. 6, 1945	23.04	44,700	1957	Apr. 9, 1957	22.42	34,800
	Apr. 20, 1945	23.60	51,400		May 1, 1957	21.25	25,900
	June 17, 1945	24.32	59,600		May 29, 1957	23.34	42,800
1946	Jan. 12, 1946	16.90	13,100		July 8, 1957	15.55	12,500
	Feb. 23, 1946	20.40	22,500	1958	Nov. 22, 1957	19.38	18,300
	May 29, 1946	21.66	30,300		Dec. 21, 1957	^c 15.70	12,800
1947	May 1, 1947	17.16	14,700		Mar. 29,30, 1958	22.13	32,400
1948	Jan. 5, 1948	^c 17.51	15,800		May 10,11, 1958	21.33	26,600
	Apr. 14, 1948	^c 16.34	14,800				

a Annual peak only.

b Occurred at different time than peak discharge.

c Occurred on following day.

WHITE RIVER BASIN

695. Spring River at Imboden, Ark.

Location. --Lat 36°12', long 91°10', in NE $\frac{1}{2}$ 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 curves.

Bankfull stage. --16 ft.

Remarks. --Records for period 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	^a 32.1	125,000	1948	Jan. 1, 1948	19.10	16,100
1937	Jan. 15, 1937	22.3	^b 31,800		June 19, 1948	17.87	12,700
1938	Feb. 15, 1938	16.60	10,500	1949	Jan. 19, 1949	20.21	20,500
	Feb. 18, 1938	23.97	42,200		Jan. 24, 1949	28.42	78,500
	Mar. 29, 1938	23.7	40,200		Jan. 28, 1949	18.20	13,400
	Apr. 16, 1938	19.9	19,200		Feb. 14, 1949	24.68	46,900
1939	Jan. 30, 1939	18.5	14,200		Mar. 27, 1949	19.54	17,500
	Mar. 5, 1939	22.40	32,400		July 8, 1949	21.85	29,000
	Apr. 6, 1939	15.70	9,440	1950	Dec. 12, 1949	15.52	9,240
	Apr. 17, 1939	22.25	31,200		Jan. 4, 1950	25.08	49,800
1940	Apr. 12, 1940	17.86	13,100		Jan. 10, 1950	17.84	12,500
1941	Jan. 24, 1941	9.87	4,680		Jan. 13, 1950	19.28	16,800
1942	Oct. 31, 1941	19.09	17,800		Jan. 16, 1950	17.59	12,100
	Apr. 8, 1942	23.10	36,600		Jan. 26, 1950	16.27	10,100
	May 4, 1942	18.60	15,500		Feb. 13, 1950	22.48	33,000
	Aug. 23, 1942	15.89	9,690		May 12, 1950	18.85	15,100
1943	Dec. 27, 1942	24.10	42,800	1951	June 4, 1950	18.10	13,100
	May 11, 1943	26.10	57,300		Jan. 14, 1951	16.57	10,500
1944	Apr. 11, 1944	19.13	16,100		Feb. 20, 1951	21.27	26,200
	Apr. 23, 1944	19.12	16,100		Apr. 21, 1951	16.95	12,300
	May 3, 1944	19.08	16,100		July 4, 1951	16.00	10,600
1945	Feb. 22, 1945	20.02	19,600		July 11, 1951	15.34	9,860
	Feb. 27, 1945	23.05	36,000	1952	Nov. 24, 1951	22.43	32,400
	Mar. 3, 1945	17.32	11,500		Jan. 4, 1952	19.30	16,800
	Mar. 19, 1945	20.98	24,600		Mar. 11, 1952	22.24	31,200
	Mar. 31, 1945	24.87	48,300		Apr. 13, 1952	15.79	9,860
	Apr. 15, 1945	23.70	40,200	1953	Mar. 18, 1953	18.16	13,400
	May 10, 1945	21.38	26,800	1954	May 3, 1954	17.82	12,500
	June 9, 1945	19.06	16,100	1955	Mar. 21, 1955	18.49	14,200
	June 11, 1945	23.21	37,200	1956	Feb. 18, 1956	16.50	10,600
	June 18, 1945	19.04	15,800	1957	Jan. 22, 1957	15.96	10,100
	Sept. 25, 1945	17.46	11,900		Apr. 4, 1957	25.74	54,200
1946	Jan. 9, 1946	20.95	24,600		Apr. 22, 1957	16.45	10,500
	Feb. 14, 1946	22.16	31,600		Apr. 28, 1957	19.07	16,100
	Mar. 6, 1946	22.16	31,600		May 23, 1957	24.18	43,500
	May 1, 1946	17.38	11,700	1958	Nov. 13, 1957	17.44	11,800
	May 16, 1946	16.00	9,750		Nov. 18, 1957	17.70	12,300
	May 25, 1946	19.46	17,500		Mar. 24, 1958	19.04	15,800
	June 1, 1946	16.81	10,800		May 3, 1958	16.12	10,200
1947	Dec. 10, 1946	14.54	8,290		May 5, 1958	22.10	30,600

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

b Annual peak only.

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	^a 19.7	^b 44,000	1940	Apr. 12, 1940	8.3	6,530
1922	Mar. 31, 1922	10.0	7,560	1941	Apr. 4, 1941	3.4	976
1923	Feb. 2, 1923	10.1	7,600	1942	Oct. 31, 1941	10.1	9,830
	Mar. 12, 1923	7.2	4,400		Apr. 8, 1942	7.7	5,750
	Mar. 16, 1923	10.6	9,450		May 31, 1942	15.7	28,300
	May 15, 1923	8.8	6,120	1943	Nov. 18, 1942	6.86	4,620
	June 11, 1923	8.1	5,350		Nov. 22, 1942	6.56	4,230
1924	Aug. 10, 1924	3.9	1,680		Dec. 28, 1942	14.10	22,200
1925	June 13, 1925	7.2	4,400		May 11, 1943	15.18	25,800
1926	Nov. 8, 1925	5.1	2,490	1944	Apr. 23, 1944	8.36	6,840
1927	Apr. 14, 1927	18.7	40,000		May 3, 1944	8.12	6,360
	Apr. 19, 1927	11.6	11,400	1945	Feb. 27, 1945		^c 15,000
	May 5, 1927	10.0	8,640		Mar. 3, 1945		^c 4,000
	June 1, 1927	10.2	8,960		Mar. 7, 1945		^c 7,200
	June 21, 1927	8.2	6,040		Mar. 20, 1945		^c 6,900
1928	Dec. 14, 1927	15.0	18,700		Mar. 31, 1945	15.5	27,200
	Apr. 6, 1928	11.6	11,400		Apr. 15, 1945	13.6	20,360
	Apr. 21, 1928	9.3	7,560		June 11, 1945	10.01	9,600
	June 13, 1928	15.6	27,200		June 18, 1945	8.32	6,680
	June 21, 1928	7.8	5,560	1946	Jan. 9, 1946	7.30	5,280
1929	Jan. 25, 1929	9.5	8,000		Feb. 14, 1946	10.88	11,400
	Feb. 26, 1929	6.9	4,480		Mar. 6, 1946	8.21	6,570
	Apr. 9, 1929	7.3	4,960		May 17, 1946	7.07	5,010
1930	Jan. 13, 1930	8.0	5,800		May 25, 1946	9.30	8,330
1931	Aug. 6, 1931	5.2	2,640		Aug. 14, 1946	7.42	5,420
1932	Jan. 23, 24, 1932	3.6	1,280	1947	Dec. 12, 1946	5.50	3,100
1933	Apr. 16, 1933	10.9	10,100	1948	Jan. 1, 1948	7.75	5,980
	May 14, 1933	9.5	8,000		June 19, 1948	9.54	8,680
1934	Sept. 15, 1934	3.5	1,190	1949	Jan. 18, 1949	6.9	4,750
1935	Mar. 12, 1935	13.7	20,200		Jan. 24, 1949	16.7	33,200
	June 3, 1935	9.5	7,840		Jan. 28, 1949	8.3	6,700
	June 17, 1935	7.8	5,560		Feb. 14, 1949	7.1	5,010
1936	Dec. 8, 1935	3.1	900		Feb. 16, 1949	8.6	7,180
1937	Jan. 14, 1937	13.9	20,900	1950	Jan. 4, 1950	12.80	16,200
1938	Feb. 19, 1938	10.0	9,100		Feb. 13, 1950	8.67	7,340
	Mar. 29, 1938	9.3	7,640		May 11, 1950	9.55	8,860
	May 24, 1938	8.1	5,880		May 30, 1950	7.22	5,140
1939	Mar. 5, 1939	8.4	6,670		June 3, 1950	8.20	6,570
	Apr. 17, 1939	13.9	20,900	1951	Feb. 21, 1951	8.50	7,020
					July 11, 1951	8.00	6,270
				1952	Nov. 24, 1951	9.66	9,040
					Mar. 11, 1952	9.16	8,160
					Apr. 13, 1952	6.41	4,120
				1953	Apr. 18, 1953	^d 4.90	2,530

WHITE RIVER BASIN

715. Eleven Point River near Bardley, Mo.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Apr. 16, 1954	8.66	7,340	1957	Apr. 28, 1957	8.25	6,570
	May 2, 1954	10.60	10,800		May 11, 1957	7.80	5,980
1955	Mar. 21, 1955	11.23	12,000	Cont.	May 23, 1957	10.38	10,400
					May 25, 1957	8.60	7,180
1956	May 16, 1956	7.37	5,420	1958	Mar. 24, 1958	10.15	9,980
1957	Apr. 4, 1957	15.76	28,600		May 3, 1958	6.64	4,360
	Apr. 22, 1957	6.64	4,360		May 5, 1958	10.35	10,400

a From floodmarks.

b Annual peak only.

c Estimated on basis of records for station near Ravendon Springs, Ark.

d From graph based on partial recorded record.

720. Eleven Point River near Ravenden Springs, Ark.
(Published as "near Eleven Point, Ark." 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 than present gage; 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 by means of velocity-area studies for the main channel and slope-area measurements of overbank flow.

Bankfull stage. --14 ft.

Remarks. --Records for period 1929 to 1933 and 1935 to 1938 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	1943	Dec. 28, 1942	17.63	21,400
1931	Mar. 7, 1931	10.0	5,680		May 11, 1943	18.97	26,900
1932	Jan. 17, 1932	11.65	7,160	1944	Apr. 11, 1944	11.62	6,550
1933	Dec. 24, 1932	12.0	7,540		Apr. 23, 1944	14.03	10,800
	Dec. 30, 1932	13.0	9,020		May 4, 1944	11.02	6,330
	Jan. 22, 1933	12.7	8,550	1945	Feb. 22, 1945	11.18	6,550
	Apr. 16, 1933	14.3	11,400		Feb. 27, 1945	18.60	25,400
	May 15, 1933	14.92	12,800		Mar. 3, 1945	11.36	6,780
1936	Apr. 6, 1936	11.6	7,160		Mar. 7, 1945	12.86	8,860
					Mar. 19, 1945	14.38	11,600
1939	Jan. 30, 1939	11.70	7,270		Mar. 31, 1945	18.84	26,200
	Mar. 5, 1939	16.12	16,100		Apr. 2, 1945	14.90	12,800
	Apr. 18, 1939	16.55	17,800		Apr. 16, 1945	17.56	21,400
					May 10, 1945	14.78	12,600
1940	Apr. 12, 1940	11.38	6,770		June 9, 1945	15.70	14,900
					June 11, 1945	17.10	19,500
1941	Sept. 3, 1941	9.63	5,120		June 17, 1945	12.90	8,860
				1946	Jan. 9, 1946	12.70	8,550
1942	Nov. 1, 1941	13.40	10,500		Feb. 14, 1946	15.81	15,200
	Apr. 8, 1942	16.31	16,700		Mar. 7, 1946	12.78	8,700
	May 4, 1942	11.12	6,440		May 26, 1946	12.74	8,550
	June 1, 1942	18.04	23,000	1947	Apr. 11, 1947	8.65	4,340

720. Eleven Point River near Ravenden Springs, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Jan. 1, 1948	12.30	7,960	1952	Nov. 25, 1951	13.56	10,000
	June 19, 1948	12.20	7,820		Jan. 4, 1952	11.84	7,280
1949	Jan. 19, 1949	12.94	8,860		Mar. 12, 1952	14.43	11,600
	Jan. 25, 1949	20.21	34,000	1953	Mar. 18, 1953	9.87	5,340
	Feb. 14, 1949	16.69	18,100		Apr. 8, 1954	10.95	6,330
	Mar. 27, 1949	13.81	10,400	1954	May 3, 1954	12.30	7,960
1950	Jan. 5, 1950	17.22	19,800	1955	Mar. 22, 1955	14.58	12,000
	Jan. 10, 1950	12.12	7,680		Feb. 18, 1956	8.99	4,640
	Jan. 13, 1950	12.60	8,400	1956	Apr. 5, 1957	18.80	26,400
	Jan. 16, 1950	12.44	8,100		Apr. 28, 1957	13.10	9,180
	Feb. 13, 1950	16.10	16,100		May 12, 1957	10.86	6,230
	May 12, 1950	14.00	10,800		May 23, 1957	18.19	23,800
	May 31, 1950	12.41	8,100		May 26, 1957	12.69	8,550
	June 4, 1950	14.20	11,200	1958	Mar. 24, 1958	14.46	11,800
1951	Jan. 14, 1951	10.84	6,130		May 3, 1958	11.10	6,440
	Feb. 20, 1951	13.92	10,600		May 5, 1958	16.24	16,400
	July 11, 1951	11.33	6,660				

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 bridge at Black Rock, 3.7 mi downstream from Spring River.

Drainage area. --7,323 sq mi.

Gage. --Nonrecording. Datum of gage is 229.56 ft above mean sea level, datum of 1929. Prior to Aug. 1, 1946, at site 900 ft upstream at same datum.

Stage-discharge relation. --Defined by current-meter measurement below 100,000 cfs and extended above by logarithmic plotting.

Bankfull stage. --20 ft.

Remarks. --Annual flood heights for 1904-1929, 1932-1939 computed from plotted U. S. Weather Bureau readings. Discharge records for 1940-58 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	1921	Apr. 28, 1921	25.7	65,300
1906	Jan. 23, 1906	24.5	51,700	1922	Apr. 9, 1922	23.4	41,400
1907	Jan. 4, 1907	26.0	69,000	1923	May 16, 1923	24.3	49,600
1908	May 7, 1908	25.4	41,400	1924	May 30, 1924	14.3	15,800
1909	Mar. 10, 1909	23.0	56,900	1925	June 15, 1925	12.1	13,300
1910	Apr. 18, 1910	17.0	19,300	1926	Oct. 18, 1925	20.8	26,000
1911	Aug. 16, 1911	19.1	22,500	1927	Apr. 15, 1927	30.3	132,000
1912	Apr. 28, 1912	23.5	42,200	1928	June 14, 1928	26.2	71,700
1913	Jan. 12, 1913	24.4	50,700	1929	Jan. 26, 1929	24.7	53,800
1914	Apr. 30, 1914	21.6	28,800	1930	Jan. 15, 1930	23.6	43,000
1915	Aug. 21, 1915	31.9	160,000	1931	Mar. 8, 1931	18.0	20,600
1916	Jan. 31, 1916	26.5	75,600	1932	Jan. 18, 1932	19.6	23,300
1917	Apr. 3, 1917	24.6	52,700	1933	May 22, 1933	23.1	38,900
1918	May 14, 1918	25.9	67,800	1934	Mar. 27, 1934	19.3	22,800
1919	Dec. 14, 1918	19.9	23,800	1935	Mar. 12, 1935	26.7	78,300
1920	Mar. 27, 1920	21.1	26,800				

WHITE RIVER BASIN

725. Black River at Black Rock, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Apr. 6, 1936	16.4	18,500	1946	June 1, 1946	23.6	42,000
1937	Jan. 16, 1937	26.2	71,700	1947	Apr. 11, 1947	a 16.0	21,200
1938	Feb. 19, 1938	25.5	63,000	1948	Jan. 2, 1948	b 19.8	29,500
1939	Apr. 18, 1939	24.8	54,800	1949	Jan. 25, 1949	28.5	103,000
1940	May 1, 1940	18.2	22,800	1950	Jan. 5, 1950	25.9	67,800
1941	Jan. 25, 1941	10.0	11,800	1951	Feb. 22, 1951	23.1	38,800
1942	Apr. 10, 1942	23.0	37,300	1952	Nov. 27, 1951		
1943	May 12, 1943	26.2	68,200		Mar. 12, 1952	c 23.3	40,600
1944	Apr. 24, 1944	22.0	31,200	1953	Mar. 18, 1953	c 20.0	30,100
1945	Mar. 31, 1945	27.2	87,400	1954	May 3, 1954	c 17.6	24,900
				1955	Mar. 21, 1955	d 19.5	26,200
				1956	Feb. 18, 1956	c 17.6	25,700
				1957	Apr. 5, 1957	26.9	77,800
				1958	May 6, 1958	24.5	50,200

a Occurred Dec. 13, 1946.

b Occurred at different time than peak discharge.

c Occurred on following day.

d Occurred Mar. 23, 1955.

730. Strawberry River near Evening Shade, Ark.

Location.--Lat 36°06', long 91°36', in NE¼ 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	1945	Apr. 15, 1945	20.72	11,100
1940	Apr. 11, 1940	15.42	4,650	Cont.	June 11, 1945	20.44	10,400
1941	Jan. 24, 1941	13.43	3,080	1946	Jan. 9, 1946	18.32	7,040
1942	Oct. 31, 1941	17.21	6,100		Feb. 14, 1946	20.18	9,970
	Mar. 8, 1942	16.89	5,810		Mar. 6, 1946	21.07	12,000
	Apr. 8, 1942	19.18	8,120		Apr. 30, 1946	19.26	8,400
	Apr. 28, 1942	15.74	4,750		May 25, 1946	16.60	5,320
1943	Dec. 27, 1942	20.84	11,300	1947	Dec. 10, 1946	17.63	6,260
	May 11, 1943	24.55	22,700		May 20, 1947	16.38	5,160
1944	Feb. 28, 1944	15.56	4,520	1948	Jan. 1, 1948	16.91	5,580
	Apr. 11, 1944	16.90	5,580		Feb. 25, 1948	15.09	4,140
	Apr. 23, 1944	15.82	4,670		June 18, 1948	17.33	5,960
	May 3, 1944	18.50	7,290		June 27, 1948	14.98	4,060
1945	Feb. 21, 1945	18.67	7,540	1949	Jan. 18, 1949	18.17	7,310
	Feb. 27, 1945	19.23	8,240		Jan. 24, 1949	26.59	31,000
	Mar. 31, 1945	22.46	15,900		Jan. 27, 1949	15.77	5,020
	Apr. 2, 1945	19.17	8,240		Feb. 14, 1949	19.94	9,760
					Mar. 26, 1949	18.64	7,830
					July 7, 1949	20.49	10,800

730. Strawberry River near Evening Shade, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Dec. 11, 1949	15.76	5,020	1953	Mar. 14, 1953	15.95	5,480
	Jan. 4, 1950	21.82	13,800	Cont.	Mar. 18, 1953	17.04	6,480
	Jan. 13, 1950	17.40	6,480		Mar. 22, 1953	15.86	5,390
	Jan. 26, 1950	15.35	4,700	1954	Jan. 20, 1954	14.40	4,060
	Feb. 13, 1950	17.93	6,980		May 3, 1954	15.38	4,940
	May 30, 1950	14.93	4,300	1955	Mar. 20, 1955	16.82	6,280
1951	June 30, 1950	18.85	8,090		May 20, 1955	18.16	7,840
	Jan. 14, 1951	15.19	4,540	1956	Feb. 18, 1956	15.62	5,120
	Feb. 20, 1951	18.44	7,570		June 25, 1956	15.86	5,410
	Apr. 21, 1951	14.80	4,220	1957	Jan. 22, 1957	14.38	4,120
	June 20, 1951	15.01	4,380		Apr. 4, 1957	21.80	14,700
	July 4, 1951	18.77	8,090		Apr. 22, 1957	16.34	5,800
	July 10, 1951	15.62	4,860		Apr. 28, 1957	16.82	6,300
	Aug. 18, 1951	16.65	5,720		May 23, 1957	19.03	9,000
1952	Nov. 6, 1951	14.36	4,060	1958	Nov. 13, 1957	15.56	5,380
	Nov. 24, 1951	20.36	10,900		Nov. 18, 1957	16.72	6,570
	Jan. 4, 1952	17.36	6,920		Mar. 24, 1958	16.25	6,020
	Mar. 11, 1952	18.52	8,200		Apr. 3, 1958	14.95	4,780
	Apr. 12, 1952	14.67	4,310		May 5, 1958	22.02	15,200
1953	Nov. 25, 1952	15.48	5,030				
	Dec. 4, 1952	14.70	4,310				

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	1945	Feb.	21, 1945	12.16	4,020				
1940	Apr.	19, 1940	8.5	1,900		Feb.	27, 1945	10.02	2,700				
						Mar.	3, 1945	9.27	2,330				
1941	Nov.	11, 1940	7.26	1,220		Mar.	6, 1945	10.18	2,810				
						Mar.	19, 1945	10.74	3,070				
1942	Jan.	1, 1942	9.60	2,490		Mar.	30, 1945	18.00	9,100				
						Apr.	8, 1942	14.74	6,000	Apr.	2, 1945	15.56	6,790
						Apr.	28, 1942	12.86	4,540	Apr.	15, 1945	18.50	9,650
1943	Dec.	27, 1942	16.60	7,720		June	11, 1945	16.87	8,000				
						May	11, 1943	19.96	11,300	June	17, 1945	16.64	7,720
					Sept.	25, 1945				11.63	3,610		
1944	Feb.	28, 1944	9.86	2,650	1946	Jan.	9, 1946	12.64	4,320				
						Feb.	14, 1946	12.89	4,540				
						Mar.	6, 1946	17.84	8,900				
						Mar.	16, 1946	9.32	2,330				
						Apr.	30, 1946	13.98	5,410				
Apr.	11, 1944	11.68	3,680	May		25, 1946	11.79	3,740					
Apr.	23, 1944	10.95	3,230										
May	3, 1944	10.88	3,180										

735. Piney Fork Strawberry River at Evening Shade, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Dec. 10, 1946	11.39	3,490	1952	Nov. 6, 1951	9.17	2,370
	May 21, 1947	14.00	5,200		Nov. 24, 1951	12.40	4,170
1948	Jan. 1, 1948	9.52	2,540		Jan. 4, 1952	12.10	3,980
	June 18, 1948	11.60	3,700		Mar. 10, 1952	10.98	3,360
	June 27, 1948	9.48	2,540		Apr. 12, 1952	9.56	2,590
	July 7, 1948	8.92	2,210	1953	Dec. 4, 1952	9.82	2,700
1949	Jan. 18, 1949	11.49	3,640		Mar. 14, 1953	9.37	2,480
	Jan. 24, 1949	23.42	17,500		Mar. 18, 1953	11.70	3,750
	Jan. 27, 1949	10.07	2,860	1954	Sept. 30, 1954	8.27	1,720
	Feb. 14, 1949	10.39	3,030	1955	Mar. 21, 1955	9.92	2,760
	Mar. 26, 1949	12.47	4,230		May 20, 1955	9.64	2,590
	July 8, 1949	14.80	5,810	1956	Feb. 18, 1956	10.69	2,950
1950	Jan. 4, 1950	15.45	6,310		June 25, 1956	9.99	2,530
	Jan. 10, 1950	9.67	2,640	1957	Jan. 22, 1957	9.89	2,470
	Jan. 13, 1950	11.14	3,420		Apr. 4, 1957	18.64	9,620
	Jan. 15, 1950	8.58	2,040		Apr. 22, 1957	12.59	4,200
	Jan. 26, 1950	9.64	2,590		Apr. 27, 1957	11.00	3,140
	Feb. 1, 1950	9.21	2,370		May 23, 1957	13.88	5,140
	Feb. 13, 1950	13.34	4,740	1958	Nov. 13, 1957	10.24	2,650
	June 3, 1950	17.77	8,700		Nov. 18, 1957	13.95	5,220
1951	Jan. 14, 1951	9.70	2,640		Mar. 24, 1958	9.02	2,020
	Feb. 20, 1951	12.90	4,480		Apr. 3, 1958	10.09	2,640
	Apr. 21, 1951	10.10	2,860		May 3, 1958	9.54	2,300
	June 20, 1951	8.58	2,040		May 5, 1958	14.60	5,680
	July 4, 1951	8.99	2,260		May 9, 1958	9.70	2,400
	Aug. 18, 1951	8.57	2,040				
	Sept. 13, 1951	8.76	2,150				

740. Strawberry River near Poughkeepsie, Ark.

Location.--Lat 36°07', long 91°27', in NW¼ 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 2½ 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 benchmark).

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	1940	Apr. 19, 1940	12.43	5,230
	Dec. 30, 1936	16.5	10,900		Jan. 24, 1941	10.9	3,850
	Jan. 14, 1937	16.8	11,500	1942	Oct. 31, 1941	15.30	8,100
	Jan. 22, 1937	15.8	9,670		Mar. 8, 1942	14.84	7,350
	June 15, 1937	14.3	7,450		Apr. 8, 1942	21.25	22,700
1938	Oct. 4, 1937	21.4	26,900		Apr. 28, 1942	16.17	9,600
	Feb. 15, 1938	17.6	13,000	1943	Dec. 27, 1942	18.10	13,800
	Feb. 18, 1938	23.6	31,600		May 11, 1943	24.60	32,900
	Mar. 29, 1938	22.0	25,300	1944	Feb. 28, 1944	16.14	9,400
	Apr. 16, 1938	18.1	14,100		Apr. 11, 1944	17.40	12,200
	June 19, 1938	21.9	28,800		Apr. 23, 1944	16.98	11,300
1939	Jan. 29, 1939	16.73	11,300		May 3, 1944	16.99	11,300
	Mar. 5, 1939	18.36	14,800				
	Apr. 16, 1939	19.5	17,600				
	July 3, 1939	15.96	10,000				

740. Strawberry River near Poughkeepsie, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 27, 1945	18.33	13,500	1951	Jan. 14, 1951	16.40	9,340
	Mar. 19, 1945	17.99	12,600		Feb. 20, 1951	19.56	17,400
	Mar. 30, 1945	21.34	22,500		Apr. 21, 1951	15.80	8,440
	Apr. 1, 1945	19.46	17,100		July 4, 1951	16.77	9,980
	Apr. 15, 1945	22.24	25,200	1952	Nov. 25, 1951	19.64	17,400
	June 11, 1945	22.62	26,500		Jan. 4, 1952	19.04	15,600
1946	Jan. 8, 1946	19.06	15,900		Mar. 11, 1952	19.33	16,500
	Feb. 13, 1946	18.88	15,300		Apr. 12, 1952	15.87	8,570
	Mar. 6, 1946	20.25	19,200	1953	Dec. 4, 1952	16.23	9,020
	May 1, 1946	19.20	16,200		Mar. 18, 1953	18.07	12,900
	May 25, 1946	18.19	13,200	1954	May 2, 1954	13.83	6,200
1947	Dec. 10, 1946	16.94	10,100		Mar. 21, 1955	16.16	9,020
	May 21, 1947	16.64	9,660	1955	May 20, 1955	17.77	12,100
1948	Jan. 1, 1948	16.67	9,820	1956	Feb. 18, 1956	17.15	10,800
	June 18, 1948	17.79	12,100		June 25, 1957	15.30	7,790
	June 27, 1948	15.06	7,530	1957	Jan. 22, 1957	15.63	8,180
1949	Jan. 18, 1949	18.27	13,500		Apr. 4, 1957	24.36	32,700
	Jan. 24, 1949	29.30	52,500		Apr. 22, 1957	16.49	9,500
	Feb. 15, 1949	17.84	12,600		Apr. 28, 1957	18.72	14,700
	Mar. 26, 1949	18.72	14,700		May 23, 1957	18.82	15,000
	July 8, 1949	22.88	27,500	1958	Nov. 13, 1957	17.92	12,400
1950	Jan. 4, 1950	21.41	22,800		Nov. 18, 1957	18.80	15,000
	Jan. 10, 1950	16.68	9,820		Mar. 24, 1958	15.06	7,530
	Jan. 13, 1950	18.55	14,400		May 3, 1958	14.71	7,100
	Jan. 26, 1950	14.73	7,080		May 5, 1958	20.44	19,800
	Feb. 1, 1950	15.40	7,920				
	Feb. 13, 1950	20.53	20,100				
	June 4, 1950	19.23	16,200				

745. White River at Newport, Ark.
(Published as "near Newport, Ark." 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 from and at datum 2.30 ft lower than present gage. 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 furnished by U. S. Weather Bureau 1885 to 1927, and 1932 to 1937. Discharge records 1938-58 furnished by Corps of Engineers and reviewed by Geological Survey. Flood flows regulated to some extent by Norfork Reservoir on North Fork River since June 1943, by Clearwater Reservoir on Black River since 1948, and by Bull Shoals Reservoir on White River since July 1951. Only annual peaks are shown.

WHITE RIVER BASIN

745. White River at Newport, Ark.--Cont.

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	1926	Oct. 19, 1925	26.1	80,900
1887	May 8, 1887	24.5	69,500	1927	Apr. 17, 1927	35.6	387,000
1888	May 23, 1888	26.1	80,900	1928	June 15, 1928	33.1	172,000
1889	Mar. 28, 1889	23.0	61,000	1929	May 12, 13, 1929	30.0	108,000
1890	Mar. 14, 1890	33.0	235,000	1930	Jan. 17, 1930	30.3	112,000
1891	Apr. 26, 1891	23.8	65,400	1931	Feb. 13, 1931	23.6	64,200
1892	May 21, 1892	29.6	132,000	1932	Jan. 26, 1932	26.7	86,300
1893	May 5, 1893	30.7	158,000	1933	May 19, 1933	32.1	199,000
1894	May 11, 1894	28.0	102,000	1934	Mar. 29, 1934	25.7	77,800
1895	July 11, 1895	19.6	45,900	1935	Mar. 14, 1935	33.7	270,000
1896	Dec. 24, 1895	28.8	116,000	1936	Dec. 9, 1935	18.0	40,000
1897	Jan. 7, Mar. 22, 1897	27.9	101,000	1937	Jan. 18, 19, 1937	30.7	158,000
1898	May 8, 1898	32.1	199,000	1938	Feb. 20, 1938	33.4	259,000
1899	May 13, 1899	28.0	102,000	1939	Apr. 20, 1939	30.3	144,000
1900	Mar. 3, 1900	18.5	41,800	1940	Apr. 14, 1940	^a 24.4	75,200
1901	Mar. 15, 1901	23.5	63,800	1941	Apr. 23, 1941	^a 27.25	106,000
1902	Mar. 2, 1902	18.1	40,400	1942	Nov. 5, 1941	28.1	102,000
1903	Mar. 12, 13, 1903	28.7	114,000	1943	May 14, 1943	^b 34.68	304,000
1904	Mar. 29, 1904	28.9	117,000	1944	Mar. 3, 1944	^b 23.0	60,700
1905	May 26, 1905	28.2	105,000	1945	Apr. 17, 1945	^a 35.9	343,000
1906	Mar. 29, 1906	30.5	152,000	1946	May 30, 1946	30.0	125,000
1907	May 11, 1907	30.7	158,000	1947	Dec. 16, 1946	28.2	100,000
1908	May 1908	29.4	127,000	1948	June 21, 1948	^a 23.3	66,200
1909	Mar. 14, 1909	26.0	80,000	1949	Jan. 28, 1949	^c 34.0	260,000
1910	June 13, 1910	20.5	49,500	1950	May 15, 1950	32.1	194,000
1911	Aug. 17, 1911	24.8	71,300	1951	Feb. 23, 1951	28.5	104,000
1912	May 2, 1912	29.4	127,000	1952	Apr. 15, 1952	25.6	75,200
1913	Jan. 26, 1913	26.0	80,000	1953	Mar. 20, 1953	24.4	66,300
1914	May 1, 1914	23.1	61,600	1954	May 3, 1954	^a 19.49	48,000
1915	Aug. 24, 1915	33.9	280,000	1955	Mar. 22, 1955	^a 21.70	54,800
1916	Feb. 1, 1916	34.3	303,000	1956	Feb. 19, 1956	^a 22.10	55,300
1917	Apr. 6, 1917	24.9	71,900	1957	Apr. 6, 1957	^d 28.25	101,000
1918	May 15, 1918	32.3	207,000	1958	May 11, 1958	27.54	92,800
1919	June 5, 1919	23.4	63,200				
1920	Mar. 29, 1920	29.3	125,000				
1921	Apr. 30, 1921	31.3	174,000				
1922	Apr. 14, 1922	26.2	81,800				
1923	Feb. 5, 1923	29.5	130,000				
1924	June 14, 1924	25.4	75,500				
1925	May 1, 1925	21.8	55,100				

^a Occurred on following day.^b Occurred Apr. 15, 1944.^c Occurred Jan. 24, 1949.^d Occurred Apr. 6-7, 1957.

Note.--Discharges from 1886 to 1927 and 1932 to 1937 computed on basis of measurements made prior to construction of levees in 1940.

WHITE RIVER BASIN

53

748.5 White River near Augusta, Ark.

Location. --Lat 35°17'23", long 91°23'33", 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 White River at Newport, Ark. 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	—
1937	Jan. 23-25, 1937	36.6	—	1948	Mar. 7, 1948	32.22	—
1938	Feb. 23, 1938	39.27	—	1949	Jan. 30, 1949	39.33	—
1939	Apr. 22, 1939	34.9	—	1950	May 17, 18, 1950	36.5	—
1940	Apr. 18, 1940	32.23	—	1951	Feb. 26, 1951	34.02	—
1941	Nov. 7, 1941	33.37	—	1952	Apr. 17, 1952	32.58	—
1942	Apr. 18, 1942	33.66	—	1953	Mar. 22, 23, 1953	32.5	—
1943	May 16, 1943	39.84	—	1954	May 6, 1954	29.98	—
1944	Apr. 17, 1944	31.93	—	1955	Mar. 25, 1955	31.33	—
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 from and at same datum as present gage. 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 was subject to considerable draw-down. All crest stages prior to July 16, 1952, 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

750. Middle Fork Little Red River at Shirley, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Mar. 10, 1935	27.3	^a 61,000	1950	Feb. 1, 1950	13.94	6,920
1939	Apr. 17, 1939	19.5	16,800	Cont.	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 3, 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	9,060
	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. 11, 1944	13.74	6,970		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	1953	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	20.26	21,300		May 13, 1953	15.03	8,880
	Feb. 13, 1946	21.45	25,500	1954	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		Aug. 13, 1957	26.03	51,700
	Jan. 13, 1950	16.27	11,200	1958	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 NE¼ sec. 29, T. 11 N., R. 13 W., on left bank 1 3/4 miles downstream from Pedee Creek, 4½ 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 beginning of record, 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	^a 31,300	1950	Jan. 13, 1950	16.66	16,500
1940	May 1, 1940	10.67	5,770	Cont.	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	11.97	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 2 3/4 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 from and at datum 1.06 ft lower than present gage; recording gage at present site and datum thereafter. 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	Jan. 9, 1946	31.17	49,400
1928	Apr. 6, 1928	42.35	74,400		Feb. 14, 1946	33.90	58,800
1929	Feb. 26, 1929	29.10	41,100		Mar. 6, 1946	30.93	48,500
1930	May 11, 1930	38.90	65,200		May 3, 1946	26.97	37,800
1931	Oct. 8, 1930	24.45	28,500		May 24, 1946	25.22	33,300
1932	Jan. 6, 1932	31.3	47,400	1947	Dec. 12, 1946	29.30	43,800
1933	May 16, 1933	38.0	62,900	1948	Jan. 1, 1948	27.66	39,600
1934	Mar. 26, 1934	31.86	49,100		Mar. 12, 1948	22.33	26,300
1935	May 5, 1935	42.0	73,300	1949	Dec. 16, 1948	24.34	31,100
1937	Jan. 15, 1937	29.9	41,800		Jan. 19, 1949	27.80	39,900
	Jan. 22, 1937	24.5	27,600		Jan. 25, 1949	46.53	117,000
	May 2, 1937	25.3	29,500		Jan. 28, 1949	24.76	32,300
1938	Jan. 24, 1938	26.4	32,300		Feb. 14, 1949	23.68	29,700
	Feb. 18, 1938	41.9	73,100		Mar. 27, 1949	27.53	39,100
	Mar. 30, 1938	39.0	70,200	1950	Oct. 6, 1949	24.82	30,500
	Apr. 16, 1938	28.5	37,800		Jan. 5, 1950	32.51	53,700
1939	Jan. 30, 1939	25.19	36,100		Jan. 14, 1950	28.76	41,900
	Apr. 17, 1939	36.83	72,800		Feb. 13, 1950	26.88	36,200
	May 27, 1939	25.40	36,600		June 4, 1950	24.18	29,000
1940	May 1, 1940	17.55	17,300	1951	Jan. 14, 1951	25.06	31,300
1941	Jan. 2, 1941	16.60	15,300		Feb. 21, 1951	27.67	38,600
1942	Oct. 18, 1941	24.38	33,800	1952	Nov. 6, 1951	23.08	26,400
	Nov. 1, 1941	29.00	46,700		Nov. 24, 1951	27.37	37,700
	Apr. 9, 1942	32.37	57,900		Jan. 4, 1952	26.24	34,200
1943	Dec. 28, 1942	32.32	51,000		Mar. 11, 1952	28.18	40,100
	Apr. 12, 1943	24.53	31,400		Apr. 13, 1952	26.55	35,400
	May 11, 1943	43.95	99,100		Apr. 23, 1952	24.85	30,500
1944	Feb. 29, 1944	23.31	28,800	1953	Nov. 26, 1952	30.56	47,500
	Apr. 11, 1944	25.93	34,500		Dec. 4, 1952	25.43	32,100
	Apr. 23, 1944	33.08	53,600		Mar. 15, 1953	23.16	26,600
	May 3, 1944	22.86	28,000		Mar. 18, 1953	31.15	49,400
1945	Feb. 22, 1945	35.09	65,900	1954	May 3, 1954	29.76	45,000
	Feb. 27, 1945	26.58	37,500	1955	Mar. 21, 1955	28.37	40,700
	Mar. 3, 1945	28.33	42,500		Apr. 21, 1955	27.37	37,700
	Mar. 20, 1945	25.83	35,200	1956	Feb. 2, 1956	27.70	38,600
	Mar. 31, 1945	42.47	96,200		Feb. 18, 1956	28.37	40,700
	Apr. 2, 1945	30.37	49,200	1957	Jan. 23, 1957	30.29	46,600
	Apr. 16, 1945	27.90	41,300		Apr. 4, 1957	44.23	96,500
	June 11, 1945	40.77	88,900		Apr. 22, 1957	23.26	27,300
	June 18, 1945	24.39	31,400		Apr. 28, 1957	23.62	28,000
					May 24, 1957	29.11	42,800
					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

WHITE RIVER BASIN

57

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 mile 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 White River at Newport, Ark. 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, 1922	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, 1951	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 White River at Newport, Ark. Only annual peak stages are shown.

WHITE RIVER BASIN

769. White River at Des Arc, Ark.--Cont.

Peak stages and discharges

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 De Valls 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 De Valls 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, according to U. S. Weather Bureau.

Remarks. --Records for the period 1927-1945 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 White River at Newport, Ark. 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	^a 220,000	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	133,000	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	23.33	63,400
1952	Dec. 8-10, 1951	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 U. S. Weather Bureau as "at Jelks, Ark. ")

Location. --Lat 35°15'20", 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.

Historical data. --Maximum stage known, 16.1 ft (from floodmarks) present datum, Apr. 19, 1927, due to break in White River Levee.

Remarks. --Records since January 1937 furnished by Corps of Engineers. Gage height records from July 1916 to December 1931 from publications of U. S. Weather Bureau.

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	—	1941	Feb. 3, 1941	8.7	^a 2,820
1917	Apr. 20-22, 1917	9.5	—	1942	Apr. 14, 1942	^b 10.15	6,200
1918	May 24,25, 1918	9.8	—	1943	May 18, 1943	10.3	6,060
1919	Jan. 2, 3, 1919	11.1	—	1944	Apr.13,16,17,1944	9.7	4,760
1920	Jan. 25, 1920	10.3	—	1945	Apr. 21, 1945	12.1	10,200
1921	Apr.18,	—	—	1946	May 27,28, 1946	10.3	6,020
	May 12,15, 1921	9.7	5,100	1947	Apr. 17,18, 1947	9.5	4,360
1922	Apr. 1, 1922	10.3	6,600	1948	Mar. 6, 1948	9.85	5,560
1923	Feb. 3, 4, 1923	10.8	8,000	1949	Jan. 31, 1949	11.3	10,400
1924	June 6, 1924	9.7	5,100	1950	Feb. 15, 1950	11.65	11,600
1925	Oct. 22, 1925	10.5	7,200				
1926	Feb. 1, 2, 1926	9.9	^a 5,600	1951	Dec. 11, 1951	10.0	7,550
1927	Apr. 19, 1927	16.1	24,500	1952	Jan. 8, 1952	10.4	8,550
1928	June 27,28, 1928	11.8	12,100	1953	Mar. 24, 1953	10.65	8,640
1929	May 16, 1929	10.3	6,340	1954	May 4, 1954	^c 8.85	3,880
1930	Jan. 15, 1930	11.5	10,800	1955	Mar. 24, 1955	9.76	5,720
1931	Feb. 19-22, 1931	8.7	2,400	1956	Feb. 19,20, 1956	^d 10.98	9,250
				1957	May 25, 1957	12.00	11,200
				1958	May 11, 1958	10.60	8,590
1937	Jan. 24, 1937	13.2	13,200				
1938	Feb. 24, 1938	11.9	10,100				
1939	Feb. 7, 1939	10.9	7,320				
1940	Apr. 21, 1940	9.95	5,380				

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

777. Bayou DeView at Morton, Ark.--Cont.

Peak stages and discharges

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
				1949	Mar. 30, 1949	^a 16.8	4,430
				1950	Jan. 17, 1950	17.16	5,300
1939	Feb. 10, 1939	16.8	4,150	1951	Jan. 17, 1951	^a 17.18	3,010
1940	Apr. 21, 1940	16.0	2,870	1952	Jan. 13, 1952	17.53	4,100
				1953	May 20, 1953	17.68	3,940
1941	Dec. 29, 1941	^a 15.5	2,040	1954	Jan. 21, 1954	^a 17.33	2,700
1942	Apr. 14, 1942	16.2	3,480	1955	Mar. 28, 1955	17.49	2,820
1943	Mar. 20-22, 1943	16.0	2,790				
1944	Apr. 13, 1944	16.7	3,710	1956	Feb. 25, 1956	17.92	6,340
1945	June 21, 22, 1945	16.6	3,800	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 W½ 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. Flood flows regulated to some extent since June 1943. See "Remarks" for White River at Newport, Ark. Only annual peaks are shown.

Peak stages and discharges

year	Date	Gage height (feet)	Discharge (cfs)	Water 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	—	1925	Mar. 3-5, 1925	22.5	—
1900	Mar. 16, 1900	25.45	—	1926	Oct. 28, 1925	28.35	—
1901	Mar. 26, 1901	26.75	—	1927	Apr. 23, 1927	43.3	395,000
1902	Dec. 30, 1902	28.3	—	1928	June 30, 1928	^a 34.9	230,000
1903	Mar. 20, 1903	32.63	—	1929	May 24, 25, 1929	^b 31.3	156,000
1904	Apr. 8, 1904	29.6	—	1930	Jan. 23, 24, 1930	30.98	135,000
1905	June 3, 1905	29.9	—	1931	Feb. 26, 1931	26.95	56,900
1906	Apr. 6, 1906	33.1	—	1932	Jan. 30-Feb. 1, 1932	^b 30.38	105,000
1907	May 18, 1907	34.2	—	1933	May 27, 28, 1933	^b 30.97	124,000
1908	May 25, 1908	30.7	—	1934	Apr. 5, 1934	^b 29.78	106,000
1909	Mar. 21, 22, 1909	28.9	—	1935	Mar. 25, 26, 1935	33.7	179,000
1910	Oct. 18, 1910	25.77	—				

778. White River at Clarendon, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Dec. 18, 1935	23.0	34,200	1946	June 4-6, 1946	31.40	132,000
1937	Jan. 27, 1937	^b 35.75	215,000	1947	Dec. 24, 25, 1946	28.6	89,200
1938	Feb. 28, 1938	^a 35.05	203,000	1948	Mar. 10, 1948	^a 28.55	75,400
1939	Apr. 28, 29, 1939	^b 30.75	119,000	1949	Feb. 4, 5, 1949	^b 35.32	211,000
1940	Apr. 28-30, 1940	27.75	67,800	1950	Jan. 21, 1950	^b 33.55	157,000
1941	May 3, 4, 1941	^b 26.10	50,400	1951	Mar. 4-6, 1951	^b 29.95	104,000
1942	Apr. 22, 1942	^b 29.28	94,200	1952	Jan. 15, 1952	^b 28.85	83,500
1943	May 27-29, 1943	^b 33.25	147,000	1953	Mar. 28, 1953	29.31	92,100
1944	May 9-10, 1944	^b 27.80	69,800	1954	May 11, 1954	26.07	54,700
1945	Apr. 23, 1945	^a 39.10	299,000	1955	Apr. 2, 1955	27.0	62,200
				1956	Feb. 26, 1956	29.05	80,700
				1957	May 6, 7, 1957	31.20	120,000
				1958	May 16, 1958	30.50	115,400

a Occurred on following day.

b Occurred on different date than peak discharge.

Note: Calendar year basis prior to 1925; water year thereafter.

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 benchmark).

Stage-discharge relation. --Defined by current-meter measurements below 3,000 cfs and extended above by 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	1945	Jan. 1, 1945	14.22	3,310
1937	Jan. 24, 1937	16.9	6,580		Feb. 23, 1945	12.41	1,650
1938	Jan. 25, 1938	14.74	3,860		Mar. 3, 1945	12.94	2,000
	Feb. 21, 1938	14.10	3,200		Mar. 27, 1945	11.18	1,030
	Apr. 11, 1938	10.78	1,030		Apr. 4, 1945	13.87	2,980
1939	Feb. 4, 1939	14.95	4,210		May 19, 1945	11.36	1,110
	Apr. 21, 1939	12.35	1,460		June 20, 1945	12.24	1,530
1940	Feb. 22, 1940	10.71	850	1946	Oct. 3, 1945	13.36	2,390
1941	Apr. 25, 26, 1941	9.44	592		Nov. 12, 1945	14.01	3,090
1942	Apr. 13, 1942	13.28	2,340		Jan. 9, 1946	14.66	3,860
	Apr. 29, 1942	11.73	1,180		Feb. 12, 1946	12.59	1,790
1943	Jan. 1, 1943	11.71	1,180		Mar. 30, 1946	13.34	2,390
	Mar. 16, 1943	12.94	1,930		May 5, 1946	11.44	1,140
1944	Mar. 31, 1944	12.63	1,740		May 26, 1946	14.01	3,090
	Apr. 13, 1944	12.02	1,410	1947	Jan. 21, 22, 1947	10.97	960
	May 7, 1944	11.11	995	1948	Nov. 16, 1947	11.42	1,110
					Jan. 4, 1948	10.90	925
					Feb. 14, 1948	14.83	3,970
					Mar. 3, 1948	13.85	2,870
					Mar. 25, 1948	13.90	2,980
					Apr. 16, 1948	11.69	1,260
					June 20, 1948	12.68	1,860

WHITE RIVER BASIN

780. Lagrue Bayou near Stuttgart, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Nov. 25, 1948	11.20	1,030	1951	Jan. 15, 1951	14.36	3,530
	Jan. 8, 1949	12.23	1,560		Feb. 10, 1951	11.69	1,260
	Jan. 28, 29, 1949	14.45	3,530		Feb. 23, 1951	11.08	1,020
	Mar. 12, 1949	11.42	1,240	1952	Dec. 14, 1951	12.10	1,410
	Mar. 29, 1949	12.86	2,120		Feb. 24, 1952	11.75	1,240
1950	Oct. 8, 1949	12.52	1,410		Mar. 14, 1952	11.12	1,000
	Oct. 27, 1949	11.08	1,020	1953	Feb. 4, 1953	11.88	1,360
	Dec. 19, 1949	12.25	1,530		Feb. 14, 1953	12.35	1,620
	Jan. 6, 1950	12.91	2,000		Mar. 24, 1953	12.24	1,560
	Jan. 14, 1950	14.00	3,090		Apr. 9, 1953	10.88	925
	Feb. 4, 1950	13.53	2,540		May 17, 1953	14.17	3,310
	Feb. 16, 1950	13.03	2,080	1954	Jan. 17, 1954	12.33	1,620
	Mar. 15, 1950	12.32	1,590		Jan. 27, 1954	12.11	1,470
	Mar. 31, 1950	11.32	1,090		Feb. 22, 1954	12.31	1,590
	May 10, 1950	13.64	2,650				
	Aug. 28, 1950	12.66	1,860				

ARKANSAS RIVER BASIN

1890. Elk River near Tiff City, Mo.

Location.--Lat 36°38', long 94°35', in NE¼ 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, 2-3/4 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	1945 Cont.	Mar. 19, 1945	16.16	21,700
1941	Apr. 16, 1941	21.46	48,000		Mar. 25, 1945	13.46	14,700
	Apr. 19, 1941	28.4	137,000		Apr. 15, 1945	23.5	63,200
1942	Oct. 5, 1941	11.60	9,480		May 10, 1945	12.46	12,200
	Oct. 31, 1941	19.69	36,400		May 17, 1945	15.83	20,500
	Apr. 9, 1942	12.66	11,700		May 27, 1945	11.20	10,400
1943	June 18, 1945	12.84	13,300		June 18, 1945	10.61	9,320
	Oct. 31, 1942	16.70	23,000	1946	Sept. 25, 1945	12.84	13,300
	Nov. 6, 1942	12.99	12,400		Feb. 14, 1946	13.79	15,200
	Dec. 28, 1942	14.35	15,600	1947	May 25, 1946	11.22	10,400
	Apr. 12, 1943	12.26	11,000		Dec. 10, 1946	15.94	20,800
	May 10, 1943	23.55	62,400		Apr. 11, 1947	14.29	16,500
1944	May 18, 1943	23.60	62,900	1948	Apr. 25, 1947	16.10	21,400
	Apr. 11, 1944	15.36	18,500		Aug. 15, 1948	10.50	8,410
1945	June 21, 1944	14.46	16,600	1949	May 20, 1949	11.29	9,860
	Feb. 22, 1945	14.90	18,000				
	Mar. 3, 1945	17.54	26,200				
	Mar. 7, 1945	13.57	14,900				

1890. Elk River near Tiff City, Mo.--Cont.

Peak stages and discharges

Water year	Date		Gage height (feet)	Discharge (cfs)	Water year	Date		Gage height (feet)	Discharge (cfs)
1950	Jan.	14, 1950	15.13	18,500	1956	May	15, 1956	23.14	49,900
	May	11, 1950	21.72	45,900					
	July	20, 1950	17.52	24,000	1957	Apr.	4, 1957	18.37	23,900
	Aug.	6, 1950	19.60	33,000		May	19, 1957	12.13	10,900
	Aug.	27, 1950	11.83	10,500		May	21, 1957	24.72	70,800
				May		25, 1947	21.12	38,000	
1951	Feb.	19, 1951	17.00	22,000	June	3, 1957	12.85	12,200	
1952	Aug.	22, 1952	11.85	10,300	June	10, 1957	12.51	11,600	
					June	13, 1957	11.66	10,200	
1953	Mar.	15, 1953	10.06	7,270	1958	Mar.	24, 1958	12.75	12,200
1954	May	3, 1954	11.06	9,030		May	3, 1958	13.53	13,500
						May	9, 1958	11.20	9,340
1955	Feb.	20, 1955	14.69	16,100		July	12, 1958	11.40	9,680
	Mar.	21, 1955	11.47	9,750	July	26, 1958	18.53	26,000	

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 3½ 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.

Peak stages and discharges

Water year	Date		Gage height (feet)	Discharge (cfs)	Water year	Date		Gage height (feet)	Discharge (cfs)
1950	May	10, 1950	^a 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

a From floodmarks.

ARKANSAS RIVER BASIN

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 benchmark).

Stage-discharge relation. --Defined by current-meter measurements to 77,000 cfs and extended above on basis of slope-area measurement at 150,000 cfs.

Bankfull stage. --11 ft.

Remarks. --Peak stage data for 1916, 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	^a 26	^b 112,000	1947	Nov. 8, 1946	12.23	12,200
1927	Apr. 1927	22.3	^c 60,000		Nov. 11, 1946	12.03	11,600
1935	—	^a 15	^c 18,500		Dec. 11, 1946	13.95	18,000
1936	Dec. 7, 1935	—	9,000		Dec. 13, 1946	14.36	19,800
1937	Jan. 10, 1937	11.98	9,580		Apr. 12, 1947	10.97	9,160
	Jan. 16, 1937	13.65	14,500		May 17, 1947	12.87	14,700
	Apr. 22, 1937	11.42	7,960		June 3, 1947	11.49	10,500
	Sept. 11, 1937	11.49	8,220	1948	Mar. 3, 1948	10.45	7,770
1938	Feb. 18, 1938	19.67	39,400		Aug. 10, 1948	10.24	7,300
	Mar. 29, 1938	13.19	12,600		Aug. 13, 1948	14.16	19,100
	May 24, 1938	13.14	12,300		Aug. 15, 1948	19.21	41,400
1939	Feb. 21, 1939	10.8	6,400	1949	Jan. 26, 1949	10.66	8,500
1940	Apr. 12, 1940	10.39	5,600		Jan. 29, 1949	10.58	8,250
1941	Jan. 2, 1941	15.22	20,500		Feb. 16, 1949	13.29	16,000
	Apr. 16, 1941	13.10	13,300		Mar. 28, 1949	10.44	8,010
	Apr. 20, 1941	19.56	41,400		May 20, 1949	13.36	16,700
1942	Oct. 17, 1941	12.57	11,200	1950	Jan. 5, 1950	10.80	9,240
	Nov. 1, 1941	17.71	30,000		Jan. 15, 1950	12.70	14,800
	Apr. 10, 1942	11.83	9,200		Feb. 14, 1950	11.46	11,200
	Apr. 26, 1942	12.13	10,000		May 10, 1950	27.94	150,000
	Apr. 29, 1942	15.41	20,600		July 24, 1950	10.1	7,980
1943	Oct. 31, 1942	16.66	25,800		Aug. 7, 1950	9.87	7,500
	Nov. 6, 1942	13.60	14,200	1951	Feb. 21, 1951	18.22	38,000
	Nov. 9, 1942	13.64	14,200		Mar. 12, 1951	10.37	8,470
	Dec. 28, 1942	17.33	29,400	1952	Mar. 12, 1952	10.10	7,740
	May 11, 1943	25.37	93,200		Apr. 13, 1952	10.24	7,980
	May 21, 1943	14.53	18,400	1953	Mar. 15, 1953	10.58	8,470
1944	Mar. 17, 1944	12.72	12,400		Mar. 19, 1953	10.83	8,470
	Mar. 21, 1944	15.82	23,200		May 14, 1953	11.21	10,100
	Apr. 12, 1944	11.06	8,300	1954	May 3, 1954	13.13	16,000
	May 3, 1944	10.86	7,820	1955	Feb. 21, 1955	13.02	13,000
1945	Feb. 22, 1945	14.85	19,800		Mar. 22, 1955	13.55	14,800
	Feb. 27, 1945	13.26	14,200	1956	May 16, 1956	11.40	8,350
	Mar. 4, 1945	15.14	20,800	1957	Apr. 4, 1957	21.60	55,400
	Mar. 7, 1945	12.54	12,100		Apr. 24, 1957	10.92	8,140
	Mar. 16, 1945	11.38	9,290		May 19, 1957	16.16	23,800
	Mar. 20, 1945	21.12	51,000		May 24, 1957	17.48	31,500
	Mar. 25, 1945	11.38	9,040		May 26, 1957	18.17	35,100
	Mar. 31, 1945	11.12	8,540		June 3, 1957	13.10	13,500
	Apr. 15, 1945	23.60	68,800		June 11, 1957	12.34	11,400
	May 17, 1945	12.44	12,700	1958	Mar. 25, 1958	11.59	8,180
	June 12, 1945	12.88	14,600		May 4, 1958	12.20	9,440
1946	Feb. 15, 1946	12.81	14,000		July 13, 1958	16.89	25,800
	May 26, 1946	15.99	25,800				

a From floodmark.

b Approximate, annual peak only.

c Annual peak only.

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, 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	^a 23.8	—	1953	Mar. 18, 1953	10.82	6,660
					May 12, 1953	12.03	9,240
1948	Aug. 14, 1948	^a 19.8	^b 34,400	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	37,600
	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
1952	Apr. 13, 1952	10.76	6,480		June 9, 1957	15.5	18,000
	May 23, 1952	11.03	6,840	1958	July 13, 1958	14.75	15,700

a From floodmarks.

b 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 N., 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 contribute 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 peaks are shown prior to 1948.

ARKANSAS RIVER BASIN

2465. Arkansas River near Sallisaw, Okla.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	^a 34.5	—	1951	Feb. 21, 1951	19.50	146,000
1940	Sept. 6, 1940	20.0	—		May 22, 1951	21.30	180,000
1941	Apr. 21, 1941	29.05	—		June 12, 1951	18.96	124,000
1942	Nov. 2, 1941	34.70	—		July 6, 1951	25.63	253,000
1943	May 11, 1943	37.90	—		July 19, 1951	25.84	245,000
1944	May 3, 1944	24.33	—		Sept. 17, 1951	18.73	118,000
1945	Apr. 16, 1945	35.96	—	1952	Mar. 13, 1952	17.03	104,000
1946	Oct. 2, 1945	27.37	—		Apr. 23, 1952	18.82	129,000
1947	Dec. 12, 1946	23.80	—	1953	Apr. 25, 1953	17.26	112,000
1948	June 25, 1948	29.70	361,000	1954	May 3, 1954	23.70	202,000
	July 20, 1948	20.72	144,000	1955	May 22, 1955	17.30	108,000
	Aug. 16, 1948	20.26	138,000		May 30, 1955	17.46	102,000
1949	Jan. 28, 1949	17.65	132,000	1956	Oct. 7, 1955	19.70	139,000
	Feb. 16, 1949	21.86	199,000	1957	Apr. 4, 1957	19.85	134,000
	May 2, 1949	18.83	139,000		Apr. 27, 1957	23.98	191,000
	May 21, 1949	28.18	363,000		May 3, 1957	22.08	146,000
	June 12, 1949	21.77	160,000		May 15, 1957	18.57	110,000
1950	May 12, 1950	31.04	442,000		May 20, 1957	29.75	334,000
	July 23, 1950	24.40	212,000		May 23, 1957	31.15	367,000
	Aug. 3, 1950	23.75	203,000		May 27, 1957	34.80	544,000
	Sept. 17, 1950	22.00	176,000		June 3, 1957	28.83	300,000
					June 16, 1957	28.04	264,000
				1958	Mar. 27, 1958	18.40	130,000
					June 26, 1958	20.28	161,000
					July 9, 1958	16.76	106,000
					July 14, 1958	20.00	156,000

a From floodmark.

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 of June 1935 was reported by local residents as greatest known.

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

ARKANSAS RIVER BASIN

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2470. Poteau River at Cauthron, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 1935	^a 27.4	—	1949	Jan. 24, 1949	23.34	31,000
1938	Feb. 19, 1939	15.1	5,640		Feb. 14, 1949	17.68	8,520
	Feb. 25, 1939	17.0	7,460		Mar. 26, 1949	14.20	5,120
	Mar. 5, 1939	14.6	5,240		May 1, 1949	16.29	6,840
	Apr. 6, 1939	17.8	8,470	1950	Jan. 4, 1950	17.08	7,710
	Apr. 16, 1939	22.5	24,400		Jan. 13, 1950	19.81	13,200
1940	Apr. 29, 1940	10.71	2,810		Feb. 1, 1950	17.92	8,840
					Feb. 12, 1950	22.78	27,800
1941	Dec. 16, 1940	10.57	2,760		Apr. 4, 1950	11.85	3,580
					May 8, 1950	18.28	9,500
1942	Oct. 4, 1941	17.34	7,820		May 12, 1950	14.98	5,690
	Oct. 31, 1941	18.87	10,500		July 23, 1950	14.55	5,400
	Apr. 8, 1942	16.70	7,130		Aug. 2, 1950	15.60	6,180
	May 20, 1942	14.54	5,160		Sept. 16, 1950	14.42	5,260
				1951	Feb. 15, 1951	15.08	5,770
1943	May 11, 1943	21.74	19,000		Feb. 20, 1951	14.59	5,400
	May 20, 1943	19.43	11,800	1952	Nov. 1, 1951	15.13	5,770
1944	Feb. 17, 1944	15.23	5,720		Jan. 2, 1952	16.16	6,740
	Feb. 28, 1944	17.09	7,580		Mar. 10, 1952	15.88	6,450
	Mar. 16, 1944	14.33	5,010		Apr. 12, 1952	18.86	10,700
	May 2, 1944	16.96	7,460		Apr. 22, 1952	18.69	10,900
1945	Feb. 21, 1945	21.03	16,600	1953	Nov. 25, 1952	20.44	15,600
	Feb. 27, 1945	19.07	10,800		Mar. 18, 1953	20.28	15,200
	Mar. 3, 1945	16.14	6,640		Apr. 24, 1953	17.23	7,830
	Mar. 6, 1945	14.13	5,050		Apr. 29, 1953	18.90	10,700
	Mar. 12, 1945	17.34	7,950		May 13, 1953	20.46	16,000
	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
1947	Nov. 26, 1946	15.58	6,180		Apr. 27, 1957	18.15	9,320
	Dec. 10, 1946	21.18	17,400		May 23, 1957	18.73	10,300
1948	Dec. 7, 1947	14.90	5,610		June 5, 1957	16.20	6,740
	Jan. 1, 1948	21.08	17,000		Aug. 12, 1957	18.38	9,320
	Feb. 26, 1948	14.52	5,330	1958	Nov. 18, 1957	18.63	10,100
	Mar. 2, 1948	14.44	5,260		Mar. 7, 1958	15.85	6,820
					May 2, 1958	18.91	11,200

a Annual peak only.

ARKANSAS RIVER BASIN

2485. Poteau River near Wister, Okla.

Location. --Lat 34°56'15", long 94°42'50", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 5 N., R. 25 E., on left bank of outflow channel 700 ft downstream from Wister Dam, 2 $\frac{1}{4}$ 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 from and at datum 13.11 ft lower than present gage; recording thereafter. Jan. 1, 1939, to Sept. 30, 1947, and Oct. 1, 1947, to June 28, 1953, at site 1.6 and 1.1 miles, respectively, downstream from and at datum 12.41 ft lower than present gage. Datum of present gage is 445.43 ft above mean sea level, datum of 1929.

Bankfull stage. --18 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	^a 43.0	—	1946	Jan. 6, 1946	19.91	7,440
1939	Feb. 21, 1939	22.88	10,200		Jan. 10, 1946	27.51	14,800
	Feb. 26, 1939	25.37	13,000		Feb. 14, 1946	30.00	18,400
	Apr. 7, 1939	25.90	13,700		Apr. 25, 1946	27.15	14,400
	Apr. 17, 1939	37.1	77,800		May 1, 1946	19.08	6,880
1940					May 4, 1946	23.31	10,200
	Apr. 12, 1940	19.70	7,670		May 18, 1946	21.78	8,880
					May 26, 1946	30.20	18,800
					June 1, 1946	32.24	26,800
1941	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	Feb. 29, 1944	28.75	17,000		Mar. 2, 1948	26.03	12,200
	Mar. 20, 1944	25.20	12,400		May 12, 1948	25.12	11,300
	May 3, 1944	31.06	22,100	1949	Jan. 27, 1949	29.89	14,600
	June 14, 1944	20.94	8,840		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	9,720
	Feb. 28, 1945	32.66	30,100		May 5, 1953	22.89	9,220
	Mar. 14, 1945	22.67	10,100	1954	May 13, 1954	8.73	6,740
	Mar. 20, 1945	33.08	32,900		Apr. 7, 1955	8.43	6,360
	Mar. 25, 1945	20.18	8,360	1956	Feb. 23, 1956	8.10	6,060
	Mar. 31, 1945	34.23	41,900		May 27, 1957	14.41	11,300
	Apr. 13, 1945	21.10	8,980	1958	May 23, 1958	8.76	7,140
	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 of 1943.

ARKANSAS RIVER BASIN

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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 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 Engineers benchmark).

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	1942	Oct. 6, 1941	22.31	7,750
1926	September 1926	32.5	40,000		Nov. 3, 1941	27.77	11,800
1927	Apr. 15, 1927	34.0	51,000		Feb. 1, 1942	20.16	6,700
1929	May 20, 1929	29.0	21,000		Apr. 10, 1942	29.63	22,700
1930	May 12, 1930	31.8	37,000		Apr. 27, 1942	28.56	18,500
1932	Feb. 18, 1932	31.0	32,000	1943	Dec. 29, 1942	29.03	20,900
1935	June 18, 1935	39.0	^a 100,000		May 11, 1943	37.00	58,100
1938	Nov. 12, 1937	24.0	8,370		May 16, 1943	23.22	7,420
	Dec. 19, 1937	25.0	9,370		May 22, 1943	26.76	11,500
	Jan. 25, 1938	31.8	37,000	1944	Feb. 19, 1944	24.29	8,140
	Feb. 19, 1938	36.3	73,000		Mar. 1, 1944	28.27	15,400
	May 30, 1938	28.0	16,500		Mar. 21, 1944	26.68	10,900
	Apr. 1, 1938	24.1	8,460		May 4, 1944	29.51	20,300
	Apr. 9, 1938	24.8	9,160		June 14, 1944	23.86	7,900
	Apr. 17, 1938	24.2	8,560	1945	Feb. 19, 1945	22.51	7,150
1939	Feb. 21, 1939	24.70	9,060		Feb. 22, 1945	32.89	39,200
	Feb. 27, 1939	26.80	12,400		Mar. 1, 1945	31.02	27,300
	Apr. 8, 1939	26.69	12,100		Mar. 14, 1945	25.13	9,500
	Apr. 17, 1939	36.20	68,200		Mar. 20, 1945	31.55	30,700
1940	Apr. 12, 1940	22.40	7,540		Mar. 25, 1945	23.95	9,000
1941	Jan. 3, 1941	24.87	9,260		Mar. 31, 1945	32.38	35,800
	Feb. 4, 1941	19.91	6,550		Apr. 14, 1945	23.67	7,780
	Feb. 21, 1941	23.28	8,250		May 16, 1945	36.42	66,300
	Apr. 19, 1941	24.75	9,160		June 12, 1945	35.10	55,900
					June 19, 1945	25.89	9,680
					Sept. 30, 1945	27.84	13,800

a Approximate, from curve extension.

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., Indiana 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 contribute 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 Railway 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 of June 1833 was highest known prior to 1943 flood.

Remarks. --Gage heights furnished by U. S. Weather Bureau. Crest stages affected by storage reservoirs and power development since 1940. 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)
1833	June 1833	38.0	—	1916	Jan. 30, 1916	32.7	—
1879	May 4, 1879	10.8	—	1917	June 10, 1917	15.0	—
1880	Apr. 5, 1880	12.9	—	1918	May 12, 1918	18.00	—
1881	May 25, 1881	15.8	—	1919	Nov. 10, 1918	20.7	—
1882	Feb. 23, 1882	21.8	—	1920	Mar. 28, 1920	22.9	—
1883	June 11, 1883	22.8	—	1921	Mar. 25, 1921	22.8	—
1884	Feb. 14, 1884	27.9	—	1922	Apr. 12, 1922	27.8	—
1885	Apr. 26, 1885	27.9	—	1923	June 15, 1923	29.4	—
1886	Aug. 9, 1886	13.7	—	1924	May 2, 1924	23.0	—
1887	June 18, 1887	9.3	—	1925	Apr. 30, 1925	15.8	—
1888	May 21, 1888	17.8	—	1926	Sept. 8, 1926	19.7	—
1889	Mar. 26, 1889	20.0	—	1927	Apr. 16, 1927	36.7	—
1890	Mar. 12, 1890	21.0	—	1928	June 24, 1928	24.8	—
	Apr. 28, 1890	21.0	—	1929	May 16, 1929	29.7	—
1891	June 8, 1891	20.4	—	1930	May 13, 1930	21.5	—
1892	May 19, 1892	30.95	—	1931	Feb. 10, 1931	14.2	—
1893	May 1, 1893	26.8	—	1932	Jan. 24, 1932	22.0	—
1894	Mar. 8-9, 1894	17.6	—	1933	May 17, 1933	27.7	—
1895	Aug. 1, 1895	19.6	—	1934	Apr. 8, 1934	18.1	—
1896	Dec. 26, 1895	27.6	—	1935	June 19, 1935	34.4	—
1897	Jan. 5, 1897	18.6	—	1936	Sept. 30, 1936	20.00	—
1898	May 7, 1898	35.4	—	1937	June 14, 1937	21.7	—
1899	May 9, 1899	26.4	—	1938	Feb. 19, 1938	33.2	—
1900	May 23, 1900	12.8	—	1939	May 16, 1939	16.6	—
1901	Apr. 19, 1901	14.7	—	1940	Sept. 6, 1940	19.1	—
1902	May 25, 1902	19.0	—	1941	Apr. 22, 1941	31.4	—
1903	May 26, 1903	25.1	—	1942	Nov. 1, 1941	37.3	—
1904	June 7, 1904	33.4	—	1943	May 12, 1943	41.7	—
1905	May 30, 1905	22.4	—	1944	May 4, 1944	26.7	—
1906	Aug. 10, 1906	20.2	—	1945	Apr. 16, 1945	38.4	—
1907	May 17-18, 1907	19.3	—	1946	Oct. 2, 1945	28.8	—
1908	May 27, 1908	32.7	—	1947	Dec. 13, 1946	26.6	—
1909	May 27, 1909	26.6	—	1948	June 26, 1948	29.7	—
1910	Nov. 19, 1909	12.4	—	1949	May 22, 1949	28.6	—
1911	Aug. 7, 1911	21.2	—	1950	May 13, 1950	31.0	—
1912	May 1, 1912	28.2	—	1951	July 19, 1951	25.9	—
1913	Mar. 28, 1913	16.0	—	1952	Apr. 24, 1952	19.2	—
1914	May 6, 1914	17.2	—	1953	Apr. 26, 1953	18.3	—
1915	May 30, 1915	29.2	—	1954	May 3, 1954	22.5	—
				1955	May 31, 1955	17.7	—
				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 5-3/4 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 above 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	^a 9,510	1956	Apr. 28,	1956	7.80	4,320
						May 15,	1956	6.60	2,790
1951	Feb.	18, 1951	6.65	2,850					
	July	2, 1951	8.80	5,890	1957	Apr.	3, 1957	13.50	20,500
						May 17,	1957	11.75	13,700
1952	Mar.	10, 1952	5.28	1,580		May 22,	1957	11.75	13,700
	Apr.	12, 1952	5.79	2,150		May 25,	1957	7.00	3,300
	May	23, 1952	6.01	2,250		June 9,	1957	6.30	2,440
						Aug. 13,	1957	8.70	5,840
1953	Mar.	14, 1953	8.03	4,640		Aug. 16,	1957	9.60	7,680
	May	17, 1953	6.45	2,520		Sept. 21,	1957	5.83	2,000
	May	12, 1953	6.20	2,250					
1954	May	2, 1954	5.56	1,670	1958	Nov.	7, 1957	6.09	2,230
						Nov. 18,	1957	6.44	2,610
1955	Oct.	11, 1954	6.78	2,930		Mar. 8,	1958	6.15	2,280
	Dec.	27, 1954	6.20	2,250		June 25,	1958	6.90	3,170
	Feb.	19, 1955	7.90	4,190		July 12,	1958	12.45	16,100
	Mar.	20, 1955	7.20	3,470		Aug. 2,	1958	6.30	2,200
	May	26, 1955	6.30	2,350					
	June 5,	1955	7.95	4,640					
	June 15,	1955	7.80	4,340					

^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., Indiana Meridian, on right bank 300 ft west of Arkansas-Oklahoma State line, 3.2 miles downstream from Webbers Creek, 6-3/4 miles northwest of Van Buren, and 7.9 miles upstream from mouth.

Drainage area. --427 sq mi.

Gage. --Nonrecording, September 1930 to June 1937, recording since October 1950. 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.

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2500. Lee Creek near Van Buren, Ark.--Cont.

Peak stages and discharges

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	^a 27.0	57,700	1957	Apr. 3, 1957	29.37	73,200
					May 17, 1957	17.98	21,700
1945	Apr. 15, 1945	^b 35.0	^b 112,000		May 23, 1957	25.16	48,500
					June 2, 1957	15.86	16,700
1950	May 10, 1950	^a 27.2	58,900		June 13, 1957	20.66	29,800
					Aug. 16, 1957	14.04	13,000
1951	Feb. 18, 1951	17.76	20,900	1958	May 9, 1958	14.34	14,800
	July 2, 1951	19.46	25,000		June 25, 1958	15.22	16,600
1952	Apr. 12, 1952	15.02	15,000		July 13, 1958	22.32	35,900

a From floodmarks.

b Approximate.

2505. Arkansas River at Van Buren, Ark.

Location. --Lat 35°25'42", long 94°21'37", in NW¼ sec. 36, T. 9 N., R. 32 W., near right bank on downstream side of bridge on U. S. Highway 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 contribute 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 are shown 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	—	1935	Nov. 24, 1934	18.60	111,000
1928	Oct. 5, 1927	25.2	243,000		Mar. 14, 1935	25.10	206,000
1929	May 16, 1929	29.0	315,000		Mar. 26, 1935	23.78	179,000
1930	May 10, 1930	22.6	164,000		May 6, 1935	22.41	165,000
1931	Dec. 6, 1930	15.5	82,500		May 22, 1935	25.48	215,000
1932	Jan. 24, 1932	22.15	184,000		June 9, 1935	^a 29.47	269,000
1933	May 17, 1933	27.88	278,000		June 19, 1935	^b 34.1	418,000
1934	Apr. 9, 1934	17.90	116,000	1936	Dec. 8, 1935	20.10	118,000
					Sept. 30, 1936	21.17	143,000
				1937	Oct. 10, 1936	20.10	126,000
					Jan. 17, 1937	21.9	154,000
					Feb. 2, 1937	21.1	143,000
					June 2, 1937	18.9	122,000
					June 14, 1937	21.9	148,000
					June 19, 1937	21.0	134,000

2505. Arkansas River at Van Buren, Ark.--Cont.

Peak stages and discharges

Water year	Date		Gage height (feet)	Discharge (cfs)	Water year	Date		Gage height (feet)	Discharge (cfs)
1938	Feb.	19, 1938	32.71	375,000	1947	Nov.	10, 1946	19.68	119,000
	Mar.	30, 1938	^a 25.40	195,000		Dec.	13, 1946	27.80	262,000
	May	25, 1938	25.12	200,000		Apr.	17, 1947	26.36	238,000
1939	May	16, 1939	16.68	77,400		Apr.	30, 1947	25.80	205,000
						May	18, 1947	26.72	224,000
						June	3, 1947	23.53	155,000
1940	Sept.	6, 1940	20.45	127,000	1948	June 25-26,	1948	^b 30.61	330,000
1941	Apr.	22, 1941	30.58	311,000		July	20, 1948	22.12	152,000
	June	13, 1941	27.52	244,000		Aug.	17, 1948	21.9	149,000
	Sept.	11, 1941	^a 19.64	115,000	1949	Jan. 27-28,	1949	^b 22.02	157,000
1942	Oct.	7, 1941	^a 25.93	209,000		Feb.	16, 1949	^b 24.90	205,000
	Oct.	18, 1941	^a 26.32	204,000		May	2, 1949	^b 21.40	152,000
	Oct.	28, 1941	26.56	203,000		May	22, 1949	^b 29.03	323,000
	Nov.	2, 1941	^a 35.70	485,000		June	15, 1949	23.04	173,000
	Apr.	12, 1942	27.78	268,000		1950	May	13, 1950	^b 30.90
	Apr.	30, 1942	31.00	328,000	July		24, 1950	25.30	226,000
	June	26, 1942	26.20	218,000	July		30, 1950	23.20	173,000
1943	Dec.	29, 1942	^a 23.30	188,000	Aug.		4, 1950	24.50	204,000
	May	12, 1943	^b 38.00	850,000	Sept.		17, 1950	22.80	185,000
	May	23, 1943	^b 36.80	752,000	1951	Feb.	21, 1951	21.19	164,000
	June	8, 1943	22.80	144,000		May	22, 1951	^a 22.08	164,000
1944	Mar.	21, 1944	22.50	152,000		June	13, 1951	20.72	138,000
	Apr.	13, 1944	24.63	182,000		June	28, 1951	20.98	140,000
	May	3, 1944	^a 26.84	238,000		July	6, 1951	26.76	250,000
	June	15, 1944	20.32	127,000		July	19, 1951	26.92	238,000
1945	Dec.	9, 1944	19.37	124,000		Sept.	17, 1951	19.56	117,000
	Feb.	24, 1945	19.28	111,000	1952	Apr.	24, 1952	20.70	145,000
	Mar.	4, 1945	^b 23.88	177,000		1953	Apr.	26, 1953	^b 19.28
	Mar.	21, 1945	^b 29.78	304,000	1954		May	3, 1954	23.84
	Apr.	2, 1945	23.70	156,000		1955	May	31, 1955	18.91
	Apr.	17, 1945	^c 38.10	650,000	1956		Oct.	7, 1955	19.63
	May	17, 1945	21.86	146,000		1957	Apr.	5, 1957	21.78
	June	11, 1945	^b 26.70	229,000	Apr.		28, 1957	25.32	197,000
	July	4, 1945	20.40	130,000	May		28, 1957	35.97	510,000
1946	Oct.	2, 1945	29.42	287,000	1958		Mar.	28, 1958	20.17
	Jan.	12, 1946	20.45	139,000		May	10, 1958	18.93	117,000
	Feb.	20, 1946	20.13	128,000		June	26, 1958	21.90	171,000
	May	24, 1946	21.63	148,000		July	15, 1958	22.20	160,000
	June	2, 1946	19.62	118,000					

^a Occurred on following day.

^b Occurred at different time than peak discharge.

^c Occurred on 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 gage 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 above 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.

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2510. Frog Bayou near Mountainburg, Ark.--Cont.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Jan. 14, 1937	26.6	2,400	1948	Aug. 14, 1948	26.69	2,550
1938	Feb. 15, 1938	27.90	5,600	1949	Jan. 24, 1949	28.21	6,500
	Feb. 18, 1938	28.20	6,500		Feb. 15, 1949	27.66	4,940
1939	Feb. 19, 1939	26.55	2,190	1950	Jan. 13, 1950	27.00	3,270
1940	Apr. 11, 1940	27.35	4,220		May 10, 1950	27.61	4,800
1941	Apr. 19, 1941	26.58	2,310	1951	Feb. 18, 1951	28.01	5,920
1942	Apr. 8, 1942	27.96	5,780		July 2, 1951	28.48	7,440
1943	Nov. 5, 1942	26.92	3,300	1952	Apr. 12, 1952	26.58	2,310
	Dec. 27, 1942	29.61	11,100	1953	Mar. 17, 1953	27.05	3,390
	May 10, 1943	29.84	12,000		Apr. 29, 1953	27.09	3,510
1944	Apr. 8, 1944	28.40	7,120		May 12, 1953	27.08	3,510
	June 14, 1944	27.06	3,390	1954	May 3, 1954	25.46	397
1945	Feb. 21, 1945	28.81	8,420	1955	Feb. 19, 1955	27.32	4,010
	Mar. 2, 1945	27.71	5,070		Mar. 20, 1955	26.91	3,030
	Mar. 19, 1945	28.43	7,120	1956	June 9, 10, 1956	25.16	92
	Mar. 30, 1945	27.92	5,630	1957	Apr. 3, 1957	27.83	5,630
	Apr. 15, 1945	31.06	17,300		May 13, 1957	26.85	3,030
	June 10, 1945	29.10	9,420		May 23, 1957	30.28	13,700
1946	Feb. 13, 1946	27.77	5,210	1958	Nov. 18, 1957		
	May 24, 1946	29.14	9,420		July 12, 1958	26.48	2,100
1947	Nov. 9, 1946	28.12	6,210				
	Dec. 10, 1946	27.41	4,270				
	June 21, 1947	27.58	4,800				

2515. Frog Bayou at Rudy, Ark.

Location.--Lat 35°31'25", long 94°16'30", in SW $\frac{1}{4}$ 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.

2515. Frog Bayou at Rudy, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Apr. 15, 1945	^a 18.5	^b 39,500	1955	Dec. 28, 1954	9.15	7,070
1950	May 10, 1950	11.40	^b 13,200		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 From floodmark.

b 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 from present gage; recording at present site thereafter. Both gages at datum 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 above on basis of velocity-area study.

Bankfull stage.--18 ft.

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

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	December 1927	^a 22.0	59,000	1945	May 16, 1945	10.37	12,100
1939	Apr. 17, 1939	11.2	12,600	Cont.	June 10, 1945	17.30	35,800
1940	Apr. 11, 1940	8.6	8,010	1946	Jan. 9, 1946	10.33	11,900
1941	Jan. 24, 1941	8.32	7,110		Feb. 6, 1946	10.56	12,600
1942	Oct. 31, 1941	10.79	12,200		Feb. 13, 1946	13.57	20,900
	Apr. 8, 1942	12.89	17,500		May 25, 1946	14.93	25,700
1943	Dec. 27, 1942	14.00	20,700	1947	Nov. 10, 1946	13.93	22,000
	May 10, 1943	18.23	40,100		Dec. 12, 1946	15.28	27,200
1944	Apr. 8, 1944	12.82	17,600		May 20, 1947	15.4	27,600
	June 14, 1944	11.83	15,000	1948	Jan. 1, 1948	12.04	16,100
1945	Feb. 21, 1945	17.17	35,400		Feb. 26, 1948	9.68	10,500
	Mar. 3, 1945	12.77	18,300	1949	Jan. 24, 1949	18.61	42,100
	Mar. 19, 1945	15.06	26,400		Feb. 14, 1949	15.98	30,100
	Mar. 30, 1945	14.17	23,100	1950	Jan. 4, 1950	13.90	22,000
	Apr. 2, 1945	10.52	12,300		Jan. 13, 1950	10.53	12,300
	Apr. 15, 1945	19.70	47,800		Feb. 12, 1950	13.44	20,300
					May 11, 1950	12.74	18,000

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2520. Mulberry River near Mulberry, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Feb. 15, 1951	10.95	13,500	1955	Feb. 20, 1955	12.14	15,600
	Feb. 18, 1951	14.55	24,500		Mar. 21, 1955	13.28	19,000
1952	Nov. 25, 1951	11.10	13,800	1956	May 15, 1956	11.68	15,300
	Mar. 11, 1952	11.57	14,500				
	Apr. 12, 1952	11.63	15,000	1957	Apr. 3, 1957	15.70	28,800
	May 23, 1952	10.93	13,300		Apr. 26, 1957	10.81	13,100
1953	Mar. 14, 1953	10.52	12,300		May 13, 1957	13.54	21,600
	Mar. 18, 1953	15.17	26,800		June 13, 1957	9.55	10,700
	Apr. 29, 1953	11.07	13,800	1958	Mar. 8, 1958	9.54	10,100
	May 12, 1953	13.92	22,000		May 9, 1958	9.88	11,000
1954	Apr. 16, 1954	8.33	7,320				

a Annual peak only, from floodmark.

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 contribute 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.

Annual peak stages and discharges

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	23.2	—
1929	May 17, 1929	24.9	—	1945	Apr. 19, 1945	35.9	—
1930	May 11, 1930	21.0	—				
1931	Feb. 10, 1931	12.0	—	1946	Oct. 3, 1945	25.8	—
1932	Nov. 26, 1931	14.8	—	1947	Dec. 13, 1946	23.3	—
1933	May 18, 1933	23.7	—	1948	June 27, 1948	25.2	—
1934	Apr. 9, 1934	13.2	—	1949	May 22, 1949	24.9	—
1935	June 21, 1935	31.1	—	1950	May 13, 1950	27.5	—
1936	June 10, 1936	12.2	—				
1937	Jan. 17, 1937	17.0	—	1951	July 7, 1951	22.8	—
1938	Feb. 20, 1938	28.9	—	1952	Apr. 24, 1952	15.9	—
1939	May 16, 1939	12.0	—	1953	Mar. 27, 1953	15.1	—
1940	Sept. 7, 1940	14.3	—	1954	May 4, 1954	19.2	—
				1955	May 25, 1955	13.7	—
1941	Apr. 22, 1941	26.0	—				
1942	Nov. 4, 1941	33.0	—	1956	Oct. 8, 1955	14.9	—
				1957	May 28, 1957	34.4	—
				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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	December 1927	^a 14.7	14,500	1955	Feb. 19, 1955	8.91	5,550
1949	Jan. 24, 1949	^a 14.5	14,000		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 peaks only, from floodmarks, from information by Corps of Engineers.

2570. Piney Creek near Dover, Ark.

Location. --Lat 35°33'00", long 93°09'25", in NE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 6, T. 10 N., R. 20 W., on left bank 7 $\frac{1}{4}$ 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 above by logarithmic plotting.

Remarks. --Base for partial-duration series, 7,000 cfs.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Jan. 24, 1949	^a 25.6	^b 80,000	1955	Feb. 20, 1955	15.62	23,200
1951	Feb. 20, 1951	14.95	17,600		Mar. 20, 1955	17.06	28,900
1952	Nov. 23, 1951	12.64	14,000		Apr. 21, 1955	11.37	11,000
	Mar. 10, 1952	12.78	14,500	1956	Feb. 1, 1956	12.44	13,400
	Apr. 12, 1952	13.34	15,800		Feb. 17, 1956	11.28	10,700
	May 23, 1952	11.95	12,400		May 15, 1956	10.68	9,380
1953	Nov. 25, 1952	12.46	13,700	1957	Apr. 3, 1957	20.37	44,000
	Mar. 14, 1953	13.34	15,800		Apr. 27, 1957	11.02	10,100
	Mar. 17, 1953	17.04	28,500		Apr. 30, 1957	10.18	8,280
	Apr. 24, 1953	11.56	11,400		May 13, 1957	11.85	12,000
	Apr. 29, 1953	11.18	10,500		May 23, 1957	10.45	8,830
	May 12, 1953	13.08	15,300		June 10, 1957	9.70	7,320
1954	Jan. 20, 1954	11.15	10,500		June 13, 1957	13.60	16,600
	Apr. 16, 1954	10.98	10,000	1958	Mar. 8, 1958	10.65	9,160
	May 2, 1954	16.03	24,700		Mar. 13, 1958	9.62	7,140
					May 3, 1958	9.58	7,140
					May 9, 1958	10.30	8,520
					Aug. 1, 1958	12.80	14,500

a Annual peak only, from floodmark.

b Approximate.

ARKANSAS RIVER BASIN

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 above by logarithmic plotting.

Bankfull stage. --16 ft.

Remarks. --Base for partial-duration series, 7,000 cfs.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 10, 1943	^a 24.6	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, from floodmarks.

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 contribute 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.

ARKANSAS RIVER BASIN

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2580. Arkansas River at Dardanelle, Ark.--Cont.

Annual 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	—	1923	June 17, 1923	26.5	—
1888	May 22, 1888	16.1	—	1924	Dec. 16, 1923	22.0	—
1889	Mar. 26, 1889	19.0	—	1925	May 1, 1925	13.0	—
1890	Apr. 27, 1890	20.00	—	1926	Oct. 17, 1925	12.1	—
1891	Apr. 22, 1891	18.0	—	1927	Apr. 19, 1927	33.0	—
1892	May 18, 1892	27.5	—	1928	Dec. 14, 1927	24.5	—
1893	May 2, 1893	24.0	—	1929	May 18, 1929	27.6	—
1894	Mar. 21, 1894	17.5	—	1930	May 11, 1930	24.3	—
1895	Aug. 2, 1895	17.5	—	1931	Feb. 10, 1931	14.2	—
1896	Dec. 26, 1895	23.5	—	1932	Jan. 25, 1932	20.2	—
1897	Mar. 20, 1897	17.4	—	1933	May 18, 1933	25.1	—
1898	May 10, 1898	28.9	—	1934	Apr. 8, 1934	15.5	—
1899	May 10, 1899	23.1	—	1935	June 21, 1935	29.5	—
1900	July 7, 1900	11.3	—	1936	Dec. 8, 1935	18.5	—
1901	Apr. 19, 1901	15.5	—	1937	Jan. 18, 1937	19.4	—
1902	June 2, 1902	17.3	—	1938	Feb. 19-20, 1938	29.55	396,000
1903	May 31, 1903	22.8	—		Apr. 1, 1938	22.8	201,000
1904	June 9, 1904	28.0	—		May 26, 1938	22.8	205,000
1905	May 30-31, 1905	21.2	—		June 14, 1938	20.2	157,000
1906	May 4, 1906	19.0	—	1939	Apr. 17, 1939	19.00	142,000
1907	May 11, 1907	18.8	—	1940	Sept. 7, 1940	^a 16.65	103,000
1908	May 29, 1908	27.2	—	1941	Apr. 23, 1941	27.16	295,000
1909	Dec. 2, 1908	24.9	—		June 14, 1941	23.94	233,000
1910	Jan. 20, May 17, 1910	12.0	—	1942	Oct. 9, 1941	^a 22.70	203,000
1911	Aug. 9, 1911	18.4	—		Oct. 19, 1941	^a 23.30	213,000
1912	May 3, 1912	24.3	—		Nov. 5, 1941	^b 31.92	433,000
1913	Mar. 29, 1913	14.4	—		Apr. 13, 1942	25.06	246,000
1914	Dec. 7, 1913	—	—		May 1, 1942	^b 28.65	316,000
	May 7, 1914	16.2	—		June 27, 1942	^b 23.55	200,000
1915	May 30, 1915	26.9	—	1943	Dec. 28, 1942	^b 21.24	182,000
1916	Jan. 31, 1916	29.8	—		May 13-14, 1943	33.30	683,000
1917	June 11, 1917	14.4	—		May 25, 1943	33.60	682,000
1918	May 13, 1918	20.3	—		June 9, 1943	22.06	147,000
1919	Nov. 11-12, 1918	17.9	—	1944	Mar. 21, 1944	21.88	164,000
1920	Mar. 29, 1920	20.9	—		Apr. 14, 1944	23.37	191,000
1921	Mar. 26, 1921	20.6	—		May 4, 1944	26.29	245,000
1922	Apr. 13, 1922	25.2	—		June 15-16, 1944	19.60	132,000
				1945	Feb. 22, 1945	21.10	170,000
					Feb. 27, 1945	21.24	172,000
					Mar. 5, 1945	23.18	201,000
					Mar. 21, 1945	28.45	307,000
					Mar. 31, 1945	27.09	265,000
					Apr. 19, 1945	33.15	579,000
					June 11, 1945	29.46	335,000
				1946	Oct. 4, 1945	27.63	285,000
					Jan. 9, 1946	19.71	148,000
					Feb. 21, 1946	18.53	132,000
					May 25, 1946	21.64	175,000

ARKANSAS RIVER BASIN

2580. Arkansas River at Dardanelle, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Nov. 10, 1946	20.00	160,000	1951	Feb. 22, 1951	21.20	174,000
	Dec. 13, 1946	26.56	303,000		May 23, 1951	19.70	148,000
	Apr. 18, 1947	24.02	224,000		June 14, 1951	18.75	135,000
	May 1, 1947	23.82	220,000		July 7, 1951	25.06	224,000
	May 15, 1947	18.90	146,000		July 20, 1951	25.14	227,000
	May 21, 1947	24.90	246,000	1952	Apr. 24, 1952	19.88	145,000
	June 3, 1947	20.23	163,000		Mar. 18, 1953	19.33	137,000
1948	June 27, 1948	^b 27.07	300,000	1953	May 4, 1954	^b 22.64	194,000
	July 21, 1948	19.37	153,000		Mar. 21, 1955	17.35	109,000
	Aug. 18, 1948	18.93	146,000	1956	Oct. 9, 1955	16.50	113,000
1949	Jan. 25, 1949	^b 25.70	294,000		Apr. 4, 1957	22.10	204,000
	Feb. 17, 1949	23.51	235,000	1957	Apr. 28, 1957	24.77	244,000
	May 3, 1949	19.13	143,000		May 30, 1957	33.42	471,000
	May 22, 1949	26.97	303,000	1958	Mar. 27, 1958	18.56	139,000
	June 15, 1949	22.00	195,000		May 10, 1958	19.46	152,000
1950	Feb. 13, 1950	17.94	137,000		June 27, 1958	18.93	156,000
	May 14, 1950	^b 29.20	382,000		July 16, 1958	18.97	154,000
	July 24, 1950	^b 23.68	215,000				
	Aug. 5, 1950	24.22	221,000				
	Sept. 18, 1950	^b 21.64	175,000				

a Occurred on following day.

b 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 above on basis of slope-area and contracted-opening measurements made by Corps of Engineers.

Bankfull stage.--19 ft.

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

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Feb. 19, 1939	19.5	8,250	1944	Feb. 28, 1944	15.95	5,270
	Feb. 25, 1939	19.6	8,350		Mar. 16, 1944	16.46	5,520
	Mar. 5, 1939	13.3	4,120		Mar. 19, 1944	14.78	4,700
	Apr. 6, 1939	17.2	6,540		May 2, 1944	17.12	5,930
	Apr. 16, 1939	23.42	43,200		June 13, 1944	16.78	5,690
1940	Apr. 29, 1940	10.45	2,580	1945	Feb. 17, 1945	15.78	5,000
1941	Jan. 1, 1941	18.81	7,640		Feb. 21, 1945	21.16	16,100
					Feb. 27, 1945	20.42	10,800
1942	Oct. 31, 1941	15.33	5,320		Mar. 3, 1945	17.45	6,030
	Jan. 30, 1942	16.53	5,320		Mar. 12, 1945	19.74	8,850
	Apr. 8, 1942	19.43	7,360		Mar. 19, 1945	20.92	13,600
	May 6, 1942	14.19	4,250		Mar. 30, 1945	21.38	18,000
	May 20, 1942	18.35	6,530		Apr. 13, 1945	16.61	5,460
1943	Dec. 27, 1942	15.35	4,790		May 12, 1945	16.98	5,730
	May 10, 1943	22.59	32,300		May 15, 1945	21.61	20,100
	May 16, 1943	18.10	6,290		June 11, 1945	20.55	11,800
					Sept. 12, 1945	15.52	4,850
					Sept. 27, 1945	15.31	4,750

2585. Petit Jean Creek near Booneville, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Jan. 8, 1946	18.20	6,750	1952	Oct. 31, 1951	19.35	8,700
	Feb. 13, 1946	18.56	7,170		Mar. 10, 1952	18.68	7,520
	Apr. 16, 1946	16.48	5,400		Apr. 12, 1952	20.49	11,500
	Apr. 24, 1946	19.58	8,650		Apr. 22, 1952	18.90	8,340
	Apr. 29, 1946	14.45	4,380	1953	Nov. 25, 1952	19.88	10,000
	May 3, 1946	17.71	6,270		Mar. 14, 1953	19.91	10,000
	May 23, 1946	16.03	5,100		Mar. 17, 1953	20.99	15,100
1947	Nov. 10, 1946	13.75	4,070		Mar. 31, 1953	13.20	4,430
	Nov. 26, 1946	14.04	4,160		Apr. 6, 1953	14.19	4,910
	Dec. 10, 1946	21.24	16,400		Apr. 24, 1953	20.95	15,100
	Apr. 10, 1947	16.70	5,520		Apr. 29, 1953	19.66	9,400
1948	Dec. 31, 1947	20.92	14,500		May 13, 1953	19.42	8,770
	Feb. 5, 1948	13.95	4,160	1954	Jan. 20, 1954	14.05	4,480
	Feb. 25, 1948	13.98	4,160		Feb. 16, 1954	13.48	4,260
	Mar. 1, 1948	17.17	5,880		May 2, 1954	15.47	5,190
	Apr. 11, 1948	18.43	7,100	1955	Feb. 20, 1955	16.38	5,660
1949	Jan. 25, 1949	22.40	29,800		Mar. 18, 1955	14.50	4,710
	Feb. 14, 1949	19.85	9,700		Mar. 20, 1955	20.58	12,900
	June 14, 1949	18.10	6,650	1956	Feb. 17, 1956	16.72	6,240
1950	Jan. 4, 1950	20.24	11,100	1957	Feb. 5, 1957	14.46	4,770
	Jan. 13, 1950	20.58	12,900		Apr. 3, 1957	20.94	13,700
	Feb. 1, 1950	19.05	8,000		Apr. 25, 1957	15.28	5,380
	Feb. 12, 1950	21.40	18,100		Apr. 27, 1957	20.60	12,200
	May 7, 1950	20.68	13,400		May 13, 1957	14.60	5,020
	May 12, 1950	17.43	6,280		May 23, 1957	20.76	13,200
	July 22, 1950	17.62	6,440		May 25, 1957	14.94	5,220
1951	Sept. 16, 1950	18.51	7,250		June 5, 1957	13.90	4,770
	Feb. 15, 1951	19.43	8,290		Aug. 12, 1957	20.47	11,000
	Feb. 18, 1951	17.32	5,950		Aug. 15, 1957	16.32	5,900
1952	Oct. 31, 1951	19.35	8,700		Sept. 22, 1957	15.64	5,530
	Mar. 10, 1952	18.68	7,520	1958	Nov. 18, 1957	20.81	13,200
	Apr. 12, 1952	20.49	11,500		Mar. 7, 1958	12.89	4,280
	Apr. 22, 1952	18.90	8,340		May 2, 1958	21.13	15,700
					May 9, 1958	19.22	8,470
					June 26, 1958	19.02	8,210

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. Jan. 16, 1939, to Sept. 30, 1943, at site 1-3/4 miles upstream from and at datum 9.54 ft higher than present gage. Datum of present gage is 339.70 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

Stage-discharge relation.--Defined by current-meter measurements at former site below 13,000 cfs and extended above on basis of velocity-area study and slope-area measurement 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.

ARKANSAS RIVER BASIN

2595. Petit Jean Creek near Waveland, Ark.--Cont.

Annual 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	Mar. 30, 1945	32.23	37,100
	Feb. 25, 1939	22.06	10,500	Cont.	May 13, 1945	25.30	6,880
	Mar. 5, 1939	20.78	8,670		May 16, 1945	31.18	25,800
	Apr. 6, 1939	20.35	8,230		June 12, 1945	29.70	16,200
	Apr. 16, 1939	29.95	62,600		Sept. 13, 1945	22.56	5,040
1940	Apr. 29, 1940	13.65	3,700	1946	Jan. 9, 1946	28.15	11,600
1941	Jan. 2, 1941	20.75	7,460		Feb. 14, 1946	29.07	14,000
1942	Oct. 31, 1941	21.43	7,100		Mar. 6, 1946	23.80	5,740
	Jan. 31, 1942	20.24	7,200		Mar. 28, 1946	25.81	7,390
	Apr. 9, 1942	21.64	9,950		Apr. 16, 1946	28.27	11,800
	May 20, 1942	20.07	7,600		Apr. 25, 1946	27.37	9,790
1943	Dec. 28, 1942	18.3	6,560		May 3, 1946	27.07	9,230
	Apr. 12, 1943	17.2	5,890	1947	Dec. 13, 1946	27.63	9,050
	May 11, 1943	28.70	38,000	1948	Jan. 2, 1948	27.25	8,580
	May 17, 1943	19.0	7,050	1949	Jan. 24, 1949	24.27	5,900
1944	Feb. 9, 1944	23.48	5,570	1950	Feb. 12, 1950	21.67	4,860
	Feb. 17, 1944	27.12	9,260	1951	Feb. 25, 1951	15.63	2,500
	Feb. 28, 1944	27.63	10,200	1952	Apr. 22, 1952	19.42	3,800
	Mar. 16, 1944	27.22	9,440	1953	Mar. 17, 1953	24.58	6,310
	Mar. 20, 1944	27.20	9,440	1954	May 2, 1954	17.44	3,150
	May 2, 1944	28.10	11,400	1955	Feb. 24, 1955	16.72	2,820
	June 14, 1944	23.88	5,810	1956	Feb. 23, 1956	15.80	2,550
1945	Feb. 18, 1945	25.07	6,700	1957	Aug. 15, 1957	22.00	4,600
	Feb. 21, 1945	30.70	21,800	1958	Mar. 23, 1958	15.65	2,650
	Feb. 28, 1945	30.07	18,100				
	Mar. 3, 1945	28.33	11,800				
	Mar. 7, 1945	23.60	5,620				
	Mar. 13, 1945	28.06	11,400				
	Mar. 20, 1945	29.77	16,600				
	Mar. 25, 1945	25.31	6,880				

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.

2600. Dutch Creek at Waltreak, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	—	^a 19.5	—	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, 1956	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	1955	Mar. 21, 1955	12.81	4,620
	Feb. 13, 1949	12.24	4,350	1956	Feb. 17, 1956	11.39	3,530
	Mar. 26, 1940	12.26	4,440	1957	Apr. 3, 1957	15.04	7,270
1950	Jan. 2, 1950	12.39	4,550		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, from floodmark.

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 Railway 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. June 1, 1916, to Aug. 24, 1934, at site 1,800 ft downstream from and at datum 0.25 ft higher than present gage. 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 and 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 3, 1917	21.7	6,290	1924	Apr. 30, 1924	25.4	22,200
1918	May 14, 1918	20.9	5,010	1925	Feb. 24, 1925	18.3	3,020
1919	Dec. 15, 1918	24.3	14,600	1926	Oct. 18, 1925	23.5	10,900
1920	Jan. 24, 1920	24.8	17,700	1927	Apr. 15, 1927	28.4	50,900
	Mar. 26, 1920	24.8	17,700	1928	Apr. 7, 1928	25.5	23,000
1921	Apr. 28, 1921	24.7	17,000	1929	Jan. 26, 1929	23.9	12,600
1922	Nov. 20, 1921	24.0	15,800	1930	May 11, 1930	26.3	30,200
1923	May 16, 1923	25.1	19,800				

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2605. Petit Jean Creek at Danville, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Feb. 24, 1931	21.4	5,770	1945	Feb. 22, 1945	27.02	23,800
1932	Feb. 18, 1932	24.4	15,200		Feb. 28, 1945	26.47	20,500
1933	May 17, 1933	23.6	11,300		Mar. 14, 1945	23.44	9,290
1934	Mar. 27, 1934	22.9	8,970		Mar. 20, 1945	25.93	20,000
1935	June 18, 1935	30.2	58,300		Mar. 31, 1945	29.50	45,700
1936	Dec. 9, 1935	23.3	9,560		May 17, 1945	27.47	29,700
1937	Jan. 23, 1937	24.3	13,000		June 13, 1945	26.00	20,500
1938	Nov. 12, 1937	23.0	8,650	1946	Jan. 10, 1946	23.96	10,000
	Jan. 25, 1938	27.12	28,000		Feb. 14, 1946	25.05	13,400
	Feb. 18, 1938	29.30	45,400		Apr. 18, 1946	23.60	8,940
	Mar. 31, 1938	23.04	8,650		May 26, 1946	23.32	8,190
	Apr. 17, 1938	22.9	8,350	1947	Dec. 13, 1946	24.99	13,400
1939	Feb. 21, 1939	23.40	10,000	1948	Jan. 1, 1948	25.05	13,400
	Feb. 27, 1939	23.81	11,400	1949	Jan. 25, 1949	27.85	27,000
	Apr. 7, 1939	22.64	7,450	1950	Jan. 14, 1950	25.43	15,000
	Apr. 17, 1939	31.82	70,800	1951	Feb. 16, 1951	22.07	5,730
1940	Apr. 30, 1940	^a 19.30	3,380	1952	Apr. 23, 1952	25.12	14,200
1941	Jan. 4, 1941	22.18	6,350	1953	Mar. 18, 1953	^b 24.14	11,100
1942	Nov. 1, 1941	24.18	13,000	1954	May 3, 1954	24.35	11,200
	Apr. 10, 1942	23.53	10,400	1955	Mar. 22, 1955	21.66	5,190
1943	May 12, 1943	28.12	35,500	1956	Feb. 19, 1956	22.10	5,730
1944	Feb. 18, 1944	23.26	9,700	1957	Apr. 4, 1957	25.53	16,300
	Mar. 1, 1944	23.39	10,000	1958	May 3, 1958	23.77	11,100
	Mar. 21, 1944	23.22	9,350				
	May 4, 1944	24.02	12,200				

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 SW¼ sec. 29, T. 6 N., R. 16 W., at bridge on State Highway 9, 1-3/4 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 contribute 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.

2608. Arkansas River near Morrilton, Ark.--Cont.

Annual peak stages and discharges

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 Fave 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 Gerner Creek, 1-3/4 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.

Annual 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	Dec. 7, 1945	15.10	10,200
1940	Apr. 29, 1940	10.32	4,630		Feb. 21, 1945	26.90	36,800
1941	May 9, 1941	9.35	3,970		Feb. 27, 1945	23.88	23,100
1942	Oct. 31, 1941	25.87	29,100		Mar. 3, 1945	18.69	14,800
	Apr. 9, 1942	17.48	14,100		Mar. 6, 1945	12.90	7,640
	Apr. 28, 1942	18.58	15,800		Mar. 12, 1945	16.15	11,500
	May 20, 1942	13.35	8,420		Mar. 17, 1945	12.32	6,980
1943	Dec. 27, 1942	11.41	6,120		Mar. 19, 1945	21.89	19,500
	May 11, 1943	14.19	9,430		Mar. 25, 1945	14.25	9,100
	May 20, 1943	15.61	11,300		Mar. 29, 1945	27.01	38,000
1944	Feb. 9, 1944	11.55	6,260		May 16, 1945	25.31	26,800
	Feb. 17, 1944	16.40	12,000		June 11, 1945	19.90	16,400
	Feb. 28, 1944	17.56	13,600		June 18, 1945	13.16	7,970
	Mar. 16, 1944	15.92	11,300		Sept. 26, 1945	11.02	5,650
	Mar. 19, 1944	11.80	6,480	1946	Oct. 1, 1945	12.20	6,870
	Apr. 2, 1944	11.52	6,160		Jan. 5, 1946	12.50	7,200
	Apr. 11, 1944	11.22	5,860		Jan. 9, 1946	20.86	18,000
	May 2, 1944	20.03	17,000		Feb. 6, 1946	10.97	5,650
					Feb. 14, 1946	24.77	25,200
					Mar. 6, 1946	11.74	6,350
					Apr. 16, 1946	13.74	8,520
					Apr. 30, 1946	17.01	12,500
					May 24, 1946	23.70	22,700
					May 31, 1946	21.92	19,500

2615. Fourche La Fave near Gravelly, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Nov. 7, 1946	12.05	6,650	1952	Mar. 22, 1952	10.42	5,450
	Nov. 26, 1946	15.64	10,800		Apr. 4, 1952	10.49	5,550
	Dec. 12, 1946	25.75	28,800		Apr. 10, 1952	13.12	8,290
1948	Dec. 8, 1947	12.21	6,870		Apr. 12, 1952	23.27	23,700
	Jan. 1, 1948	27.37	39,800		Apr. 22, 1952	26.99	37,700
	Feb. 25, 1948	18.00	13,800	1953	Nov. 25, 1952	22.73	22,400
	Mar. 2, 1948	13.35	8,190		Dec. 4, 1952	11.38	6,450
	Apr. 13, 1948	14.85	9,820		Jan. 23, 1953	11.10	6,150
	May 12, 1948	11.20	5,850		Mar. 18, 1953	17.19	13,400
1949	Jan. 18, 1949	10.57	5,250		Apr. 6, 1953	11.90	6,970
	Jan. 24, 1949	28.86	54,000		Apr. 24, 1953	13.20	8,400
	Feb. 14, 1949	15.47	10,700		Apr. 29, 1953	20.83	18,800
	Mar. 26, 1949	16.90	12,400		May 13, 1953	22.77	22,600
	May 1, 1949	23.89	23,100	1954	Apr. 16, 1954	11.12	6,150
	June 14, 1949	11.78	6,450		May 2, 1954	26.20	33,400
1950	Jan. 3, 1950	17.67	13,400	1955	Oct. 25, 1954	9.97	5,050
	Jan. 10, 1950	10.76	5,450		Feb. 20, 1955	11.95	7,080
	Jan. 13, 1950	26.70	35,200		Mar. 21, 1955	17.60	13,900
	Jan. 26, 1950	11.80	6,450	1956	Feb. 2, 1956	10.16	5,250
	Feb. 1, 1950	22.10	19,900		Feb. 18, 1956	16.59	12,600
	Feb. 13, 1950	27.20	38,400	1957	Jan. 23, 1957	11.78	6,860
	Apr. 4, 1950	12.63	7,310		Apr. 4, 1957	22.39	21,800
	May 2, 1950	13.66	8,520		Apr. 25, 1957	16.68	12,700
	May 7, 1950	21.80	19,400		Apr. 27, 1957	21.58	20,200
	May 12, 1950	11.25	5,850		May 23, 1957	14.43	9,820
	July 23, 1950	14.79	9,820		May 26, 1957	16.06	11,900
	Aug. 2, 1950	11.75	6,450		June 5, 1957	12.14	7,190
	Sept. 16, 1950	16.51	11,900		June 13, 1957	18.44	15,000
1951	Feb. 15, 1951	15.77	11,000	1958	Mar. 7, 1958	14.90	10,400
	Feb. 20, 1951	14.71	9,700		Mar. 24, 1958	13.63	8,860
	July 3, 1951	13.80	8,630		Apr. 21, 1958	12.93	8,070
1952	Nov. 1, 1951	19.85	17,100		Apr. 27, 1958	10.90	5,950
	Nov. 6, 1951	10.05	5,050		May 3, 1958	23.21	24,300
	Dec. 9, 1951	10.29	5,350		May 10, 1958	11.63	6,650
	Jan. 3, 1952	12.91	8,070		June 26, 1958	11.45	6,450
	Mar. 11, 1952	16.43	12,300				

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 Mar. 3, 1936, to Dec. 20, 1938, at site 1.1 miles downstream from and at datum 3.92 ft lower than present gage; recording thereafter. Dec. 21, 1938, to Aug. 26, 1946, at site 2.0 miles downstream from and at datum 9.72 ft lower than present gage. Datum of present gage is 305.25 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

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

Historical data.--Flood of April 1927, reached a stage of 28.15 ft at site and datum of nonrecording gage, from information by Corps of Engineers. Flood of 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.

2625. Fourche La Fave River near Nimrod, Ark.--Cont.

Annual peak stages and discharges

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	1947	Dec. 20, 1946	10.36	7,210
	Jan. 23, 1937	22.8	21,800		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	1951	May 5, 6, 1952	10.20	6,850
	Jan. 25, 1938	28.2	32,800	1952	May 25, 1953	10.09	6,680
	Jan. 31, 1938	12.9	7,740	1953	May 11, 1954	9.68	6,000
	Feb. 19, 1938	29.7	36,100	1954	Mar. 27, 1955	9.54	5,670
	Mar. 30, 1938	17.6	13,500	1955	Feb. 13, 1956	9.68	5,830
	Apr. 9, 1938	12.0	6,380	1956	July 18,19, 1957	9.72	5,830
	Apr. 17, 1938	16.6	12,300	1957	May 26,29, 1958	9.70	5,930
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-benchmark).

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs and extended above 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.

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2630. South Fourche La Fave River near Hollis, Ark.--Cont.

Annual 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	Feb. 12, 1950	12.68	17,000
	Apr. 27, 1942	15.80	29,700	Cont.	Sept. 16, 1950	12.65	17,000
1943	Dec. 27, 1942	13.29	18,500	1951	Feb. 15, 1951	11.38	12,300
1944	Apr. 23, 1944	18.51	47,000	1952	Apr. 22, 1952	13.22	18,300
1945	Feb. 21, 1945	15.29	27,200	1953	Nov. 25, 1952	13.96	21,300
	Mar. 30, 1945	19.47	54,400		Dec. 4, 1952	15.51	28,200
1946	Mar. 28, 1946	14.16	22,200		May 12, 1953	13.04	17,600
1947	Dec. 12, 1946	13.96	21,300	1954	May 2, 1954	16.30	32,400
1948	Apr. 13, 1948	12.21	14,600	1955	Mar. 20, 1955	13.38	19,100
1949	Dec. 15, 1948	13.32	18,500	1956	Jan. 29, 1956	12.75	17,000
	Jan. 24, 1949	16.04	30,700	1957	Apr. 3, 1957	14.56	24,000
1950	Jan. 2, 1950	13.24	18,200		May 24, 1957	12.90	17,300
	Jan. 10, 1950	12.60	16,700		Aug. 13, 1957	13.62	19,800
	Feb. 1, 1950	12.28	15,600	1958	Apr. 29, 1958	12.48	16,100
					May 2, 1958	14.56	24,000

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 contribute directly to surface runoff.

Gage.--Nonrecording gage in same vicinity and at same datum as present gage prior to Oct. 1, 1934; recording gage at present site and datum 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 of 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.

Annual 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	—	1879	Feb. 3, 1879	19.4	—
1844	May 1844	32.6	—	1880	Mar. 14, 1880	16.1	—
1873	Apr. 12, 1873	25.6	—	1881	Feb. 20, 1881	18.6	—
1874	Apr. 24, 1874	26.0	—	1882	Feb. 25, 1882	25.1	—
1875	Aug. 5, 1875	24.8	—	1883	Feb. 19, 1883	24.4	—
1876	July 7, 1876	29.3	—	1884	Feb. 16, 1884	27.0	—
1877	June 13, 1877	30.5	—	1885	Apr. 27, 1885	26.6	—
1878	May 28, 1878	27.3	—	1886	Feb. 15, 1886	16.6	—

2635. Arkansas River at Little Rock, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1887	May 6, 1887	16.5	—	1923	June 18, 1923	25.3	300,000
1888	May 23, 1888	18.4	—	1924	May 3, 1924	21.0	—
1889	Mar. 28, 1889	21.5	—	1925	May 2, 1925	12.0	—
1890	Apr. 29, 1890	24.3	—	1926	Sept. 11, 1926	14.2	—
1891	Apr. 23, 1891	20.9	—	1927	Apr. 20, 1927	33.0	—
1892	May 20, 1892	27.9	—	1928	Oct. 7, 1927	20.9	220,000
1893	May 3, 1893	25.2	—		Dec. 15, 1927	20.0	200,000
1894	May 22, 1894	22.6	—		Apr. 10, 1928	18.7	175,000
1895	Aug. 3, 1895	19.1	—		Apr. 26, 1928	20.5	211,000
1896	Dec. 29, 1895	23.5	—		June 16, 1928	19.6	192,000
1897	Mar. 21, 1897	21.4	—		June 26-27, 1928	20.6	213,000
1898	May 11, 1898	27.5	—	1929	Apr. 13, 1929	17.9	160,000
1899	May 11, 1899	24.5	—		Apr. 19, 1929	18.1	164,000
1900	Feb. 11, 1900	12.5	—		Apr. 26, 1929	19.9	194,000
1901	Apr. 20, 1901	17.9	—		May 19, 1929	23.3	275,000
1902	May 28, 1902	18.1	—		June 8, 1929	18.1	163,000
1903	June 3, 1903	24.8	—	1930	Feb. 8, 1930	17.4	152,000
1904	June 11, 1904	27.8	—		May 12, 1930	21.3	221,000
1905	May 31, 1905	23.0	—	1931	Feb. 11, 1931	13.0	97,000
1906	May 5, 1906	20.5	—	1932	Jan. 20, 1932	18.5	206,000
1907	May 11, 1907	21.5	—		Jan. 26, 1932	19.5	233,000
1908	May 30, 1908	26.5	—		Feb. 19, 1932	18.0	182,000
1909	May 29, 1909	23.5	—	1933	Dec. 28, 1932	17.2	175,000
1910	May 26, 1910	14.5	—		May 19, 1933	22.7	277,000
1911	Aug. 10, 1911	18.5	—		Sept. 6, 1933	17.0	158,000
1912	May 4, 1912	24.0	—	1934	Apr. 9, 1934	15.52	127,000
1913	Apr. 13, 1913	17.4	—	1935	Mar. 15, 1935	20.40	208,000
1914	May 8, 1914	17.8	—		Mar. 27, 1935	21.22	207,000
1915	June 1, 1915	25.4	—		May 8, 1935	22.20	229,000
1916	Feb. 2, 1916	27.3	—		May 22, 1935	21.71	218,000
1917	June 12, 1917	15.0	—		June 12, 1935	23.64	263,000
1918	May 14, 1918	18.9	—		June 22-23, 1935	28.18	422,000
1919	Nov. 13, 1918	16.9	—	1936	Dec. 9, 1935	18.00	144,000
1920	Mar. 30, 1920	20.6	—	1937	Jan. 18, 1937	18.74	170,000
1921	Apr. 30, 1921	20.8	—		Feb. 3, 1937	17.60	152,000
1922	Apr. 14, 1922	23.1	—	1938	Jan. 25-26, 1938	15.16	142,000
					Feb. 21, 1938	^a 26.2	471,000
					Apr. 1, 1938	^a 21.60	244,000
					May 26, 1938	20.30	207,000
					June 15, 1938	17.24	148,000
				1939	Apr. 18, 1939	18.12	181,000
				1940	Sept. 9, 1940	11.87	92,300
				1941	Apr. 24, 1941	^b 22.36	294,000
					June 15, 1941	^b 20.30	214,000
				1942	Oct. 10, 1941	^a 19.65	202,000
					Oct. 20, 1941	^a 20.61	209,000
					Nov. 7, 1941	26.33	404,000
					Apr. 14, 1942	22.24	285,000
					May 2, 1942	24.86	312,000
					June 28, 1942	20.67	218,000

ARKANSAS RIVER BASIN

2635. Arkansas River at Little Rock, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Dec. 31, 1942	19.63	216,000	1949	May 23, 1949	^a 20.98	284,000
	May 16, 1943	28.34	484,000	Cont.	June 16, 1949	18.45	199,000
	May 27, 1943	30.05	536,000				
	June 10, 1943	19.03	164,000	1950	Jan. 15, 1950	15.41	158,000
1944	Mar. 22, 1944	18.94	196,000		Feb. 14, 1950	15.25	164,000
	Apr. 15, 1944	19.52	194,000		May 15, 1950	22.80	358,000
	May 4, 1944	^a 22.35	282,000		July 25, 1950	18.88	222,000
	June 17, 1944	15.60	154,000		Aug. 6, 1950	19.50	222,000
1945					Sept. 19, 1950	17.67	175,000
	Mar. 5, 1945	^a 19.90	242,000	1951	Feb. 22, 1951	17.37	189,000
	Mar. 23, 1945	24.00	323,000		May 24, 1951	^b 15.00	159,000
	Apr. 1, 1945	24.05	314,000		July 8, 1951	^b 19.79	235,000
	Apr. 21, 1945	^b 28.13	467,000		July 22, 1951	^b 20.36	225,000
	May 17, 1945	18.90	176,000	1952	Mar. 12, 1952	14.91	148,000
1946	June 13, 1945	23.98	332,000		Apr. 14, 1952	14.69	146,000
	Oct. 4, 1945	21.22	268,000		Apr. 25, 1952	16.20	167,000
	Jan. 14, 1946	16.69	174,000	1953	Mar. 19, 1953	15.24	159,000
	Feb. 22, 1946	15.08	148,000		Apr. 27, 1953	14.30	142,000
1947	May 26, 1946	17.31	192,000		May 16, 1953	14.61	150,000
	Nov. 11, 1946	14.41	145,000	1954	May 5, 1954	17.86	210,000
	Dec. 13, 1946	^a 20.56	288,000	1955	Mar. 22, 1955	13.85	130,000
	Apr. 19, 1947	18.37	224,000	1956	Oct. 10, 1955	11.94	102,000
	May 2, 1947	18.90	224,000	1957	Apr. 6, 1957	18.52	224,000
	May 21, 1947	19.80	234,000		Apr. 29, 1957	21.86	270,000
1948	June 5, 1947	16.03	162,000		May 31, 1957	27.87	460,000
	Mar. 4, 1948	14.34	142,000	1958	Mar. 28, 1958	16.03	158,000
	June 28, 1948	20.80	264,000		May 11, 1958	17.43	187,000
	July 23, 1948	15.63	151,000		June 28, 1958	15.08	154,000
1949	Aug. 19, 1948	15.36	140,000		July 17, 1958	15.27	166,000
	Jan. 26, 1949	20.28	301,000				
	Feb. 17, 1949	19.09	288,000				
	May 4, 1949	15.56	161,000				

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 contribute 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.

2637. Arkansas River at Pine Bluff, Ark.--Cont.

Annual 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	—	1931	Dec. 1, 1931	17.6	—
1906	May 6-7, 1906	22.6	—	1932	Jan. 27, 1932	23.5	—
1907	May 12, 1907	23.7	—	1933	May 20, 1933	25.8	—
1908	May 31, June 1, 1908	28.9	—	1934	Apr. 10, 1934	19.0	—
1909	May 30, 1909	27.0	—	1935	June 24, 1935	33.0	—
1910	May 26-27, 1910	18.2	—	1936	Oct. 3, 1936	18.0	—
1911	Aug. 11, 1911	22.1	—	1937	Jan. 19, 1937	22.1	—
1912	May 4, 1912	27.7	—	1938	Feb. 22, 1938	^a 31.7	476,000
1913	Apr. 14, 1913	20.4	—	1939	Apr. 19, 1939	20.9	—
1914	May 9, 1914	19.7	—	1940	Sept. 10, 1940	14.9	77,900
1915	June 2, 1915	26.9	—	1941	Nov. 8, 1941	^b 30.6	409,000
1916	Feb. 3, 1916	29.6	—	1942	May 3, 1942	27.7	312,000
1917	June 13, 1917	17.6	—	1943	May 28, 1943	33.78	553,000
1918	May 15, 1918	20.9	—	1944	May 6, 1944	25.3	—
1919	Nov. 3-5, 1919	20.0	—	1945	Apr. 22, 1945	32.1	—
1920	Mar. 31, 1920	23.5	—	1946	Dec. 15, 1946	21.7	—
1921	May 1, 1921	23.9	—	1947	May 22, 1947	21.4	—
1922	Apr. 16, 1922	26.0	—	1948	June 30, 1948	21.9	281,000
1923	June 19-20, 1923	27.7	—	1949	May 25, 1949	22.7	291,000
1924	May 5, 1924	23.7	—	1950	May 16, 1950	24.1	340,000
1925	Oct. 19, 1925	16.6	—	1951	July 8, 1951	^c 21.9	230,000
1926	Oct. 15, 1926	25.8	—	1952	Apr. 26, 1952	19.4	164,000
1927	Apr. 21, 1927	32.4	—	1953	Apr. 28, 1953	^d 17.6	141,000
1928	June 27, 1928	24.8	—	1954	May 6, 1954	19.9	—
1929	May 20, 1929	27.6	—	1955	Mar. 23, 1955	15.7	—
1930	May 13, 1930	24.7	—	1956	Feb. 20, 1956	12.4	—
				1957	May 31, 1957	30.85	—
				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 peak stages are shown.

Annual peak stages and discharges

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	—

ARKANSAS RIVER BASIN

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 SW¼ 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 2½ miles south of Lonoke.

Drainage area. --203 sq mi.

Gage. --Recording. Prior to Feb. 10, 1955, at site 4-3/4 miles upstream from and at datum 6.97 ft higher than present gage. 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	January 1937	^a 22.9	—	1953	May 19, 1953	19.7	—
1948	Mar. 1948	20.2	—	1954	May 7, 1954	21.3	—
1949	Jan. 30, 1949	22.1	—	1955	June 1, 1955	22.30	1,920
1950	Jan. 14, 1950	22.0	—	1956	Feb. 6, 1956	23.80	2,120
1951	Jan. 20, 1951	18.0	—	1957	May 29, 1957	25.16	3,360
1952	Apr. 18, 1952	16.8	—	1958	May 6, 1958	25.13	3,440

a From floodmarks. Site and datum used prior to 1955.

2645. Bayou Meto near Stuttgart, Ark.

Location. --Lat 34°27'15", long 91°37'00", in SE¼ sec. 11, T. 3 S., R. 6 W., on downstream side of bridge on U. S. Highway 79, 5½ 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 than present gage. 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. Stages for 1955-58 from reports of Corps of Engineers.

During flows above 600 cfs, Bayou Meto and Crooked Creek 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 5, 1936	15.00	^a 1,060	1948	Mar. 8, 9, 1948	22.82	4,500
1937	Jan. 26, 1937	25.50	^a 9,350	1949	Feb. 6, 1949	23.67	5,280
1938	Feb. 1, 1938	23.26	^a 4,850	1950	Feb. 18-20, 1950	24.33	6,200
1939	Feb. 16, 1939	23.54	5,180	1951	Jan. 20, 1951	20.38	3,080
1940	Feb. 22, 1940	17.01	1,640	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	1956	Feb. 24, 1956	22.23	4,020
1945	Apr. 7, 1945	22.86	4,410	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.

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 contribute directly to surface runoff.

Gage. --Nonrecording gage at present site or at Kansas City Southern Railway bridge 1,100 ft upstream prior to Dec. 12, 1939; recording gage 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	Apr. 19, 1918	24.5	—	1942	Oct. 9, 1941	^b 24.55	106,000
1919	Oct. 31, 1918	22.0	—		Nov. 5, 1941	25.90	128,000
1920	May 21, 1920	27.6	—		Apr. 14, 1942	28.33	145,000
1921	June 27, 1921	23.5	—		Apr. 23, 1942	25.33	107,000
1922	May 15, 1922	26.3	—		May 1, 1942	29.85	178,000
1923	Sept. 24, 1923	23.3	—	1943	May 16, 1943	^b 24.35	112,000
1924	Dec. 18, 1923	27.0	—	1944	May 4, 1944	21.88	87,800
1925	May 1, 1925	20.5	—	1945	Feb. 24, 1945	23.25	105,000
1926	Aug. 21, 1926	23.5	—		Mar. 2, 1945	24.17	120,000
1927	Apr. 23, 1927	30.8	—		May 20, 1945	22.63	110,000
1928	May 23, 1928	25.0	—		Apr. 1, 1945	28.05	152,000
1929	May 21, 1929	27.2	—		June 14, 1945	23.90	101,000
1930	May 21, 1930	27.2	—		June 22, 1945	^c 24.37	120,000
1931	Dec. 9, 1930	20.2	—	1946	Oct. 11, 1945	20.80	76,400
1932	Feb. 21, 1932	27.4	—	1947	Nov. 9, 1946	23.74	110,000
1933	May 29, 1933	24.7	—		Dec. 15, 1946	23.47	108,000
1934	Mar. 4, 1934	20.5	—		May 2, 1947	20.40	76,500
1935	May 25, 1935	31.1	—		June 4, 1947	20.50	74,700
1936	Dec. 9, 1935	^a 22.1	—	1948	May 13, 1948	21.40	84,000
1937	Oct. 1, 1936	24.00	88,100	1949	Jan. 29, 1949	24.56	112,000
1938	Jan. 26, 1938	25.95	114,000	1950	Jan. 16, 1950	20.98	78,800
	Feb. 23, 1938	34.25	297,000		Feb. 3, 1950	20.52	71,200
	Apr. 2, 1938	27.55	139,400		Feb. 15, 1950	23.48	108,000
1939	Apr. 19, 1939	21.2	70,600		May 4, 1950	22.78	87,000
1940	May 26, 1940	19.7	70,100		July 29, 1950	20.00	75,400
1941	Apr. 20, 1941	^b 20.29	74,000		Sept. 18, 1950	21.23	74,000
	Apr. 26, 1941	24.27	108,000	1951	June 18, 1951	23.64	102,000
	May 10, 1941	23.36	94,100	1952	Apr. 25, 1952	24.50	112,000
	June 16, 1941	27.83	145,000	1953	May 2, 1953	22.48	91,700
					May 17, 1953	20.50	76,400
				1954	May 13, 1954	20.50	76,200
				1955	Mar. 23, 1955	17.88	56,500
				1956	Feb. 20, 1956	^d 15.94	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.

RED RIVER BASIN

3395. Rolling Fork near DeQueen, 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Aug. 27, 1947	25.6	^a 110,000	1953	Apr. 29, 1953	18.98	14,700
1949	Jan. 24, 1949	20.16	19,200	Cont.	May 11, 1953	21.96	34,000
	May 1, 1949	17.20	8,800		July 20, 1953	17.60	10,200
	June 14, 1949	18.96	14,100	1954	Apr. 16, 1954	16.11	7,040
					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				
	May 1, 1950	18.65	12,700	1956	Feb. 2, 1956	15.88	6,220
	July 30, 1950	15.64	6,150		Feb. 18, 1956	17.03	8,800
	Sept. 16, 1950	20.49	20,800	1957	Mar. 18, 1957	17.80	10,700
	Sept. 20, 1950	17.56	9,720		Apr. 4, 1957	16.77	8,400
1951	Jan. 14, 1951	16.01	6,700		Apr. 23, 1957	16.97	8,800
	July 2, 1951	16.35	7,320		Apr. 25, 1957	17.78	10,700
1952	Jan. 3, 1952	16.45	7,000		Apr. 27, 1957	18.38	12,600
	Apr. 12, 1952	18.80	14,000		May 23, 1957	16.98	8,800
	Apr. 22, 1952	18.80	14,000		May 26, 1957	15.92	6,700
1953	Nov. 25, 1952	19.86	19,200	1958	Apr. 27, 1958	16.73	8,200
	Apr. 6, 1953	18.06	11,500		May 2, 1958	18.73	13,800
					Sept. 19, 1958	16.21	7,220

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.

RED RIVER BASIN

95

3400. Little River near Horatio, Ark.--Cont.

Annual 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	^a 124,000	1946	Feb. 7, 1946	29.16	32,000
1930	May 20, 1930	36.0	^a 97,700	Cont.	Feb. 15, 1946	29.67	34,500
1931	July 27, 1931	24.84	20,700		May 26, 1946	31.74	49,300
1932	Jan. 6, 1932	31.5	48,400	1947	Nov. 8, 1946	28.25	28,000
	Jan. 18, 1932	28.6	31,000		Dec. 14, 1946	31.82	50,200
	Jan. 24, 1932	31.84	50,800		May 1, 1947	29.98	36,200
	Feb. 18, 1932	31.3	46,800		May 14, 1947	32.00	52,000
1933	Jan. 1, 1933	27.2	24,800		May 18, 1947	30.87	42,500
1934	Apr. 9, 1934	27.36	25,100		Aug. 29, 1947	32.99	61,900
1935	Jan. 21, 1935	31.2	46,000	1948	Dec. 9, 1947	28.99	31,100
	May 6, 1935	34.80	82,100		Jan. 2, 1948	32.29	54,900
	May 21, 1935	29.14	33,300		Mar. 3, 1948	28.86	30,700
	June 19, 1935	33.56	68,200		May 13, 1948	29.36	33,000
1936	Dec. 8, 1935	28.85	31,800	1949	Jan. 27, 1949	35.58	97,900
1937	Jan. 11, 1937	28.15	26,700		May 2, 1949	30.50	39,500
1938	Jan. 25, 1938	36.93	110,000		June 15, 1949	30.47	39,500
	Feb. 19, 1938	36.65	106,000	1950	Jan. 5, 1950	29.25	32,000
	Apr. 1, 1938	30.48	41,100		Jan. 14, 1950	32.66	59,700
	Apr. 17, 1938	29.10	33,300		Feb. 2, 1950	31.42	46,600
1939	Feb. 26, 1939	28.05	31,500		Feb. 13, 1950	34.06	82,500
	Apr. 7, 1939	29.00	36,400		May 3, 1950	31.78	50,200
	Apr. 18, 1939	32.12	56,500		July 31, 1950	28.65	29,500
1940	May 19, 1940	28.50	28,200		Sept. 17, 1950	32.80	60,800
	July 2, 1940	30.62	37,500	1951	Feb. 21, 1951	29.48	33,500
1941	Apr. 24, 1941	26.90	23,900		June 16, 1951	29.40	33,000
1942	Nov. 1, 1941	^b 27.58	25,400		July 4, 1951	31.47	47,500
	Apr. 9, 1942	31.77	50,800	1952	Apr. 13, 1952	31.84	53,300
1943	Dec. 28, 1942	26.45	24,700		Apr. 23, 1952	34.26	83,900
1944	Mar. 1, 1944	^c 28.16	29,200	1953	Nov. 26, 1952	27.46	26,400
	May 3, 1944	32.64	57,900		Apr. 7, 1953	28.12	29,500
1945	Feb. 22, 1945	32.78	59,900		Apr. 30, 1953	32.02	55,700
	Feb. 28, 1945	32.65	57,900		May 12, 1953	32.32	59,000
	Mar. 21, 1945	31.15	44,900		July 24, 1953	28.73	31,800
	Mar. 30, 1945	37.70	120,000	1954	May 4, 1954	28.16	29,800
	May 17, 1945	30.80	41,700	1955	Mar. 22, 1955	30.10	37,200
	June 15, 1945	30.90	42,500	1956	Feb. 19, 1956	27.84	28,500
1946	Oct. 2, 1945	29.30	32,500	1957	Mar. 19, 1957	27.46	27,600
	Jan. 10, 1946	31.29	45,700		Apr. 5, 1957	29.86	37,800
					Apr. 28, 1957	33.13	68,300
					May 15, 1957	28.35	30,500
					May 27, 1957	30.92	44,500
					June 6, 1957	28.50	30,900
				1958	Mar. 9, 1958	26.48	25,200
					May 3, 1958	32.72	63,600

a Annual peak only.

b Occurred on following day.

c Occurred at different time than peak discharge.

RED RIVER BASIN

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 and 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.

Annual 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	1949	Jan. 24, 1949	19.76	39,400
	Feb. 17, 1938	19.40	34,000		Jan. 27, 1949	15.67	12,600
	Mar. 29, 1938	16.30	14,800		May 1, 1949	16.29	14,800
	Apr. 16, 1938	17.10	18,900	1950	Dec. 12, 1949	15.56	12,300
1939	Feb. 25, 1939	15.86	13,000		Jan. 3, 1950	16.40	15,200
	Apr. 6, 1939	17.43	20,700		Jan. 10, 1950	15.80	13,000
	Apr. 16, 1939	19.70	36,300		Jan. 13, 1950	18.97	31,700
1940	Apr. 29, 1940	17.46	21,300		Feb. 1, 1950	17.48	21,000
	May 18, 1940	17.94	23,700		Feb. 12, 1950	19.36	35,400
	July 1, 1940	16.98	18,300		May 2, 1950	14.98	10,900
1941	July 13, 1941	15.08	10,100		Sept. 16, 1950	18.94	30,900
					Sept. 20, 1950	20.14	42,500
1942	Apr. 8, 1942	18.42	27,000	1951	Jan. 14, 1951	15.78	13,000
	Apr. 26, 1942	16.10	14,000		July 3, 1951	16.49	15,600
	Sept. 9, 1942	18.56	28,400	1952	Jan. 3, 1952	15.10	11,300
1943	Dec. 27, 1942	14.30	9,520		Mar. 22, 1952	14.54	10,100
					Apr. 12, 1952	17.94	23,500
1944	Feb. 9, 1944	15.90	14,000		Apr. 22, 1952	18.00	34,200
	Mar. 16, 1944	16.66	17,400	1953	Nov. 25, 1952	19.02	31,700
	May 2, 1944	18.70	29,100		Dec. 4, 1952	15.54	12,100
1945	Feb. 21, 1945	18.14	24,900		Mar. 18, 1953	14.94	10,800
	Feb. 27, 1947	18.18	25,600		Apr. 6, 1953	16.97	18,000
	Mar. 19, 1945	16.78	17,100		Apr. 24, 1953	14.52	10,100
	Mar. 30, 1945	20.20	43,300		Apr. 29, 1953	17.37	20,200
	May 16, 1945	15.25	11,300		May 12, 1953	19.16	33,100
					July 21, 1953	14.74	10,400
1946	Jan. 5, 1946	15.19	11,300	1954	May 2, 1954	16.57	16,100
	Jan. 9, 1946	17.37	20,400				
	Feb. 6, 1946	16.83	17,100	1955	Oct. 25, 1954	14.62	10,200
	Feb. 14, 1946	15.78	13,000		Mar. 21, 1955	17.25	19,200
	Mar. 6, 1946	14.87	10,700	1956	Feb. 2, 1956	16.33	13,600
	Apr. 30, 1946	16.74	16,600		Feb. 18, 1956	16.20	14,400
	May 25, 1946	19.96	41,200	1957	Jan. 22, 1957	15.59	12,300
					Mar. 18, 1957	16.37	15,200
1947	Dec. 12, 1946	17.86	23,500		Apr. 4, 1957	17.35	19,800
	Aug. 28, 1947	20.47	46,900		Apr. 25, 1957	15.15	11,300
1948	Oct. 31, 1947	17.29	22,800		Apr. 27, 1957	17.82	22,800
	Dec. 7, 1947	18.28	26,300		May 26, 1957	15.30	11,600
	Jan. 1, 1948	18.30	26,300	1958	Nov. 13, 1957	16.46	16,500
					Mar. 7, 1958	14.48	10,300
					Apr. 27, 1958	15.55	13,00
					May 3, 1958	18.56	29,200

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, 2-3/4 miles south of White Cliffs, 1.9 miles upstream from Hurricane Creek 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.

Annual 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	—	1931	Dec. 21, 1931	24.7	—
1906	May 6, 1906	28.1	—	1932	Jan. 26, 1932	27.8	—
1907	Jan. 5, 1907	28.2	—	1933	Jan. 2, 1933	25.6	—
1908	May 16, 1908	29.0	—	1934	Apr. 11, 1934	25.3	—
1909	Mar. 12, 1909	22.9	—	1935	May 8, 1935	29.6	—
1910	Apr. 15, 1910	25.8	—	1936	Dec. 10, 1936	23.1	—
1911	Apr. 21, 1911	27.7	—	1937	Jan. 25, 1937	26.4	—
1912	Apr. 5, 1912	29.0	—	1938	Jan. 26, 1938	31.0	—
1913	Dec. 10, 1913	28.0	—	1939	Apr. 20, 1939	27.8	—
1914	Apr. 2-3, 1914	27.7	—	1940	July 4, 1940	27.1	—
1915	Aug. 21, 1915	32.0	—	1941	Apr. 26, 1941	25.5	—
1916	Feb. 3, 1916	28.4	—	1942	Apr. 11, 1942	28.0	—
1917	Mar. 5, 1917	24.0	—	1943	Apr. 21, 1943	24.8	—
1918	Dec. 16, 1918	28.7	—	1944	May 4, 1944	29.2	—
1919	Oct. 14, 1919	27.4	—	1945	Apr. 1, 1945	33.5	—
1920	May 14, 1920	30.0	—	1946	Dec. 16, 1946	27.6	—
1921	Apr. 29, 1921	29.0	—	1947	May 16, 1947	27.6	—
1922	Apr. 30, 1922	26.1	—	1948	Jan. 4-5, 1948	27.2	—
1923	May 17, 1923	27.9	—	1949	Jan. 28, 1949	31.1	—
1924	Apr. 29, 1924	23.2	—	1950	Feb. 15, 1950	29.1	—
1925	Oct. 20, 1925	22.5	—	1951	July 5, 1951	27.9	—
1926	Dec. 24, 1926	28.9	—	1952	Apr. 25, 1952	29.5	—
1927	Apr. 24, 1927	29.9	—	1953	May 14, 1953	29.0	—
1928	Dec. 20, 1928	27.4	—	1954	May 5, 1954	25.4	—
1929	May 22, 1929	26.4	—	1955	Mar. 24, 1955	27.0	—
1930	May 14, 1930	27.6	—	1956	Feb. 21, 1956	25.7	—
				1957	Apr. 29, 1957	29.9	—
				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 from and at same datum as present gage. 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 above 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.

3410. Saline River near Dierks, Ark.--Cont.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1920	—	^a 21.9	—	1950	Jan. 10, 1950	14.03	5,830
1939	Apr. 16, 1939	17.10	12,000		Jan. 13, 1950	13.83	5,620
	May 19, 1939	14.50	6,400		Feb. 12, 1950	14.82	6,860
1940	Apr. 29, 1940	15.20	7,350		May 2, 1950	13.72	5,520
	May 18, 1940	17.00	11,700		May 6, 1950	13.79	5,620
	July 2, 1940	14.70	6,670		Sept. 16, 1950	15.32	7,610
	July 21, 1940	13.85	5,500		Sept. 20, 1950	14.30	6,180
1941	Nov. 23, 1940	17.94	15,200	1951	Jan. 14, 1951	13.83	5,630
	July 14, 1941	18.75	20,100		July 1, 1951	13.08	5,090
1942	Apr. 8, 1942	17.07	12,000	1952	Mar. 21, 1952	13.50	5,720
	Sept. 9, 1942	13.50	5,260		Apr. 12, 1952	14.90	7,520
1943	Dec. 27, 1942	12.04	3,940		Apr. 22, 1952	16.54	11,000
1944	Mar. 16, 1944	14.38	6,280	1953	Nov. 25, 1952	15.62	8,720
	Apr. 10, 1944	14.34	6,150		Dec. 4, 1952	15.90	9,360
	May 1, 1944	16.68	10,800		Apr. 6, 1953	14.07	6,330
1945	Feb. 21, 1945	15.35	7,730		Apr. 24, 1953	13.64	5,860
	Feb. 27, 1945	15.72	8,330		Apr. 29, 1953	16.78	11,500
	Mar. 30, 1945	19.93	31,200		May 11, 1953	18.56	16,500
1946	Jan. 8, 1946	14.93	7,880		July 21, 1953	14.02	6,250
	Feb. 5, 1946	14.56	7,470	1954	May 2, 1954	11.15	3,640
	Apr. 30, 1946	16.23	10,100	1955	Oct. 1, 1954	13.32	5,320
	May 25, 1946	16.43	10,600		Oct. 12, 1954	13.50	5,720
1947	May 17, 1947	13.97	5,830		Mar. 20, 1955	16.82	11,600
	Aug. 28, 1947	15.00	7,160		July 17, 1955	13.76	5,920
1948	Mar. 1, 1948	13.21	5,050	1956	Apr. 30, 1956	17.71	14,000
1949	Jan. 24, 1949	16.65	9,800	1957	Mar. 17, 1957	14.25	6,490
	May 1, 1949	13.27	5,140		Apr. 3, 1957	13.60	5,820
	June 15, 1949	13.21	5,050		Apr. 25, 1957	13.66	5,920
					Apr. 27, 1957	13.38	5,620
					May 26, 1957	13.62	6,370
				1958	Nov. 13, 1957	15.80	9,140
					Apr. 27, 1958	13.84	6,030
					May 1, 1958	14.70	7,150
					May 3, 1958	13.30	5,820

^a Annual peak only.

3415. Red River at Fulton, Ark.

Location. --Lat 33°37', long 93°49', in NE¼ 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 bridge, 2½ miles downstream from Little River, and at mile 463.0.

Drainage area. --52,380 sq mi, of which about 46,444 sq mi contribute directly to surface runoff.

Gage. --Nonrecording. Prior to Oct. 16, 1942, on railroad bridge 0.3 mile upstream from and at same datum as present gage. 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 by Lake Texoma, 261 miles upstream since July 1942 (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.

3415. Red River at Fulton, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1876	July 17, 1876	35.8	—	1921	Apr. 30, 1921	26.6	—
1886	Apr. 21, 1886	20.9	—	1922	Apr. 9, 1922	28.5	—
1887	Dec. 12, 1887	27.5	—	1923	Dec. 19, 1923	31.4	—
1888	May 7, 1888	31.8	—	1924	May 1-2, 1924	26.2	—
1889	Jan. 20, 1889	30.8	—	1925	May 2, 1925	23.1	—
1890	May 3, 1890	34.0	—	1926	Dec. 25, 1926	27.5	—
1891	Apr. 27-28, 1891	30.3	—	1927	Apr. 24, 1927	35.0	—
1892	May 23-24, 1892	34.8	—	1928	May 24, 1928	25.9	—
1893	Mar. 13, 1893	26.8	—	1929	May 23, 1929	31.1	—
1894	Mar. 24, 1894	32.9	—	1930	May 22, 1930	32.5	—
1895	July 18, 1895	31.4	—	1931	Feb. 17, 27, 1931	18.5	—
1896	Feb. 7, 1896	^a 20.5	—	1932	Jan. 28, 29, 1932	31.6	—
1897	Mar. 23, 1897	28.6	—	1933	May 30, 1933	24.4	—
1898	May 11, 1898	27.9	—	1934	Mar. 5, 1934	21.3	—
1899	Nov. 28, 1899	26.0	—	1935	June 24, 1935	34.8	—
1900	Nov. 4, 1900	23.0	—	1936	Oct. 2, 1936	23.7	—
1901	May 25, 1901	27.7	—	1937	Jan. 17, 1937	22.4	—
1902	Dec. 1, 1902	32.2	—	1938	Feb. 24, 1938	36.4	—
1903	Mar. 14, 1903	31.2	—	1939	Apr. 20, 21, 1939	24.0	—
1904	June 13-14, 1904	31.6	—	1940	May 31, 1940	24.6	—
1905	June 1-3, 1905	31.5	—	1941	June 17, 1941	29.6	—
1906	May 10, 1906	31.2	—	1942	May 2, 1942	33.3	—
1907	June 4, 1907	31.4	—	1943	May 17, 1943	26.0	—
1908	June 2, 1908	34.1	—	1944	May 5, 1944	28.2	—
1909	June 21, 1909	20.6	—	1945	Apr. 2, 1945	37.4	—
1910	Apr. 19, 1910	22.6	—	1946	Dec. 17, 1946	27.34	—
1911	Apr. 21, 1911	24.1	—	1947	May 24, 1947	25.58	—
1912	Apr. 6, 1912	30.9	—	1948	May 14, 1948	23.85	—
1913	Dec. 12, 1913	33.2	—	1949	Jan. 30, 1949	32.03	—
1914	May 9, 1914	31.5	—	1950	Feb. 16, 1950	28.24	—
1915	May 2, 1915	34.1	—	1951	June 19, 1951	26.16	—
1916	Feb. 4, 1916	32.2	—	1952	Apr. 26, 1952	28.22	—
1917	May 1, 1917	19.9	—	1953	May 18, 1953	27.01	—
1918	Apr. 21, 1918	28.1	—	1954	May 14, 1954	21.65	—
1919	Oct. 26, 1919	29.8	—	1955	Mar. 24, 1955	20.54	—
1920	May 18-19, 1920	33.6	—	1956	Feb. 21, 1956	18.03	—
				1957	June 9, 1957	31.12	—
				1958	May 6, 1958	29.41	—

a Maximum crest stage; maximum stage of 21.8 ft observed Jan. 1 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, and at mile 424.0.

Drainage area. --52,630 sq mi, of which about 46,694 sq mi contribute directly to surface runoff.

Gage. --Nonrecording gage prior to Oct. 1, 1934 on railroad bridge 0.2 mile upstream from described site and at same datum; recording gage at described site Oct. 1, 1934 to Sept. 30, 1949. 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.

RED RIVER BASIN

3420. Red River at Garland, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1885	—	28.3	—	1928	May 24, 1928	25.8	78,900
1890	Apr. 30, 1890	28.2	—	1929	May 24, 1929	30.2	105,000
1891	Apr. 28, 1891	27.6	—	1930	May 22-23, 1930	32.5	119,000
1892	May 24-25, 1892	28.4	—	1931	Dec. 10, 1930	21.85	57,100
1893	Dec. 18, 1892	27.3	—	1932	Jan. 28-30, 1932	31.5	131,000
1894	Mar. 24, 1894	28.5	—	1933	May 30, 1933	24.42	80,000
1895	July 19, 1895	28.4	—	1934	Mar. 5, 1934	20.8	56,000
1896	Dec. 31, 1895	24.6	—	1935	May 12, 1935	32.6	132,000
1897	Mar. 24, 1897	27.6	—		May 27, 1935	33.6	138,000
1898	May 11, 1898	27.7	—		June 25, 1935	34.37	143,000
1899	July 26, 1899	24.6	—	1936	Dec. 11, 1935	22.90	73,700
1904	June 11, 1904	28.9	—	1937	Oct. 2, 1936	22.95	74,200
1905	May 31, June 2, 1905	29.0	—	1938	Jan. 28, 1938	31.25	160,000
1906	May 10, 1906	29.5	—		Feb. 25, 1938	^a 35.97	327,000
1907	June 5, 1907	30.5	—		Apr. 4, 1938	29.65	139,000
1908	Apr. 15, 1908	31.1	—	1939	Apr. 20, 1939	22.9	85,000
1909	June 21, 1909	22.3	—	1940	May 30, 1940	^b 22.91	86,900
1910	Apr. 20, 1910	24.8	—	1941	Apr. 27, 1941	25.66	119,000
1911	Apr. 21, 1911	26.0	—		May 10, 1941	25.56	99,000
1912	Apr. 6, 1912	30.9	—		June 17, 1941	^b 27.11	130,000
1913	May 25, 1913	25.8	—	1942	Oct. 9, 1941	^b 23.70	93,400
1914	Dec. 12, 1913	31.7	—		Nov. 6, 1941	^b 24.80	110,000
1915	May 1, 1915	34.0	—		Apr. 15, 1942	^b 31.10	175,000
1916	Feb. 4, 1916	30.3	—		May 2, 1942	32.45	185,000
1917	May 2, 1917	21.3	—	1943	May 17, 1943	^b 24.25	112,000
1918	Apr. 22, 1918	30.4	—		June 1, 1943	^b 20.99	76,000
1920	May 17, 1920	34.7	—	1944	May 5, 1944	^b 25.58	122,000
1921	Apr. 30, 1921	27.5	—	1945	Mar. 3, 1945	^b 28.72	150,000
1922	May 16-17, 1922	29.6	—		Mar. 25, 1945	26.73	118,000
1923	June 15, 1923	26.5	—		Apr. 3, 1945	36.87	280,000
1924	Dec. 21-22, 1923	30.8	—		June 23, 1945	27.10	130,000
1925	May 2, 1925	23.5	—	1946	Oct. 11, 1945	21.50	80,300
1926	Aug. 22, 1926	23.4	—		Feb. 21, 1946	22.20	93,600
1927	Apr. 23, 1927	35.4	—		June 3, 1946	20.98	79,600
				1947	Nov. 10, 1946	23.86	119,000
					Dec. 18, 1946	24.26	123,000
					May 3, 1947	21.17	85,500
					May 25, 1947	22.50	97,000
				1948	Mar. 4, 1948	19.77	78,400
					May 14, 1948	20.75	88,000
				1949	Jan. 31, 1949	30.18	185,000
					Feb. 27, 1949	20.66	84,700
					June 16, 1949	19.35	76,400

RED RIVER BASIN

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3420. Red River at Garland, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 17, 1950	^c 25.8	108,000	1953	May 2, 1953	^b 25.07	117,000
	Feb. 16, 1950	28.20	136,000		May 17, 1953	^b 27.01	127,000
	May 5, 1950	26.6	114,000	1954	May 14, 1954	21.65	86,000
	May 18, 1950	23.1	82,000		Mar. 24, 1955	20.54	83,100
	Sept. 20-21, 1950	25.6	113,000	1955	Mar. 24, 1955	20.54	83,100
1951	Feb. 22-23, 1951	23.80	91,700		Feb. 21, 1956	18.03	59,500
	June 19, 1951	26.16	123,000	1957	May 1, 1957	30.41	220,000
	July 10, 1951	22.09	76,000		June 9, 1957	31.12	228,000
1952	Apr. 15-16, 1952	22.22	87,400		Sept. 26, 1957	20.44	90,500
	Apr. 26, 1952	28.22	150,000	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", lon 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.

Annual 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	^a 19.8	—
1941	Apr. 25, 1941	^a 19.8	—	1950	May 3-4, 1950	^a 20.45	—
1942	Apr. 10, 1942	^a 20.3	—	1951	Feb. 17, 1951	17.18	—
1943	Apr. 19, 1943	^a 16.0	—	1952	Apr. 13, 1952	19.37	—
1944	May 3-4, 1944	^a 20.3	—	1953	May 19, 1953	19.96	—
1945	Apr. 2, 1945	21.3	—	1954	May 14, 1954	18.28	—
1946	May 20, 1946	^a 20.4	—	1955	Mar. 22, 1955	19.0	—
1947	May 15, 1947	^a 16.6	—	1956	May 4, 1956	16.98	—
1948	Mar. 23, 1948	^a 19.5	—	1957	Apr. 5, 1957	20.25	—
				1958	Apr. 27, 1958	20.72	—

a 8 a.m. readings.

RED RIVER BASIN

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 contribute 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, datum of gage was 8 ft higher. Peaks for this report referred to present datum.

Stage-discharge relation. --Not defined.

Bankfull stage. --37 ft.

Historical data. --Date for floods of 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.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1866	—	41.7	—	1929	May 25, 1929	31.6	—
1879	—	39.1	—	1930	May 24, 1930	37.7	—
1892	—	43.7	—	1931	Mar. 11, 1931	21.8	—
1905	June 1-3, 1905	40.8	—	1932	Jan. 31, 1932	33.2	—
1908	—	43.0	—	1933	May 31, 1933	24.4	—
1909	June 22, 1909	26.8	—	1934	Apr. 10-11, 1934	21.7	—
1910	Apr. 20, 1910	29.8	—	1935	June 27, 1935	36.3	—
1911	Apr. 24, 1911	29.9	—	1936	Oct. 3, 1936	23.4	—
1912	Apr. 13, 1912	36.6	—	1937	Jan. 29, 1937	23.7	—
1913	Dec. 18, 1913	36.8	—	1938	Feb. 27, 1938	38.0	—
1914	Apr. 8-9, 1914	39.5	—	1939	Apr. 21, 1939	24.4	—
1915	May 6, 1915	41.5	—	1941	May 11, 1941	29.8	—
1916	Feb. 7, 1916	39.4	—	1942	May 4, 1942	34.7	—
1917	May 3, 1917	23.7	—	1943	May 18, 1943	24.1	—
1918	Apr. 24, 1918	33.3	—	1945	Apr. 6, 1945	42.0	—
1919	Oct. 29-30, 1919	37.5	—	1946	Feb. 22, 1946	26.3	—
1920	May 23, 1920	41.4	—	1947	May 26, 1947	24.9	—
1921	May 1, 1921	29.4	—	1948	Mar. 5-6, 1948	23.0	—
1922	May 4, 1922	32.7	—	1949	Feb. 1, 1949	30.9	—
1923	Dec. 24-27, 1923	34.0	—	1950	Feb. 17, 1950	30.1	—
1924	May 3, 1924	25.9	—	1951	June 19-20, 1951	26.4	—
1925	May 2, 1925	26.5	—	1952	Apr. 27, 1952	29.0	—
1926	Dec. 26, 1926	28.1	—	1953	May 19, 1953	28.83	—
1927	Apr. 27-28, 1927	40.2	—	1954	May 15, 1954	22.7	—
1928	Apr. 28, 1928	26.9	—	1955	May 25, 1955	22.3	—
				1956	Feb. 21, 1956	20.4	—
				1957	May 2-4, 1957	31.6	—
				1958	May 8, 1958	26.5	—

a Maximum peak stage. Maximum stage of 28.8 ft on Jan. 1 following a crest of Dec. 24-27, 1923.

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 at highwater 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.

Annual 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, 1946	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

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.

Annual 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	1947	Nov. 5, 1946	11.18	966
	Jan. 18, 1945	11.05	937		Nov. 11, 1946	14.40	1,660
	Feb. 20, 1945	9.85	758		Nov. 26, 1946	10.40	805
	Feb. 28, 1945	10.62	892		Mar. 13, 1947	11.60	1,050
	Mar. 3, 1945	15.55	1,800		Mar. 23, 1947	12.93	1,330
	Apr. 1, 1945	^a 16.20	1,600		Apr. 11, 1947	10.33	786
	Apr. 24, 1945	10.32	804		May 17, 1947	11.94	1,120
1946	Nov. 12, 1945	10.24	814	1948	Feb. 12, 1948	12.70	1,020
	Jan. 9, 1946	^a 13.29	1,270		Mar. 2, 1948	12.33	962
	Feb. 10, 1946	10.76	815		Mar. 23, 1948	10.82	752
	Mar. 7, 1946	13.46	1,460		May 11, 1948	11.48	850
	Mar. 15, 1946	10.21	768		May 26, 1948	12.57	1,000
	May 13, 1946	14.68	1,730				
	May 25, 1946	14.31	1,550	1949	Jan. 18, 1949	11.41	836
	May 31, 1946	^a 14.61	1,470		Jan. 27, 1949	10.97	780
					Apr. 26, 1949	11.30	822

RED RIVER BASIN

3470. Kelly Bayou near Hosston, La.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 16, 1950	13.73	967	1955	Mar. 21, 1955	11.07	1,050
	Feb. 13, 1950	14.47	1,110		May 20, 1955	10.15	870
	May 2, 1950	14.16	1,100		May 24, 1955	13.44	1,520
1951	Jan. 14, 1951	10.01	513	1956	Feb. 2, 1956	11.86	1,200
1952	Feb. 20, 1952	10.29	809	1957	Feb. 1, 1957	10.25	880
	Apr. 13, 1952	11.34	994		Apr. 4, 1957	11.64	1,040
1953	Mar. 12, 1953	13.55	1,520		Apr. 29, 1957	17.18	1,720
	Apr. 24, 1953	10.24	837		June 5, 1957	12.62	1,070
	Apr. 29, 1953	11.69	955	1958	Nov. 8, 1957	11.58	916
	May 15, 1953	^a 14.53	1,340		Nov. 15, 1957	^a 13.10	970
1954	Jan. 15, 1954	11.31	1,040		Jan. 22, 1958	11.96	921
	May 12, 1954	9.50	714		Apr. 28, 1958	^a 22.72	4,460
					July 7, 1958	11.40	962

^a Occurred on different date.

3487.2 Bayou Dorchest 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 second-feet and extended above.

Remarks.--Gage-height records and occasional current-meter measurements collected by Corps of Engineers. Only annual peaks are shown.

Annual 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				

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 of 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.

Annual 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	1948	Feb. 15, 1948	17.71	4,360
	Mar. 1, 1939	18.47	5,050		Mar. 29, 1948	18.00	4,740
1940	July 6, 1940	22.16	12,600	1949	Jan. 29, 1949	18.70	5,700
1941	Dec. 29, 1940	18.50	5,450		Feb. 2, 1949	18.34	5,140
	Mar. 10, 1941	17.36	4,140		Jan. 16, 1950	20.36	8,340
	May 1, 1941	19.88	7,470	1950	Feb. 14, 1950	19.66	7,170
1942	Apr. 14, 1942	20.10	7,830		Feb. 18, 1950	19.72	7,170
	May 1, 1942	20.82	9,170		Mar. 20, 1950	17.07	3,680
	May 21, 1942	17.52	4,250		May 3, 1950	18.80	5,840
1943	Apr. 22, 1943	16.08	2,830	1951	Feb. 20, 1951	15.67	2,480
1944	Feb. 27, 1944	18.11	5,160	1952	Mar. 14, 1952	17.17	3,730
	Mar. 30, 1944	^a 18.46	5,810	1953	Mar. 14, 1953	^a 16.49	3,150
	May 7, 1944	20.28	8,170		Apr. 30, 1953	^a 19.05	6,020
1945	Jan. 3, 1945	18.61	5,580		May 18, 1953	^a 19.04	5,950
	Mar. 4, 1945	^a 19.82	7,820	1954	May 16, 1954	13.46	1,540
	Apr. 3, 1945	^a 19.00	6,680		Apr. 21, 1955	15.28	2,340
	June 19, 1945	17.08	3,880	1955	Apr. 21, 1955	15.28	2,340
1946	Jan. 11, 1946	19.87	7,990	1956	Feb. 11, 1956	14.52	1,750
	Feb. 11, 1946	17.32	3,900	1957	Apr. 10, 1957	^a 18.45	5,150
	Mar. 17, 1946	16.85	3,480		Apr. 28, 1957	^a 20.49	8,890
	May 15, 1946	^a 18.25	5,420		May 3, 1957	19.09	6,060
	May 21, 1946	^a 18.61	5,760	1958	Nov. 20, 1957	16.95	3,440
1947	May 19, 1948	16.16	2,830		May 2, 1958	25.14	18,600

^a Occurred on different date.

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 from and at same datum as present gage. Datum of present 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.

Annual 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 NW¼ sec. 24, T. 2 S., R. 25 W., on downstream side of bridge on U. S. Highway 270 at Mount Ida, 2-¾ 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 above on basis of slope-area measurement at 10,800 cfs.

Bankfull stage. --10 ft.

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

Annual 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	1951	Feb. 20, 1951	8.75	3,860
	Jan. 10, 1950	8.83	3,860		July 2, 1951	9.80	5,200
	Jan. 13, 1950	10.00	6,120		Sept. 27, 1951	8.45	3,040
	Feb. 1, 1950	9.18	4,520	1952	Nov. 24, 1951	8.44	3,040
	Feb. 12, 1950	10.59	7,540		Jan. 2, 1952	9.05	3,750
	Sept. 16, 1950	9.71	5,000				

3565. South Fork Ouachita River at Mt. Ida, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952 Cont.	Mar. 10, 1952	11.44	7,600	1955	Mar. 20, 1955	8.36	2,920
	Mar. 21, 1952	9.16	4,010	1956	Jan. 29, 1956	9.23	3,780
	Apr. 1, 1952	12.61	10,500		Feb. 2, 1956	10.52	5,640
	Apr. 12, 1952	9.92	4,960		Feb. 17, 1956	9.47	4,160
	Apr. 22, 1952	8.94	3,620	1957	Jan. 22, 1957	8.77	3,890
1953	Nov. 25, 1952	13.24	10,800		Mar. 17, 1957	9.03	4,130
	Dec. 4, 1952	9.50	4,160		Apr. 3, 1957	10.38	5,870
	Mar. 18, 1953	9.50	4,160		Apr. 27, 1957	8.13	3,110
	Apr. 29, 1953	8.68	3,220	1958	Nov. 13, 1957	9.78	5,090
	May 12, 1953	12.02	8,380		Nov. 18, 1957	8.54	3,550
1954	May 2, 1954	10.60	6,320		May 2, 1958	9.92	5,970

3570. Ouachita River near Mountain Pine, Ark.

Location.--Lat 34°36', long 93°12', in NW $\frac{1}{4}$ 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 above by logarithmic plotting.

Remarks.--Station discontinued Sept. 30, 1950, due to backwater from Blakely Mountain Dam. Base for partial-duration series, 25,000 cfs.

Annual peak stages and discharges

Water year	Date		Gage height (feet)	Discharge (cfs)	Water year	Date		Gage height (feet)	Discharge (cfs)
1923	May	— 1923	37.0	^a 112,000	1945	Mar.	20, 1945	19.78	30,400
1937	Jan.	23, 1937	22.38	39,100	Cont.	Mar.	30, 1945	38.55	123,000
						May	16, 1956	18.48	26,500
1938	Jan.	24, 1938	26.8	57,400		June	12, 1945	20.60	32,900
	Feb.	18, 1938	32.2	83,200	1946	Jan.	9, 1946	21.55	36,200
1939	Apr.	17, 1939	34.54	94,900	Apr.	30, 1946	18.62	26,800	
					May	25, 1946	23.10	41,800	
1940	Apr.	29, 1940	13.36	13,700	1947	Dec.	12, 1946	18.76	27,400
1941	Nov.	23, 1940	20.10	31,300	1948	Jan.	2, 1948	20.54	32,600
1942	Apr.	9, 1942	21.12	34,500	1949	Jan.	26, 1949	29.28	69,100
	Apr.	28, 1942	23.90	44,900	May	1, 1949	20.99	34,200	
1943	Dec.	27, 1942	18.46	26,500	1950	Jan.	10, 1950	19.31	28,900
1944	Jan.	14, 1950	21.30	35,300					
	Apr.	23, 1944	26.50	56,000	Jan.	14, 1950	21.30	35,300	
	May	2, 1944	20.90	33,900	Feb.	1, 1950	19.87	30,700	
1945	Feb.	13, 1950	23.69	44,100	Feb.	13, 1950	23.69	44,100	
	Feb.	22, 1945	24.67	48,200	Sept.	15, 1950	^b 29.68	30,000	
	Feb.	28, 1945	23.36	42,900					

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 above by velocity-area study of main channel flow and slope-area measurement of overflow.

Remarks. --Station discontinued Sept. 30, 1930, due to backwater from Carpenter Dam. Only annual peaks are shown.

Annual 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	1926	Jan. 21, 1926	27.10	57,600
1924	Dec. 13, 1923	18.08	23,400	1927	Apr. 21, 1927	42.4	134,000
1925	Feb. 23, 1925	14.62	13,500	1928	Apr. 6, 1928	27.36	59,000
				1929	Dec. 17, 1928	23.25	41,600
				1930	May 18, 1930	29.0	66,000

3595. Ouachita River near Malvern, Ark.

(Published as "at Rammel 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 Rammel 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 than present gage. January 1925 to March 1937 at site 5.8 miles upstream from and at datum 20.11 ft higher than present gage. Datum of present gage is 228.05 ft above mean sea level, datum of 1929. Gage height records for 1903-04 adjusted to present datum.

Stage-discharge relation. --Defined by current-meter measurements below 120,000 cfs at present site and extended above by logarithmic plotting. Defined by current-meter measurements below 44,000 cfs at Rammel 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.

Annual 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	1936	Dec. 9, 1935	12.5	13,200
1904	Mar. 18, 1904	20.0	39,500	1937	Jan. 22, 1937	24.67	53,800
				1938	Feb. 18, 1938	26.74	103,000
1923	May 15, 1923	30.3	140,000	1939	Apr. 16, 1939	27.00	108,000
1924	Dec. 13, 1923		^a 26,000	1940	Apr. 30, 1940	15.82	22,000
1925	Feb. 23, 1925		^a 16,000				
1926	Jan. 21, 1926	24.3	60,900	1941	Nov. 23, 1940	13.72	16,500
1927	Apr. 21, 1927	35.7	138,000	1942	Apr. 8, 1942	21.77	56,000
1928	Apr. 6, 1928	24.43	60,000	1943	May 31, 1943	14.76	19,200
1929	Dec. 17, 1928	21.72	48,100	1944	Apr. 23, 1944	25.20	83,000
1930	May 10, 1930	24.0	58,200	1945	Mar. 30, 1945	27.20	132,000
1931	Oct. 7, 1930	20.22	41,600	1946	May 23, 1946	24.90	80,000
1932	Jan. 5, 1932	26.0	67,400	1947	Dec. 12, 1946	18.60	35,100
1933	Dec. 30, 1932	27.55	74,400	1948	Jan. 2, 1948	18.80	36,100
1934	Mar. 26, 1934	25.2	63,700	1949	Jan. 26, 1949	24.89	90,700
1935	May 5, 1935	28.97	70,500	1950	Feb. 13, 1950	21.72	57,100

3595. Ouachita River near Malvern, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	July 3, 1951	20.70	49,800	1956	Feb. 18, 1956	12.75	15,500
1952	Apr. 23, 1952	18.40	38,600	1957	Apr. 4, 1957	16.14	27,400
1953	Dec. 4, 1952	20.90	54,400	1958	May 2, 1958	21.16	55,200
1954	May 2, 1954	17.36	31,400				
1955	May 27, 1955	14.36	20,000				

a Discharge estimated on basis of records for Ouachita River near Hot Springs, Ark.

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.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar 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 SE $\frac{1}{4}$ 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.

3598. Caddo River near Alpine, Ark.--Cont.

Annual 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, 1953	19.95	37,800
1945	Mar. 30, 1945	30.2	64,200	1954	May 2, 1954	13.80	21,900
1947	Apr. 30, 1947	10.0	12,500	1955	Mar. 21, 1955	16.25	27,900
1948	Mar. 2, 1948	12.39	18,300	1956	Feb. 2, 1956	12.15	17,900
				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 from and at different datum than present gage. January 1914 to Sept. 28, 1934, at present site at datum 5.00 ft higher than present gage (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. Peaks are shown on calendar year basis prior to 1929.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	May 4, 1906	20.6	33,800	1936	Dec. 7, 1935	17.72	23,200
1914	Apr. 29, 1914	26.2	—	1937	Jan. 22, 1937	26.03	81,400
1915	Aug. 22, 1915	26.3	—	1938	Feb. 19, 1938	28.97	133,000
1916	Jan. 28, 1916	23.2	—	1939	Apr. 17, 1939	28.87	131,000
1917	Mar. 4, 1917	20.8	—	1940	May 1, 1940	17.40	20,800
1918	Dec. 14, 1918	23.8	—	1941	Nov. 24, 1940	18.15	22,700
1919	Oct. 12, 1919	25.7	—	1942	Apr. 9, 1942	26.75	94,700
1920	May 12, 1920	27.9	—	1943	Apr. 19, 1943	18.49	22,000
1921	Apr. 27, 1921	26.5	—	1944	May 2, 1944	25.90	86,400
1922	Apr. 1, 1922	22.8	—	1945	Mar. 30, 1945	30.3	170,000
1923	May 15, 1923	28.3	—	1946	Apr. 30, 1946	27.83	122,000
1924	May 1, 1924	15.3	—	1947	Dec. 13, 1946	21.90	36,800
1925	Oct. 18, Nov. 8, 1925	19.0	—	1948	Mar. 2, 1948	23.68	47,300
1926	Dec. 22, 1926	27.8	—	1949	Jan. 27, 1949	28.15	139,000
1927	Apr. 21, 1927	29.2	133,000	1950	Feb. 13, 1950	25.92	76,600
1928	Dec. 18, 1928	24.9	—	1951	July 3, 1951	26.20	81,100
1929	Jan. 26, May 15, 1929	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
1935	May 6, 1935	26.97	94,000	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.

Annual 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.

Annual 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	—	1938	Jan. 24, 1938	17.50	54,300
1928	Apr. 21, 1928	^a 7.75	8,740		Feb. 18, 1938	16.60	38,600
1929	Dec. 17, 1928	^a 12.52	21,600		Mar. 29, 1938	15.60	28,000
1930	May 3, 1930	^a 14.00	26,000	1939	Apr. 16, 1939	14.73	21,800
1931	Feb. 13, 1931	^a 6.80	6,290	1940	May 18, 1940	13.49	16,800
				1941	Nov. 23, 1940	17.03	44,800

RED RIVER BASIN

3610. Little Missouri River near Murfreesboro, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Dec. 23, 1941	14.07	19,600	1949	Jan. 24, 1949	18.05	65,700
	Apr. 8, 1942	16.52	37,200		Mar. 9, 1949	14.83	21,900
	Sept. 9, 1942	16.80	32,500		Mar. 26, 1949	13.26	15,100
1943	Dec. 27, 1942	14.24	20,000	1950	Sept. 16, 1950	13.74	16,600
1944	Apr. 23, 1944	12.69	15,000	1951	July 2, 1951	11.34	9,220
	May 1, 1944	16.60	38,600		Apr. 22, 1952	14.19	17,600
1945	Dec. 6, 1944	13.11	15,200	1952	Apr. 22, 1952	14.19	17,600
	Feb. 21, 1945	15.05	23,800		May 11, 1953	15.60	25,800
	Feb. 27, 1945	15.08	24,500	1954	May 2, 1954	9.10	6,080
	Mar. 30, 1945	19.84	120,000		Mar. 21, 1955	12.55	13,300
1946	Jan. 8, 1946	13.71	17,500	1955	Mar. 21, 1955	12.55	13,300
	Feb. 5, 1946	15.12	24,500		Apr. 30, 1956	10.15	8,180
	Apr. 30, 1946	16.78	41,500	1957	Apr. 3, 1957	10.75	9,020
	May 25, 1946	14.36	20,700		May 2, 1958	15.74	30,300
1947	Apr. 30, 1947	12.62	13,500				
1948	Mar. 2, 1948	14.53	21,200				

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, one 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 7, 1940	13.3	—	1951	Jan. 3, 1951	14.83	—
1941	Apr. 23, 1941	14.5	—	1952	Apr. 12, 1952	15.02	—
1942	Apr. 8, 1942	15.1	—	1953	May 11, 1953	18.08	—
1943	Mar. 12, 1943	16.7	—	1954	May 2, 1954	13.88	—
1944	May 2, 1944	16.4	—	1955	Mar. 21, 1955	15.23	—
1945	Mar. 30, 1945	19.9	—	1956	Feb. 18, 1956	14.17	—
1946	Feb. 6, Mar. 6, 1946	14.5	—	1957	Apr. 3, 1957	a 16.10	—
1947	May 13, 1947	17.96	—	1958	May 1, 3, 1958	16.95	—
1948	Mar. 22, 1948	14.5	—				
1949	Jan. 25, 1949	16.4	—				
1950	Feb. 13, 1950	15.42	—				

a From floodmark.

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 from and at same datum as present gage. Datum of present gage is 229.33 ft above mean sea level, datum of 1929.

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

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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May — 1905	^a 29.7	40,000	1956	Feb. 18, 1956	15.62	4,580
1945	Mar. 31, 1945	^b 24.6	18,800	Cont.	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
1954	May 2, 1954	19.0	7,100		May 24, 1957	18.64	6,720
1955	Mar. 21, 1955	23.52	14,900		May 26, 1957	19.80	7,900
	May 27, 1955	19.87	8,000	1958	Nov. 8, 1957	15.52	4,320
1956	Feb. 2, 1956	18.03	6,540		Nov. 13, 1957	19.59	7,700
	Feb. 8, 1956	16.86	5,580		Jan. 20, 1958	19.44	7,500
					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 by Lake Greeson since November 1949 (capacity, 408,000 acre-ft, drainage area 237 sq mi). Only annual peaks are shown.

RED RIVER BASIN

3616. Little Missouri River near Boughton, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	—	^a 26.9	—	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, 1943	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	37,300	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, 6-3/4 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 than present gage. 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.

Annual 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	—	1951	Jan. 14, 1951	19.25	—
1941	May 6, 1941	19.5	—	1952	Apr. 13, 1952	18.76	—
1942	Apr. 9, 1942	21.9	—	1953	May 12, 1953	20.06	—
1944	May 2, 1944	20.5	—	1954	May 2, 1954	17.94	—
1945	Mar. 30, 1945	22.8	—	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	—
1950	Feb. 13, 1950	19.54	—				

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 of 1882 reached a stage of 46.0 ft from information by Corps of Engineers.

Remarks. --Records furnished by Corps of Engineers except for the period 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.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1882	May 12, 1882	46.0	—	1921	Apr. 30, 1921	38.8	—
				1922	Apr. 3, 1922	37.0	—
1886	Nov. 27, 1886	26.8	—	1923	May 19, 1923	40.1	—
1887	Dec. 13, 1887	35.7	—	1924	Mar. 24, 1924	26.5	—
1888	Jan. 18, 1888	34.2	—	1925	Nov. 11, 1925	29.7	—
1889	Jan. 21, 1889	37.7	—				
1890	Apr. 7, 1890	38.5	—	1926	Dec. 26, 1926	39.1	—
				1927	Apr. 24, 1927	41.8	—
1891	Feb. 5, 1891	35.6	—	1928	Apr. 11, 1928	30.4	—
1892	Dec. 17, 1892	38.0	—	1929	Dec. 22, 1928	35.41	62,400
1893	Jan. 6, 1893	34.8	—	1930	May 21, 1930	40.84	138,000
1894	Mar. 23, 1894	43.25	—				
1895	Mar. 18, 1895	30.7	—	1931	Oct. 10, 1930	24.91	14,500
				1932	Jan. 9, 1932	38.42	102,000
1896	Feb. 6-7, 1896	34.0	—	1933	Jan. 5, 1933	32.46	36,700
1897	Mar. 23, 1897	38.75	—	1934	Mar. 31, 1934	33.32	38,800
1898	Jan. 25, 1898	33.7	—	1935	May 9, 1935	39.33	126,000
1899	Jan. 18, 1899	39.1	—				
1900	Mar. 4, 1900	26.2	—	1936	Dec. 13, 1935	25.2	22,700
				1937	Jan. 25, 1937	41.71	151,000
1901	Apr. 23, 1901	33.9	—	1938	Feb. 22, 1938	41.1	158,000
1902	Dec. 1, 1902	36.2	—	1939	Apr. 21, 1939	37.71	102,000
1903	Feb. 20, 1903	39.6	—	1940	July 4, 1940	^a 28.66	24,400
1904	June 12, 1904	33.6	—				
1905	July 1, 1905	42.0	—	1941	May 11, 1941	31.78	37,500
				1942	Apr. 12, 1942	40.17	124,000
1906	Jan. 27, May 8, 1906	35.2	—	1943	Mar. 17, 1943	30.14	39,000
1907	Jan. 6, 1907	42.9	—	1944	May 5, 1944	39.10	144,000
1908	May 19, 1908	36.1	—	1945	Apr. 3, 1945	44.82	243,000
1909	Mar. 13, 1909	31.0	—				
1910	Apr. 17, 1910	33.1	—	1946	May 29, 1946	^b 37.46	89,900
				1947	Nov. 13, Dec. 17, 1946	^c 29.71	33,500
1911	Apr. 22, 1911	38.2	—	1948	Mar. 6, 1948	35.41	57,000
1912	Apr. 5, 1912	39.4	—	1949	Jan. 30, 1949	44.15	185,000
1913	Apr. 14, 1913	37.1	—	1950	Feb. 17, 1950	39.63	110,000
1914	Apr. 4, 1914	36.9	—				
1915	Aug. 25, 1915	36.5	—	1951	Jan. 20, 1951	34.40	53,400
				1952	Apr. 18, 1952	35.45	58,400
1916	Feb. 1, 1916	39.0	—	1953	May 16, 1953	^a 38.82	126,000
1917	Mar. 8, 1917	31.7	—	1954	May 6, 1954	^a 28.78	32,900
1918	Apr. 23, 1918	35.5	—	1955	Mar. 25, 1955	^a 34.51	58,200
1919	Oct. 16, 1919	37.4	—				
1920	May 20, 1920	38.6	—	1956	Feb. 21, 1956	^a 29.28	32,000
				1957	May 1, 1957	38.92	98,900
				1958	May 5, 1958	43.87	181,000

^a Occurred on following day. Note: Calendar year basis prior to 1928; water year thereafter.

^b Occurred Jan. 13, 1946.

^c Occurred Nov. 11, 1946.

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.

Annual 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	^a Jan. 10, 1946	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 No. 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.

Annual 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	—	1921	May 4, 1921	33.7	—
1911	Apr. 25, 1911	34.3	—	1922	Apr. 6, 1922	33.5	—
1912	Apr. 8, 1912	35.5	—	1923	May 22-23, 1923	33.4	—
1913	Apr. 18, 1913	31.2	—	1924	Jan. 1, 1924	26.1	—
1914	Apr. 8, 1914	32.0	—	1925	Nov. 15, 1925	26.5	—
1915	Feb. 10, 1915	30.7	—	1926	Dec. 30, 1926	34.1	—
1916	Feb. 5, 1916	35.7	—	1927	Apr. 27, 1927	38.9	—
1917	Mar. 13-14, 1917	27.4	—	1928	Dec. 27, 1928	29.6	—
1918	Apr. 27, 1918	30.2	—	1929	Feb. 3, 1929	27.9	—
1919	Oct. 30, 1919	33.1	—	1930	May 23-24, 1930	37.5	—
1920	May 22, 1920	34.7	—				

3624. Ouachita River at Lock and Dam No. 8, Champagnolle Landing, Ark.--Cont.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1931	Dec. 25, 1931	32.7	—	1944	May 9, 1944	37.2	—
1932	Feb. 1, 1932	34.6	—	1945	Apr. 6, 1945	40.2	—
1933	Jan. 10-11, 1933	26.7	—	1946	Jan. 16, 1946	34.5	—
1934	Apr. 4, 1934	29.3	—	1947	May 25, 1947	26.7	—
1935	May 13, 1935	34.4	—	1948	Mar. 10, 1948	31.7	—
1936	Dec. 13, 1936	20.7	—	1949	Feb. 2, 1949	39.0	—
1937	Jan. 28, 1937	38.2	—	1950	Feb. 20, 1950	35.3	—
1938	Jan. 31, 1938	36.4	—	1951	Mar. 1, 1951	29.7	—
1939	Apr. 25, 1939	32.5	—	1952	Apr. 22-23, 1952	30.6	—
1940	July 8-9, 1940	27.8	—	1953	May 21, 1953	35.4	—
1941	May 14-15, 1941	28.0	—	1954	May 10, 1954	27.0	—
1942	Apr. 16, 1942	34.6	—	1955	Mar. 31, 1955	29.2	—
1943	Mar. 23, 1943	28.1	—	1956	Feb. 25-26, 1956	27.2	—
				1957	May 5, 1957	34.8	—
				1958	May 8, 1958	40.4	—

3625. Moro Creek near Fordyce, Ark.

Location. --Lat 33°47', long 92°20', in NW¼ 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	January 1938	^a 15.1	15,800	1955	Mar. 23, 1955	12.27	4,360
1952	Mar. 12, 1952	11.23	2,150		Apr. 14, 1955	11.30	2,120
	Apr. 15, 1952	11.88	3,290	1956	Feb. 22, 1956	10.22	1,060
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	1958	Nov. 14, 1957	11.57	2,350
	May 14, 1953	12.55	5,340		Dec. 10, 1957	11.71	2,610
	May 18, 1953	12.54	5,340		Jan. 24, 1958	11.40	2,130
1954	May 4-5, 1954	10.94	1,760		Apr. 28, 1958	13.26	6,790
					May 2, 1958	16.47	26,800

a Annual peak only, from information by Arkansas Highway Department.

RED RIVER BASIN

3630. Saline River at Benton, Ark.

Location. --Lat 34°34'05", long 92°36'40", in NE $\frac{1}{4}$ 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 the period. Prior to Mar. 26, 1950, at site 0.4 mile downstream from and at datum 3.00 ft lower than present gage. 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 of April 1927 reached a stage of 32.0 ft at former site and datum, from information by Arkansas State Highway Department, or about 30.5 ft at present site and datum.

Remarks. --Peaks prior to 1948 computed from graph based on once-daily or more frequency gage readings of U. S. Weather Bureau and will not necessarily agree with maxima 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	April 1927	32.0	—	1953	Nov. 26, 1952	19.77	18,600
1938	Jan. 22, 1938	23.52	34,000	1953	Dec. 4, 1952	25.28	49,500
1939	Apr. 17, 1939	27.5	67,000	1953	Jan. 23, 1953	18.00	14,200
1940	Apr. 7, 1940	15.4	7,800	1953	Mar. 18, 1953	19.18	17,000
1941	May 9, 1941	15.4	7,800	1953	Apr. 6, 1953	16.72	11,900
1942	Apr. 9, 1942	25.0	45,000	1953	Apr. 24, 1953	17.52	13,300
1943	Mar. 12, 1943	20.1	17,300	1953	May 12, 1953	19.22	18,100
1944	Apr. 23, 1944	26.72	58,000	1954	May 2, 1954	24.49	48,000
1945	Mar. 30, 1945	27.0	59,000	1955	Mar. 21, 1955	19.51	19,700
1946	May 24, 1946	26.2	50,000	1955	May 27, 1955	23.16	38,800
1947	Apr. 11, 1947	16.4	8,800	1956	Jan. 30, 1956	22.36	33,200
1948	Mar. 2, 1948	23.0	25,500	1956	Feb. 2, 1956	21.43	27,400
1949	Jan. 25, 1949	24.50	32,000	1956	Feb. 9, 1956	17.44	14,100
1950	Feb. 13, 1950	24.50	32,000	1956	Feb. 18, 1956	20.77	24,400
1951	Jan. 15, 1951	20.27	14,700	1957	Jan. 23, 1957	18.23	16,000
1951	Feb. 16, 1951	17.80	10,500	1957	Jan. 28, 1957	16.76	12,900
1951	Feb. 21, 1951	22.60	21,500	1957	Apr. 4, 1957	22.68	35,200
1951	Apr. 7, 1951	18.16	11,000	1957	Apr. 28, 1957	18.58	17,100
1951	July 3, 1951	18.22	14,700	1957	May 24, 1957	19.84	20,700
1952	Jan. 4, 1952	15.44	10,000	1957	May 26, 1957	18.34	16,300
1952	Apr. 13, 1952	20.42	20,500	1957	June 14, 1957	15.50	10,600
1952	Apr. 23, 1952	17.54	13,300	1957	Aug. 18, 1957	15.67	10,200
				1958	Nov. 14, 1957	18.70	17,900
				1958	Jan. 21, 1958	17.8	15,500
				1958	Apr. 29, 1958	14.95	10,100
				1958	May 3, 1958	21.40	28,400
				1958	May 5, 1958	15.70	11,200
				1958	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.

Annual 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	—	1948	Mar. 5, 1948	16.4	18,500
1939	Apr. 19, 1939	19.4	—	1949	Jan. 28, 1949	20.1	61,000
1940	Apr. 13, 1940	13.2	—	1950	Feb. 15, 1950	19.7	56,000
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
				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, 5-¾ 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.

Annual 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	—

RED RIVER BASIN

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 of April 1927 is greatest known, from information by Arkansas State Highway Department.

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

Annual 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	^a 73,000	1948	Feb. 19, 1948	23.75	14,400
1938	Jan. 27, 1938	28.0	42,300		Mar. 9, 1948	25.02	20,400
	Feb. 23, 1938	27.81	40,700		Mar. 27, 1948	24.97	20,400
	Apr. 8, 1938	24.05	16,500	1949	Jan. 31, 1949	29.19	57,400
1939					Apr. 2, 1949	24.36	17,100
	Feb. 9, 1939	26.05	27,700	1950	Jan. 17, 1950	26.70	32,000
	Feb. 17, 1939	24.90	21,200		Feb. 7, 1950	26.33	29,000
	Mar. 5, 1939	23.60	15,500		Feb. 18, 1950	28.26	46,500
	Apr. 16, 1939	22.50	12,100		Mar. 16, 1950	22.93	11,500
	Apr. 23, 1939	26.50	31,400		Apr. 5, 1950	22.38	10,300
1940	July 3, 1940	20.91	9,040		May 14, 1950	23.86	14,800
1941	Apr. 28, 1941	21.60	9,050	1951	Jan. 21, 1951	25.10	21,000
1942	Apr. 14, 1942	27.65	39,600		Mar. 2, 1951	22.32	10,100
	May 4, 1942	24.92	19,800	1952	Apr. 21, 1952	23.92	14,800
1943	Mar. 16, 1943	22.29	10,100	1953	Mar. 25, 1953	24.96	20,800
1944	Mar. 29, 1944	24.20	16,100		May 5, 1953	23.72	15,300
	May 8, 1944	26.77	32,800		May 19, 1953	27.16	36,100
1945	Jan. 6, 1945	23.29	12,600	1954	May 11, 1954	23.30	14,600
	Mar. 6, 1945	26.05	26,900	1955	Mar. 29, 1955	24.30	17,600
	Apr. 5, 1945	28.43	47,600	1956	Feb. 11, 1956	24.32	17,600
	May 21, 1945	25.95	26,900		Feb. 24, 1956	25.10	21,300
	June 18, 1945	25.53	23,500	1957	Feb. 6, 1957	24.29	17,600
1946	Jan. 14, 1946	26.91	36,100		Apr. 9, 1957	26.50	33,000
	Feb. 14, 1946	24.62	20,400		May 3, 1957	27.00	37,000
	Apr. 2, 1946	27.01	37,100		June 3, 1957	23.66	16,700
	May 8, 1946	22.91	13,300	1958	Nov. 20, 1957	25.70	27,200
	May 30, 1946	25.62	26,500		Jan. 30, 1958	22.46	12,600
1947	June 26, 1947	21.94	10,700		May 3, 1958	30.31	70,500
					May 21, 1958	22.23	11,800

a Annual peak only.

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 southeast 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 27, 1927	^a 28.0	—	1938	Jan. 28, 1938	25.72	57,100
1929	Mar. 11-13, 1929	20.22	11,900	1939	Feb. 10, 1939	24.39	32,200
1930	Mar. 19, 1930	25.90	61,500	1940	July 3, 1940	22.49	16,400
1931	Apr. 3-6, 1931	12.00	4,270				

a From floodmarks.

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 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.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 16-18, 1912	39.0	—	1926	Apr. 18-19, 1926	26.2	—
1913	Apr. 24-26, 1913	30.8	—	1927	Apr. 30, May 1, 1927	43.0	—
1914	Apr. 15-16, 1914	32.2	—	1928	May 7-8, 1928	27.1	—
1915	Mar. 17-19, 1915	29.7	—	1929	Mar. 23-24, 1929	26.4	—
				1930	May 30-31, 1930	36.6	—
1916	Feb. 12-13, 1916	35.0	—				
1917	Mar. 22-24, 1917	23.1	—	1931	Apr. 6-7, 1931	^a 19.9	—
1918	May 5-6, 1918	24.1	—	1932	Feb. 3-4, 1932	42.7	—
1919	Dec. 16-17, 1919	30.9	—	1933	Apr. 11-15, 1933	26.2	—
1920	May 29, 1920	34.5	—	1934	Apr. 17-20, 1934	29.0	—
				1935	May 21, 1935	31.2	—
1921	May 12-13, 1921	32.8	—				
1922	Apr. 13-16, 1922	35.0	—	1936	Feb. 5, 1936	18.5	—
1923	May 29-30, 1923	32.2	—	1937	Feb. 4-5, 1937	38.8	—
1924	Jan. 3-5, 1924	26.0	—	1938	Mar. 4, 1938	34.8	—
1925	Nov. 20-22, 1925	26.2	—	1939	Mar. 10-13, 1939	34.6	—
				1940	July 15, 1940	24.2	—

3640.8 Ouachita River at Lock and Dam No. 6 near Felsenthal, Ark.--Cont.

Annual peak stages and discharges

Calendar year	Date	Gage height (feet)	Discharge (cfs)	Calendar year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 21-23, 1941	25.5	—	1951	Mar. 8-9, 1951	28.8	—
1942	May 10-11, 1942	32.8	—	1952	May 5-7, 1952	29.2	—
1943	Apr. 7-10, 1943	25.2	—	1953	May 28-29, 1953	39.4	—
1944	May 15-16, 1944	39.2	—	1954	May 19, 1954	23.2	—
1945	Apr. 11-12, 1945	44.2	—	1955	Apr. 20-23, 1955	26.1	—
1946	Feb. 22-24, 1946	37.7	—	1956	Mar. 3-5, 1956	26.8	—
1947	Apr. 21-24, 1947	25.2	—	1957	May 11-14, 1957	35.8	—
1948	Apr. 3-5, 1948	33.5	—	1958	May 14-16, 1958	43.0	—
1949	Feb. 10-12, 1949	36.0	—				
1950	Feb. 25-26, 1950	40.0	—				

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, $\frac{3}{4}$ 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.

Annual 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
1946	Jan. 12, 1946	23.1	2,580	1955	Mar. 27, 1955	19.1	1,520
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, 2-3/4 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.

3641.5 Bayou Bartholomew near McGehee, Ark.--Cont.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	—	^a 19.4	4,300	1946	Jan. 20-21, 1946	21.3	5,200
1932	—	^a 22.4	5,600	1947	June 5, 1947	13.7	2,100
1939	Feb. '28, 1939	19.4	4,300	1948	Feb. 22, 1948	20.0	4,600
1940	July 15, 1940	11.1	1,350	1949	Feb. 6-7, 1949	16.2	3,000
1941	Mar. 13, 1941	12.4	1,700	1950	Jan. 21,23, 1950	20.0	4,600
1942	May 10-11, 1942	15.5	2,700	1951	Jan. 24-25, 1951	14.8	2,450
1943	Mar. 27, 1943	17.0	3,300	1952	Feb. 9, 1952	14.8	2,450
1944	Apr. 3-4, 1944	17.7	3,600	1953	May 25, 1953	22.5	5,700
1945	Apr. 8, 1945	20.7	4,900	1954	Feb. 1, 1954	12.0	1,600
				1955	Apr. 19, 1955	16.6	3,150
				1956	Feb. 14, 1956	17.3	3,450
				1957	Feb. 14, 1957	16.79	3,070
				1958	May 11, 1958	24.49	6,870

a From floodmarks.

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 from and at same datum as present gage. Datum of present gage is 85.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

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

Annual 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	1946	Feb. 14-22, 1946	25.3	6,640
1930	May 27-28, 1930	24.9	6,440	1947	Apr. 18, 1947	18.1	3,580
1931	Mar. 16-18, 1931	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	1951	Feb. 16, 1951	20.2	4,180
1935	Jan. 31, Feb. 6, 1935	24.8	6,400	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	1956	Apr. 23-25, 1956	20.8	4,360
1940	July 17-20, 1940	18.9	3,890	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 NW¼NW¼ 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. 17, 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.

Annual peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 1, 1927	^a 26.75	—	1947	Jan. 23, 1947	17.50	4,960
1929	Mar. 27, 1929	19.20	5,230		Mar. 17, 1947	17.41	4,910
1930	Feb. 1, 1930	21.44	7,120		Apr. 13, 1947	20.80	6,700
	May 21, 1930	23.64	9,130	1948	Feb. 16, 1948	23.34	7,380
1931	Jan. 13, 1931	9.08	1,560		Mar. 7, 1948	22.62	7,070
1932	Jan. 12, 1932	25.78	^b 12,400		Apr. 18, 1948	20.05	5,900
1933	Apr. 4, 1933	21.70	7,400	1949	Feb. 9, 1949	20.28	6,030
1934	Mar. 6, 1934	21.40	7,200		Mar. 29, 1949	23.35	7,800
1935	Feb. 15, 1935	22.80	8,400	1950	Jan. 17, 1950	21.82	7,120
1936	Feb. 11-12, 1936	7.40	1,260		Feb. 16, 1950	25.76	9,380
1937	Jan. 27, 1937	23.60	9,100		Mar. 17, 1950	22.71	7,620
1938	Apr. 11, 1938	19.20	5,820		May 4, 1950	22.00	7,230
1939	Mar. 2-3, 1939	22.07	7,560		Sept. 4, 1950	18.23	5,140
	Apr. 10, 1939	19.96	6,290	1951	Jan. 7, 1951	18.32	^c 5,490
1940	Apr. 22, 1940	19.06	^c 5,610		Feb. 11-12, 1951	20.50	^c 6,560
	July 16, 1940	23.83	8,570		Apr. 1, 1951	17.22	^c 4,970
1941	Jan. 7, 1941	17.25	^c 4,750	1952	Feb. 2, 1952	17.32	4,760
	Mar. 11, 1941	18.81	5,470	1953	Mar. 16, 1953	18.70	^c 5,060
1942	Apr. 12, 1942	21.29	6,860		May 20, 1953	25.09	8,540
1943	Apr. 4, 1943	16.86	4,610	1954	May 6, 1954	20.30	5,680
1944	Feb. 29, 1944	21.93	6,790	1955	Mar. 24, 1955	22.48	7,510
	Mar. 31, 1944	25.33	8,780		Apr. 17, 1955	20.26	^c 6,420
	May 7, 1944	23.94	7,940	1956	Feb. 21-22, 1956	18.05	^c 5,000
1945	Jan. 4, 1945	21.50	7,080		Mar. 17, 1956	17.77	^c 4,920
	Feb. 23, 1945	22.10	7,410		Mar. 23, 1956	17.31	^c 4,720
	Apr. 5, 1945	26.45	9,890		Apr. 9, 1956	18.14	5,030
1946	Feb. 12, 1946	27.23	10,400	1957	Feb. 6, 1957	17.19	^c 4,680
					Mar. 4, 1957	17.97	^c 5,000
					Apr. 7, 1957	21.08	^c 6,480
					May 6, 1957	18.24	^c 4,980
				1958	Nov. 21, 1957	24.59	^c 8,500
					Jan. 26, 1958	18.70	^c 5,250
					May 2, 1958	28.30	^c 14,700
					May 23, 1958	26.71	^c 10,300
					Sept. 23, 1958	23.92	^c 8,060

a Affected by Mississippi River overflow.

b Result of discharge measurement.

c Mean daily.

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. 3, 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 of 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.

Annual 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		Jan. 31, 1949	14.85	4,440
	Mar. 10, 1941	14.84	4,550	1950	Jan. 17, 1950	15.54	6,440
	Apr. 7, 1941	15.02	5,140		Feb. 16, 1950	15.22	5,470
	May 7, 1941	17.48	15,100		Mar. 16, 1950	14.82	4,440
1942	Apr. 11, 1942	16.48	10,300		May 4, 1950	15.24	5,600
	Apr. 29, 1942	15.42	6,330	1951	Feb. 11, 1951	13.75	2,520
1943	Mar. 30, 1943	14.26	3,230	1952	Jan. 30, 1952	14.86	4,690
	Feb. 29, 1944	15.09	5,360		Feb. 15, 1952	15.16	5,470
1944	Mar. 31, 1944	16.78	11,000		Apr. 16, 1952	14.85	4,440
	May 4, 1944	16.27	9,000	1953	Mar. 15, 1953	15.40	6,020
	Jan. 4, 1945	16.23	8,590		May 2, 1953	16.03	7,980
1945	Feb. 24, 1945	14.84	4,440		May 16, 1953	16.28	8,890
	Mar. 1, 1945	15.02	4,940	1954	May 6, 1954	12.90	1,700
	Mar. 5, 1945	18.20	17,200	1955	Mar. 25, 1955	14.36	3,540
	Apr. 3, 1945	18.00	16,200		Feb. 9, 1956	13.43	2,320
1946	Jan. 11, 1946	15.44	6,020	1957	Apr. 6, 1957	14.67	4,010
	Feb. 12, 1946	15.82	7,210		Apr. 30, 1957	17.06	11,500
	Mar. 30, 1946	15.25	5,470	1958	Apr. 27, 1958	25.20	^a 46,300
	May 16, 1946	15.42	6,020				
	May 23, 1946	14.72	4,200				
1947	Mar. 16, 1947	14.70	4,200				
	Apr. 14, 1947	15.39	6,020				

a Annual peak only.

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 2, 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 of Engineers. Discharge computed from rating curve based on all available current-meter measurements. Major channel improvements made in 1955. Only annual peaks are shown.

RED RIVER BASIN

3676.8 Boeuf River near Eudora, Ark.--Cont.

Annual 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 SW¼ 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, 7½ 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 and 55. Only annual peaks stages are shown.

Annual 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, 1955	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	—				
1951	Jan. 5, 1951	22.6	—	1956	Feb. 4, 1956	18.4	—
1952	Jan. 30-31, 1952	21.5	—	1957	Feb. 2, 1957	18.1	—
				1958	Sept. 22, 1958	22.7	—

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 old U. S. Highway 65 bridge 0.2 mile upstream from and at same datum as present gage. 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. Discharge computed from curves based on discharge measurements. Only annual peaks are shown.

RED RIVER BASIN

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3696.8 Bayou Macon at Eudora, Ark.--Cont.

Annual 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 Bacon 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 furnished by Corps of Engineers. Only annual peak stages are shown.

Annual 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	—	1953	May 17, 1953	22.2	—
1948	Feb. 13-14, 1948	22.1	—	1954	May 4, 1954	17.8	—
1949	Jan. 4, 1949	21.5	—	1955	Mar. 22, 1955	22.6	—
1950	Feb. 14, 1950	22.5	—	1956	Mar. 14, 1956	19.77	—
1951	Jan. 4, 1951	21.7	—	1957	Feb. 2, 1957	19.4	—
1952	Jan. 28, 1952	18.9	—	1958	Sept. 21, 1958	23.55	—

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