

Surface Water Supply of the United States 1951

Part 7. Lower Mississippi River Basin

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1211

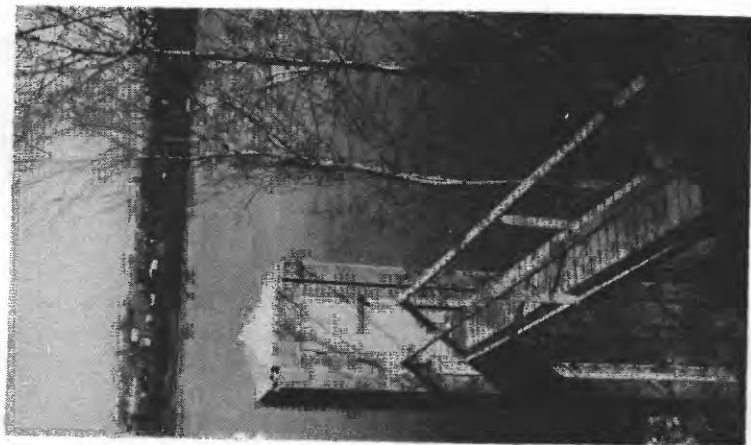
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Missouri, New Mexico, Oklahoma,
Tennessee, and Texas, and with other
agencies*



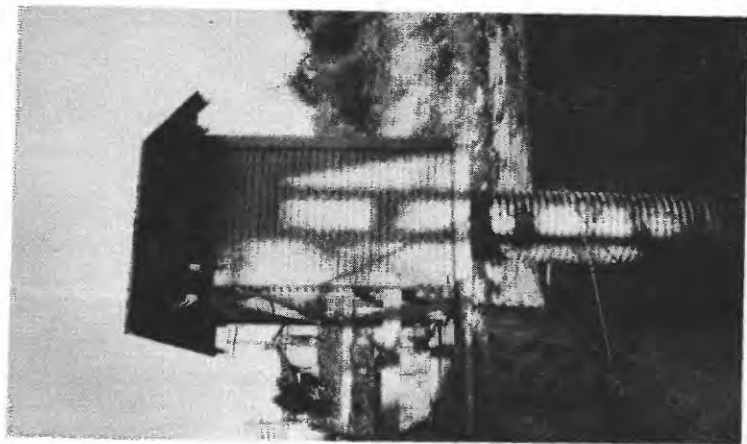
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U.S.G.S.
SURFACE WATER BRANCH



4. ARKANSAS RIVER AT LITTLE ROCK, ARK.



B. RED RIVER NEAR COLBERT, OKLA.

FIGURE 1.—GAGING-STATION STRUCTURES.

parable records of discharge for other stations in the same or nearby basins. If the stage-discharge relation is affected by ice, this information is given in a note to the table. No mention is made of occasional days of ice effect if the degree of accuracy of daily records is not changed.

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge and runoff of the stream.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks and notations of revisions of the previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "Location" for some stations, is that determined and used by the Corps of Engineers unless otherwise noted. Under "Gage" are given the type of gage currently in use and the datum of the present gage above mean sea level, and a condensed history of the types of gages, locations, and datums of previous gages for which discharge records are generally equivalent to those at the present site. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest-stage obtained by use of a water-stage recorder, a crest-stage indicator, or a non-recording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and conditions which affect the natural flow at the gaging station is given under "Remarks."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. In order to make it easier to find such revised records, a paragraph headed "Revisions (water years)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the report number, "W" means water-supply paper. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are concerned in the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff, in inches, are published, a revision of the drainage area necessitates corres-

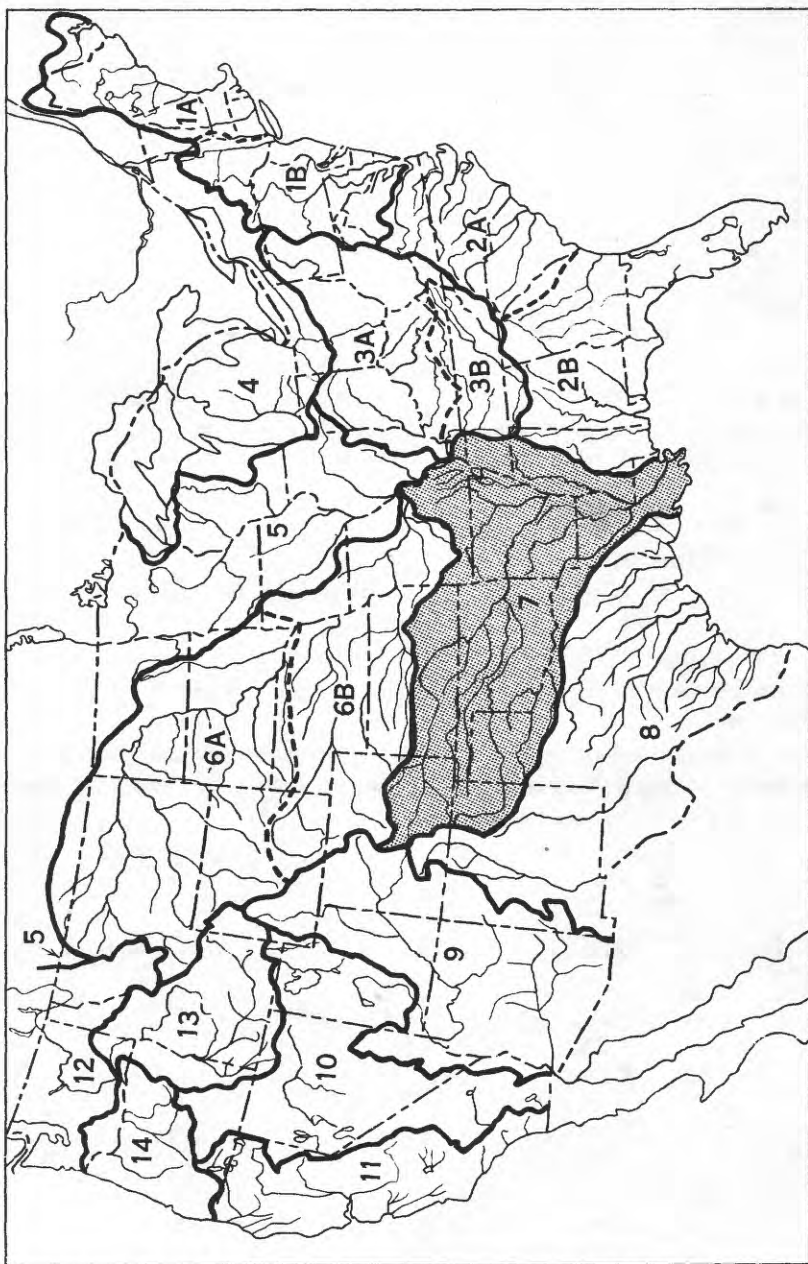


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface water supply. The area covered by this report is shaded.

Part 1. North Atlantic slope basins, in two volumes:

- A, North Atlantic slope basins, Maine to Connecticut.
- B, North Atlantic slope basins, New York to York River.

2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:

- A, South Atlantic slope basins, James River to Savannah River.
- B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.

3. Ohio River basin, in two volumes:

- A, Ohio River basin except Cumberland and Tennessee River basins.
- B, Cumberland and Tennessee River basins.

4. St. Lawrence River basin.

5. Hudson Bay and upper Mississippi River basins.

6. Missouri River basin, in two volumes:

- A, Missouri River basin above Sioux City, Iowa.
- B, Missouri River basin below Sioux City, Iowa.

7. Lower Mississippi River basin.

8. Western Gulf of Mexico basins.

9. Colorado River basin.

10. The Great Basin.

11. Pacific slope basins in California.

12. Pacific slope basins in Washington and upper Columbia River basin.

13. Snake River basin.

14. Pacific slope basins in Oregon and lower Columbia River basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be purchased or consulted as follows:

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.

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

3. Sets are available for consultation in the offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page

Early records of the flow of streams in the United States are published in the reports listed below. In many of these reports records for years earlier than those indicated have been included for some streams.

Streamflow data for the years 1884-1901, in reports of the Geological Survey

(A = Annual Report; B = Bulletin; W = Water-Supply Paper)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2do.....	1884 to June 30, 1891.
13th A, pt. 3do.....	1884-92.
14th A, pt. 2	Monthly discharge.....	1888-93.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
W 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of stream west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge.....	1898.
W 35 to 39....	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52....	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.....	1901.
W 75.....	Monthly discharge.....	1901.

Records of discharge collected by agencies other than the Geological Survey--Continued

Stream	Location	Period
Muddy Fork Creek.....	Murfreesboro, Ark.....	1940-42, 1947-51.
Obion River.....	Bogota, Tenn.....	1939-51.
Obion River, North Fork.....	Martin, Tenn.....	1939-51.
Old River.....	Torras, La.....	1928-51.
Quachita River.....	Arkadelphia, Ark.....	1930-51.
Do.....	Camden, Ark.....	1930-51.
Do.....	Mountain Pine, Ark.....	1951.
Panola-Quitman floodway.....	Batesville, Miss.....	1940-42, 1944-51.
Quiver River.....	Doddsville, Miss.....	1938-51.
Red River.....	Fulton, Ark.....	1938-42, 1946-51.
St. Francis Bay.....	Riverfront, Ark.....	1933-51.
St. Francis River.....	Lake City, Ark.....	1933-51.
Do.....	Parkin, Ark.....	1928-51.
Do.....	St. Francis, Ark.....	1930-51.
Do.....	Wittsburg, Ark.....	1951.
Tuscumbia River.....	Corinth, Miss.....	1949-51.
Tyroneza River.....	Tyroneza, Ark.....	1949-51.
White River.....	Clarendon, Ark.....	1928-51.
Wolf River.....	Raleigh, Tenn.....	1936-51.
Yalobusha River.....	Whaley, Miss.....	1938-51.
Yocoma River.....	Oxford, Miss.....	1946-51.

Note.--The Soil Conservation Service of the U. S. Department of Agriculture has collected records beginning in 1931 from eight areas of less than 10 acres each, 3 areas of less than 20 acres each, 1 area of less than 40 acres and 1 area of less than 100 acres, all near Guthrie, Okla. These records are not published but are available in files of the Soil Conservation Service.

HYDROLOGIC CONDITIONS

Streamflow during the 1951 water year was normal or slightly above normal in most of the lower Mississippi River basin with exception of Louisiana where drought conditions prevailed and in southeastern Kansas where runoff was generally greater than any previously recorded. The record-breaking Kansas-Missouri flood, which also extended into parts of Oklahoma, is described in Water-Supply Paper 1139, "Kansas-Missouri Floods of July 1951." Floods in northwestern Texas in May are described in Water-Supply Paper 1227-B, "Floods of May 1951 in western Oklahoma and northwestern Texas." For three key stations in the area covered by this report, a comparison of monthly and yearly mean discharge during the 1951 water year with the median discharge for the 25-year period 1921-45 is shown in figure 3 on the following page.

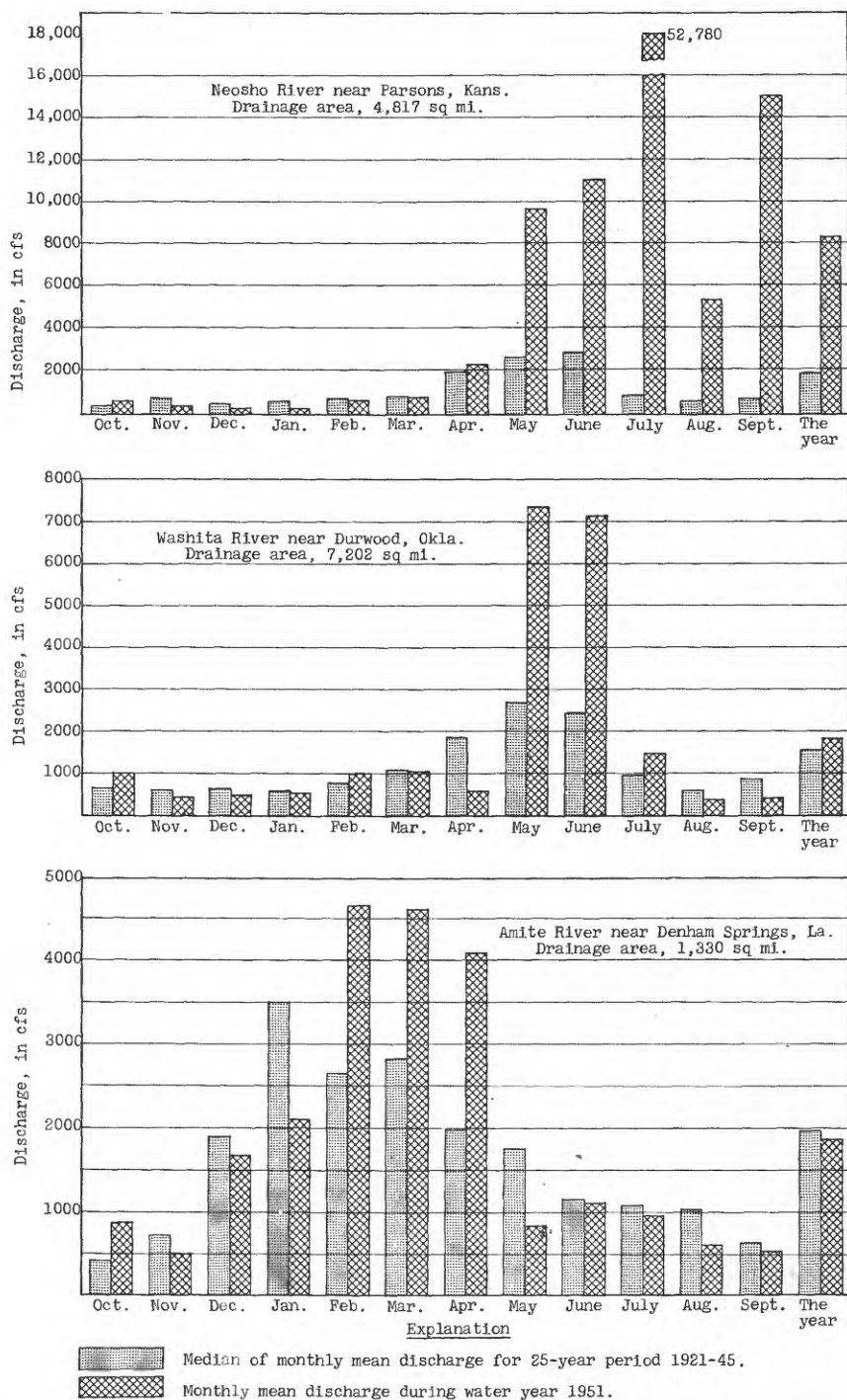


Figure 3.--Comparison of discharge at three key gaging stations during 1951 water year with median discharge for 25-year period.

