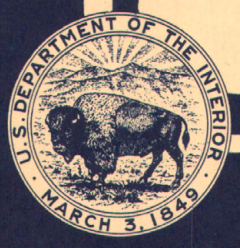
1971

Water Resources Data for Oklahoma

Part 1. Surface Water Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Oklahoma
and with other agencies

CALENDAR FOR WATER YEAR 1971

OCTOBER 1970

S	M	T	W	T	F	S
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29	30					

DECEMBER 1970

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JANUARY 1971

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FEBRUARY 1971

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28						

MARCH 1971

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APRIL 1971

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MAY 1971

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30	31					

JUNE 1971

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JULY 1971

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AUGUST 1971

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29	30	31				

SEPTEMBER 1971

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26	27	28	29	30		

1971

Water Resources Data for Oklahoma

Part 1. Surface Water Records

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Oklahoma
and with other agencies

Prepared in cooperation with

Oklahoma Water Resources Board
Oklahoma Department of Highways
City of Oklahoma City
Corps of Engineers, U.S. Army
Soil Conservation Service, U.S. Department of Agriculture
Bureau of Reclamation, U.S. Department of the Interior

Water-resources records, 1971, for Oklahoma are given in the following reports of the U.S. Geological Survey:

1. Water Resources Data for Oklahoma
   Part 1: Surface Water Records

2. Water Resources Data for Oklahoma
   Part 2: Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
Room 4301, Federal Building
Oklahoma City, Okla. 73102

1972

CONTENTS

ILLUSTRATIONS

GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

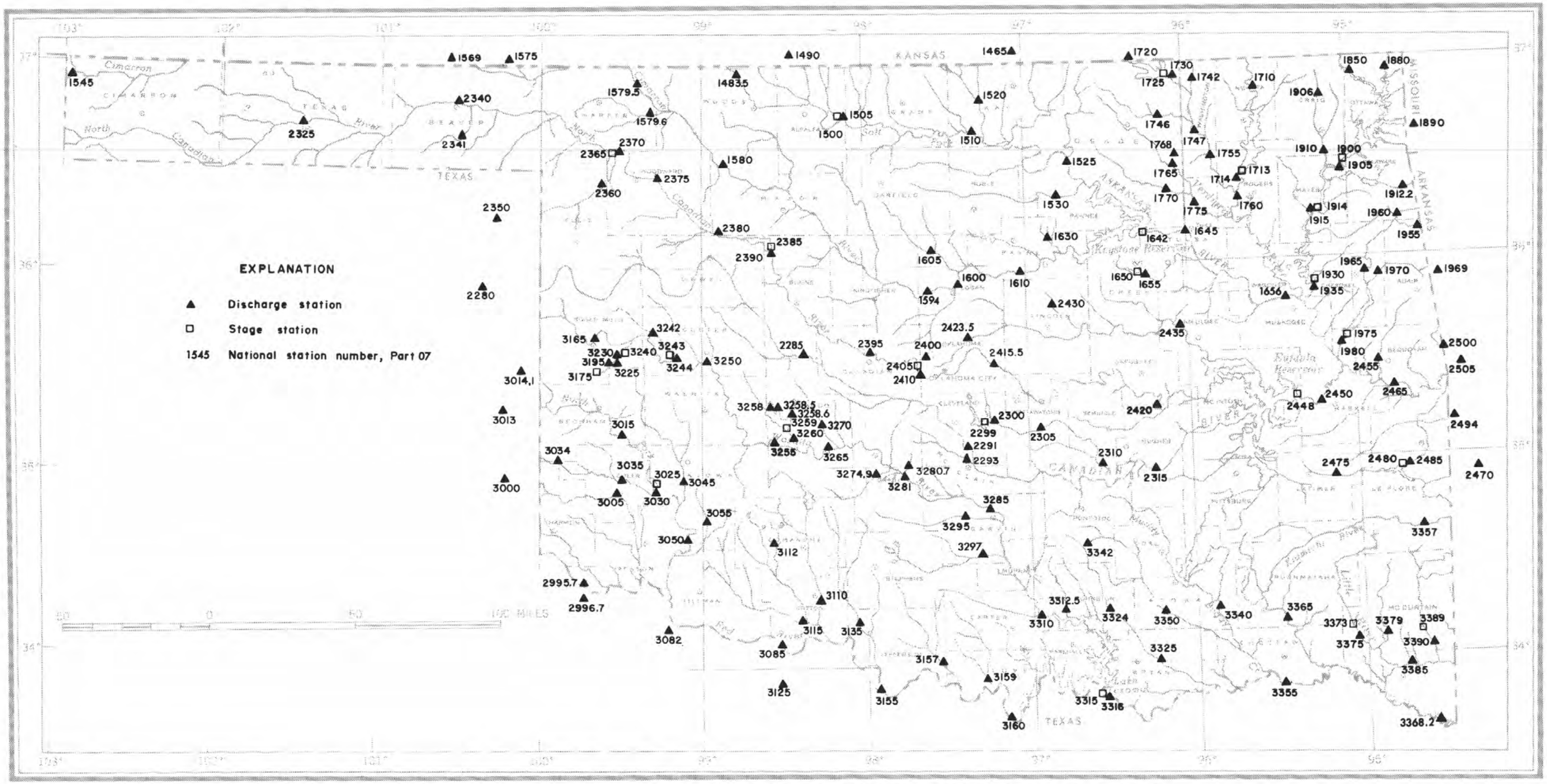
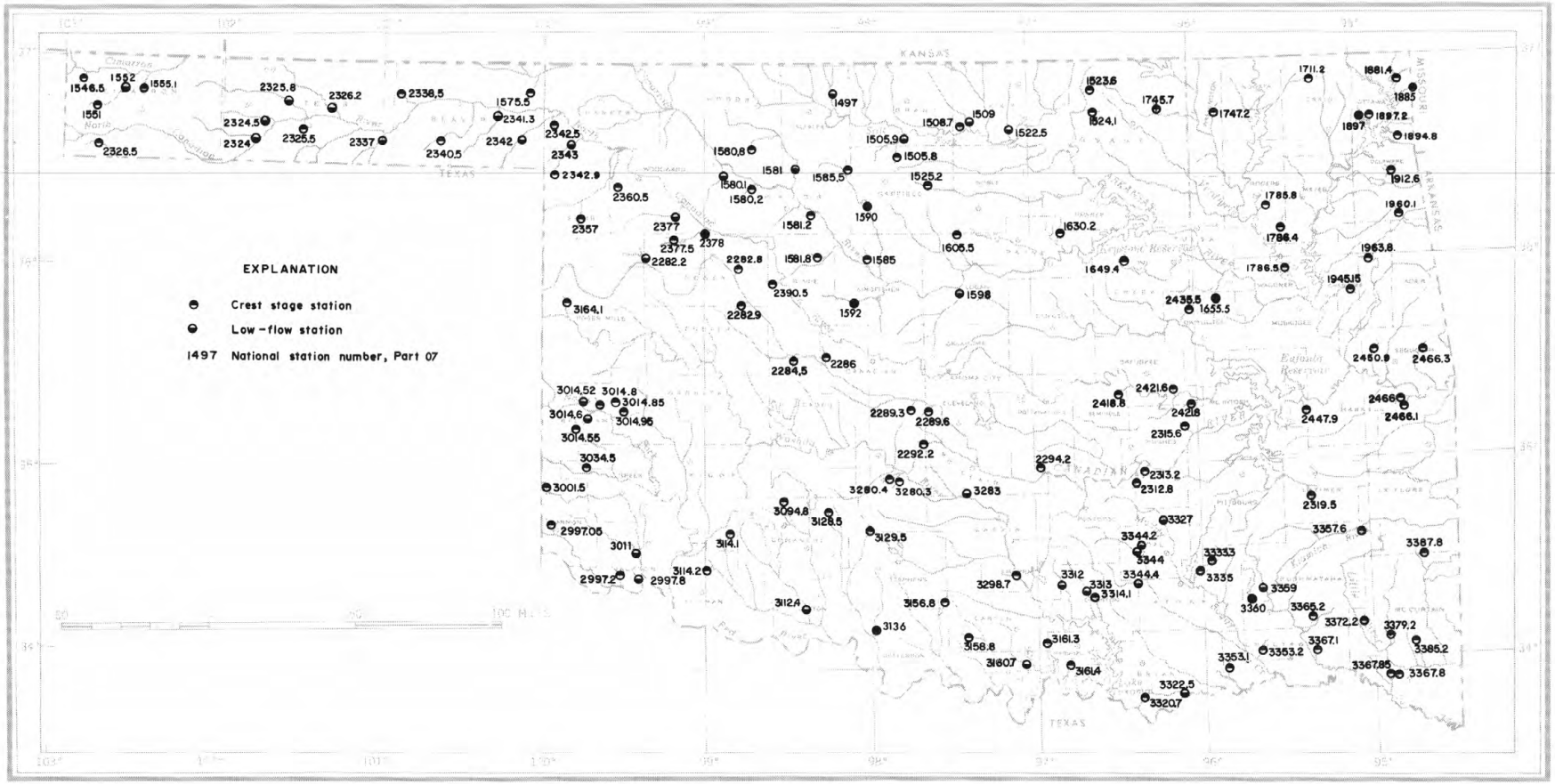


Figure 1.— Map of Oklahoma showing location of continuous record stations, water year 1971


EXPLANATION
Crest stage station
Low-flow station
1497 National station number, Part 07
KANSAS
TEXAS
1546.5
1552
1555.1
1551
2326.5
2325.8
2326.2
2324.5
2324
2325.5
2337
2336.5
2340.5
1575.5
2341.3
2342
2342.5
2343
2342.9
2360.5
2357
2377
2377.5
2378
2282.2
2282.8
1580.8
1581
1580.1
1580.2
1581.2
1585.5
1581.8
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1497
1508.7
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1505.9
1505.8
1522.5
1525.2
1605.5
2390.5
1598
2282.9
1592
3164.1
2284.5
2286
3014.52
3014.8
3014.85
3014.6
3014.95
3014.55
3034.5
3001.5
2997.05
3011
2997.2
2997.8
3114.2
3114
3094.8
3128.5
3129.5
3112.4
3136
3158.8
3160.7
3161.3
3161.4
3356.8
3298.7
3312
3313
3314.1
3344.4
3344
3344.2
3333
3335
3359
3360
3365.2
3372.2
3379.2
3367.1
3385.2
3353.2
3353.1
3367.85
3367.8
3322.5
3320.7
1523.6
1524.1
1745.7
1747.2
1711.2
1881.4
1885
1897
1897.2
1894.8
1912.6
1785.8
1980.1
1630.2
1788.4
1963.8
1649.4
1786.5
1945.5
2435.5
1655.5
2450.9
2466.3
2421.6
2418.8
2421.8
2466
2466.1
2447.9
2315.6
2289.3
2289.6
2292.2
2294.2
2313.2
2312.8
3280.4
3280.3
3283
2319.5
3327
3357.6
3387.8
3164.1
Figure 2.— Map of Oklahoma showing location of partial record stations, water year 1971

WATER RESOURCES DATA FOR OKLAHOMA, 1971

PART 1. SURFACE-WATER RECORDS

INTRODUCTION

Surface-water records for the 1971 water year for Oklahoma, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, are given in this report and their locations shown in figures 1, 2. Records for a few pertinent gaging stations in bordering States are also included. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of J. H. Irwin, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma.

Through September 30, 1960, the records of discharge and stage of streams and canals and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Beginning with the 1961 water year, records will be published at 5-year intervals.

Beginning with the 1961 water year, surface-water records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs.

COOPERATION

The U.S. Geological Survey and organizations of the State of Oklahoma have had cooperative agreements for the systematic collection of surface-water records since 1935. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Oklahoma Water Resources Board, Guy N. Keith, Chairman, succeeded by Milton Craig, Forrest Nelson, executive director.

Oklahoma Department of Highways, Truman Branscum, Director, succeeded by Chester Brooks.

Oklahoma City Water Department, B. M. Petitt, Jr., Director of water services.

Assistance in the form of funds or services was given by the Corps of Engineers, U. S. Army, in collecting records for 74 gaging stations published in this report. Assistance for 15 stations was furnished by the Soil Conservation Service of the U.S. Department of Agriculture, and 5 stations by the Bureau of Reclamation of the U.S. Department of the Interior.

The following organizations aided in collecting records:

Grand River Dam authority; Central Oklahoma Master Conservancy District; Fort Cobb Reservoir Master Conservancy District; Lugert-Altus Irrigation District; the cities of Ada, Altus, Lawton, Shawnee, and Tulsa; the Department of Transportation, Federal Highway Administration; and the Agricultural Research Service, U. S. Department of Agriculture.

DEFINITION OF TERMS

Definition of terms related to streamflow and other hydrologic data, as used in this report, are as follows:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gate. This feature may be a natural constriction of the channel, an artifical structure, or a uniform cross section over a long reach of the channel.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second(cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water(or more broadly, total fluids), that passes a given point within a given period of time.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height(G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Runoff in inches (IN.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a

bench-mark station may be used to separate effects of natural from man-made changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

DOWNSTREAM ORDER AND STATION NUMBERS

Records listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 07194500, includes the part number "07" and a 6-digit station number. In previous reports, the nonessential zeros were not shown.

All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage

recorder that gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge.(See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on idividual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in determining discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves

defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1971 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, and general remarks. 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 or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for Stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. The maximum discharge (or

contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, 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 or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also 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 alond with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the descritpion 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 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 were revised, 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 revisions of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis.

The daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

The daily tables for reservoir stations give the contents corresponding to the water-surface elevation at a given time, usually at 2400 each day. For some reservoirs the elevation at a given time is given in the daily table.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN.") or in acre-feet (line headed "AC-FT"). Figures of cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large non-contributing areas, or if the average rainfall on the drainage basin is usually less than 20 inches.

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. For some reservoirs a tabulation of monthly diversions from the reservoir also is included.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year. For some reservoirs the yearly diversion also is included.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream

for which the peaks are subject to substantail control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed

runoff may occur if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Daily records for a 5-year period, water years 1961-65, have been published in two volumes of a new continuing series. Data for the Red River basin are contained in Water Supply Paper 1920 "Surface Water Supply of the United States, 1961-65: Part 7, Volume 1, Lower Mississippi River Basin . . ."; data for the Arkansas River basin are contained in Volume 2 (WSP 1921). Records for subsequent years will be published at five-year intervals.

Each volume of the 1965 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data have been published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area.

Monthly records through September 1950 for the area covered by this report have been compiled and published in Water Supply Paper 1311; records for October 1950 to September 1960 have been compiled and published in Water Supply Paper 1731. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district ofice.

Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites.

More detailed information than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Many gaging-station records in Oklahoma through 1965 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables): (2) the lowest mean discharge for selected numbers of consectuive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDTIONS

Yearly runoff was normal in east central Oklahoma, and below normal in the remainder of the state where yearly mean discharges were generally 20 to 50 percent of average.

Peak discharges were generally insignificant and not above base. However, the highest peak of record occurred on Baron Fork at Eldon, and on Blue Creek at Milburn in eastern Oklahoma in October, and at the peak gage, Chickasaw Creek tributary near Stringtown in April.

Reservoir storage in central and eastern Oklahoma varied within the normal range and generally was at least 80 percent of capacity at the end of the water-year. Year-end contents at Lake Altus in Southwestern Oklahoma was only 11 percent of capacity.

SELECTED REFERENCES

Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U. S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A6, 13p.

Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U. S. Geol. Survey Water-Supply Paper 888, 245 p.

Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U. S. Geol. Survey Water-Supply Paper 1541-A. 29 p.

ARKANSAS RIVER BASIN

07146500 Arkansas River at Arkansas City, Kans.

LOCATION.--Lat 36°03'23", long 97°03'32", in NE 1/4 NE 1/4 NE 1/4 sec.35, T.34 S., R.3 E., Cowley County, near left bank at downstream side of bridge on U. S. Highway 166, 0.1 mile downstream from St. Louis - San Francisco Railway Co. bridge, 0.5 mile west of Arkansas City, 5.4 miles upstream from Walnut River and at mile 701.4.

DRAINAGE AREA.--43,713 sq mi, of which 7,607 sq mi is probably noncontributing.

PERIOD OF RECORD.--September 1902 to September 1906, September 1921 to current year. Published as "near Arkansas City" 1903-4. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,050.04 ft above mean sea level (levels by Corps of Engineers). Sept. 23, 1902, to July 31, 1906, nonrecording gage at site 0.5 mile upstream at datum 9.5 ft higher. Sept. 10, 1921, to Sept. 27, 1929, nonrecording gage and Sept. 28, 1929, to Aug. 28, 1956, water-stage recorder at site 0.5 mile upstream at datum 2.97 ft higher than present datum.

AVERAGE DISCHARGE.--54 years, 1,737 cfs (1,258,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,320 cfs June 16 (gage height, 13.93 ft); minimum, 222 cfs Sept. 14, 15.
Period of record: Maximum discharge, 103,000 cfs June 10, 1923 (gage height, 25.46 ft, from floodmarks, site and datum then in use), from rating curve extended above 8,000 cfs on basis of field estimate (maximum gage height, 25.55 ft May 18, 1957); minimum discharge, 1 cfs Oct. 9, 1921 (result of diversion by local power canal).
Maximum stage known since at least 1877, 25.55 ft May 18, 1957, from information by local residents.

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir since 1943 (see sta. 07130000) and Cheney Reservoir since 1964 (see sta. 07144790). Diversions above station for irrigation. Records of chemical analyses, water temperatures, suspended sediment loads and specific conductance for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1311: 1905. WSP 1341: 1922-23, 1927, 1929, 1931, 1933, 1940, 1945-46(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	769	569	427	556	585	2,710	715	1,040	1,170	623	2,010	332
2	676	559	425	549	574	2,300	712	925	1,510	722	2,120	328
3	618	542	435	865	571	1,820	709	839	6,290	1,240	1,360	334
4	562	523	438	1,080	500	1,560	691	782	5,210	1,130	1,380	351
5	525	508	431	585	350	1,500	667	733	4,200	1,940	2,060	336
6	502	500	413	490	400	1,910	644	688	3,200	3,020	1,870	335
7	502	493	403	450	300	2,660	594	653	2,650	4,000	1,580	413
8	1,510	490	412	450	300	3,160	616	619	3,530	4,680	1,310	652
9	4,440	486	466	500	300	3,170	598	594	2,110	4,170	1,150	521
10	2,860	478	448	500	400	2,510	592	601	1,650	3,720	1,010	384
11	4,800	440	400	543	500	2,360	586	714	1,290	2,330	794	321
12	3,930	441	418	512	724	2,670	568	657	1,380	1,350	691	271
13	2,740	468	454	439	697	2,680	554	659	2,110	998	639	244
14	1,800	420	465	400	695	2,580	546	647	4,350	788	588	233
15	1,350	458	489	450	768	2,370	529	621	6,250	677	548	257
16	1,140	453	555	450	885	2,250	536	586	7,920	600	508	259
17	1,020	439	570	538	899	1,990	554	547	5,400	588	491	616
18	917	442	568	536	887	1,690	568	525	4,360	522	511	903
19	840	444	533	512	920	1,530	587	515	3,070	469	462	886
20	779	505	514	457	969	1,420	645	506	1,940	427	427	886
21	736	465	518	499	1,010	1,360	662	490	1,710	357	399	862
22	704	451	513	577	766	1,260	642	680	1,750	320	632	881
23	682	442	524	569	562	1,130	674	1,440	1,710	350	469	855
24	663	420	520	580	578	984	1,170	2,640	1,490	332	427	1,000
25	707	407	519	578	682	973	990	3,890	1,120	279	476	1,450
26	833	404	468	621	1,270	925	1,060	4,210	1,010	399	406	1,260
27	720	402	436	664	3,090	921	1,250	3,960	960	623	391	1,030
28	640	445	455	651	2,970	905	1,190	2,260	830	650	344	961
29	609	439	473	630	------	843	1,260	1,730	722	910	355	948
30	587	437	517	607	------	821	1,170	1,620	641	1,120	379	935
31	576	------	538	599	------	791	------	1,360	------	1,650	369	------
TOTAL	39,737	13,970	14,745	17,437	23,152	55,753	22,279	37,731	81,533	40,984	26,156	19,044
MEAN	1,282	466	476	562	827	1,798	743	1,217	2,718	1,322	844	635
MAX	4,800	569	570	1,080	3,090	3,170	1,260	4,210	7,920	4,680	2,120	1,450
MIN	502	402	400	400	300	791	529	490	641	279	344	233
AC-FT	78,820	27,710	29,250	34,590	45,920	110,600	44,190	74,840	161,700	81,290	51,880	37,770

CAL YR 1970 TOTAL 535,515 MEAN 1,467 MAX 26,600 MIN 200 AC-FT 1,062,000
WTR YR 1971 TOTAL 392,521 MEAN 1,075 MAX 7,920 MIN 233 AC-FT 778,600

PEAK DISCHARGE (BASE, 10,000 CFS, REVISED).--NO PEAK ABOVE BASE.

07147800 Walnut River at Winfield, Kans.

LOCATION.--Lat 37°13'27", long 96°59'40", in SW 1/4 SW 1/4 NE 1/4 sec.33, T.32 S., R.4 E., Cowley County, at downstream side of bridge on U.S. Highway 77, 1 mile south of Winfield, 1 mile upstream from Black Crook Creek, and at mile 24.8.

DRAINAGE AREA.--1,872 sq mi.

PERIOD OF RECORD.--October 1921 to current year. October to November 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,0832.86 ft above mean sea level (Corps of Engineers bench mark). Prior to Oct. 1, 1934, nonrecording gage on upstream side of former bridge just upstream from present gage at same datum.

AVERAGE DISCHARGE.--50 years, 771 cfs (558,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,880 cfs Feb. 28 (gage height, 12.38 ft); minimum, 12 cfs Sept. 16, 17.
Period of record: Maximum discharge, 105,000 cfs Apr. 23, 1944 (gage height, 38.30 ft); no flow at times in 1929, 1936, 1954-56.
Maximum floods known since at least 1877, that of Apr. 23, 1944; Nov. 18, 1928, discharge, 94,400 cfs (gage height, 41.0 ft, from graph based on gage readings at former site).

REMARKS.--Records good. Some regulation at low flow by City Water Works Dam above station. Records of chemical analyses, water temperatures, suspended sediment loads, and specific conductance for the water year 1971 are published in Part 2 of the Kansas State report.

REVISIONS (WATER YEARS).--WSP 607: 1923(M). WSP 1117: Drainage area. WSP 1241: 1922(M), 1923, 1926-27, 1928-29(M), 1934, 1940-41.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	120	112	113	254	3,890	210	294	282	82	295	34
2	302	121	106	111	252	2,100	208	260	306	84	188	32
3	294	120	106	962	247	1,350	201	241	1,860	70	135	27
4	274	117	101	3,370	254	966	196	236	2,150	87	104	28
5	262	115	99	2,390	201	859	189	217	1,780	232	79	28
6	254	119	98	750	173	902	194	205	556	996	120	24
7	540	122	98	650	170	1,290	193	194	367	1,400	78	47
8	3,030	118	98	550	151	1,180	182	180	332	627	147	51
9	886	115	105	470	147	773	180	174	327	284	141	44
10	1,480	108	110	409	145	653	178	175	285	192	85	33
11	1,530	113	105	343	149	602	175	202	884	149	62	27
12	706	113	101	289	181	580	174	241	2,900	164	54	22
13	452	111	102	254	1,100	558	166	261	1,160	129	46	20
14	352	121	106	265	1,010	540	150	319	621	102	42	18
15	290	111	114	224	581	510	138	247	758	81	41	15
16	254	110	136	219	418	478	129	205	426	69	41	13
17	228	116	140	214	330	450	112	162	292	62	38	15
18	210	115	144	209	300	354	107	76	223	58	38	44
19	192	113	146	180	285	307	104	85	187	54	39	26
20	178	111	143	197	283	291	120	72	164	50	34	22
21	173	110	138	201	280	270	118	69	146	46	33	21
22	165	113	139	195	280	265	123	384	128	73	185	21
23	159	107	136	186	250	258	134	982	125	425	61	23
24	153	104	132	182	250	257	874	838	115	109	32	58
25	148	100	127	182	284	254	786	790	106	60	28	145
26	155	103	121	178	1,680	249	539	1,010	97	81	25	63
27	213	104	116	173	6,930	242	407	411	84	88	30	50
28	156	101	116	230	7,430	239	397	345	76	245	31	53
29	139	102	115	258	------	228	439	316	70	199	33	45
30	131	106	113	260	------	222	336	370	66	197	30	36
31	125	------	113	258	------	215	------	354	------	219	29	------
TOTAL	13,689	3,359	3,636	14,472	24,015	21,332	7,459	9,915	16,873	6,714	2,324	1,085
MEAN	442	112	117	467	858	688	249	320	562	217	75.0	36.2
MAX	3,030	122	146	3,370	7,430	3,890	874	1,010	2,900	1,400	295	145
MIN	125	100	98	111	145	215	104	69	66	46	25	13
AC-FT	27,150	6,660	7,210	28,710	47,630	42,310	14,790	19,670	33,470	13,320	4,610	2,150

CAL YR 1970 TOTAL 335,890 MEAN 920 MAX 30,700 MIN 28 AC-FT 666,200
WTR YR 1971 TOTAL 124,873 MEAN 342 MAX 7,430 MIN 13 AC-FT 247,700

PEAK DISCHARGE (BASE, 9,600 CFS).--NO PEAK ABOVE BASE.

07148350 Salt Fork Arkansas River near Winchester, Okla.

LOCATION.--Lat 36°57'43", long 98°46'55", in NE 1/4 SE 1/4 sec.26, T.29 N., R.15 W., Woods County, near left bank on downstream side of pier of county road bridge, 1 mile northeast of Winchester, 2.5 miles upstream from Greenwood Creek, 4.9 miles downstream from Yellowstone Creek, 5 miles downstream from State line, 19 miles northwest of Alva, and at mile 156.2.

DRAINAGE AREA.--856 sq mi.

PERIOD OF RECORD.--October 1959 to current year. Monthly discharge only for some periods, published in WSP 1731.

GAGE.--Water-stage recorder. Datum of gage is 1,409.6 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 70.6 cfs (51,150 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,350 cfs Apr. 23 (gage height, 7.10 ft); no flow at times.
Period of record: Maximum discharge, 52,000 cfs Aug. 19, 1961 (gage height, 13.95 ft), from rating curve extended above 17,400 cfs; no flow at times in 1961, 1964-71.
Flood in May 1957 reached a stage of 15.4 ft, from information by county engineer.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1731: Drainage area. WSP 1921: 1960.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.15	.11	11	12	87	33	40	7.8	155	.43	0
2	0	.09	.12	9.0	13	99	31	36	5.5	26	.02	0
3	0	.09	.08	7.8	15	97	31	31	108	2.9	0	0
4	0	.07	.08	5.5	16	110	31	27	66	2.5	0	0
5	0	.07	.09	4.5	14	135	32	24	45	.84	0	0
6	0	.07	.10	4.0	12	170	32	22	28	.37	0	0
7	0	.08	.12	5.2	11	164	32	21	17	.09	0	0
8	11	.10	.13	7.0	10	149	30	19	19	0	0	0
9	12	.07	.98	10	14	159	29	19	31	0	.76	0
10	.46	.05	4.5	10	18	164	28	19	22	0	.01	0
11	.14	.08	3.6	6.3	27	178	28	20	81	0	1.1	0
12	.10	.11	3.2	6.0	39	174	27	19	56	0	21	0
13	.06	.13	2.5	6.0	47	181	24	19	19	0	.92	0
14	.04	.11	4.5	7.0	27	184	22	19	276	0	.57	0
15	.02	.13	9.2	7.1	23	135	22	17	87	0	59	0
16	.04	.13	12	7.7	22	102	23	16	49	0	61	0
17	.09	.15	13	9.8	22	90	24	13	23	0	9.1	0
18	.08	.13	12	17	25	76	25	13	6.5	0	1.5	0
19	.09	.14	8.6	12	31	63	24	13	3.1	0	.76	0
20	.04	.11	9.0	14	27	52	28	12	19	0	.43	0
21	.03	.13	12	18	25	43	28	11	13	0	.12	0
22	.03	.10	14	25	24	39	74	9.4	7.9	13	0	0
23	.02	.07	9.2	17	25	36	509	9.0	3.8	108	0	0
24	.04	.09	7.9	21	45	36	537	8.3	1.4	5.4	0	.66
25	.03	.13	6.8	22	95	39	138	6.3	.52	.28	0	.79
26	.03	.11	4.5	20	86	43	71	4.9	.27	.21	0	0
27	.05	.12	4.1	18	63	39	55	4.1	.03	.03	0	0
28	.04	.13	5.0	16	75	36	45	3.4	0	.07	0	0
29	.05	.14	9.0	16	------	36	43	3.1	0	32	0	0
30	.05	.15	13	16	------	36	41	7.7	.08	14	0	0
31	.05	------	12	13	------	34	------	13	------	1.5	0	------
TOTAL	24.58	3.23	181.41	368.9	863	2,986	2,097	499.2	995.90	362.19	156.72	1.45
MEAN	.79	.11	5.85	11.9	30.8	96.3	69.9	16.1	33.2	11.7	5.06	.048
MAX	12	.15	14	25	95	184	537	40	276	155	61	.79
MIN	0	.05	.08	4.0	10	34	22	3.1	0	0	0	0
AC-FT	49	6.4	360	732	1,710	5,920	4,160	990	1,980	718	311	2.9

CAL YR 1970 TOTAL 13,627.26 MEAN 37.3 MAX 1,070 MIN 0 AC-FT 27,030
WTR YR 1971 TOTAL 8,539.58 MEAN 23.4 MAX 537 MIN 0 AC-FT 16,940

PEAK DISCHARGE (BASE, 5,000 CFS).--No peak above base.

07149000 Medicine Lodge River near Kiowa, Kans.

LOCATION.--Lat 37°02'17", long 98°28'04", in SE 1/4 SW 1/4 sec.36, T.34 S., R.11 W., Barber County, at downstream side of bridge on State Highway 14, 200 ft downstream from the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.5 miles northeast of Kiowa, and at mile 22.2.

DRAINAGE AREA.--903 sq mi.

PERIOD OF RECORD.--May 1895 to October 1896, October 1937 to September 1950, October 1954 to September 1955, June 1959 to current year. Published as Medicine River near Kiowa 1895-96. All figures of discharge above 2,000 cfs for June and July 1896, published in Eighteenth Annual Report of the Geological Survey (Part 4), have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 1,286.99 ft above mean sea level (levels by Corps of Engineers). May 1895 to October 1896, nonrecording gage at site 2 miles upstream at different datum. Feb. 11 to Mar. 2, 1938, to Sept. 30, 1944, water-stage recorder at present site at datum 3.00 ft higher. Oct. 1, 1944, to Sept. 30, 1950, and Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--26 years (1937-50, 1954-55, 1959-71), 135 cfs (97,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,610 cfs June 3 (gage height, 9.31 ft); no flow Sept. 5-16, 19-21.
Period of record: Maximum discharge, 16,000 cfs Oct. 22, 1941 (gage height, 11.75 ft, present datum); no flow at times in most years.
Floods of May 8, 1922, and June 1957 reached stages of about 16 and 15.5 ft, respectively, present site and datum, from the Atchison, Topeka and Santa Fe Railway Co. records and information by local resident.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1391: 1938(M), 1942(M). WSP 1921: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	57	73	94	75	166	92	87	76	151	63	.45
2	18	60	70	94	80	164	87	90	87	544	44	.24
3	17	62	70	70	87	150	82	87	2,110	201	31	.06
4	15	60	70	40	79	136	84	82	1,640	147	26	.02
5	13	57	73	35	50	148	84	70	339	109	26	0
6	12	60	70	35	50	180	84	62	238	94	32	0
7	13	60	68	45	35	192	84	54	182	72	33	0
8	25	52	68	60	30	188	87	50	159	54	48	0
9	114	52	70	80	30	188	79	52	147	40	71	0
10	121	54	70	80	40	198	79	54	140	32	46	0
11	79	60	70	65	70	215	76	90	144	30	38	0
12	73	60	65	50	90	248	76	110	163	27	29	0
13	68	60	65	60	120	238	76	92	140	26	38	0
14	60	65	70	60	121	245	73	76	138	23	37	0
15	54	62	76	75	110	245	73	60	122	20	32	0
16	52	68	84	95	105	202	70	52	109	21	35	0
17	52	68	79	130	97	168	76	42	100	23	28	.02
18	54	65	76	130	97	155	87	37	92	19	34	.10
19	54	68	79	100	108	139	90	40	82	19	25	0
20	57	65	82	130	105	130	101	40	144	18	17	0
21	54	68	82	157	60	125	97	36	551	16	12	0
22	54	68	82	130	60	121	82	34	278	13	9.9	.05
23	52	65	79	119	57	119	123	32	174	12	8.7	.99
24	44	65	76	105	60	112	248	31	132	12	7.1	9.2
25	42	73	52	103	148	114	150	30	107	9.7	5.4	17
26	40	76	47	99	160	110	123	30	88	8.5	3.4	18
27	44	73	90	94	170	110	103	30	74	7.4	2.2	17
28	50	73	103	92	170	108	92	28	55	18	1.8	15
29	50	73	99	92	------	101	87	28	46	24	1.6	14
30	52	70	97	90	------	97	90	34	46	96	1.1	12
31	57	------	94	80	------	92	------	40	------	116	.76	------
TOTAL	1,508	1,919	2,349	2,689	2,464	4,904	2,835	1,680	7,903	2,002.6	786.96	104.13
MEAN	48.6	64.0	75.8	86.7	88.0	158	94.5	54.2	263	64.6	25.4	3.47
MAX	121	76	103	157	170	248	248	110	2,110	544	71	18
MIN	12	52	47	35	30	92	70	28	46	7.4	.76	0
AC-FT	2,990	3,810	4,660	5,330	4,890	9,730	5,620	3,330	15,680	3,970	1,560	207

CAL YR 1970 TOTAL 35,939.13 MEAN 98.5 MAX 1,910 MIN .40 AC-FT 71,290
WTR YR 1971 TOTAL 31,144.69 MEAN 85.3 MAX 2,110 MIN 0 AC-FT 61,780

PEAK DISCHARGE (BASE, 3,700 CFS).--NO PEAK ABOVE BASE.

07150000 Great Salt Plains Lake near Jet, Okla.
(Formerly published as Great Salt Plains Reservoir near Jet)

LOCATION.--Lat 36°44'40", long 98°08'08", in NW 1/4 SE 1/4 sec.11, T.26 N., R.9 W., Alfalfa County, at right end of Great Salt Plains Dam on Salt Fork Arkansas River, 4.5 miles upstream from Wagon Creek, 5.5 miles northeast of Jet, and at mile 103.3.

DRAINAGE AREA.--3,200 sq mi, of which 8 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1941 to current year. Prior to October 1970, published as Great Salt Plains Reservoir near Jet.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 46,480 acre-feet June 8 (elevation, 1,125.98 ft); minimum, 31,070 acre-ft Sept. 15 (elevation 1,124.23 ft).
Period of record: Maximum contents, 189,400 acre-ft July 2, 1951 (elevation, 1,134.38 ft); minimum, 20,900 acre-ft Jan. 17, 1955 (elevation, 1,121.50 ft).

REMARKS.--Reservoir is formed by earth dam. Outlet works consist of a 310-foot uncontrolled concrete spillway containing a series of three weirs to form a cascade. Storage began in June 1941; conservation pool was first filled Oct. 21, 1941. Capacity, 280,200 acre-ft at elevation 1,138.5 ft (crest of upper weir) and 37,450 acre-ft at elevation 1,125.0 ft (crest of intermediate weir and conservation pool). Reservoir is used for flood control and as a wildlife refuge. Figures given herein represent total contents. Revised capacity table, based on survey in 1961, used since Oct. 1, 1963.

COOPERATION.--Records furnished by Corps of Engineers.

REVISIONS.--WSP 1117: Drainage area.

Capacity table (elevation, in feet, and contents, in acre-feet)

1,124	29,250	1,126	46,670
1,125	37,450		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.58	37.45	38.23	38.76	38.94	41.28	39.12	39.92	36.52	39.66	37.71	34.42
2	35.42	37.45	38.23	39.21	38.94	41.28	38.85	39.57	38.76	39.92	37.54	34.34
3	35.25	37.45	38.23	40.56	39.03	41.37	38.68	39.39	40.65	40.01	37.36	34.09
4	35.09	37.45	38.15	39.57	39.12	41.28	38.50	39.39	42.66	40.01	37.36	33.76
5	34.92	37.45	38.15	39.39	39.21	41.19	38.59	39.03	43.13	40.10	37.28	33.18
6	34.75	37.45	38.23	39.21	39.21	41.19	38.59	38.76	43.04	39.83	37.11	33.43
7	35.17	37.45	38.32	39.12	39.30	41.19	38.50	38.50	45.02	39.48	37.11	33.34
8	35.42	37.45	38.32	39.03	39.21	41.19	38.50	38.32	46.48	39.21	37.11	32.94
9	35.67	37.45	38.41	38.94	39.21	41.28	38.41	38.50	45.60	38.85	36.94	33.02
10	36.00	37.45	38.50	38.94	39.21	41.28	38.41	38.50	44.83	38.76	36.94	32.94
11	36.60	37.45	38.50	38.85	39.21	41.46	38.23	38.41	43.88	37.88	36.86	32.61
12	36.60	37.45	38.59	38.85	39.30	41.46	37.97	38.32	43.13	37.80	36.68	32.53
13	36.63	37.45	38.68	38.76	39.48	41.46	37.88	38.15	42.29	37.11	36.60	32.69
14	36.68	37.54	38.68	38.76	39.57	41.46	37.80	37.97	41.74	37.20	36.43	31.64
15	36.77	37.71	38.76	38.76	39.57	41.46	37.88	37.88	41.37	36.94	37.20	31.32
16	36.77	37.71	38.85	38.85	39.57	41.46	37.88	37.80	41.01	36.52	37.36	31.48
17	37.02	37.71	38.85	38.94	39.48	41.37	38.06	37.71	40.65	36.60	37.28	32.13
18	37.02	37.80	38.94	38.94	39.48	41.37	38.23	37.54	40.19	36.09	37.11	34.84
19	37.02	37.80	39.03	38.94	39.48	40.74	38.50	37.45	39.92	36.26	37.11	34.92
20	37.02	37.80	39.21	38.94	39.74	40.10	38.76	37.28	39.92	35.84	36.77	34.67
21	37.11	37.80	39.21	39.03	41.83	39.48	39.12	37.11	40.10	35.42	35.84	34.59
22	37.11	37.71	39.21	39.12	41.10	39.39	39.21	37.02	40.10	35.50	36.09	34.67
23	37.20	37.71	39.12	39.21	40.10	39.30	39.21	36.94	40.01	35.84	35.92	34.67
24	37.28	37.71	39.03	39.30	40.01	39.21	39.21	36.68	39.66	36.34	36.00	36.52
25	37.36	37.71	38.94	39.30	40.56	39.21	39.39	36.52	39.39	36.34	35.67	36.52
26	37.36	37.71	38.85	39.39	41.65	39.21	39.66	36.18	39.03	36.26	35.50	36.52
27	37.45	37.80	38.85	39.39	41.37	39.21	39.66	35.92	38.68	36.00	34.92	36.26
28	37.45	37.88	38.85	39.30	41.28	39.39	39.83	35.58	38.41	37.20	34.92	36.09
29	37.45	37.97	38.85	39.21	------	39.57	40.19	35.75	38.06	37.88	34.84	35.75
30	37.45	38.06	38.76	39.03	------	39.66	40.19	36.09	37.80	37.80	34.59	35.75
31	37.45	------	38.76	38.94	------	39.39	------	36.34	------	37.54	34.67	------
(+)	1,125.00	1,125.07	1,125.15	1,125.17	1,125.43	1,125.22	1,125.31	1,124.87	1,125.04	1,125.01	1,124.67	1,124.80
(‡)	+1.95	+.61	+.70	+.18	+2.34	-1.89	-+.80	-3.85	+1.46	-.26	-2.87	+1.08
MAX	37.45	38.06	39.21	40.56	41.83	41.46	40.19	39.92	46.48	40.10	37.71	36.52
MIN	34.75	37.45	38.15	38.76	38.94	39.21	37.80	35.58	36.52	35.42	34.59	31.32

CAL YR 1970 ..... ‡ -.81
WTR YR 1971 ..... ‡ +.25

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07150500 Salt Fork Arkansas River near Jet, Okla.

LOCATION.--Lat 36°45'11", long 98°07'44", in NE 1/4 NE 1/4 sec.11, T.26 N., R.9 W., Alfalfa County, near center of span on downstream side of county road bridge, 0.6 mile downstream from Great Salt Plains Dam, 4 miles upstream from Wagon Creek, 6 miles northeast of Jet, and at mile 102.7.

DRAINAGE AREA.--3,202 sq mi, of which 8 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,092.20 ft above mean sea level (levels by Corps of Engineers). Prior to Mar. 17, 1938, nonrecording gage at site 2.5 miles upstream at datum 13.46 ft higher. Mar. 17, 1938, to Apr. 26, 1953, water-stage recorder at site 200 ft upstream (datum 5.00 ft higher prior to Oct. 1, 1950).

AVERAGE DISCHARGE.--34 years, 345 cfs (250,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 936 cfs June 9 (gage height, 5.80 ft); minimum daily, 0.74 cfs Sept. 27.
Period of record: Maximum discharge, 25,900 cfs May 19, 1938 (gage height, 13.80 ft, present datum); no flow at times in 1939-41, 1944, 1955-56.

REMARKS.--Records good. Flow regulated since June 1941 by Great Salt Plains Lake (see sta. 07150000). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.7	10	22	50	259	113	196	5.1	149	13	4.0
2	3.5	5.6	9.9	7.1	44	216	100	133	17	184	10	3.7
3	4.2	11	25	108	45	250	92	119	253	233	7.1	2.9
4	3.0	7.9	9.9	102	118	255	34	120	341	180	5.3	3.0
5	2.8	3.3	3.1	62	89	266	51	168	482	177	4.8	4.5
6	2.5	2.7	5.8	52	80	244	57	94	530	198	35	4.5
7	2.4	3.0	12	47	98	250	88	88	494	184	4.0	4.0
8	5.9	56	8.8	43	88	213	72	52	703	141	6.5	17
9	5.3	27	5.9	36	73	274	29	32	755	153	5.9	4.8
10	3.3	2.5	41	34	71	263	44	49	690	92	4.4	4.5
11	4.1	5.7	19	34	75	271	80	62	624	83	5.5	5.0
12	4.0	2.5	9.4	32	86	270	68	25	540	53	4.0	4.4
13	3.6	2.8	10	30	81	301	13	35	511	28	4.5	4.0
14	4.1	3.5	19	32	100	343	19	36	431	18	5.1	16
15	4.4	1.3	12	29	103	334	27	27	388	8.8	5.1	5.0
16	6.1	1.2	64	25	116	288	20	23	341	41	4.5	3.3
17	4.1	2.0	48	24	102	269	17	38	325	5.5	5.1	4.9
18	3.8	2.8	60	39	110	507	35	28	291	6.0	5.4	6.1
19	3.6	6.4	33	35	312	256	57	14	237	25	5.8	2.5
20	3.3	5.2	27	36	69	201	122	9.5	270	4.1	4.5	1.9
21	3.6	7.3	33	42	145	158	97	7.0	237	3.6	4.5	2.0
22	3.9	3.9	46	45	343	128	50	4.7	255	43	5.6	2.1
23	3.9	3.1	36	51	170	129	79	13	264	5.0	42	2.2
24	4.2	4.3	33	62	140	113	93	17	278	4.0	4.9	4.1
25	4.3	3.1	27	73	137	155	109	2.3	229	3.5	4.9	1.5
26	9.3	7.0	26	54	290	148	135	2.6	184	4.8	4.9	.79
27	6.2	1.7	23	60	274	163	192	6.6	152	3.1	4.5	.74
28	3.9	.98	24	63	235	107	145	3.3	93	19	5.5	.86
29	3.8	3.0	26	72	------	159	138	3.2	84	9.1	5.6	21
30	3.9	19	61	49	------	187	179	6.0	54	17	9.4	1.8
31	4.7	------	30	38	------	185	------	9.6	------	14	6.7	------
TOTAL	129.5	209.48	797.8	1,438.1	3,644	7,162	2,355	1,423.8	10,058.1	2,089.5	244.0	143.09
MEAN	4.18	6.98	25.7	46.4	130	231	78.5	45.9	335	67.4	7.87	4.77
MAX	9.3	56	64	108	343	507	192	196	755	233	42	21
MIN	2.4	.98	3.1	7.1	44	107	13	2.3	5.1	3.1	4.0	.74
AC-FT	257	416	1,580	2,850	7,230	14,210	4,670	2,820	19,950	4,140	484	284

CAL YR 1970 TOTAL 72,523.78 MEAN 199 MAX 3,640 MIN .98 AC-FT 143,900
WTR YR 1971 TOTAL 29,694.37 MEAN 81.4 MAX 755 MIN .74 AC-FT 58,900

07151000 Salt Fork Arkansas River at Tonkawa, Okla.

LOCATION.--Lat 36°40'13", long 97°18'33", in NW 1/4 SE 1/4 sec.4, T.25 N., R.1 W., Kay County, near right bank on downstream side of pier of bridge on U. S. Highway 77 in Tonkawa, 4 miles downstream from Thompson Creek, 7.8 miles upstream from Chikaskia River, and at mile 33.8.

DRAINAGE AREA.--4,528 sq mi, of which 8 sq mi is probably noncontributing.

PERIOD OF RECORD.--September 1903 to October 1905 (gage heights only), October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Arkansas River (Salt Fork) near Tonkawa 1903-4 and as "near Tonkawa" 1905.

GAGE.--Water-stage recorder. Datum of gage is 930.22 ft above mean sea level (Corps of Engineers bench mark). September 1903 to October 1905, nonrecording gage near present site at different datum. Jan. 2, 1936, to Jan. 22, 1939 nonrecording gage, and Jan. 23, 1939, to June 20, 1960, water-stage recorder at site 100 ft upstream at same datum.

AVERAGE DISCHARGE.--36 years, 630 cfs (456,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,110 cfs July 24 (gage height, 10.42 ft); minimum, 17 cfs Sept. 15-17.
Period of record: Maximum discharge, 40,800 cfs May 20, 1938 (gage height, 22.82 ft); maximum gage height, 23.48 ft Oct. 5, 1959; no flow Aug. 31 to Oct. 12, Oct. 14-16, 1956.
Flood of June 10, 1923, reached a stage of 26.8 ft, from information by Corps of Engineers. Flood of July 11, 1904, reached a stage of 14.6 ft, datum then in use.

REMARKS.--Records good. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 miles upstream (see sta. 07150000). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	38	41	71	96	574	173	162	62	1,100	428	35
2	68	38	40	88	86	540	192	162	62	582	249	32
3	63	37	41	147	80	588	173	172	928	261	165	31
4	59	37	49	277	87	467	131	165	1,020	197	132	30
5	59	38	45	168	82	443	137	133	1,340	173	112	27
6	61	38	50	130	80	428	110	121	830	159	93	28
7	61	41	51	105	70	465	102	135	603	140	690	27
8	83	42	49	110	70	534	102	125	741	143	915	25
9	200	38	45	120	90	477	98	111	791	146	329	23
10	137	39	50	130	114	374	114	101	951	147	151	22
11	79	39	49	172	138	368	102	89	1,220	134	113	22
12	72	54	49	126	143	352	91	75	1,460	130	108	22
13	63	45	53	94	127	348	84	80	914	116	85	22
14	54	39	64	121	111	331	111	77	672	105	79	20
15	50	39	63	105	111	343	100	66	575	95	410	18
16	46	39	73	103	112	381	79	67	463	85	347	17
17	45	39	77	101	119	399	81	66	375	80	218	22
18	45	39	70	97	128	335	86	60	317	74	141	41
19	44	38	83	92	130	332	87	59	272	75	107	43
20	44	38	88	85	116	531	93	65	245	66	84	48
21	44	39	91	98	225	346	94	59	222	61	68	39
22	43	36	85	92	144	263	224	57	217	65	58	32
23	43	37	75	89	113	223	903	51	199	90	112	28
24	43	50	77	89	141	183	420	45	196	2,370	70	59
25	42	41	78	89	332	181	135	45	198	1,560	66	1,720
26	41	40	80	92	340	173	161	43	207	391	80	1,260
27	39	37	79	97	675	181	1,560	48	192	276	60	406
28	39	39	76	99	634	171	572	44	167	220	46	200
29	38	41	75	93	------	179	252	43	156	518	42	133
30	39	45	70	98	------	154	193	48	137	435	53	94
31	38	------	69	94	------	172	------	87	------	630	39	------
TOTAL	1,859	1,200	1,985	3,472	4,694	10,836	6,760	2,661	15,732	10,624	5,650	4,526
MEAN	60.0	40.0	64.0	112	168	350	225	85.8	524	343	182	151
MAX	200	54	91	277	675	588	1,560	172	1,460	2,370	915	1,720
MIN	38	36	40	71	70	154	79	43	62	61	39	17
AC-FT	3,690	2,380	3,940	6,890	9,310	21,490	13,410	5,280	31,200	21,070	11,210	8,980

CAL YR 1970 TOTAL 187,798 MEAN 515 MAX 19,600 MIN 28 AC-FT 372,500
WTR YR 1971 TOTAL 69,999 MEAN 192 MAX 2,370 MIN 17 AC-FT 138,800

PEAK DISCHARGE (BASE, 11,000 CFS).--No peak above base.

07152000 Chikaskia River near Blackwell, Okla.

LOCATION.--Lat 36°48'31", long 97°16'39", in NE 1/4 NW 1/4 sec.23, T.27 N., R.1 W., Kay County, near left bank on downstream side of pier of St. Louis-San Francisco Railway Co. bridge at northeast edge of Blackwell, 0.2 mile downstream from Bitter Creek, and at mile 28.2.

DRAINAGE AREA.--1,859 sq mi.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 967.41 ft above mean sea level (levels by Corps of Engineers). See WSP 1921 for history of changes prior to April, 1952.

AVERAGE DISCHARGE.--36 years, 458 cfs (331,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,350 cfs Aug. 23 (gage height, 17.48 ft); minimum, 3.0 cfs Sept. 13-16.
Period of record: Maximum discharge, 85,000 cfs June 22, 1942 (gage height, 33.3 ft, from floodmark, present site and datum); no flow at times in 1954, 1956.
Flood of June 10, 1923 reached a stage of about 34 ft, present site and datum, from information by local residents (discharge, 100,000 cfs).

REMARKS.--Records good. Some regulation at low flow by Lake Blackwell (capacity, 3,600 acre-ft), 12.6 miles above station. Small diversion made from reservoir for municipal supply of city of Blackwell.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	59	73	86	98	912	107	81	97	142	204	12
2	64	59	73	82	96	547	101	80	83	233	96	11
3	57	58	69	227	95	442	100	79	1,700	277	61	8.4
4	52	59	66	507	92	412	101	77	1,360	172	51	8.7
5	49	58	65	162	86	456	100	75	531	269	46	8.7
6	48	60	64	115	72	1,050	102	74	370	424	42	7.9
7	52	63	63	100	73	971	101	72	278	234	40	7.6
8	364	65	63	85	84	522	101	70	422	129	42	6.8
9	1,910	69	65	60	78	407	102	70	1,170	93	42	5.2
10	561	64	68	58	76	363	101	72	647	85	39	4.6
11	238	62	72	62	81	325	99	74	325	82	37	4.0
12	162	60	67	73	101	275	98	73	228	76	34	3.4
13	133	61	65	68	109	252	98	73	212	76	33	3.3
14	110	61	64	65	125	235	100	72	298	72	35	3.2
15	100	62	72	90	139	212	100	69	194	67	36	3.0
16	90	61	97	95	134	195	100	66	159	66	39	3.1
17	82	63	91	100	120	180	104	65	138	65	39	4.6
18	78	63	89	105	114	178	109	64	116	65	39	14
19	74	65	84	111	132	160	120	57	105	66	34	9.9
20	70	66	79	90	123	155	171	58	102	66	29	9.3
21	68	64	78	100	137	152	169	57	100	64	24	9.0
22	67	68	78	107	120	150	511	61	282	53	1,630	7.8
23	68	63	79	96	107	148	374	140	184	64	4,450	7.2
24	67	57	74	92	100	140	172	81	134	426	669	49
25	89	52	67	92	117	130	128	70	114	154	152	1,030
26	76	59	61	104	195	120	98	65	103	101	33	423
27	67	67	59	108	1,280	115	93	71	98	83	21	63
28	74	67	59	110	1,220	110	86	74	92	82	18	37
29	68	68	72	110	------	105	85	64	85	94	16	26
30	63	68	85	110	------	102	84	63	82	820	14	20
31	60	------	88	110	------	102	------	83	------	693	13	------
TOTAL	5,135	1,871	2,249	3,480	5,304	9,623	3,915	2,250	9,809	5,393	8,058	1,810.7
MEAN	166	62.4	72.5	112	189	310	131	72.6	327	174	260	60.4
MAX	1,910	69	97	507	1,280	1,050	511	140	1,700	820	4,450	1,030
MIN	48	52	59	58	72	102	84	57	82	53	13	3.0
AC-FT	10,190	3,710	4,460	6,900	10,520	19,090	7,770	4,460	19,460	10,700	15,980	3,590

CAL YR 1970 TOTAL 160,413.6 MEAN 439 MAX 38,800 MIN 8.6 AC-FT 318,200
WTR YR 1971 TOTAL 58,897.7 MEAN 161 MAX 4,450 MIN 3.0 AC-FT 116,800

PEAK DISCHARGE(BASE, 8,000 CFS).--No peak above base.

07152500 Arkansas River at Ralston, Okla.

LOCATION.--Lat 36°30'09", long 96°43'22", in NW 1/4 sec.1, T.23 N., R.5 E., Osage County, near left bank on downstream side of pier of bridge on State Highway 18 at Ralston, 2 miles downstream from Salt Creek, 2 miles upstream from Grayhorse Creek, and at mile 594.0.

DRAINAGE AREA.--54,465 sq mi, of which 7,615 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1922 are contained in reports of U. S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft above mean sea level. Oct. 1, 1925, to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft downstream at same datum. Nov. 14, 1935, to Feb. 23, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--46 years, 4,521 cfs (3,275,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,100 cfs June 13 (gage height, 8.14 ft); minimum, 482 cfs Sept. 16, 17.
Period of record: Maximum discharge, 179,000 cfs Apr. 25, 1944 (gage height, 22.82 ft in gage well, 23.65 ft from outside gage); minimum, 14 cfs Oct. 12, 1956.
Flood of June 11, 1923, reached a stage of 23.8 ft, referred to outside gage on basis of stages observed in 1923 and 1944 at site 1,200 ft downstream.

REMARKS.--Records good. Some regulation by John Martin Reservoir in Colorado and Great Salt Plains Lake (see sta. 07150000). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,610	1,150	807	861	1,090	12,300	1,840	4,480	3,520	2,300	2,060	960
2	2,080	1,100	804	900	1,110	11,500	1,770	3,350	3,170	3,600	2,720	929
3	1,690	1,100	801	2,080	1,100	8,280	1,730	2,960	5,390	4,090	2,630	898
4	1,420	1,050	783	2,260	1,100	6,500	1,650	2,650	12,500	3,000	2,690	919
5	1,290	1,000	769	2,270	1,070	5,430	1,630	2,440	13,500	2,800	2,400	1,110
6	1,210	1,000	777	4,440	1,050	4,560	1,560	2,230	9,630	2,700	1,940	1,480
7	1,110	980	773	5,500	900	4,170	1,530	2,070	8,450	3,000	1,980	1,290
8	1,200	960	756	3,650	800	4,680	1,460	1,920	8,910	3,430	2,190	868
9	1,330	940	756	2,880	700	5,470	1,370	1,840	8,060	4,840	2,420	704
10	2,950	910	756	2,280	600	5,780	1,340	1,760	7,810	5,990	2,420	624
11	6,180	887	717	2,130	750	5,270	1,320	1,670	6,200	5,360	2,040	670
12	4,750	876	729	1,830	906	4,550	1,300	1,520	7,100	4,630	1,830	670
13	5,590	861	725	1,620	979	4,150	1,240	1,470	10,600	3,690	1,670	630
14	4,880	852	723	1,460	985	4,150	1,220	1,480	9,130	3,020	1,540	590
15	3,810	848	697	1,330	986	4,040	1,180	1,450	6,360	2,900	1,480	553
16	3,060	857	795	1,230	1,370	3,910	1,160	1,450	6,410	2,400	1,360	499
17	2,480	858	836	1,230	1,700	3,730	1,180	1,460	7,220	2,000	1,450	530
18	2,160	873	857	1,180	1,620	3,600	1,190	1,400	6,720	1,700	1,430	1,480
19	1,910	865	885	1,160	1,610	3,350	1,190	1,340	6,140	1,400	1,310	1,250
20	1,710	854	919	1,170	1,480	3,110	1,270	1,310	5,530	1,400	1,200	1,060
21	1,550	863	969	1,130	1,510	2,880	1,240	1,260	4,670	1,300	1,130	1,130
22	1,410	858	1,000	1,100	1,650	2,840	1,300	1,300	3,850	1,200	1,810	1,150
23	1,330	863	979	1,060	1,600	2,650	1,610	1,340	3,200	1,250	1,550	1,110
24	1,290	848	957	1,100	1,640	2,490	3,160	1,440	3,750	1,800	1,790	1,190
25	1,270	846	933	1,140	1,550	2,380	4,460	1,950	3,400	2,000	3,680	3,280
26	1,250	844	927	1,120	2,390	2,250	3,030	3,540	2,800	3,300	2,250	3,800
27	1,290	814	923	1,070	2,450	2,190	5,560	5,930	2,300	2,400	1,510	4,880
28	1,290	784	906	1,060	4,800	2,100	7,230	7,140	2,250	1,800	1,290	3,140
29	1,310	774	885	1,090	------	2,030	8,170	5,670	2,300	1,600	1,140	1,910
30	1,300	792	867	1,100	------	2,020	7,280	4,290	2,050	1,780	1,050	1,730
31	1,220	------	854	1,090	------	1,940	------	3,670	------	1,850	987	------
TOTAL	67,930	27,107	25,865	53,521	39,496	134,300	71,170	77,780	182,920	84,530	56,947	41,034
MEAN	2,191	904	834	1,726	1,411	4,332	2,372	2,509	6,097	2,727	1,837	1,368
MAX	6,180	1,150	1,000	5,500	4,800	12,300	8,170	7,140	13,500	5,990	3,680	4,880
MIN	1,110	774	697	861	600	1,940	1,160	1,260	2,050	1,200	987	499
AC-FT	134,700	53,770	51,300	106,200	78,340	266,400	141,200	154,300	362,800	167,700	113,000	81,390

CAL YR 1970 TOTAL 1,372,113 MEAN 3,759 MAX 92,300 MIN 289 AC-FT 2,722,000
WTR YR 1971 TOTAL 862,600 MEAN 2,363 MAX 13,500 MIN 499 AC-FT 1,711,000

PEAK DISCHARGE (BASE, 30,000 CFS).--No peak above base.

07153000 Black Bear Creek at Pawnee, Okla.

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE 1/4 NE 1/4 sec.31, T.22 N., R.5 E., Pawnee County, on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 300 feet downstream from Skedee Creek, and at mile 23.4.

DRAINAGE AREA.--576 sq mi.

PERIOD OF RECORD.--July 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 802.73 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 21, 1944, nonrecording gage at present site and datum except for Aug. 27, 1953, to Apr. 29, 1954, nonrecording gage at site 500 ft downstream at same datum.

AVERAGE DISCHARGE.--27 years, 155 cfs (112,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,050 cfs Sept. 6 (gage height, 10.18 ft); no flow at times.
Period of record: Maximum discharge, 30,200 cfs Oct. 3, 1959 (gage height, 31.43 ft); no flow at times in many years.
Flood of May 19, 1943, reached a stage of 28.19 ft, from floodmark (discharge, 17,800 cfs).

REMARKS.--Records good. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	.02	0	3.0	2.3	78	.36	71	37	86	9.3	0
2	5.4	.23	0	3.7	1.6	38	.21	45	67	160	6.6	0
3	3.7	.74	0	30	1.5	22	.36	32	1,400	47	5.8	0
4	2.6	.87	0	483	2.0	15	.36	23	1,620	12	4.8	27
5	5.9	.20	0	124	2.1	12	.11	17	300	8.5	3.4	173
6	1.7	.03	0	25	2.0	10	.11	14	115	7.5	2.4	2,110
7	.74	.03	0	18	2.2	7.9	.11	11	69	6.1	1.6	1,470
8	238	.01	0	15	2.1	6.2	.14	9.7	291	5.5	1.0	200
9	217	0	.01	10	2.1	5.2	.21	9.8	169	3.9	.82	96
10	107	0	.01	8.1	2.3	4.3	.21	10	79	55	.58	63
11	36	0	0	7.7	2.7	3.9	.21	12	50	277	.89	42
12	12	0	0	6.9	2.9	3.3	.12	32	392	30	1.0	31
13	5.8	0	0	6.4	3.2	2.7	.09	18	1,270	12	.56	24
14	3.3	0	0	5.9	3.2	2.5	.01	12	288	8.2	1.8	18
15	2.3	0	1.1	4.9	3.4	1.9	0	10	102	7.1	35	14
16	1.7	0	1.8	4.8	3.8	1.6	.01	9.4	61	6.6	35	13
17	1.2	0	1.8	4.4	4.0	1.5	.03	8.5	37	6.6	15	16
18	.77	0	2.0	4.4	5.0	1.9	.08	7.2	21	6.2	13	2,380
19	.61	0	2.2	3.8	6.2	.94	.11	5.1	16	4.7	9.8	1,500
20	.77	0	4.5	3.5	5.6	.72	.65	3.7	10	3.0	8.9	215
21	.83	0	9.7	3.7	8.8	.89	19	3.3	7.7	1.8	8.0	96
22	.89	0	8.1	3.4	8.2	.63	42	4.3	7.4	1.0	9.7	46
23	2.0	0	6.8	3.4	11	.42	444	3.6	5.3	1.9	5.2	30
24	2.0	0	5.3	3.0	12	.30	731	2.6	4.2	12	4.0	476
25	1.6	0	4.6	2.9	34	.36	121	1.8	3.2	89	2.8	2,250
26	2.4	0	4.5	2.1	190	.30	57	46	2.4	38	1.9	1,850
27	8.1	0	4.0	1.5	445	.55	51	49	1.8	29	1.1	405
28	2.0	0	3.2	1.1	185	1.1	452	9.6	1.4	45	.62	156
29	.17	0	2.6	1.0	------	.42	227	3.7	1.1	82	.34	105
30	.09	0	2.5	3.0	------	.42	110	3.7	2.6	35	.13	80
31	.03	------	2.2	3.1	------	.42	------	3.9	------	18	.07	------
TOTAL	674.10	2.13	66.92	800.7	954.2	225.37	2,257.49	491.9	6,431.1	1,105.6	191.11	13,886.0
MEAN	21.7	.071	2.16	25.8	34.1	7.27	75.2	15.9	214	35.7	6.16	463
MAX	238	.87	9.7	483	445	78	731	71	1,620	277	35	2,380
MIN	.03	0	0	1.0	1.5	.30	0	1.8	1.1	1.0	.07	0
AC-FT	1,340	4.2	133	1,590	1,890	447	4,480	976	12,760	2,190	379	27,540

CAL YR 1970 TOTAL 17,482.68 MEAN 47.9 MAX 2,470 MIN 0 AC-FT 34,680
WTR YR 1971 TOTAL 27,086.62 MEAN 74.2 MAX 2,380 MIN 0 AC-FT 53,730

PEAK DISCHARGE (BASE, 4,000 CFS).--No peak above base.

07154500 Cimarron River near Kenton, Okla.

LOCATION.--Lat 36°56'48", long 102°57'28", in SE 1/4 sec.4, T.5 N., R.1 E., Cimarron County, near right bank on downstream side of pier of county road bridge, 1.5 miles upstream from North Carrizo Creek, 1.7 miles northeast of Kenton, 2.2 miles downstream from Carrizozo Creek, and at mile 594.0.

DRAINAGE AREA.--1,106 sq mi, of which 68 sq mi is probably noncontributing.

PERIOD OF RECORD.--April 1904 to July 1905 (gage heights only), October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft above mean sea level, (levels by State Highway Department). April 1904 to July 1905 nonrecording gage at site 0.9 mile upstream at different datum. Oct. 1, 1950, to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft higher.

AVERAGE DISCHARGE.--21 years (1950-71), 24.9 cfs (18,040 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 960 cfs Aug. 7 (gage height, 9.16 ft); no flow at times. Period of record: Maximum discharge, 43,400 cfs Oct. 17, 1965 (gage height, 22.32 ft, present datum), from rating curve extended above 7,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

REMARKS.--Records fair. Extensive diversions for irrigation above station.

REVISIONS (WATER YEARS).--WSP 1711: 1956(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.25	.71	.17	.10	4.5	.70	1.9	1.4	0	0	
2	0	.35	.67	.25	.85	4.1	.30	1.2	.45	79	0	
3	0	.35	1.1	.17	2.9	3.5	.45	1.2	.21	4.1	0	
4	0	.30	1.1	.04	2.2	5.2	.35	.70	.45	.13	0	
5	0	.30	1.2	.01	2.4	4.5	.70	.25	.17	0	0	
6	0	.32	1.5	.02	2.9	3.5	.45	.21	.02	0	24	
7	0	.42	1.6	.04	2.4	2.9	.25	.45	0	0	283	
8	0	1.1	1.5	.05	2.2	4.5	.17	.85	.13	0	62	
9	.17	1.5	1.5	.07	2.0	4.1	.10	.55	9.1	0	13	
10	.25	.45	1.6	.10	2.0	2.4	.04	2.9	1.2	0	13	
11	.30	.30	1.5	.20	2.2	1.9	.02	2.4	.17	0	6.6	
12	.25	.24	1.9	.40	2.4	1.0	.07	1.9	.07	0	6.2	
13	.25	.92	1.6	.80	2.9	.35	0	1.0	.07	0	5.2	
14	.39	.91	1.6	1.6	3.2	.25	.07	.45	.10	0	4.8	
15	1.1	.52	2.1	3.5	3.2	.30	.07	.25	.02	0	181	
16	1.2	.42	1.9	5.8	3.2	.30	.10	.13	0	112	10	
17	1.5	.43	2.3	1.3	2.9	.35	.17	.04	0	4.8	7.0	
18	1.3	.42	2.6	1.4	4.1	.30	.25	.13	0	.45	4.8	
19	1.0	.52	2.6	.49	4.8	.25	4.1	1.0	0	6.6	2.7	
20	.84	.40	2.9	.30	5.2	.25	1.4	.35	0	1.2	1.0	
21	.65	.51	3.1	.25	2.4	.30	.45	.13	0	.35	.35	
22	.68	.49	2.2	.13	2.0	.25	.35	0	0	.17	.17	
23	.66	.33	1.4	.13	2.0	.25	1.2	0	.85	.04	.10	
24	.78	.43	1.5	.17	3.5	.35	.85	0	.13	5.2	.02	
25	.71	.89	2.0	.10	5.2	.30	.35	0	0	.45	0	
26	.75	.67	2.4	.21	4.5	.25	.30	0	0	.21	0	
27	.42	.51	2.7	.21	2.9	.25	1.2	0	0	.10	0	
28	.30	.49	.52	.10	4.1	.17	2.4	0	0	.02	0	
29	.17	.52	.17	.02	------	1.0	3.2	3.2	0	0	0	
30	.13	.75	.10	.25	------	1.0	3.2	75	0	0	0	
31	.10	------	.07	.25	------	1.2	------	4.1	------	0	0	------
TOTAL	13.90	16.01	49.64	18.53	80.65	49.77	23.26	100.29	14.54	214.82	624.94	0
MEAN	.45	.53	1.60	.60	2.88	1.61	.78	3.24	.48	6.93	20.2	0
MAX	1.5	1.5	3.1	5.8	5.2	5.2	4.1	75	9.1	112	283	0
MIN	0	.24	.07	.01	.10	.17	0	0	0	0	0	0
AC-FT	28	32	98	37	160	99	46	199	29	426	1,240	0

CAL YR 1970 TOTAL 590.97 MEAN 1.62 MAX 53 MIN 0 AC-FT 1,170
WTR YR 1971 TOTAL 1,206.35 MEAN 3.31 MAX 283 MIN 0 AC-FT 2,390

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

07156900 Cimarron River near Forgan, Okla.

LOCATION.--Lat 37°00'45", long 100°29'39", in SE 1/4 SE 1/4 sec.8, T.35 S., R.24 E., Meade County, Kans., near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mile north of Oklahoma-Kansas State line, 7.8 miles north of Forgan, and at mile 375.7.

DRAINAGE AREA.--8,536 sq mi, of which 4,316 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,325 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 87.8 cfs (63,610 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 686 cfs Feb. 25 (gage height, 4.27 ft); maximun gage height, 4.33 ft Feb. 24 (backwater from ice); minimum daily discharge, 22 cfs July 18, 19, Sept. 3.
Period of record: Maximum discharge, 21,200 cfs Oct. 20, 1965 (gage height, 8.10 ft); minimum daily, 21 cfs Aug. 8, 1970.

REMARKS.--Records good except for winter periods, which are fair. Extensive diversion for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	82	63	51	52	110	48	85	71	75	39	26
2	61	93	61	50	50	112	44	67	40	96	41	24
3	59	93	61	43	55	86	44	65	37	55	36	22
4	62	96	57	36	60	94	47	73	37	34	31	26
5	63	88	57	30	66	85	47	86	42	40	34	33
6	65	82	60	25	68	71	46	91	46	46	37	33
7	66	71	59	25	62	78	46	84	46	32	46	33
8	80	90	61	30	68	82	44	74	42	34	66	31
9	109	80	64	40	78	90	46	77	40	34	61	34
10	93	62	78	50	70	89	48	85	36	33	51	36
11	90	67	83	95	71	81	48	84	44	34	37	33
12	68	70	83	150	65	80	54	81	49	35	41	30
13	50	81	68	150	70	73	69	79	46	36	37	29
14	39	83	82	70	74	81	67	71	44	34	42	28
15	51	72	91	60	74	77	70	64	40	31	52	28
16	50	72	78	60	75	81	77	58	40	30	66	29
17	73	65	75	60	75	61	69	55	37	27	56	36
18	84	75	86	80	77	108	61	55	34	22	57	46
19	83	88	85	100	81	91	64	58	34	22	60	40
20	68	68	108	150	82	83	65	55	92	26	52	38
21	65	60	108	275	80	73	69	52	55	27	45	37
22	60	65	87	78	74	68	71	46	42	25	40	49
23	58	60	87	60	70	78	80	46	42	26	37	50
24	63	60	84	58	110	91	80	58	40	25	39	51
25	64	68	124	56	350	85	69	55	40	30	39	54
26	64	71	139	47	165	66	74	49	36	33	35	50
27	79	70	123	46	92	56	72	58	30	37	34	51
28	76	75	83	53	117	53	64	64	30	39	32	53
29	73	68	67	53	------	52	70	61	34	45	30	52
30	79	63	68	53	------	50	76	71	61	42	30	41
31	79	------	58	57	------	47	------	131	------	39	26	------
TOTAL	2,131	2,238	2,488	2,191	2,431	2,432	1,829	2,138	1,307	1,144	1,329	1,123
MEAN	68.7	74.6	80.3	70.7	86.8	78.5	61.0	69.0	43.6	36.9	42.9	37.4
MAX	109	96	139	275	350	112	80	131	92	96	66	54
MIN	39	60	57	25	50	47	44	46	30	22	26	22
AC-FT	4,230	4,440	4,930	4,350	4,820	4,820	3,630	4,240	2,590	2,270	2,640	2,230

CAL YR 1970 TOTAL 23,221 MEAN 63.6 MAX 281 MIN 21 AC-FT 46,060
WTR YR 1971 TOTAL 22,781 MEAN 62.4 MAX 350 MIN 22 AC-FT 45,190

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

07157500 Crooked Creek near Nye, Kans.

LOCATION.--Lat 37°02'02", long 100°11'55", in southeast corner sec.1, T.35 S., R.27 W., Meade County, on left bank at upstream side of county road bridge, 6.5 miles east of Nye, and at mile 14.0.

DRAINAGE AREA.--1,157 sq mi, of which 344 sq mi is probably noncontributing.

PERIOD OF RECORD.--August 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 2,163.79 ft above mean sea level, unadjusted. Prior to Sept. 12, 1942, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 42.3 cfs (30,650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 486 cfs Aug. 6 (gage height, 3.81 ft); no flow at times. Period of record: Maximum discharge, 13,600 cfs May 20, 1955 (gage height, 8.01 ft, right-bank gage), from rating curve extended above 2,400 cfs on basis of contracted-opening measurement of peak flow at site 10 miles upstream and a mean of slope-area measurement at gage site and discharge measurement at site 10 miles upstream at gage height 7.59 ft; maximum stage, 9.00 ft Aug. 31, 1963, at left-bank gage (8.2 ft, floodmark, at right-bank gage); no flow at times in most years.

REMARKS.--Records good except for winter records, which are fair. Extensive diversion for irrigation above station.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1211: 1950. WSP 1311: 1949(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	13	13	13	12	22	14	12	8.8	6.4	18	2.2
2	6.1	13	14	13	12	19	16	12	7.8	11	15	1.5
3	6.0	12	14	10	13	18	16	11	8.7	16	24	1.3
4	6.0	12	14	4.7	7.9	29	16	11	9.7	9.3	34	.74
5	6.4	13	14	4.0	7.0	37	17	9.3	6.2	7.4	35	.74
6	5.8	13	13	3.5	6.5	25	18	8.8	5.6	5.5	185	.60
7	5.8	12	14	3.0	6.0	21	17	8.9	4.7	3.2	93	.48
8	11	12	13	3.0	6.0	22	15	9.0	4.2	.89	97	0
9	37	11	13	3.5	12	20	14	9.4	7.6	2.1	95	0
10	22	11	13	7.0	22	18	16	8.8	6.8	6.0	66	0
11	13	12	18	14	19	18	15	9.9	7.0	12	40	0
12	11	13	14	25	13	17	15	10	7.8	5.2	32	0
13	11	19	13	25	12	18	14	11	6.6	1.8	28	0
14	9.9	17	14	15	12	17	15	9.9	5.5	.61	26	0
15	10	17	13	10	12	18	15	8.8	4.4	2.3	23	0
16	11	16	12	10	11	17	14	7.9	2.8	3.4	20	0
17	11	15	12	10	10	17	14	7.4	2.0	2.6	18	0
18	12	15	12	10	12	16	13	9.0	.90	.82	16	0
19	13	14	11	10	12	16	16	11	.48	0	19	1.6
20	12	15	13	50	11	17	18	9.1	7.2	.07	26	2.5
21	11	16	13	63	7.6	17	15	8.4	9.0	0	37	2.3
22	11	14	12	38	7.2	16	14	8.8	8.2	0	39	10
23	11	14	11	27	7.0	17	14	6.4	4.8	0	35	7.8
24	11	15	10	24	12	17	13	6.2	2.4	0	25	9.0
25	11	16	10	20	32	19	12	6.8	1.1	0	17	8.3
26	10	14	19	16	41	18	12	5.5	.37	0	12	5.1
27	12	14	27	15	34	18	12	6.1	0	0	8.7	3.7
28	12	14	17	15	28	17	11	7.2	0	0	6.3	3.2
29	12	15	14	15	------	18	12	8.0	0	0	5.0	3.3
30	12	15	14	13	------	20	12	14	1.3	18	4.0	3.8
31	12	------	12	12	------	15	------	10	------	31	2.9	------
TOTAL	352.0	422	426	501.7	397.2	594	435	281.6	141.95	145.59	1,101.9	68.16
MEAN	11.4	14.1	13.7	16.2	14.2	19.2	14.5	9.08	4.73	4.70	35.5	2.27
MAX	37	19	27	63	41	37	18	14	9.7	31	185	10
MIN	5.8	11	10	3.0	6.0	15	11	5.5	0	0	2.9	0
AC-FT	698	837	845	995	788	1,180	863	559	282	289	2,190	135

CAL YR 1970 TOTAL 5,501.73 MEAN 15.1 MAX 379 MIN 0 AC-FT 10,910
WTR YR 1971 TOTAL 4,867.10 MEAN 13.3 MAX 185 MIN 0 AC-FT 9,650

PEAK DISCHARGE (BASE, 1,400 CFS).--No peak above base.

07157950 Cimarron River near Buffalo, Okla.

LOCATION.--Lat 36°55'28", long 99°23'56", in NW 1/4 SW 1/4 sec.7, T.28 N., R.20 W., Harper County, on left bank 800 ft downstream from unnamed tributary, 6 miles upstream from Keno Creek, 7 miles upstream from bridge on U. S. Highway 64, 14 miles northeast of Buffalo, and at mile 296.0.

DRAINAGE AREA.--11,930 sq mi, of which 4,813 sq mi is probably noncontributing.

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,650 ft (from river profile map).

AVERAGE DISCHARGE.--11 years, 133 cfs (96,360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 380 cfs Feb. 28 (gage height, 2.73 ft); no flow at times. Period of record: Maximum discharge, 9,280 cfs June 22, 1965; maximum gage height, 4.67 ft June 23, 1963; no flow at times each year.

REMARKS.--Records good. Extensive diversions for irrigation above station. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	12	34	49	75	322	73	42	3.5	6.5	11	0
2	0	14	35	47	76	282	64	39	2.7	0	1.3	0
3	0	14	36	46	78	219	60	37	.82	0	0	0
4	0	15	33	20	85	200	49	37	21	0	0	0
5	0	16	30	10	64	215	49	33	14	0	0	0
6	0	18	25	7.0	60	226	47	26	5.7	0	12	0
7	0	18	20	7.0	58	237	45	22	1.7	0	49	0
8	11	19	25	8.5	56	199	40	21	.07	0	97	0
9	25	19	20	10	65	205	37	21	39	0	86	0
10	3.6	19	17	12	72	210	34	20	12	0	59	0
11	0	19	8.1	15	118	205	33	19	4.7	0	64	0
12	0	18	7.8	17	271	192	30	17	.62	0	76	0
13	0	18	7.1	20	177	173	29	16	30	0	63	0
14	0	18	9.3	15	139	176	27	14	39	0	51	0
15	0	25	16	22	124	176	27	9.4	18	0	41	0
16	0	29	33	15	116	168	27	6.2	12	0	50	0
17	0	38	22	18	110	158	31	2.6	6.7	0	63	.06
18	0	38	22	34	110	119	45	2.7	.04	0	57	17
19	.09	37	24	107	131	87	36	3.2	0	0	43	.06
20	.31	33	21	141	146	92	62	2.5	4.8	0	33	0
21	.07	32	23	171	150	86	42	3.4	6.5	0	19	0
22	.07	30	26	194	140	81	40	39	4.7	0	9.6	24
23	.01	31	25	160	130	79	82	17	18	31	3.4	30
24	.01	34	30	150	120	80	70	11	5.7	0	.53	20
25	0	29	34	125	120	81	60	8.7	0	0	0	30
26	0	28	36	107	140	83	56	7.2	0	0	0	16
27	0	30	27	89	169	89	50	5.3	0	0	0	6.0
28	0	31	27	84	348	88	46	3.6	0	.80	0	1.3
29	0	32	24	79	------	80	45	2.3	0	35	0	.15
30	2.5	32	56	81	------	79	45	4.3	13	16	0	.02
31	9.1	------	56	77	------	83	------	4.4	------	29	0	------
TOTAL	51.76	746	809.3	1,937.5	3,448	4,770	1,381	496.8	264.25	118.30	888.83	144.59
MEAN	1.67	24.9	26.1	62.5	123	154	46.0	16.0	8.81	3.82	28.7	4.82
MAX	25	38	56	194	348	322	82	42	39	35	97	30
MIN	0	12	7.1	7.0	56	79	27	2.3	0	0	0	0
AC-FT	103	1,480	1,610	3,840	6,840	9,460	2,740	985	524	235	1,760	287

CAL YR 1970 TOTAL 21,835.06 MEAN 59.8 MAX 545 MIN 0 AC-FT 43,310
WTR YR 1971 TOTAL 15,056.33 MEAN 41.3 MAX 348 MIN 0 AC-FT 29,860

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

07157960 Buffalo Creek near Lovedale, Okla.

LOCATION.--Lat 36°46'08", long 99°21'58", in NW 1/4 NW 1/4 sec.4, T.26 N., R.20 W., Harper County, near center of channel on downstream side of pier of bridge on State Highway 34, 1.2 miles east of Lovedale, 1.3 miles upstream from Sleeping Bear Creek, and at mile 7.6.

DRAINAGE AREA.--408 sq mi.

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,602.56 ft above mean sea level (State Highway Department bench mark).

AVERAGE DISCHARGE.--5 years, 7.40 cfs (5,361 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 283 cfs June 9 (gage height, 5.71 ft); no flow at times.
Period of record: Maximum discharge, 15,800 cfs Aug. 9, 1967 (gage height, 14.80 ft), from rating curve extended above 7,000 cfs; no flow each year.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	14	.08		0	1.0		
2					0	9.0	.27		0	0		
3					0	7.0	.34		0	0		
4					0	5.6	.11		0	0		
5					0	4.6	.30		0	0		
6					0	5.8	.51		0	0		
7					0	6.0	.56		0	0		
8					0	5.5	.19		0	0		
9					0	5.4	0		68	0		
10					0	6.5	.07		13	0		
11					.34	6.8	.06		2.5	0		
12					.27	7.1	.04		.30	0		
13					.02	9.6	0		0	0		
14					0	7.7	0		0	0		
15					0	6.0	0		0	0		
16					0	4.3	0		0	0		
17					0	3.1	.06		0	0		
18					.06	1.1	.23		0	0		
19					.04	1.2	.48		0	0		
20					0	1.3	1.5		.21	0		
21					0	1.3	.88		0	0		
22					0	1.2	.54		0	0		
23					0	1.1	1.1		0	3.0		
24					0	1.3	1.2		0	17		
25					0	1.4	.85		0	1.8		
26					0	1.5	.51		0	0		
27					8.7	1.4	.22		0	0		
28					27	1.0	.05		0	0		
29					------	.99	0		0	0		
30					------	.99	0		0	0		
31		------			------	.76	------		------	0		------
TOTAL	0	0	0	0	36.43	130.54	10.15	0	84.01	22.8	0	0
MEAN	0	0	0	0	1.30	4.21	.34	0	2.80	.74	0	0
MAX	0	0	0	0	27	14	1.5	0	68	17	0	0
MIN	0	0	0	0	0	.76	0	0	0	0	0	0
AC-FT	0	0	0	0	72	259	20	0	167	45	0	0

CAL YR 1970 TOTAL 396.13 MEAN 1.09 MAX 30 MIN 0 AC-FT 786
WTR YR 1971 TOTAL 283.93 MEAN .78 MAX 68 MIN 0 AC-FT 563

PEAK DISCHARGE (BASE, 1,000 CFS).--No peak above base.

07158000 Cimarron River near Waynoka, Okla.

LOCATION.--Lat 36°31'02", long 98°52'45", near center of sec.35, T.24 N., R.16 W., Woods County, near left bank on downstream side of bridge on U. S. Highway 281, 0.8 mile downstream from Main Creek, 5 miles south of Waynoka, and at mile 247.0.

DRAINAGE AREA.--13,334 sq mi, of which 4,830 sq mi is probably noncontributing.

PERIOD OF RECORD.--September 1903 to December 1905 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,367.50 ft above mean sea level (levels by Corps of Engineers). September 1903 to December 1905, nonrecording gage at The Atchison, Topeka and Santa Fe Railway Co. bridge 5 miles upstream at different datum. Feb. 4 to Mar. 3, 1938, nonrecording gage and Mar. 4, 1938, to Oct. 24, 1956, water-stage recorder, on former highway bridge 50 ft downstream at present datum.

AVERAGE DISCHARGE.--34 years (1937-71), 353 cfs (255,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 661 cfs Feb. 28 (gage height, 5.89 ft); no flow at times.
Period of record: Maximum discharge, 94,500 cfs May 16, 1957 (gage height, 15.10 ft), from rating curve extended above 45,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.
A stage of about 14 ft occurred probably in 1914.

REMARKS.--Records good. Extensive diversions for irrigation above station. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 897: 1939. WSP 1341: Drainage area. WSP 1731: 1950(M). WSP 1921: 1960.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	34	38	65	460	41	43	.80	13	22	0
2	0	0	33	63	63	435	40	55	1.8	65	13	0
3	0	0	34	81	61	392	38	43	14	30	5.5	0
4	0	0	34	45	61	340	34	38	4.5	6.7	.50	0
5	0	0	30	35	48	326	32	28	.80	1.0	0	0
6	0	0	24	30	45	333	31	20	0	0	0	0
7	0	0	24	25	40	347	29	15	0	0	46	0
8	0	0	21	25	40	354	24	12	26	0	95	0
9	0	0	21	30	43	347	22	13	81	0	61	0
10	70	0	31	33	46	333	18	12	147	0	70	0
11	29	0	26	37	48	299	18	10	79	0	53	0
12	12	0	21	33	70	263	15	8.8	41	0	61	0
13	6.7	5.9	14	33	189	251	13	8.1	30	0	45	0
14	2.0	3.5	13	36	184	229	14	7.4	24	0	15	0
15	0	6.7	15	31	147	203	12	5.0	106	0	12	0
16	0	12	21	31	126	189	12	3.5	48	0	81	0
17	0	8.8	15	30	112	180	13	.40	21	0	61	0
18	0	6.7	20	29	119	150	15	0	6.7	0	61	0
19	0	18	36	28	129	136	20	0	0	0	42	0
20	0	31	30	28	126	122	33	0	21	0	37	0
21	0	31	26	53	70	106	38	0	75	0	15	0
22	0	29	29	103	60	95	41	8.1	49	0	4.0	0
23	0	26	25	193	60	86	61	.40	20	129	1.0	0
24	0	22	25	172	98	80	167	0	4.0	176	12	0
25	0	18	21	154	198	73	101	0	0	53	6.0	0
26	0	16	21	143	281	68	70	1.1	0	18	1.0	20
27	0	19	18	129	287	62	55	37	0	8.0	0	5.0
28	0	22	18	119	418	58	45	15	0	103	0	.50
29	0	28	23	98	------	53	43	9.5	0	159	0	0
30	0	34	32	77	------	46	42	7.4	0	101	0	0
31	0	------	30	65	------	44	------	2.0	------	49	0	------
TOTAL	119.7	337.6	765	2,027	3,234	6,460	1,137	402.70	800.60	911.7	820.00	25.50
MEAN	3.86	11.3	24.7	65.4	116	208	37.9	13.0	26.7	29.4	26.5	.85
MAX	70	34	36	193	418	460	167	55	147	176	95	20
MIN	0	0	13	25	40	44	12	0	0	0	0	0
AC-FT	237	670	1,520	4,020	6,410	12,810	2,260	799	1,590	1,810	1,630	51

CAL YR 1970 TOTAL 29,442.46 MEAN 80.7 MAX 4,200 MIN 0 AC-FT 58,400
WTR YR 1971 TOTAL 17,040.80 MEAN 46.7 MAX 460 MIN 0 AC-FT 33,800

PEAK DISCHARGE (BASE, 10,000 CFS).--No peak above base.

07159400 Cimarron River near Crescent, Okla.

LOCATION.--Lat 35°53'12", long 97°35'21", in SW 1/4 SE 1/4 sec.2, T.16 N., R.4 W., Logan County, near upstream side of left abutment of bridge on State Highway 74, 5.2 miles south of Crescent, and at mile 131.0.

DRAINAGE AREA.--16,833 sq mi, of which 4,926 sq mi is probably noncontributing.

PERIOD OF RECORD.--Current year.

GAGE.--Water-stage recorder. Datum of gage is 925.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 6,330 cfs Sept. 26 (gage height, 10.97 ft); minimum, 0.45 cfs Sept. 16.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	31	30	63	128	515	105	116	25	50	43	4.5
2	74	31	31	66	120	410	92	107	50	540	33	3.8
3	68	34	31	218	110	381	86	98	401	430	38	3.2
4	64	35	33	479	108	476	83	90	2,790	360	35	2.8
5	63	32	33	385	101	459	77	81	1,140	240	29	2.4
6	60	31	33	166	107	423	77	72	466	166	24	2.1
7	175	31	34	120	89	384	72	67	217	124	21	1.8
8	550	30	37	100	40	338	68	61	313	84	19	1.6
9	155	29	40	100	50	342	66	65	470	60	18	1.4
10	138	27	43	120	82	357	61	67	399	48	17	1.2
11	132	26	47	160	99	372	60	56	539	38	16	1.1
12	102	26	47	155	110	362	56	48	2,710	30	16	1.0
13	79	25	52	135	147	337	54	43	5,180	26	22	.9
14	67	31	56	125	138	311	50	41	2,000	22	55	.8
15	57	29	59	96	114	289	47	38	1,200	20	92	.8
16	51	28	73	108	100	274	47	36	600	19	159	.7
17	52	30	79	102	131	245	55	30	260	18	95	16
18	55	31	89	88	212	224	55	29	180	18	129	277
19	51	30	87	79	189	192	59	26	155	40	181	993
20	47	30	77	77	174	181	92	24	140	85	115	832
21	46	28	77	76	182	174	106	22	130	38	85	321
22	43	27	76	67	78	163	96	21	200	25	64	210
23	44	25	71	64	110	158	147	19	140	29	47	129
24	45	23	65	64	178	147	212	18	100	33	41	290
25	57	22	65	62	190	138	100	17	75	80	32	3,550
26	71	20	64	57	400	136	85	16	62	68	22	4,340
27	47	26	66	107	638	130	85	20	56	61	15	994
28	39	24	67	157	624	134	118	45	53	60	11	417
29	35	26	66	157	------	122	151	35	51	74	8.5	263
30	33	29	67	153	------	115	131	30	50	80	6.5	180
31	31	------	68	139	------	103	------	26	------	61	5.5	------
TOTAL	2,615	847	1,763	4,045	4,749	8,392	2,593	1,464	20,152	3,027	1,494.5	12,842.1
MEAN	84.4	28.2	56.9	130	170	271	86.4	47.2	672	97.6	48.2	428
MAX	550	35	89	479	638	515	212	116	5,180	540	181	4,340
MIN	31	20	30	57	40	103	47	16	25	18	5.5	.70
AC-FT	5,190	1,680	3,500	8,020	9,420	16,650	5,140	2,900	39,970	6,000	2,960	25,470

WTR YR 1971 TOTAL 63,983.6 MEAN 175 MAX 5,180 MIN .70 AC-FT 126,900

PEAK DISCHARGE (BASE, 12,000 CFS).--No peak above base.

07160000 Cimarron River near Guthrie, Okla.

LOCATION.--Lat 35°55'10", long 97°25'35", in NE 1/4 SE 1/4 sec.29, T.17 N., R.2 W., Logan County, on left bank 125 ft upstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 1.2 miles downstream from Cottonwood Creek, 2.5 miles north of Guthrie, 6.5 miles upstream from Skeleton Creek, and at mile 121.8.

DRAINAGE AREA.--16,892 sq mi, of which 4,926 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP's 1311 and 1731.

GAGE.--Water-stage recorder. Datum of gage is 900.50 ft above mean sea level (Corps of Engineers bench mark). Prior to Mar. 19, 1939, nonrecording gage at railway bridge 125 ft downstream at same datum. Since Sept. 14, 1967, supplementary water-stage recorder, at site 2,000 ft downstream and at datum 4.00 ft lower.

AVERAGE DISCHARGE.--34 years, 844 cfs (611,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,900 cfs Sept. 26 (gage height, 5.6 ft, from flood mark); minimum daily, 7.4 cfs Sept. 16.
Period of record: Maximum discharge, 158,000 cfs May 17, 1957 (gage height, 18.58 ft); minimum, 0.1 cfs Nov. 2, 1939.
Flood in May 1935 reached a stage of 16.5 ft, from information by Corps of Engineers.

REMARKS.--Records good.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	62	40	68	152	723	116	142	63	123	84	14
2	120	62	41	70	140	544	113	131	56	831	69	13
3	102	60	42	150	133	453	108	119	1,060	810	61	12
4	88	63	43	601	135	558	104	114	3,430	253	66	12
5	86	62	44	648	125	565	96	101	2,170	213	60	14
6	397	60	46	265	127	540	93	90	908	186	55	11
7	936	58	48	200	125	475	91	85	368	145	52	10
8	875	59	50	150	60	405	86	80	323	111	50	9.3
9	1,250	55	52	140	70	385	80	84	914	85	47	8.9
10	805	54	55	160	98	416	76	90	718	71	46	9.0
11	377	50	54	192	105	446	71	79	817	60	51	8.6
12	247	50	57	198	120	439	69	72	1,790	52	46	8.2
13	170	50	57	161	147	415	63	64	5,170	46	49	8.6
14	133	55	60	167	166	380	58	58	3,020	42	69	9.9
15	110	56	64	123	140	358	55	53	1,320	39	106	7.9
16	98	68	72	129	119	339	54	47	640	36	166	7.4
17	98	70	79	132	111	310	66	41	382	35	131	24
18	92	68	82	123	236	264	68	38	257	34	91	230
19	86	61	92	114	229	246	68	38	195	32	132	1,140
20	82	57	86	106	238	235	136	34	185	91	106	1,490
21	77	54	83	101	290	216	113	30	423	81	70	459
22	71	48	81	94	200	192	123	30	337	58	57	271
23	77	50	76	90	299	189	112	32	289	57	43	180
24	79	47	74	89	274	181	259	29	207	60	35	198
25	88	43	69	86	327	168	140	26	147	104	33	2,590
26	152	42	70	82	755	160	102	29	121	128	27	4,720
27	105	40	68	91	1,100	155	98	56	108	94	24	1,810
28	84	39	71	178	1,010	156	103	41	98	97	22	667
29	73	39	70	186	------	148	163	49	87	98	20	382
30	68	39	72	182	------	143	155	39	83	105	18	249
31	63	------	72	167	------	125	------	33	------	105	16	------
TOTAL	7,231	1,621	1,970	5,243	7,031	10,329	3,039	1,954	25,686	4,282	1,902	14,573.8
MEAN	233	54.0	63.5	169	251	333	101	63.0	856	138	61.4	486
MAX	1,250	70	92	648	1,100	723	259	142	5,170	831	166	4,720
MIN	63	39	40	68	60	125	54	26	56	32	16	7.4
AC-FT	14,340	3,220	3,910	10,400	13,950	20,490	6,030	3,880	50,950	8,490	3,770	28,910

CAL YR 1970 TOTAL 119,419.0 MEAN 327 MAX 11,200 MIN 6.0 AC-FT 236,900
WTR YR 1971 TOTAL 84,861.8 MEAN 232 MAX 5,170 MIN 7.4 AC-FT 168,300

PEAK DISCHARGE (BASE, 16,000 CFS).--No peak above base.

07160500 Skeleton Creek near Lovell, Okla.

LOCATION.--Lat 36°03'36", long 97°35'05", in NW 1/4 SW 1/4 sec.1, T.18 N., R.4 W., Logan County, near right bank on downstream side of pier of bridge on State Highway 74, 2 miles upstream from Otter Creek, 2.8 miles east of Lovell, and at mile 14.6.

DRAINAGE AREA.--410 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 914.76 ft above mean sea level (State Highway Department bench mark). Prior to Dec. 5, 1949, nonrecording gage at site 60 ft downstream at datum 0.30 ft lower.

AVERAGE DISCHARGE.--22 years, 99.4 cfs (72,020 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 970 cfs Sept. 26 (gage height, 11.29 ft); minimum, 0.07 cfs July 21, 22.
Period of record: Maximum discharge, 75,200 cfs May 16, 1957 (gage height, 34.58 ft); no flow at times in 1953-54, 1956.
Flood of Aug. 17, 1932, reached a stage of 32.0 ft, from floodmarks.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	5.0	8.0	5.4	5.6	40	5.4	9.3	14	2.6	7.0	.89
2	5.0	4.8	7.6	4.9	5.7	28	6.2	8.6	13	3.0	4.9	1.1
3	3.9	4.0	7.5	170	4.9	22	6.5	6.0	213	5.0	4.1	.72
4	4.4	2.9	7.5	237	6.1	16	6.0	5.3	151	5.0	2.6	9.8
5	5.1	2.0	7.2	39	6.5	17	6.2	5.1	30	3.2	2.4	15
6	5.3	1.6	7.0	27	7.2	16	6.6	4.9	14	2.1	2.8	2.8
7	20	.84	7.3	17	7.5	15	5.6	4.9	7.9	1.5	2.7	22
8	78	6.7	7.5	14	6.7	13	5.8	5.0	18	.84	2.5	22
9	198	10	7.9	12	4.6	10	6.5	4.5	27	1.2	2.9	9.3
10	59	4.3	8.6	10	4.6	9.6	5.7	4.1	37	1.2	3.3	6.7
11	24	4.2	9.3	9.8	6.5	9.5	5.9	4.2	41	.93	2.8	8.3
12	12	3.7	8.4	9.8	7.4	9.4	4.8	3.9	345	.80	3.1	3.9
13	8.1	4.6	7.8	9.3	8.2	9.4	4.9	3.7	102	.81	3.1	3.0
14	5.5	4.4	7.7	8.9	7.4	9.4	4.3	3.5	42	.70	4.3	2.7
15	4.5	3.9	8.5	7.9	6.5	9.8	3.8	3.2	21	.62	7.5	2.5
16	3.8	4.3	9.9	8.4	5.9	8.5	4.9	3.2	12	.51	4.2	2.6
17	3.2	5.1	18	7.6	5.3	6.5	4.9	2.8	9.1	.91	4.6	4.0
18	2.8	5.0	24	7.8	5.8	7.0	4.5	2.3	7.6	.76	5.0	69
19	2.6	5.4	13	7.1	5.6	6.7	17	2.0	6.5	.61	4.0	149
20	4.4	6.3	9.9	6.2	6.3	6.2	71	2.8	5.1	.33	4.0	42
21	3.7	5.4	8.4	6.3	12	6.7	14	3.3	4.6	.12	3.5	18
22	4.3	5.6	7.7	7.6	9.3	7.3	17	3.9	10	.53	4.0	9.7
23	7.2	5.4	7.6	8.2	6.8	6.5	85	3.4	9.3	1.1	3.4	7.5
24	29	6.4	8.1	6.5	4.5	5.2	66	3.1	5.4	52	3.1	134
25	38	6.7	8.1	6.5	6.4	7.0	21	3.5	4.5	31	2.9	808
26	11	7.0	6.9	6.2	183	6.3	11	3.6	3.6	12	2.6	807
27	6.6	7.1	6.0	5.9	385	6.0	9.7	6.4	3.5	7.0	2.6	64
28	5.5	6.8	5.7	6.2	102	6.1	88	8.3	2.7	7.4	2.1	24
29	5.4	6.8	6.0	5.9	------	6.1	25	8.2	2.0	37	1.9	16
30	5.4	7.2	5.7	5.5	------	6.0	11	7.5	1.9	30	1.7	11
31	5.2	------	5.4	5.9	------	5.0	------	5.8	------	13	1.2	------
TOTAL	576.8	153.44	268.2	689.8	833.3	337.2	534.2	146.3	1,163.7	223.77	106.8	2,276.51
MEAN	18.6	5.11	8.65	22.3	29.8	10.9	17.8	4.72	38.8	7.22	3.45	75.9
MAX	198	10	24	237	385	40	88	9.3	345	52	7.5	808
MIN	2.6	.84	5.4	4.9	4.5	5.0	3.8	2.0	1.9	.12	1.2	.72
AC-FT	1,140	304	532	1,370	1,650	669	1,060	290	2,310	444	212	4,520

CAL YR 1970 TOTAL 7,440.03 MEAN 20.4 MAX 752 MIN .69 AC-FT 14,760
WTR YR 1971 TOTAL 7,310.02 MEAN 20.0 MAX 808 MIN .12 AC-FT 14,500

PEAK DISCHARGE (BASE, 1,500 CFS).--No peak above base.

07161000 Cimarron River at Perkins, Okla.

LOCATION.--Lat 35°57'32", long 97°01'49", in SW 1/4 SW 1/4 sec.7, T.17 N., R.3 E., Payne County, near right bank at downstream side of bridge on U.S. Highway 177, 1 miles south of Perkins, 1.5 miles upstream from Dugout Creek, 4 miles downstream from Wildhorse Creek, and at mile 87.3.

DRAINAGE AREA.--17,852 sq mi, of which 4,926 sq mi is probably noncontributing.

PERIOD OF RECORD.--June 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1927 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 819.88 ft above mean sea level (levels by Corps of Engineers). Prior to June 26, 1940, and Jan. 9, to Apr. 7, 1954, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--32 years, 1,101 cfs (797,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,560 cfs Sept. 26 (gage height, 7.84 ft); minimum, 8.4 cfs Sept. 4.
Period of record: Maximum discharge, 149,000 cfs May 17, 1957 (gage height, 19.53 ft); minimum, 0.8 cfs Dec. 8, 1954.
Flood of Oct. 4, 5, 1926, reached a stage of 17.0 ft, from floodmarks, from information by Corps of Engineers.

REMARKS.--Records fair. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	76	52	101	186	967	157	174	102	594	164	19
2	192	74	56	108	177	718	132	157	104	423	138	16
3	172	70	55	234	171	560	130	149	1,100	395	113	13
4	153	67	58	592	174	481	126	140	1,860	504	100	19
5	169	66	56	799	170	500	121	136	3,150	266	94	196
6	163	66	56	618	165	505	132	134	1,340	215	86	164
7	184	66	55	444	150	481	132	121	612	243	82	50
8	2,520	63	57	250	110	449	109	115	544	206	80	43
9	2,060	60	62	235	100	408	100	140	437	175	81	32
10	1,140	60	66	235	140	386	96	140	681	148	71	42
11	604	59	68	275	176	390	98	120	553	123	82	31
12	351	61	70	269	155	400	94	98	586	106	105	22
13	266	57	72	262	149	397	98	81	5,520	96	94	18
14	215	62	77	252	160	372	89	79	4,390	87	105	16
15	183	60	83	234	180	337	89	73	1,610	80	80	15
16	164	58	83	223	176	344	85	67	682	76	112	22
17	155	58	84	211	164	334	86	60	400	71	150	62
18	149	63	93	212	158	302	113	63	289	67	148	309
19	144	65	111	209	199	265	109	60	236	60	119	669
20	136	65	124	199	238	259	431	51	206	57	115	1,010
21	130	63	132	191	293	244	691	48	221	54	139	1,000
22	126	62	127	180	328	238	251	49	338	93	111	463
23	131	56	120	176	282	208	439	51	274	206	89	305
24	141	52	113	173	318	195	568	48	269	150	76	346
25	160	52	111	170	318	195	467	45	226	90	64	2,290
26	125	50	106	168	424	195	339	43	176	190	56	5,850
27	128	49	107	159	934	179	212	78	148	237	48	5,790
28	113	50	107	157	1,410	176	128	75	129	175	53	1,790
29	95	52	107	173	------	164	171	75	122	149	34	789
30	85	52	105	201	------	164	200	67	116	132	29	505
31	78	------	104	192	------	153	------	72	------	172	23	------
TOTAL	10,653	1,814	2,677	7,902	7,605	10,966	5,993	2,809	26,421	5,640	2,841	21,896
MEAN	344	60.5	86.4	255	272	354	200	90.6	881	182	91.6	730
MAX	2,520	76	132	799	1,410	967	691	174	5,520	594	164	5,850
MIN	78	49	52	101	100	153	85	43	102	54	23	13
AC-FT	21,130	3,600	5,310	15,670	15,080	21,750	11,890	5,570	52,410	11,190	5,640	43,430

CAL YR 1970 TOTAL 139,309.9 MEAN 382 MAX 9,650 MIN 8.4 AC-FT 276,300
WTR YR 1971 TOTAL 107,217.0 MEAN 294 MAX 5,850 MIN 13 AC-FT 212,700

PEAK DISCHARGE (BASE, 16,000 CFS).--No peak above base.

07163000 Council Creek near Stillwater, Okla.

LOCATION.--Lat 36°07'07", long 96°52'00", in SE 1/4 SW 1/4 sec.15, T.19 N., R.4 E., Payne County, on right bank 200 ft upstream from bridge on State Highway 51, 10 miles east of Stillwater, and at mile 10.0.

DRAINAGE AREA.--31 sq mi.

PERIOD OF RECORD.--March 1934 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 838.28 ft above mean sea level, adjustment of 1912. Prior to May 4, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--37 years, 10.5 cfs (4.60 inches per year, 7,160 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,080 cfs Oct. 8 (gage height, 6.62 ft); no flow at times.
Period of record: Maximum discharge, 25,000 cfs Oct. 2, 1959 (gage height, 18.9 ft, from floodmarks), from rating curve extended above 2,500 cfs on basis of slope-area measurements at gage heights 13.4 and 17.5 ft; no flow at times in each year.
Flood of Apr. 27, 1912, reached a stage of 16.6 ft at gage, based on floodmarks set by local resident at site 900 ft downstream.

REMARKS.--Records good.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.02	.04	.18	.10	.52	.15	.52	27			0
2	0	.03	.04	.22	.06	.36	.18	.36	17			0
3	0	.03	.04	102	.08	.22	.22	.28	221			0
4	0	.03	.04	5.5	.15	.28	.28	.22	4.8			.49
5	.27	.02	.04	1.2	.28	.36	.22	.22	1.5			61
6	.71	.02	.04	.60	.28	.28	.28	.22	.76			17
7	19	.02	.05	.44	.20	.22	.22	.18	.52			1.0
8	304	.03	.06	.44	.20	.22	.28	.18	60			.12
9	9.7	.03	.06	.52	.25	.28	.22	.36	8.7			.01
10	1.6	.01	.08	.52	.30	.22	.22	.52	2.1			0
11	.50	0	.05	.52	.50	.28	.36	1.2	.92			0
12	.25	0	.04	.44	.68	.28	.44	.18	.65			0
13	.13	0	.04	.52	.44	.28	.44	.10	11			0
14	.07	.04	.04	.52	.44	.28	.52	.08	1.8			0
15	.03	.05	.06	.36	.44	.22	.60	.06	.74			0
16	0	.05	.52	.36	.52	.15	.60	.04	.34			0
17	0	.04	.52	.28	.44	.10	.76	.03	.19			0
18	0	.03	.28	.36	.60	.08	.86	.03	.12			130
19	0	.04	.28	.28	.96	.08	.76	.04	.06			5.1
20	0	.04	.18	.22	.76	.08	1.2	.05	.03			.85
21	0	.03	.22	.28	4.0	.12	.76	.02	.02			.23
22	0	.03	.22	.36	5.1	.18	.52	.01	.01			.10
23	.01	.02	.28	.18	2.9	.18	.76	.01	0			.05
24	4.1	.01	.28	.22	5.1	.15	.76	.03	0			108
25	.97	.01	.44	.22	38	.22	.52	.02	0			108
26	.10	.02	.52	.22	12	.22	.52	.01	0			6.2
27	.96	.02	.60	.15	2.0	.28	.44	5.6	0			1.1
28	.36	.03	.76	.10	.60	.28	.36	.67	0			.31
29	.12	.04	.44	.10	------	.18	.36	.30	0			.12
30	.05	.04	.22	.10	------	.15	.60	.25	0			.06
31	.03	------	.22	.08	------	.18	------	.24	------			------
TOTAL	342.96	.78	6.70	117.49	77.38	6.93	14.41	12.03	359.26	0	0	439.74
MEAN	11.1	.026	.22	3.79	2.76	.22	.48	.39	12.0	0	0	14.7
MAX	304	.05	.76	102	38	.52	1.2	5.6	221	0	0	130
MIN	0	0	.04	.08	.06	.08	.15	.01	0	0	0	0
CFSM	.36	.0008	.007	.12	.09	.007	.02	.01	.39	0	0	.47
IN.	.41	0	.008	.14	.09	.008	.02	.01	.43	0	0	.53
AC-FT	680	1.6	13	233	153	14	29	24	713	0	0	872

CAL YR 1970 TOTAL 1,768.83 MEAN 4.85 MAX 652 MIN 0 CFSM .16 IN 2.12 AC-FT 3,510
WTR YR 1971 TOTAL 1,377.68 MEAN 3.77 MAX 304 MIN 0 CFSM .12 IN 1.65 AC-FT 2,730

PEAK DISCHARGE (BASE, 1,200 CFS).--No peak above base.

07164200 Keystone Lake near Sand Springs, Okla.
(Formerly published as Keystone Reservoir near Sand Springs)

LOCATION.--Lat 36°09'05", long 96°15'05", in SW 1/4 SE 1/4 sec.4, T.19 N., R.10 E., Tulsa County, in stair tower of intake structure near left end of Keystone Dam on Arkansas River, 8.5 miles west of Sand Springs, and at mile 538.8.

DRAINAGE AREA.--74,506 sq mi, of which 12,541 sq mi is probably noncontributing.

PERIOD OF RECORD.--September 1964 to current year. Prior to October 1970 published as Keystone Reservoir near Sand Springs.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Nov. 1, 1964, nonrecording gage nearby at same datum.

EXTREMES.--Current year: Maximum contents, 721,500 acre-ft Oct. 14 (elevation, 725.14 ft); minimum, 488,900 acre-ft Sept. 4 (elevation, 715.67 ft).
Period of record: Maximum contents, 973,100 acre-ft Apr. 23, 1970 (elevation, 733.30 ft); minimum since power pool was first filled, 297,800 acre-ft Jan. 19, 1965 (elevation, 705.07 ft).

REMARKS.--Reservoir is formed by rolled-fill earth dam. Spillway is concrete ogee weir controlled by 18 40-foot taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power was first filled Nov. 20, 1964. Capacity, 1,879,000 acre-ft at elevation 754.0 ft (top of flood-control pool), 662,700 acre-ft at elevation 723.0 ft (top of power pool), 563,000 acre-ft at elevation 719.0 ft (crest of controlled spillway), and 311,800 acre-ft at elevation 706.0 ft (minimum power pool). Figures given herein represent total contents. Reservoir is designed for flood control, power development, and conservation. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

715	474,800	723	662,700
718	540,000	726	744,900
721	611,700		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	649.4	711.1	611.7	564.4	578.4	604.4	586.8	606.7	595.2	617.4	586.3	498.9
2	653.1	706.6	608.7	564.9	577.6	628.4	581.5	610.2	597.4	617.4	583.6	494.8
3	655.4	705.5	607.4	574.8	578.4	632.7	583.4	607.2	606.7	625.2	585.8	489.5
4	657.2	702.8	601.7	574.8	581.2	636.0	584.6	603.7	625.2	629.2	586.0	524.4
5	660.1	700.6	602.4	572.6	578.6	635.7	579.6	602.4	647.4	633.0	585.8	570.7
6	664.0	697.1	600.7	568.3	579.3	637.7	573.6	601.7	669.2	629.4	585.1	617.4
7	668.2	696.9	593.0	567.8	580.3	639.6	565.6	598.7	676.3	625.4	587.2	614.4
8	697.4	699.6	586.8	569.5	574.5	636.0	560.7	600.2	679.8	620.2	589.4	605.4
9	703.9	694.7	582.4	574.0	570.7	638.3	555.9	601.4	678.8	617.0	587.7	598.2
10	704.4	693.1	580.5	578.1	567.3	640.3	556.6	596.0	679.8	623.4	583.4	590.4
11	710.8	692.5	576.9	579.3	567.1	643.2	557.9	586.0	679.6	632.2	583.2	589.4
12	713.6	690.4	574.0	580.3	567.8	643.7	556.3	579.3	678.5	630.4	578.6	588.0
13	718.1	688.8	573.8	580.0	569.0	642.9	555.2	573.8	693.9	625.4	572.8	581.0
14	715.6	689.3	568.8	579.8	571.4	642.9	553.8	571.2	699.8	619.2	575.2	575.0
15	715.3	689.0	567.8	577.6	570.4	639.3	554.3	571.4	699.6	612.7	575.5	571.2
16	712.5	684.2	564.7	580.5	568.8	638.3	553.1	570.2	689.8	606.4	572.8	570.0
17	710.8	675.0	564.0	582.9	568.3	631.0	553.8	569.7	680.1	605.2	570.2	567.6
18	709.4	669.5	565.6	581.2	570.7	630.7	554.7	571.9	678.5	606.0	564.7	596.0
19	710.5	664.3	564.7	580.5	572.4	621.7	554.5	566.8	676.9	605.0	555.6	598.4
20	708.9	660.6	565.6	580.5	573.3	615.2	554.5	563.5	678.5	602.4	545.5	593.2
21	708.0	661.9	566.6	582.7	580.8	615.2	554.3	558.9	675.8	598.7	543.4	583.9
22	706.1	662.7	566.8	583.9	575.0	612.4	556.8	560.7	671.0	595.2	552.0	583.2
23	706.1	658.5	566.6	584.6	568.3	615.2	559.1	562.3	661.1	596.2	542.8	579.8
24	704.4	644.2	566.6	585.3	569.0	612.2	561.2	559.3	652.8	596.7	532.5	581.2
25	706.1	629.7	566.8	582.7	573.3	609.4	568.5	558.9	646.6	598.4	525.5	611.2
26	706.6	628.0	567.6	579.8	578.1	604.7	574.5	562.3	644.0	594.2	523.5	631.7
27	707.2	625.2	567.8	579.8	582.7	603.7	575.7	570.2	640.6	595.4	517.4	646.3
28	708.6	620.7	565.2	579.3	587.5	605.4	582.2	573.6	634.2	596.4	518.7	657.2
29	709.4	621.0	564.9	577.9	------	600.4	588.2	584.6	626.4	586.5	518.7	655.9
30	711.1	614.0	567.1	577.9	------	595.0	596.0	591.1	621.0	582.4	513.2	647.1
31	709.4	------	564.0	578.1	------	590.1	------	596.0	------	584.6	505.0	------
(+)	724.74	721.09	719.04	719.63	720.02	720.13	720.37	720.37	721.37	719.90	716.42	722.40
(‡)	+64.9	-95.4	-50.0	+14.1	+9.4	+2.6	+5.9	0	+25.0	-36.4	-79.6	+142.1
MAX	718.1	711.1	611.7	585.3	587.5	643.7	596.0	610.2	699.8	633.0	589.4	657.2
MIN	649.1	614.0	564.0	564.4	567.1	590.1	553.1	558.9	595.2	582.4	505.0	489.5

CAL YR 1970 ..... ‡ +35.2
WTR YR 1971 ..... ‡ +2.6

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07164500 Arkansas River at Tulsa, Okla.

LOCATION.--Lat 36°08'37", long 96°00'13", in NW 1/4 sec.11, T.19 N., R.12 E., Tulsa County, near left bank on downstream side of pier of bridge on U.S. Highway 66 in Tulsa, 10.1 miles upstream from Polecat Creek, 15.1 miles downstream from Keystone Dam, and at mile 523.7.

DRAINAGE AREA.--74,615 sq mi, of which 12,541 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are published in reports of the U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft above mean sea level (Corps of Engineers bench mark). Prior to Feb. 2, 1939, nonrecording gage and Feb. 2, 1939, to Sept. 30, 1952, water-stage recorder at datum 3.00 ft higher.

AVERAGE DISCHARGE.--46 years, 6,346 cfs (4,598,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,900 cfs July 30 (gage height, 5.01 ft); minimum daily discharge, 466 cfs Feb. 14.
Period of record: Maximum discharge, 246,000 cfs Oct. 5, 1959 (gage height, 22.00 ft); minimum, 27 cfs Oct. 12, 13, 1956.
Maximum stage since 1904, 22.8 ft June 13, 1923, present datum, from reports of U.S. Weather Bureau.

REMARKS.--Records good. Except for 109 sq mi intervening area, flow completely regulated by Keystone Lake (see sta. 07164200) since September 1964. Prior minor regulation by John Martin Lake in Colorado and by Great Salt Plains Lake (see sta. 07150000). Records of chemical analyses and of water temperatures for site 7 miles upstream (published as "at Sand Springs Bridge near Tulsa") for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 23 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,270	2,080	2,360	1,190	917	1,230	3,170	2,130	2,570	5,520	681	3,460
2	945	2,370	1,980	783	829	1,110	3,680	865	3,450	3,710	2,600	2,780
3	872	2,640	2,140	1,030	1,060	5,420	2,080	2,850	2,870	2,440	2,100	2,460
4	758	1,850	1,960	1,400	1,360	5,280	625	3,690	2,580	1,840	2,030	1,810
5	714	1,840	1,730	2,540	2,210	7,120	2,740	3,230	3,870	1,580	2,260	3,170
6	722	2,430	949	3,330	1,360	4,160	3,700	3,160	4,050	3,210	2,550	6,970
7	703	2,100	2,630	2,780	803	3,110	3,950	2,940	5,610	4,560	1,390	3,870
8	1,050	1,020	4,080	2,410	1,950	5,750	4,490	1,430	7,070	4,670	753	7,360
9	3,120	1,620	3,190	1,670	2,170	3,990	3,410	908	10,600	5,910	1,600	6,140
10	4,640	2,020	2,720	831	2,760	3,890	2,160	2,690	7,700	3,420	3,590	4,630
11	4,000	1,440	2,350	1,100	2,120	3,890	802	6,530	6,880	1,350	3,170	2,800
12	4,400	1,680	1,480	1,620	1,120	3,900	1,320	5,550	8,030	3,510	3,660	1,120
13	4,630	2,110	1,180	1,610	643	4,130	1,730	4,510	6,770	6,330	4,250	2,900
14	5,890	1,520	2,100	1,690	466	4,240	1,730	2,670	9,610	6,430	2,460	4,500
15	5,590	807	2,260	2,030	470	5,800	1,020	1,410	12,800	6,180	671	2,700
16	4,800	1,720	1,870	1,680	2,270	3,700	1,530	1,250	12,900	5,410	1,600	1,410
17	3,440	4,850	1,180	552	1,680	5,870	1,140	1,480	13,000	3,700	2,170	2,890
18	3,430	3,860	1,080	1,440	989	5,980	755	1,760	8,290	1,680	3,030	6,100
19	2,770	3,890	892	1,150	1,690	5,980	1,240	2,250	7,480	1,340	4,200	8,210
20	1,940	3,000	895	1,220	934	5,980	1,430	2,710	5,870	1,760	4,880	7,630
21	2,180	1,530	685	1,090	890	2,850	1,470	2,720	6,010	2,760	3,960	6,590
22	2,220	691	880	856	2,410	3,830	904	2,390	5,420	3,490	2,010	4,700
23	2,610	1,080	901	660	5,090	2,080	877	1,380	8,130	2,580	6,640	3,410
24	3,120	5,460	1,130	685	3,900	2,950	859	1,300	7,330	2,040	6,690	5,600
25	2,300	8,040	1,100	2,050	1,670	3,730	840	2,030	7,280	1,440	5,130	3,910
26	1,370	4,720	696	2,240	1,140	3,920	819	1,680	4,960	1,590	4,610	948
27	2,380	2,600	714	1,100	912	2,990	2,500	1,670	3,410	4,290	4,640	2,250
28	937	1,370	1,300	972	912	1,780	2,060	3,560	5,690	2,300	1,950	6,410
29	788	2,950	1,500	1,610	------	3,150	3,280	2,470	5,770	4,990	846	6,520
30	775	4,380	1,030	1,050	------	3,760	4,700	1,190	5,430	5,380	1,810	6,540
31	1,020	------	977	1,080	------	3,840	------	1,260	------	1,940	4,410	------
TOTAL	75,384	77,668	49,939	45,449	44,725	125,410	61,011	75,663	201,430	107,350	92,341	129,788
MEAN	2,432	2,589	1,611	1,466	1,597	4,045	2,034	2,441	6,714	3,463	2,979	4,326
MAX	5,890	8,040	4,080	3,330	5,090	7,120	4,700	6,530	13,000	6,430	6,690	8,210
MIN	703	691	685	552	466	1,110	625	865	2,570	1,340	671	948
AC-FT	149,500	154,100	99,050	90,150	88,710	248,800	121,000	150,100	399,500	212,900	183,200	257,400

CAL YR 1970 TOTAL 1,788,085 MEAN 4,899 MAX 44,600 MIN 631 AC-FT 3,547,000
WTR YR 1971 TOTAL 1,086,158 MEAN 2,976 MAX 13,000 MIN 466 AC-FT 2,154,000

07165000 Heyburn Lake near Heyburn, Okla.
(Formerly published as Heyburn Reservoir near Heyburn)

LOCATION.--Lat 35°56'52", long 96°17'55", in SE 1/4 sec.13, T.17 N., R.9 E., Creek County, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 miles northwest of Heyburn, 3.4 miles upstream from bridge on U.S. Highway 66, 11 miles southwest of Sapulpa, and at mile 48.6.

DRAINAGE AREA.--123 sq mi.

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1970, published as Heyburn Reservoir near Heyburn.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 19,410 acre-ft Sept. 6 (elevation, 769.98 ft); minimum, 7,550 acre-ft July 22, (elevation, 760.83 ft).
Period of record: Maximum contents, 26,670 acre-ft June 25, 1958 (elevation, 772.60 ft); minimum since conservation pool was first filled, 6,580 acre-ft Apr. 9, 1967 (elevation, 759.76 ft).

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of an 8-foot 3-inch diameter concrete conduit extending from an uncontrolled concrete drop inlet at the upstream side of dam to a concrete stilling basin near downstream toe of dam and three 36-inch gated low-flow pipes which drain into the conduit below the drop inlet. Spillway is a 200-foot channel in a natural saddle about 1,000 ft west of right abutment. Storage began Sept. 29, 1950; conservation pool was first filled Mar. 10, 1951. Capacity, 147,000 acre-ft at elevation 802.0 ft (maximum pool), 57,220 acre-ft at elevation 784.0 ft (spillway crest and top of flood-control pool), and 8,150 acre-ft at evevation 761.5 (conservation pool). Dead storage, 377 acre-ft below elevation 740.0 ft (invert of low-flow sluices). Reservoir was designed for flood control and conservation. Figures given herein represent total contents. Revised capacity table, based on survey in 1959, used since Oct. 1, 1959.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

760	6,800	766	13,460
763	9,780	769	17,800

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.500	8.320	8.090	8.040	8.200	8.840	8.070	7.970	7.810	8.060	8.340	8.240
2	8.440	8.320	8.090	8.060	8.200	8.740	8.050	7.940	7.910	8.040	8.310	8.210
3	8.390	8.300	8.090	9.250	8.200	8.650	8.030	7.930	8.540	8.030	8.310	8.190
4	8.350	8.260	8.070	9.060	8.600	8.580	8.040	7.920	8.500	8.020	8.280	8.570
5	8.350	8.250	8.060	8.880	8.590	8.550	8.030	7.920	8.460	8.010	8.250	17.800
6	8.320	8.250	8.050	8.750	8.550	8.480	8.020	7.920	8.400	7.990	8.240	17.800
7	8.300	8.230	8.040	8.640	8.520	8.440	8.020	7.920	8.380	8.050	8.220	14.620
8	11.410	8.250	8.040	8.560	8.460	8.440	8.020	7.920	8.350	7.940	8.210	12.030
9	10.350	8.210	8.040	8.500	8.430	8.380	8.010	7.910	8.320	7.920	8.200	10.550
10	9.690	8.200	8.060	8.470	8.420	8.370	8.010	7.910	8.300	7.890	8.190	9.820
11	9.280	8.200	8.020	8.440	8.400	8.340	8.000	7.910	8.260	7.860	8.180	9.360
12	9.020	8.180	8.020	8.400	8.350	8.330	7.990	7.870	8.620	7.830	8.170	9.060
13	8.830	8.200	8.020	8.380	8.330	8.320	7.980	7.860	8.700	7.800	8.160	8.800
14	8.700	8.190	8.020	8.360	8.320	8.310	7.960	7.840	8.610	7.760	8.160	8.720
15	8.590	8.180	8.040	8.340	8.310	8.300	7.960	7.840	8.530	7.740	8.170	8.590
16	8.520	8.170	8.030	8.320	8.300	8.270	7.960	7.830	8.460	7.720	8.140	8.530
17	8.460	8.170	8.030	8.310	8.300	8.250	7.980	7.810	8.400	7.680	8.120	9.800
18	8.420	8.160	8.040	8.300	8.550	8.220	7.990	7.820	8.350	7.650	8.100	13.980
19	8.380	8.170	8.020	8.270	8.590	8.170	7.970	7.850	8.300	7.630	8.090	11.770
20	8.350	8.160	8.050	8.260	8.540	8.160	7.990	7.840	8.280	7.590	8.060	10.520
21	8.330	8.150	8.070	8.260	9.850	8.160	7.990	7.840	8.250	7.560	8.060	9.820
22	8.310	8.130	8.070	8.250	9.720	8.150	8.020	7.830	8.220	7.560	9.310	9.420
23	8.400	8.100	8.060	8.250	9.440	8.130	8.020	7.840	8.200	8.880	9.030	9.130
24	8.390	8.100	8.050	8.250	9.320	8.120	8.020	7.820	8.190	8.780	8.820	9.650
25	8.370	8.090	8.040	8.250	9.720	8.110	8.020	7.810	8.160	8.640	8.680	10.180
26	8.400	8.090	8.040	8.240	9.430	8.110	8.020	7.810	8.130	8.580	8.620	9.690
27	8.400	8.080	8.040	8.230	9.180	8.110	8.010	7.810	8.100	8.490	8.480	9.320
28	8.360	8.070	8.040	8.230	8.980	8.110	7.970	7.810	8.090	8.440	8.400	9.080
29	8.340	8.080	8.040	8.230	------	8.110	7.990	7.800	8.060	8.500	8.350	8.890
30	8.320	8.090	8.060	8.220	------	8.100	7.980	7.790	8.050	8.440	8.300	8.740
31	8.300	------	8.040	8.210	------	8.090	------	7.810	------	8.380	8.270	------
(+)	761.65	761.43	761.38	761.57	762.27	761.43	761.31	761.12	761.39	761.73	761.63	762.05
(‡)	-270	-210	-.50	+170	+770	-890	-110	-170	+240	+330	-110	+470
MAX	11,410	8,320	8,090	9,250	9,850	8,840	8,070	7,970	8,700	8,880	9,310	17,800
MIN	8,300	8,070	8,020	8,040	8,200	8,090	7,960	7,790	7,810	7,560	8,060	8,190

CAL YR 1970..... ‡ +20
WTR YR 1971..... ‡ +170

\+ Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07165500 Polecat Creek below Heyburn Lake, near Heyburn, Okla.
(Formerly published as Polecat Creek below Heyburn Reservoir, near Heyburn)

LOCATION.--Lat 35°56'51", long 96°17'58", in SE 1/4 sec.13, T.17 N., R.9 E., Creek County, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 miles northwest of Heyburn, 3.4 miles upstream from bridge on U.S. Highway 66, 11 miles southwest of Sapulpa, and at mile 48.6.

DRAINAGE AREA.--123 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Prior to October 1956, published as Polecat Creek at Heyburn and October 1956 to September 1970 as Polecat Creek below Heyburn Reservoir near Heyburn.

GAGE.--Water-stage recorder, modified morning-glory type drop inlet structure, and uncontrolled concrete emergency spillway. Datum of gage is 760.00 ft above mean sea level. Supplementary water-stage recorder at site 1,100 ft downstream at datum 718.00 ft. Prior to Feb. 22, 1949, nonrecording gage and Feb. 22, 1949, to Feb. 16, 1956, water-stage recorder at site 3.4 miles downstream at datum 706.47 ft.

AVERAGE DISCHARGE.--28 years, 47.6cfs (34,490 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,850 cfs Sept. 6 (gage height, 9.98 ft); no flow at times.
Period of record: Maximum discharge, 17,300 cfs June 23, 1948 and May 19, 1949, from rating curve extended above 6,100 cfs; maximum gage height, 28.53 ft May 19, 1949, site and datum then in use; no flow at times in most years.
Flood of Sept. 4, 1940, reached a stage of 31.5 ft, from floodmark, at former site and datum.

REMARKS.--Records fair. Low flow computed from supplementary gage during periods of no spill. Flow regulated since September 1950 by Heyburn Lake (see sta. 07165000) with occasional prior regulation from March 1950 by lake construction operations.

COOPERATION.--Gage-height record, 17 discharge measurements, 10 observations of no flow, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1441: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	7.6	0	0	.49	71	2.8	.03	0	.07	8.3	2.5
2	19	9.0	0	0	.37	54	.11	.01	0	0	5.4	1.3
3	14	7.6	0	57	.37	42	0	.01	14	0	3.9	.4
4	9.0	6.1	0	118	14	32	0	1.2	25	0	3.2	.4
5	7.6	4.7	0	80	33	27	0	.20	20	0	1.8	1,270
6	7.6	3.9	0	58	30	24	.30	.07	15	0	1.0	1,760
7	5.4	3.2	0	42	25	18	.03	.08	12	0	.76	1,460
8	402	3.3	0	38	20	14	0	.05	9.0	0	.37	1,240
9	607	6.7	0	26	16	12	0	0	7.6	0	.27	735
10	324	1.2	1.2	23	14	9.9	0	0	5.4	0	.11	382
11	182	6.7	.80	16	13	8.3	0	0	3.9	0	.05	206
12	113	1.2	0	14	11	7.6	0	.42	6.5	0	0	124
13	75	.80	0	12	6.8	6.1	.07	.07	47	0	0	78
14	50	.60	0	11	6.1	7.3	0	0	38	0	0	52
15	37	6.0	0	9.0	6.1	5.2	0	0	30	0	0	38
16	26	1.2	0	6.8	5.4	3.4	0	0	23	0	0	27
17	20	.80	0	6.8	4.7	2.6	0	0	15	0	0	130
18	16	.40	0	6.1	8.3	16	0	0	11	0	0	1,160
19	14	.20	0	4.7	30	17	0	0	6.8	0	0	1,260
20	11	1.2	0	3.9	27	2.7	0	0	4.7	1.1	0	676
21	7.6	.80	0	3.9	76	1.2	0	0	3.2	.07	0	371
22	6.8	0	1.2	3.9	271	3.6	.01	0	1.8	0	102	214
23	9.0	0	.80	3.2	191	1.4	.17	0	.76	3.6	95	135
24	14	0	0	3.2	151	.63	.05	.17	.37	63	63	119
25	12	0	0	3.2	217	.23	.01	.05	.18	43	47	377
26	12	0	0	2.5	204	.11	0	.03	0	32	34	301
27	14	0	0	1.8	138	.05	.64	.03	0	23	25	187
28	13	0	0	1.8	95	.17	1.4	0	0	18	16	124
29	12	0	0	1.8	------	.63	.20	0	0	18	11	84
30	9.0	0	1.2	1.8	------	.07	.17	0	1.2	18	6.8	60
31	7.6	------	.95	.76	------	0	------	0	------	12	4.7	------
TOTAL	2,081.6	73.20	6.15	560.16	1,614.63	388.19	5.96	2.42	301.41	231.84	429.66	12,574.6
MEAN	67.1	2.44	.20	18.1	57.7	12.5	.20	.078	10.0	7.48	13.9	419
MAX	607	9.0	1.2	118	271	71	2.8	1.2	47	63	102	1,760
MIN	5.4	0	0	0	.37	0	0	0	0	0	0	.40
AC-FT	4,130	145	12	1,110	3,200	770	12	4.8	598	460	852	24,940

CAL YR 1970 TOTAL 9,312.58 MEAN 25.5 MAX 922 MIN 0 AC-FT 18,470
WTR YR 1971 TOTAL 18,269.82 MEAN 50.1 MAX 1,760 MIN 0 AC-FT 36,240

07165600 Arkansas River near Tullahassee, Okla.

LOCATION.--Lat 35°48'15", long 95°24'10", in NW 1/4 SE 1/4, sec.4, T.15 N., R.18 E., Muskogee County, 1.3 miles downstream from Pecan Creek, 3.0 miles southeast of Tullahassee, 4.5 miles northwest of Muskogee, 6.5 miles upstream from Verdigris River, and at mile 466.7.

DRAINAGE AREA.--75,815 sq mi, of which 12,541 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 490.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 51,400 cfs Sept. 6 (gage height, 16.55 ft); minimum daily, 693 cfs Dec. 29, Feb. 16.
Period of record: Maximum discharge, 53,800 cfs May 1, 1970 (gage height, 17.04 ft); minimum daily, 693 cfs Dec. 29, 1970, Feb. 16, 1971.

REMARKS.--Records good. Flow regulated by Keystone Lake, 72.1 miles upstream.

COOPERATION.--Gage-height record, 23 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,660	1,410	2,100	954	1,400	1,790	4,200	4,580	1,380	6,610	3,620	2,610
2	2,190	2,550	5,030	994	1,320	1,660	4,020	4,510	1,490	6,330	1,540	4,080
3	1,170	2,480	2,710	1,380	1,160	1,860	3,820	1,570	6,110	5,610	1,040	3,240
4	958	4,200	2,630	3,440	1,230	2,730	4,120	1,080	7,180	3,210	3,090	3,800
5	841	2,770	2,260	3,650	2,350	5,950	1,580	3,820	4,460	2,250	2,140	5,060
6	1,240	2,550	3,470	3,100	3,780	6,640	1,200	3,890	3,680	2,060	2,490	24,400
7	3,040	2,480	1,570	3,990	3,570	6,210	3,710	3,230	5,310	1,750	2,790	34,400
8	2,480	3,580	1,360	4,300	1,680	4,250	4,070	3,300	3,380	3,960	2,790	13,900
9	2,880	1,940	4,450	3,550	2,270	4,810	4,970	3,300	7,360	4,470	1,430	12,200
10	4,710	1,390	4,740	3,310	4,960	5,100	4,320	1,520	9,860	5,250	982	9,350
11	7,150	2,290	3,630	1,790	3,250	4,590	3,700	1,450	8,200	5,130	2,390	6,520
12	5,370	2,250	3,440	1,270	3,160	4,400	1,530	5,060	7,470	2,360	4,620	5,780
13	4,710	1,910	2,690	2,160	2,500	4,540	1,060	6,710	7,930	1,250	3,620	2,640
14	5,540	2,300	2,130	3,170	1,380	4,770	1,710	4,720	7,660	4,860	4,650	2,220
15	4,410	2,770	1,380	2,750	992	4,890	1,990	4,380	9,740	6,140	4,830	4,190
16	5,890	1,560	3,050	2,950	693	6,010	1,870	2,870	12,700	6,020	1,790	4,400
17	5,460	1,140	2,940	3,140	778	5,000	1,140	1,450	12,600	5,450	1,170	3,070
18	5,410	3,220	2,580	1,730	2,370	5,960	1,770	1,530	12,600	5,120	2,350	3,250
19	4,370	6,000	1,570	1,130	1,970	6,690	1,220	1,490	8,700	2,530	2,610	10,500
20	3,850	4,390	1,400	2,260	1,400	6,490	1,000	2,160	8,060	1,410	3,650	12,700
21	2,390	4,920	1,230	1,820	2,390	6,600	1,580	3,060	6,890	1,680	5,270	10,400
22	2,800	2,960	1,170	1,640	3,410	4,910	1,560	2,870	5,800	2,050	5,890	7,200
23	6,200	1,510	1,030	1,380	4,650	3,690	1,920	3,130	6,170	3,480	3,670	7,230
24	8,600	1,020	1,180	1,090	5,820	4,190	1,770	2,090	7,100	4,370	5,570	4,390
25	6,430	2,350	1,280	918	6,790	2,080	1,220	1,760	7,430	3,110	6,030	6,060
26	5,880	8,160	1,330	1,000	4,710	4,120	999	2,070	7,010	1,950	6,650	9,350
27	7,370	7,540	1,150	2,530	3,280	4,060	893	1,840	6,170	1,240	5,710	3,830
28	6,500	3,650	828	2,820	2,190	4,280	980	2,530	4,350	3,640	4,740	2,760
29	3,110	2,760	693	1,470	------	3,290	2,590	2,110	4,160	3,110	5,000	5,790
30	1,750	2,850	863	1,480	------	2,020	3,000	3,970	5,920	2,900	1,520	7,630
31	1,400	------	1,050	2,160	------	3,840	------	1,660	------	6,670	1,090	------
TOTAL	126,759	90,900	66,934	69,326	75,453	137,420	69,512	89,710	206,870	115,970	104,732	232,950
MEAN	4,089	3,030	2,159	2,236	2,695	4,433	2,317	2,894	6,896	3,741	3,378	7,765
MAX	8,600	8,160	5,030	4,300	6,790	6,690	4,970	6,710	12,700	6,670	6,650	34,400
MIN	841	1,020	693	918	693	1,660	893	1,080	1,380	1,240	982	2,220
AC-FT	251,400	180,300	132,800	137,500	149,700	272,600	137,900	177,900	410,300	230,000	207,700	462,100

CAL YR 1970 TOTAL 1,936,811 MEAN 5,306 MAX 48,100 MIN 693 AC-FT 3,842,000
WTR YR 1971 TOTAL 1,386,536 MEAN 3,799 MAX 34,400 MIN 693 AC-FT 2,750,000

PEAK DISCHARGE (BASE, 50,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
9-6	abt. 2300	16.55	51,400				

07170500 Verdigris River at Independence, Kans.

LOCATION.--Lat 36°13'26", long 95°40'43", in NW 1/4 NE 1/4 NE 1/4 sec.32, T.32 S., R.16 E., Montgomery County, near right bank at downstream side of bridge on U.S. Highway 160, 1 mile east of Independence, 3.6 miles downstream from Elk River, and at mile 194.3.

DRAINAGE AREA.--2,892 sq mi.

PERIOD OF RECORD.--August 1895 to September 1904 (monthly figures only, published in WSP 1311), October 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.63 ft above mean sea level. Aug. 2, 1895, to Nov. 30, 1903, nonrecording gage at former milldam 5 miles downstream and 2.5 miles northwest of Liberty, at datum about 4 ft lower. Apr. 20 to Sept. 25, 1904, nonrecording gage at Myrtle Street highway bridge 0.8 mile upstream at different datum. Nov. 14, 1921, to Sept. 30, 1929, nonrecording gage at Myrtle Street bridge at datum 0.87 ft higher than present datum. Oct. 1, 1929, to Dec. 25, 1933, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--59 years, 1,590 cfs (1,152,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,900 cfs June 10 (gage height, 22.83 ft); minimum, 18 cfs Sept. 1-3.
Period of record: Maximum discharge, 117,000 cfs Apr. 17, 1945 (gage height, 47.28 ft); maximum gage height, 47.60 ft May 19, 1943; no flow at times in 1932, 1934, 1936, 1939-40, 1953-55.
Maximum stage known since at least 1885, that of May 19, 1943.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Reservoir (see sta. 07168000) and since 1960 by Toronto Reservoir (see sta. 07165900). Since 1966, some regulation by Elk City Reservoir (see sta. 07170050). Records of chemical analyses for the water year 1971 are published in Part 2 of the Kansas State report.

COOPERATION.--Gage-height record, 27 discharge measurements, and records of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 977: 1922, 1927-29. WSP 1117: Drainage area. WSP 1341: 1923-25(M), 1939.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	328	73	82	276	3,540	217	1,350	466	160	1,480	18
2	158	186	59	91	305	3,690	206	595	601	193	1,440	18
3	147	161	456	5,320	398	4,870	186	405	2,740	136	1,390	18
4	142	154	1,000	13,000	547	4,830	181	407	1,940	930	1,150	25
5	137	135	977	6,500	682	4,750	180	321	2,150	1,420	413	52
6	143	111	609	5,860	445	4,640	177	227	2,090	2,800	363	97
7	133	98	420	9,720	343	4,300	174	162	2,130	3,470	333	99
8	324	89	404	8,470	294	4,150	172	144	2,540	4,690	246	73
9	2,090	79	399	4,770	271	3,360	161	139	3,260	4,050	202	61
10	1,480	73	287	1,080	278	1,600	123	140	8,070	2,940	193	51
11	667	70	193	791	280	909	97	157	10,000	1,760	170	46
12	417	68	134	760	293	872	82	175	5,250	1,220	150	43
13	383	68	92	748	294	968	70	216	6,040	957	139	40
14	737	67	79	673	289	861	62	316	4,950	1,390	137	35
15	836	65	77	587	345	810	59	514	5,740	1,350	322	30
16	579	64	81	557	356	739	58	624	4,460	1,240	208	28
17	495	62	86	525	355	597	56	620	2,200	681	139	28
18	352	62	87	483	373	495	65	595	1,140	338	118	76
19	247	67	80	422	507	450	74	324	534	280	109	119
20	232	70	74	363	537	405	90	183	329	271	99	89
21	220	66	74	328	472	322	104	175	259	202	73	72
22	215	61	74	319	489	287	103	794	222	123	60	59
23	216	57	74	316	741	280	118	969	1,600	148	51	50
24	218	55	73	316	1,400	273	196	1,170	4,440	722	40	55
25	180	53	68	314	3,480	264	431	403	1,300	867	31	880
26	168	53	66	309	7,290	250	674	1,210	749	903	25	3,620
27	172	54	63	303	7,660	246	658	1,280	670	857	22	687
28	1,020	112	61	296	4,340	245	1,050	993	556	2,000	21	276
29	687	154	59	289	------	237	1,300	803	366	4,250	21	172
30	674	111	65	288	------	233	1,770	494	241	1,480	19	128
31	531	------	77	284	------	230	------	431	------	1,170	19	------
TOTAL	14,179	2,853	6,421	64,164	33,340	49,703	8,894	16,336	77,033	42,998	9,183	7,045
MEAN	457	95.1	207	2,070	1,191	1,603	296	527	2,568	1,387	296	235
MAX	2,090	328	1,000	13,000	7,660	4,870	1,770	1,350	10,000	4,690	1,480	3,620
MIN	133	53	59	82	271	230	56	139	222	123	19	18
AC-FT	28,120	5,660	12,740	127,300	66,130	98,590	17,640	32,400	152,800	85,290	18,210	13,970

CAL YR 1970 TOTAL 657,350 MEAN 1,801 MAX 22,200 MIN 34 AC-FT 1,304,000
WTR YR 1971 TOTAL 332,149 MEAN 910 MAX 13,000 MIN 18 AC-FT 658,800

PEAK DISCHARGE (BASE, 14,000 CFS).--NO PEAK ABOVE BASE.

07171000 Verdigris River near Lenapah, Okla.

LOCATION.--Lat 36°51'05", long 95°35'06", at center of sec.3, T.27 N., R.16 E., Nowata County, near right bank on downstream side of pier of county road bridge, 2.8 miles east of Lenapah, 4.5 miles upstream from Cedar Creek, and at mile 144.6.

DRAINAGE AREA.--3,639 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 644.89 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 2,074 cfs (1,503,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,000 cfs Jan. 4 (gage height, 20.00 ft); minimum, 20 cfs Sept. 4.
Period of record: Maximum discharge, 137,000 cfs May 20, 1943 (gage height, 40.44 ft, from floodmarks); no flow at times in 1939-40, 1956.

REMARKS.--Records good. Some regulation, by dams in Kansas, since April 1949.

COOPERATION.--Gage-height record, 25 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 977: 1942(M). WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389	629	180	213	350	4,160	273	1,630	660	355	1,330	24
2	261	421	125	209	333	3,780	259	1,180	663	379	1,470	23
3	221	279	95	6,430	368	4,610	243	592	2,660	276	1,420	21
4	196	246	561	16,100	1,200	5,240	216	465	3,090	227	1,370	23
5	197	234	1,050	12,300	1,930	5,150	201	473	2,140	1,710	956	383
6	664	209	977	5,010	1,120	5,130	202	385	2,270	3,010	426	245
7	514	178	639	8,850	690	4,880	197	274	2,180	3,450	410	127
8	2,000	158	496	9,730	518	4,540	195	191	2,640	4,100	367	154
9	5,000	152	480	7,400	441	4,220	199	154	3,050	4,830	277	117
10	2,500	151	470	2,500	402	2,680	194	149	3,970	3,340	208	84
11	1,520	141	359	1,010	408	1,430	169	157	12,000	2,640	198	69
12	786	124	246	913	444	1,040	143	171	7,930	1,540	172	59
13	566	121	187	879	447	1,060	131	192	6,800	1,130	156	54
14	537	114	146	839	432	1,080	129	225	5,380	1,190	155	51
15	873	114	124	767	422	966	129	366	6,000	1,420	170	45
16	852	115	135	685	473	914	133	629	5,570	1,360	381	43
17	615	117	165	667	478	801	130	687	3,390	1,130	289	45
18	553	111	155	624	474	692	133	680	1,840	697	185	151
19	396	104	152	572	560	596	130	627	1,010	402	148	367
20	295	99	149	508	764	550	131	354	609	328	128	218
21	271	110	156	436	709	494	135	203	408	314	121	152
22	263	114	181	409	817	415	137	458	326	242	106	107
23	274	109	178	406	845	377	139	1,670	429	171	78	81
24	377	107	166	407	1,490	362	149	1,430	3,660	211	63	74
25	339	102	149	403	3,350	351	216	1,240	3,350	820	56	345
26	279	96	137	398	10,200	342	570	751	1,040	1,010	53	2,970
27	267	91	122	388	9,620	323	748	1,340	867	938	41	2,320
28	470	92	113	374	6,940	318	828	1,230	781	951	33	709
29	1,050	99	105	365	------	312	1,120	978	638	3,770	29	388
30	834	208	103	360	------	299	1,630	826	464	2,830	26	250
31	777	------	141	357	------	285	------	984	------	1,290	25	------
TOTAL	24,136	4,945	8,442	80,509	46,225	57,397	9,209	20,691	85,815	46,061	10,847	9,699
MEAN	779	165	272	2,597	1,651	1,852	307	667	2,861	1,486	350	323
MAX	5,000	629	1,050	16,100	10,200	5,240	1,630	1,670	12,000	4,830	1,470	2,970
MIN	196	91	95	209	333	285	129	149	326	171	25	21
AC-FT	47,870	9,810	16,740	159,700	91,690	113,800	18,270	41,040	170,200	91,360	21,520	19,240

CAL YR 1970 TOTAL 828,259 MEAN 2,269 MAX 33,400 MIN 32 AC-FT 1,643,000
WTR YR 1971 TOTAL 403,976 MEAN 1,107 MAX 16,100 MIN 21 AC-FT 801,300

PEAK DISCHARGE (BASE, 23,000 CFS).--No peak above base.

07171300 Oologah Lake near Oologah, Okla.
(Formerly published as Oologah Reservoir near Oologah)

LOCATION.--Lat 36°25'19", long 95°40'43", in NE 1/4 NW 1/4 sec.2, T.22 N., R.15 E., Rogers County, in gate tower 1,000 ft from left end of dam on Verdigris River, 2 miles southeast of Oologah, and at mile 90.3.

DRAINAGE AREA.--4,339 sq mi.

PERIOD OF RECORD.--May 1963 to current year. Prior to October 1970 published as Oologah Reservoir near Oologah.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 303,400 acre-ft Sept. 30 (elevation, 627.98 ft); minimum, 55,820 acre-ft Oct. 19 (elevation, 607.62 ft).
Period of record: Maximum contents, 355,700 acre-ft May 5, 1970 (elevation, 630.42 ft); minimum since conservation pool was first filled, 33,750 acre-ft Aug. 28, Oct. 27, 1969 (elevation 602.87 ft).

REMARKS.--Reservoir is formed by earth dam with concrete outlet structure and emergency spillway. Storage began May 15, 1963; conservation pool was first filled Apr. 4, 1964. Capacity, 1,020,000 acre-ft at elevation 651.0 ft (crest of uncontrolled spillway) and 264,800 acre-ft at elevation 626.0 ft (conservation pool, revised). Dead storage, 9,260 acre-ft below elevation 592.0 ft. Figures given herein represent total contents. Reservoir is used for flood control and conservation.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

607	52,410	622	196,000
612	85,580	625	246,600
617	133,000	628	303,800

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57,420	62,920	63,890	59,110	83,750	174,300	126000	142,500	181,200	231,400	264,800	270,300
2	57,960	63,950	63,950	59,650	84,150	175,400	126100	145,300	183,000	230,500	267,500	269,600
3	58,020	64,870	64,540	65930	85180	172,900	127,700	146300	185,000	229,000	270,300	268,500
4	57,840	65,400	64,470	89,480	95660	171,200	127,300	146200	191,600	229,100	273,000	273,200
5	58500	65930	66730	100,500	108,100	172,800	127,600	147,200	195800	231,900	274,200	277,100
6	59,410	66130	68590	96700	112,400	171,500	127,800	148,600	200,600	236000	275200	280,000
7	60,320	64,870	70,060	89,400	114,600	171,100	127,700	149,000	207,800	237,900	275000	279,400
8	61,950	60,440	71,050	93,740	115900	168,600	128,100	149,300	213,100	236500	275,000	279,800
9	78620	58870	71,920	97,050	117,100	161,800	128500	149,600	218,100	236500	275,400	279,800
10	87,090	59,110	73,220	91,740	118,200	151,100	128,400	149,800	221,900	236000	275,200	279,600
11	91,220	59,590	73,880	79,060	120,000	137,600	128,700	151,100	223,800	234,800	276100	279,400
12	89,160	59,840	74,390	65130	120,900	128,400	128,400	150,300	287,200	231,200	275,900	279,100
13	90,440	60,320	74,750	60,020	121,700	125700	129,200	150,100	222,900	230,200	275,900	278,100
14	91,310	60,500	74,820	62,500	123,000	124,900	129,200	150,200	224,200	231,200	276100	279,600
15	88920	60,500	75630	64,470	123,900	123,600	129,000	150,700	222,400	234,400	276100	281,400
16	81,130	60,740	76140	66530	125100	122,700	129,300	151,000	220,900	236800	276100	278,300
17	70,920	61,040	76140	68,590	126000	121,800	129,300	151,500	221,700	238,600	276100	280,600
18	60,740	61,230	76360	70,060	126400	123,500	129,300	153,700	224,200	240,400	275,600	286500
19	56100	61,530	75850	71,250	128,500	124,100	129,500	154,700	225,000	240,300	275,600	286500
20	56700	61,650	75260	72,050	131,300	123,700	129,800	155300	225200	240,100	275,400	286900
21	57,050	61,830	74,390	73,800	134,100	125100	129,900	155600	226000	240,100	274,800	287,100
22	57,420	62,380	71,850	74,970	137,100	125,400	131,000	158,100	225,900	240,100	275,600	287,100
23	58,750	62,260	66330	75,850	135600	124,500	130,400	162,200	225,700	244,000	275,400	287,800
24	60,560	61,890	60,200	76,940	134,300	124,100	130,800	164,400	227,400	244,200	275,200	288,200
25	61,950	61,950	56,990	77,890	135,400	123,800	131,000	167,600	233,100	244,700	275200	290,400
26	63,160	62,560	57,350	78,980	145600	123,400	131,200	170,000	232,900	246,400	275,000	293,100
27	63,770	62,680	57,600	79,570	159,900	124,100	133,000	171,500	231,000	247,300	274,200	299,500
28	62,070	62,740	57,900	80,440	170,300	126000	134,600	174,000	230,700	250,400	273,200	301,700
29	60,020	62,860	58,080	81,370	------	124,700	136,400	176,100	229,500	254,800	271,800	302,800
30	59,350	62,860	58,620	83,040	------	124,300	138,900	177,500	229,600	261,300	271,500	303,400
31	61,410	------	58,500	83,200	------	123,100	------	178,700	------	263,200	270,900	------
(+)	608.56	608.80	608.08	611.70	620.08	616.08	617.54	620.69	624.02	625.91	626.33	627.98
(‡)	+5,040	+1,450	-4,360	+24,700	+87,100	-47,200	+15,800	+39,800	+50,900	+33,600	+7,700	+32,500
MAX	91,310	66,130	76,360	100,500	170,300	175,400	138,900	178,700	233,100	263,200	276,100	303,400
MIN	56,100	58,870	56,990	59,110	83,750	121,800	126,000	142,500	181,200	229,000	264,800	268,500

CAL YR 1970.....‡ +23,390
WTR YR 1971.....‡ +247,000

\+ Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07171400 Verdigris River near Oologah, Okla.

LOCATION.--Lat 36°25'17", long 95°41'01", in NW 1/4 sec.2, T.22 N., R.15 E., Rogers County, on right bank 0.3 mile downstream from Oologah Dam, 1.2 miles upstream from Fourmile Creek, 2 miles southeast of Oologah, and at mile 90.0.

DRAINAGE AREA.--4,339 sq mi.

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 552.00 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 2,000 cfs (1,449,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,000 cfs June 12 (gage height, 22.89 ft); minimum daily, 0.20 cfs Aug. 24.
Period of record: Maximum discharge, 27,900 cfs Sept. 19, 1961 (gage height, 37.92 ft); no flow Mar. 16-26, 1967, and Sept. 2, 1969.
Flood in May 1943 reached a stage of 65.2 ft, from floodmarks. Flood of May 9, 1961, reached a stage of 52.8 ft.

REMARKS.--Records good. Some regulation by several dams in Kansas prior to May 1963 and completely regulated thereafter by Oologah Lake (see sta. 07171300). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 25 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	57	25	32	.8	3,400	24	27	27	747	32	84
2	82	56	25	32	.7	3,400	24	26	27	745	30	60
3	165	54	25	66	1.5	4,660	24	26	25	744	32	60
4	161	48	26	3,650	2.8	5,510	24	27	24	744	30	68
5	161	47	27	10,600	10	5,480	25	28	24	743	32	76
6	160	236	28	10,700	4.8	5,470	25	28	25	742	32	76
7	448	850	28	9,650	2.5	5,460	25	28	31	1,870	33	32
8	1,110	2,240	32	7,590	1.9	5,880	26	27	32	4,390	35	1.7
9	3,540	1,160	33	7,640	1.1	8,100	25	27	24	4,400	35	.30
10	1,640	33	31	7,620	1.3	8,840	27	27	1,510	3,770	35	.80
11	172	30	30	7,490	9.1	8,740	27	26	6,560	3,760	36	.60
12	2,340	25	31	7,290	15	6,060	29	25	10,500	3,270	36	.40
13	232	15	31	3,580	15	2,530	29	26	9,090	1,490	36	.60
14	230	18	31	15	15	2,060	31	24	6,380	233	34	.50
15	1,610	18	32	2.3	15	2,050	31	23	6,360	44	34	.50
16	4,570	17	32	2.1	17	1,600	32	22	6,330	44	31	1.7
17	5,470	17	31	2.5	21	811	31	20	4,050	43	20	7.4
18	5,360	18	656	2.0	23	444	31	20	759	40	8.2	20
19	2,890	20	1,250	3.6	25	285	31	19	757	41	1.9	23
20	112	24	45	1.2	60	451	31	18	489	38	1.1	6.5
21	111	27	47	1.2	105	446	31	19	35	37	1.0	2.9
22	111	29	1,130	1.2	1,190	439	31	29	192	38	.40	1.2
23	114	30	2,830	1.0	2,610	439	31	30	528	42	.30	1.1
24	111	31	3,140	1.1	3,050	437	30	29	1,020	38	.20	3.1
25	111	30	1,680	1.7	3,380	436	29	27	1,470	37	.90	5.0
26	112	28	45	1.3	3,360	324	28	28	1,470	37	173	4.0
27	486	28	45	.7	3,380	111	28	29	1,460	38	153	3.1
28	1,580	28	40	1.8	3,400	114	27	29	1,090	39	148	1.4
29	2,120	26	31	3.3	------	86	27	25	745	38	147	1.4
30	1,440	25	31	1.6	------	24	27	25	743	37	133	1.3
31	60	------	32	1.1	------	24	------	26	------	32	123	------
TOTAL	36,844	5,265	11,500	75,984.7	20,717.5	84,111	841	790	61,777	28,311	1,444.00	544.50
MEAN	1,189	176	371	2,451	740	2,713	28.0	25.5	2,059	913	46.6	18.2
MAX	5,470	2,240	3,140	10,700	3,400	8,840	32	30	10,500	4,400	173	84
MIN	35	15	25	.70	.70	24	24	18	24	32	.20	.30
AC-FT	73,080	10,440	22,810	150,700	41,090	166,800	1,670	1,570	122,500	56,150	2,860	1,080

CAL YR 1970 TOTAL 957,565.50 MEAN 2,623 MAX 20,700 MIN .10 AC-FT 1,899,000
WTR YR 1971 TOTAL 328,129.70 MEAN 899 MAX 10,700 MIN .20 AC-FT 650,800

07172000 Caney River near Elgin, Kans.

LOCATION.--Lat 36°00'13", long 96°18'54", NW 1/4 NW 1/4 SE 1/4 sec.16, T.35 S., R.10 E., Chautauqua County, at county highway bridge, 2 miles west of Elgin, and at mile 117.8.

DRAINAGE AREA.--445 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 763.32 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 13, 1961, at site 300 ft downstream at same datum.

AVERAGE DISCHARGE.--33 years, 218 cfs (157,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,940 cfs Sept. 25 (gage height, 6.71 ft); no flow at times. Period of record: Maximum discharge, 62,000 cfs Sept. 13, 1961 (gage height, 34.70 ft, from floodmarks); no flow at times.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 25 discharge measurements, 2 observations of no flow, and records of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.30	.40	3.2	17	376	26	72	53	124	.60	0
2	.10	.50	.50	3.7	17	305	24	66	52	86	.40	0
3	0	.80	.60	480	17	254	24	60	54	27	.30	0
4	0	.90	.70	390	18	210	22	56	99	17	.30	123
5	0	.90	.80	149	19	201	21	52	119	26	.10	385
6	0	.90	.90	86	19	203	21	48	91	57	.10	211
7	0	.90	1.3	72	20	191	21	43	85	57	.10	56
8	7.8	.90	3.3	65	21	163	21	38	166	47	0	18
9	6.7	.70	2.7	59	18	143	20	33	152	33	0	8.2
10	2.4	.60	2.3	54	17	134	19	34	132	25	0	5.2
11	1.3	.50	2.0	49	16	124	19	41	100	22	0	3.0
12	1.0	.50	2.0	46	17	116	19	44	84	15	0	2.0
13	.70	.30	1.7	42	17	107	19	44	97	10	0	1.4
14	.60	.20	1.4	39	17	97	19	41	78	7.4	0	1.1
15	.50	.20	1.4	36	17	93	18	34	61	5.7	0	.70
16	.50	.20	1.9	33	17	84	18	32	49	4.5	0	.60
17	.50	.20	2.4	32	17	75	17	26	40	3.6	0	.50
18	.50	.20	2.8	30	17	68	17	22	32	2.6	0	3.2
19	.50	.20	3.9	29	19	69	18	21	27	2.3	0	7.7
20	.50	.30	4.1	27	27	63	22	19	21	1.9	0	10
21	.50	.20	4.1	26	29	58	23	16	17	1.4	0	8.8
22	.50	.20	4.0	25	38	51	22	63	14	1.1	0	5.5
23	.60	.20	3.4	24	44	48	37	130	16	.90	0	4.1
24	.50	.20	3.3	24	48	45	89	124	13	.80	0	181
25	.40	.10	3.4	23	74	43	109	222	11	.70	0	1,290
26	.40	.20	3.4	22	513	40	101	122	9.1	.70	0	253
27	.50	.20	3.5	22	1,200	38	93	89	6.9	.60	0	123
28	.50	.20	3.5	22	511	35	85	84	5.2	.60	0	77
29	.40	.20	3.4	21	------	34	78	72	3.8	.60	0	57
30	.30	.20	3.3	19	------	32	76	64	3.5	.60	0	44
31	.30	------	3.3	18	------	29	------	58	------	.80	0	------
TOTAL	28.70	12.10	75.70	1,970.9	2,821	3,529	1,118	1,870	1,691.5	582.80	1.90	2,880.00
MEAN	.93	.40	2.44	63.6	101	114	37.3	60.3	56.4	18.8	.061	96.0
MAX	7.8	.90	4.1	480	1,200	376	109	222	166	124	.60	1,290
MIN	0	.10	.40	3.2	16	29	17	16	3.5	.60	0	0
AC-FT	57	24	150	3,910	5,600	7,000	2,220	3,710	3,360	1,160	3.8	5,710

CAL YR 1970 TOTAL 65,347.30 MEAN 179 MAX 10,900 MIN 0 AC-FT 129,600
WTR YR 1971 TOTAL 16,581.60 MEAN 45.4 MAX 1,290 MIN 0 AC-FT 32,890

PEAK DISCHARGE (BASE, 6,000 CFS).--NO PEAK ABOVE BASE.

07172500 Hulah Lake near Hulah, Okla.
(Formerly published as Hulah Reservoir near Hulah)

LOCATION.--Lat 36°55'44", long 96°05'18", in SE 1/4 sec.2, T.28 N., R.11 E., Osage County, in stair tower at right end of Hulah Dam on Caney River, 0.5 mile downstream from Hickory Creek, 2 miles west of Hulah, 15.7 miles upstream from Little Caney River, and at mile 96.2.

DRAINAGE AREA.--732 sq mi.

PERIOD OF RECORD.--April 1950 to current year. Prior to October 1970 published as Hulah Reservoir near Hulah.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Feb. 15, 1951, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 40,170 acre-ft Sept. 27 (elevation, 734.48 ft); minimum, 25,740 acre-ft Jan. 2 (elevation, 730.30 ft).
Period of record: Maximum contents, 293,400 acre-ft June 23, 1957 (elevation, 764.87 ft); minimum since conservation pool was first filled, 11,250 acre-ft Mar. 20, 1957 (elevation, 723.22 ft).

REMARKS.--Reservoir is formed by an earth dam. Spillway is a 472-ft concrete ogee-type weir controlled by 10 taintor gates. Outlet works consist of nine rectangular sluices, two 24-inch gated pipes, and one 10-inch water-supply pipe. Closure for diversion made Feb. 6, 1950; regulated storage began Oct. 25, 1950; conservation pool was first filled Sept. 24, 1951. Capacity, 292,600 acre-ft at elevation 765.0 ft (top of taintor gates), 65,600 acre-ft at elevation 740.0 ft (crest of spillway), and 34,660 acre-ft at elevation 733.0 ft (conservation pool). Dead storage, 506 acre-ft below elevation 706.0 ft (crest of spillway), and 34,660 acre-ft at herein represent total contents. Reservoir is used for flood control, conservation, and municipal water supply. Revised capacity table, based on survey in 1958, used since Oct. 1, 1958.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

730	24,840	733	34,660
731	27,900	734	38,360
732	31,200	735	42,300

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29,480	28,130	26,730	25,800	30,870	37,100	34,620	35,400	36,470	34,140	31,860	28,530
2	29,420	28,100	26,670	25,980	30,610	36,840	34,590	35,440	36,470	34,290	31,730	28,400
3	29,290	28,060	26,640	29,190	30,640	36,250	34,510	35,470	36,400	34,220	31,660	28,230
4	29,190	27,900	26,580	30,040	30,940	35,660	34,550	35,440	36,210	34,220	31,530	30,080
5	29,220	27,830	26,520	30,380	30,900	35,470	34,550	35,440	35,990	34,360	31,430	32,980
6	28,960	27,800	26,490	30,510	30,870	35,330	34,510	35,510	35,700	34,400	31,330	33,440
7	29,060	27,740	26,430	30,610	30,870	35,140	34,480	35,510	35,990	34,400	31,230	33,510
8	29,520	27,800	26,430	30,700	30,870	34,960	34,480	35,440	36,100	34,360	31,200	33,480
9	29,450	27,670	26,400	30,770	30,840	34,920	34,440	35,470	36,070	34,250	31,100	33,360
10	29,380	27,600	26,370	30,840	30,800	34,960	34,400	35,550	35,960	34,180	30,970	33,290
11	29,350	27,600	26,370	30,900	30,800	34,990	34,360	35,580	35,770	34,070	30,840	33,150
12	29,290	27,540	26,310	30,940	30,800	35,030	34,330	35,470	35,660	33,920	30,740	33,050
13	29,250	27,540	26,250	30,940	30,770	35,030	34,330	35,470	35,440	33,810	30,640	32,980
14	29,150	27,440	26,220	30,970	30,770	35,100	34,290	35,440	35,220	33,620	30,540	32,820
15	29,090	27,340	26,370	31,000	30,740	35,030	34,220	35,400	35,030	33,480	30,510	32,590
16	29,020	27,310	26,310	31,040	30,770	34,960	34,220	35,330	34,920	33,360	30,380	32,520
17	28,960	27,270	26,250	31,040	30,770	34,730	34,180	35,220	34,840	33,220	30,280	32,650
18	28,890	27,240	26,280	31,040	30,770	34,810	34,140	35,290	34,770	33,080	30,180	33,180
19	28,820	27,240	26,190	31,070	30,800	34,660	34,100	35,180	34,660	32,950	30,010	33,180
20	28,760	27,150	26,220	31,070	30,740	34,550	34,180	35,070	34,590	32,820	29,880	33,110
21	28,660	27,120	26,220	31,070	31,170	34,510	34,140	34,920	34,510	32,680	29,810	33,050
22	28,590	27,090	26,190	31,070	31,170	34,480	34,220	35,360	34,480	32,550	29,750	33,020
23	28,660	26,970	26,130	31,070	31,130	34,480	34,290	35,620	34,360	32,550	29,620	32,920
24	28,590	26,880	26,070	31,070	31,170	34,480	34,360	35,730	34,220	32,450	29,520	33,550
25	28,560	26,850	25,980	31,070	31,730	34,550	34,550	36,070	34,070	32,360	29,380	39,140
26	28,590	26,850	25,950	31,040	33,850	34,590	34,920	36,210	33,920	32,360	29,290	36,250
27	28,490	26,790	25,920	31,040	35,770	34,620	35,070	36,320	33,740	32,260	29,120	39,690
28	28,400	26,760	25,890	31,000	36,810	34,660	35,100	36,400	33,590	32,290	29,020	38,360
29	28,330	26,730	25,830	30,970	------	34,660	35,290	36,470	33,440	32,220	28,890	36,770
30	28,260	26,760	25,860	30,940	------	34,620	35,360	36,510	33,480	32,090	28,790	36,210
31	28,160	------	25,830	30,900	------	34,620	------	36,510	------	31,990	28,660	------
(+)	731.08	730.64	730.33	731.91	733.58	732.99	733.19	733.50	732.68	732.24	731.23	733.42
(‡)	-1,390	-1,400	-930	+5,070	+5,910	-2,190	+740	+1,150	-3,030	-1,490	-3,330	+7,550
MAX	29,520	28,130	26,730	31,070	36,810	37,100	35,360	36,510	36.470	34,400	31,860	39,690
MIN	28,160	26,730	25,830	25,800	30,610	34,480	34,100	34.920	33,440	31,990	28,660	28,230

CAL YR 1970 .....‡ -8,790
WTR YR 1971 .....‡ +6,660

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07173000 Caney River near Hulah, Okla.

LOCATION.--Lat 36°55'06", long 96°04'15", in NW 1/4 SE 1/4 sec.12, T.28 N., R.11 E., Osage County, on left bank 1,000 ft downstream from The Atchison, Topeka, and Santa Fe Railway Co. bridge, 0.9 mile downstream from Hulah Dam, 1.5 miles upstream from Opossum Creek, 2.5 miles west of Hulah, and at mile 95.3.

DRAINAGE AREA.--736 sq mi.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 681.96 ft above mean sea level. Prior to Feb. 18, 1939, nonrecording gage and Feb. 18, 1939, to Sept. 30, 1948, water-stage recorder, at county road bridge 0.8 mile upstream at datum 3.00 ft higher.

AVERAGE DISCHARGE.--34 years, 335 cfs (242,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 946 cfs Sept. 29 (gage height, 14.37 ft); minimum daily, 5.5 cfs Apr. 16.
Period of record: Maximum discharge, 51,000 cfs Apr. 10, 1944 (gage height, 39.45 ft, former site and datum); no flow at times in 1939-40, 1946, 1962.
A stage of 40.2 ft occurred at former site and datum, date unknown, from floodmark, from information by Corps of Engineers.

REMARKS.--Records good. Flow completely regulated since February 1950 by Hulah Lake (see sta. 07172500). About 5 to 9 cfs is diverted above station by city of Bartlesville for municipal water supply.

COOPERATION.--Gage-height record, 30 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	12	10	11	170	6.3	8.7	54	24	17	16
2	12	19	12	10	121	472	5.5	8.7	92	19	17	16
3	12	19	12	53	12	472	6.6	8.7	92	18	17	16
4	12	19	12	13	12	472	6.8	8.7	115	18	17	17
5	12	19	12	11	11	360	6.8	8.7	160	19	17	23
6	132	16	12	11	11	231	6.8	8.7	160	18	17	23
7	14	12	12	11	11	231	6.8	8.7	162	18	17	23
8	25	12	12	11	5.9	231	7.1	8.7	172	18	17	23
9	17	12	11	11	11	193	7.3	9.0	161	18	17	24
10	12	12	13	11	12	88	7.6	9.0	161	18	17	22
11	12	12	13	11	12	88	7.9	9.0	161	18	17	18
12	11	12	12	11	12	88	7.3	9.0	161	18	17	17
13	11	12	12	11	11	88	7.1	11	160	18	17	17
14	11	12	12	11	11	87	7.1	11	159	18	17	17
15	11	12	12	11	11	86	7.3	11	133	18	17	17
16	11	12	12	11	12	86	5.5	11	72	18	18	17
17	11	12	12	11	12	86	7.9	11	47	18	17	18
18	11	12	12	11	12	86	8.2	12	17	18	17	22
19	11	12	12	11	12	68	8.2	11	17	18	17	18
20	11	12	12	11	12	45	8.7	11	17	17	17	18
21	11	12	12	11	13	45	8.7	11	20	17	17	18
22	11	12	12	11	13	39	8.7	13	22	17	17	18
23	11	12	12	11	13	19	8.7	12	26	18	17	18
24	11	12	11	11	14	7.9	8.4	12	28	18	17	20
25	11	12	10	11	33	7.1	8.7	12	24	17	17	22
26	11	12	10	11	20	6.6	8.7	12	19	18	17	20
27	11	12	10	11	11	6.6	9.0	12	19	17	17	227
28	11	12	10	13	10	6.6	9.0	12	19	18	17	733
29	11	12	10	17	------	6.6	9.0	15	19	17	17	884
30	14	12	10	11	------	6.3	9.0	21	19	17	16	368
31	19	------	10	11	------	6.6	------	21	------	17	17	------
TOTAL	503	399	358	391	461.9	3,885.3	230.7	347.6	2,488	558	527	2,710
MEAN	16.2	13.3	11.5	12.6	16.5	125	7.69	11.2	82.9	18.0	17.0	90.3
MAX	132	19	13	53	121	472	9.0	21	172	24	18	884
MIN	11	12	10	10	5.9	6.3	5.5	8.7	17	17	16	16
AC-FT	998	791	710	776	916	7,710	458	689	4,930	1,110	1,050	5,380

CAL YR 1970 TOTAL 97,143.5 MEAN 266 MAX 3,980 MIN 2.8 AC-FT 192,700
WTR YR 1971 TOTAL 12,859.5 MEAN 35.2 MAX 884 MIN 5.5 AC-FT 25,510

07174200 Little Caney River below Cotton Creek, near Copan, Okla.

LOCATION.--Lat 36°53'42", long 95°58'00", in W 1/2 sec.19, T.28 N., R.13 E., Washington County, near right bank on downstream side of pier of bridge on State Highway 10, 2 miles west of Copan, 4.2 miles downstream from Cotton Creek, and at mile 8.8.

DRAINAGE AREA.--502 sq mi.

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1962, published as Caney Creek below Cotton Creek, near Copan.

GAGE.--Water-stage recorder. Datum of gage is 672.23 ft above mean sea level. Since Nov. 16, 1962, auxiliary water-stage recorder 6.0 miles downstream, at datum 10 ft lower.

AVERAGE DISCHARGE.--13 years, 213 cfs (154,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,520 cfs Jan. 3 (gage height, 18.12 ft); minimum, no flow Aug. 31 to Sept. 3.
Period of record: Maximum discharge, 23,700 cfs May 9, 1961 (gage height, 24.94 ft); no flow at times in 1962-66, 1971.
Flood in April 1944 reached a stage of 29.3 ft, from floodmarks.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 26 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	1.4	1.8	6.1	8.8	332	10	17	10	4.8	14	0
2	3.1	1.2	2.4	7.7	8.6	252	9.0	15	9.7	733	9.7	0
3	2.6	.90	3.3	919	8.3	193	8.0	13	11	179	6.6	0
4	2.2	.80	3.9	1,730	34	152	7.0	13	14	113	4.8	.10
5	2.0	.60	3.5	402	195	126	6.8	11	24	941	3.7	105
6	2.3	.50	2.3	179	75	112	7.0	9.3	17	1,460	2.9	211
7	1.9	.30	2.4	115	41	101	7.3	8.7	14	666	2.4	81
8	30	.30	2.3	90	26	90	6.8	7.5	139	307	2.0	26
9	57	.50	2.0	78	22	78	6.5	6.8	74	173	1.8	14
10	59	.80	2.1	68	15	73	6.2	6.3	24	102	1.5	9.0
11	56	.80	2.1	60	14	70	6.0	7.2	35	63	1.4	6.2
12	36	.60	3.0	54	16	66	5.8	11	126	41	1.1	5.3
13	23	.10	14	46	17	60	5.4	21	207	30	.90	4.5
14	17	.20	14	42	15	56	5.4	20	363	22	5.2	3.6
15	12	.30	15	39	14	49	5.1	13	221	16	5.1	2.8
16	8.9	.50	16	39	13	44	5.6	10	127	13	2.3	2.3
17	6.8	.50	17	37	12	38	5.5	7.7	68	11	1.6	2.4
18	5.1	.50	16	31	13	29	5.0	6.4	41	8.9	1.1	11
19	4.0	.50	16	26	71	25	4.9	5.2	27	7.5	.90	85
20	2.7	.70	16	28	75	20	6.7	4.5	20	6.1	.60	29
21	2.1	.90	16	26	33	17	14	4.4	15	4.7	.50	14
22	1.6	.90	17	24	36	19	13	7.1	12	4.0	.40	8.9
23	1.4	.90	16	22	56	18	12	118	24	3.5	.30	6.3
24	1.7	1.1	15	18	133	14	13	57	61	134	.20	5.7
25	3.7	1.4	13	15	1,090	13	13	60	30	153	.20	312
26	3.9	1.6	12	13	1,700	12	17	33	18	55	.10	960
27	2.7	1.8	11	13	1,050	12	20	18	11	26	.10	379
28	2.4	1.8	9.0	12	564	14	24	12	7.6	20	.10	194
29	1.9	1.9	6.0	11	------	13	15	9.0	5.6	17	.10	106
30	1.6	1.9	5.0	10	------	11	14	7.5	4.6	13	.10	69
31	1.8	------	4.6	9.6	------	11	------	8.0	------	10	0	------
TOTAL	360.4	26.20	279.7	4,170.4	5,355.7	2,120	285.0	547.6	1,760.5	5,337.5	71.70	2,653.10
MEAN	11.6	.87	9.02	135	191	68.4	9.50	17.7	58.7	172	2.31	88.4
MAX	59	1.9	17	1,730	1,700	332	24	118	363	1,460	14	960
MIN	1.4	.10	1.8	6.1	8.3	11	4.9	4.4	4.6	3.5	0	0
AC-FT	715	52	555	8,270	10,620	4,210	565	1,090	3,490	10,590	142	5,260

CAL YR 1970 TOTAL 78,446.30 MEAN 215 MAX 5,070 MIN .10 AC-FT 155,600
WTR YR 1971 TOTAL 22,967.80 MEAN 62.9 MAX 1,730 MIN 0 AC-FT 45,560

PEAK DISCHARGE (BASE, 5,000 CFS).--No peak above base.

07174600 Sand Creek at Okesa, Okla.

LOCATION.--Lat 36°43'10", long 96°07'56", in NW 1/4 NW 1/4 sec.21, T.26 N., R.11 E., Osage County, on downstream side of left abutment of county road bridge, 0.5 mile northeast of Okesa, 9 miles southwest of Bartlesville, and at mile 17.2.

DRAINAGE AREA.--139 sq mi.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 689.20 ft above mean sea level. Prior to May 25, 1960, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--12 years, 51.2 cfs (37,090 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,120 cfs Sept. 5 (gage height, 11.80 ft); no flow at times. Period of record: Maximum discharge, 14,700 cfs Sept. 13, 1961 (gage height, 27.7 ft, from floodmarks); no flow at times in each year.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 24 discharge measurements, 3 observations of no flow, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.0	.10	.40	2.0	38	.50	2.3	.10	73		0
2	0	1.0	.10	.50	1.5	29	.40	7.1	.10	55		0
3	0	.80	.10	353	1.2	26	1.1	7.8	.30	9.6		0
4	0	.80	.10	268	4.4	21	1.0	6.0	.20	5.3		0
5	0	.60	.10	76	9.2	17	1.0	5.1	.10	13		1,050
6	0	.40	.10	36	12	14	.80	3.7	0	12		123
7	0	.30	.10	23	8.6	13	.90	2.6	.70	3.9		57
8	65	.30	.10	17	6.6	13	.70	1.5	5.8	.90		35
9	81	.30	.10	13	5.0	13	1.5	1.2	12	.10		26
10	21	.20	.20	12	4.0	12	1.9	.90	9.7	0		16
11	8.0	.20	.20	9.9	4.0	11	1.3	1.0	5.9	0		10
12	4.7	.10	.10	9.1	3.1	9.7	1.3	1.2	173	0		5.2
13	3.4	.10	.10	8.6	3.0	9.1	.10	1.5	134	0		2.6
14	3.2	.10	.10	8.0	3.0	11	.10	1.2	120	0		1.6
15	3.7	.10	.20	7.2	3.3	7.8	.20	.70	53	0		1.0
16	3.0	.10	.60	6.8	2.9	5.7	.40	.50	21	0		.50
17	2.3	.10	.30	6.7	2.6	6.2	.40	.40	11	0		0
18	2.0	.10	.30	5.9	3.0	5.4	.40	.20	6.5	0		0
19	2.0	.10	.10	5.5	6.2	4.1	.30	.10	4.1	.10		0
20	1.6	.10	.10	4.7	4.8	2.4	.60	.10	2.5	.20		0
21	.60	.20	.10	3.5	5.4	1.1	.30	.10	1.2	.10		0
22	.40	.10	.20	3.6	14	2.2	.10	1.9	.70	0		0
23	.40	.10	.20	3.7	19	6.3	.70	1.9	.40	0		0
24	.40	.10	.30	3.6	30	4.8	1.0	2.2	.20	0		3.0
25	.30	.10	.40	3.2	74	3.4	.40	2.3	0	0		20
26	20	.10	.40	2.4	239	2.4	.80	1.6	0	0		85
27	11	.10	.40	3.0	130	1.9	2.0	1.0	0	0		58
28	1.1	.10	.40	3.3	60	1.7	2.5	.50	0	0		40
29	.30	.10	.40	3.0	------	1.2	2.6	.30	0	0		24
30	.20	.10	.40	2.7	------	1.1	2.0	.20	0	0		16
31	.70	------	.40	2.0	------	.60	------	.20	------	0		------
TOTAL	236.30	7.90	6.80	905.30	661.8	295.10	27.30	57.30	562.50	173.20	0	1,573.90
MEAN	7.62	.26	.22	29.2	23.6	9.52	.91	1.85	18.8	5.59	0	52.5
MAX	81	1.0	.60	353	239	38	2.6	7.8	173	73	0	1,050
MIN	0	.10	.10	.40	1.2	.60	.10	.10	0	0	0	0
AC-FT	469	16	13	1,800	1,310	585	54	114	1,120	344	0	3,120

CAL YR 1970 TOTAL 17,465.30 MEAN 47.9 MAX 3,890 MIN 0 AC-FT 34,640
WTR YR 1971 TOTAL 4,507.40 MEAN 12.3 MAX 1,050 MIN 0 AC-FT 8,940

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
9-05	0330	11.80	3,120				

07174700 Caney River near Ochelata, Okla.

LOCATION.--Lat 36°38'26", long 95°56'02", in SW 1/4 SW 1/4 sec.16, T.25 N., R.13 E., Washington County, near right bank on downstream side of pier of bridge on U.S. Highway 75, 3.5 miles upstream from Fish Creek, 4 miles northeast of Ochelata, 8 miles southeast of Bartlesville, and at mile 53.8.

DRAINAGE AREA.--1,753 sq mi.

PERIOD OF RECORD.--April 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 611.98 ft above mean sea level.

AVERAGE DISCHARGE.--15 years, 823 cfs (596,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,170 cfs Oct. 8 (gage height, 19.84 ft); minimum, 16 cfs Aug. 30, 31, Sept. 2, 3.
Period of record: Maximum discharge, 33,800 cfs June 13, 1957 (gage height, 38.82 ft); minimum, 0.4 cfs Sept. 28, 29, 1956.

REMARKS.--Records good. Some regulation by Hulah Lake 42.4 miles upstream. (See sta. 07172500).

COOPERATION.--Gage-height record, 26 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	37	28	36	42	657	34	47	51	38	32	17
2	31	40	29	41	41	673	31	47	55	328	31	17
3	28	40	28	1,420	87	894	29	45	124	652	34	17
4	26	40	28	3,700	225	810	29	43	119	223	31	18
5	27	40	29	1,730	429	729	26	44	126	380	28	901
6	196	40	30	538	315	557	27	41	188	1,260	28	659
7	208	38	30	228	181	402	25	37	510	1,490	27	316
8	1,990	35	29	204	119	375	25	33	341	614	27	166
9	3,140	30	29	168	92	360	25	32	433	292	26	93
10	946	27	28	152	80	315	24	33	268	177	26	64
11	295	26	28	134	78	212	22	34	214	116	25	52
12	162	27	29	118	86	199	23	32	302	84	28	42
13	114	27	30	100	80	193	25	28	920	64	24	33
14	84	27	32	95	75	186	24	29	621	56	24	32
15	66	26	50	92	71	173	23	38	778	51	23	28
16	55	25	70	83	68	160	25	36	416	45	31	25
17	47	26	55	86	64	148	26	31	212	39	32	27
18	44	25	54	88	65	140	26	32	148	33	25	784
19	41	26	50	77	195	127	26	31	87	31	23	569
20	39	26	46	69	213	114	47	28	63	30	21	243
21	37	25	54	70	185	85	44	27	50	29	20	129
22	34	25	54	69	314	80	38	62	43	29	21	86
23	37	24	53	67	331	79	44	70	94	30	24	60
24	77	23	46	62	437	62	44	149	85	29	22	60
25	81	23	42	59	1,070	52	37	100	94	109	20	815
26	55	24	38	54	2,170	43	40	104	70	150	18	1,390
27	58	24	37	48	2,100	40	84	127	49	84	19	1,110
28	77	25	36	47	988	40	51	62	38	60	19	667
29	56	25	35	48	------	38	57	49	34	48	18	1,060
30	43	26	35	48	------	36	54	44	32	41	16	1,030
31	39	------	36	47	------	34	------	48	------	37	16	------
TOTAL	8,166	872	1,198	9,778	10,201	8,013	1,035	1,563	6,565	6,649	759	10,510
MEAN	263	29.1	38.6	315	364	258	34.5	50.4	219	214	24.5	350
MAX	3,140	40	70	3,700	2,170	894	84	149	920	1,490	34	1,390
MIN	26	23	28	36	41	34	22	27	32	29	16	17
AC-FT	16,200	1,730	2,380	19,390	20,230	15,890	2,050	3,100	13,020	13,190	1,510	20,850

CAL YR 1970 TOTAL 279,391 MEAN 765 MAX 15,700 MIN 16 AC-FT 554,200
WTR YR 1971 TOTAL 65,309 MEAN 179 MAX 3,700 MIN 16 AC-FT 129,500

PEAK DISCHARGE (BASE, 7,500 CFS).--No peak above base.

07175500 Caney River near Ramona, Okla.

LOCATION.--Lat 36°30'31", long 95°50'36", in NE 1/4 NW 1/4 sec.5, T.23 N., R.14 E., Washington County, near left bank on downstream side of pier of county road bridge, 1 mile upstream from Buck Creek, 2.2 miles downstream from Double Creek, 4.5 miles southeast of Ramona, and at mile 32.0.

DRAINAGE AREA.--1,955 sq mi.

PERIOD OF RECORD.--October 1935 to February 1939 (published as "near Collinsville"), September 1945 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft above mean sea level. Dec. 4, 1935, to Feb. 28, 1939, nonrecording gage at site 16.2 miles downstream at datum 21.41 ft lower. Sept. 1, 1945, to Feb. 15, 1946, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--29 years (1935-38, 1945-71), 843 cfs (610,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,060 cfs Oct. 9 (gage height, 18.84 ft); minimum, 14 cfs Sept. 1-4.
Period of record: Maximum discharge, 38,500 cfs Oct. 3, 1945 (gage height, 30.12 ft); no flow Aug. 9 to Sept. 15, 1936, Sept. 11 to Nov. 3, 1956.

REMARKS.--Records good. Some regulation since February 1950 by Hulah Lake (see sta. 07172500). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 26 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1241: 1939.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	58	27	47	54	890	45	61	38	30	41	15
2	31	51	28	47	48	734	44	53	38	98	36	14
3	25	50	31	1,010	45	910	41	49	55	720	32	14
4	22	50	32	4,020	270	910	38	47	114	398	34	16
5	21	50	30	2,690	890	858	36	45	110	203	33	212
6	100	50	30	1,040	673	804	36	44	142	972	26	1,160
7	469	43	30	540	374	612	33	40	608	1,550	26	506
8	1,330	47	30	280	211	551	31	37	924	1,010	24	250
9	4,870	44	30	248	159	516	30	36	530	503	22	141
10	1,810	40	30	214	123	488	29	36	458	251	22	92
11	743	34	30	186	114	317	28	35	267	162	21	70
12	317	32	30	175	126	249	26	34	234	116	21	58
13	200	32	30	157	128	241	24	34	934	85	23	47
14	138	32	29	130	112	234	24	31	795	68	23	38
15	107	32	30	126	104	226	25	28	936	62	22	34
16	83	32	48	119	95	201	25	32	674	57	20	30
17	69	31	67	108	87	192	24	34	349	50	24	27
18	58	30	70	108	79	182	25	33	200	40	29	597
19	53	29	66	106	199	171	28	33	130	33	24	1,160
20	49	30	63	90	402	157	34	32	79	28	19	415
21	46	30	60	83	343	131	50	28	63	26	18	200
22	41	30	61	81	839	110	53	37	56	26	18	118
23	40	30	65	81	805	105	50	76	54	29	19	79
24	98	29	65	79	928	99	51	111	108	33	20	121
25	171	27	65	76	1,410	78	53	148	89	30	20	1,130
26	115	27	61	72	1,770	70	54	102	93	152	19	1,550
27	93	27	54	66	2,290	57	82	138	67	153	16	1,450
28	129	27	51	57	1,370	54	122	107	49	88	16	917
29	128	27	48	54	------	50	70	60	37	69	16	1,110
30	86	27	47	54	------	48	65	46	33	55	16	1,300
31	62	------	47	54	------	45	------	39	------	46	15	------
TOTAL	11,539	1,083	1,385	12,198	14,048	10,290	1,276	1,666	8,264	7,143	715	12,871
MEAN	372	36.1	44.7	393	502	332	42.5	53.7	275	230	23.1	429
MAX	4,870	58	70	4,020	2,290	910	122	148	936	1,550	41	1,550
MIN	21	27	27	47	45	45	24	28	33	26	15	14
AC-FT	22,890	2,150	2,750	24,190	27,860	20,410	2,530	3,300	16,390	14,170	1,420	25,530

CAL YR 1970 TOTAL 312,222 MEAN 855 MAX 14,800 MIN 14 AC-FT 619,300
WTR YR 1971 TOTAL 82,478 MEAN 226 MAX 4,870 MIN 14 AC-FT 163,600

PEAK DISCHARGE (BASE, 7,500 CFS).--No peak above base.

07176000 Verdigris River near Claremore, Okla.

LOCATION.--Lat 36°18'26", long 95°41'52", in SE 1/4 SW 1/4 sec.10, T.21 N., R.15 E., Rogers County, near left bank on downstream side of pier of bridge on State Highway 20, 2.3 miles downstream from Caney River, 4.5 miles west of Claremore, 12.4 miles upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 sq mi.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 538.62 ft above mean sea level. Prior to Feb. 24, 1939, and May 17 to Aug. 24, 1967, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--36 years, 3,418 cfs (2,476,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14,200 cfs Jan. 5 (gage height, 17.07 ft); minimum, 26 cfs Aug. 26.
Period of record: Maximum discharge, 182,000 cfs May 21, 1943 (gage height, 55.05 ft); no flow at times in 1936, 1939-40, 1956.

REMARKS.--Records good. Flow regulated since May 1963 by Oologah Lake 14.3 miles upstream (see sta. 07171300); some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950. (See sta. 07172500).

COOPERATION.--Gage-height record, 20 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	133	52	86	74	4,460	96	104	68	702	76	143
2	84	129	52	86	72	4,170	93	95	63	687	71	98
3	146	118	52	179	65	5,010	91	86	74	804	67	97
4	171	113	50	4,480	462	6,320	91	80	74	1,370	66	100
5	178	111	50	13,900	999	6,260	89	77	118	996	62	1,240
6	184	109	50	12,400	707	6,180	90	76	122	1,010	60	1,930
7	330	699	50	10,800	480	6,040	94	75	175	2,580	62	1,270
8	1,280	1,850	50	7,920	294	6,120	98	70	1,030	5,150	66	446
9	6,320	1,740	54	7,800	189	8,170	98	68	558	5,080	66	251
10	6,090	100	56	7,770	159	9,310	98	71	1,250	4,010	63	156
11	1,200	74	56	7,610	146	9,190	103	69	5,770	3,860	63	110
12	2,700	67	52	7,360	148	7,340	103	60	10,900	3,500	62	87
13	502	61	52	5,040	144	3,010	101	56	10,600	1,870	62	72
14	388	57	50	241	130	2,380	96	56	7,620	420	66	61
15	1,110	54	52	147	127	2,340	96	57	7,230	126	70	49
16	4,150	54	58	138	112	1,730	96	50	7,260	108	71	50
17	5,350	54	77	126	108	961	96	49	5,700	105	64	52
18	5,200	54	276	116	102	816	98	59	1,010	98	54	2,470
19	3,640	54	1,720	116	230	303	98	65	876	87	48	2,260
20	176	57	180	116	450	590	103	61	766	80	46	895
21	147	60	119	106	460	574	137	54	182	72	36	404
22	141	62	654	100	2,140	547	136	90	121	67	41	238
23	154	62	2,730	98	3,510	531	142	161	496	73	41	158
24	149	60	3,120	98	4,120	521	122	142	767	184	31	132
25	183	60	2,370	97	4,720	517	114	137	1,510	98	28	1,600
26	291	58	150	91	5,150	493	112	155	1,490	78	42	1,620
27	321	56	109	87	5,650	221	123	128	1,500	151	237	1,510
28	1,430	54	105	82	5,270	197	125	158	1,280	168	147	1,120
29	2,190	52	96	77	------	198	157	130	707	120	168	680
30	1,960	52	89	73	------	124	118	90	693	101	164	983
31	208	------	87	74	------	96	------	74	------	88	150	------
TOTAL	46,488	6,264	12,718	87,414	36,218	94,719	3,214	2,703	70,010	33,843	2,350	20,282
MEAN	1,500	209	410	2,820	1,294	3,055	107	87.2	2,334	1,092	75.8	676
MAX	6,320	1,850	3,120	13,900	5,650	9,310	157	161	10,900	5,150	237	2,470
MIN	84	52	50	73	65	96	89	49	63	67	28	49
AC-FT	92,210	12,420	25,230	173,400	71,840	187,900	6,370	5,360	138,900	67,130	4,660	40,230

CAL YR 1970 TOTAL 1,273,482 MEAN 3,489 MAX 23,500 MIN 50 AC-FT 2,526,000
WTR YR 1971 TOTAL 416,223 MEAN 1,140 MAX 13,900 MIN 28 AC-FT 825,600

PEAK DISCHARGE (BASE, 24,000 CFS).--No peak above base.

07176500 Bird Creek at Avant, Okla.

LOCATION.--Lat 36°29'11", long 96°03'45", in NW 1/4 sec.7, T.23 N., R.12 E., Osage County, near left bank on downstream side of pier of county road bridge at Avant, 1.5 miles upstream from Candy Creek, and at mile 54.2.

DRAINAGE AREA.--364 sq mi.

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft above mean sea level.

AVERAGE DISCHARGE.--26 years, 160 cfs (115,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,150 cfs Sept. 6 (gage height, 14.91 ft); no flow July 20, 21.
Period of record: Maximum discharge, 32,400 cfs Oct. 2, 1959 (gage height, 31.40 ft); no flow at times in most years.
Flood in May 1943 reached a stage of 29.6 ft, from floodmark.

REMARKS.--Records good. Small diversions above station for municipal water supply of cities of Pawhuska and Barnsdall.

COOPERATION.--Gage-height record, 27 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	6.2	.70	3.2	5.0	74	1.6	7.8	6.2	8.3	7.0	.2
2	4.5	5.3	.70	3.2	4.8	52	1.2	5.7	5.6	16	4.9	.1
3	3.5	4.5	.70	1,090	4.9	40	1.7	4.5	10	18	3.8	.1
4	2.9	3.2	.60	681	51	31	1.7	3.5	90	10	2.7	20
5	3.2	2.6	.30	142	109	25	1.7	3.2	77	10	2.1	4,030
6	5.3	2.3	.30	58	63	24	1.7	3.2	38	9.1	1.7	5,040
7	8.4	1.0	.20	36	40	22	1.2	2.9	26	7.5	1.3	381
8	1,450	1.0	.20	24	24	19	1.1	2.6	51	8.5	1.2	130
9	563	1.0	.40	21	17	17	.80	2.3	48	6.1	.80	105
10	112	1.4	.60	19	14	15	.80	2.0	27	4.1	.70	93
11	42	1.2	.90	17	15	12	.90	1.7	19	2.8	10	86
12	22	1.2	.90	17	14	11	.70	1.7	333	2.0	8.8	81
13	15	1.2	.90	16	13	10	.60	1.4	1,770	1.2	5.5	77
14	9.8	1.0	.90	15	14	11	.60	1.0	272	.80	4.0	77
15	6.7	1.0	.90	14	12	11	.50	1.0	197	.60	3.2	74
16	5.3	.90	2.0	21	11	10	.50	1.0	111	.50	2.4	73
17	4.1	.60	2.0	11	10	8.5	.50	.90	52	.40	1.7	84
18	3.5	.60	2.6	9.1	10	8.0	.60	1.2	27	.30	1.3	4,320
19	3.2	.60	2.6	8.4	18	8.0	.60	3.5	15	.20	1.0	747
20	2.9	.60	3.2	7.8	31	6.4	1.9	2.9	11	0	.90	216
21	2.3	.60	3.8	7.2	42	3.9	2.0	2.5	7.9	0	.70	109
22	1.7	.60	4.1	6.7	132	2.9	2.2	87	6.1	.30	1.9	69
23	2.0	.50	4.1	5.6	119	2.5	2.6	58	7.1	399	1.2	44
24	2.9	.40	4.1	5.5	163	2.3	2.1	74	4.8	127	1.1	170
25	9.8	.30	4.1	6.1	357	2.3	1.8	39	3.5	49	1.2	3,190
26	19	.30	4.1	5.5	398	2.2	1.9	26	2.5	23	1.2	716
27	67	.30	4.1	5.0	267	2.4	166	52	1.7	13	1.0	232
28	67	.30	3.8	5.3	116	2.3	75	12	.90	30	.80	128
29	24	.50	3.8	5.3	------	2.1	25	8.5	.80	57	.60	116
30	14	.60	3.8	5.2	------	2.3	11	7.2	.60	24	.50	102
31	8.4	------	3.5	5.2	------	2.2	------	6.8	------	12	.40	------
TOTAL	2,490.7	41.80	64.90	2,276.3	2,074.7	442.3	310.50	427.00	3,221.70	840.70	75.60	20,510.4
MEAN	80.3	1.39	2.09	73.4	74.1	14.3	10.4	13.8	107	27.1	2.44	684
MAX	1,450	6.2	4.1	1,090	398	74	166	87	1,770	399	10	5,040
MIN	1.7	.30	.20	3.2	4.8	2.1	.50	.90	.60	0	.40	.10
AC-FT	4,940	83	129	4,520	4,120	877	616	847	6,390	1,670	150	40,680

CAL YR 1970 TOTAL 54,757.34 MEAN 150 MAX 12,300 MIN 0 AC-FT 108,600
WTR YR 1971 TOTAL 32,776.60 MEAN 89.8 MAX 5,040 MIN 0 AC-FT 65,010

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
9-6	0530	14.91	9,150	9-18	1400	13.22	8,130

07176800 Candy Creek near Wolco, Okla.

LOCATION.--Lat 36°32'06", long 96°02'54", in NW 1/4 NW 1/4 sec.29, T.24 N., R.12 E., Osage County, 1.3 miles east of Wolco, 3.3 miles northeast of Avant, and at mile 5.6.

DRAINAGE AREA.--30.6 sq mi.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft above mean sea level.

EXTREMES.--Current year: Maximum gage height, 10.21 ft Sept. 18 (discharge not determined); no flow at times.
Period of record: Maximum gage height, 15.90 ft Apr. 30, 1970 (discharge not determined); no flow at times each year.

REMARKS.--Discharge records not submitted for publication.

COOPERATION.--Records collected by Corps of Engineers.

07177000 Hominy Creek near Skiatook, Okla.

LOCATION.--Lat 36°20'55", long 96°06'35", in SW 1/4 SE 1/4 sec.27, T.22 N., R.11 E., Osage County, near left bank on downstream side of pier of bridge on State Highway 20, 1 mile upstream from Tall Chief Creek, 6 miles west of Skiatook, and at mile 16.7.

DRAINAGE AREA.--340 sq mi.

PERIOD OF RECORD.--March 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 619.66 ft above mean sea level. Prior to May 26, 1945, nonrecording gage and May 26, 1954, to Sept. 30, 1958, water-stage recorder at site 600 ft upstream at same datum.

AVERAGE DISCHARGE.--27 years, 158 cfs (114,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,400 cfs Sept. 6 (gage height, 36.62 ft); minimum daily, 0.20 cfs Aug. 20, 21.
Period of record: Maximum discharge, 35,600 cfs Oct. 3, 1959 (gage height, 38.82 ft); no flow at times in 1946, 1952-58, 1963-66.
Flood in May 1943 reached a stage of 35.0 ft, from floodmark.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 28 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	10	2.4	2.2	4.1	61	2.1	21	17	106	9.6	2.6
2	3.7	8.8	2.5	2.1	4.0	43	1.8	16	12	70	5.2	2.5
3	2.7	6.4	2.6	285	3.9	34	1.3	13	199	56	3.2	2.4
4	2.0	4.9	2.4	1,070	34	26	1.2	11	472	31	2.2	171
5	2.1	4.2	2.2	188	211	21	.90	8.6	108	23	1.8	9,020
6	3.1	3.4	1.9	70	77	19	.70	6.5	44	23	1.5	13,900
7	4.5	2.7	1.9	37	38	17	.70	4.6	26	46	1.3	7,860
8	398	2.1	2.0	26	23	15	.70	3.9	31	29	1.3	706
9	1,320	1.9	2.0	20	16	15	.70	4.3	78	21	1.2	106
10	207	1.9	2.0	17	14	14	.70	4.4	45	20	1.1	62
11	74	1.8	2.0	16	11	13	1.2	4.1	24	8.4	.90	39
12	38	1.8	2.0	15	9.4	12	1.5	3.4	23	4.8	.90	26
13	24	2.1	1.8	15	8.8	11	1.2	2.8	1,290	2.9	.70	16
14	17	3.0	1.7	14	8.3	11	.90	2.6	604	1.9	.60	7.0
15	12	2.8	2.2	13	7.9	8.9	.70	4.7	271	1.4	.50	2.2
16	8.4	2.4	2.8	12	7.8	8.0	.80	5.1	140	1.2	.50	1.0
17	7.2	2.3	2.8	12	5.7	7.6	.90	4.4	52	1.0	.40	3.2
18	5.6	2.3	3.2	11	5.8	5.9	.90	3.8	28	.80	.30	3,150
19	4.8	2.6	5.0	9.8	6.8	5.1	1.1	5.9	18	.70	.30	4,750
20	3.9	2.3	5.3	9.4	11	4.6	2.2	9.6	13	.60	.20	583
21	3.1	2.5	5.5	8.8	17	4.0	2.6	6.3	11	.50	.20	195
22	2.5	2.8	5.6	8.3	190	3.5	2.4	17	9.0	.70	1.3	110
23	3.0	2.7	4.8	7.3	144	3.3	5.1	44	7.0	212	60	72
24	18	2.4	4.1	6.8	192	3.0	8.8	56	5.3	194	39	261
25	52	2.4	3.5	6.4	524	2.6	7.2	34	3.7	54	17	3,430
26	22	2.0	3.2	5.7	623	2.5	6.3	55	2.8	21	10	2,960
27	159	1.8	2.9	5.8	259	3.0	92	618	2.2	13	6.1	431
28	123	1.8	2.4	5.8	105	2.8	176	243	1.8	37	4.0	202
29	36	2.0	2.2	5.4	------	2.4	65	65	1.4	79	3.1	121
30	20	2.3	2.3	5.1	------	2.1	31	31	1.6	48	2.7	89
31	13	------	2.3	4.5	------	2.2	------	20	------	18	2.6	------
TOTAL	2,594.7	92.4	89.5	1,914.4	2,561.5	383.5	418.60	1,329.0	3,540.8	1,125.90	179.70	48,280.9
MEAN	83.7	3.08	2.89	61.8	91.5	12.4	14.0	42.9	118	36.3	5.80	1,609
MAX	1,320	10	5.6	1,070	623	61	176	618	1,290	212	60	13,900
MIN	2.0	1.8	1.7	2.1	3.9	2.1	.70	2.6	1.4	.50	.20	1.0
AC-FT	5,150	183	178	3,800	5,080	761	830	2,640	7,020	2,230	356	95,770

CAL YR 1970 TOTAL 54,046.00 MEAN 148 MAX 10,500 MIN .10 AC-FT 107,200
WTR YR 1971 TOTAL 62,510.90 MEAN 171 MAX 13,900 MIN .20 AC-FT 124,000

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
9-6	1100	36.62	15,400	9-19	0630	26.92	5,820

07177500 Bird Creek near Sperry, Okla.

LOCATION.--Lat 36°16'42", long 95°57'14", in NW 1/4 NW 1/4 sec.29, T.21 N., R.13 E., Tulsa County, on downstream side of right pier of county road bridge, 1.5 miles upstream from Delaware Creek, 2.4 miles downstream from Hominy Creek, 2.5 miles southeast of Sperry, and at mile 25.0.

DRAINAGE AREA.--905 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 436 cfs (315,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,900 cfs Sept. 7; maximum gage height, 29.02 Sept. 7; no flow part of Nov. 9, 10.
Period of record: Maximum discharge, 90,000 cfs Oct. 3, 1959 (gage height, 32.60 ft), from rating curve extended above 49,000 cfs; no flow at times in 1939, 1954-57, 1964-66, 1970.
Flood of May 18, 1943, reached a stage of 31.68 ft (discharge, 72,200 cfs). Flood in 1915 reached a stage similar to flood of Oct. 31, 1941 (30.14 ft), from information by local residents.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 28 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1921: 1943.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	43	7.9	13	20	252	13	72	38	86	48	.5
2	5.5	36	7.9	13	20	176	12	55	35	290	29	.3
3	3.3	30	7.9	433	20	139	11	46	50	133	18	.2
4	2.2	28	7.9	2,010	42	115	9.5	35	618	104	13	13
5	2.2	22	7.9	864	295	94	8.4	27	328	74	9.8	8,550
6	6.5	17	7.2	308	353	80	7.9	21	166	85	7.4	14,900
7	11	13	6.5	158	173	73	7.9	18	103	83	6.9	18,300
8	700	12	6.5	101	107	68	7.9	15	84	83	6.5	10,500
9	3,700	7.1	6.5	81	71	59	7.9	15	122	53	5.5	1,890
10	1,500	1.1	6.5	65	53	52	7.9	14	146	46	4.4	303
11	500	4.0	6.5	53	41	49	8.5	12	93	35	3.4	201
12	200	.90	5.9	47	39	47	8.7	12	64	19	1.8	157
13	93	.60	5.9	46	37	44	8.7	12	2,090	13	3.3	134
14	63	.60	5.9	45	34	42	8.7	10	2,290	8.4	8.4	121
15	45	.70	5.9	44	29	40	8.7	7.9	467	6.0	7.8	109
16	35	1.9	5.9	41	28	38	9.5	7.9	492	4.6	5.2	109
17	29	4.2	6.5	38	25	35	9.5	7.9	199	3.9	3.2	143
18	24	5.9	7.9	38	21	33	10	9.0	118	2.6	2.1	4,140
19	18	7.9	8.7	38	47	30	10	11	78	1.4	1.5	11,200
20	15	7.8	8.7	36	41	26	10	8.7	55	1.0	1.0	5,050
21	12	7.9	8.7	32	116	24	10	8.9	39	.60	.70	531
22	11	5.2	9.0	32	255	22	10	24	37	.50	2.2	269
23	10	4.6	9.4	31	327	22	10	97	48	861	3.9	168
24	10	5.3	9.4	29	403	21	10	134	71	772	60	425
25	35	7.7	9.5	28	1,140	20	11	131	36	253	29	5,070
26	76	7.9	9.6	27	1,580	18	12	98	23	112	11	7,330
27	76	7.9	11	27	766	16	84	447	15	66	5.5	2,420
28	343	7.9	54	27	448	15	365	604	10	68	2.4	554
29	176	7.9	15	25	------	15	150	144	8.4	111	1.2	336
30	98	7.9	13	23	------	14	93	73	6.7	139	.80	246
31	61	------	13	20	------	13	------	48	------	85	.60	------
TOTAL	7,867.9	313.90	302.1	4,773	6,531	1,692	940.7	2,225.3	7,930.1	3,600.00	303.50	93,170.0
MEAN	254	10.5	9.75	154	233	54.6	31.4	71.8	264	116	9.79	3,106
MAX	3,700	43	54	2,010	1,580	252	365	604	2,290	861	60	18,300
MIN	2.2	.60	5.9	13	20	13	7.9	7.9	6.7	.50	.60	.20
AC-FT	15,610	623	599	9,470	12,950	3,360	1,870	4,410	15,730	7,140	602	184,800

CAL YR 1970 TOTAL 134,718.20 MEAN 369 MAX 17,100 MIN .60 AC-FT 267,200
WTR YR 1971 TOTAL 129,649.50 MEAN 355 MAX 18,300 MIN .20 AC-FT 257,200

PEAK DISCHARGE (BASE, 11,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
9-7	1200	29.02	18,900	9-19	1000	22.53	11,800

07185000 Neosho River near Commerce, Okla.

LOCATION.--Lat 36°55'43", long 94°57'26", in SW 1/4 SE 1/4 sec.5, T.28 N., Ottawa County, on downstream side of left pier of county road bridge, 1.3 miles upstream from Mud Creek, 2.2 miles downstream from Four Mile Creek, 4.5 miles west of Commerce, and at mile 153.4.

DRAINAGE AREA.--5,876 sq mi.

PERIOD OF RECORD.--June 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--32 years, 3,371 cfs (2,442,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,500 cfs Jan. 5 (gage height, 15.54 ft); minimum, 65 cfs Sept. 16, 17.
Period of record: Maximum discharge, 267,000 cfs July 15, 1951, computed by flood-routing method from hydrograph defined at Miami (mile 144.2) by several discharge measurements, gage-height record, and by comparison with computed inflow into Lake O' The Cherokees; maximum gage height, 34.03 ft July 16, 1951, from floodmark; no flow at times in 1953-54, 1956.

REMARKS.--Records good. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 miles upstream. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,440	2,030	447	358	511	8,040	578	1,150	6,650	6,420	6,850	632
2	2,340	1,560	408	375	520	4,700	558	876	6,290	4,550	7,460	627
3	1,480	993	408	3,170	540	5,510	551	631	6,420	3,000	7,560	609
4	1,010	832	968	17,300	2,730	6,600	537	496	10,400	2,570	7,270	596
5	729	774	2,400	21,300	6,960	6,560	527	435	12,300	3,220	6,650	423
6	621	773	2,680	18,500	4,060	6,260	479	643	10,600	3,490	5,300	312
7	777	767	1,590	5,190	2,240	5,550	410	507	10,600	5,230	3,390	294
8	898	748	684	3,540	1,540	3,640	372	429	11,500	4,540	2,230	240
9	9,470	691	392	4,940	1,180	2,940	369	375	11,200	5,010	1,500	192
10	6,030	591	1,050	4,740	978	3,190	350	334	11,400	8,170	1,180	160
11	6,460	512	2,600	3,800	879	4,230	346	576	16,300	13,800	1,150	135
12	7,440	495	2,540	3,220	833	4,020	315	632	19,000	16,400	1,280	114
13	7,020	481	2,390	2,820	764	2,610	290	690	11,500	14,500	1,020	96
14	6,470	475	1,640	2,100	744	2,080	270	545	6,460	11,400	900	82
15	4,900	452	1,060	1,600	708	1,710	262	495	8,160	10,400	890	74
16	3,330	441	1,060	1,270	723	1,450	260	421	8,810	9,970	868	75
17	2,090	438	1,000	996	733	1,360	236	341	9,380	9,050	710	69
18	1,480	436	732	857	716	1,300	199	298	10,600	6,630	530	294
19	1,180	455	528	840	1,230	1,250	181	291	11,500	4,420	483	914
20	868	496	395	710	2,530	1,110	196	249	11,800	3,960	438	808
21	782	451	395	600	3,210	925	216	250	11,800	3,610	434	524
22	731	513	568	604	4,100	834	205	1,280	8,560	2,210	438	317
23	736	605	579	583	3,280	675	319	3,820	9,640	1,420	445	212
24	1,040	578	447	582	3,220	626	383	2,730	12,000	2,180	601	163
25	1,030	532	380	585	3,810	646	320	3,050	12,500	5,810	685	157
26	964	526	338	580	6,220	649	312	3,530	12,000	5,440	670	1,040
27	1,590	534	333	566	11,500	651	614	5,950	11,600	7,000	646	3,300
28	3,320	494	336	545	12,100	631	699	7,410	11,500	6,600	638	1,250
29	3,760	439	328	544	------	612	1,020	7,940	11,300	5,920	632	649
30	2,660	415	322	540	------	598	1,780	7,860	10,400	5,420	631	416
31	2,280	------	336	525	------	575	------	7,140	------	5,470	630	------
TOTAL	86,926	19,527	29,334	103,880	78,559	81,532	13,154	61,374	322,170	197,810	64,109	14,774
MEAN	2,804	651	946	3,351	2,806	2,630	438	1,980	10,740	6,381	2,068	492
MAX	9,470	2,030	2,680	21,300	12,100	8,040	1,780	7,940	19,000	16,400	7,560	3,300
MIN	621	415	322	358	511	575	181	249	6,290	1,420	434	69
AC-FT	172,400	38,730	58,180	206,000	155,800	161,700	26,090	121,700	639,000	392,400	127,200	29,300

CAL YR 1970 TOTAL 1,274,046 MEAN 3,491 MAX 31,900 MIN 74 AC-FT 2,527,000
WTR YR 1971 TOTAL 1,073,149 MEAN 2,940 MAX 21,300 MIN 69 AC-FT 2,129,000

PEAK DISCHARGE (BASE, 20,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
1-5	0645	15.54	21,500

07188000 Spring River near Quapaw, Okla.

LOCATION.--Lat 36°56'04", long 94°44'45", in NE 1/4 SW 1/4 sec.5, T.28 N., R.24 E., Ottawa County, near center of span on downstream side of pier of county road bridge, 0.1 mile upstream from Rock Creek, 3 miles southeast of Quapaw, and at mile 13.9. Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 sq mi, includes that of Rock Creek.

PERIOD OF RECORD.--July 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft above mean sea level. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

AVERAGE DISCHARGE.--32 years, 1,790 cfs (9.68 inches per year, 1,297,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,900 cfs Sept. 7 (gage height, 13.34 ft); minimum, 74 cfs Aug. 26.
Period of record: Maximum discharge, 190,000 cfs May 19, 1943 (gage height, 43.4 ft, from floodmark), from rating curve extended above 54,000 cfs on basis of slope-area measurement of peak flow; minimum daily, 5.8 cfs July 8, 1954.
Flood in December 1895 reached a stage similar to that of May 19, 1943, from information by local residents.

REMARKS.--Records good. Low and medium flow regulated by Riverton hydroelectric plant, 15 miles above station.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	884	2,190	1,070	995	843	1,790	793	948	702	4,980	878	140
2	906	1,980	1,030	1,020	827	1,640	761	916	710	1,070	576	140
3	952	1,860	993	2,820	814	1,510	744	866	962	486	320	161
4	613	1,760	964	9,160	1,570	1,430	738	817	1,110	632	1,350	196
5	476	1,650	935	6,510	5,560	1,360	732	790	845	916	834	262
6	850	1,510	899	3,660	2,430	1,460	719	963	697	664	642	265
7	747	1,310	880	2,170	1,630	1,760	705	1,100	639	1,000	500	7,760
8	1,870	1,430	871	2,090	1,270	1,780	682	826	630	786	452	6,950
9	4,510	1,580	858	1,910	1,120	1,670	671	839	6,060	539	405	1,030
10	5,150	1,800	856	1,780	1,070	1,660	644	829	4,200	436	361	771
11	3,050	1,790	837	1,670	1,050	1,710	638	975	6,730	1,620	333	516
12	1,990	1,680	821	1,580	1,030	1,720	616	897	4,640	1,650	313	482
13	1,830	1,610	804	1,500	1,020	1,620	598	1,630	1,650	1,170	290	404
14	1,680	1,560	786	1,340	1,010	1,510	571	1,230	1,190	628	287	355
15	1,510	1,530	798	1,230	996	1,400	563	894	1,270	434	301	320
16	1,400	1,470	945	1,290	994	1,320	555	722	1,100	362	274	290
17	1,170	1,460	1,010	1,250	895	1,250	546	642	808	325	257	344
18	952	1,430	1,030	1,200	805	1,190	547	582	636	295	243	888
19	1,140	1,490	1,010	1,160	929	1,120	539	544	541	278	235	3,940
20	1,100	2,100	995	1,120	927	1,100	584	506	480	303	234	2,310
21	1,060	1,930	1,030	1,080	1,120	1,070	586	477	441	338	272	1,010
22	1,000	1,730	1,180	1,050	2,750	826	553	1,650	404	404	214	762
23	1,160	1,510	1,240	1,040	3,280	909	1,040	2,670	391	1,030	122	644
24	1,460	1,360	1,210	1,020	3,230	950	2,010	4,240	440	3,160	110	568
25	1,220	1,270	1,150	1,000	2,830	924	1,890	4,620	402	1,810	102	542
26	1,320	1,240	1,080	975	2,930	926	1,470	2,620	356	778	122	527
27	3,470	1,200	1,030	935	2,800	918	1,900	1,500	332	389	149	548
28	5,250	1,160	985	914	2,090	901	1,260	1,100	316	485	147	474
29	4,190	1,130	952	891	------	872	1,040	833	296	944	144	416
30	3,080	1,110	940	885	------	882	1,020	820	763	2,090	143	370
31	2,390	------	957	863	------	834	------	760	------	1,310	143	------
TOTAL	58,380	46,830	30,146	56,108	47,820	40,012	25,715	38,806	39,741	31,312	10,753	33,385
MEAN	1,883	1,561	972	1,810	1,708	1,291	857	1,252	1,325	1,010	347	1,113
MAX	5,250	2,190	1,240	9,160	5,560	1,790	2,010	4,620	6,730	4,980	1,350	7,760
MIN	476	1,110	786	863	805	826	539	477	296	278	102	140
CFSM	.75	.62	.39	.72	.68	.51	.34	.50	.53	.40	.14	.44
IN.	.87	.69	.45	.83	.71	.59	.38	.58	.59	.46	.16	.49
AC-FT	115,800	92,890	59,790	111,300	94,850	79,360	51,010	76,970	78,830	62,110	21,330	66,220

CAL YR 1970 TOTAL 631,107 MEAN 1,729 MAX 40,900 MIN 170 CFSM .69 IN 9.35 AC-FT 1,252,000
WTR YR 1971 TOTAL 459,008 MEAN 1,258 MAX 9,160 MIN 102 CFSM .50 IN 6.80 AC-FT 910,400

PEAK DISCHARGE (BASE, 18,000 CFS).--No peak above base.

07189000 Elk River near Tiff City, Mo.

LOCATION.--Lat 36°37'50", long 94°35'12", in NE 1/4 sec.22, T.22 N., R.34 W., McDonald County, on downstream side of right pier of bridge on State Highway 43, 0.8 mile downstream from Blackfoot Branch, 2.8 miles upstream from Buffalo Creek, 3 miles southeast of Tiff City, and at mile 15.8.

DRAINAGE AREA.--872 sq mi.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 750.61 ft above mean sea level (levels by Corps of Engineers). Sept. 6, 1960, to Aug. 24, 1961, at site 100 ft downstream.

AVERAGE DISCHARGE.--32 years, 754 cfs (11.74 inches per year, 546,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,700 cfs Oct. 27 (gage height, 13.90 ft, from peak indicator); minimum, 45 cfs Sept. 15, 16.
Period of record: Maximum discharge, 137,000 cfs Apr. 19, 1941 (gage height, 28.4 ft, from floodmark), from rating curve extended above 60,000 cfs on basis of slope-area measurement of peak flow; minimum daily, 5.1 cfs Sept. 5, 6, 1954.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 927: 1940. WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	605	1,740	509	473	447	1,530	416	643	595	270	101	54
2	545	1,620	493	459	423	1,380	404	615	530	270	96	54
3	493	1,660	471	584	411	1,230	395	580	482	252	98	55
4	440	1,650	453	1,530	416	1,100	393	572	439	236	108	53
5	403	1,600	443	1,920	427	1,010	411	542	397	222	122	55
6	381	1,450	435	1,620	418	1,090	456	489	372	212	114	55
7	361	1,340	393	1,400	420	1,330	534	477	349	198	111	55
8	589	1,240	400	1,230	409	1,430	556	462	332	183	109	59
9	3,400	1,380	398	1,080	395	1,390	539	440	317	171	106	62
10	3,310	1,480	398	975	382	1,330	529	425	301	164	100	57
11	2,070	1,390	388	886	383	1,230	513	412	286	161	96	52
12	1,570	1,290	379	808	395	1,130	494	401	274	156	92	51
13	1,300	1,170	368	756	414	1,030	482	386	259	145	87	50
14	1,110	1,100	359	861	449	970	460	374	248	135	83	48
15	968	1,070	366	1,100	477	925	443	363	238	126	86	46
16	856	1,050	409	1,080	494	860	429	355	228	124	94	50
17	764	1,040	488	1,010	500	805	418	339	217	121	84	65
18	692	1,010	607	940	499	755	410	331	205	118	79	87
19	646	961	638	864	527	708	402	335	194	114	74	93
20	615	923	630	795	543	674	417	323	185	110	70	100
21	573	871	620	740	689	642	426	313	176	105	69	100
22	541	811	618	701	2,890	613	422	616	171	101	67	93
23	548	756	622	664	3,540	588	530	1,470	173	101	66	86
24	792	711	616	634	2,630	559	819	6,330	172	141	87	81
25	1,110	670	598	604	2,180	543	922	4,260	166	139	68	88
26	1,270	640	576	576	2,020	523	904	2,170	156	126	69	89
27	7,560	607	554	544	1,880	503	849	1,500	147	116	68	89
28	6,830	586	534	519	1,700	486	783	1,140	140	112	64	86
29	3,370	567	513	499	------	465	728	921	138	107	61	84
30	2,400	534	497	483	------	447	686	775	196	108	58	80
31	1,990	------	492	468	------	427	------	666	------	105	57	------
TOTAL	48,102	32,917	15,265	26,803	26,358	27,703	16,170	29,025	8,083	4,749	2,644	2,077
MEAN	1,552	1,097	492	865	941	894	539	936	269	153	85.3	69.2
MAX	7,560	1,740	638	1,920	3,540	1,530	922	6,330	595	270	122	100
MIN	361	534	359	459	382	427	393	313	138	101	57	46
CFSM	1.78	1.26	.56	.99	1.08	1.03	.62	1.07	.31	.18	.10	.08
IN.	2.05	1.40	.65	1.14	1.12	1.18	.69	1.24	.34	.20	.11	.09
AC-FT	95,410	65,290	30,280	53,160	52,280	54,950	32,070	57,570	16,030	9,420	5,240	4,120

CAL YR 1970 TOTAL 312,982 MEAN 857 MAX 27,300 MIN 66 CFSM .98 IN 13.35 AC-FT 620,800
WTR YR 1971 TOTAL 239,896 MEAN 657 MAX 7,560 MIN 46 CFSM .75 IN 10.23 AC-FT 475,800

PEAK DISCHARGE (BASE, 9,000 CFS)

Date	Time	G.HT.	Discharge
10-27	2100	13.90*	12,700

*From peak indicator.

07190000 Lake O' The Cherokees at Langley, Okla.

LOCATION.--Lat 36°28'17", long 95°02'19", in SW 1/4 sec.14, T.23 N., R.21 E., Mayes County, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 miles upstream from Big Cabin Creek, and at mile 77.0.

DRAINAGE AREA.--10,298 sq mi.

PERIOD OF RECORD.--March 1940 to current year. Prior to October 1940, published as Grand Lake at Langley.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above mean sea level (Corps of Engineers bench mark). Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 1,695,000 acre-ft June 13 (gage height, 745.48 ft); minimum, 1,387,000 acre-ft March 27 (gage height, 738.39 ft).
Period of record: Maximum contents, 2,213.000 acre-ft May 25, 1957 (gage height, 755.27 ft); minimum since power-pool was first filled, 642,900 acre-ft Sept. 28, 1954 (gage height, 713.41 ft).

REMARKS.--Reservoir is formed by multiple-arch concrete dam, with top of taintor-type spillway gates at gage height 755.0 ft. Storage began Mar. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft (sill of powerhouse penstock) and 745.0 ft (maximum power pool) is 1,492,000 acre-ft. Capacity between gage heights 745.0 ft and 755.0 ft is 525,000 acre-ft and is reserved for flood control. Dead storage below gage height 682.0 ft is 180,200 acre-ft. Figures given herein represent total contents. Reservoir is utilized for power development and flood control.

REVISIONS.--WSP 1117: Drainage area.

Capacity table (gage height, in feet, and contents, in thousands of acre-feet)

738	1,371	744	1,626
740	1,452	746	1,719
742	1,537		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.429	1.515	1.489	1.479	1.440	1.456	1.411	1.540	1.627	1.683	1.606	1.434
2	1.436	1.505	1.493	1.486	1.434	1.448	1.413	1.544	1.624	1.672	1.608	1.436
3	1.443	1.496	1.498	1.504	1.433	1.438	1.419	1.548	1.623	1.657	1.612	1.435
4	1.445	1.488	1.501	1.539	1.435	1.433	1.423	1.552	1.622	1.654	1.611	1.436
5	1.451	1.494	1.500	1.576	1.462	1.430	1.425	1.553	1.625	1.653	1.606	1.439
6	1.444	1.496	1.504	1.604	1.467	1.430	1.428	1.561	1.624	1.650	1.599	1.440
7	1.436	1.498	1.501	1.604	1.468	1.440	1.431	1.563	1.627	1.645	1.592	1.445
8	1.450	1.504	1.496	1.594	1.453	1.436	1.434	1.568	1.628	1.643	1.590	1.452
9	1.476	1.502	1.492	1.587	1.436	1.436	1.438	1.570	1.637	1.637	1.575	1.442
10	1.489	1.500	1.495	1.579	1.435	1.432	1.440	1.570	1.644	1.639	1.565	1.436
11	1.495	1.503	1.494	1.570	1.437	1.430	1.444	1.572	1.663	1.655	1.558	1.433
12	1.500	1.500	1.497	1.556	1.435	1.435	1.446	1.568	1.686	1.670	1.551	1.434
13	1.501	1.497	1.504	1.544	1.434	1.428	1.450	1.567	1.694	1.678	1.548	1.431
14	1.504	1.495	1.498	1.530	1.438	1.421	1.452	1.564	1.687	1.679	1.551	1.428
15	1.498	1.499	1.495	1.514	1.438	1.418	1.455	1.565	1.682	1.677	1.554	1.430
16	1.488	1.497	1.492	1.501	1.432	1.419	1.458	1.566	1.680	1.673	1.549	1.429
17	1.477	1.497	1.490	1.504	1.425	1.418	1.461	1.562	1.674	1.667	1.542	1.433
18	1.463	1.500	1.493	1.496	1.413	1.411	1.464	1.563	1.671	1.659	1.531	1.438
19	1.458	1.499	1.492	1.488	1.407	1.408	1.467	1.565	1.670	1.643	1.522	1.446
20	1.458	1.501	1.493	1.479	1.414	1.414	1.472	1.566	1.670	1.629	1.508	1.452
21	1.458	1.497	1.488	1.482	1.422	1.416	1.474	1.563	1.671	1.622	1.493	1.454
22	1.458	1.500	1.487	1.480	1.432	1.407	1.483	1.579	1.671	1.612	1.486	1.451
23	1.460	1.490	1.486	1.474	1.436	1.403	1.485	1.601	1.666	1.612	1.474	1.450
24	1.463	1.484	1.491	1.478	1.435	1.396	1.492	1.609	1.664	1.615	1.463	1.448
25	1.467	1.477	1.495	1.471	1.432	1.392	1.501	1.613	1.665	1.623	1.458	1.447
26	1.478	1.486	1.499	1.469	1.432	1.389	1.506	1.608	1.667	1.621	1.447	1.448
27	1.499	1.491	1.503	1.459	1.443	1.392	1.512	1.604	1.666	1.611	1.441	1.448
28	1.518	1.490	1.495	1.461	1.452	1.400	1.520	1.603	1.662	1.605	1.440	1.443
29	1.524	1.492	1.487	1.460	------	1.400	1.526	1.621	1.667	1.601	1.440	1.438
30	1.525	1.483	1.481	1.455	------	1.401	1.532	1.629	1.679	1.593	1.436	1.432
31	1.522	------	1.475	1.452	------	1.403	------	1.630	------	1.597	1.434	------
(+)	741.65	740.74	740.55	740.00	740.00	738.80	741.89	744.09	745.14	743.35	739.55	739.52
(‡)	+91	-39	-8	-23	0	-49	+129	+98	+49	-82	-163	-2
MAX	1,525	1,515	1,504	1,604	1,468	1,456	1,532	1,630	1,694	1,683	1,612	1,454
MIN	1,429	1,477	1,475	1,452	1,407	1,389	1,411	1,540	1,622	1,593	1,434	1,428

CAL YR 1970..... ‡ +171
WTR YR 1971..... ‡ +1

\+ Gage height, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07190500 Neosho River near Langley, Okla.
(Below Spring River, known locally as Grand River)

LOCATION.--Lat 36°26'15", long 95°02'44", in SE 1/4 sec.27, T.23 N., R.21 E., Mayes County, on hillside of left bank, 0.5 mile upstream from bridge on State Highway 82, 1.5 miles south of Langley, 3.6 miles downstream from Pensacola Dam, 6.3 miles upstream from Big Cabin Creek, and at mile 73.4.

DRAINAGE AREA.--10,335 sq mi.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 607.65 ft above mean sea level (Corps of Engineers bench mark). Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mile upstream at same datum. Feb. 10, 1954, to Sept. 30, 1963, water-stage recorder at site 0.5 mile downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 miles upstream at same datum.

AVERAGE DISCHARGE.--32 years, 6,595 cfs (4,778,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,600 cfs June 28, maximum gage height, 13.93 ft June 7; minimum daily discharge, 15 cfs at times.
Period of record: Maximum discharge, 300,000 cfs May 20, 1943 (gage height, 45.5 ft, from floodmark), from computation of outflow from Lake O' The Cherokees; minimum daily, 9 cfs Mar. 25, 1940 (caused by closure of Pensacola Dam).

REMARKS.--Records good. Low flow values of 15 cfs consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (see sta. 07190000).

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,810	10,300	1,470	287	7,690	12,100	55	15	10,900	12,200	2,730	15
2	76	10,300	313	15	4,930	11,900	15	15	9,150	12,200	7,730	28
3	15	10,200	220	1,770	2,600	12,000	15	15	8,800	11,900	7,940	211
4	601	10,000	15	10,800	3,170	12,200	15	15	12,000	4,920	8,570	15
5	602	1,320	5,640	12,100	2,850	12,200	396	44	12,000	6,130	8,350	25
6	6,530	3,010	1,550	12,200	6,170	11,800	88	136	12,200	5,260	8,640	15
7	6,270	3,160	4,650	12,200	4,070	4,550	118	15	12,100	7,990	5,540	3,490
8	2,080	800	4,700	12,200	9,310	10,200	15	15	12,100	7,340	3,710	4,860
9	6,380	6,510	3,960	12,300	11,300	8,340	15	39	12,200	7,380	8,580	5,490
10	10,500	4,870	1,210	12,200	3,010	8,380	110	2,560	12,200	6,230	6,110	5,210
11	10,500	3,410	3,540	12,200	3,360	8,200	15	2,840	12,200	6,570	6,210	1,590
12	10,400	6,000	2,430	12,200	2,780	5,470	15	3,030	12,000	7,940	3,840	15
13	10,400	5,820	145	12,200	2,950	8,510	15	2,560	12,000	12,100	3,400	1,390
14	10,400	4,310	5,900	11,900	15	9,480	15	3,140	12,100	12,200	15	1,770
15	10,300	451	5,910	12,200	2,950	5,960	15	1,310	12,200	12,200	29	15
16	10,500	4,910	5,170	11,700	5,880	4,160	15	785	11,900	12,200	3,780	15
17	10,500	3,400	2,400	3,040	5,510	4,680	15	2,310	12,100	12,000	4,330	15
18	10,500	2,140	2,970	7,230	7,670	5,340	15	1,200	12,200	12,000	5,230	15
19	7,280	3,500	2,810	6,350	5,640	5,930	15	908	12,200	12,100	5,190	15
20	3,260	3,430	2,080	6,130	2,320	15	15	792	12,200	11,400	6,850	15
21	2,520	5,580	5,490	3,170	899	3,550	15	1,440	11,900	6,860	7,080	1,170
22	1,850	4,030	2,830	4,000	8,080	7,050	15	478	11,800	5,920	5,490	2,080
23	5,640	5,920	4,380	5,430	8,610	4,790	15	2,070	11,800	4,010	6,950	1,590
24	2,580	5,250	15	15	10,700	5,470	15	7,760	12,400	3,290	5,060	1,910
25	3,360	5,030	15	5,850	12,100	4,080	15	11,600	12,300	3,690	3,500	853
26	7,860	15	15	4,330	10,400	3,630	15	12,000	11,600	6,860	6,280	155
27	7,440	15	1,360	5,980	12,100	921	15	12,100	12,400	10,800	3,810	4,090
28	9,390	3,040	5,950	1,410	12,200	33	15	11,300	12,400	12,100	53	4,920
29	10,400	1,910	5,920	3,050	------	154	15	813	10,400	8,860	15	4,100
30	10,300	4,080	5,220	6,260	------	32	15	6,160	10,500	12,000	3,130	3,840
31	10,300	------	5,130	2,320	------	35	------	7,760	------	4,860	1,650	------
TOTAL	205,544	132,711	93,408	223,037	169,264	191,160	1,142	95,225	352,250	271,510	149,792	48,922
MEAN	6,630	4,424	3,013	7,195	6,045	6,166	38.1	3,072	11,740	8,758	4,832	1,631
MAX	10,500	10,300	5,950	12,300	12,200	12,200	396	12,100	12,400	12,200	8,640	5,490
MIN	15	15	15	15	15	15	15	15	8,800	3,290	15	15
AC-FT	407,700	263,200	185,300	442,400	335,700	379,200	2,270	188,900	698,700	538,500	297,100	97,040

CAL YR 1970 TOTAL 2,452,347 MEAN 6,719 MAX 66,300 MIN 15 AC-FT 4,864,000
WTR YR 1971 TOTAL 1,933,965 MEAN 5,299 MAX 12,400 MIN 15 AC-FT 3,836,000

07190600 Big Cabin Creek near Pyramid Corners, Okla.

LOCATION.--Lat 36°48'06", long 95°09'48", in SE 1/4 SE 1/4 sec.21, T.27 N., R.20 E., Craig County, on left bank, 60 ft upstream from county road bridge, 1.2 miles west of Pyramid Corners, 5.2 miles west of Bluejacket, and at mile 34.4.

DRAINAGE AREA.--71.1 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map). Prior to Feb. 7, 1964, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--8 years, 31.4 cfs (6.00 inches per year, 22,750 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,220 cfs Jan. 3 (gage height, 8.31 ft); no flow at times.
Period of record: Maximum discharge, 7,940 cfs Apr. 30, 1970 (gage height, 18.02 ft) from rating curve extended above 4,000 cfs; no flow at times each year.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	12	3.6	11	4.0	26	3.8	11	.70	.47		0
2	2.4	12	3.6	9.2	3.4	21	3.5	8.2	.68	.31		0
3	1.7	11	3.6	503	3.2	16	3.1	6.7	23	.18		0
4	1.3	10	3.3	186	282	13	3.0	5.5	9.4	.52		0
5	1.1	9.2	3.0	54	372	13	2.9	4.4	2.4	1.4		0
6	1.9	8.5	2.8	30	76	80	2.7	37	1.3	1.4		0
7	4.3	7.6	2.4	19	43	58	2.5	14	1.1	.82		0
8	98	7.2	2.0	14	28	30	2.3	7.6	1.6	.62		0
9	203	6.5	2.0	12	21	25	2.2	5.1	1.8	.35		0
10	61	6.0	2.0	12	13	53	2.1	4.4	.98	.21		0
11	29	6.1	2.0	13	29	40	2.0	21	.74	.15		0
12	19	4.8	1.9	13	37	26	1.9	29	.57	.12		0
13	14	4.0	1.8	12	21	22	2.0	13	.47	.09		0
14	11	5.9	1.8	13	15	19	2.0	6.6	.41	.06		0
15	7.8	8.7	2.4	13	14	14	1.8	3.9	.36	.04		0
16	5.8	6.8	26	12	13	11	1.8	2.9	.26	.02		0
17	4.8	6.6	31	12	13	9.1	1.8	2.2	.19	0		0
18	4.1	6.1	14	12	11	8.7	1.8	1.7	.16	0		0
19	3.9	14	9.0	9.2	11	7.5	1.8	1.5	.14	0		20
20	3.5	21	6.3	7.2	9.2	6.1	3.5	1.2	.11	0		12
21	3.1	12	8.7	7.2	278	6.0	11	1.1	.07	0		3.0
22	2.7	8.6	24	8.6	315	6.0	8.2	2.7	.05	0		1.4
23	4.1	6.0	18	8.0	99	5.6	128	10	.17	.01		.70
24	72	4.2	10	8.0	112	5.2	74	41	.22	.04		.50
25	47	3.8	7.2	8.0	118	5.2	29	9.4	.34	.02		.50
26	162	3.8	5.2	7.6	75	5.2	19	3.1	.19	0		21
27	185	4.0	4.8	6.0	42	5.2	35	1.8	.18	0		8.6
28	88	3.8	4.4	4.8	29	5.2	27	1.3	.23	0		3.9
29	39	3.8	4.4	4.4	------	4.9	15	1.1	.23	0		2.0
30	24	3.6	4.8	4.6	------	4.4	12	.94	.24	0		1.8
31	16	------	7.4	4.8	------	4.1	------	.83	------	0		------
TOTAL	1,123.5	227.6	223.4	1,038.6	2,086.8	555.4	406.7	260.17	48.29	6.83	0	75.40
MEAN	36.2	7.59	7.21	33.5	74.5	17.9	13.6	8.39	1.61	.22	0	2.51
MAX	203	21	31	503	372	80	128	41	23	1.4	0	21
MIN	1.1	3.6	1.8	4.4	3.2	4.1	1.8	.83	.05	0	0	0
CFSM	.51	.11	.10	.47	1.05	.25	.19	.12	.02	.003	0	.04
IN.	.59	.12	.12	.54	1.09	.29	.21	.14	.03	.003	0	.04
AC-FT	2,230	451	443	2,060	4,140	1,100	807	516	96	14	0	150

CAL YR 1970 TOTAL 15,878.26 MEAN 43.5 MAX 4,890 MIN 0 CFSM .61 IN 8.31 AC-FT 31,490
WTR YR 1971 TOTAL 6,052.69 MEAN 16.6 MAX 503 MIN 0 CFSM .23 IN 3.17 AC-FT 12,010

PEAK DISCHARGE (BASE, 1,500 CFS).--No peak above base.

07191000 Big Cabin Creek near Big Cabin, Okla.

LOCATION.--Lat 36°31'00", long 95°08'18", in NW 1/4 SE 1/4 sec.35, T.24 N., R.20 E., Craig County, on downstream side of right pier of county road bridge, 2.3 miles upstream from Mustang Creek, 5 miles southeast of Big Cabin, and at mile 8.5.

DRAINAGE AREA.--466 sq mi.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft above mean sea level (levels by Corps of Engineers). Auxiliary water-stage recorder 4.5 miles upstream at same datum.

AVERAGE DISCHARGE.--24 years, 289 cfs (8.42 inches per year, 209,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,890 cfs Jan. 3 (gage height, 16.81 ft); minimum, 0.36 cfs Sept. 15, 16.
Period of record: Maximum discharge, 52,000 cfs Oct. 3, 1959 (gage height, 34.55 ft); minimum, 0.10 cfs, at times in 1954, 1956, and 1963.
Flood of May 18, 1943, reached a stage of 34.96 ft (discharge, 63,000 cfs, by slope-area measurement of peak flow).

REMARKS.--Records good. Low flow sustained by sewage from city of Vinita. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	120	34	44	34	146	26	37	20	585	2.5	.72
2	19	164	33	56	34	128	24	32	19	1,220	2.2	.86
3	16	139	28	2,510	31	112	23	27	17	157	2.2	1.4
4	13	113	26	4,140	231	93	23	24	16	69	2.3	1.4
5	14	103	21	497	1,930	83	22	20	15	110	2.3	2.0
6	285	91	20	218	381	373	22	18	22	115	3.3	1.7
7	114	80	19	139	204	478	21	17	22	77	3.6	1.2
8	195	71	18	112	143	229	19	27	25	47	2.9	.92
9	2,250	75	18	96	121	158	18	28	27	30	3.1	.71
10	463	88	17	90	88	156	16	26	21	20	2.9	.69
11	175	72	17	88	116	218	17	80	18	15	2.5	.58
12	113	60	18	86	195	172	17	232	14	11	2.6	.68
13	98	54	18	84	161	133	16	165	14	8.4	2.3	.79
14	73	53	19	81	107	116	14	72	33	6.5	1.9	.71
15	58	66	19	85	94	100	14	49	194	5.3	1.8	.45
16	47	78	211	83	87	84	14	35	67	4.4	2.0	.51
17	40	76	326	77	82	70	14	25	37	3.9	2.9	1.4
18	34	65	157	75	76	63	13	19	23	3.6	3.8	12
19	29	63	100	73	71	56	13	28	15	3.5	3.4	28
20	25	347	75	64	67	51	17	25	10	3.1	3.0	22
21	22	192	63	58	481	48	25	15	7.3	2.6	2.8	12
22	19	108	88	55	3,590	44	29	613	5.5	2.5	2.3	6.2
23	50	77	112	55	906	42	110	577	55	3.0	1.9	3.1
24	493	58	99	57	505	41	378	527	106	3.4	1.9	1.9
25	440	46	74	56	678	38	154	231	40	3.0	1.7	1.8
26	986	40	57	52	580	36	82	99	26	3.2	1.7	2.3
27	4,110	36	48	46	309	40	61	61	13	3.2	1.9	2.1
28	1,320	33	42	43	185	45	50	45	8.1	3.7	2.1	1.4
29	433	34	39	38	------	35	51	34	5.5	3.5	2.2	1.2
30	219	32	37	35	------	31	44	27	8.6	3.3	1.2	3.6
31	147	------	39	33	------	29	------	23	------	2.6	.82	------
TOTAL	12,324	2,634	1,892	9,226	11,487	3,448	1,347	3,238	904.0	2,528.7	74.02	114.32
MEAN	398	87.8	61.0	298	410	111	44.9	104	30.1	81.6	2.39	3.81
MAX	4,110	347	326	4,140	3,590	478	378	613	194	1,220	3.8	28
MIN	13	32	17	33	31	29	13	15	5.5	2.5	.82	.45
CFSM	.85	.19	.13	.64	.88	.24	.10	.22	.06	.18	.005	.008
IN.	.98	.21	.15	.74	.92	.28	.11	.26	.07	.20	.005	.009
AC-FT	24,440	5,220	3,750	18,300	22,780	6,840	2,670	6,420	1,790	5,020	147	227

CAL YR 1970 TOTAL 103,822.83 MEAN 284 MAX 23,900 MIN .69 CFSM .61 IN 8.29 AC-FT 205,900
WTR YR 1971 TOTAL 49,217.04 MEAN 135 MAX 4,140 MIN .45 CFSM .29 IN 3.93 AC-FT 97,620

PEAK DISCHARGE (BASE, 9,000 CFS).--No peak above base.

07191220 Spavinaw Creek near Sycamore, Okla.

LOCATION.--Lat 36°19'57", long 94°38'24", in NE 1/4 NW 1/4 sec.4, T.21 N., R.25 E., Delaware County, on right bank 1.8 miles upstream from Cherokee Creek, 4.8 miles northeast of Row, 6.5 miles southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 sq mi.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 875 ft (from topographic map).

AVERAGE DISCHARGE.--10years, 82.6 cfs (8.43 inches per year, 59,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,020 cfs Oct. 27 (gage height, 6.96 ft); minimum, 11 cfs Sept. 2-5, 16, 17.
Period of record: Maximum discharge, 12,000 cfs Apr. 30, 1970 (gage height, 14.95 ft); minimum, 1.2 cfs Aug. 9, 1964.
Flood of May 19, 1961, reached a stage of 15.61 ft ,from floodmark, (discharge, 15,000 cfs, from rating curve extended above 4,000 cfs at former station 1 mile upstream).

REMARKS.--Records good.

REVISIONS (WATER YEAR).--WSP 2121: 1965(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	252	90	62	81	203	67	93	80	28	19	12
2	127	306	88	62	78	180	66	87	73	31	19	12
3	114	330	86	88	76	160	65	81	68	34	19	11
4	101	289	83	242	74	145	65	76	62	36	19	11
5	90	250	82	306	74	134	66	73	57	37	18	12
6	84	216	78	248	73	132	67	69	53	37	19	12
7	78	192	76	206	72	126	69	67	51	36	20	12
8	315	182	74	172	70	120	71	64	49	35	21	12
9	794	199	73	148	68	117	71	62	46	33	21	12
10	468	192	72	131	67	114	69	61	44	32	21	12
11	344	179	72	118	66	111	68	59	43	31	20	13
12	273	166	69	106	67	107	66	58	41	29	19	13
13	215	153	68	127	68	105	65	57	40	27	18	13
14	174	151	67	277	69	104	64	55	38	26	18	12
15	150	156	66	308	70	101	63	54	37	25	17	12
16	132	162	69	273	71	98	61	52	37	24	17	11
17	117	163	73	236	71	96	60	51	36	23	17	12
18	107	156	74	202	71	93	59	49	35	22	16	12
19	103	148	75	172	73	90	59	48	34	22	16	14
20	98	141	74	154	74	87	63	47	33	21	15	14
21	93	132	73	141	108	84	69	47	32	20	15	15
22	87	123	72	130	295	81	71	61	31	20	15	16
23	107	114	71	122	379	79	84	152	30	20	14	16
24	200	109	69	114	321	77	132	374	29	19	14	17
25	319	104	68	109	290	75	160	343	29	19	14	18
26	373	101	67	103	280	75	147	254	28	19	13	19
27	886	100	66	99	260	74	129	193	27	19	13	20
28	643	96	64	95	230	72	115	151	26	20	13	19
29	480	95	63	91	------	71	105	120	25	20	13	19
30	375	93	62	88	------	69	99	100	25	20	13	18
31	297	------	62	85	------	68	------	87	------	20	13	------
TOTAL	7,890	5,050	2,246	4,815	3,596	3,248	2,415	3,145	1,239	805	519	421
MEAN	255	168	72.5	155	128	105	80.5	101	41.3	26.0	16.7	14.0
MAX	886	330	90	308	379	203	160	374	80	37	21	20
MIN	78	93	62	62	66	68	59	47	25	19	13	11
CFSM	1.92	1.26	.55	1.17	.96	.79	.61	.76	.31	.20	.13	.11
IN.	2.21	1.41	.63	1.35	1.01	.91	.68	.88	.35	.23	.15	.12
AC-FT	15,650	10,020	4,450	9,550	7,130	6,440	4,790	6,240	2,460	1,600	1,030	835

CAL YR 1970 TOTAL 55,046 MEAN 151 MAX 5,890 MIN 23 CFSM 1.14 IN 15.40 AC-FT 109,200
WTR YR 1971 TOTAL 35,389 MEAN 97.0 MAX 886 MIN 11 CFSM .73 IN 9.90 AC-FT 70,190

PEAK DISCHARGE (BASE, 2,500 CFS).--No peak above base.

07191400 Lake Hudson near Locust Grove, Okla.

LOCATION.--Lat 36°13'54", long 95°11'36", in SE 1/4 NW 1/4 sec.9, T.20 N., R.20 E., Mayes County, at left side of Robert S. Kerr dam, 2 miles northwest of Locust Grove, 3.5 miles downstream from Salina Creek, and at mile 47.3.

DRAINAGE AREA.--11,534 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Remote-controlled indicator and nonrecording gage. Datum of gage is at mean sea level (levels by Grand River Dam authority).

EXTREMES.--Current year: Maximum contents, 213,300 acre-ft Aug. 23 (elevation, 620.17 ft); minimum, 194,200 acre-ft Mar. 30 (elevation, 618.43 ft).
Period of record: Maximum contents, 375,400 acre-ft May 4, 1970 (elevation, 632.07 ft); minimum since power pool first filled, 183,100 acre-ft Dec. 24, 1967 (elevation, 617.38 ft).

REMARKS.--Reservoir is formed by earth dam and gated concrete spillway. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft at elevation 636.0 ft (top of taintor gates), 200,300 acre-ft at elevation 619.0 ft (power pool), and 48,630 acre-ft at elevation 599.0 ft (top of spillway crest). Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Grand River Dam Authority.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970TO SEPTEMBER 1971

Date	Elevation (feet) +	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	619.85	209,700	--
Oct. 31	618.99	200,200	-9,500
Nov. 30	619.53	206,100	+5,900
Dec. 31	619.70	208,000	+1,900
CAL YR 70	--	--	+1,400
Jan. 31	619.50	205,800	-2,200
Feb. 28	619.35	204,100	-1,700
Mar. 31	618.95	199,800	-4,300
Apr. 30	619.52	206,000	+6,200
May 31	619.81	209,200	+3,200
June 30	619.21	202,600	-6,600
July 31	619.67	207,700	+5,100
Aug. 31	619.99	211,200	+3,500
Sept. 30	619.70	208,000	-3,200
WTR YR 71	--	--	-1,700

07191500 Neosho River near Chouteau, Okla.

LOCATION.--Lat 36°14'13", long 95°13'35", in SE 1/4 SE 1/4 sec.1, T.20 N., R.19 E., Mayes County, at county road bridge between Locust Grove and Pryor, 2.5 miles downstream from Lake Hudson, 5.0 miles upstream from Pryor Creek, and 7.5 miles northeast of Chouteau, and at mile 44.7.

DRAINAGE AREA.--11,546 sq mi.

PERIOD OF RECORD.--October 1937 to September 1950, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 551.83 ft above mean sea level (levels by Corps of Engineers). Prior to Apr. 3, 1941, nonrecording gage at bridge on State Highway 33, 5.7 miles downstream, at datum 15.46 ft lower. Auxiliary water-stage recorder since Oct. 4, 1963, at former site and supplemental water-stage recorder since Apr. 6, 1964 at Kerr Dam 2.5 miles upstream.

AVERAGE DISCHARGE.--21 years, 7,825 cfs (5,669,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 37,700 cfs Jan. 9; maximum gage height.13.73 July 16; minimum daily discharge, 77 cfs Oct. 3-5.
Period of record: Maximum discharge, 400,000 cfs May 20, 1943 (gage height, 45.00 ft), from rating curve extended above 140,000 cfs on basis of slope-area measurement of peak flow; minimum daily, 12 cfs Nov. 13, 1963 (caused by closure of Kerr Dam).

REMARKS.--Records good. Flow regulated since 1940 by Lake O' The Cherokees (see sta. 07190000), and completely regulated since 1963 by Lake Hudson (see sta. 07191400).

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13,400	8,430	3,450	156	9,450	16,300	199	128	14,100	10,500	1,000	222
2	88	15,600	525	138	4,820	18,500	146	125	9,200	16,700	8,280	162
3	77	9,630	150	9,030	1,420	6,180	149	133	10,300	11,300	7,930	844
4	77	9,980	670	15,800	4,950	14,600	146	128	17,700	148	16,000	159
5	77	414	8,530	17,800	3,790	13,200	146	128	11,100	10,900	6,180	156
6	5,800	2,400	2,110	12,900	7,330	14,200	167	123	8,550	6,900	9,130	156
7	5,220	5,210	892	16,700	1,520	570	183	123	15,000	9,850	7,580	6,980
8	2,500	500	6,280	12,400	12,400	11,500	163	120	10,600	7,950	168	8,300
9	14,000	9,580	2,510	12,300	10,300	9,700	178	120	15,800	5,190	14,000	174
10	10,700	5,720	113	12,800	4,830	10,200	152	2,470	12,300	7,100	6,400	171
11	15,300	4,350	6,580	14,200	2,490	6,480	149	4,260	15,700	2,830	4,340	3,000
12	10,200	6,080	2,560	11,600	4,310	8,380	152	4,460	15,200	17,700	3,500	438
13	13,100	5,760	105	9,770	3,070	12,000	149	3,070	10,000	7,160	4,650	4,890
14	10,100	4,700	3,860	13,500	130	3,810	146	4,980	9,600	10,300	156	159
15	9,580	110	6,220	11,700	2,100	7,480	149	1,910	14,400	15,600	138	150
16	13,600	3,320	5,070	12,700	4,560	4,740	586	138	14,100	12,200	2,880	143
17	8,080	5,540	4,280	376	5,980	4,030	149	1,300	13,800	15,100	4,580	145
18	10,500	832	3,880	9,830	8,550	6,500	138	128	11,600	5,180	10,200	145
19	8,180	4,860	1,400	5,260	6,740	7,080	138	620	9,430	15,500	195	143
20	3,810	3,400	1,680	8,020	2,500	156	138	2,070	12,600	11,200	5,300	195
21	730	6,980	7,080	3,880	118	1,640	135	2,050	14,400	10,800	11,200	88
22	2,530	4,860	962	2,770	12,700	9,900	140	138	12,900	165	1,200	712
23	8,350	7,800	5,920	5,860	15,900	6,800	130	5,460	13,800	5,820	11,700	2,250
24	4,030	6,790	143	148	10,400	3,680	128	12,600	14,600	5,840	4,200	2,860
25	5,190	6,660	140	4,580	14,100	4,640	128	15,000	11,500	189	4,770	772
26	12,300	145	183	7,500	13,900	4,260	128	14,300	12,300	9,550	10,200	100
27	18,300	140	213	7,450	14,400	492	125	10,500	8,850	10,900	1,800	8,580
28	13,800	1,300	5,860	2,030	12,000	180	118	14,200	15,800	13,600	189	2,790
29	12,600	216	7,130	1,660	------	146	118	310	11,600	9,630	177	5,030
30	13,500	3,470	5,030	4,490	------	146	123	4,020	13,700	10,300	171	4,090
31	12,900	------	5,030	3,790	------	146	------	8,750	------	4,850	4,020	------
TOTAL	258,619	144,777	98,556	251,138	194,758	207,636	4,796	113,862	380,530	280,952	162,234	54,004
MEAN	8,343	4,826	3,179	8,101	6,956	6,698	160	3,673	12,680	9,063	5,233	1,800
MAX	18,300	15,600	8,530	17,800	15,900	18,500	586	15,000	17,700	17,700	16,000	8,580
MIN	77	110	105	138	118	146	118	120	8,550	148	138	88
AC-FT	513,000	287,200	195,500	498,100	386,300	411,800	9,510	225,800	754,800	557,300	321,800	107,100

CAL YR 1970 TOTAL 2,683,443 MEAN 7,352 MAX 54,600 MIN 71 AC-FT 5,323,000
WTR YR 1971 TOTAL 2,151,862 MEAN 5,896 MAX 18,500 MIN 77 AC-FT 4,268,000

07193000 Fort Gibson Lake near Fort Gibson, Okla.
(Formerly published as Fort Gibson Reservoir near Fort Gibson)

LOCATION.--Lat 35°52'16", long 95°13'43", in NW 1/4 NW 1/4 sec.18, T.16 N., R.20 E., Cherokee County, in control tower near left end of Fort Gibson Dam on Neosho River, 4 miles north of Fort Gibson, and at mile 7.7.

DRAINAGE AREA.--12,492 sq mi.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1970 published as Fort Gibson Reservoir near Fort Gibson.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Jan. 13, 1950, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 442,800 acre-ft Oct. 28 (elevation, 557.81 ft); minimum, 325,100 acre-ft Feb. 5 (elevation, 551.81 ft).
Period of record: Maximum contents, 1,278,000 acre-ft May 12, 1961 (elevation, 581.88 ft); minimum since first use of power pool, 303,800 acre-ft May 26, 1955 (elevation, 550.56 ft).

REMARKS.--Reservoir is formed by a concrete-gravity and earth-fill dam. Regulated storage began Sept. 5, 1949; power pool was first maintained in 1953. Capacity, 1,284,000 acre-ft at elevation 582.0 ft (flood-control pool), 365,200 acre-ft at elevation 554.0 ft (maximum power pool), and 311,300 acre-ft at elevation 551.0 ft (minimum power pool). Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Corps of Engineers.

REVISIONS (WATER YEARS).--WSP 1731: 1950(M).

Capacity table (elevation, in feet, and contents, in acre-feet)

551	311,300	557	425,400
553	346,500	558	447,000
555	384,500		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388.3	406.5	362.9	354.4	344.3	397.5	336.8	331.7	372.4	386.5	374.3	346.3
2	373.4	410.5	360.1	348.3	340.9	402.1	333.9	332.1	370.7	400.3	376.6	345.4
3	364.8	401.1	357.6	378.1	333.5	382.5	334.3	331.4	370.5	400.3	381.9	344.3
4	358.7	397.1	356.6	394.3	333.5	378.5	335.9	330.5	386.3	380.5	400.5	344.3
5	351.9	377.7	373.2	396.3	328.5	380.5	333.5	330.5	383.1	386.1	397.9	347.2
6	355.1	362.5	377.0	389.1	341.6	383.1	331.7	331.4	376.8	380.3	396.5	347.6
7	358.7	365.2	371.5	389.1	341.1	361.2	330.8	330.8	382.3	380.1	399.5	351.9
8	374.7	366.9	373.0	380.5	351.4	361.2	331.9	330.8	382.1	378.7	394.1	360.8
9	394.5	373.4	364.4	375.1	356.3	358.9	331.6	332.1	389.3	370.9	408.2	355.7
10	394.5	370.7	353.4	374.5	352.1	356.3	331.7	337.1	392.7	370.5	402.5	349.7
11	408.4	368.0	355.3	384.3	346.1	347.6	330.8	339.7	396.3	374.9	394.1	353.0
12	406.9	363.9	345.1	387.7	351.4	342.9	330.3	346.1	397.7	394.9	386.5	354.0
13	409.2	361.0	338.8	387.1	352.8	343.1	330.7	343.4	387.7	387.9	383.7	356.5
14	423.3	361.0	338.2	396.5	350.5	335.9	329.6	344.7	376.4	393.1	378.5	354.2
15	432.8	355.5	344.2	397.7	348.8	341.5	329.4	347.2	380.3	402.5	373.6	354.0
16	433.0	356.8	344.5	400.5	354.0	342.4	329.6	347.6	384.9	402.7	369.0	352.8
17	430.4	360.4	346.1	376.6	354.9	339.1	329.8	344.2	387.5	411.5	365.0	353.2
18	429.6	353.8	347.6	374.5	358.0	345.1	330.3	340.7	385.9	399.3	369.2	354.0
19	425.4	356.8	347.8	362.2	356.1	347.8	329.4	339.3	381.3	403.5	359.7	354.2
20	411.1	353.8	349.6	355.7	354.4	342.9	330.7	338.2	384.7	405.3	353.4	351.7
21	390.5	365.2	353.6	344.3	356.8	344.7	329.9	337.9	389.5	408.0	361.0	350.1
22	373.6	376.2	346.1	337.9	372.8	354.0	331.0	337.3	391.3	387.9	361.0	348.3
23	378.1	374.3	352.1	337.1	390.7	355.7	331.2	349.9	395.7	380.5	370.1	350.5
24	372.8	369.4	349.0	332.5	390.5	350.5	331.4	362.4	398.3	369.8	362.9	351.4
25	361.0	367.1	348.5	332.1	401.5	346.7	331.6	375.1	393.3	366.5	359.5	354.8
26	394.3	366.2	346.9	338.2	404.9	345.4	331.7	378.5	390.5	367.3	367.5	352.3
27	439.3	365.6	346.7	342.4	402.9	345.1	331.4	378.5	379.3	364.1	364.1	359.7
28	442.6	364.2	348.5	339.3	396.5	345.8	331.6	384.5	384.5	374.1	354.2	352.1
29	427.7	364.6	355.1	335.0	------	340.0	332.1	366.7	384.5	373.0	354.2	354.4
30	419.1	363.1	357.8	335.7	------	337.5	331.4	360.6	387.5	373.9	349.9	351.9
31	418.5	------	356.1	338.2	------	334.6	------	367.1	------	371.3	348.8	------
(+)	556.67	553.89	553.52	552.54	555.60	552.34	552.16	554.10	555.15	554.32	553.13	553.30
(‡)	+39.4	-55.4	-7.0	-17.9	+58.3	-61.9	-3.2	+35.7	+20.4	-16.2	-22.5	+3.1
MAX	442.6	410.5	377.0	400.5	404.9	402.1	336.8	384.5	398.3	411.5	408.2	360.8
MIN	351.9	353.8	338.2	332.1	328.5	334.6	329.4	330.5	370.5	364.1	348.8	344.3

CAL YR 1970..... ‡ +17.2
WTR YR 1971..... ‡ -27.2

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07193500 Neosho River below Fort Gibson Lake, near Fort Gibson, Okla.
(Formerly published as Neosho River below Fort Gibson Reservoir, near Fort Gibson)

LOCATION.--Lat 35°51'15", long 95°13'45", in SE 1/4 NW 1/4 sec.19, T.16 N., R.20 E., Cherokee County, on left bank 1.1 miles downstream from Fort Gibson Dam, 4.5 miles north of Fort Gibson, and at mile 6.6.

DRAINAGE AREA.--12,495 sq mi.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1970 published as Neosho River below Fort Gibson Reservoir, near Fort Gibson.

GAGE.--Water-stage recorder. Datum of gage is 483.75 ft above mean sea level. May 11, 1950, to Aug. 20, 1951 nonrecording gage and Aug. 21, 1951, to June 11, 1952, water-stage recorder, at site 4.4 miles downstream at datum 8.00 ft lower.

AVERAGE DISCHARGE.--20 years, 6,675 cfs (4,836,000 acre-ft per year).

EXTREMES.--Current year: Maximum gage height, 11.20 ft Oct. 28 (discharge not determined).
Period of record: Maximum discharge, 223,000 cfs May 26, 1957 (gage height, 37.60 ft); minimum, 12 cfs Oct. 10, 1957, Aug. 23, 1964.
Flood in May 1943 reached a stage of 43.0 ft, from high-water profile by Corps of Engineers.

REMARKS.--Records withheld. Flow completely regulated by Fort Gibson Lake. (See sta. 07193000). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record furnished by Corps of Engineers.

07195500 Illinois River near Watts, Okla.

LOCATION.--Lat 36°07'48", long 94°34'12", in NE 1/4 sec.18, T.19 N., R.26 E., Adair County, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 miles north of Watts, 4.5 miles downstream from Cincinnati Creek, and at mile 106.2.

DRAINAGE AREA.--635 sq mi.

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 893.78 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 533 cfs (11.41 inches per year, 386,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 25,200 cfs Oct. 27 (gage height, 20.48 ft); minimum, 88 cfs Sept. 15-18.
Period of record: Maximum discharge, 68,000 cfs July 25, 1960 (gage height, 25.96 ft), from rating curve extended above 51,000 cfs; minimum, 8.6 cfs Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

REMARKS.--Records good. Some regulation at low flow by Lake Francis Dam, 0.8 mile above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

COOPERATION.--Gage-height record, 21 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	569	1,380	454	358	441	1,010	353	462	407	354	140	95
2	496	2,980	449	356	536	920	349	420	381	326	140	92
3	439	2,250	434	611	495	856	342	384	364	264	136	92
4	390	1,730	424	1,780	458	818	252	368	332	219	135	94
5	347	1,490	407	1,240	442	778	193	414	304	203	135	95
6	333	1,270	399	906	454	749	196	351	285	194	133	92
7	328	1,120	383	765	452	797	198	704	261	181	133	93
8	1,410	1,050	377	652	443	769	202	934	246	169	131	92
9	5,280	2,140	366	598	432	721	203	563	238	164	128	91
10	2,420	1,610	372	558	405	685	205	578	234	167	127	91
11	1,470	1,190	362	526	390	683	209	2,780	222	161	124	95
12	1,340	1,030	388	499	419	662	218	1,430	212	153	121	100
13	1,170	927	379	614	482	648	217	861	210	143	119	97
14	1,010	983	360	2,770	505	635	212	647	206	140	118	91
15	864	1,310	366	1,690	507	620	218	533	200	133	117	90
16	730	1,040	482	1,210	501	596	219	467	195	130	117	88
17	646	908	594	1,020	496	573	215	431	190	130	117	89
18	593	836	532	888	519	545	227	375	184	127	115	90
19	566	778	486	777	650	521	234	385	181	120	113	92
20	536	749	463	689	1,110	498	245	380	175	116	109	99
21	493	719	440	623	1,230	479	372	350	145	114	107	101
22	458	647	435	592	3,730	457	466	328	126	115	105	103
23	613	613	432	556	2,360	428	518	845	129	119	105	100
24	3,260	582	429	516	1,670	344	841	3,300	131	122	105	100
25	2,360	557	395	496	1,500	256	664	2,070	138	126	106	105
26	2,200	545	384	467	1,510	282	564	1,180	144	122	106	112
27	16,200	518	366	489	1,310	356	481	857	147	119	103	119
28	6,150	503	353	457	1,120	365	432	675	146	115	103	115
29	3,120	487	346	441	------	362	406	566	142	124	102	107
30	2,070	480	353	420	------	359	418	497	192	142	99	102
31	1,570	------	360	389	------	359	------	440	------	137	96	------
TOTAL	59,431	32,422	12,770	23,953	24,567	18,131	9,869	24,575	6,467	4,949	3,645	2,922
MEAN	1,917	1,081	412	773	877	585	329	793	216	160	118	97.4
MAX	16,200	2,980	594	2,770	3,730	1,010	841	3,300	407	354	140	119
MIN	328	480	346	356	390	256	193	328	126	114	96	88
CFSM	3.02	1.70	.65	1.22	1.38	.92	.52	1.25	.34	.25	.19	.15
IN.	3.48	1.90	.75	1.40	1.44	1.06	.58	1.44	.38	.29	.21	.17
AC-FT	117,900	64,310	25,330	47,510	48,730	35,960	19,580	48,740	12,830	9,820	7,230	5,800

CAL YR 1970 TOTAL 142,163 MEAN 389 MAX 16,200 MIN 13 CFSM .61 IN 8.33 AC-FT 282,000
WTR YR 1971 TOTAL 223,701 MEAN 613 MAX 16,200 MIN 88 CFSM .97 IN 13.11 AC-FT 443,700

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-9	1430	11.16	6,350	10-27	1415	20.48	25,200

07196000 Flint Creek near Kansas, Okla.

LOCATION.--Lat 36°11'54", long 94°42'30", in SW 1/4 sec.24, T.20 N., R.24 E., Delaware County, near left bank on downstream side of pier of bridge on State Highway 33, 6 miles southeast of Kansas, 6 miles downstream from Sager Creek, and at mile 2.8.

DRAINAGE AREA.--110 sq mi.

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 96.9 cfs (11.96 inches per year, 70,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,430 cfs Oct. 27 (gage height, 8.76 ft); minimum daily, 16 cfs Aug. 30, 31.
Period of record: Maximum discharge, 23,600 cfs Aug. 14, 1961 (gage height, 15.66 ft), from rating curve extended above 7,200 cfs; minimum daily, 0.6 cfs Oct. 11-13, 1956.

REMARKS.--Records good. Small diversion above station for irrigation.

COOPERATION.--Gage-height record, 25 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	294	90	63	75	192	62	71	83	51	24	17
2	109	426	89	63	72	173	61	66	76	53	23	17
3	95	367	88	141	69	152	60	63	74	42	24	17
4	86	315	84	445	69	138	63	61	68	39	28	17
5	79	274	83	315	69	126	74	58	63	38	28	25
6	77	247	80	252	65	123	70	57	58	38	27	34
7	72	221	79	217	64	116	66	56	55	36	28	28
8	562	217	77	189	59	106	65	53	55	33	27	27
9	1,100	230	76	164	56	101	63	53	54	32	25	25
10	435	225	75	145	56	100	61	55	51	32	24	23
11	308	205	74	131	58	98	60	56	48	30	22	23
12	247	185	72	122	60	94	59	52	47	29	23	22
13	213	170	70	189	59	91	59	50	44	28	24	20
14	182	170	67	392	58	90	58	47	43	27	24	19
15	155	167	72	301	58	87	57	45	44	25	24	18
16	138	161	80	247	58	84	57	43	42	25	35	18
17	122	161	77	225	59	82	56	42	40	26	35	19
18	111	155	75	201	59	80	55	42	38	24	28	26
19	109	145	74	179	74	77	54	66	37	23	24	29
20	100	148	71	158	79	76	64	59	34	22	21	27
21	94	136	71	143	126	75	71	52	34	22	20	25
22	89	126	72	131	367	74	69	83	35	22	20	24
23	122	120	70	122	310	73	86	243	40	25	21	23
24	287	111	67	113	266	71	100	330	37	29	20	23
25	269	108	66	107	281	70	99	262	34	26	20	27
26	379	106	64	101	269	70	93	200	31	24	19	29
27	1,460	102	63	94	243	68	87	168	29	26	18	27
28	655	100	62	90	216	67	80	138	27	26	18	25
29	445	95	62	86	------	66	77	117	26	29	17	23
30	350	94	62	82	------	65	76	103	29	29	16	23
31	308	------	64	77	------	64	------	90	------	26	16	------
TOTAL	8,882	5,581	2,276	5,285	3,354	2,949	2,062	2,881	1,376	937	723	700
MEAN	287	186	73.4	170	120	95.1	68.7	92.9	45.9	30.2	23.3	23.3
MAX	1,460	426	90	445	367	192	100	330	83	53	35	34
MIN	72	94	62	63	56	64	54	42	26	22	16	17
AC-FT	17,620	11,070	4,510	10,480	6,650	5,850	4,090	5,710	2,730	1,860	1,430	1,390

CAL YR 1970 TOTAL 54,279 MEAN 149 MAX 4,240 MIN 13 AC-FT 107,700
WTR YR 1971 TOTAL 37,006 MEAN 101 MAX 1,460 MIN 16 AC-FT 73,400

PEAK DISCHARGE (BASE, 2,500 CFS).--No peak above base.

07196500 Illinois River near Tahlequah, Okla.

LOCATION.--Lat 35°55'17", long 94°55'15", in SE 1/4 sec.26, T.17 N., R.22 E., Cherokee County, near center of span on downstream side of pier of bridge 0.2 mile downstream from U.S. Highway 62, 2.2 miles northeast of Tahlequah, 6.5 miles upstream from Barren Fork, and at mile 55.8.

DRAINAGE AREA.--959 sq mi.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 664.14 ft above mean sea level (Corps of Engineers bench mark). Prior to Feb. 23, 1939, nonrecording gage.

AVERAGE DISCHARGE.--36 years, 848 cfs (12.01 inches per year, 614,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,300 cfs Oct. 28 (gage height, 16.91 ft); minimum, 99 cfs Sept. 5.
Period of record: Maximum discharge, 150,000 cfs May 10, 1950 (gage height, 27.94 ft), from rating curve extended above 77,000 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.1 cfs Oct. 10-14, 1956.
Flood in January 1916 reached a stage of about 26 ft.

REMARKS.--Records good.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,330	2,440	683	436	639	1,850	440	623	797	265	172	109
2	1,140	2,170	656	450	606	1,660	434	632	719	430	167	107
3	970	3,400	634	573	725	1,490	427	606	688	528	172	105
4	833	3,100	606	1,310	728	1,350	435	559	651	450	172	102
5	720	2,460	573	2,570	692	1,260	435	523	582	391	171	145
6	639	2,150	551	2,340	650	1,170	342	537	520	370	169	158
7	573	1,880	525	1,850	656	1,100	308	557	475	324	170	160
8	1,220	1,710	505	1,560	646	1,090	293	610	443	285	172	143
9	4,440	1,700	490	1,350	620	1,060	290	1,140	406	260	168	133
10	7,310	2,320	477	1,190	598	1,010	288	920	377	239	162	132
11	4,220	2,280	468	1,060	582	957	290	858	358	226	157	126
12	2,580	1,830	454	958	565	930	296	2,310	337	217	154	118
13	2,090	1,600	463	976	576	913	299	1,880	317	203	156	115
14	1,810	1,480	463	1,440	638	892	309	1,270	309	188	150	117
15	1,540	1,440	454	3,180	681	870	307	968	295	174	154	116
16	1,350	1,680	463	2,670	699	817	308	815	282	167	152	110
17	1,190	1,550	515	2,140	703	774	313	705	270	159	153	126
18	1,060	1,390	678	1,830	709	735	312	632	258	153	156	144
19	974	1,290	678	1,620	752	704	313	681	244	148	152	151
20	889	1,220	628	1,440	829	673	337	650	232	141	144	152
21	813	1,160	595	1,290	1,310	638	359	607	267	133	137	149
22	742	1,100	573	1,150	1,820	611	421	596	297	142	137	146
23	827	994	546	1,060	3,910	583	625	635	231	188	136	144
24	1,260	928	530	988	3,230	562	728	1,230	203	162	135	145
25	3,090	886	535	916	2,640	516	1,070	3,030	187	155	129	156
26	3,440	844	505	856	2,460	419	1,040	2,770	175	153	140	168
27	5,320	808	486	802	2,350	373	914	1,870	172	152	139	166
28	14,400	760	463	772	2,100	412	789	1,500	168	166	125	165
29	12,400	738	445	749	------	444	707	1,230	166	157	119	165
30	4,740	711	436	716	------	450	656	1,030	188	152	115	159
31	3,150	------	432	678	------	450	------	897	------	166	113	------
TOTAL	87,060	48,019	16,510	40,920	33,114	26,763	14,085	32,871	10,614	7,044	4,648	4,132
MEAN	2,808	1,601	533	1,320	1,183	863	470	1,060	354	227	150	138
MAX	14,400	3,400	683	3,180	3,910	1,850	1,070	3,030	797	528	172	168
MIN	573	711	432	436	565	373	288	523	166	133	113	102
CFSM	2.93	1.67	.56	1.38	1.23	.90	.49	1.11	.37	.24	.16	.14
IN.	3.38	1.86	.64	1.59	1.28	1.04	.55	1.28	.41	.27	.18	.16
AC-FT	172,700	95,250	32,750	81,160	65,680	53,080	27,940	65,200	21,050	13,970	9,220	8,200

CAL YR 1970 TOTAL 440,888 MEAN 1,208 MAX 14,400 MIN 106 CFSM 1.26 IN 17.10 AC-FT 874,500
WTR YR 1971 TOTAL 325,780 MEAN 893 MAX 14,400 MIN 102 CFSM .93 IN 12.64 AC-FT 646,200

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-10	1415	11.59	7,630	10-28	1900	16.91	20,300

07196900 Baron Fork at Dutch Mills, Ark.

LOCATION.--Lat 35°52'48", long 94°29'11", on line between secs.21 and 22, T.14 N., R.33 W., Washington County, near right bank on downstream side of bridge on State Highway 59 at Dutch Mills, 2.2 miles downstream from Fly Creek, and 2.9 miles upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--46.0 sq mi.

PERIOD OF RECORD.--April 1958 to current year. Prior to October 1969, published as Barren Fork at Dutch Mills.

GAGE.--Water-stage recorder. Datum of gage is 986.47 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 33.9 cfs (10.01 inches per year, 24,560 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,400 cfs Oct. 26 (gage height, 13.24 ft), from rating curve extended above 2,900 cfs on basis of contracted-opening measurement at 12,900 cfs; minimum, 0.48 cfs Sept. 4; minimum gage height, 1.62 ft July 15, 18, 19, 20, 21, 22.
Period of record: Maximum discharge, 15,400 cfs Oct. 26, 1970 (gage height, 13.24 ft), from rating curve extended above 2,900 cfs on basis of contracted-opening measurement at 12,900 cfs; no flow at times in 1963, 1967.

REMARKS.--Records good. Records of chemical analyses for the current year are published in Part 2 of the Arkansas State report.

REVISIONS.--WRD Ark. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	212	27	16	22	54	13	22	24	5.9	1.1	.66
2	30	238	26	19	21	51	12	19	19	4.0	.97	.69
3	23	134	25	175	21	50	12	16	18	2.9	1.3	.70
4	20	116	23	118	37	49	12	14	18	2.4	2.0	.61
5	18	96	22	67	40	49	15	14	14	2.5	1.6	1.4
6	19	83	20	54	33	51	14	165	13	2.8	1.8	.79
7	20	73	20	44	32	47	13	286	11	2.5	2.8	.73
8	541	176	19	36	29	42	12	73	10	1.8	2.3	1.1
9	235	156	19	34	30	40	11	58	9.9	1.7	1.5	2.5
10	99	99	19	33	31	41	11	791	9.6	2.3	1.1	1.8
11	78	81	23	31	44	36	11	281	8.6	2.1	3.8	1.3
12	77	71	21	30	72	34	9.9	116	7.5	1.8	4.4	1.2
13	61	67	19	377	53	32	9.9	75	6.7	1.5	1.6	1.0
14	50	276	18	205	47	30	10	56	7.2	1.2	1.2	.86
15	41	142	20	111	41	27	9.9	44	6.9	1.1	1.2	.83
16	33	100	31	82	37	25	9.8	36	6.0	1.1	1.1	.86
17	29	86	26	70	48	24	9.2	31	5.4	1.2	.90	1.5
18	26	73	23	60	43	22	9.4	27	4.7	1.1	.80	1.8
19	24	64	22	49	127	21	9.4	30	4.3	.86	.83	2.2
20	22	56	20	45	71	20	54	24	4.0	.84	.84	2.8
21	20	52	20	42	321	20	51	21	3.8	.81	1.1	2.3
22	18	46	23	39	225	19	31	28	3.7	.85	2.6	1.8
23	493	39	22	36	126	18	54	474	4.4	1.7	1.6	1.5
24	364	35	20	36	95	17	41	262	3.7	.90	1.3	2.0
25	128	34	19	34	97	17	29	82	3.1	.99	.91	6.1
26	2,700	34	17	30	83	17	24	52	2.8	1.2	.85	2.9
27	834	33	17	28	67	16	20	39	2.6	1.2	.81	2.2
28	302	31	16	27	60	15	17	32	2.4	2.4	.81	1.9
29	178	30	16	27	------	14	19	29	2.4	3.0	.81	1.7
30	130	28	16	26	------	14	29	24	3.9	2.6	.72	1.7
31	100	------	17	24	------	13	------	22	------	1.8	.69	------
TOTAL	6,749	2,761	646	2,005	1,953	925	582.5	3,243	240.6	59.05	45.34	49.43
MEAN	218	92.0	20.8	64.7	69.8	29.8	19.4	105	8.02	1.90	1.46	1.65
MAX	2,700	276	31	377	321	54	54	791	24	5.9	4.4	6.1
MIN	18	28	16	16	21	13	9.2	14	2.4	.81	.69	.61
CFSM	4.74	2.00	.45	1.41	1.52	.65	.42	2.28	.17	.04	.03	.04
IN.	5.46	2.23	.52	1.62	1.58	.75	.47	2.62	.19	.05	.04	.04
AC-FT	13,390	5,480	1,280	3,980	3,870	1,830	1,160	6,430	477	117	90	98

CAL YR 1970 TOTAL 22,990.70 MEAN 63.0 MAX 2,700 MIN .20 CFSM 1.37 IN 18.59 AC-FT 45,600
WTR YR 1971 TOTAL 19,258.92 MEAN 52.8 MAX 2,700 MIN .61 CFSM 1.15 IN 15.57 AC-FT 38,200

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	GH	DISCHARGE
10-8	1800	7.45	2,540
10-26	2100	13.24	15,400
5-10	1530	8.96	4,350
5-23	2100	8.71	4,130

07197000 Baron Fork at Eldon, Okla.
(Formerly published as Barren Fork at Eldon)

LOCATION.--Lat 35°55'16", long 94°50'18", in SE 1/4 sec.27, T.17 N., R.23 E., Cherokee County, on downstream side of left pier of bridge on State Highway 51, 0.4 mile southeast of Eldon, 6 miles downstream from Tyner Creek, and at mile 8.8.

DRAINAGE AREA.--307 sq mi.

PERIOD OF RECORD.--October 1948 to current year. Prior to October 1970 published as Barren Fork at Eldon.

GAGE.--Water-stage recorder. Datum of gage is 701.14 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 271 cfs (11.98 inches per year, 196,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 36,200 cfs Oct. 27 (gage height, 21.13 ft); minimum, 18 cfs Sept. 4, 5, 16.
Period of record: Maximum discharge, 37,600 cfs Apr. 3, 1957 (gage height, 20.33 ft); maximum gage height, 21.13 ft Oct. 27, 1970; minimum, 1.7 cfs Oct. 25, 1956.
Flood of Apr. 15, 1945, reached a stage of 23.8 ft, from information by local resident.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	615	803	219	127	190	664	127	177	208	144	38	20
2	509	1,210	208	132	182	603	121	174	187	158	37	20
3	427	1,060	198	220	171	556	119	157	174	102	36	19
4	357	867	186	859	172	514	120	144	159	79	35	18
5	298	758	177	777	214	486	126	134	147	71	40	27
6	278	660	167	626	246	466	125	131	132	68	43	27
7	252	588	159	528	231	443	121	437	120	70	41	28
8	660	540	150	464	209	414	117	510	113	68	40	25
9	3,790	757	147	417	188	385	113	344	107	63	35	24
10	1,480	689	142	371	174	369	108	383	104	58	33	24
11	1,010	581	152	326	181	354	108	2,540	101	54	30	23
12	881	517	147	286	243	334	107	1,020	95	49	32	22
13	737	481	139	294	369	314	106	714	90	45	37	21
14	611	550	134	1,140	349	299	104	571	91	40	34	20
15	511	798	134	801	327	279	105	476	88	38	34	19
16	433	637	153	624	306	256	103	404	81	35	33	18
17	370	568	170	546	295	238	101	335	76	42	31	22
18	319	519	178	497	292	223	101	281	70	50	29	26
19	286	484	170	448	439	207	99	267	64	47	26	29
20	253	455	162	406	590	195	109	217	60	44	23	31
21	219	420	157	375	636	188	149	179	58	42	22	30
22	192	389	158	348	1,970	180	227	171	60	39	25	29
23	310	355	163	326	1,410	172	210	186	63	46	28	29
24	2,250	323	163	298	1,130	164	233	1,850	63	48	29	28
25	1,350	306	159	287	998	160	242	846	58	47	28	30
26	1,090	289	151	266	927	155	212	547	54	42	27	32
27	14,500	273	147	249	828	152	187	433	50	40	26	31
28	3,590	256	140	227	737	146	164	361	46	42	24	31
29	1,770	242	136	218	------	140	155	315	44	43	23	29
30	1,250	230	133	210	------	137	164	271	60	44	22	28
31	954	------	130	202	------	131	------	238	------	41	21	------
TOTAL	41,552	16,605	4,929	12,895	14,004	9,324	4,183	14,813	2,823	1,799	962	760
MEAN	1,340	554	159	416	500	301	139	478	94.1	58.0	31.0	25.3
MAX	14,500	1,210	219	1,140	1,970	664	242	2,540	208	158	43	32
MIN	192	230	130	127	171	131	99	131	44	35	21	18
CFSM	4.36	1.80	.52	1.36	1.63	.98	.45	1.56	.31	.19	.10	.08
IN.	5.03	2.01	.60	1.56	1.70	1.13	.51	1.79	.34	.22	.12	.09
AC-FT	82,420	32,940	9,780	25,580	27,780	18,490	8,300	29,380	5,600	3,570	1,910	1,510

CAL YR 1970 TOTAL 181,907 MEAN 498 MAX 14,500 MIN 16 CFSM 1.62 IN 22.04 AC-FT 360,800
WTR YR 1971 TOTAL 124,649 MEAN 342 MAX 14,500 MIN 18 CFSM 1.11 IN 15.10 AC-FT 247,200

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-27	0730	21.13	36,200

07197500 Tenkiller Ferry Lake near Gore, Okla.
(Formerly published as Tenkiller Ferry Reservoir near Gore)

LOCATION.--Lat 35°35'48", long 95°02'57", in SE 1/4 SW 1/4 sec.14, T.13 N., R.21 E., Sequoyah County, at gate tower on right bank, 0.6 mile upstream from Tenkiller Ferry Dam on Illinois River, 6 miles northeast of Gore, and at mile 12.8.

DRAINAGE AREA.--1,610 sq mi.

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970 published as Tenkiller Ferry Reservoir near Gore.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Apr. 5, 1953, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 785,300 acre-ft Oct. 30 (elevation, 641.55 ft); minimum, 505,700 acre-ft Sept. 30 (elevation, 619.41 ft).
Period of record: Maximum contents, 1,217,600 acre-ft June 5, 1957 (elevation, 666.36 ft); minimum since conservation pool was first filled, 305,700 acre-ft Oct. 21, 1954 (elevation, 597.50 ft).

REMARKS.--Reservoir is formed by earth dam. Spillway consists of a 590-ft concrete modified ogee weir in right abutment controlled by 10 taintor gates. Outlet works consist of a 19-foot diameter tunnel in right abutment controlled by two vertical-lift gates. A similar tunnel conducts water to two hydroelectric turbines. Closure was made for diversion in July 1950 and regulated storage began in July 1952; conservation pool was first filled Apr. 9, 1953. Capacity, 1,231,000 acre-ft at elevation 667.0 ft (flood-control pool), 791,900 acre-ft at elevation 642.0 ft (spillway crest), 628,700 acre-ft at elevation 630.0 ft (maximum power pool), and 283,100 acre-ft at elevation 594.5 ft (conservation and minimum power pool). Figures given herein represent total contents. Reservoir is used for flood control and for power development.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

619	501,200	635	693,400
625	568,400	639	748,600
630	628,700	642	791,900

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629.3	771.5	669.0	615.5	591.1	590.3	566.9	541.0	595.0	566.8	541.7	517.7
2	632.5	764.4	666.0	614.8	585.8	591.3	564.1	542.4	593.0	566.3	541.2	517.5
3	635.1	758.9	663.7	615.7	581.4	590.9	564.7	542.5	592.2	566.9	541.9	516.5
4	636.9	753.0	661.4	618.0	577.6	590.7	565.7	541.7	592.0	567.6	541.7	516.3
5	639.2	745.8	662.4	621.0	575.0	589.7	562.8	541.8	592.4	568.0	541.7	518.2
6	640.4	737.3	663.0	623.4	573.8	586.6	559.7	542.4	593.5	565.8	541.7	518.5
7	641.0	727.6	659.7	625.0	571.5	585.0	556.7	542.4	592.7	563.6	541.9	517.4
8	658.0	718.0	656.5	626.0	567.5	583.9	554.8	544.3	593.6	561.3	542.1	516.1
9	672.4	708.2	653.2	629.3	563.5	582.7	553.4	547.6	595.0	558.4	541.0	516.0
10	683.7	701.3	650.7	632.5	561.0	582.4	554.1	549.9	594.9	558.4	540.4	514.4
11	689.6	697.7	647.8	631.7	558.6	583.1	554.9	557.1	593.6	558.8	539.1	514.3
12	690.6	693.1	645.3	630.5	554.2	584.0	552.2	561.9	593.4	556.3	538.1	514.2
13	690.1	689.9	642.4	630.2	552.2	585.2	548.8	567.1	592.3	553.5	537.2	512.8
14	694.6	687.5	639.0	630.4	550.1	587.2	545.2	568.4	590.9	551.2	537.4	512.1
15	695.8	685.5	636.9	631.8	547.3	588.8	543.4	570.9	589.3	548.1	537.3	511.8
16	692.6	683.7	634.0	632.6	545.9	590.3	541.2	573.0	587.5	546.9	537.2	511.6
17	688.8	681.7	630.9	632.1	545.1	590.6	541.7	572.9	585.6	546.9	536.7	512.1
18	685.1	679.4	628.7	632.8	546.5	590.0	541.9	570.8	583.5	546.4	535.6	512.7
19	681.3	679.0	628.8	633.9	546.7	587.4	538.8	568.7	583.2	544.7	534.0	512.6
20	680.7	681.9	628.7	632.8	547.6	586.7	537.4	567.0	584.4	543.8	532.8	511.9
21	677.7	681.5	626.0	632.6	553.2	588.1	536.4	565.0	584.3	542.6	532.7	511.6
22	675.1	681.6	625.0	629.4	559.0	587.4	536.3	566.5	583.5	542.3	531.3	510.9
23	682.3	680.7	623.9	626.1	566.6	584.7	536.4	572.2	582.0	547.0	529.4	510.8
24	685.0	679.3	623.2	622.6	572.4	582.1	538.0	576.4	579.2	547.0	527.1	510.6
25	688.3	676.1	622.2	618.9	576.4	579.3	539.7	582.1	577.9	546.6	525.3	510.9
26	704.1	675.6	622.4	614.9	579.5	576.4	541.5	586.7	577.1	545.3	523.6	510.9
27	735.7	672.7	623.2	610.5	582.5	576.5	541.9	588.5	574.3	543.8	521.5	509.3
28	761.2	670.9	621.3	609.6	587.8	576.9	539.6	589.0	571.9	543.6	520.4	508.2
29	783.2	672.8	619.6	605.6	------	574.4	540.8	592.2	569.0	542.9	520.0	507.7
30	783.8	670.6	618.7	601.0	------	571.4	539.6	594.6	568.4	542.3	519.1	505.7
31	778.1	------	617.3	595.9	------	569.3	------	595.5	------	542.2	518.7	------
(+)	641.06	633.26	629.07	627.33	626.67	625.08	622.52	627.30	625.00	622.74	620.60	619.41
(‡)	+152.7	-107.5	-53.3	-121.4	-8.1	-18.5	-29.7	+55.9	-27.1	-26.2	-23.5	-13.0
MAX	783.8	771.5	669.0	633.9	591.1	591.3	566.9	595.0	595.0	568.0	542.1	518.5
MIN	629.3	670.6	617.3	595.9	545.1	569.3	536.3	541.0	568.4	542.2	518.7	505.7

CAL YR 1970.....‡ +74.5
WTR YR 1971.....‡ -119.7

+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07198000 Illinois River near Gore, Okla.

LOCATION.--Lat 35°34'23", long 95°04'07", in NE 1/4 SW 1/4 sec.27, T.13 N., R.21 E., Sequoyah County, on right bank 4.3 miles downstream from Tenkiller Ferry Dam, 4.5 miles northeast of Gore, and at mile 8.5.

DRAINAGE AREA.--1,626 sq mi.

PERIOD OF RECORD.--March 1924 to April 1926, April 1939 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 473.00 ft above mean sea level. See WSP 1921 for history of changes prior to Feb. 19, 1952.

AVERAGE DISCHARGE.--33 years (1924-25, 1939-71), 1,464 cfs (1,061,000 acre-ft per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 8,100 cfs Nov. 2 (gage height, 10.73 ft); minimum daily, 17 cfs Jan. 10.
Period of record: Maximum discharge, 180,000 cfs May 11, 1950 (gage height, 29.6 ft, present site and datum, from floodmark), from rating curve extended above 42,000 cfs by velocity-area studies; minimum, 2.0 cfs Sept. 16, 1959.

REMARKS.--Records good. Except for 16 sq mi intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (see sta. 07197500). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 28 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	7,980	2,040	1,140	3,480	1,680	2,150	169	1,660	1,270	370	646
2	188	8,010	2,300	1,590	3,500	2,250	2,160	90	2,170	698	480	255
3	140	7,930	2,290	1,520	3,540	2,320	350	826	1,740	192	398	573
4	157	7,870	2,080	1,090	3,480	2,190	425	1,130	1,030	169	397	190
5	199	7,850	444	1,760	2,420	2,420	2,160	856	598	228	252	114
6	298	7,840	503	2,100	1,980	3,470	2,190	1,190	185	1,570	256	158
7	351	7,810	2,310	1,680	2,200	2,570	2,120	1,150	1,130	1,620	168	800
8	588	7,820	2,470	1,740	3,130	2,310	1,550	199	269	1,600	172	906
9	1,800	7,840	2,500	317	3,090	2,250	1,510	84	312	1,910	803	272
10	3,270	6,970	2,260	17	2,320	1,690	158	1,210	676	259	564	909
11	3,400	5,120	2,250	2,040	2,320	1,170	115	302	1,200	102	940	195
12	3,590	5,130	1,970	2,040	3,310	912	1,930	1,230	618	1,470	783	185
13	3,590	4,500	2,050	2,830	2,110	856	2,310	400	1,120	1,730	779	837
14	622	3,600	2,500	2,880	2,300	420	2,180	1,660	1,410	1,680	106	430
15	1,460	3,600	2,040	3,360	2,550	400	1,590	474	1,360	1,710	246	282
16	3,510	3,600	2,300	3,340	1,970	568	1,730	344	1,340	795	333	187
17	3,510	3,580	2,220	3,330	1,540	940	385	1,180	1,480	179	477	184
18	3,500	3,550	2,170	2,290	1,010	1,650	490	2,300	1,540	436	792	162
19	3,370	2,320	872	1,690	1,690	2,270	2,060	2,260	439	790	964	185
20	1,600	473	862	2,450	1,340	1,390	1,730	1,900	164	485	789	418
21	2,650	1,920	2,360	2,070	1,740	264	1,100	1,890	460	694	192	421
22	2,450	1,760	1,410	3,350	2,240	1,690	1,140	501	808	623	1,120	418
23	2,450	1,700	1,360	3,360	2,170	2,320	1,070	105	1,360	754	1,350	265
24	3,250	2,000	1,260	3,370	2,400	2,270	164	1,410	1,800	432	1,400	336
25	3,150	2,870	1,060	3,370	2,380	2,340	219	1,060	1,100	479	1,050	177
26	2,630	1,760	683	3,370	2,330	2,160	390	2,000	660	1,020	1,050	221
27	1,780	2,830	362	3,390	1,990	652	1,070	2,060	1,610	783	1,450	1,050
28	3,010	2,110	1,620	1,730	440	664	2,510	1,790	1,880	1,270	603	818
29	5,170	189	1,540	3,440	------	2,050	841	104	1,830	733	262	571
30	6,730	2,260	1,280	3,450	------	2,320	1,570	89	1,720	485	564	1,200
31	7,980	------	1,800	3,460	------	1,800	------	784	------	169	334	------
TOTAL	76,945	132,792	53,166	73,564	64,970	52,256	39,367	30,747	33,669	26,335	19,444	13,365
MEAN	2,482	4,426	1,715	2,373	2,320	1,686	1,312	992	1,122	850	627	446
MAX	7,980	8,010	2,500	3,460	3,540	3,470	2,510	2,300	2,170	1,910	1,450	1,200
MIN	140	189	362	17	440	264	115	84	164	102	106	114
AC-FT	152,600	263,400	105,500	145,900	128,900	103,600	78,080	60,990	66,780	52,240	38,570	26,510

CAL YR 1970 TOTAL 715,752 MEAN 1,961 MAX 8,010 MIN 52 AC-FT 1,420,000
WTR YR 1971 TOTAL 616,620 MEAN 1,689 MAX 8,010 MIN 17 AC-FT 1,223,000

07228000 Canadian River near Canadian, Tex.

LOCATION.--Lat 35°56'01", long 100°22'06", Hemphill County, near left bank on downstream side of pier of bridge on U.S. Highways 60 and 83, 500 ft downstream from Panhandle and Santa Fe Railway Co. bridge, 1.2 miles downstream from Red Deer Creek, 1.6 miles northeast of Canadian, and at mile 433.9.

DRAINAGE AREA.--22,866 sq mi, of which 4,688 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1924 to August 1925 (gage heights only), January 1938 to current year. Prior to April 1938, monthly discharge only published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 2,301.50 ft above mean sea level. July 1, 1924, to Aug. 31, 1925, nonrecording gage; Apr. 21 to Dec. 15, 1938, nonrecording gage; and Dec. 16, 1938, to Sept. 30, 1953, water-stage recorder and nonrecording gages; all at site 300 ft upstream at same datum.

AVERAGE DISCHARGE.--33 years (1938-71), 450 cfs (326,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,800 cfs June 9 (gage height, 6.20 ft); minimum, 0.04 cfs June 25-27.
Period of record: Maximum discharge, 122,000 cfs Sept. 23, 1941 (gage height, 9.8 ft, from graph based on gage readings), from rating curves for two channels extended above 8,000 and 54,000 cfs; no flow at times.
Maximum stage 20.0 ft Oct. 2, 1904. Floods of May 2, 1914, and Oct. 5, 1923, second highest known, reached stages of 12 ft.

REMARKS.--Records fair. Extreme low flow maintained by springs which enter river about 600 ft above gage. Some regulation and diversions upstream by Lake Meredith 75 miles upstream (station 07227900).

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	18	45	56	149	21	11	1.8	583	8.5	2.7
2	20	18	19	45	63	158	16	11	1.6	460	3.2	1.9
3	18	19	20	50	61	144	14	9.1	1.6	708	.97	1.2
4	17	18	22	30	52	109	14	8.0	1.5	370	.38	.80
5	14	17	26	20	52	94	14	6.7	1.6	168	.46	.50
6	12	18	31	20	75	113	18	5.5	4.8	80	.62	.38
7	8.7	19	35	20	40	105	18	4.5	5.9	27	.35	.26
8	8.0	18	47	35	40	97	18	3.9	3.7	10	8.5	.18
9	18	15	56	32	70	86	18	3.4	4,180	5.5	72	.12
10	13	14	56	29	70	75	16	2.7	1,650	2.5	168	.11
11	9.4	13	54	32	81	69	15	2.0	163	.97	46	.11
12	6.8	15	59	34	78	64	19	2.0	224	.56	15	.10
13	4.2	47	58	47	70	58	14	3.2	120	.35	5.9	.10
14	2.2	100	59	61	63	52	12	1.6	64	.28	9.1	.10
15	3.7	70	59	49	56	46	11	3.4	31	.26	33	.11
16	6.8	59	54	107	52	40	13	3.4	14	.26	97	.12
17	11	54	56	100	47	36	17	2.5	6.3	.24	295	9.6
18	15	52	54	78	49	33	24	3.2	1.6	.22	124	80
19	16	37	54	73	56	27	36	2.5	1.8	1.8	66	26
20	17	26	56	73	52	20	48	2.5	1.3	128	44	13
21	15	17	56	73	80	19	44	1.8	.56	231	30	7.1
22	13	9.4	59	78	70	18	40	1.4	.32	69	18	124
23	11	5.7	54	73	60	20	35	1.3	.16	33	14	1,070
24	10	3.3	54	65	70	21	30	1.1	.09	40	11	1,320
25	9.4	5.7	54	65	288	24	23	1.1	.04	13	11	1,320
26	9.4	8.0	54	70	626	28	20	1.1	.04	5.9	10	370
27	8.7	8.7	54	63	225	33	17	1.1	.04	2.2	10	173
28	10	11	52	63	134	28	15	1.2	.05	1.3	8.5	105
29	11	13	52	58	------	27	15	1.3	.09	28	6.3	69
30	12	16	43	56	------	24	13	1.9	27	28	4.8	44
31	13	------	41	56	------	24	------	1.8	------	20	3.7	------
TOTAL	364.3	741.8	1,466	1,700	2,736	1,841	628	107.2	6,507.89	3,018.34	1,125.28	4,739.49
MEAN	11.8	24.7	47.3	54.8	97.7	59.4	20.9	3.46	217	97.4	36.3	158
MAX	21	100	59	107	626	158	48	11	4,180	708	295	1,320
MIN	2.2	3.3	18	20	40	18	11	1.1	.04	.22	.35	.10
AC-FT	723	1,470	2,910	3,370	5,430	3,650	1,250	213	12,910	5,990	2,230	9,400

CAL YR 1970 TOTAL 19,032.07 MEAN 52.1 MAX 5,920 MIN 0 AC-FT 37,750
WTR YR 1971 TOTAL 24,975.30 MEAN 68.4 MAX 4,180 MIN .04 AC-FT 49,540

07228500 Canadian River at Bridgeport, Okla.

LOCATION.--Lat 35°34'00", long 98°22'45", in SE 1/4 SW 1/4 sec.28, T.13 N., R.11 W., Blaine County, on downstream side of left abutment of Chicago, Rock Island and Pacific Railraod Co. bridge, 1 mile north of Bridgeport, 2.8 miles upstream from Lumpmouth Creek, and at mile 267.1.

DRAINAGE AREA.--25,229 sq mi, of which 4,801 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1944 to September 1964; October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,384.25 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1947, at site 0.2 mile downstream at same datum. Oct. 1, 1947, to Sept. 30, 1948, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--22 years, 435 cfs (315,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 24,500 cfs June 9 (gage height, 10.24 ft); minimum, 0.84 cfs Sept. 16, 17.
Period of record: Maximum discharge, about 150,000 cfs June 23, 1948 (gage-height, 14.60 ft from floodmarks), from rating curve extended above 50,000 cfs; no flow at times in 1946, 1951-56, 1964, 1970.
Flood in May 1914 reached a stage of about 19.4 ft; a higher stage probably occurred during flood in October 1904.

REMARKS.--Records good except for winter records, which are poor. Occasional slight regulation by Conchas Reservoir in New Mexico, and by Lake Meredith in Texas since 1964. Records of chemical analysis for the water year 1971 are published in Part 2 of this report.

REVISION.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	15	21	21	22	750	20	17	50	40	6.6	20
2	16	15	23	22	23	370	20	19	99	25	5.0	13
3	14	15	24	87	22	238	19	18	1,060	18	3.8	10
4	13	15	20	58	20	214	19	17	124	15	3.5	7.9
5	12	15	20	35	20	210	20	14	44	12	2.9	7.2
6	12	16	19	25	18	190	20	12	25	10	2.7	6.8
7	10	17	19	22	15	161	20	12	31	9.0	12	5.1
8	12	18	20	20	15	134	19	12	1,040	8.0	29	3.6
9	12	16	22	20	15	140	21	16	11,500	7.2	22	3.2
10	11	15	23	35	25	131	21	20	196	6.5	11	2.9
11	10	15	21	37	40	108	20	16	1,040	6.0	10	2.5
12	12	15	20	24	41	106	20	14	138	5.5	91	2.0
13	10	19	20	22	39	84	16	13	486	5.0	41	1.8
14	11	20	20	20	41	70	16	13	200	4.5	19	1.4
15	10	19	21	25	40	55	18	13	100	4.0	16	1.2
16	11	18	24	30	35	45	21	13	70	4.0	14	1.1
17	15	18	26	31	40	40	24	11	60	3.5	10	13
18	17	18	25	29	45	35	29	10	50	3.5	7.8	66
19	15	18	23	26	65	30	33	9.8	45	3.0	6.2	37
20	14	18	21	26	55	27	27	10	60	3.0	4.8	23
21	14	19	21	26	50	24	23	9.5	50	2.7	3.7	16
22	17	19	21	25	45	22	21	10	40	2.5	3.0	14
23	16	16	21	25	64	20	20	12	35	2.7	2.7	13
24	18	16	20	24	91	20	20	11	30	4.1	3.0	309
25	24	19	21	23	105	19	19	8.8	25	3.6	3.2	117
26	13	20	21	23	161	18	19	7.7	20	2.9	3.2	26
27	12	18	21	24	300	19	19	13	17	2.3	2.8	15
28	12	18	23	25	940	20	17	14	15	15	3.2	11
29	14	20	23	25	------	20	17	12	13	22	948	89
30	16	25	23	24	------	20	18	13	12	22	136	93
31	15	------	21	22	------	21	------	25	------	9.2	35	------
TOTAL	428	525	668	881	2,392	3,361	616	415.8	16,675	281.7	1,462.1	931.7
MEAN	13.8	17.5	21.5	28.4	85.4	108	20.5	13.4	556	9.09	47.2	31.1
MAX	24	25	26	87	940	750	33	25	11,500	40	948	309
MIN	10	15	19	20	15	18	16	7.7	12	2.3	2.7	1.1
AC-FT	849	1,040	1,320	1,750	4,740	6,670	1,220	825	33,070	559	2,900	1,850

CAL YR 1970 TOTAL 37,451.53 MEAN 103 MAX 11,800 MIN 0 AC-FT 74,290
WTR YR 1971 TOTAL 28,637.30 MEAN 78.5 MAX 11,500 MIN 1.1 AC-FT 56,800

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-9	0600	10.24	24,500

07229100 Canadian River near Noble, Okla.

LOCATION.--Lat 35°04'55", long 97°22'52", in N 1/2 sec.14, T.7 N., R.2 W., McClain County, on right bank 80 ft upstream from the Atchison, Topeka, and Santa Fe Railway Co. bridge, 3.6 miles upstream from Chouteau Creek, 3.8 miles south of Noble, and at mile 190.8.

DRAINAGE AREA.--25,911 sq mi, of which 4,801 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1959 to June 1961 (published as "at Purcell"), October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,045.29 ft above mean sea level. Oct. 1, 1959, to June 30, 1961, water-stage recorder at site 5.9 miles downstream at datum 28.15 ft lower. Oct. 1, 1963, to Feb. 28, 1964, nonrecording age at present site and datum.

AVERAGE DISCHARGE.--9 years (1959-60, 1963-71), 341 cfs (247,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,400 cfs June 10 (gage height, 6.35 ft); minimum daily, 4.2 cfs Sept. 14.
Period of record: Maximum discharge, 35,500 cfs Sept. 22, 1965 (gage height, 8.46 ft); no flow Oct. 8-15, 1963.
Floods in 1904 and 1937 reached a stage of about 18.0 ft, and flood of 1914 reached a stage of 16.9, from information by Corps of Engineers.

REMARKS.--Records fair. Extreme low flow sustained by sewage from city of Norman. Occasional slight regulation by reservoirs in Texas and New Mexico. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	32	33	30	54	488	20	19	43	87	5.7	95
2	75	52	33	30	58	896	14	14	72	212	5.2	34
3	65	36	40	172	62	576	15	12	3,860	348	5.4	10
4	60	36	38	110	58	380	15	12	4,180	216	5.5	5.9
5	308	35	35	70	58	296	14	10	872	68	5.4	4.9
6	1,100	38	29	60	52	257	14	9.6	414	35	6.3	4.5
7	526	38	26	50	45	215	11	23	247	28	6.1	4.7
8	1,570	38	27	73	35	173	11	9.3	721	13	5.6	4.7
9	620	41	32	86	35	155	11	56	1,110	9.6	5.2	4.8
10	318	44	35	92	43	130	11	38	5,160	8.2	5.3	4.7
11	147	48	41	87	56	126	12	50	961	7.5	6.7	4.6
12	62	48	33	82	54	116	15	12	1,200	7.0	6.5	4.5
13	55	50	32	71	50	109	14	8.6	455	7.0	5.9	4.4
14	50	199	38	71	56	102	15	7.8	606	6.8	7.4	4.2
15	45	100	35	62	56	92	19	7.0	333	6.8	9.9	4.5
16	41	75	44	54	50	79	27	6.6	160	6.8	64	4.5
17	40	62	40	62	44	69	41	6.4	109	6.7	54	5.5
18	46	58	38	60	56	58	32	6.2	74	6.3	20	171
19	44	50	38	54	109	56	23	6.0	40	6.5	13	50
20	41	43	33	41	184	48	32	5.6	17	6.8	9.3	23
21	40	36	38	44	444	46	29	5.8	135	6.5	8.2	39
22	56	35	43	44	423	43	27	5.8	463	6.7	7.7	30
23	718	27	38	44	251	40	20	32	151	8.5	12	14
24	257	23	33	43	173	35	19	26	71	8.4	15	109
25	168	23	27	43	160	38	15	8.5	35	7.1	9.0	667
26	102	26	26	43	173	36	14	6.0	14	6.7	8.4	1,130
27	380	24	24	58	239	32	46	25	8.9	6.2	8.0	229
28	134	24	24	71	194	32	14	8.8	7.2	8.5	7.8	109
29	70	30	32	69	------	29	19	12	6.3	8.1	8.6	62
30	45	32	36	66	------	27	26	11	5.7	6.8	7.9	35
31	30	------	32	62	------	22	------	9.1	------	6.1	73	------
TOTAL	7,303	1,403	1,053	2,004	3,272	4,801	595	469.1	21,531.1	1,172.6	418.0	2,873.4
MEAN	236	46.8	34.0	64.6	117	155	19.8	15.1	718	37.8	13.5	95.8
MAX	1,570	199	44	172	444	896	46	56	5,160	348	73	1,130
MIN	30	23	24	30	35	22	11	5.6	5.7	6.1	5.2	4.2
AC-FT	14,490	2,780	2,090	3,970	6,490	9,520	1,180	930	42,710	2,330	829	5,700

CAL YR 1970 TOTAL 71,689.3 MEAN 196 MAX 8,120 MIN 1.8 AC-FT 142,200
WTR YR 1971 TOTAL 46,895.2 MEAN 128 MAX 5,160 MIN 4.2 AC-FT 93,020

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-10	0800	6.35	10,400

07229300 Walnut Creek at Purcell, Okla.

LOCATION.--Lat 34°59'56", long 97°22'00", in NW 1/4 NW 1/4 sec.13, T.6 N., R.2 W., McClain County, on downstream side of right bank pier of bridge on U. S. Highway 77, at south edge of Purcell, and at mile 1.0.

DRAINAGE AREA.--202 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, made in water years 1951-55, 1958-65. October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,017.68 ft above mean sea level (Oklahoma State Highway Department bench mark).

AVERAGE DISCHARGE.--6 years, 37.5 cfs (27,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,900 cfs June 3 (gage height, 14.14 ft); minimum daily, 0.69 cfs Sept. 6.
Period of record: Maximum discharge, 17,200 cfs Sept. 23, 1970 (gage height, 15.35 ft), from rating curve extended above 8,200 cfs; no flow at times in 1966-67.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	17	17	15	22	12	13	52	31	1.7	.84
2	18	26	17	17	15	21	12	12	32	134	1.6	.76
3	16	26	16	36	16	20	12	12	4,410	15	1.5	.74
4	14	26	16	21	17	22	12	12	227	10	1.5	.72
5	273	27	16	14	16	20	12	11	98	6.0	1.4	.70
6	102	28	16	13	16	20	12	11	67	4.0	5.5	.69
7	152	28	17	12	14	18	12	13	54	2.5	2.6	.90
8	1,080	29	17	13	10	18	12	11	247	2.0	2.3	.91
9	175	27	18	18	9.0	18	12	15	45	1.8	2.1	.88
10	70	26	18	19	13	18	11	19	35	1.7	1.9	.88
11	50	28	18	19	16	17	11	16	30	1.6	1.9	.83
12	40	28	17	18	15	18	11	11	80	1.5	1.8	.77
13	35	41	18	18	14	18	11	10	40	1.5	1.8	.76
14	32	53	18	18	14	17	12	9.8	25	1.4	2.6	.73
15	30	30	19	17	14	16	12	9.5	20	1.4	5.0	.72
16	30	26	20	17	14	16	13	9.2	17	1.4	4.0	.71
17	34	25	18	17	14	16	14	9.2	14	1.3	3.6	1.2
18	32	24	18	17	17	16	14	8.9	13	1.2	3.4	28
19	30	23	18	15	17	15	14	8.9	12	1.1	3.3	10
20	30	22	17	15	15	15	14	8.7	11	1.1	3.3	3.4
21	30	22	18	17	95	15	14	8.6	35	1.2	2.9	2.2
22	30	22	18	17	41	15	13	8.9	18	1.4	2.6	1.7
23	324	22	18	17	30	14	13	26	14	15	15	1.7
24	70	22	17	17	27	14	13	27	11	3.5	14	70
25	50	22	17	16	26	15	12	14	10	2.9	2.9	87
26	314	21	17	16	24	15	12	15	9.2	2.5	1.8	14
27	169	20	17	16	23	15	16	29	8.6	3.1	1.5	9.5
28	55	20	17	16	22	14	14	17	8.4	5.7	1.3	8.7
29	38	19	17	16	------	14	13	14	8.2	4.2	1.1	7.8
30	29	18	17	16	------	13	14	14	8.0	2.7	1.0	7.1
31	22	------	17	16	------	13	------	15	------	2.0	.91	------
TOTAL	3,394	775	539	531	579.0	518	379	418.7	5,659.4	265.7	97.81	264.84
MEAN	109	25.8	17.4	17.1	20.7	16.7	12.6	13.5	189	8.57	3.16	8.83
MAX	1,080	53	20	36	95	22	16	29	4,410	134	15	87
MIN	14	18	16	12	9.0	13	11	8.6	8.0	1.1	.91	.69
AC-FT	6,730	1,540	1,070	1,050	1,150	1,030	752	830	11,230	527	194	525

CAL YR 1970 TOTAL 19,676.23 MEAN 53.9 MAX 6,660 MIN .26 AC-FT 39,030
WTR YR 1971 TOTAL 13,421.45 MEAN 36.8 MAX 4,410 MIN .69 AC-FT 26,620

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	1515	[a]8.6	2,090	6-3	0645	14.14	11,900

a From floodmark.

07229900 Lake Thunderbird near Norman, Okla.

LOCATION.--Lat 35°13'15", long 97°13'05", in NW 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, near center of dam on Little River, just downstream from Hog Creek and 13 miles east of Norman, and at mile 96.4.

DRAINAGE AREA.--256 sq mi.

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 111,100 acre-ft Feb. 28, Mar. 1 (elevation, 1,037.57 ft); minimum, 94,800 acre-ft Oct. 1 (elevation, 1,034.59 ft).
Period of record: Maximum contents, 111,100 acre-ft Feb. 28, Mar. 1, 1971 (elevation, 1,037.57 ft), minimum since conservation pool first reached, 15,370 acre-ft Nov. 30, 1965 (elevation, 1,011.0 ft).

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft at elevation 1,049.4 ft (crest of drop inlet); 119,600 acre-ft at elevation 1,039.0 ft (top of conservation pool); 13,640 acre-ft at elevation 1,010.0 ft (minimum conservation pool). Dead storage, 1,220 acre-ft below elevation 997.0 ft (sill of gated outlet). Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies exported to Del City, Midwest City, and Norman. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Elevations and data on diversions furnished by Central Oklahoma Master Conservancy District.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,034.58	94,750	--	--
Oct. 31	1,036.92	107,400	+12,650	466
Nov. 30	1,036.90	107,300	-100	381
Dec. 31	1,036.75	106,500	-800	651
CAL YR 70	--	--	32,190	8,430
Jan. 31	1,037.00	107,800	+1,300	637
Feb. 28	1,037.57	111,100	+3,300	572
Mar. 31	1,037.27	109,400	-1,700	705
Apr. 30	1,037.05	108,100	-1,300	675
May 31	1,036.87	107,000	-1,100	869
June 30	1,036.96	107,600	+600	796
July 31	1,036.52	105,200	-2,400	1,130
Aug. 31	1,035.95	102,000	-3,200	1,020
Sept. 30	1,035.81	101,300	-700	1,020
WTR YR 71	--	--	6,550	8,922

+ Elevation at 0800 on following day.

07230000 Little River below Lake Thunderbird, near Norman, Okla.

LOCATION.--Lat 35°13'14", long 97°13'00", in NE 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, at right bank of outlet channel, 170 ft upstream from State Highway 9, 1,200 ft downstream from Lake Thunderbird, 1 mile upstream from Prairie Creek, 13 miles east of Norman, and at mile 96.2.

DRAINAGE AREA.--257 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1964, published as Little River below Hog Creek near Norman.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 965.62 ft above mean sea level. Prior to Nov. 28, 1956, nonrecording gage 800 ft downstream at same datum. Nov. 28, 1956, to Oct. 14, 1964, water-stage recorder at site 800 ft downstream at same datum. Oct. 15, 1964, to Sept. 1, 1965, nonrecording gage at site 170 ft downstream at same datum.

AVERAGE DISCHARGE.--12 years, (1952-64), 58.9 cfs (42,640 acre-ft per year); 6 years, (1965-71), 0.32 cfs (232 acre-ft per year).

EXTREMES.--Current year: Maximum gage height, 5.58 ft Oct. 8 (discharge not determined); minimum daily discharge, 0.35 cfs at times.
Period of record: Maximum discharge, 34,600 cfs May 25, 1957 (gage height, 28.85 ft, from high-water mark, at site then in Use), from rating curve extended above 15,000 cfs; no flow at times in 1954-56, 1964.

REMARKS.--Records poor. Stage-discharge relation indefinite because of backwater from beaver dams; daily discharge estimated on basis of periodic measurements of seepage and leakage. Flow completely regulated by Lake Thunderbird since March 1965 (see sta. 07229900). In prior years occasional small diversions above station for irrigation.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
2	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
3	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
4	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
5	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
6	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
7	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
8	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
9	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
10	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
11	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
12	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
13	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
14	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
15	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
16	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
17	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
18	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
19	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
20	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
21	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
22	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
23	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
24	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
25	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
26	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
27	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
28	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
29	.40	.40	.40	.40	------	.45	.45	.45	.40	.35	.35	.40
30	.40	.40	.40	.40	------	.45	.45	.45	.40	.35	.35	.40
31	.40	------	.40	.40	------	.45	------	.45	------	.35	.35	------
TOTAL	12.40	12.00	12.40	12.40	12.60	13.95	13.50	13.95	12.00	10.85	10.85	12.00
MEAN	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
MAX	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
MIN	.40	.40	.40	.40	.45	.45	.45	.45	.40	.35	.35	.40
AC-FT	25	24	25	25	25	28	27	28	24	22	22	24

CAL YR 1970	TOTAL	131.65	MEAN	.36	MAX	.40	MIN	.30	AC-FT 261
WTR YR 1971	TOTAL	148.90	MEAN	.41	MAX	.45	MIN	.35	AC-FT 295

07230500 Little River near Tecumseh, Okla.

LOCATION.--Lat 35°10'25", long 96°55'55", near northwest corner sec.18, T.8 N., R.4 E., Pottawatomie County, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 miles downstream from Dance Creek, 5 miles south of Tecumseh, and at mile 77.2.

DRAINAGE AREA.--456 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--21 years (1943-64), 149 cfs (107,900 acre-ft per year); 7 years (1964-71), 56.5 cfs (40,930 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,870 cfs Oct. 8 (gage height, 15.27 ft); no flow at times.
Period of record: Maximum discharge, 32,400 cfs May 25, 1957 (gage height, 18.84 ft); maximum gage height, 19.68 ft May 18, 1949; no flow at times in 1952-56, 1963-67, 1969-71.
Flood in 1932 reached a stage of 25.58 ft, from floodmark.

REMARKS.--Records fair. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 miles upstream. (see sta. 07229900).

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	25	25	17	16	24	6.3	56	102	456	.29	0
2	5.8	40	22	19	16	23	4.8	46	16	86	.19	0
3	2.9	28	22	344	18	26	5.1	33	800	21	.08	0
4	1.2	20	20	62	42	22	5.3	26	129	9.4	0	0
5	514	18	19	41	25	21	7.4	18	75	5.2	0	0
6	579	19	17	35	20	19	7.1	19	38	3.7	.56	0
7	684	18	17	35	10	13	6.2	110	16	2.4	9.4	0
8	6,390	18	17	50	10	14	5.7	20	7.4	1.7	21	0
9	1,750	15	20	64	13	15	6.0	100	4.0	1.4	5.7	0
10	420	13	21	57	20	15	6.7	40	4.4	1.5	1.2	0
11	200	14	18	50	21	15	7.0	43	2.0	.84	3.6	0
12	80	14	16	45	17	15	5.7	21	4.3	.34	20	0
13	29	50	16	47	11	15	4.8	10	36	0	5.0	0
14	14	246	16	49	13	14	4.9	10	15	0	13	0
15	8.0	82	26	38	13	9.2	5.7	11	4.5	0	20	0
16	4.6	44	34	35	13	8.7	7.6	11	1.8	0	20	0
17	4.8	39	26	38	11	8.2	33	9.2	1.7	0	15	0
18	4.0	34	22	36	31	8.1	68	11	1.3	0	8.5	19
19	2.8	32	19	27	51	6.8	195	13	.91	0	5.0	33
20	1.7	27	17	28	21	6.4	409	16	1.1	0	3.9	9.9
21	1.0	26	23	33	379	8.5	81	15	9.3	0	2.9	4.1
22	.9	26	30	30	266	10	274	8.8	4.2	0	1.7	2.2
23	820	20	24	28	100	8.9	158	74	2.1	3.8	.82	2.1
24	253	19	17	29	53	9.3	54	149	.83	7.6	.50	76
25	54	23	18	26	48	12	33	255	.53	2.9	.40	111
26	1,190	26	16	23	43	12	84	234	.27	.64	.40	33
27	654	22	18	19	27	11	213	335	.11	.13	.38	15
28	151	20	19	20	23	12	83	67	.21	1.9	.26	7.1
29	63	22	18	23	------	11	74	12	.05	4.6	0	5.0
30	36	23	20	22	------	7.9	73	6.3	.16	2.6	0	3.7
31	26	------	18	19	------	6.4	------	3.4	------	.75	0	------
TOTAL	13,953.1	1,023	631	1,389	1,331	407.4	1,928.3	1,782.7	1,278.17	614.40	159.78	321.1
MEAN	450	34.1	20.4	44.8	47.5	13.1	64.3	57.5	42.6	19.8	5.15	10.7
MAX	6,390	246	34	344	379	26	409	335	800	456	21	111
MIN	.90	13	16	17	10	6.4	4.8	3.4	.05	0	0	0
AC-FT	27,680	2,030	1,250	2,760	2,640	808	3,820	3,540	2,540	1,220	317	637

CAL YR 1970 TOTAL 42,389.16 MEAN 116 MAX 7,400 MIN 0 AC-FT 84,080
WTR YR 1971 TOTAL 24,818.95 MEAN 68.0 MAX 6,390 MIN 0 AC-FT 49,230

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-8	1230	15.27	6,870

07231000 Little River near Sasakwa, Okla.

LOCATION.--Lat 34°59'02", long 96°33'01", in NE 1/4 sec.22, T.6 N., R.7 E., Seminole County, near left abutment on downstream side of county road bridge, 2.8 miles northwest of Sasakwa, 8.7 miles downstream from Salt Creek, and at mile 24.1.

DRAINAGE AREA.--865 sq mi.

PERIOD OF RECORD.--September 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 749.21 ft above mean sea level (levels by Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 361 cfs (261,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,600cfs Oct. 9 (gage height, 24.4 ft, from floodmark); minimum, 0.80 cfs Sept. 16, 17.
Period of record: Maximum discharge, 44,600 cfs May 11, 1950 (gage height, 33.48 ft); no flow at times in 1952, 1954, 1956, 1963-67, 1970.

REMARKS.--Records fair. Flow regulated by Lake Thunderbird 72.3 miles upstream since March 1965 (see sta. 07229900). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	341	57	42	48	93	28	112	589	2,480	11	1.7
2	190	226	55	40	45	86	26	91	405	1,070	5.8	1.7
3	149	185	54	960	46	84	26	76	2,650	263	4.1	1.4
4	115	160	52	557	132	80	23	65	2,340	211	3.7	1.3
5	99	141	50	220	235	74	22	56	1,340	111	4.8	1.5
6	545	126	47	150	152	68	23	48	854	70	27	1.7
7	736	117	46	120	124	63	22	116	462	50	44	1.5
8	11,000	107	45	100	80	55	21	127	1,160	38	18	1.3
9	14,800	101	45	120	70	52	21	138	617	31	9.4	1.1
10	10,800	94	46	150	92	51	20	314	266	24	6.4	10
11	3,440	87	47	140	94	49	21	605	188	17	7.7	6.8
12	2,150	81	42	130	84	48	22	224	141	14	86	2.7
13	1,040	87	42	125	78	48	20	133	631	11	39	1.8
14	635	183	41	115	73	47	19	96	1,330	8.8	441	1.3
15	443	157	42	110	72	42	19	76	1,290	6.7	233	1.0
16	338	159	49	105	70	39	20	59	413	5.8	93	.84
17	282	171	52	100	66	37	25	48	239	4.8	64	.93
18	246	136	46	95	64	36	81	38	161	6.4	68	2.3
19	204	112	45	90	64	33	85	31	115	9.2	46	5.2
20	166	97	44	85	62	35	613	28	89	4.8	30	14
21	135	89	43	80	95	33	497	24	87	3.3	22	7.8
22	115	81	44	73	351	34	536	20	87	3.0	15	5.2
23	7,840	73	44	69	340	33	625	72	64	4.6	9.4	3.8
24	4,020	65	40	65	330	30	448	67	48	8.8	6.7	3.0
25	1,130	63	38	64	232	31	425	48	36	9.6	5.4	44
26	7,070	63	40	60	165	37	253	42	27	6.1	4.4	55
27	5,520	61	38	55	131	37	215	976	21	4.8	3.5	43
28	1,950	57	36	53	105	33	169	445	15	8.0	2.8	56
29	1,110	57	38	54	------	34	161	490	11	6.9	2.5	42
30	960	57	44	55	------	33	139	327	18	29	2.0	26
31	745	------	40	53	------	30	------	209	------	18	1.8	------
TOTAL	78,222	3,534	1,392	4,235	3,500	1,485	4,625	5,201	15,694	4,538.6	1,317.4	345.87
MEAN	2,523	118	44.9	137	125	47.9	154	168	523	146	42.5	11.5
MAX	14,800	341	57	960	351	93	625	976	2,650	2,480	441	56
MIN	99	57	36	40	45	30	19	20	11	3.0	1.8	.84
AC-FT	155,200	7,010	2,760	8,400	6,940	2,950	9,170	10,320	31,130	9,000	2,610	686

CAL YR 1970 TOTAL 157,302.45 MEAN 431 MAX 14,800 MIN 0 AC-FT 312,000
WTR YR 1971 TOTAL 124,089.87 MEAN 340 MAX 14,800 MIN .84 AC-FT 246,100

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-9	0600	[a]24.4	15,600	10-26	1200	[a]19.5	9,250
10-23	1200	[a]23.2	13,800	7-1	1400	15.05	5,370

a From floodmark.

07231500 Canadian River at Calvin, Okla.

LOCATION.--Lat 34°58'32", long 96°14'24", in NE 1/4 SW 1/4 sec.22, T.6 N., R.10 E., Hughes County, near left bank on downstream side of pier of bridge on U.S. Highway 75, 0.5 mile northeast of Calvin, 2.5 miles upstream from Shawnee Creek, 8.5 miles downstream from Little River, and at mile 93.9.

DRAINAGE AREA.--27,952 sq mi, of which 4,801 sq mi is probably noncontributing.

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 684.72 ft above mean sea level. January 1905 to December 1908, nonrecording gage at site 0.8 mile upstream at datum 2.00 ft higher. Oct. 1, 1938, to Aug. 12, 1944, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--32 years (1905-6, 1938-42, 1944-71), 1,637 cfs (1,186,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 130,000 cfs Oct. 8 (gage height, 14.50 ft); minimum, 6.9 cfs Sept. 17.
Period of record: Maximum discharge, 174,000 cfs May 11, 1950 (gage height, 17.35 ft); maximum gage height, 21.00 ft Aug. 7, 1906, from floodmark, site and datum then in use; no flow at times in 1939, 1954, 1956, 1966-67.

REMARKS.--Records fair. Occasional slight regulation by dams in New Mexico and Texas. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 45 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1341: Drainage area. WSP 1391: 1941.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	695	1,260	264	238	285	435	103	374	1,020	3,410	99	46
2	519	1,110	256	242	276	462	109	304	1,470	3,350	67	37
3	359	949	253	1,600	273	839	107	276	14,700	606	63	34
4	274	806	241	2,110	295	1,100	103	236	20,000	840	77	29
5	211	711	235	1,110	429	845	106	220	6,660	466	45	177
6	513	642	237	862	495	649	102	248	3,140	340	80	60
7	2,000	577	240	584	391	520	100	1,130	1,930	266	1,010	190
8	87,700	511	240	442	331	453	100	436	6,080	191	503	56
9	34,800	461	246	402	264	395	94	977	3,710	153	324	36
10	14,300	432	240	413	248	380	94	1,110	2,150	130	145	34
11	8,060	396	232	431	268	361	95	1,770	5,620	105	100	25
12	4,190	370	239	423	259	353	91	1,350	2,210	78	97	24
13	2,750	374	249	1,050	256	342	88	657	3,220	59	278	23
14	2,040	553	246	1,580	256	335	89	434	3,920	51	668	16
15	1,610	876	253	979	260	313	88	335	4,860	38	2,060	11
16	1,400	852	268	629	256	293	89	263	2,590	31	747	7.9
17	1,250	609	280	490	251	274	93	216	1,320	25	313	7.9
18	1,200	557	284	435	256	245	185	199	706	23	207	60
19	1,080	490	272	398	259	223	344	175	524	20	165	85
20	977	432	267	358	237	217	531	148	936	20	126	84
21	859	405	272	334	407	210	1,200	133	834	18	111	78
22	792	374	266	333	1,320	197	1,400	121	407	14	87	100
23	26,500	370	269	322	1,320	193	3,790	817	373	85	82	82
24	16,200	352	255	316	1,020	188	2,470	2,060	353	266	63	69
25	3,950	334	249	307	785	193	1,330	867	436	120	55	221
26	10,700	320	242	298	580	194	824	428	294	91	57	248
27	7,070	302	237	286	506	197	522	2,930	232	101	65	454
28	3,330	283	236	278	465	196	460	3,430	196	185	74	428
29	2,920	278	231	274	------	197	409	1,840	189	127	55	291
30	2,110	273	239	275	------	175	389	1,100	189	268	57	191
31	1,620	------	238	277	------	134	------	630	------	124	56	------
TOTAL	241,979	16,259	7,776	18,076	12,248	11,108	15,505	25,214	90,269	11,601	7,936	3,204.8
MEAN	7,806	542	251	583	437	358	517	813	3,009	374	256	107
MAX	87,700	1,260	284	2,110	1,320	1,100	3,790	3,430	20,000	3,410	2,060	454
MIN	211	273	231	238	237	134	88	121	189	14	45	7.9
AC-FT	480,000	32,250	15,420	35,850	24,290	22,030	30,750	50,010	179,000	23,010	15,740	6,360

CAL YR 1970 TOTAL 536,437.80 MEAN 1,470 MAX 87,700 MIN .70 AC-FT 1,064,000
WTR YR 1971 TOTAL 461,175.80 MEAN 1,263 MAX 87,700 MIN 7.9 AC-FT 914,700

PEAK DISCHARGE (BASE, 25,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	0600	14.50	130,000	6-3	2400	7.36	37,000
10-23	1430	9.56	58,600				

07232500 Beaver River near Guymon, Okla.
(Headwater of the North Canadian River)
(Formerly published as North Canadian River near Guymon)

LOCATION.--Lat 36°43'24", long 101°29'30", in NW 1/4 SW 1/4 sec.18, T.3 N., R.15 E., Texas County, near center of span on downstream side of pier of bridge on U. S. Highway 64 at Dry Sand Draw, 1.2 miles upstream from Goff Creek, 2.5 miles north of Guymon, and at mile 650.7. Records include flow of Dry Sand Draw.

DRAINAGE AREA.--2,139 sq mi (includes that of Dry Sand Draw), of which 964 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1970 published as North Canadian River near Guymon.

GAGE.--Water-stage recorder. Datum of gage is 2,970.93 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--34 years, 27.9 cfs (20,210 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,100 cfs July 19 (gage height, 10.25 ft); no flow at times. Period of record: Maximum discharge, 55,400 cfs June 15, 1964 (gage height, 13.68 ft); maximum gage height, 13.82 ft Sept. 23, 1941, from floodmark; no flow at times in most years.

REMARKS.--Records good. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.8	3.5	10	9.8	9.3	5.7	4.6	16	.92	2.3	8.1
2	0	3.8	3.6	8.4	11	8.9	6.3	4.5	12	.71	1.8	.30
3	.03	3.3	3.7	7.0	11	8.0	6.0	4.6	11	.41	1.7	.11
4	.33	3.8	3.6	5.0	8.1	10	6.2	4.4	11	.33	1.7	.02
5	.24	3.7	3.6	4.5	7.8	10	7.0	3.4	11	.28	1.2	.06
6	.26	4.2	3.6	4.0	7.5	9.6	7.7	3.5	10	.22	.95	.06
7	.35	4.0	4.0	3.5	7.0	9.4	7.0	4.0	10	.07	2.3	0
8	1.6	3.8	4.5	4.0	7.0	10	6.1	4.0	9.6	.05	5.0	0
9	2.7	3.4	4.2	5.0	9.5	9.5	5.7	4.0	12	.08	2.5	0
10	1.2	3.8	4.1	6.0	10	9.4	5.8	3.4	8.4	.06	1.4	0
11	.34	3.6	3.0	5.0	12	9.6	5.5	3.2	8.4	0	.99	0
12	.48	3.6	2.8	4.5	11	9.6	5.3	3.6	19	0	.64	0
13	.49	4.5	2.5	5.0	11	9.4	5.0	3.6	20	0	.55	0
14	.66	4.9	5.0	8.0	11	8.9	5.1	3.3	5.4	0	.50	0
15	.91	4.3	6.1	19	10	8.7	6.0	2.9	2.7	0	.49	0
16	1.1	4.9	4.9	16	9.8	8.6	9.0	2.7	2.2	0	.47	0
17	1.3	4.9	4.6	12	9.8	8.3	6.9	1.8	1.4	0	.48	.33
18	1.4	4.5	4.4	12	10	7.6	6.2	2.5	1.0	0	.49	.63
19	1.3	4.5	4.5	14	9.4	7.8	6.2	4.0	.95	460	.36	.58
20	1.5	3.8	4.5	15	9.3	8.2	6.1	3.1	.86	616	.38	.55
21	1.4	4.2	4.6	14	8.2	8.1	5.8	2.5	.86	49	.51	.56
22	1.3	3.8	4.7	13	7.0	7.7	5.5	1.3	.84	16	.52	.78
23	1.3	3.2	4.8	13	7.6	7.9	5.2	.18	.57	22	.45	.77
24	1.2	3.7	5.0	11	8.8	7.7	5.7	.41	.41	9.9	.50	.82
25	1.1	4.8	5.6	11	19	7.9	5.6	.21	.33	6.0	.48	.81
26	1.0	3.8	6.6	11	12	8.0	5.4	.10	.26	4.8	.36	.71
27	2.8	3.5	8.2	11	9.1	7.5	5.1	.30	.19	3.1	.28	.63
28	3.0	3.7	7.9	10	9.5	7.1	4.8	1.3	.16	2.7	.23	.67
29	3.1	4.0	8.1	10	------	7.2	4.8	572	.16	2.9	.16	.67
30	3.1	4.1	6.8	10	------	7.2	4.9	245	.36	3.4	.10	.70
31	3.0	------	9.0	9.7	------	6.6	------	76	------	2.6	.03	------
TOTAL	38.49	119.9	152.0	291.6	273.2	263.7	177.6	970.40	177.05	1,201.53	29.82	17.86
MEAN	1.24	4.00	4.90	9.41	9.76	8.51	5.92	31.3	5.90	38.8	.96	.60
MAX	3.1	4.9	9.0	19	19	10	9.0	572	20	616	5.0	8.1
MIN	0	3.2	2.5	3.5	7.0	6.6	4.8	.10	.16	0	.03	0
AC-FT	76	238	301	578	542	523	352	1,920	351	2,380	59	35

CAL YR 1970 TOTAL 1,562.51 MEAN 4.28 MAX 88 MIN 0 AC-FT 3,100
WTR YR 1971 TOTAL 3,713.15 MEAN 10.2 MAX 616 MIN 0 AC-FT 7,370

PEAK DISCHARGE (BASE, 2,400 CFS).--No peak above base.

07234000 Beaver River at Beaver, Okla.
(Headwater of the North Canadian River)
(Formerly published as North Canadian River at Beaver)

LOCATION.--Lat 36°49'20", long 100°31'05", in SW 1/4 sec.7, T.4 N., R.24 E., Beaver County, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.5 miles downstream from Home Creek, 5 miles upstream from Clear Creek, and at mile 576.0.

DRAINAGE AREA.--7,955 sq mi, of which 4,270 sq mi is probably noncontributing.

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft above mean sea level (levels by Corps of Engineers). Mar. 29, 1904, to Dec. 31, 1905, nonrecording gage in same vicinity at different datum. Mar. 1, 1938, to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft higher.

AVERAGE DISCHARGE.--34 years, 115 cfs (83,320 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,090 cfs June 10 (gage height, 6.75 ft); no flow at times.
Period of record: Maximum discharge, 70,000 cfs Oct. 8, 1946, by slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 cfs; maximum gage height, 14.55 ft Oct. 8, 1946; no flow at times in each year.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.23	.04	0	5.0	60	13	6.5	388	.48	104	
2	0	.18	.08	.28	6.0	43	12	5.8	232	.36	49	
3	0	.08	.13	0	5.4	35	12	5.5	145	.18	29	
4	0	.13	.11	0	3.7	35	11	4.8	88	.14	18	
5	0	.23	.09	0	5.7	50	12	3.8	41	76	30	
6	0	.28	.07	0	4.0	52	13	3.0	21	178	168	
7	0	.23	.06	.04	3.0	48	14	2.5	9.8	86	9.1	
8	0	.18	.08	.08	3.0	45	12	2.0	4.9	38	121	
9	.06	.08	.07	.04	6.1	44	11	1.9	4.1	18	29	
10	.06	.08	.08	.04	6.8	41	9.9	1.5	2,070	8.8	14	
11	.08	.18	.06	.08	14	40	9.7	1.4	1,800	2.7	6.1	
12	.08	.18	.07	.13	17	37	9.2	1.2	412	.60	2.9	
13	.08	.23	.05	.18	15	34	8.1	.97	187	.43	20	
14	.04	.18	.05	.28	15	31	7.6	.76	338	.28	16	
15	.02	.18	.04	.40	15	28	7.8	.58	211	.23	21	
16	.02	.18	.10	.60	15	27	8.7	.49	136	.18	19	
17	.02	.04	.05	.96	15	27	8.8	.49	85	.08	13	
18	.02	.04	.07	1.2	17	25	9.6	.56	51	0	6.7	
19	.01	.08	.08	1.4	18	21	11	.60	32	.08	1.7	
20	0	.13	.08	10	20	19	12	.48	51	.08	.54	
21	0	.18	.08	40	20	16	12	.38	23	68	.28	
22	0	.18	.08	65	15	15	11	.35	13	87	.04	
23	0	.13	.08	40	15	16	14	.36	6.3	42	.08	
24	0	.08	.04	14	15	17	13	.38	3.0	15	.04	
25	0	.08	.08	10	19	18	10	.34	1.1	7.0	.01	
26	0	.04	.04	9.4	79	17	9.3	.30	.47	4.7	.01	
27	.04	.04	.04	9.2	100	17	8.9	.37	.27	3.8	0	
28	.04	.08	0	9.3	79	16	7.9	.38	.18	3.9	0	
29	.04	.13	.08	7.9	------	15	7.8	.37	.15	809	0	
30	.04	.13	.08	7.1	------	16	7.1	.67	.39	500	0	
31	.18	------	.13	5.9	------	14	------	164	------	220	0	------
TOTAL	.84	4.19	2.19	233.51	551.7	919	313.4	212.73	6,354.66	2,171.02	678.50	0
MEAN	.027	.14	.071	7.53	19.7	29.6	10.4	6.86	212	70.0	21.9	0
MAX	.18	.28	.13	65	100	60	14	164	2,070	809	168	0
MIN	0	.04	0	0	3.0	14	7.1	.30	.15	0	0	0
AC-FT	1.7	8.3	4.3	463	1,090	1,820	622	422	12,600	4,310	1,350	0

CAL YR 1970 TOTAL 10,209.50 MEAN 28.0 MAX 2,410 MIN 0 AC-FT 20,250
WTR YR 1971 TOTAL 11,441.74 MEAN 31.3 MAX 2,070 MIN 0 AC-FT 22,690

PEAK DISCHARGE (BASE, 4,000 CFS).--No peak above base.

07234100 Clear Creek near Elmwood, Okla.

LOCATION.--Lat 36°38'42", long 100°30'07", in SW 1/4 SW 1/4 sec.8, T.2 N., R.24 E., Beaver County, on downstream side of right pile bent of county road bridge, 1,000 ft downstream from small irrigation dam, 2.8 miles northeast of Elmwood, and at mile 16.9.

DRAINAGE AREA.--170 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,550 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 10.7 cfs (7,750 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10 cfs Feb. 27, maximum gage height, 3.04 ft Feb. 21, backwater from ice; minimum daily discharge, 0.06 cfs Aug. 5.
Period of record: Maximum discharge, 20,000 cfs Oct. 16, 1969 (gage height, 13.97 ft, from floodmark), from rating curve extended above 12,500 cfs on basis of slope-area measurement at gage height 13.15 ft; no flow part of July 14, 18, 19, 1970.

REMARKS.--Records good. Small diversions for irrigation above station.

REVISIONS (WATER YEAR).--WSP 2121: 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.6	2.3	2.5	2.8	3.7	2.8	2.6	1.1	.94	1.1	.18
2	1.4	2.6	2.4	2.6	2.9	3.3	2.8	1.4	.55	1.5	1.1	.14
3	1.1	2.4	2.4	2.8	3.0	3.2	2.9	1.6	1.0	1.1	1.0	.14
4	.96	2.4	2.4	1.9	3.2	3.4	2.9	1.5	.60	1.3	.86	.70
5	.56	2.4	2.5	1.6	3.5	3.7	2.9	1.2	.70	1.2	.06	.30
6	.48	2.4	2.5	1.3	3.1	3.4	3.1	1.6	1.3	.94	.12	.25
7	.48	2.4	2.6	1.3	3.0	3.1	1.9	1.0	1.2	.78	.78	.86
8	.85	2.7	2.7	1.5	2.8	3.2	2.4	.65	1.3	.86	1.0	1.2
9	3.3	2.6	2.5	1.7	2.7	3.4	1.6	.40	.70	1.1	.94	1.3
10	2.9	2.5	2.2	2.0	2.5	3.2	2.8	.86	1.3	1.2	.25	1.4
11	2.7	2.6	2.6	2.7	2.7	3.1	1.6	1.2	1.1	1.0	.25	1.0
12	2.7	2.6	2.4	3.3	2.7	3.4	1.6	1.6	1.8	.86	.18	.25
13	1.8	3.1	1.7	3.6	2.6	3.7	1.7	.70	1.5	1.0	.20	.18
14	1.2	2.9	1.9	3.6	2.6	3.4	1.5	1.7	1.9	.70	1.5	.20
15	2.4	2.6	2.4	3.4	2.5	2.9	1.6	1.5	1.9	.86	2.2	.14
16	1.4	2.6	2.6	3.4	2.4	2.8	1.6	2.2	1.7	.30	1.9	.18
17	1.8	2.7	2.3	3.0	2.6	2.7	1.5	2.3	1.5	.60	1.5	.50
18	1.9	2.6	1.8	2.6	2.9	2.7	1.6	1.9	1.3	1.3	1.4	.86
19	1.4	2.7	2.6	2.6	2.1	2.4	1.7	2.3	1.3	1.3	1.3	.78
20	1.4	2.5	2.6	2.6	1.9	2.4	1.6	1.7	2.3	1.3	1.3	.94
21	2.1	2.6	2.6	2.5	1.9	2.6	1.4	1.1	1.6	1.1	1.2	1.3
22	1.8	2.7	2.6	2.6	1.9	2.6	.70	1.1	.86	1.1	1.3	2.1
23	2.1	2.6	2.6	2.7	2.0	2.6	1.4	.55	.55	1.2	1.4	1.9
24	2.1	2.4	2.6	2.7	2.3	2.6	.94	.86	.45	1.2	1.5	1.9
25	2.1	2.3	2.6	2.6	2.7	2.9	.86	1.1	.45	1.2	1.4	1.9
26	2.2	2.5	2.8	2.6	5.0	2.8	.78	1.6	.35	1.2	.94	1.7
27	2.4	2.2	2.8	2.6	10	2.8	1.6	2.1	.40	1.3	.30	1.6
28	2.4	2.1	2.7	2.8	6.0	2.8	.94	2.1	.20	1.3	.25	1.5
29	2.4	2.3	2.9	2.8	------	3.0	1.9	1.9	.18	1.2	.30	1.6
30	2.4	2.4	2.8	2.8	------	2.9	2.1	2.2	1.0	.65	.30	1.6
31	2.4	------	2.5	2.9	------	3.0	------	1.7	------	1.2	.25	------
TOTAL	56.33	76.0	76.9	79.6	86.3	93.7	54.72	46.22	32.09	32.79	28.08	28.60
MEAN	1.82	2.53	2.48	2.57	3.08	3.02	1.82	1.49	1.07	1.06	.91	.95
MAX	3.3	3.1	2.9	3.6	10	3.7	3.1	2.6	2.3	1.5	2.2	2.1
MIN	.48	2.1	1.7	1.3	1.9	2.4	.70	.40	.18	.30	.06	.14
AC-FT	112	151	153	158	171	186	109	92	64	65	56	57

CAL YR 1970 TOTAL 1,348.88 MEAN 3.70 MAX 487 MIN .17 AC-FT 2,680
WTR YR 1971 TOTAL 691.33 MEAN 1.89 MAX 10 MIN .06 AC-FT 1,370

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

07235000 Wolf Creek at Lipscomb, Tex.

LOCATION.--Lat 36°14'16", long 100°16'28", Lipscomb County, near center of stream on downstream side of bridge on State Highway 305, 0.3 mile north of Lipscomb, 0.7 mile downstream from Little Sandy Creek, 2 miles upstream from Plum Creek, and at mile 61.2.

DRAINAGE AREA.--697 sq mi, of which 222 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1942, October 1961 to current year. Prior to 1941, monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 2,371.29 ft above mean sea level. Prior to Feb. 25, 1938, nonrecording gage, Feb. 25, 1938, to Sept. 30, 1942, water-stage recorder and nonrecording gage at present site at datum 5.77 ft higher.

AVERAGE DISCHARGE.--15 years (1937-42, 1961-71), 22.5 cfs (16,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,560 cfs June 9 (gage height, 7.30 ft); minimum, 0.20 cfs Sept. 13, 14.
Period of record: Maximum discharge, 20,000 cfs Oct. 21, 1941 (gage height, 11.57 ft, present datum), from rating curve extended above 14,000 cfs on basis of velocity-area studies; no flow at times.
Maximum stage since 1890, 15.5 ft June 23, 1957, present site and datum, from floodmarks. Flood in May 1955 reached a stage of 12.1 ft, present site and datum, from information by State Highway Department.

REMARKS.--Records fair. Small diversion upstream from station for irrigation and recreation.

REVISIONS (WATER YEARS).--WSP 1311: 1938-39, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	5.3	5.8	7.7	6.5	8.0	5.8	4.6	3.5	4.4	2.6	.53
2	6.5	5.1	6.3	8.0	6.5	7.0	5.5	4.8	3.2	3.9	2.3	.53
3	6.3	5.1	6.3	7.0	6.5	6.0	5.5	4.6	3.2	3.2	2.6	.53
4	6.0	4.8	6.3	6.0	6.5	7.0	5.3	4.6	3.2	3.2	2.6	.68
5	5.3	4.8	6.3	5.0	6.5	10	5.5	4.6	2.8	3.0	2.6	.53
6	4.6	5.1	6.3	4.0	6.3	10	5.3	4.4	2.8	2.3	2.6	.53
7	4.8	5.1	6.0	3.0	6.0	10	5.3	4.2	2.6	1.7	2.3	.40
8	5.3	5.1	6.3	3.0	5.8	10	4.8	4.4	2.7	1.2	1.7	.29
9	5.5	4.8	6.3	3.0	5.5	9.7	4.8	4.4	280	1.0	1.5	.68
10	6.3	4.6	6.0	3.0	5.5	9.7	4.8	4.4	133	.90	1.5	.40
11	4.4	4.8	6.3	4.0	5.9	9.4	4.8	4.6	113	.85	1.5	.68
12	3.5	5.1	6.5	4.0	6.0	9.2	18	4.6	27	.80	1.5	.29
13	3.2	5.3	6.5	6.0	5.8	9.4	5.5	4.4	21	.75	1.5	.20
14	3.2	5.3	6.7	8.2	5.8	9.0	4.4	4.4	161	.68	1.2	.20
15	3.5	5.3	6.7	7.7	5.5	9.0	4.2	4.2	43	.53	1.2	.29
16	3.7	5.3	7.0	7.7	5.3	8.7	4.2	4.2	22	.40	1.5	.40
17	3.9	5.3	7.2	7.7	5.1	8.4	4.2	3.9	14	.53	1.5	.53
18	4.2	5.3	7.2	7.7	5.3	7.7	3.9	3.9	12	.84	1.5	1.0
19	4.2	5.3	7.2	7.7	5.5	7.0	4.2	3.9	11	1.7	1.5	.84
20	4.4	5.3	7.2	7.7	5.0	7.2	4.8	3.7	10	1.9	1.0	.68
21	4.6	5.3	7.5	7.7	4.0	7.0	3.9	3.7	9.4	1.7	1.0	.53
22	4.8	5.3	7.5	7.2	3.5	7.0	3.7	4.2	8.4	1.7	1.0	.84
23	5.1	5.1	7.5	7.2	3.5	6.7	4.2	3.9	7.5	2.6	.84	1.0
24	5.3	4.8	7.5	7.2	4.0	7.0	4.4	3.7	6.7	2.1	.84	1.7
25	5.5	5.3	7.7	7.2	5.0	6.7	4.4	3.7	6.3	2.1	1.5	1.9
26	5.3	5.8	7.7	7.0	6.0	7.0	4.4	3.5	5.5	2.3	.84	1.7
27	5.3	5.8	8.0	7.0	7.0	6.5	4.4	3.5	4.6	2.6	.53	1.0
28	5.1	5.5	8.0	7.0	8.0	6.3	4.6	3.5	4.6	2.8	.53	.68
29	5.3	5.8	8.2	6.7	------	6.0	4.8	3.5	3.9	3.5	.68	.68
30	5.3	5.8	8.0	7.0	------	6.3	4.8	3.7	3.2	3.5	.53	1.0
31	5.3	------	8.2	7.0	------	5.8	------	3.7	------	3.5	.40	------
TOTAL	153.2	156.6	216.2	196.3	157.8	244.7	154.4	127.4	931.1	62.18	44.89	21.24
MEAN	4.94	5.22	6.97	6.33	5.64	7.89	5.15	4.11	31.0	2.01	1.45	.71
MAX	7.5	5.8	8.2	8.2	8.0	10	18	4.8	280	4.4	2.6	1.9
MIN	3.2	4.6	5.8	3.0	3.5	5.8	3.7	3.5	2.6	.40	.40	.20
AC-FT	304	311	429	389	313	485	306	253	1,850	123	89	42

CAL YR 1970 TOTAL 4,336.09 MEAN 11.9 MAX 1,680 MIN .06 AC-FT 8,600
WTR YR 1971 TOTAL 2,466.01 MEAN 6.76 MAX 280 MIN .20 AC-FT 4,890

PEAK DISCHARGE (BASE, 500 CFS).--June 9 (1030) 1,560 cfs (7.30 ft).

07236000 Wolf Creek near Fargo, Okla.

LOCATION.--Lat 36°23'57", long 99°37'22", in SE 1/4 NE 1/4 sec.11, T.22 N., R.23 W., Ellis County, near right bank on downstream side of pier of county road bridge, 800 ft downstream from Boggy Creek, 1.2 miles downstream from Sixteen Mile Creek, 1.5 miles north of Fargo, and at mile 18.7.

DRAINAGE AREA.--1,624 sq mi, of which 238 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 2,044.35 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1962, at same site at datum 10.00 ft higher.

AVERAGE DISCHARGE.--29 years, 70.8 cfs (51,290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 271 cfs June 12 (gage height, 10.97 ft); minimum, no flow part of each day Sept. 13-15.
Period of record: Maximum discharge, 81,600 cfs June 23, 1957 (gage height, 20.0 ft, present datum, from floodmarks), from rating curve extended above 7,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.
Maximum stage known since at least 1913, that of June 23, 1957, from information by local residents.

REMARKS.--Records good.

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	21	27	29	30	55	32	28	16	39	4.5	.71
2	39	21	27	38	30	53	31	28	15	27	2.7	.65
3	34	22	27	43	30	50	30	30	14	20	1.7	.59
4	30	22	27	30	27	46	30	27	15	17	1.5	.88
5	28	22	26	25	26	45	30	25	14	15	1.3	.81
6	22	22	26	20	26	47	30	23	12	14	5.9	.76
7	17	22	27	20	23	48	30	24	10	12	17	.58
8	18	22	28	23	28	46	30	23	11	11	15	.50
9	21	22	28	25	40	45	30	24	55	11	12	.80
10	22	22	28	28	34	44	30	25	78	9.9	9.0	.80
11	22	22	27	33	33	44	31	24	171	8.6	9.9	.80
12	24	22	26	38	33	44	36	24	199	7.2	21	.60
13	26	28	26	40	32	44	52	23	104	5.8	22	.60
14	28	29	27	35	29	42	47	23	58	4.9	12	.40
15	18	27	27	35	28	41	37	22	77	4.0	10	.40
16	20	27	27	34	28	40	36	20	151	3.2	9.2	.80
17	21	27	28	32	26	40	33	20	63	2.6	7.7	2.1
18	18	26	28	31	26	39	33	20	39	2.2	5.7	3.2
19	17	26	28	31	28	38	44	20	26	2.7	4.1	1.9
20	16	27	28	29	30	37	44	20	27	2.7	2.9	1.4
21	16	27	28	29	35	36	35	18	25	2.5	2.1	1.3
22	16	27	28	30	43	36	34	17	23	2.7	1.7	3.2
23	16	26	27	30	70	36	32	16	21	7.0	1.6	4.5
24	16	25	26	30	80	36	31	16	17	3.8	1.4	9.2
25	16	25	24	29	78	35	31	15	14	3.3	1.4	14
26	17	26	24	29	68	34	32	14	12	2.7	1.3	13
27	17	26	29	28	64	34	30	15	11	2.3	1.2	10
28	18	27	29	29	57	34	28	16	11	2.0	1.2	8.5
29	18	28	30	29	------	34	28	16	10	3.9	1.2	7.3
30	18	29	29	29	------	34	28	18	14	8.2	.99	6.7
31	19	------	29	29	------	33	------	17	------	7.1	.87	------
TOTAL	670	745	846	940	1,082	1,270	1,005	651	1,313	265.3	190.06	96.98
MEAN	21.6	24.8	27.3	30.3	38.6	41.0	33.5	21.0	43.8	8.56	6.13	3.23
MAX	42	29	30	43	80	55	52	30	199	39	22	14
MIN	16	21	24	20	23	33	28	14	10	2.0	.87	.40
AC-FT	1,330	1,480	1,680	1,860	2,150	2,520	1,990	1,290	2,600	526	377	192

CAL YR 1970 TOTAL 10,038.70 MEAN 27.5 MAX 607 MIN .40 AC-FT 19,910
WTR YR 1971 TOTAL 9,074.34 MEAN 24.9 MAX 199 MIN .40 AC-FT 18,000

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

07236500 Fort Supply Lake near Fort Supply, Okla.
(Formerly published as Fort Supply Reservoir near Fort Supply)

LOCATION.--Lat 36°33'14", long 99°34'16", in NE 1/4 SE 1/4 sec.17, T.24 N., R.22 W., Woodward County, in control tower at left end of Fort Supply Dam on Wolf Creek, 2 miles southeast of Fort Supply and at mile 5.5.

DRAINAGE AREA.--1,735 sq mi, of which 241 sq mi is probably noncontributing.

PERIOD OF RECORD.--June 1942 to current year. Prior to October 1970, published as Fort Supply Reservoir near Fort Supply.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 15,350 acre-ft June 17 (elevation, 2,004.40 ft); minimum, 11,630 acre-fet Sept. 17 (elevation, 2,002.30 ft).
Period of record: Maximum contents, 97,930 acre-ft June 25, 1957 (elevation, 2,026.53 ft), from capacity table then in use; no contents at times November 1942 to January 1943.

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began May 4, 1942; conservation pool first filled in June 1942. Capacity, 101,800 acre-ft at elevation 2,028.0 ft (crest of spillway) and 14,550 acre-ft at elevation 2,004.0 ft (conservation pool, designated in 1965). No storage below elevation 1,987.0 ft. Figures given herein represent total contents. Reservoir is used for flood control and conservation. Revised capacity table, based on survey in 1958, used since Oct. 1, 1958.

COOPERATION.--Records furnished by Corps of Engineers.

REVISIONS.--WSP 1117: Drainage area.

Capacity table (elevation, in feet, and content, in acre-feet)

2,002	11,120	2,004	14,550
2,003	12,820	2,005	16,550

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.220	12.990	13.770	14.650	14.510	14.710	14.590	14.690	14.150	14.450	13.330	12.410
2	12.240	12.990	13.790	14.670	14.550	14.770	14.570	14.690	14.130	14.510	13.260	12.400
3	12.290	12.990	13.810	14.750	14.610	14.790	14.550	14.710	14.110	14.490	13.230	12.290
4	12.310	13.010	13.820	14.790	14.650	14.750	14.530	14.690	14.100	14.430	13.180	12.210
5	12.330	13.060	13.810	14.790	14.650	14.710	14.530	14.630	14.060	14.370	13.130	12.170
6	12.330	13.080	13.860	14.770	14.650	14.650	14.530	14.550	14.010	14.410	13.260	12.160
7	12.400	13.080	13.910	14.750	14.650	14.590	14.530	14.530	13.960	14.320	13.230	12.170
8	12.480	13.080	13.920	14.750	14.650	14.510	14.510	14.530	14.180	14.250	13.230	12.000
9	12.550	13.090	13.980	14.730	14.690	14.470	14.510	14.490	14.230	14.210	13.210	12.000
10	12.530	13.110	13.980	14.710	14.730	14.430	14.510	14.430	14.280	14.200	13.160	11.970
11	12.560	13.110	14.010	14.710	14.730	14.430	14.510	14.370	14.470	14.130	13.130	11.940
12	12.630	13.160	14.030	14.710	14.710	14.430	14.510	14.350	14.710	14.040	13.110	11.880
13	12.650	13.240	14.100	14.710	14.750	14.430	14.510	14.370	15.030	13.960	13.090	11.850
14	12.650	13.300	14.100	14.730	14.630	14.370	14.530	14.390	15.190	13.890	13.060	11.770
15	12.670	13.360	14.100	14.730	14.590	14.350	14.530	14.390	15.270	13.820	13.060	11.720
16	12.700	13.420	14.160	14.750	14.550	14.350	14.530	14.370	15.310	13.770	13.040	11.660
17	12.740	13.420	14.250	14.750	14.530	14.350	14.570	14.330	15.250	13.760	13.010	11.730
18	12.750	13.470	14.180	14.750	14.510	14.350	14.630	14.320	15.170	13.640	12.990	11.750
19	12.820	13.480	14.260	14.750	14.490	14.350	14.670	14.330	15.050	13.620	12.940	11.750
20	12.820	13.520	14.280	14.750	14.550	14.350	14.750	14.350	14.910	13.580	12.870	11.750
21	12.840	13.530	14.320	14.710	14.710	14.330	14.710	14.350	14.750	13.550	12.820	11.700
22	12.870	13.500	14.370	14.690	14.830	14.350	14.690	14.350	14.630	13.670	12.790	11.770
23	12.890	13.530	14.330	14.670	14.750	14.350	14.710	14.330	14.610	13.650	12.770	11.770
24	12.920	13.530	14.330	14.650	14.670	14.370	14.710	14.280	14.530	13.640	12.740	11.880
25	12.900	13.580	14.350	14.590	14.650	14.430	14.710	14.250	14.450	13.580	12.680	11.920
26	12.900	13.580	14.430	14.570	14.630	14.450	14.710	14.210	14.390	13.530	12.650	11.870
27	12.920	13.620	14.450	14.550	14.650	14.490	14.710	14.210	14.320	13.500	12.620	11.950
28	12.940	13.670	14.490	14.510	14.730	14.550	14.690	14.230	14.320	13.470	12.580	11.880
29	12.970	13.690	14.510	14.510	------	14.630	14.690	14.210	14.350	13.430	12.560	11.850
30	12.970	13.770	14.550	14.490	------	14.630	14.690	14.200	14.390	13.420	12.530	11.800
31	12.970	------	14.650	14.490	------	14.590	------	14.160	------	13.400	12.500	------
(+)	2,003.09	2,003.56	2,004.05	2,003.97	2,004.09	2,004.02	2,004.07	2,003.79	2,003.92	2,003.34	2,002.81	2,002.40
(‡)	+810	+800	+880	-160	+240	-140	+100	-530	+230	-990	-900	-700
MAX	12,970	13,770	14,650	14,790	14,830	14,790	14,750	14,710	15,310	14,510	13,330	12,410
MIN	12,220	12,990	13,770	14,490	14,490	14,330	14,510	14,160	13,960	13,400	12,500	11,660

CAL YR 1970..... ‡ +240
WTR YR 1971..... ‡ -360

\+ Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07237000 Wolf Creek near Fort Supply, Okla.

LOCATION.--Lat 36°34'00", long 99°33'05", in SE 1/4 SE 1/4 sec.9, T.24 N., R.22 W., Woodward County, near left bank on downstream side of pier of bridge on U.S. Highway 270, 1 mile southeast of Fort Supply, 1.6 miles downstream from Fort Supply Dam, and at mile 3.9.

DRAINAGE AREA.--1,739 sq mi, of which 241 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to Oct. 1, 1941, published as "near Supply."

GAGE.--Water-stage recorder. Datum of gage is 1,958.38 ft above mean sea level (levels by Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

AVERAGE DISCHARGE.--34 years, 70.4 cfs (51,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 156 cfs June 20 (gage height, 6.10 ft); minimum daily, 0.20 cfs Aug. 25.
Period of record: Maximum discharge, 14,200 cfs June 24, 1939 (gage height, 15.60 ft, present datum), from rating curve extended above 8,000 cfs; no flow at times in most years.
A stage of 19.6 ft, present datum, was reached prior to October 1937, from information by State Highway Department.

REMARKS.--Records good. Flow completely regulated since May 1942 by Fort Supply Lake (see sta. 07236500).

REVISIONS.--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	1.3	1.8	.53	19	40	22	26	1.5	2.2	.57	.58
2	.85	1.1	2.0	.67	13	40	22	26	1.3	1.4	.46	.58
3	.83	1.1	2.0	1.3	13	44	22	26	1.3	1.2	.43	.59
4	.81	1.1	1.9	9.2	14	66	22	27	1.3	1.1	.46	.67
5	.70	1.1	1.9	22	13	100	22	27	1.3	.94	.45	.69
6	.80	1.3	1.7	25	12	100	22	27	1.3	.90	1.4	.50
7	.70	1.3	1.7	25	13	98	22	28	1.1	.67	1.1	.75
8	1.3	1.4	1.7	25	14	95	22	28	1.9	.52	.80	.69
9	3.1	1.3	1.9	25	14	89	22	28	7.9	.64	.75	.63
10	2.3	1.3	1.9	25	31	71	22	28	1.8	.57	.56	.76
11	1.6	1.3	1.6	25	45	58	22	28	1.1	.47	.53	.65
12	1.4	1.4	1.5	26	45	58	22	17	.71	.44	.59	.60
13	1.3	2.8	1.5	25	46	59	22	2.4	.65	.42	.59	.60
14	1.2	2.5	1.5	25	46	59	23	2.0	.80	.42	.70	.53
15	1.1	1.8	1.4	24	46	41	23	1.9	23	.45	1.1	.43
16	1.2	1.7	1.2	35	45	26	24	2.4	129	.46	1.3	.48
17	1.1	1.6	1.2	48	45	26	24	2.9	135	.43	1.1	1.4
18	1.1	1.7	1.3	46	46	26	24	3.4	143	.42	.90	2.5
19	1.1	1.7	.95	45	45	26	24	3.9	141	.44	.50	1.8
20	1.1	1.6	.94	45	45	26	24	4.1	141	.55	.45	1.2
21	.90	1.5	1.1	45	46	26	24	4.8	139	.54	.45	1.2
22	1.1	1.3	.94	45	48	26	24	5.6	118	.85	.40	2.6
23	.90	1.1	.93	45	45	26	24	1.8	37	1.4	.35	2.5
24	.90	1.1	.93	44	43	26	24	1.1	34	.75	.25	4.1
25	1.1	.97	.65	44	42	23	24	1.0	19	.59	.20	3.9
26	1.1	1.2	.57	44	41	2.6	24	.83	3.2	.48	.25	2.5
27	1.1	1.1	.49	44	39	1.4	24	1.1	3.2	.48	.50	1.9
28	1.3	1.4	.45	42	40	1.1	24	1.3	3.0	.48	.50	1.4
29	1.1	1.6	.55	25	------	.80	25	1.5	2.4	.88	.70	1.4
30	1.1	1.8	.57	25	------	11	26	1.7	3.9	.73	.76	1.3
31	1.3	------	.50	25	------	22	------	1.5	------	.61	.69	------
TOTAL	36.36	43.47	39.27	930.70	954	1,313.90	695	361.23	1,098.66	22.43	19.79	39.43
MEAN	1.17	1.45	1.27	30.0	34.1	42.4	23.2	11.7	36.6	.72	.64	1.31
MAX	3.1	2.8	2.0	48	48	100	26	28	143	2.2	1.4	4.1
MIN	.70	.97	.45	.53	12	.80	22	.83	.65	.42	.20	.43
AC-FT	72	86	78	1,850	1,890	2,610	1,380	717	2,180	44	39	78

CAL YR 1970 TOTAL 5,119.86 MEAN 14.0 MAX 180 MIN .45 AC-FT 10,160
WTR YR 1971 TOTAL 5,554.24 MEAN 15.2 MAX 143 MIN .20 AC-FT 11,020

07237500 North Canadian River at Woodward, Okla.

LOCATION.--Lat 36°26'18", long 99°16'40", in SE 1/4 SE 1/4 sec.25, T.23 N., R.20 W., Woodward County, near right bank on downstream side of pier of bridge on State Highway 15, 200 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6 miles east of Woodward, 7.2 miles upstream from Indian Creek, 27.5 miles downstream from Wolf Creek, and at mile 460.2.

DRAINAGE AREA.--11,589 sq mi, of which 4,812 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1903 to September 1905 (gage heights only), October 1905 to June 1906, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-6. Gage-height records collected in this vicinity since 1919 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,830.43 ft above mean sea level. Prior to July 1906, non-recording gage at railway bridge 200 ft upstream at different datum. Oct. 1, 1938, to Oct. 26, 1943, nonrecording gage and Oct. 27, 1943, to July 12, 1951, water-stage recorder, at site 7.8 miles upstream at datum 37.01 ft higher than present datum.

AVERAGE DISCHARGE.--33 years (1938-71), 216 cfs (156,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,520 cfs June 12 (gage height, 7.02 ft); no flow at times.
Period of record: Maximum discharge, 35,000 cfs May 18, 1951 (gage height, 8.70 ft, site and datum then in use; 13.98 ft, from floodmark at present site and datum); maximum gage height, 9.80 ft Oct. 10, 1946, site and datum then in use; no flow at times in most years.
Flood of Oct. 12, 1923, reached a stage of 11.0 ft, site and datum then in use, from reports of U.S. Weather Bureau.

REMARKS.--Records good except for winter periods, which are fair. Some regulation since May 1942 by Fort Supply Lake on Wolf Creek 33 miles upstream (see sta. 07236500).

REVISIONS (WATER YEARS).--WSP 1341: Drainage area. WSP 1731: 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	1.7	2.5	3.2	16	56	43	36	1.3	77	27	0
2	.36	1.6	2.5	3.0	16	50	42	35	1.8	31	65	0
3	.13	2.3	2.4	6.8	16	41	42	36	1.2	17	43	0
4	.04	1.9	2.4	3.5	11	63	41	35	1.6	11	27	0
5	0	2.4	2.6	2.5	10	97	42	33	5.9	8.0	16	0
6	0	1.9	2.5	2.1	9.0	137	43	31	25	5.3	9.9	0
7	0	2.0	2.6	3.0	8.4	136	43	28	18	3.8	7.9	0
8	1.8	1.7	2.8	11	7.0	136	41	27	11	2.7	10	0
9	6.2	1.6	2.8	15	9.0	135	40	26	30	1.9	9.6	0
10	3.0	1.8	3.0	16	15	131	39	26	94	1.2	7.2	0
11	1.7	1.6	2.8	14	22	122	40	25	384	.68	11	0
12	1.5	1.7	3.3	14	38	115	40	24	1,130	.56	20	0
13	1.4	6.9	3.4	17	36	112	38	23	523	.45	9.5	0
14	1.3	4.5	3.2	24	38	108	37	19	367	.21	4.5	0
15	1.2	2.9	3.5	26	38	104	39	15	257	.11	7.5	0
16	1.3	2.6	3.2	35	38	95	38	12	189	.03	4.5	0
17	1.7	2.5	3.1	28	38	81	38	11	271	0	3.0	2.5
18	1.8	2.4	3.1	21	42	75	40	9.2	202	0	1.4	10
19	2.1	2.3	2.9	11	43	69	41	8.7	175	0	.80	.11
20	1.8	2.3	3.0	17	40	69	42	8.0	173	0	.32	0
21	1.6	2.3	3.1	35	51	62	40	6.4	152	0	.05	0
22	1.5	2.2	3.0	30	51	59	40	5.7	136	.16	.01	.63
23	1.6	2.1	2.9	30	55	57	40	8.9	117	70	0	1.8
24	1.6	2.6	3.4	31	47	57	41	6.4	75	14	0	9.2
25	1.6	2.5	3.4	32	58	59	38	5.0	55	8.2	0	3.6
26	1.6	2.0	3.7	32	91	58	38	4.2	43	5.0	0	.67
27	1.7	1.8	3.5	32	74	46	37	4.0	30	4.2	0	.16
28	1.9	2.1	3.1	32	72	43	34	3.7	27	7.1	0	.03
29	5.1	2.3	3.4	33	------	40	36	3.6	25	6.7	0	0
30	4.1	2.5	3.1	25	------	39	37	3.5	25	5.3	0	0
31	2.0	------	3.2	19	------	36	------	2.0	------	3.4	0	------
TOTAL	52.06	71.0	93.4	604.1	989.4	2,488	1,190	521.3	4,545.8	285.00	285.18	28.70
MEAN	1.68	2.37	3.01	19.5	35.3	80.3	39.7	16.8	152	9.19	9.20	.96
MAX	6.2	6.9	3.7	35	91	137	43	36	1,130	77	65	10
MIN	0	1.6	2.4	2.1	7.0	36	34	2.0	1.2	0	0	0
AC-FT	103	141	185	1,200	1,960	4,930	2,360	1,030	9,020	565	566	57

CAL YR 1970 TOTAL 18,098.52 MEAN 49.6 MAX 598 MIN 0 AC-FT 35,900
WTR YR 1971 TOTAL 11,153.94 MEAN 30.6 MAX 1,130 MIN 0 AC-FT 22,120

PEAK DISCHARGE (BASE, 3,500 CFS).--No peak above base.

07238000 North Canadian River near Seiling, Okla.

LOCATION.--Lat 36°11'06", long 98°55'15", in NW 1/4 sec.28, T.20 N., R.16 W., Major County, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2 miles upstream from Seiling Creek, 2.2 miles north of Seiling, 2.8 miles downstream from Deep Creek, and at mile 422.6.

DRAINAGE AREA.--12,261 sq mi, of which 4,847 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,675.42 ft above mean sea level (levels by Corps of Engineers). July 1, 1946, to Aug. 17, 1964, at site 60 ft downstream and prior to Oct. 1, 1954, at datum 5.00 ft higher.

AVERAGE DISCHARGE.--25 years, 237 cfs (171,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,520 cfs June 12 (gage height, 8.66 ft); no flow at times. Period of record: Maximum discharge, 33,000 cfs May 19, 1951 (gage height, 15.61 ft, present datum); maximum gage height, 16.00 ft Oct. 11, 1946, present datum; no flow at times in most years.

REMARKS.--Records good. Some regulation by Fort Supply Lake on Wolf Creek 70.6 miles upstream. (See sta. 07236500). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1341: Drainage area. WSP 1731: 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0		.05	2.7	22	102	42	43	2.1	22	.01	0
2	0		.10	3.2	20	77	42	43	1.5	53	0	0
3	0		.18	10	20	64	47	41	1.8	33	3.2	0
4	0		.19	3.0	21	59	46	40	1.4	16	9.4	0
5	0		.26	2.1	13	67	46	37	.59	10	6.2	0
6	0		.32	1.7	12	113	46	34	.21	7.5	4.4	0
7	0		.35	2.1	11	173	47	30	0	5.7	2.5	0
8	.07		.44	2.5	9.0	180	46	28	.08	5.0	1.0	0
9	.06		.52	2.9	13	179	46	27	.61	5.0	1.2	0
10	0		.60	3.5	16	175	45	27	1.1	3.4	.89	0
11	0		.57	4.3	20	172	43	26	551	2.3	.29	0
12	0		.71	3.0	21	161	44	25	941	1.1	3.8	0
13	0		.75	4.0	21	148	42	22	882	.74	5.5	0
14	0		.93	5.3	27	141	42	22	544	.49	1.5	0
15	0		1.3	6.3	28	132	42	21	384	.35	.39	0
16	0		1.3	6.8	29	125	42	19	302	.28	.15	0
17	0		1.3	8.5	30	114	44	15	234	.20	.02	.50
18	0		1.4	12	31	95	46	12	302	.08	0	2.0
19	0		1.3	13	35	82	48	10	239	0	0	0
20	0		1.5	16	34	78	53	9.1	219	0	0	0
21	0		1.5	18	38	77	53	7.6	207	0	0	0
22	0		1.7	17	49	72	48	6.3	187	.02	0	.07
23	0		1.4	23	49	68	46	5.3	175	2.2	0	.08
24	0		1.7	22	45	65	46	4.3	146	.29	0	.43
25	0		1.6	23	31	67	47	3.7	108	.53	0	1.7
26	0		1.8	23	39	68	45	6.0	80	.37	0	.35
27	0		2.0	24	89	68	42	4.7	60	.14	0	.20
28	0		2.2	24	100	64	41	3.3	45	2.9	0	.07
29	0		2.3	25	------	55	41	2.8	35	3.0	0	0
30	0		2.6	27	------	50	43	2.8	25	.60	0	0
31	0	------	2.8	27	------	46	------	2.4	------	.21	0	------
TOTAL	.13	0	35.67	365.9	873.0	3,137	1,351	580.3	5,675.39	176.40	40.45	5.40
MEAN	.004	0	1.15	11.8	31.2	101	45.0	18.7	189	5.69	1.30	.18
MAX	.07	0	2.8	27	100	180	53	43	941	53	9.4	2.0
MIN	0	0	.05	1.7	9.0	46	41	2.4	0	0	0	0
AC-FT	.3	0	71	726	1,730	6,220	2,680	1,150	11,260	350	80	11

CAL YR 1970 TOTAL 23,197.84 MEAN 63.6 MAX 2,050 MIN 0 AC-FT 46,010
WTR YR 1971 TOTAL 12,240.64 MEAN 33.5 MAX 941 MIN 0 AC-FT 24,280

PEAK DISCHARGE (BASE, 3,500 CFS).--No peak above base.

07238500 Canton Lake near Canton, Okla.
(Formerly published as Canton Reservoir near Canton)

LOCATION.--Lat 36°05'03", long 98°36'05", in SE 1/4 NE 1/4 sec.32, T.19 N., R.13 W., Blaine County, near right end of Canton Dam on North Canadian River, 2 miles northwest of Canton, and at mile 394.3.

DRAINAGE AREA.--12,483 sq mi, of which 4,883 sq mi is probably noncontributing.

PERIOD OF RECORD.--April 1948 to current year. Prior to October 1970 published as Canton Reservoir near Canton.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 77,040 acre-ft Oct. 1 (elevation, 1,609.66 ft); minimum, 39,780 acre-fet Sept. 16 (elevation, 1,602.48 ft).
Period of record: Maximum contents, 258,600 acre-ft May 25, 1951 (elevation, 1,628.05 ft); minimum since conservation pool was first filled, 867 acre-ft May 5, 1955 (elevation, 1,585.66 ft), from capacity table then in use.

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 383,800 acre-ft at elevation 1,638.0 ft (flood-control pool), 116,000 acre-fet at elevation 1,615.2 ft (normal water-supply pool, designated in 1965), 99,400 acre-ft at elevation 1,613.0 ft (crest of spillway), and 18,460 acre-ft at elevation 1,596.5 ft (conservation pool). Dead storage, 4 acre-ft below elevation 1,582.0 ft (invert of bypass gates). Figures given herein represent total contents. Reservoir was designed for flood control, irrigation, and conservation, but owing to lack of facilities, it is not being used for irrigation at this time. Revised capacity table, based on survey in 1966, used since Oct. 1, 1967. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records furnished by Corps of Engineers.

REVISIONS.--WSP 1341: Drainage area.

Capacity table (elevation, in feet, and contents, in acre-feet)

1,602	37,820	1,608	67,210
1,604	46,650	1,610	79,160
1,606	56,400		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76980	73100	71260	70440	69970	71730	74360	63350	61130	60750	57790	41250
2	76920	73040	71260	70550	69910	71610	74120	63410	61390	60640	57690	41030
3	76730	72980	71260	70610	69910	71320	74360	63300	61340	60590	57530	40860
4	76610	72740	71200	70730	69910	71140	74120	63240	61130	60590	57430	40990
5	76180	72500	71140	70670	70030	72020	74180	63190	61130	60590	57220	40820
6	76180	72620	71020	70610	70030	71670	74120	63240	60860	60430	57020	40860
7	76670	72440	70960	70550	69970	71730	74060	63190	60960	60320	56910	40680
8	76800	72440	70960	70550	69850	72020	74060	63130	61130	60320	56810	40820
9	76120	72440	70960	70550	69790	72320	74060	63080	61290	60320	56760	40640
10	75750	72320	70960	70550	69790	72440	73930	63130	61390	60060	56650	40550
11	76060	72260	70900	70550	69790	72800	73930	63190	61880	59900	56600	40470
12	75880	72200	70850	70550	69790	73150	73930	62860	62480	59840	56450	40290
13	75750	72260	70670	70490	69740	73210	74060	62750	63680	59630	56350	40210
14	74900	72320	70610	70490	69790	73510	73930	62700	64680	59530	56300	40120
15	74300	72140	70850	70490	69790	73690	73870	62640	65350	59470	56300	39820
16	74240	72140	71080	70440	69790	73810	73100	62370	65740	59370	56300	40040
17	74360	72140	70850	70440	69790	73930	71320	62210	66080	58890	56240	40900
18	74360	72020	70960	70440	69910	74120	69270	62480	66190	59210	56090	40600
19	74240	72020	70960	70380	70090	73930	67720	62210	66470	59050	56040	40470
20	74180	71850	70850	70320	70440	73810	66130	61880	67210	58940	54770	40290
21	73750	71790	70850	70320	71430	74060	64120	61770	67380	58840	52430	40250
22	73750	71730	70850	70320	70960	74120	63130	61660	67490	58840	50620	40250
23	73810	71670	70790	70260	70960	74120	63240	61770	67550	58890	48420	40680
24	73630	71260	70670	70260	70900	74120	63130	61660	67550	58840	46370	40470
25	73750	71260	70550	70260	70850	74180	63130	61390	66750	58730	44320	40250
26	73930	71260	70550	70200	71140	74240	63240	61390	65070	58520	42400	40250
27	73510	71260	70550	70140	71140	74420	63240	61390	63190	58370	41470	40250
28	73390	71200	70550	70090	71260	74540	63240	61290	61290	58310	41380	40250
29	73330	71260	70490	70090	------	74420	63300	61130	60320	58580	41600	40510
30	73270	71260	70490	70090	------	74180	63300	61130	60480	58310	41510	40290
31	73210	------	70440	70090	------	73930	------	61130	------	58110	41430	------
(+)	1,609.03	1,608.70	1,608.56	1,608.50	1,608.70	1,609.15	1,607.30	1,606.90	1,606.78	1,606.33	1,602.84	1,602.58
(‡)	-3,770	-1,950	-820	-350	+1,170	+2,670	-10,630	-2,170	-650	-2,370	-16,680	-1,140
MAX	76,980	73,100	71,260	70,730	71,430	74,540	74,360	63,410	67,550	60,750	57,790	41,250
MIN	73,210	71,200	70,440	70,090	69,740	71,140	63,130	61,130	60,320	58,110	41,380	39,820

CAL YR 1970.....‡ -28,280
WTR YR 1971.....‡ -36,690

\+ Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07239000 North Canadian River at Canton, Okla.

LOCATION.--Lat 36°04'45", long 98°35'25", in NE 1/4 SW 1/4 sec.33, T.19 N., R.13 W., Blaine County, on right bank 2,700 ft downstream from Canton Dam, 1.5 miles northwest of Canton, 4.8 miles upstream from Minnehaha Creek, and at mile 393.8.

DRAINAGE AREA.--12,484 sq mi, of which 4,883 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1914 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft above mean sea level (Corps of Engineers bench mark). Oct. 1, 1937, to Jan. 5, 1955, water-stage recorder at site 2.5 miles downstream at datum 1.91 ft lower prior to Oct. 1, 1950, and at datum 6.91 ft lower thereafter.

AVERAGE DISCHARGE.--34 years, 210 cfs (152,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,070 cfs Apr. 17 (gage height, 8.44 ft), maximum gage height, 8.92 ft Aug. 20, 21; minimum daily discharge, 1.0 cfs July 31, Aug. 1.

Period of record: Maximum discharge, 24,800 cfs Oct. 12, 1946 (gage height, 12.83 ft, site and datum then in use); no flow at times in most years.

Flood of Oct. 13, 1923, reached a stage of 16.8 ft, at site 300 ft upstream from former site at datum 1.91 ft lower than present datum, from reports of U.S. Weather Bureau.

REMARKS.--Records good. Flow partly regulated by Fort Supply Lake (see station 07236500) for period May 1942 to April 1948 and completely regulated thereafter by Canton Lake (see station 07238500).

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.7	2.8	2.8	3.3	3.1	2.4	2.7	3.1	5.6	1.0	4.9
2	2.5	2.5	2.8	3.0	3.3	3.0	2.4	2.7	3.2	2.2	2.2	2.7
3	2.5	2.5	2.7	5.0	3.3	2.8	2.7	2.7	2.5	1.9	1.3	2.2
4	2.5	2.3	2.6	3.8	3.2	3.1	2.8	3.5	2.2	2.0	1.2	2.1
5	2.5	2.4	2.6	2.6	3.3	3.0	2.8	3.1	2.0	1.9	1.2	1.7
6	2.5	2.5	2.6	2.5	3.2	2.5	2.8	2.9	1.9	2.0	1.2	1.7
7	2.4	2.5	2.9	2.3	2.7	2.8	2.8	2.9	1.9	2.0	1.2	1.7
8	2.5	2.7	3.0	2.3	2.6	3.1	2.8	3.0	2.6	1.6	1.4	1.4
9	2.2	2.2	3.0	2.3	2.3	2.7	2.8	3.1	4.0	2.2	1.3	1.5
10	2.5	2.6	2.9	2.3	2.3	2.8	2.9	3.1	2.9	2.4	1.1	1.8
11	2.6	2.6	3.1	2.3	2.5	3.0	2.8	2.9	5.9	1.9	1.2	1.6
12	2.3	2.5	3.1	2.3	2.5	3.1	2.8	2.3	3.0	2.0	1.2	1.4
13	115	3.4	3.0	2.3	2.6	3.1	2.7	2.5	1.9	2.0	1.3	2.3
14	430	3.1	3.0	2.6	2.6	2.6	2.5	2.5	1.8	4.1	1.2	1.5
15	191	2.9	3.7	2.6	2.7	2.5	2.6	2.5	1.7	2.2	1.2	1.1
16	4.9	3.1	3.7	3.7	2.8	2.7	419	2.4	1.6	2.2	1.3	1.1
17	4.2	3.1	3.1	3.1	3.0	3.0	1,070	2.3	1.5	2.2	1.2	2.8
18	3.6	3.2	3.1	3.1	3.4	2.0	1,060	2.2	1.4	1.9	1.2	7.1
19	3.3	3.3	3.1	3.1	2.6	2.1	1,030	2.0	1.4	1.7	1.1	2.5
20	3.0	3.1	3.1	3.1	2.5	2.6	767	2.2	3.0	3.9	527	2.5
21	3.3	3.0	3.1	3.1	2.4	2.7	974	2.1	2.7	1.9	1,020	2.2
22	3.3	3.1	3.0	3.1	4.6	2.6	652	2.4	2.5	1.9	1,010	1.5
23	3.1	2.8	3.4	3.1	5.0	2.8	3.9	2.2	1.9	1.7	1,000	2.1
24	3.1	2.9	3.5	3.1	4.0	3.1	3.5	2.1	1.7	1.7	985	3.9
25	2.8	3.0	3.5	3.3	3.7	3.3	3.2	2.0	319	1.7	970	5.8
26	2.7	2.9	3.5	3.3	3.5	3.3	3.0	1.9	915	3.0	951	4.3
27	2.7	2.8	3.5	3.1	3.4	3.2	2.9	1.9	905	1.6	467	1.6
28	2.6	2.9	3.3	3.1	3.3	3.0	2.8	2.0	900	1.1	10	1.7
29	2.6	3.1	3.0	3.1	------	3.3	2.7	2.2	600	1.4	7.4	1.4
30	2.8	3.0	2.8	3.2	------	3.3	2.7	2.8	12	1.1	6.3	1.4
31	2.8	------	2.8	3.3	------	3.3	------	3.1	------	1.0	5.4	------
TOTAL	816.3	84.7	95.3	91.9	86.6	89.5	6,037.3	78.2	3,709.3	66.0	6,983.1	71.5
MEAN	26.3	2.82	3.07	2.96	3.09	2.89	201	2.52	124	2.13	225	2.38
MAX	430	3.4	3.7	5.0	5.0	3.3	1,070	3.5	915	5.6	1,020	7.1
MIN	2.2	2.2	2.6	2.3	2.3	2.0	2.4	1.9	1.4	1.0	1.0	1.1
AC-FT	1,620	168	189	182	172	178	11,970	155	7,360	131	13,850	142

CAL YR 1970 TOTAL 27,424.2 MEAN 75.1 MAX 1,020 MIN 1.6 AC-FT 54,400
WTR YR 1971 TOTAL 18,209.7 MEAN 49.9 MAX 1,070 MIN 1.0 AC-FT 36,120

07239500 North Canadian River near El Reno, Okla.

LOCATION.--Lat 35°33'44", long 97°57'32", on east line of sec.32, T.13 N., R.7 W., Canadian County, near left bank on downstream side of pier of bridge of U.S. Highway 81, 2 miles north of courthouse in El Reno, 2.2 miles downstream from Target Creek, and at mile 307.4.

DRAINAGE AREA.--13,042 sq mi, of which 4,899 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1 mile upstream March 1914 to March 1934 and at present site thereafter are contained in reports of U.S. Weather Bureau. Published as Canadian River (North Fork) near El Reno 1902-4.

GAGE.--Water-stage recorder. Datum of gage is 1,299.02 ft above mean sea level (U.S. Weather Bureau bench mark). October 1902 to April 1908, nonrecording gage at site about 50 ft downstream at different datum.

AVERAGE DISCHARGE.--39 years (1902-7, 1937-71), 231 cfs (167,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 938 cfs Sept. 24 (gage height, 7.85 ft); no flow at times.
Period of record: Maximum discharge, 15,000 cfs Oct. 28, 1941 (gage height, 15.98 ft): maximum gage height, 18.20 ft Sept. 21, 1965: no flow at times in most years.
Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft above mean sea level at railroad bridge 1 mile above station, from reports of U.S. Weather Bureau.

REMARKS.--Records fair. Some regulation by Fort Supply Lake (see station 07236500) for period May 1942 to April 1948 and by Canton Lake (see station 07238500) thereafter.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.0	2.8	5.1	2.2	18	1.8	33	3.7	594	0	60
2	3.1	3.1	2.6	6.3	2.0	16	1.6	29	1.3	198	0	36
3	2.4	2.5	2.6	54	2.2	15	1.3	25	302	108	0	25
4	1.5	2.0	2.3	34	2.8	11	1.2	22	238	73	0	18
5	1.7	1.7	2.3	25	3.0	8.7	1.5	19	86	50	0	14
6	18	1.7	2.0	17	2.5	7.8	1.7	17	37	33	0	11
7	6.4	1.7	2.2	12	2.0	6.7	1.5	15	21	25	0	6.3
8	4.1	1.8	2.3	9.5	1.5	6.1	.91	13	29	20	0	2.6
9	4.9	1.6	2.6	7.5	2.0	5.7	1.0	13	136	15	0	5.2
10	3.9	1.6	2.9	6.0	3.4	5.4	1.0	13	269	12	0	2.5
11	2.3	1.8	2.9	5.0	2.7	4.7	1.2	13	164	9.2	0	.37
12	2.1	1.7	3.2	4.4	2.7	4.5	.83	10	123	6.9	0	.02
13	2.1	4.7	3.1	4.6	2.4	4.4	.66	9.3	111	4.8	0	0
14	1.9	8.0	2.9	3.2	2.4	3.6	.95	8.2	94	2.5	0	0
15	1.8	5.9	3.3	3.0	2.1	2.9	.92	7.1	49	1.0	0	0
16	36	4.0	4.1	3.2	2.4	2.7	1.6	5.9	29	.20	0	0
17	121	3.5	3.8	2.6	2.4	2.4	2.3	5.0	20	0	0	.41
18	51	3.1	3.5	2.5	2.7	2.3	25	4.5	14	0	0	33
19	26	3.0	3.3	2.4	3.0	2.0	489	3.7	10	0	0	61
20	18	2.8	3.2	2.8	2.7	1.6	664	3.0	8.4	0	0	32
21	13	2.5	3.7	2.6	7.2	1.6	516	2.4	7.2	0	0	16
22	9.9	2.5	3.7	2.5	5.0	1.9	551	2.4	6.8	0	0	11
23	8.6	2.4	3.6	2.3	4.4	1.7	734	3.0	5.3	3.7	237	6.3
24	8.1	2.3	3.5	2.4	5.8	1.7	495	2.4	3.7	1.6	591	164
25	7.6	2.1	3.3	2.4	15	1.9	169	.80	2.0	.50	693	542
26	6.5	2.1	3.1	2.3	26	1.9	98	.31	1.0	0	756	203
27	4.9	2.3	5.7	2.0	24	1.7	69	1.4	.50	0	765	75
28	4.0	2.4	5.5	2.1	19	2.4	53	.58	272	.23	781	44
29	3.4	2.5	5.3	2.3	------	1.9	46	.44	579	.89	561	28
30	3.1	2.7	5.1	2.4	------	1.5	38	.93	655	0	195	21
31	2.8	------	4.9	2.3	------	1.4	------	1.9	------	0	110	------
TOTAL	383.1	83.0	105.3	235.7	155.5	151.1	3,968.97	285.26	3,277.90	1,159.52	4,689	1,417.70
MEAN	12.4	2.77	3.40	7.60	5.55	4.87	132	9.20	109	37.4	151	47.3
MAX	121	8.0	5.7	54	26	18	734	33	655	594	781	542
MIN	1.5	1.6	2.0	2.0	1.5	1.4	.66	.31	.50	0	0	0
AC-FT	760	165	209	468	308	300	7,870	566	6,500	2,300	9,300	2,810

CAL YR 1970 TOTAL 23,597.57 MEAN 64.7 MAX 857 MIN 0 AC-FT 46,810
WTR YR 1971 TOTAL 15,912.05 MEAN 43.6 MAX 781 MIN 0 AC-FT 31,560

PEAK DISCHARGE (BASE, 3,100 CFS).--No peak above base.

07240000 Lake Hefner Canal near Oklahoma City, Okla.

LOCATION.--Lat 35°33'11", long 97°37'11", in SW 1/4 SW 1/4 sec.34, T.13 N., R.4 W., Oklahoma County, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft upstream from Lake Hefner, 3 miles northeast of Bethany, and 7.6 miles northwest of the State Capitol in Oklahoma City.

PERIOD OF RECORD.--March 1944 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,200.96 ft above mean sea level. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 miles upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 miles upstream at different datum. May 1, 1950, to May 19, 1954, water-stage recorder and concrete control at present site and datum. May 20, 1954, to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft downstream at datum 2.80 ft lower than present datum, also used as auxiliary gage after Apr. 25, 1957.

EXTREMES.--Period of record: Maximum daily discharge, 1,500 cfs May 28, 1955; no flow at times in each year.

REMARKS.--Records good. Use of canal began in March 1944. Canal diverts water from North Canadian River just upstream from Lake Overholser (see sta. 07240500) and delivers water to Lake Hefner (capacity, 80,600 acre-ft) for municipal water supply of Oklahoma City. Subsequent to April 1950, small ground-water seepage, when head gates are closed, included in records.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	0		0	0	.02	0		0	782	2.5	1.9
2	1.5	.22		0	0	0	0		0	41	2.3	1.9
3	1.5	.11		2.8	0	0	0		478	33	.25	1.8
4	1.6	.07		.07	0	0	0		588	33	.02	1.7
5	9.5	.07		.04	0	0	0		270	33	1.3	1.9
6	290	.14		0	0	0	0		7.7	23	2.3	1.9
7	24	.06		0	0	0	0		.09	6.1	2.0	1.9
8	5.5	.11		0	0	0	0		401	5.7	2.0	1.6
9	1.8	.11		0	0	0	0		579	5.7	1.6	1.7
10	1.3	0		0	0	0	0		578	5.7	1.6	1.5
11	1.0	0		0	0	0	0		321	5.7	1.5	1.6
12	.61	0		0	0	0	0		201	5.2	2.0	1.9
13	.45	0		0	0	0	0		199	4.7	1.3	1.9
14	.36	.25		0	0	0	0		63	4.2	1.2	1.6
15	.29	.05		0	0	0	0		7.3	4.1	1.2	.31
16	.33	0		0	0	0	0		101	4.7	1.3	.01
17	.60	0		0	0	0	0		86	3.9	1.4	.49
18	.38	0		0	0	0	0		33	3.4	1.4	1.6
19	.34	0		0	0	0	0		29	2.9	1.5	.11
20	.27	0		0	0	0	0		11	2.7	1.4	.01
21	.26	0		0	1.5	0	0		7.3	2.4	1.4	0
22	.34	0		0	.28	0	418		1.8	2.9	1.1	0
23	.55	0		0	.49	0	607		1.6	3.9	.98	0
24	.48	0		0	.88	0	218		6.8	2.7	1.0	1.3
25	.24	0		0	3.1	0	4.8		6.3	2.5	2.1	643
26	.22	0		0	1.6	0	2.9		5.9	2.2	2.4	338
27	.08	0		0	.65	0	.14		5.5	2.3	2.5	142
28	.18	0		0	.11	0	0		96	2.9	2.2	8.1
29	.19	0		0	------	0	.01		281	2.1	2.5	.33
30	.10	0		0	------	0	0		434	2.3	2.5	.06
31	0	------		0	------	0	------		------	2.5	2.2	------
TOTAL	345.67	1.19	0	2.91	8.61	.02	1,250.85	0	4,799.29	1,038.4	50.95	1,160.12
MEAN	11.2	.040	0	.094	.31	.0006	41.7	0	160	33.5	1.64	38.7
MAX	290	.25	0	2.8	3.1	.02	607	0	588	782	2.5	643
MIN	0	0	0	0	0	0	0	0	0	2.1	.02	0
AC-FT	686	2.4	0	5.8	17	.04	2,480	0	9,520	2,060	101	2,300

CAL YR 1970 TOTAL 16,312.73 MEAN 44.7 MAX 1,180 MIN 0 AC-FT 32,360
WTR YR 1971 TOTAL 8,658.01 MEAN 23.7 MAX 782 MIN 0 AC-FT 17,170

07240500 Lake Overholser near Oklahoma City, Okla.

LOCATION.--Lat 35°29'11", long 97°39'58", on north line of SW 1/4 sec.30, T.12 N., R.4 W., Oklahoma County, at control tower at left end of dam on North Canadian River, 2.9 miles upstream from Mustang Creek, 9 miles west of State Capitol in Oklahoma City, and at mile 281.5.

DRAINAGE AREA.--13,221 sq mi, of which 4,899 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Oklahoma City Water Department). Prior to Oct. 1, 1955, at same site at datum 1,065.77 ft elevation. Oct. 1, 1955, to Sept. 30, 1962, water-stage recorder at same site and present datum.

EXTREMES.--Current year: Maximum contents, 16,160 acre-ft Oct. 1 (elevation, 1,241.65 ft); minimum observed, 8,050 acre-ft Aug. 25 (elevation, 1,236.25 ft).
Period of record: Maximum contents, 20,900 acre-ft June 14, 1944 (elevation, 1,242.67 ft), from capacity table then in use; minimum observed, 1,870 acre-ft May 14, 1955 (elevation, 1,230.62 ft).

REMARKS.--Reservoir is formed by Ambursen-type dam flanked by long earth-fill sections. Storage began in 1917. Dam was partly washed out in 1923 and rebuilt in 1924. Capacity, 17,100 acre-ft below elevation 1,242.27 ft (top of spillway gates). Dead storage, 1,400 acre-ft below elevation 1,229.77 ft (sill of outlet works). Figures given herein represent total contents. Water diverted for municipal water supply by Oklahoma City. Revised capacity table used since Oct. 1, 1950.

COOPERATION.--Elevations and capacity table furnished by Oklahoma City Water Department.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet) +	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,241.65	16,160	--
Oct. 31	1,241.10	15,320	-840
Nov. 30	1,240.00	13,640	-1,680
Dec. 31	1,239.30	12,580	-1,060
CAL YR 1970	--	--	+6,200
Jan. 31	1,239.20	12,420	-160
Feb. 28	1,239.30	12,580	+160
Mar. 31	1,238.00	10,610	-1,970
Apr. 30	1,239.70	13,180	+2,570
May 31	1,238.95	12,040	-1,140
June 30	1,238.20	10,910	-1,130
July 31	1,237.38	9,680	-1,230
Aug. 31	1,239.90	13,490	+3,810
Sept. 30	1,239.38	12,700	-790
WTR YR 1971	--	--	-3,460

+ Elevation at 0800 on following day.

07241000 North Canadian River below Lake Overholser, near Oklahoma City, Okla.

LOCATION.--Lat 35°28'46", long 97°39'47", in southeast corner of SW 1/4 sec.30, T.12 N., R.4 W., Oklahoma County, on left bank 200 ft upstream from bridge on State Highway 4, 0.5 mile downstream from Lake Overholser, 2.4 miles upstream from Mustang Creek, 9.1 miles southwest of State Capitol in Oklahoma City, and at mile 281.0.

DRAINAGE AREA.--13,222 sq mi, of which 4,899 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft above mean sea level. Prior to Oct. 1, 1961, at datum 10.00 ft higher and through Mar. 24, 1971 at site 200 ft downstream.

AVERAGE DISCHARGE.--18 years, 93.6 cfs (67,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,040 cfs Oct. 6 (gage height, 17.76 ft); minimum daily, 0.45 cfs Sept. 15.
Period of record: Maximum discharge, 8,020 cfs Oct. 5, 1959; maximum gage height, 24.62 ft Sept. 23, 1965; no flow at times in 1952-57.
Maximum stage known, 40.9 ft., present datum, in October 1923 (from information by State Highway Department).

REMARKS.--Records fair. Some regulation by Canton Lake (see station 07238500) and by Lake Overholser (see sta. 07240500). Diversions above station into Lake Hefner Canal (see sta. 0724000).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	7.0	4.0	8.0	1.3	4.5	2.2	1.3	2.4	44	.95	1.4
2	5.0	17	4.0	7.0	1.3	6.0	1.0	1.5	3.2	12	.86	1.4
3	1.9	26	3.7	6.0	1.4	4.0	.91	1.4	22	3.5	.86	1.4
4	1.1	30	3.7	5.0	4.5	4.0	.86	1.3	3.1	1.9	.86	1.4
5	103	7.0	4.0	4.5	1.9	3.7	.86	1.3	1.2	1.4	.86	1.4
6	474	3.2	4.0	4.0	1.9	12	.86	1.4	1.1	1.2	.86	1.4
7	34	3.0	3.7	3.7	1.8	3.0	.82	1.4	1.3	1.1	.77	1.3
8	179	7.5	4.0	3.6	1.5	4.5	.77	1.3	12	.95	1.0	.98
9	406	26	4.0	3.5	1.8	3.5	.73	1.3	17	.77	.86	.95
10	25	3.0	5.0	3.4	2.4	2.4	.68	1.3	4.7	.77	.77	.95
11	15	42	8.0	3.3	2.0	2.2	.68	2.6	2.3	.77	.86	.95
12	14	3.0	1.4	3.2	1.7	2.7	.68	3.3	1.6	.77	.87	.95
13	12	11	1.0	3.2	1.7	2.4	.68	1.7	1.3	.82	.77	.83
14	12	26	.95	2.7	1.7	3.5	.68	1.4	1.3	.77	.77	.48
15	15	5.5	.95	2.7	1.7	1.7	.68	1.4	1.2	.73	.77	.45
16	67	6.0	1.0	2.7	1.7	1.7	.71	1.4	1.2	.68	.77	.46
17	90	7.5	1.0	2.4	1.7	1.4	.86	1.4	1.0	.68	.73	10
18	53	8.5	1.3	2.4	11	12	.86	1.5	1.1	.60	.65	6.7
19	29	15	3.2	2.2	20	2.2	111	1.9	1.3	.50	.59	1.2
20	4.5	5.5	1.7	1.7	12	1.2	3.1	1.3	1.2	.50	.59	102
21	5.0	5.5	1.4	2.2	31	1.1	2.2	1.2	7.5	.50	.59	12
22	5.5	26	1.2	1.9	21	1.1	1.4	1.2	12	.87	.56	9.0
23	12	5.5	10	1.7	12	1.0	1.3	1.3	2.4	1.1	.50	8.7
24	14	3.0	2.7	1.7	15	.95	1.2	1.7	1.2	.89	110	13
25	9.0	3.2	2.7	1.4	23	1.1	1.2	1.3	1.0	.86	1.2	14
26	23	3.5	2.4	1.4	26	1.1	1.2	1.3	.95	.86	.96	8.0
27	56	3.5	1.9	1.4	10	1.1	1.5	1.7	.86	.86	.86	3.7
28	13	3.7	1.6	1.4	6.0	1.0	1.2	1.5	.86	1.4	.86	2.7
29	6.0	4.0	1.4	1.4	------	1.0	1.0	1.3	.68	1.0	.96	2.2
30	4.5	4.5	11	1.4	------	.98	1.0	1.3	.68	.95	1.1	1.7
31	3.5	------	9.0	1.3	------	.90	------	2.0	------	.95	1.3	------
TOTAL	1,710.0	322.1	105.90	92.4	219.0	89.93	142.82	47.2	109.63	84.65	134.91	211.60
MEAN	55.2	10.7	3.42	2.98	7.82	2.90	4.76	1.52	3.65	2.73	4.35	7.05
MAX	474	42	11	8.0	31	12	111	3.3	22	44	110	102
MIN	1.1	3.0	.95	1.3	1.3	.90	.68	1.2	.68	.50	.50	.45
AC-FT	3,390	639	210	183	434	178	283	94	217	168	268	420

CAL YR 1970 TOTAL 5,658.95 MEAN 15.5 MAX 614 MIN .77 AC-FT 11,220
WTR YR 1971 TOTAL 3,270.14 MEAN 8.96 MAX 474 MIN .45 AC-FT 6,490

07241550 North Canadian River near Harrah, Okla.

LOCATION.--Lat 35°30'01", long 97°11'37", in SW 1/4 NW 1/4 sec.22, T.12 N., R.1 E., Oklahoma County, near left bank on downstream side of pier of county road bridge, 2.2 miles northwest of Harrah, 3.8 miles downstream from Choctaw Creek, and at mile 230.0.

DRAINAGE AREA.--13,501 sq mi, of which 4,899 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,055.69 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 2,290 cfs Oct. 9 (gage height, 11.98 ft); minimum, 41 cfs Sept. 13, 14.
Period of record: Maximum discharge, 5,130 cfs May 30, 1970 (gage height, 16.05 ft); minimum, 38 cfs Sept. 7, 1970.

REMARKS.--Records good. Some regulation by Canton Lake (see station 07238500) and by Lake Overholser (see sta. 07240500), where diversions are made into Lake Hefner Canal (see sta. 07240000). Low flow sustained by part of sewage effluent from Oklahoma City. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	88	72	78	53	96	69	75	90	304	62	56
2	128	111	75	76	54	91	68	67	170	1,190	53	56
3	115	117	75	96	59	88	70	64	609	507	53	56
4	100	99	74	425	61	90	69	65	968	153	57	57
5	114	95	73	167	61	87	65	66	232	121	56	53
6	1,310	96	72	103	61	83	69	66	119	95	56	50
7	866	96	70	86	57	77	72	65	97	84	58	59
8	1,620	90	72	85	54	77	72	63	98	79	57	74
9	1,630	85	76	88	54	77	73	65	219	77	60	57
10	711	85	76	77	68	78	68	103	333	75	64	55
11	336	88	75	71	77	78	65	97	153	70	59	55
12	198	86	76	71	77	79	60	82	113	63	95	51
13	166	102	80	72	76	79	61	69	104	61	240	46
14	148	201	72	74	74	74	66	66	92	61	126	47
15	135	165	76	71	69	68	69	65	75	60	160	50
16	128	115	81	71	70	70	68	61	72	59	233	50
17	128	85	90	69	73	72	75	55	70	58	125	58
18	193	82	82	65	75	72	116	59	66	55	83	230
19	160	85	81	64	143	69	88	66	62	52	72	466
20	167	79	79	67	124	72	93	63	59	52	67	135
21	133	74	79	67	108	74	182	60	125	55	64	95
22	117	72	79	66	585	68	96	59	364	55	58	112
23	116	71	81	64	247	68	80	62	113	69	52	83
24	123	78	79	63	219	72	74	130	84	401	59	96
25	122	82	78	60	199	73	70	90	70	127	82	852
26	115	79	71	56	188	73	64	69	64	78	83	428
27	246	73	68	67	163	74	67	149	57	74	65	135
28	167	69	71	64	121	73	69	227	51	73	60	96
29	133	73	72	64	------	67	67	92	53	217	56	85
30	102	70	76	64	------	69	74	79	59	99	52	79
31	82	------	76	59	------	70	------	64	------	74	55	------
TOTAL	9,961	2,791	2,357	2,670	3,270	2,358	2,299	2,463	4,841	4,598	2,522	3,822
MEAN	321	93.0	76.0	86.1	117	76.1	76.6	79.5	161	148	81.4	127
MAX	1,630	201	90	425	585	96	182	227	968	1,190	240	852
MIN	82	69	68	56	53	67	60	55	51	52	52	46
AC-FT	19,760	5,540	4,680	5,300	6,490	4,680	4,560	4,890	9,600	9,120	5,000	7,580

CAL YR 1970 TOTAL 59,519 MEAN 163 MAX 4,260 MIN 44 AC-FT 118,100
WTR YR 1971 TOTAL 43,952 MEAN 120 MAX 1,630 MIN 46 AC-FT 87,180

PEAK DISCHARGE (BASE, 4,000 CFS).--No peak above base.

07242000 North Canadian River near Wetumka, Okla.

LOCATION.--Lat 35°15'53", long 96°12'25", in center of SW 1/4 sec.12, T.9 N., R.10 E., Hughes County, near left bank on downstream side of pier of bridge on U.S. Highway 75, 2.3 miles upstream from Wewoka Creek, 2.5 miles northeast of Wetumka, and at mile 84.4.

DRAINAGE AREA.--14,290 sq mi, of which 4,899 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 683.28 ft above mean sea level. Prior to Jan. 19, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--34 years, 663 cfs (480,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,350 cfs Oct. 10 (gage height, 10.28 ft); minimum, 50 cfs Sept. 17.
Period of record: Maximum discharge, 66,000 cfs Apr. 15, 1945 (gage height, 26.40 ft); no flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.
Flood in October 1923 reached a stage of 26.9 ft, from information by Corps of Engineers.

REMARKS.--Records good. Some regulation by Lake Overholser (see sta. 07240500) and other dams upstream. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 35 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 977: 1942. WSP 1341: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	614	255	170	158	339	140	157	246	458	155	56
2	483	601	246	177	154	321	138	146	244	2,540	162	54
3	413	591	242	508	152	298	133	140	2,070	1,070	166	52
4	365	523	229	887	161	276	132	134	2,090	538	153	52
5	336	463	220	638	240	257	139	135	992	655	126	100
6	934	429	210	386	330	242	145	136	553	651	117	1,070
7	2,090	403	209	366	240	226	147	136	730	402	125	281
8	3,290	370	205	346	158	212	145	122	477	301	114	103
9	8,050	359	214	286	124	207	144	126	713	249	99	71
10	8,470	347	212	276	149	204	142	193	818	210	91	75
11	4,420	331	211	258	143	202	140	288	410	179	92	76
12	1,840	320	206	249	143	199	135	176	282	159	163	60
13	1,320	317	195	279	132	200	132	142	1,710	150	112	57
14	961	369	191	292	131	194	132	128	1,360	133	127	56
15	744	696	214	267	131	186	129	135	4,170	118	116	52
16	603	670	225	237	127	179	129	124	1,360	106	170	51
17	521	500	227	223	121	179	134	114	618	95	187	52
18	459	481	224	214	123	175	154	106	378	90	175	62
19	405	410	213	204	121	172	158	103	288	83	140	92
20	363	365	203	202	115	169	232	101	243	81	141	110
21	330	337	207	202	185	167	537	97	219	75	148	103
22	330	312	213	200	985	167	707	94	206	72	125	132
23	1,760	303	204	194	931	165	383	103	241	318	112	228
24	5,480	286	193	193	523	164	375	116	206	430	100	164
25	2,200	283	189	192	607	166	313	122	179	185	90	513
26	3,190	280	182	185	678	167	243	114	275	123	79	761
27	5,810	277	179	180	502	165	203	226	217	98	73	379
28	3,390	270	179	177	398	164	173	458	179	151	68	288
29	1,380	269	176	172	------	162	164	298	150	218	63	462
30	899	260	180	167	------	156	162	203	133	381	60	307
31	724	------	175	163	------	145	------	175	------	259	59	------
TOTAL	62,130	12,036	6,428	8,490	7,962	6,225	6,140	4,848	21,757	10,578	3,708	5,919
MEAN	2,004	401	207	274	284	201	205	156	725	341	120	197
MAX	8,470	696	255	887	985	339	707	458	4,170	2,540	187	1,070
MIN	330	260	175	163	115	145	129	94	133	72	59	51
AC-FT	123,200	23,870	12,750	16,840	15,790	12,350	12,180	9,620	43,160	20,980	7,350	11,740

CAL YR 1970 TOTAL 203,995 MEAN 559 MAX 8,480 MIN 39 AC-FT 404,600
WTR YR 1971 TOTAL 156,221 MEAN 428 MAX 8,470 MIN 51 AC-FT 309,900

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-10	0730	10.28	9,350	10-27	0900	9.73	6,650
10-24	0330	9.38	6,520	6-15	0915	9.41	6,620

07242350 Deep Fork near Arcadia, Okla.

LOCATION.--Lat 35°39'10", long 97°20'58", on south line of SW 1/4 sec.30, T.14 N., R.1 W., Oklahoma County, on left bank at downstream side of county road bridge, 1.6 miles upstream from Coffee Creek, 1.6 miles southwest of Arcadia, and at mile 212.8.

DRAINAGE AREA.--108 sq mi.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 950 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,990 cfs June 3, July 1; maximum gage height, 15.36 ft July 1; minimum daily discharge, 17 cfs Dec. 26, Jan. 2.
Period of record: Maximum discharge, 5,260 cfs Sept. 22 (gage height, 19.81 ft); maximum gage height, 21.10 ft Apr. 30, 1970; minimum daily discharge, 16 cfs at times in 1969-70.

REMARKS.--Records fair. Low flow sustained by part of sewage effluent from Oklahoma City. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	26	18	24	36	28	24	110	876	24	19
2	21	35	24	17	25	35	23	24	50	337	24	18
3	19	29	23	480	25	39	24	24	690	59	24	19
4	19	27	23	65	25	32	25	24	50	33	23	18
5	354	25	21	36	26	32	24	27	47	26	24	19
6	191	24	22	33	25	30	25	24	39	28	24	18
7	128	23	22	30	25	30	25	21	36	25	24	35
8	359	22	22	29	28	30	26	21	140	27	24	21
9	132	23	22	28	26	28	28	28	166	25	27	20
10	46	21	20	26	25	23	25	38	67	24	26	20
11	35	20	22	26	24	23	26	35	60	22	157	20
12	38	21	22	27	25	23	24	24	55	22	267	20
13	38	36	22	25	24	23	28	21	54	22	109	20
14	36	91	21	26	23	23	25	20	46	21	51	20
15	24	39	23	27	22	23	25	19	44	20	50	21
16	26	36	25	26	23	23	26	20	43	20	46	21
17	31	33	22	27	23	24	38	21	42	19	32	108
18	31	31	21	24	24	25	38	25	42	18	26	368
19	28	31	20	26	65	24	31	22	41	19	25	58
20	25	31	20	27	27	23	45	19	40	20	23	39
21	23	29	20	30	217	24	31	20	191	19	22	34
22	22	30	20	25	148	23	25	21	220	20	21	31
23	23	29	20	24	169	25	24	36	58	107	21	30
24	33	29	21	24	178	24	22	37	49	103	20	432
25	23	30	20	24	156	25	23	21	45	37	20	427
26	37	29	17	24	112	25	24	22	42	39	20	70
27	29	26	18	24	80	25	23	111	39	49	19	51
28	26	26	18	24	55	27	22	36	36	87	19	43
29	26	25	19	24	------	23	23	27	39	41	19	38
30	25	24	18	23	------	23	24	22	39	29	19	32
31	24	------	19	24	------	27	------	54	------	25	19	------
TOTAL	1,892	899	653	1,293	1,649	820	800	888	2,620	2,219	1,249	2,090
MEAN	61.0	30.0	21.1	41.7	58.9	26.5	26.7	28.6	87.3	71.6	40.3	69.7
MAX	359	91	26	480	217	39	45	111	690	876	267	432
MIN	19	20	17	17	22	23	22	19	36	18	19	18
AC-FT	3,750	1,780	1,300	2,560	3,270	1,630	1,590	1,760	5,200	4,400	2,480	4,150

CAL YR 1970 TOTAL 18,680 MEAN 51.2 MAX 2,050 MIN 16 AC-FT 37,050
WTR YR 1971 TOTAL 17,072 MEAN 46.8 MAX 876 MIN 17 AC-FT 33,860

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
6-3	0445	15.35	2,990	9-24	2315	14.69	2,710
7-1	1245	15.36	2,990				

07243000 Dry Creek near Kendrick, Okla.

LOCATION.--Lat 35°46'55", long 96°51'20", in NW 1/4 NW 1/4 sec.14, T.15 N., R.4 E., Lincoln County, near left bank on downstream side of county road bridge, 1 mile downstream from Beaver Creek and 4.5 miles west of Kendrick.

DRAINAGE AREA.--69.0 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (from topographic map).

AVERAGE DISCHARGE.--16 years, 16.8 cfs (12,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,830 cfs Oct. 8 (gage height 10.85 ft); no flow much of the year.
Period of record: Maximum discharge, 5,020 cfs June 25, 1958 (gage height, 13.63 ft); no flow at times in most years.

REMARKS.--Records fair. Records of chemical analyses and of suspended sediment loads for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.11	.90	.89	1.2	2.6	1.4	1.0	25	74	1.5	0
2	0	.48	.66	1.0	1.2	2.2	1.3	.63	9.5	157	1.0	0
3	0	.23	.66	75	1.5	2.0	1.3	.45	343	7.0	.63	0
4	0	.12	4.9	8.6	2.2	2.0	1.3	.50	9.2	3.6	.45	0
5	203	.10	.50	5.1	1.7	2.2	1.3	.45	4.6	1.6	.35	77
6	24	.12	.45	4.8	1.4	1.8	1.3	.40	3.0	1.0	.30	3.4
7	1.9	.16	.45	2.5	1.3	1.5	1.2	.35	2.0	.65	.40	.20
8	783	.19	.76	2.0	1.5	1.8	1.3	.25	3.8	.40	.50	0
9	39	.15	.89	2.0	2.0	2.0	1.3	1.0	4.1	.30	1.2	0
10	6.6	.12	1.0	3.2	2.2	2.0	1.3	1.5	2.6	.15	.35	0
11	1.9	.12	.89	3.0	2.0	1.8	1.3	20	2.2	0	0	0
12	1.1	.14	.63	1.8	1.5	1.8	1.4	1.3	2.0	0	.30	0
13	.70	.30	.63	1.8	1.3	1.8	1.2	.63	3.4	0	.20	0
14	.50	1.1	.76	2.0	1.5	2.0	1.2	.50	2.0	0	.15	0
15	.46	.79	1.2	1.5	1.4	1.4	1.3	.40	1.4	0	.30	0
16	.42	.48	1.5	1.7	1.5	1.2	1.4	.30	1.0	0	.25	0
17	.40	.44	1.3	1.7	1.3	1.3	1.5	.20	.76	0	0	8.0
18	.35	.44	1.2	3.2	1.7	1.4	2.6	2.2	.50	0	0	189
19	.35	.44	.89	3.8	1.8	1.3	1.8	4.3	.35	0	0	11
20	.32	.32	.89	4.6	1.3	1.4	12	.63	.20	0	0	.89
21	.30	.26	1.3	2.8	8.3	1.7	3.4	.30	.40	0	0	0
22	.26	.27	1.4	1.8	8.6	1.7	2.4	.25	.50	0	0	0
23	.37	.26	1.0	1.5	4.3	1.5	2.4	.63	.30	389	0	0
24	.76	.26	.76	1.5	4.8	1.5	1.4	.76	.10	56	0	289
25	.56	.44	.89	1.5	9.2	1.8	1.3	.25	0	4.8	0	245
26	11	.82	.76	1.3	5.6	1.8	1.2	5.4	0	11	0	19
27	18	.74	.89	1.2	3.0	1.8	1.2	29	0	8.3	0	5.9
28	2.2	.66	1.0	1.4	2.6	1.8	.63	4.3	0	9.2	0	2.4
29	.78	.66	1.0	1.7	------	1.7	1.2	3.4	0	16	0	1.7
30	.20	.82	1.0	1.5	------	1.5	1.4	3.6	0	8.3	0	1.2
31	.13	------	.89	1.3	------	1.5	------	2.6	------	2.4	0	------
TOTAL	1,098.56	11.54	31.95	147.69	77.9	53.8	55.23	87.48	421.91	750.70	7.88	853.69
MEAN	35.4	.38	1.03	4.76	2.78	1.74	1.84	2.82	14.1	24.2	.25	28.5
MAX	783	1.1	4.9	75	9.2	2.6	12	29	343	389	1.5	289
MIN	0	.10	.45	.89	1.2	1.2	.63	.20	0	0	0	0
AC-FT	2,180	23	63	293	155	107	110	174	837	1,490	16	1,690

CAL YR 1970 TOTAL 3,433.36 MEAN 9.41 MAX 930 MIN 0 AC-FT 6,810
WTR YR 1971 TOTAL 3,598.33 MEAN 9.86 MAX 783 MIN 0 AC-FT 7,140

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-8	1330	10.85	2,830	7-23	1845	10.67	2,740
6-3	0300	9.55	2,180				

07243500 Deep Fork near Beggs, Okla.

LOCATION.--Lat 35°40'15", long 96°04'08", on line between secs. 19 and 20, T.14 N., R.12 E., Okmulgee County, near left bank on downstream side of pier of county road bridge, 3 miles upstream from Adams Creek, 4 miles south of Beggs, 8 miles downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0.

DRAINAGE AREA.--2,018 sq mi.

PERIOD OF RECORD.--September 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 632.55 ft above mean sea level. Prior to Aug. 29, 1939, nonrecording gage at site 450 ft downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--33 years, 773 cfs (560,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,620 cfs Sept. 6 (gage height, 19.42 ft); minimum, 26 cfs Sept. 4, 5.
Period of record: Maximum discharge, 66,800 cfs May 11, 1943 (gage height, 34.55 ft); no flow at times in 1939, 1954, 1956.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 26 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 957: 1941. WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,920	1,520	109	78	94	620	82	232	202	161	201	31
2	1,270	1,150	102	79	88	520	80	180	240	211	140	29
3	871	1,010	100	278	79	467	75	169	1,220	345	129	28
4	653	796	100	1,360	193	418	69	152	2,090	297	132	27
5	502	600	96	915	980	372	63	158	1,720	365	177	1,610
6	1,500	484	91	499	664	350	37	138	1,040	501	136	5,140
7	1,730	402	89	261	451	336	63	108	1,100	483	91	5,120
8	1,820	350	85	186	296	294	63	105	1,260	445	75	3,570
9	2,910	308	83	238	208	275	61	101	1,510	430	69	1,140
10	2,990	268	81	256	174	250	61	94	1,540	405	61	744
11	2,960	244	82	244	169	232	60	154	1,310	361	55	534
12	2,920	226	84	256	174	220	59	119	990	307	55	380
13	2,810	220	79	275	164	202	56	102	1,450	247	75	301
14	2,710	251	80	301	147	192	55	94	2,020	202	96	244
15	2,540	465	79	315	135	180	56	81	2,470	166	83	208
16	2,310	434	79	268	117	158	59	74	2,400	133	130	186
17	1,640	329	86	232	114	147	59	71	2,150	106	206	169
18	994	262	96	214	112	137	60	60	1,300	84	119	382
19	718	232	102	196	115	128	64	54	651	76	87	1,440
20	560	214	96	174	208	107	87	55	462	74	81	1,210
21	450	196	84	152	376	102	128	60	350	63	81	647
22	364	174	87	137	2,190	98	129	59	275	56	132	420
23	2,350	158	84	135	2,280	88	186	57	232	151	164	331
24	3,690	136	83	142	1,710	90	256	56	196	1,050	122	273
25	3,460	127	85	134	1,310	93	250	80	158	561	87	1,680
26	3,300	115	85	124	1,530	87	220	78	123	250	68	2,330
27	3,440	104	75	115	1,180	85	180	71	108	159	56	1,290
28	3,460	108	71	107	820	83	158	336	100	174	47	657
29	3,300	120	70	100	------	84	220	559	98	175	41	609
30	3,070	121	71	95	------	85	419	268	116	185	37	539
31	2,550	------	75	95	------	87	------	196	------	361	34	------
TOTAL	65,762	11,124	2,669	7,961	16,078	6,587	3,415	4,121	28,881	8,584	3,067	31,269
MEAN	2,121	371	86.1	257	574	212	114	133	963	277	98.9	1,042
MAX	3,690	1,520	109	1,360	2,280	620	419	559	2,470	1,050	206	5,140
MIN	364	104	70	78	79	83	37	54	98	56	34	27
AC-FT	130,400	22,060	5,290	15,790	31,890	13,070	6,770	8,170	57,290	17,030	6,080	62,020

CAL YR 1970 TOTAL 189,486.2 MEAN 519 MAX 5,440 MIN 2.4 AC-FT 375,800
WTR YR 1971 TOTAL 189,518.0 MEAN 519 MAX 5,140 MIN 27 AC-FT 375,900

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-10	0300	13.83	3,000	9-6	1615	19.42	5,620
10-24	0400	15.86	3,740				

07244800 Eufaula Lake near Brooken, Okla.
(Formerly published as Eufaula Reservoir near Brooken)

LOCATION.--Lat 35°18'25", long 95°21'45", in SW 1/4 sec.25, T.10 N., R.18 E., McIntosh County, in intake structure near left end of dam on Canadian River, 4 miles northeast of Brooken and at mile 27.0.

DRAINAGE AREA.--47,522 sq mi, of which 9,700 sq mi is probably noncontributing.

PERIOD OF RECORD.--February 1964 to current year. Prior to October 1970 published as Eufaula Reservoir near Brooken.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 2,881,600 acre-ft Oct. 28 (elevation, 589.61 ft); minimum, 1,798,500 acre-ft Apr. 19 (elevation, 578.77 ft).
Period of record: Maximum contents, 2,932,400 acre-ft May 18, 1968 (elevation, 590.04 ft); minimum since power pool first filled, 1,181,800 acre-ft Nov. 4, 1964 (elevation, 570.23 ft).

REMARKS.--Reservoir is formed by an earth dam having a gated, concrete, ogee-type spillway weir controlled by 11 40-foot taintor gates. Closure for diversion was made Feb. 1, 1963 and regulated storage began Feb. 10, 1964; minimum power pool was first filled June 17, 1964. Capacity, 3,844,000 acre-ft at elevation 597.0 ft (top of flood control pool), 2,376,000 acre-ft at elevation 585.0 ft (top of power pool), and 897,000 acre-ft at elevation 565.0 ft (bottom of power pool). Dead storage is negligible. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, power development, and other water uses.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

578	1,735,000	587	2,587,100
581	1,991,900	590	2,927,600
584	2,275,300		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060.2	2655.0	2353.6	2053.8	2026.3	1983.8	1874.9	1871.4	1958.8	2182.6	2051.0	1917.4
2	2065.7	2602.3	2354.7	2053.8	2017.2	1982.0	1873.2	1869.7	1945.5	2197.0	2048.2	1907.8
3	2069.4	2558.9	2350.6	2080.5	2008.2	1976.7	1871.4	1864.6	1987.4	2204.8	2044.6	1897.4
4	2070.4	2528.9	2339.4	2082.4	2010.0	1970.4	1869.7	1857.7	2043.6	2207.7	2037.2	1894.8
5	2074.0	2507.6	2337.4	2080.5	2004.5	1977.6	1863.7	1862.9	2065.7	2209.6	2035.4	1949.1
6	2069.4	2485.3	2343.5	2075.0	2000.0	1976.7	1859.4	1864.6	2079.6	2203.8	2046.4	2001.8
7	2060.2	2459.0	2313.2	2069.4	2010.0	1978.4	1851.7	1864.6	2087.0	2196.1	2057.4	2021.8
8	2302.2	2448.6	2289.2	2061.1	1996.4	1968.6	1847.5	1866.3	2102.9	2187.4	2060.2	2026.3
9	2469.5	2440.2	2265.4	2060.2	1992.8	1963.3	1844.9	1873.2	2130.2	2175.8	2057.4	2028.1
10	2573.0	2447.5	2247.7	2067.6	1984.7	1955.3	1844.1	1882.6	2142.5	2168.2	2051.9	2027.2
11	2601.2	2440.2	2222.2	2070.4	1978.4	1950.0	1845.8	1910.4	2151.0	2168.2	2046.4	2024.5
12	2601.2	2441.3	2200.9	2064.8	1967.7	1942.9	1840.7	1913.9	2152.9	2158.6	2039.1	2026.3
13	2596.8	2432.9	2176.8	2080.5	1966.8	1944.7	1829.6	1918.3	2163.4	2147.2	2034.5	2017.2
14	2606.7	2432.9	2145.3	2089.8	1969.5	1949.1	1819.5	1916.5	2179.7	2134.9	2034.5	2005.4
15	2606.7	2430.8	2125.4	2097.3	1959.7	1948.2	1814.5	1917.4	2204.8	2123.6	2036.3	2002.7
16	2592.5	2425.6	2104.8	2104.8	1950.8	1942.9	1811.1	1916.5	2217.4	2116.0	2033.6	2000.0
17	2575.1	2424.6	2089.8	2107.6	1945.5	1936.7	1810.3	1908.7	2220.3	2111.3	2029.9	2000.9
18	2554.6	2410.1	2083.3	2101.0	1945.5	1941.1	1812.0	1902.6	2216.4	2106.6	2022.7	2010.0
19	2537.4	2411.1	2077.8	2092.6	1941.1	1915.6	1806.9	1900.0	2216.4	2095.4	2014.5	2011.8
20	2522.5	2397.7	2078.7	2086.1	1941.1	1917.4	1805.2	1893.9	2223.2	2085.2	2003.6	2006.3
21	2512.9	2398.7	2075.0	2077.8	1978.4	1916.5	1810.3	1886.1	2227.1	2075.9	2000.9	2001.8
22	2506.5	2398.7	2068.5	2072.2	1975.8	1905.2	1818.7	1887.8	2227.1	2063.0	1997.3	1994.6
23	2587.1	2392.6	2062.0	2074.0	1979.4	1898.2	1848.3	1916.5	2220.3	2068.5	1987.4	1986.5
24	2671.6	2384.3	2060.2	2077.8	1982.9	1888.7	1868.9	1935.0	2212.5	2069.4	1980.2	1982.0
25	2708.4	2382.3	2060.2	2068.5	1979.4	1886.1	1877.5	1930.6	2204.8	2071.3	1970.4	1997.3
26	2825.7	2381.2	2059.3	2058.4	1983.8	1880.9	1872.3	1929.7	2197.0	2064.8	1961.5	2009.0
27	2878.1	2364.9	2058.4	2055.6	1987.4	1881.8	1873.2	1939.4	2192.2	2060.2	1953.5	2008.2
28	2859.4	2359.8	2059.3	2047.3	1990.1	1886.1	1868.9	1949.1	2179.7	2060.2	1950.0	2004.5
29	2816.5	2359.8	2055.6	2042.7	------	1880.0	1871.4	1956.2	2175.8	2055.6	1950.0	1996.4
30	2761.5	2360.8	2064.8	2033.6	------	1880.9	1869.7	1958.8	2169.1	2050.1	1941.1	1985.6
31	2708.4	------	2053.8	2031.8	------	1886.1	------	1976.7	------	2050.1	1927.9	------
(+)	558.10	584.85	581.68	581.44	580.98	579.80	579.61	580.83	582.91	581.64	580.28	580.93
(‡)	+656.5	-347.6	-307.0	-22.0	-41.7	-104.0	-16.4	+107.0	+192.4	-119.0	-122.2	+57.7
MAX	2,878.1	2,655.0	2,354.7	2,107.6	2,107.6	1,983.8	1,877.5	1,976.7	2,227.1	2,209.6	2,060.2	2,028.1
MIN	2,060.2	2,359.8	2,053.8	2,031.8	2,031.8	1,880.0	1,805.2	1,857.7	1,945.5	2,050.1	1,927.9	1,894.8

CAL YR 1970.....‡ +290.1
WTR YR 1971.....‡ -66.3

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07245000 Canadian River near Whitefield, Okla.

LOCATION.--Lat 35°15'45", long 95°14'19", in SE 1/4 SE 1/4 sec.12, T.9 N., R.19 E., Haskell County, near right bank on downstream side of pier of bridge on State Highway 2, 0.8 mile north of Whitefield, 5.5 miles upstream from Taleka (Snake) Creek, 8.2 miles downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 sq mi, of which 9,700 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 478.16 ft above mean sea level. Prior to Jan. 11, 1939, non-recording gage and Jan. 11, 1939, to Dec. 10, 1941, June 12, 1947, to Sept. 30, 1948, water-stage recorder, all at site 2.1 miles downstream at datum 2.80 ft lower. Dec. 11, 1941, to June 11, 1947, water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--33 years, 5,320 cfs (3,854,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 38,000 cfs Nov. 1 (gage height, 12.30 ft); maximum gage height, 12.92 ft Oct. 28; minimum daily discharge, 64 cfs Oct. 4.
Period of record: Maximum discharge, 281,000 cfs May 10, 1943 (gage height, 25.5 ft); minimum daily, 0.4 cfs Oct. 8, 1956.
Maximum stage known since 1898, that of May 10, 1943, from information by local resident.

REMARKS.--Records fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 sq mi of intervening area, completely regulated thereafter by Eufaula Lake (see sta. 07244800). Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 42 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1177: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	37,300	1,700	177	2,860	5,390	1,250	432	4,490	1,450	200	5,170
2	84	36,200	1,300	897	5,000	6,020	1,020	113	6,320	925	1,320	4,570
3	68	29,400	2,710	1,140	5,120	5,540	686	2,780	3,180	367	2,670	4,660
4	64	17,900	3,160	4,130	3,370	5,390	204	2,880	4,920	325	3,190	2,000
5	720	14,200	873	5,480	3,850	3,220	3,160	1,110	3,480	118	1,730	771
6	3,130	14,100	1,670	5,740	1,940	791	3,190	2,750	1,210	3,390	644	883
7	3,150	14,300	10,700	6,370	1,030	138	2,840	2,050	1,930	5,560	495	3,070
8	3,610	13,500	13,800	5,220	3,850	4,280	2,380	623	457	6,400	109	5,780
9	9,670	5,100	13,700	1,090	3,780	5,630	890	115	87	6,010	2,340	5,490
10	8,190	3,660	13,900	193	5,550	4,220	243	2,740	1,560	3,920	3,100	4,690
11	8,950	3,010	13,400	698	4,790	3,320	85	744	2,560	857	3,830	2,870
12	14,500	3,780	13,100	3,120	3,550	4,390	2,220	1,110	2,430	4,080	3,290	358
13	14,000	4,990	12,400	4,290	811	1,430	4,450	296	1,480	5,920	3,420	3,010
14	2,280	4,940	16,200	2,790	135	204	4,970	1,990	3,080	5,820	1,290	6,080
15	2,720	4,810	16,000	1,050	4,000	558	2,850	715	1,700	5,300	121	2,840
16	13,800	4,650	13,600	596	5,480	2,430	3,500	96	2,130	4,560	1,900	1,010
17	13,800	5,040	9,510	162	4,240	3,510	673	4,980	3,370	2,710	3,270	3,990
18	13,700	7,470	6,280	328	3,560	3,860	149	3,960	4,590	2,730	3,840	1,240
19	13,600	5,220	2,320	6,150	3,960	4,010	4,760	968	3,500	4,120	4,520	130
20	9,770	5,380	1,030	6,160	1,080	999	3,990	3,690	1,120	3,150	5,470	3,430
21	8,000	1,560	2,300	4,600	1,540	1,240	2,650	3,580	1,020	4,310	3,070	4,040
22	5,280	1,070	4,090	3,080	6,730	3,090	3,780	431	1,190	5,520	3,470	4,900
23	7,010	2,530	2,710	633	5,900	5,090	3,080	173	3,820	4,820	6,990	4,640
24	9,640	4,800	1,270	237	6,050	2,850	551	3,070	4,620	1,650	6,180	5,860
25	13,500	4,690	394	5,200	7,240	4,650	142	4,210	4,080	1,100	4,670	1,820
26	16,300	4,680	465	5,040	4,300	3,650	5,120	907	4,180	3,280	4,410	138
27	9,860	4,650	515	2,910	848	807	1,780	2,580	3,730	2,500	3,760	3,400
28	31,000	4,620	978	4,480	191	192	2,760	317	4,200	3,070	1,240	5,680
29	35,300	1,370	1,410	4,100	------	2,000	1,620	99	3,560	4,110	198	5,570
30	36,800	3,130	1,480	3,020	------	523	2,680	78	2,950	3,360	3,280	6,650
31	36,800	------	1,110	1,170	------	724	------	68	------	936	6,160	------
TOTAL	345,686	268,050	184,075	90,251	100,755	90,146	67,673	49,655	86,944	102,368	90,177	104,740
MEAN	11,150	8,935	5,938	2,911	3,598	2,908	2,256	1,602	2,898	3,302	2,909	3,491
MAX	36,800	37,300	16,200	6,370	7,240	6,020	5,120	4,980	6,320	6,400	6,990	6,650
MIN	64	1,070	394	162	135	138	85	68	87	118	109	130
AC-FT	685,700	531,700	365,100	179,000	199,800	178,800	134,200	98,490	172,500	203,000	178,900	207,800

CAL YR 1970 TOTAL 1,829,470 MEAN 5,012 MAX 37,300 MIN 64 AC-FT 3,629,000
WTR YR 1971 TOTAL 1,580,520 MEAN 4,330 MAX 37,300 MIN 64 AC-FT 3,135,000

07245500 Sallisaw Creek near Sallisaw, Okla.

LOCATION.--Lat 35°27'52", long 94°51'43", in SW 1/4 sec.34, T.12 N., R.23 E., Sequoyah County, on downstream side of right pier of abandoned county road bridge, 300 ft upstream from U.S. Highway 64, 400 ft downstream from water-supply dam of city of Sallisaw, 3.5 miles west of Sallisaw, 5 miles upstream from Little Sallisaw Creek, and at mile 9.0.

DRAINAGE AREA.--182 sq mi.

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 474.78 ft above mean sea level. Prior to Aug. 20, 1953, and as supplementary gage since Feb. 21, 1958, water-stage recorder at site 400 ft upstream at datum 15.22 ft higher. Aug. 20, 1953, to Apr. 9, 1963, water-stage recorder at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--29 years, 186 cfs (134,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,400 cfs Oct. 26 (gage height, 13.83 ft); minimum daily, 0.70 cfs July 20.
Period of record: Maximum discharge, 110,000 cfs Apr. 15, 1945 (gage height, 11.25 ft, site and datum then in use), from rating curve extended above 23,000 cfs on basis of contracted-opening measurements at gage heights 7.96 and 11.25 ft; no flow at times in 1943, 1954, 1956, 1960, 1963, 1964.

REMARKS.--Records good. Small diversion above station for municipal water supply of city of Sallisaw.

COOPERATION.--Gage-height record, 30 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS--WSP 1117: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	1,380	89	57	82	246	46	113	125	13	33	2.6
2	191	1,420	84	86	76	226	43	98	110	13	26	2.2
3	143	1,240	76	300	71	222	41	83	110	12	42	2.4
4	113	1,130	74	605	82	203	40	72	98	9.5	80	2.4
5	92	998	68	434	91	191	41	65	83	7.8	49	13
6	78	859	65	319	92	180	39	73	71	6.8	43	10
7	68	758	63	245	95	167	37	550	61	5.5	35	9.2
8	410	770	59	199	90	153	35	358	59	4.2	27	7.6
9	1,130	874	58	171	84	146	34	251	55	3.4	20	6.0
10	757	654	55	156	80	153	35	295	50	2.9	18	5.3
11	475	459	59	143	85	148	36	379	46	2.5	16	4.6
12	389	364	55	132	106	142	36	326	41	2.1	14	3.7
13	316	300	53	724	132	136	34	254	34	1.6	11	3.2
14	261	340	50	1,170	134	128	34	201	34	1.1	9.8	3.0
15	209	373	55	854	129	119	33	163	30	1.0	9.9	2.7
16	164	325	66	584	124	110	32	134	26	.90	10	2.3
17	133	292	65	447	119	103	32	115	22	.80	12	3.1
18	111	261	62	350	118	96	32	99	19	.80	12	5.0
19	97	235	61	276	203	86	31	90	16	.80	13	7.6
20	86	210	60	229	245	82	39	78	18	.70	11	7.9
21	75	186	62	200	519	78	48	66	19	.80	9.3	6.6
22	65	168	78	178	1,160	73	52	65	19	.90	9.2	5.7
23	1,180	146	81	161	845	68	61	89	14	386	8.4	5.3
24	2,010	135	80	152	588	64	69	1,030	16	274	7.4	44
25	1,430	125	75	142	470	64	73	723	15	125	6.2	34
26	6,180	119	72	130	403	61	70	562	12	74	5.9	23
27	4,540	112	64	118	328	59	65	418	10	49	5.2	20
28	2,170	104	61	108	282	58	59	274	9.5	49	4.2	16
29	1,830	98	60	101	------	55	73	212	11	49	3.6	14
30	1,640	* 92	59	96	------	51	110	166	11	54	3.2	11
31	1,470	------	59	90	------	48	------	139	------	43	3.0	------
TOTAL	28,097	14,527	2,028	8,957	6,833	3,716	1,410	7,541	1,244.5	1,195.10	557.3	283.4
MEAN	906	484	65.4	289	244	120	47.0	243	41.5	38.6	18.0	9.45
MAX	6,180	1,420	89	1,170	1,160	246	110	1,030	125	386	80	44
MIN	65	92	50	57	71	48	31	65	9.5	.70	3.0	2.2
AC-FT	55,730	28,810	4,020	17,770	13,550	7,370	2,800	14,960	2,470	2,370	1,110	562

CAL YR 1970 TOTAL 100,281.80 MEAN 275 MAX 6,180 MIN .10 AC-FT 198,900
WTR YR 1971 TOTAL 76,389.30 MEAN 209 MAX 6,180 MIN .70 AC-FT 151,500

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-26	1930	13.83	10,400				

07246500 Arkansas River near Sallisaw, Okla.

LOCATION.--Lat 35°20'58", long 94°46'16", in SE 1/4 SW 1/4 sec.9, T.10 N., R.24 E., LeFlore County, at downstream right abutment of bridge on U. S. Highway 59, 0.4 mile downstream from Robert S. Kerr Lock and Dam, 7.5 miles south of Sallisaw, and at mile 394.9.

DRAINAGE AREA.--147,757 sq mi, of which 22,241 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1947 to December 1970 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 413.42 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, (1947-1970) 26,080 cfs (18,890,000 acre-ft per year).

EXTREMES.--Period October to December: Maximum discharge, 109,000 cfs Oct. 27 (gage height, 17.62 ft); no flow Dec. 6 (closure of lock and dam).
Period of record: Maximum discharge, 544,000 cfs May 27, 1957 (gage height, 34.80 ft); minimum observed, 161 cfs Oct. 12, 1956.
Flood of May 11, 1943, reached a stage of 37.90 ft.

REMARKS.--Records fair. Natural flow of stream affected by storage reservoirs and power development and regulated by Robert S. Kerr Lock and Dam since September 1970. Flow diverted through locks and boat channel Dec. 1, 1970. Records of chemical analyses for water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height records, 14 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1341: Drainage area.

DISCHARGE, IN CFS, PERIOD OCTOBER TO DECEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,800	66,900	14,200									
2	22,200	71,800	6,150									
3	16,300	69,800	7,380									
4	9,260	54,200	3,680									
5	7,320	43,000	1,080									
6	6,310	38,700	0									
7	8,750	36,700	680									
8	18,100	33,300	1,920									
9	43,800	30,000	1,920									
10	43,400	12,000	1,920									
11	47,700	16,200	1,920									
12	45,800	20,900	1,920									
13	40,000	16,500	1,920									
14	35,400	20,100	1,560									
15	9,810	18,200	1,370									
16	16,100	15,500	1,370									
17	37,600	13,000	1,370									
18	39,100	14,300	3,040									
19	40,800	19,700	10,400									
20	36,500	13,900	1,920									
21	27,400	11,600	2,840									
22	14,800	7,870	5,580									
23	35,100	5,850	12,600									
24	61,000	4,860	9,260									
25	50,000	4,040	3,810									
26	74,000	4,180	3,810									
27	84,600	4,860	3,840									
28	60,500	7,240	3,810									
29	84,200	8,680	3,840		------							
30	82,500	2,580	3,810		------							
31	72,500	------	4,240		------		------		------			------
TOTAL	1,193,650	686,460	123,160									
MEAN	38,500	22,800	3,970									
MAX	84,600	71,800	14,200									
MIN	6,310	2,580	0									
AC-FT	2,368,000	1,362,000	244,300									

CAL YR 1970 TOTAL 9,405,540 MEAN 25,770 MAX 107,000 MIN 0 AC-FT 18,660,000

Note.--No gage-height Dec. 1-31, discharge computed from lock and gate openings.

07247000 Poteau River at Cauthron, Ark.

LOCATION.--Lat 34°55'08", long 94°17'55", in NW 1/4 SW 1/4 sec.16, T.3 N., R.31 W., Scott County, on right bank at downstream side of highway bridge at Cauthron, 2.9 miles downstream from Cross Creek, 7.8 miles downstream from Jones Creek, and at mile 109.0.

DRAINAGE AREA.--203 sq mi.

PERIOD OF RECORD.--February 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 569.53 ft above mean sea level. Prior to May 2, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--32 years, 211 cfs (14.12 inches per year, 152,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,740 cfs Apr. 23 (gage height, 12.55 ft); minimum, 0.23 cfs Sept. 19 (gage height, 3.71 ft).
Period of record: Maximum discharge, 32,200 cfs May 20, 1960 (gage height, 23.76 ft); no flow at times in most years.
Flood in June 1935 reached a stage of 27.4 ft, from information by local resident.

REMARKS.--Records good. As of September 1971, flow from 74.8 sq mi above this station is controlled by twelve floodwater-detention reservoirs with a total combined capacity of 32,660 acre-ft below the flood spillway crests, of which 29,546 acre-ft is flood-detention capacity, 2,100 acre-ft is water-supply storage, and 1,014 acre-ft is sediment-storage capacity.

REVISIONS (WATER YEARS).--WSP 1037: 1939(M). WRD Ark. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	105	23	66	63	98	55	84	30	10	6.5	1.9
2	11	103	22	56	55	93	48	69	62	7.7	3.6	1.8
3	7.9	90	21	462	51	150	43	58	49	6.3	2.7	1.8
4	4.3	73	18	1,080	77	164	39	47	34	5.4	2.6	1.7
5	3.9	62	17	411	156	145	36	41	28	4.6	35	7.9
6	3.5	53	15	249	120	169	33	37	21	3.6	209	9.5
7	3.2	43	14	177	102	177	30	184	15	3.9	105	7.7
8	3.9	112	14	140	93	129	28	149	11	3.6	77	5.4
9	8.5	675	14	120	82	112	26	83	8.2	3.1	59	3.6
10	6.7	240	13	107	74	154	24	126	6.8	2.7	39	2.6
11	14	140	14	100	74	147	23	119	6.6	4.3	22	2.0
12	145	109	12	88	988	122	22	105	5.9	4.5	12	1.5
13	154	88	11	554	640	579	21	99	5.4	3.5	24	1.0
14	100	331	10	974	411	405	20	79	4.8	2.9	24	.76
15	64	324	11	481	303	240	20	63	4.4	2.2	17	.60
16	46	193	22	318	232	162	19	52	3.9	1.9	17	.45
17	33	147	66	249	190	125	18	42	3.5	1.8	12	.33
18	27	122	44	198	162	108	19	35	3.2	1.8	8.3	.29
19	25	103	31	152	172	93	21	33	3.1	2.0	6.8	.41
20	21	86	28	125	167	78	501	28	2.9	1.7	6.8	.53
21	18	71	394	110	180	70	646	25	108	1.3	6.5	.51
22	15	61	528	100	513	66	253	20	223	1.2	5.5	.53
23	69	53	381	94	279	61	2,060	17	64	2.9	4.6	.54
24	501	43	204	150	198	55	731	189	27	5.3	3.8	.50
25	252	39	145	159	167	64	382	120	13	3.8	3.4	.61
26	411	34	116	122	154	120	248	70	8.3	3.9	3.0	.65
27	1,170	32	98	98	133	98	181	59	8.3	13	2.4	.64
28	720	29	82	85	110	80	136	62	11	14	2.1	.68
29	324	28	69	80	------	80	108	50	8.8	7.8	2.0	.73
30	174	27	62	75	------	75	94	39	12	5.5	2.2	.69
31	122	------	66	70	------	63	------	30	------	7.9	2.3	------
TOTAL	4,475.9	3,616	2,565	7,250	5,946	4,282	5,885	2,214	792.1	144.1	727.1	57.85
MEAN	144	121	82.7	234	212	138	196	71.4	26.4	4.65	23.5	1.93
MAX	1,170	675	528	1,080	988	579	2,060	189	223	14	209	9.5
MIN	3.2	27	10	56	51	55	18	17	2.9	1.2	2.0	.29
AC-FT	8,880	7,170	5,090	14,380	11,790	8,490	11,670	4,390	1,570	286	1,440	115

CAL YR 1970 TOTAL 57,067.40 MEAN 156 MAX 4,900 MIN .30 AC-FT 113,200
WTR YR 1971 TOTAL 37,955.05 MEAN 104 MAX 2,060 MIN .29 AC-FT 75,280

07247500 Fourche Maline near Red Oak, Okla.

LOCATION.--Lat 34°54'44", long 95°09'20", in NW 1/4 NW 1/4 sec.13, T.5 N., R.20 E., Latimer County, on downstream side of left abutment of county road bridge, 0.1 mile downstream from Little Fourche Maline, 5 miles southwest of Red Oak, and at mile 41.2.

DRAINAGE AREA.--122 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 540.80 ft above mean sea level. Prior to Apr. 25, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 123 cfs (13.69 inches per year, 89,110 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,780 cfs Oct. 9 (gage height, 16.95 ft); minimum, 0.40 cfs July 18, 19.
Period of record: Maximum discharge, 41,500 cfs May 19, 1960 (gage height, 24.79 ft, from floodmarks), from rating curve extended above 25,000 cfs; no flow at times in most years.
Flood in June 1935 reached a stage of 25.4 ft, from floodmarks.

REMARKS.--Records good. Some regulation by several flood retarding structures.

COOPERATION.--Gage-height record, 31 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1631: 1940.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	340	22	24	22	54	31	73	27	9.5	4.4	2.9
2	30	226	21	24	21	51	28	61	28	9.7	3.4	3.3
3	24	172	22	546	19	67	27	52	42	10	3.0	2.8
4	19	120	28	824	29	76	23	46	81	9.9	3.1	2.4
5	16	104	23	468	42	76	22	41	48	9.7	6.5	4.4
6	15	53	19	272	40	80	22	61	34	8.0	203	941
7	14	44	16	122	33	72	21	109	27	7.1	201	959
8	1,520	40	14	83	29	56	20	78	33	6.5	55	330
9	3,040	64	14	69	26	51	18	68	69	4.5	28	281
10	1,150	64	13	65	23	50	16	170	59	3.5	17	191
11	917	51	15	61	23	46	15	196	38	2.2	16	96
12	508	41	17	55	23	46	15	174	28	1.9	76	88
13	820	42	15	56	22	129	14	108	22	1.5	30	85
14	717	275	14	81	22	111	13	72	22	.90	24	82
15	622	424	13	78	19	77	12	55	31	.70	20	79
16	478	203	25	64	18	59	11	44	26	.60	18	72
17	360	129	29	56	18	49	11	37	21	.50	13	30
18	318	97	28	52	18	44	11	32	18	.40	9.6	16
19	213	76	24	45	33	40	14	29	16	.50	7.5	15
20	140	62	22	40	58	34	572	32	14	.70	6.3	18
21	105	52	43	37	166	31	666	28	14	.60	5.4	15
22	35	44	43	37	451	30	361	26	140	.60	4.7	14
23	1,170	38	40	36	268	29	1,200	25	49	5.4	20	12
24	2,110	35	34	35	161	26	836	124	26	19	44	12
25	1,020	30	30	35	113	45	593	108	18	21	17	15
26	849	27	25	32	92	68	303	53	14	11	9.3	25
27	1,150	26	24	29	73	61	196	44	11	7.9	6.5	29
28	1,110	25	26	27	58	50	128	42	9.0	11	5.0	23
29	814	23	24	25	------	46	97	36	8.1	7.4	4.0	18
30	663	22	23	25	------	40	86	31	7.7	5.2	3.4	14
31	543	------	24	24	------	35	------	27	------	4.8	3.1	------
TOTAL	20,928	2,949	730	3,427	1,920	1,729	5,382	2,082	980.8	182.20	867.2	3,475.8
MEAN	675	98.3	23.5	111	68.6	55.8	179	67.2	32.7	5.88	28.0	116
MAX	3,040	424	43	824	451	129	1,200	196	140	21	203	959
MIN	14	22	13	24	18	26	11	25	7.7	.40	3.0	2.4
AC-FT	41,510	5,850	1,450	6,800	3,810	3,430	10,680	4,130	1,950	361	1,720	6,890

CAL YR 1970 TOTAL 65,188.90 MEAN 179 MAX 3,040 MIN 0 AC-FT 129,300
WTR YR 1971 TOTAL 44,653.00 MEAN 122 MAX 3,040 MIN .40 AC-FT 88,570

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-9	0130	16.95	4,780				

07248000 Wister Lake near Wister, Okla.
(Formerly published as Wister Reservoir near Wister)

LOCATION.--Lat 34°56'10", long 94°43'10", in SE 1/4 NE 1/4 sec.1, T.5 N., R.24 E., LeFlore County, in control tower near right end of Wister Dam on Poteau River, 2 miles south of Wister, 2.7 miles upstream from Caston Creek, and at mile 60.9.

DRAINAGE AREA.--993 sq mi.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1970 published as Wister Reservoir near Wister.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 153,900 acre-ft Oct. 29 (elevation, 486.93 ft); minimum, 28,840 acre-ft July 22 (elevation, 471.32 ft).
Period of record: Maximum contents, 507,400 acre-ft May 27, 1957 (elevation, 505.73 ft); minimum since conservation pool was first filled, 4,020 acre-ft Oct. 16, 1961 (elevation, 456.97 ft).

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 429,600 acre-ft at elevation 502.5 ft (crest of spillway) and 29,950 acre-ft at elevation 471.6 ft (conservation pool). Figures given herein represent total contents. Reservoir is used for flood control and recreation. Revised capacity table used since Oct. 1, 1953.

COOPERATION.--Records furnished by Crops of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

471	27,580	482	99,030
474	40,780	485	130,600
478	65,130	487	154,800

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61,270	134,000	63,400	29,790	29,790	32,410	30,310	56,320	30,310	30,230	29,910	29,320
2	61,340	125,500	63,470	30,030	29,750	31,710	30,190	46,540	30,340	30,110	29,630	29,320
3	61,540	116,600	63,470	32,850	30,030	31,530	30,150	38,990	30,660	29,950	29,790	29,280
4	61,610	107,500	63,470	42,640	30,620	31,620	30,110	33,470	30,820	29,910	30,340	29,200
5	62,820	98,270	63,470	45,710	31,450	31,790	30,110	30,860	30,940	29,750	31,250	29,560
6	62,020	89,140	63,470	43,270	32,540	31,710	30,150	30,380	31,020	29,710	35,140	29,440
7	62,020	79,560	62,020	39,130	33,550	31,570	30,150	30,940	31,020	29,630	37,090	30,230
8	67,230	71,500	59,130	35,670	33,730	31,330	30,190	31,790	31,060	29,520	36,120	32,370
9	67,980	67,160	56,130	33,770	33,250	31,100	30,190	32,320	30,980	29,560	32,450	32,720
10	68,800	65,800	53,400	31,840	32,760	30,660	30,270	32,540	30,900	29,520	30,110	32,280
11	71,660	65,800	50,490	30,540	32,370	30,500	30,340	32,450	30,860	29,440	30,310	31,660
12	77,280	65,130	47,650	30,030	34,350	32,190	30,420	31,620	30,820	29,360	30,580	30,940
13	75,970	64,920	44,760	32,230	37,050	36,950	30,230	39,900	30,700	29,280	31,210	30,110
14	71,880	66,330	41,950	36,420	37,480	40,680	30,270	30,460	30,660	29,160	31,530	29,750
15	67,000	68,130	39,570	36,370	37,000	40,780	30,190	30,070	30,540	29,000	31,790	29,830
16	63,400	67,900	37,050	34,830	35,670	38,500	30,230	29,670	30,420	28,960	31,450	29,950
17	63,060	66,180	34,390	31,810	33,290	35,050	30,150	29,560	30,310	29,160	30,820	29,990
18	63,130	63,750	33,070	31,140	31,450	31,970	30,740	29,750	30,030	29,120	30,150	30,110
19	63,060	62,370	32,630	30,420	31,140	30,500	30,980	29,870	30,150	29,040	29,950	30,270
20	62,720	62,160	32,500	30,030	31,880	30,580	46,030	29,990	30,030	29,000	29,910	30,190
21	62,370	62,230	32,320	29,830	35,620	30,580	56,070	29,990	29,990	28,920	29,870	30,150
22	62,370	62,090	33,380	29,950	38,890	30,420	60,640	30,150	30,420	28,880	29,910	30,110
23	86,320	61,820	34,390	30,340	39,620	30,340	82,190	30,230	30,900	29,910	29,870	30,070
24	118,400	61,610	34,390	30,820	38,840	30,340	96,200	30,230	31,140	30,230	29,830	30,110
25	119,000	62,090	33,950	31,450	37,290	31,140	96,760	30,460	31,020	30,500	29,750	30,340
26	126,600	62,580	33,200	31,410	36,030	31,840	92,890	30,940	30,900	30,660	29,710	30,380
27	144,000	62,720	32,230	31,020	35,010	32,280	86,240	31,140	30,740	31,490	29,630	30,340
28	153,200	62,920	31,250	30,460	33,820	32,590	78,340	30,700	30,540	31,450	29,560	30,270
29	153,400	63,060	30,190	30,150	------	32,230	73,850	30,380	30,340	31,140	29,480	30,340
30	149,500	63,470	29,870	30,070	------	31,170	66,400	30,150	30,270	30,580	29,400	30,270
31	141,900	------	29,710	29,870	------	30,620	------	30,110	------	30,310	29,360	------
(+)	485.96	477.76	471.54	471.58	472.52	471.77	478.17	471.64	471.68	471.69	471.45	471.68
(‡)	+80,560	-78,430	-33,760	+160	+3,950	-3,200	+35,780	-36,290	++160	+40	-950	+910
MAX	153,400	134,000	63,470	45,170	39,620	40,780	96,760	56,300	31,140	31,490	37,090	32,720
MIN	61,270	61,610	29,710	29,790	29,750	30,340	30,110	29,560	29,990	28,880	29,360	29,200

CAL YR 1970.....‡ -41,490
WTR YR 1971.....‡ -31,070

\+ Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07248500 Poteau River near Wister, Okla.

LOCATION.--Lat 34°56'15", long 94°42'54", in NW 1/4 NW 1/4 sec.6, T.5 N., R.25 E., Leflore County, on left bank of outflow channel 700 ft downstream from Wister Dam, 2.2 miles southeast of Wister, 2.6 miles upstream from Caston Creek, and at mile 60.8.

DRAINAGE AREA.--993 sq mi.

PERIOD OF RECORD.--May 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to May 21, 1951, records below about 500 cfs include flow from Caston Creek (drainage area, 70 sq mi).

GAGE.--Water-stage recorder. Datum of gage is 445.43 ft above mean sea level. See WSP 1921 for history of changes prior to June 28, 1953.

AVERAGE DISCHARGE.--33 years, 1,106 cfs (801,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,550 cfs Apr. 28 (gage height, 7.42 ft); maximum gage height, 7.66 Oct. 23; minimum daily discharge, 6.1 cfs Sept. 7, 8.
Period of record: Maximum discharge, 78,600 cfs May 16, 1945 (gage height, 37.16 ft, site and datum then in use); no flow at times in 1938-39, 1943, 1947, 1953-54, 1961, 1964.
Flood in June 1935 reached a stage of 43.0 ft at site and datum used in 1938 (estimated as 38.5 ft at site and datum used during 1939-47, on basis of fall determined for flood in 1943).

REMARKS.--Records good. Flow completely regulated by Wister Lake since October 1949. (See sta. 07248000).

COOPERATION.--Gage-height record, 17 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1117: Drainage area. WSP 1241: 1939, 1943(M), 1945(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	4,910	127	218	304	1,250	413	5,230	103	103	320	6.9
2	96	4,850	127	214	190	1,070	314	5,060	103	93	204	6.9
3	15	4,790	126	215	130	802	284	4,450	103	68	98	6.8
4	15	4,730	126	225	131	800	284	3,160	103	46	61	6.6
5	13	4,640	126	1,450	130	800	210	1,640	103	32	177	6.7
6	13	4,570	127	3,110	130	801	158	717	103	29	403	6.3
7	13	4,490	774	3,260	132	801	156	440	104	29	751	6.1
8	14	4,390	1,470	2,700	320	799	155	577	104	29	1,510	6.1
9	1,110	3,620	1,560	1,660	630	797	147	578	105	26	2,150	246
10	2,060	2,130	1,530	1,660	627	795	131	579	104	16	1,560	472
11	1,610	876	1,520	1,240	626	716	132	778	103	12	149	465
12	768	869	1,490	789	906	534	132	1,110	103	12	87	460
13	2,930	867	1,480	666	1,320	466	131	1,020	103	12	87	456
14	3,720	869	1,460	1,320	1,330	480	118	682	103	13	87	200
15	3,680	869	1,440	2,090	1,330	1,180	107	572	97	12	87	23
16	2,920	1,520	1,420	2,080	1,540	2,010	106	486	86	12	262	23
17	1,030	1,950	1,400	2,050	1,910	2,430	90	312	90	12	397	24
18	563	1,940	902	1,690	1,670	2,380	79	165	61	11	355	24
19	562	1,400	365	1,080	1,080	1,260	168	132	38	11	184	23
20	558	611	360	786	663	398	305	130	35	10	51	23
21	410	420	360	595	669	395	1,150	121	29	10	50	23
22	280	420	359	393	1,140	399	1,840	115	26	9.8	50	23
23	169	420	672	264	1,940	361	268	115	26	9.8	50	23
24	13	331	864	265	1,930	271	1,440	115	70	9.5	49	22
25	12	111	864	263	1,920	212	2,760	115	103	10	48	21
26	13	65	859	450	1,650	300	3,790	115	103	9.9	48	22
27	12	64	855	649	1,260	453	4,540	236	103	34	48	22
28	1,610	100	849	648	1,260	455	4,390	368	103	323	48	22
29	3,310	127	844	480	------	659	2,840	269	103	770	48	21
30	4,060	127	553	356	------	929	3,850	268	103	612	26	22
31	4,950	------	303	356	------	698	------	158	------	320	7.6	------
TOTAL	37,039	57,076	25,312	33,222	26,868	25,701	30,488	29,813	2,623	2,706.0	9,492.6	2,712.4
MEAN	1,195	1,903	817	1,072	960	829	1,016	962	87.4	87.3	306	90.4
MAX	4,950	4,910	1,560	3,260	1,940	2,430	4,540	5,230	105	770	2,150	472
MIN	12	64	126	214	130	212	79	115	26	9.5	7.6	6.1
AC-FT	73,470	113,200	50,210	65,900	53,290	50,980	60,470	59,130	5,200	5,370	18,830	5,380

CAL YR 1970 TOTAL 399,672.6 MEAN 1,095 MAX 6,250 MIN 4.1 AC-FT 792,800
WTR YR 1971 TOTAL 283,053.0 MEAN 775 MAX 5,230 MIN 6.1 AC-FT 561,400

07249400 James Fork near Hackett, Ark.

LOCATION.--Lat 35°09'45", long 94°24'25", in NW 1/4 NW 1/4 sec.34, T.6 N., R.32 W., Sebastian County, near left bank on downstream side of bridge on State Highway 45, 1.7 miles south of Hackett, 2 miles downstream from Elder Branch, 2 miles upstream from small tributary, and 3.6 miles upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 sq mi.

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 459.71 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 121 cfs (11.18 inches per year, 87,660 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,660 cfs Oct. 24 (gage height, 15.39 ft); minimum, 0.45 cfs Sept. 23, 24; minimum gage height, 0.63 ft July 22.
Period of record: Maximum discharge, 30,000 cfs May 14, 1968 (gage height, 23.00 ft), from rating curve extended above 20,000 cfs; no flow Aug. 16 to Dec. 12, 1963, Sept. 14-21, 1965.

REMARKS.--Records good. Records of chemical analyses for the current year are published in Part 2 of the Arkansas State report.

REVISIONS.--WRD Ark. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	110	32	46	42	64	37	84	9.1	6.7	2.7	1.4
2	38	110	30	46	37	62	32	63	8.3	5.8	2.5	1.6
3	31	101	28	169	35	85	28	51	8.1	4.4	2.9	1.8
4	23	90	26	858	37	88	26	44	7.8	3.2	3.0	1.8
5	20	75	24	270	101	79	27	37	7.3	2.8	3.2	2.3
6	16	66	23	170	76	77	26	38	6.5	2.5	6.0	1.8
7	14	59	21	132	67	84	24	51	6.2	2.3	102	1.6
8	24	59	19	105	64	74	23	52	5.2	2.0	60	1.6
9	77	144	18	107	57	69	21	43	4.9	2.1	49	1.4
10	46	141	18	103	52	77	19	94	4.3	2.6	39	1.5
11	32	101	18	101	51	73	18	73	3.8	2.2	29	1.6
12	155	88	17	95	352	67	17	53	3.5	1.8	20	1.5
13	115	83	16	248	258	99	17	46	3.7	1.6	14	1.6
14	103	266	16	711	170	105	14	38	6.3	1.4	9.6	1.5
15	86	250	18	298	133	83	13	30	5.5	1.4	7.6	1.4
16	71	160	48	185	112	70	13	24	4.8	1.5	5.8	1.2
17	61	123	57	145	99	61	13	20	4.2	1.6	4.8	1.1
18	52	110	50	125	91	55	14	16	4.5	1.6	9.1	.90
19	43	97	43	104	94	49	16	15	13	1.6	18	.75
20	35	88	38	91	98	44	407	14	6.6	1.5	14	.83
21	28	77	89	84	98	40	335	13	5.1	1.2	9.3	.62
22	23	71	118	78	178	37	144	13	3.2	1.3	6.6	.55
23	951	62	105	73	124	34	697	24	2.6	2.6	4.4	.45
24	2,010	54	90	76	98	31	325	44	4.6	3.8	3.5	.52
25	456	49	77	77	90	51	187	23	6.6	3.7	2.7	.76
26	283	45	69	70	86	72	134	16	4.9	3.5	2.3	.90
27	1,660	42	61	62	77	62	106	15	3.6	3.2	2.0	.76
28	596	38	56	57	69	55	84	13	3.1	4.8	1.7	.75
29	271	36	52	54	------	52	82	11	3.4	7.8	1.6	.67
30	175	33	48	52	------	47	112	10	3.8	5.8	1.4	.71
31	132	------	46	47	------	42	------	9.2	------	3.8	1.3	------
TOTAL	7,673	2,828	1,371	4,839	2,846	1,988	3,011	1,077.2	164.5	92.1	439.0	35.87
MEAN	248	94.3	44.2	156	102	64.1	100	34.7	5.48	2.97	14.2	1.20
MAX	2,010	266	118	858	352	105	697	94	13	7.8	102	2.3
MIN	14	33	16	46	35	31	13	9.2	2.6	1.2	1.3	.45
CFSM	1.69	.64	.30	1.06	.69	.44	.68	.24	.04	.02	.10	.008
IN.	1.94	.72	.35	1.22	.72	.50	.76	.27	.04	.02	.11	.009
AC-FT	15,220	5,610	2,720	9,600	5,650	3,940	5,970	2,140	326	183	871	71

CAL YR 1970 TOTAL 47,035.70 MEAN 129 MAX 4,960 MIN .10 CFSM .88 IN 11.90 AC-FT 93,300
WTR YR 1971 TOTAL 26,364.67 MEAN 72.2 MAX 2,010 MIN .45 CFSM .49 IN 6.67 AC-FT 52,290

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

07250000 Lee Creek near Van Buren, Ark.

LOCATION.--Lat 35°29'40", long 94°26'58", in SE 1/4 sec.21, T.12 N., R.27 E., Indian Meridian, Sequoyah County, Okla., on right bank 300 ft west of Arkansas-Oklahoma State line, 3.2 miles downstream from Webbers Creek, 6.8 miles northwest of Van Buren, and at mile 7.8.

DRAINAGE AREA.--426 sq mi.

PERIOD OF RECORD.--September 1930 to June 1937, October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 408.04 ft above mean sea level (Corps of Engineers bench mark). September 1930 to June 1937, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years (1930-36, 1950-71), 470 cfs (14.98 inches per year, 340,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 30,000 cfs Oct. 27 (gage height, 20.57 ft); minimum, 2.6 cfs July 22, 23 (gage height, .90 ft).
Period of record: Maximum discharge, 80,600 cfs May 6, 1960 (gage height, 30.30 ft); no flow at times. Flood of Apr. 15, 1945, reached a stage of about 35.0 ft, from floodmarks, (discharge, about 112,000 cfs).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1211: 1931(M). WSP 1441: 1935(M). WRD Ark. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376	1,140	218	243	276	754	138	465	243	39	29	11
2	308	1,980	204	356	253	683	130	389	232	45	25	9.9
3	250	1,640	190	3,750	236	650	125	328	232	36	27	11
4	204	1,250	178	5,700	312	584	120	288	236	30	59	9.5
5	175	1,050	166	2,360	632	548	120	257	184	25	39	14
6	163	897	158	1,500	650	514	120	250	155	22	178	14
7	153	774	148	1,110	566	481	133	683	135	20	741	13
8	2,460	878	143	897	492	445	133	800	118	17	356	13
9	6,320	2,200	135	780	425	412	128	602	105	16	215	11
10	1,960	1,610	133	696	385	440	123	1,040	98	18	150	8.7
11	1,150	1,170	140	626	394	440	118	6,190	85	18	118	7.4
12	1,280	959	133	566	644	412	113	2,110	76	9.9	93	6.2
13	1,070	826	128	3,700	865	389	110	1,290	67	8.4	81	5.3
14	839	966	125	6,280	754	372	108	910	63	7.2	81	4.9
15	670	1,350	130	2,600	676	344	105	696	63	6.2	70	4.3
16	530	1,050	155	1,710	608	316	100	542	57	5.4	61	3.7
17	435	897	250	1,340	548	288	95	425	50	5.0	70	3.8
18	372	787	272	1,080	503	264	100	348	43	4.3	55	4.7
19	324	689	253	884	774	246	105	308	39	3.8	47	5.4
20	284	602	236	761	966	232	250	272	36	3.5	41	6.1
21	246	530	229	683	1,490	222	700	229	32	2.8	36	6.5
22	218	465	257	620	4,000	211	450	222	29	2.6	34	6.3
23	5,810	403	340	560	2,250	197	2,000	300	27	13	34	6.4
24	10,900	356	352	525	1,580	187	3,000	4,210	27	34	28	6.3
25	3,470	324	324	497	1,290	181	1,200	1,690	24	34	24	9.3
26	15,900	304	300	450	1,150	175	800	945	20	34	25	11
27	18,800	284	276	398	952	169	380	663	17	30	27	11
28	6,690	264	260	364	819	163	328	497	15	30	23	9.9
29	3,160	246	246	340	------	158	352	394	12	41	19	9.9
30	1,990	229	239	324	------	150	481	332	15	43	15	8.9
31	1,430	------	243	304	------	143	------	276	------	36	13	------
TOTAL	87,937	26,120	6,561	42,004	24,490	10,770	12,165	27,951	2,535	640.1	2,814	252.4
MEAN	2,837	871	212	1,355	875	347	406	902	84.5	20.6	90.8	8.41
MAX	18,800	2,200	352	6,280	4,000	754	3,000	6,190	243	45	741	14
MIN	153	229	125	243	236	143	95	222	12	2.6	13	3.7
CFSM	6.66	2.04	.50	3.18	2.05	.81	.95	2.12	.20	.05	.21	.02
IN.	7.68	2.28	.57	3.67	2.14	.94	1.06	2.44	.22	.06	.25	.02
AC-FT	174,400	51,810	13,010	83,310	48,580	21,360	24,130	55,440	5,030	1,270	5,580	501

CAL YR 1970 TOTAL 278,610.88 MEAN 763 MAX 18,800 MIN 0 CFSM 1.79 IN 24.33 AC-FT 552,600
WTR YR 1971 TOTAL 244,239.50 MEAN 669 MAX 18,800 MIN 2.6 CFSM 1.57 IN 21.33 AC-FT 484,400

PEAK DISCHARGE (BASE, 13,000 CFS)

DATE	TIME	GH	DISCHARGE
10-24	0115	15.01	16,500
10-27	0445	20.57	30,000
1-14	0015	13.20	13,000

07250550 Arkansas River at Dam No. 13, near Van Buren, Ark.

LOCATION.--Lat 35°20'56", long 94°17'54", in sec.28, T.8 N., R.31 W., Sebastian County, in Dam No. 13 control house on right bank, and at mile 345.5.

DRAINAGE AREA.--150,547 sq mi, of which 22,241 sq mi probably noncontributing.

PERIOD OF RECORD.--October 1927 to current year. Prior to October 1969, published as 07250500 Arkansas River at Van Buren. Gage-height records collected at Fort Smith (16.3 miles upstream) from 1879 to December 1955, are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage and gate position recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1934, nonrecording gage, and Oct. 1, 1934, to Dec. 20, 1969, recording gage at site 7.9 miles upstream at dautm 372.36 ft higher.

AVERAGE DISCHARGE.--44 years, 29,920 cfs (21,680,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 136,000 cfs Oct. 27 (tailwater elevation, 389.07 ft); minimum daily discharge, 16 cfs Dec. 7.
Period of record: Maximum discharge, 850,000 cfs May 12, 1943 (gage height, 38.0 ft, from floodmark, site and datum then in use); maximum gage height, 38.10 ft, former site and datum, Apr. 16, 1945: minimum daily discharge, 16 cfs Dec. 7, 1970.
Maximum stage since at least 1833, that of Apr. 16, 1945, and maximum discharge since at least 1833, that of May 12, 1943. Flood in June 1833 reached a stage of 38 ft on Fort Smith gage, from records collected by U.S. Weather Bureau. Flood of Apr. 16, 1927, reached a stage of 35.0 ft, former site and datum, from information by local resident.

REMARKS.--Records good. Beginning Apr. 26, 1970, daily discharge computed from relation between discharge, head, and gate openings. Natural flow of stream affected by storage reservoirs and power development. Records of chemical analyses, water temperatures, and suspended sediment loads for the current year are published in Part 2 of the Arkansas State report.

REVISIONS (WATER YEARS).--WSP 1211: 1934-36. WSP 1561: 1954. WRD Ark. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21,100	74,200	8,310	7,000	13,700	29,600	5,300	10,400	7,040	23,900	15,700	8,130
2	22,700	73,000	10,400	7,830	12,400	28,000	3,860	13,300	16,900	24,600	11,000	10,500
3	16,100	75,300	6,420	18,000	19,700	30,300	3,140	10,800	23,100	12,300	8,350	12,800
4	11,500	65,600	4,380	44,400	16,900	35,400	3,740	12,300	36,600	14,200	8,140	11,000
5	7,630	50,600	2,890	39,600	17,900	35,400	3,590	9,780	33,400	19,700	7,920	6,820
6	6,710	45,200	1,120	42,000	16,400	24,800	3,560	8,350	16,900	12,000	16,900	2,750
7	5,030	42,000	16	53,000	6,000	26,200	3,710	15,000	14,600	10,500	10,800	52,700
8	21,600	40,800	1,930	50,800	9,320	31,700	2,780	8,650	19,900	21,200	9,610	56,700
9	47,700	40,400	4,340	35,600	26,400	33,700	5,600	6,220	21,800	28,900	10,200	34,700
10	47,700	24,200	4,880	37,000	16,900	38,500	6,280	7,090	16,500	23,600	10,500	33,300
11	47,200	21,600	3,830	25,500	15,900	37,300	6,800	13,200	22,900	22,100	17,500	17,000
12	48,800	21,100	4,890	24,600	17,300	27,100	5,590	12,100	30,500	13,000	17,900	16,500
13	43,700	21,100	3,940	28,700	15,100	22,400	5,080	10,600	31,900	12,900	9,910	16,600
14	42,300	27,200	4,120	52,500	8,090	28,900	7,490	10,700	35,000	25,700	14,400	12,000
15	24,900	30,100	5,280	34,300	7,070	30,300	7,650	9,790	34,600	19,800	8,650	13,000
16	15,000	20,300	3,210	24,000	9,020	5,640	9,060	6,220	34,500	18,200	8,580	9,800
17	32,400	12,100	3,500	22,300	21,000	9,490	8,470	7,380	35,300	20,500	7,670	3,920
18	38,600	16,200	5,780	23,200	18,600	20,500	3,130	6,020	35,400	21,200	8,270	5,150
19	39,100	22,200	14,500	28,500	30,500	25,800	3,170	10,000	26,400	20,400	10,400	19,500
20	39,400	20,200	2,810	35,900	21,900	12,200	12,200	11,200	24,800	18,600	12,000	14,900
21	29,100	14,700	4,680	18,600	16,800	11,200	18,700	9,120	25,100	15,700	17,600	16,700
22	14,600	11,900	7,650	14,100	24,500	14,000	10,700	5,780	22,000	13,800	13,700	17,400
23	35,100	8,750	11,700	13,900	45,600	17,100	19,400	8,930	13,700	18,200	15,200	17,800
24	81,700	7,360	13,100	16,500	37,700	13,300	21,400	19,200	17,100	33,100	13,400	20,300
25	72,100	4,140	6,700	6,880	35,400	14,400	8,080	26,300	30,400	20,500	21,400	20,400
26	88,500	3,180	5,930	12,000	37,200	23,900	8,050	18,900	26,900	11,900	20,800	20,300
27	129,000	4,720	6,300	14,200	47,400	21,400	8,090	19,500	23,400	15,900	15,500	20,100
28	85,600	7,500	6,520	9,100	35,000	16,100	7,850	27,700	19,200	14,000	10,600	14,100
29	80,900	13,500	7,110	12,200	------	9,570	8,350	19,100	28,800	13,700	11,500	15,800
30	87,600	4,210	6,890	13,000	------	9,680	9,330	16,600	26,000	18,600	8,020	16,900
31	77,400	------	7,540	11,700	------	7,500	------	6,710	------	20,800	8,080	------
TOTAL	1,360,8M	823,360	180,666	776,910	599,700	691,380	230,150	376,940	750,640	579,500	380,200	537,570
MEAN	43,900	27,450	5,828	25,060	21,420	22,300	7,672	12,160	25,020	18,690	12,260	17,920
MAX	129,000	75,300	14,500	53,000	47,400	38,500	21,400	27,700	36,600	33,100	21,400	56,700
MIN	5,030	3,180	16	6,880	6,000	5,640	2,780	5,780	7,040	10,500	7,670	2,750
AC-FT	2,699M	1,633M	358,400	1,541M	1,190M	1,371M	456,500	747,700	1,489M	1,149M	754,100	1,066M

CAL YR 1970 TOTAL 10,455,695 MEAN 28,650 MAX 144,000 MIN 16 AC-FT 20,740,000
WTR YR 1971 TOTAL 7,287,786 MEAN 19,970 MAX 129,000 MIN 16 AC-FT 14,460,000

07299570 Red River near Quanah, Tex.

LOCATION.--Lat 34°24'47", long 99°44'03", Hardeman County, on right bank at downstream side of bridge on State Highway 283, 8 miles north of Quanah, 30 miles upstream from Salt Fork Red River, and at mile 1,030.

DRAINAGE AREA.--8,321 sq mi, of which 4,769 sq mi is probably noncontributing.

PERIOD OF RECORD.--November 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,412.97 ft above mean sea level.

AVERAGE DISCHARGE.--11 years (1960-71), 150 cfs (108,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,800 cfs June 13 (gage height, 11.22 ft); no flow at times.
Period of record: Maximum discharge, 64,000 cfs June 7, 1960 (gage height, 16.00 ft), from rating curve extended above 32,000 cfs; no flow at times.
Maximum stage since at least 1891 occurred in 1896 and was about 2 ft higher than flood of June 1, 1957 (second highest), which reached a stage of 21.2 ft, from information by local resident.

REMARKS.--Records poor. Several small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.27	.54	.80	1.9	2.1	1.8	.50	732	38	14	.9
2	.38	.48	.35	1.3	2.2	1.5	.93	.28	110	37	4.8	.2
3	.02	.33	.20	1.9	2.8	1.3	1.2	.20	28	17	1.2	0
4	0	.25	.25	.40	3.7	1.8	1.3	.20	5.1	23	0	1.2
5	.40	.36	.16	.20	3.2	1.6	1.6	.20	.8	32	0	16
6	.15	.59	.20	.30	2.5	1.1	2.5	.20	16	30	0	2.2
7	0	.67	.25	.80	2.3	1.1	2.0	.12	8.9	3.6	0	.1
8	.40	.57	.38	1.4	2.0	1.5	1.6	6.0	2.3	0	4.3	0
9	.09	.27	.47	2.0	2.5	1.9	1.3	135	71	0	3,460	4.4
10	0	.28	.47	3.0	4.2	1.3	1.3	809	413	0	1,200	11
11	0	.39	.31	2.6	3.7	1.6	1.4	113	1,490	0	1,230	0
12	0	.33	.31	2.2	2.8	2.1	1.1	16	635	0	468	0
13	0	3.4	.38	2.5	2.7	2.5	1.4	4.6	5,640	0	185	0
14	0	1.9	.38	2.2	2.8	1.9	1.7	2.8	5,270	0	2,860	0
15	4.8	.83	1.4	1.9	2.5	1.3	1.6	.94	1,630	0	688	0
16	11	.98	.80	2.1	2.5	1.1	12	.57	408	0	549	0
17	14	.86	.47	2.5	2.8	1.1	7.7	.31	215	0	2,320	983
18	4.7	.58	.47	2.2	2.8	1.2	23	.20	84	0	531	2,640
19	2.7	.53	.38	2.2	2.5	.53	10	.16	42	0	1,150	144
20	1.4	.50	.47	2.5	2.2	.52	3.4	.16	36	0	233	79
21	1.1	.49	.94	2.5	2.2	1.2	.47	.20	52	0	92	34
22	.71	.34	.94	2.2	2.2	1.2	.20	.20	31	0	41	49
23	.30	.16	.47	2.2	12	1.3	.16	51	20	.75	22	193
24	.23	.32	.57	2.5	35	1.6	.20	9.8	11	0	15	2,320
25	.18	.50	.57	2.5	17	2.4	.20	.34	6.8	0	305	9,470
26	.32	.46	.57	2.2	6.8	2.4	.16	.06	4.0	0	259	1,330
27	.09	.36	.80	2.2	2.3	2.5	.12	1.2	2.9	0	99	367
28	.13	.45	.94	2.8	2.2	2.2	1.3	.25	2.4	0	60	171
29	.20	.74	.94	3.2	------	1.1	6.0	5.5	2.2	0	27	116
30	.27	.94	1.1	2.8	------	1.0	1.1	774	1.8	4.0	11	75
31	.25	------	.68	2.5	------	.89	------	1,060	------	44	3.7	------
TOTAL	43.91	19.13	17.16	62.60	134.3	46.84	88.74	2,992.99	16,971.2	229.35	15,833.0	18,007.0
MEAN	1.42	.64	.55	2.02	4.80	1.51	2.96	96.5	566	7.40	511	600
MAX	14	3.4	1.4	3.2	35	2.5	23	1,060	5,640	44	3,460	9,470
MIN	0	.16	.16	.20	1.9	.52	.12	.06	.80	0	0	0
AC-FT	87	38	34	124	266	93	176	5,940	33,660	455	31,400	35,720

CAL YR 1970 TOTAL 4,850.77 MEAN 13.3 MAX 924 MIN 0 AC-FT 9,620
WTR YR 1971 TOTAL 54,446.22 MEAN 149 MAX 9,470 MIN 0 AC-FT 108,000

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
6-13	2215	11.22	21,800	8-14	0400	9.93	11,600
8- 9	1200	9.90	11,200	9-18	0100	11.18	21,600
				9-25	0300	10.83	18,800

07299670 Groesbeck Creek at State Highway 283, near Quanah, Tex.

LOCATION.--Lat 34°21'16", long 99°44'24", Hardeman County, near left bank on downstream side of bridge on State Highway 283, 2 miles downstream from confluence of North and South Groesbeck Creeks, 4 miles north of Quanah, and 9 miles upstream from mouth.

DRAINAGE AREA.--303 sq mi.

PERIOD OF RECORD.--November 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,425.69 ft above mean sea level.

AVERAGE DISCHARGE.--9 years (1962-71), 9.47 cfs (6,860 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,600 cfs Sept. 18 (gage height, 15.73 ft); no flow at times.
Period of record: Maximum discharge, 12,000 cfs Oct. 18, 1965 (gage height, 22.93 ft), from rating curve extended above 6,100 cfs; no flow at times.
Highest stage occurred in June 1891; highest stage since 1891 occurred in September 1929; other large floods are reported to have occurred in 1912, 1936, 1946, 1951, 1955, and 1957, from information by local residents.

REMARKS.--Records good. Several diversions upstream from station for farm and ranch use and for a gypsum wallboard plant.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	1.4	1.9	1.5	1.3	1.2	1.3	1.5	30	.54	0	.14
2	.82	1.5	1.8	1.6	1.3	1.1	1.1	1.3	7.5	.62	0	.14
3	.81	1.4	1.8	1.7	1.3	1.1	1.2	1.4	4.5	.64	0	.14
4	.76	1.4	1.7	1.7	1.3	1.2	.99	1.3	4.2	.56	0	14
5	.74	1.4	1.7	1.2	1.2	1.2	1.2	1.3	3.6	.58	0	11
6	.66	1.4	1.5	1.2	1.2	1.1	1.4	1.3	3.5	.53	0	386
7	.63	1.5	1.8	1.2	1.2	1.0	1.4	1.4	3.0	.48	0	172
8	.54	1.5	1.9	1.3	1.2	1.1	1.4	1.4	6.2	.46	0	3.5
9	.54	1.5	1.9	1.4	1.2	1.1	1.3	1.7	4.3	.46	0	.89
10	.52	1.5	1.8	1.3	1.3	1.1	1.4	2.0	2.5	.34	0	.45
11	.59	1.5	1.8	1.3	1.4	1.3	1.4	1.5	12	.34	0	.28
12	.63	1.6	1.8	1.2	1.3	1.2	.75	1.3	4.2	.17	0	.13
13	1.1	1.7	1.8	1.3	1.4	1.2	.16	1.3	2.4	.08	0	.05
14	1.5	2.0	1.8	1.3	1.4	1.1	.48	1.4	2.1	.04	0	.03
15	1.7	1.9	1.9	1.2	1.3	.98	.85	1.4	1.8	.02	72	.02
16	1.8	1.6	1.9	1.2	1.2	1.1	1.1	1.6	1.6	.02	2.2	.02
17	1.8	1.6	1.7	1.2	1.3	1.2	1.4	1.5	1.6	.01	42	4.4
18	1.6	1.7	1.7	1.2	1.4	1.1	1.7	1.3	1.4	0	45	1,060
19	1.4	1.7	1.7	1.2	1.5	1.7	1.8	1.2	1.2	0	2.0	491
20	1.3	1.7	1.8	1.2	1.4	1.3	1.5	1.5	1.2	0	.59	40
21	1.2	1.8	1.8	1.2	1.5	1.2	1.4	1.5	1.1	0	.30	8.5
22	1.2	1.7	1.9	1.3	1.7	1.2	1.3	1.5	1.2	0	.20	5.5
23	1.3	1.7	1.8	1.4	1.7	1.3	1.3	1.8	1.0	0	0	318
24	1.2	1.7	1.6	1.4	1.5	1.2	1.3	1.5	.76	0	0	450
25	1.2	1.8	1.6	1.4	1.5	1.3	1.4	1.2	.67	0	.07	743
26	1.3	1.8	1.6	1.4	1.4	1.3	1.3	1.1	.40	0	.19	197
27	1.3	1.7	1.7	1.4	1.2	1.3	1.3	1.0	1.6	0	.20	17
28	1.3	1.9	1.7	1.4	1.3	1.0	1.2	1.0	.70	0	.19	7.1
29	1.3	1.9	1.8	1.4	------	1.1	1.3	85	.63	0	.17	6.1
30	1.4	1.9	1.6	1.3	------	1.2	1.5	339	.61	0	.16	5.5
31	1.4	------	1.5	1.2	------	1.1	------	168	------	0	.16	------
TOTAL	34.33	49.4	54.3	41.2	37.9	36.58	37.13	631.2	107.47	5.89	165.43	3,941.89
MEAN	1.11	1.65	1.75	1.33	1.35	1.18	1.24	20.4	3.58	.19	5.34	131
MAX	1.8	2.0	1.9	1.7	1.7	1.7	1.8	339	30	.64	72	1,060
MIN	.52	1.4	1.5	1.2	1.2	.98	.16	1.0	.40	0	0	.02
AC-FT	68	98	108	82	75	73	74	1,250	213	12	328	7,820

CAL YR 1970 TOTAL 1,376.67 MEAN 3.77 MAX 404 MIN 0 AC-FT 2,730
WTR YR 1971 TOTAL 5,142.72 MEAN 14.1 MAX 1,060 MIN 0 AC-FT 10,200

PEAK DISCHARGE (BASE, 1,000 CFS).--Sept. 18 (1800) 1,600 cfs (15.73 ft).

07300000 Salt Fork Red River near Wellington, Tex.

LOCATION.--Lat 34°57'27", long 100°13'14", Collingsworth County, near center of stream on downstream side of bridge on U.S. Highway 83, 4 miles downstream from Fort Worth and Denver (Burlington) Railway Co. bridge, 4.5 miles south of Lutie, and 7.2 miles north of Wellington.

DRAINAGE AREA.--1,222 sq mi, of which 209 sq mi is probably noncontributing.

PERIOD OF RECORD.--June 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,941.41 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 62.4 cfs (45,210 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,210 cfs June 9 (gage height, 6.27 ft); minimum, 0.49 cfs May 25.
Period of record: Maximum discharge, 146,000 cfs May 16, 1957 (gage height, 19.00 ft), from rating curve extended above 11,000 cfs on basis of slope-area measurement of 63,400 cfs; minimum, 0.1 cfs June 19, 1952.

REMARKS.--Records poor. Flow partly regulated since August 1967 by Greenbelt Reservoir (station 07299840). Water-quality records for the current year are published in Part 2 of the Texas State report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	8.0	12	15	10	15	4.6	2.7	1.6	6.8	1.8	2.7
2	3.2	9.1	11	13	9.8	9.1	5.4	2.7	1.2	7.3	1.8	2.2
3	3.0	8.4	10	10	10	8.4	4.6	2.2	4.1	18	2.0	2.5
4	3.0	7.3	11	5.9	12	10	5.0	2.5	5.2	7.3	2.0	3.0
5	3.0	9.1	12	5.0	12	11	5.9	2.2	2.2	5.9	2.2	2.2
6	3.0	11	13	5.0	11	9.8	5.9	1.8	1.8	4.2	2.2	2.0
7	3.0	11	14	6.0	9.0	9.8	6.8	1.8	1.2	2.7	2.7	2.5
8	4.6	11	13	8.0	6.0	12	6.4	2.0	5.0	6.4	2.5	2.2
9	3.2	11	12	10	7.0	12	5.4	4.6	248	5.4	2.5	2.5
10	3.0	10	12	12	10	12	5.4	2.7	202	4.6	2.5	2.2
11	3.0	9.8	10	13	12	16	5.0	2.7	54	4.6	2.2	2.2
12	3.2	9.1	13	14	11	16	5.4	2.2	57	5.0	2.5	2.2
13	3.8	10	14	13	11	7.8	4.4	1.8	100	3.2	2.5	2.2
14	5.0	12	18	13	11	8.0	5.4	2.2	38	3.2	2.5	2.7
15	4.6	12	19	13	12	8.4	6.8	2.0	25	2.5	2.2	2.5
16	5.4	12	18	13	11	7.8	13	1.5	22	2.2	3.2	2.5
17	8.4	10	18	12	11	7.8	14	1.0	19	3.0	4.6	11
18	7.8	10	19	11	12	7.8	8.0	1.5	18	2.7	3.2	13
19	5.9	9.8	18	12	12	7.8	9.1	1.8	17	2.2	2.7	9.8
20	5.4	9.1	19	10	11	7.8	10	1.8	16	2.5	2.5	7.3
21	5.4	10	21	10	9.0	9.1	6.4	1.8	14	2.2	2.5	5.4
22	5.4	9.8	21	10	8.0	9.8	6.4	1.6	9.8	2.0	2.2	6.4
23	5.4	9.8	17	10	8.0	9.8	5.0	.91	8.4	1.3	5.0	6.8
24	5.0	10	17	9.8	15	8.4	5.4	.91	8.4	1.5	5.0	266
25	5.4	11	15	9.8	23	5.9	5.0	.56	7.3	1.6	3.8	146
26	5.9	9.1	13	10	23	5.4	4.2	.64	5.4	6.0	3.5	17
27	6.4	10	15	10	23	5.9	4.2	1.3	5.6	4.2	3.2	9.8
28	5.9	11	17	10	18	6.0	3.5	8.5	5.9	11	3.0	7.8
29	5.9	13	15	10	------	7.3	3.5	10	3.5	2.7	3.0	6.8
30	6.8	13	14	11	------	7.3	3.0	6.0	6.4	2.5	2.7	6.4
31	6.8	------	14	10	------	7.8	------	5.0	------	2.0	2.7	------
TOTAL	148.8	306.4	465	324.5	337.8	287.0	183.1	80.92	913.0	136.7	86.9	557.8
MEAN	4.80	10.2	15.0	10.5	12.1	9.26	6.10	2.61	30.4	4.41	2.80	18.6
MAX	8.4	13	21	15	23	16	14	10	248	18	5.0	266
MIN	3.0	7.3	10	5.0	6.0	5.4	3.0	.56	1.2	1.3	1.8	2.0
AC-FT	295	608	922	644	670	569	363	161	1,810	271	172	1,110

CAL YR 1970 TOTAL 5,725.92 MEAN 15.7 MAX 1,110 MIN .91 AC-FT 11,360
WTR YR 1971 TOTAL 3,827.92 MEAN 10.5 MAX 266 MIN .56 AC-FT 7,590

PEAK DISCHARGE (BASE, 5,000 CFS).--No peak above base.

07300500 Salt Fork Red River at Mangum, Okla.

LOCATION.--Lat 34°51'32", long 99°30'28", in SW 1/4 SE 1/4 sec.34, T.5 N., R.22 W., Greer County, near left bank on downstream side of pier of bridge on State Highway 34, 0.5 mile south of Mangum, 13 miles downstream from Fish Creek, and at mile 35.5.

DRAINAGE AREA.--1,566 sq mi, of which 209 sq mi is probably noncontributing.

PERIOD OF RECORD.--April 1905 to June 1906, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft above mean sea level (levels by Bureau of Reclamation). Apr. 11, 1905, to June 30, 1906, nonrecording gage at site 0.2 mile upstream at different datum. Oct. 1, 1937, to Nov. 8, 1938, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--34 years (1937-71), 89.5 cfs (64,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,080 cfs June 11 (gage height, 9.16 ft); no flow at times. Period of record: Maximum discharge, 72,000 cfs May 16, 1957 (gage height, 14.55 ft); maximum gage height, 14.7 ft June 16, 1938; no flow at times in each year.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1241: 1938.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	2.9			0	0	0	0
2					0	.90			0	16	0	0
3					0	0			0	93	0	0
4					0	0			0	.22	0	128
5					0	0			0	0	0	226
6					0	0			0	0	0	9.1
7					0	0			0	0	0	.74
8					0	0			0	0	0	0
9					0	0			62	0	0	283
10					0	0			84	0	0	2.1
11					0	0			1,400	0	0	0
12					0	0			684	0	0	0
13					0	0			92	0	0	0
14					0	0			50	0	75	0
15					0	0			34	0	572	0
16					0	0			6.0	0	79	0
17					0	0			.11	0	24	81
18					0	0			0	0	2.3	36
19					0	0			0	0	.04	3.5
20					0	0			0	0	0	.88
21					0	0			0	0	0	.12
22					0	0			0	0	0	0
23					0	0			0	72	0	39
24					0	0			0	2.3	0	3.7
25					0	0			0	0	0	205
26					9.7	0			0	0	0	97
27					9.2	0			0	0	0	56
28					3.6	0			0	0	0	9.0
29					------	0			0	0	0	2.4
30					------	0			0	0	0	.23
31		------			------	0	------		------	0	0	------
TOTAL	0	0	0	0	22.5	3.80	0	0	2,412.11	183.52	752.34	1,182.77
MEAN	0	0	0	0	.80	.12	0	0	80.4	5.92	24.3	39.4
MAX	0	0	0	0	9.7	2.9	0	0	1,400	93	572	283
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	45	7.5	0	0	4,780	364	1,490	2,350

CAL YR 1970 TOTAL 11,517.72 MEAN 31.6 MAX 3,160 MIN 0 AC-FT 22,850
WTR YR 1971 TOTAL 4,557.04 MEAN 12.5 MAX 1,400 MIN 0 AC-FT 9,040

PEAK DISCHARGE (BASE,6,000 CFS).--No peak above base.

07301300 North Fork Red River near Shamrock, Tex.

LOCATION.--Lat 35°15'51", long 100°14'29", Wheeler County, on left bank at downstream side of bridge on U.S. Highway 83, 2.5 miles north of Shamrock, 16 miles upstream from Oklahoma-Texas State line, and 23 miles downstream from McClellan Creek.

DRAINAGE AREA.--1,082 sq mi, of which 379 sq mi is probably noncontributing.

PERIOD OF RECORD.--1951-63 (occasional low-flow measurements), February 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,165.55 ft above mean sea level.

AVERAGE DISCHARGE.--7 years, 23.9 cfs (17,320 acre-ft per year).

EXTREMES,--Current year: Maximum discharge, 3,360 cfs May 31 (gage height, 4.58 ft); no flow at times.
Period of record: Maximum discharge, 11,200 cfs June 7, 1967 (gage height, 5.80 ft), from rating curve extended above 3,800 cfs; no flow at times.
Maximum stage since at least 1915, 16.1 ft in May 1957, from information by State Highway Department and local residents.

REMARKS.--Records poor. Small diversion from McClellan Creek upstream from gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	64		0	23		0	0
2					0	35		0	0		0	0
3					0	25		0	0		0	0
4					0	50		0	5.4		0	0
5					0	75		0	0		0	0
6					0	40		0	0		0	0
7					0	24		0	0		15	0
8					0	19		0	0		0	0
9					0	15		0	12		0	0
10					0	12		0	.05		0	0
11					13	4.6		0	0		0	0
12					10	5.4		0	.32		0	0
13					11	3.7		0	7.7		0	0
14					12	.34		0	0		0	0
15					7.9	0		0	0		0	0
16					7.9	0		0	0		0	0
17					7.0	0		0	0		0	0
18					12	0		0	0		0	0
19					27	0		0	0		0	0
20					20	0		0	0		0	0
21					17	0		0	0		0	0
22					15	0		0	0		0	0
23					15	0		0	0		0	0
24					50	0		0	0		0	0
25					82	0		0	0		0	0
26					124	0		0	0		0	0
27					150	0		0	0		0	4.7
28					121	0		0	0		0	.04
29					------	0		37	0		0	.01
30					------	0		7.3	0		0	0
31		------			------	0	------	156	------		0	------
TOTAL	0	0	0	0	701.8	373.04	0	200.3	48.47	0	15	4.75
MEAN	0	0	0	0	25.1	12.0	0	6.46	1.62	0	.48	.16
MAX	0	0	0	0	150	75	0	156	23	0	15	4.7
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	1,390	740	0	397	96	0	30	9.4

CAL YR 1970 TOTAL 5,262.45 MEAN 14.4 MAX 2,150 MIN 0 AC-FT 10,440
WTR YR 1971 TOTAL 1,343.36 MEAN 3.68 MAX 156 MIN 0 AC-FT 2,660

PEAK DISCHARGE (BASE, 3,000 CFS).--May 31 (2200) 3,360 cfs (4.58 ft).

07301410 Sweetwater Creek near Kelton, Tex.

LOCATION.--Lat 35°28'23", long 100°07'14", Wheeler County, near center of stream on downstream side of bridge on Farm Road 592, 5 miles north of Kelton, 8 miles upstream from Texas-Oklahoma State line, and 8.5 miles northeast of Wheeler.

DRAINAGE AREA.--287 sq mi, of which 20 sq mi is probably noncontributing.

PERIOD OF RECORD.--November 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,230 ft (from topographic map).

AVERAGE DISCHARGE.--9 years (1962-71), 14.1 cfs (10,220 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 730 cfs June 11 (gage height, 12.80 ft); no flow Sept. 6-16.
Period of record: Maximum discharge, 2,110 cfs Apr. 18, 1970 (gage height, 14.95 ft); no flow at times.
Maximum stage since at least 1882, about 20 ft May 16, 1957.

REMARKS.--Records good. Diversion above station for ranch use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	9.1	11	11	9.2	13	9.7	6.6	2.6	1.9	.64	.01
2	.89	7.5	10	11	9.4	11	9.7	6.4	2.0	1.5	.54	.01
3	.89	8.5	10	10	9.9	10	9.9	6.2	1.6	1.6	.49	.01
4	.89	9.2	9.9	9.0	10	10	9.2	6.2	2.6	1.3	.40	.01
5	.89	9.9	11	8.0	9.5	11	8.7	6.0	2.6	1.1	.40	.01
6	.89	9.9	10	7.0	9.0	9.7	9.2	5.6	1.6	1.0	.40	0
7	.96	9.2	10	7.0	8.0	9.0	9.2	5.9	1.2	.82	.44	0
8	1.2	9.9	11	8.0	7.0	9.2	9.0	4.8	1.0	.76	.66	0
9	1.5	10	11	9.0	8.0	9.0	7.8	4.8	1.8	.76	2.7	0
10	1.6	11	11	10	9.0	8.2	7.5	4.3	6.5	.70	1.5	0
11	1.7	11	11	11	9.7	8.2	7.8	3.4	247	.54	1.3	0
12	1.7	12	11	10	8.7	8.5	8.0	3.3	52	.44	1.2	0
13	1.9	12	11	11	8.7	8.7	7.8	3.1	32	.40	1.2	0
14	2.0	11	11	12	8.5	8.2	7.5	3.4	19	.40	1.3	0
15	2.3	11	12	10	8.5	8.0	7.8	3.1	12	.40	1.4	0
16	2.6	11	11	11	8.7	7.8	9.2	2.8	8.2	.40	1.4	0
17	3.0	11	11	11	8.5	8.0	11	2.3	5.8	.36	1.2	.07
18	3.1	11	11	11	9.4	7.8	11	2.0	4.5	.28	1.2	.53
19	3.1	11	11	11	11	7.8	10	2.0	3.5	.32	.82	.24
20	3.5	9.9	11	11	9.2	8.0	12	1.9	3.1	.44	.59	.22
21	4.0	10	11	11	9.0	8.7	10	1.8	3.0	.40	.44	.16
22	4.5	11	11	11	8.0	8.7	9.0	1.7	2.9	.32	.28	.34
23	5.0	10	11	10	10	9.2	8.2	1.2	2.6	1.5	.24	1.4
24	6.2	11	10	10	12	9.2	8.2	.96	2.3	2.1	.22	6.2
25	6.0	12	9.0	10	14	9.9	8.2	.82	2.1	.89	.16	15
26	6.6	12	10	9.9	16	9.9	7.5	.82	2.0	.64	.12	11
27	7.0	10	11	9.7	19	10	7.3	.70	1.8	.59	.10	3.9
28	7.8	10	11	9.7	16	9.9	7.0	.76	1.7	.64	.06	2.2
29	8.5	11	11	9.9	------	9.9	7.3	3.7	1.5	.76	.04	1.7
30	8.7	11	11	9.9	------	10	7.0	4.6	1.5	.89	.03	1.5
31	9.0	------	10	9.7	------	11	------	3.5	------	.76	.01	------
TOTAL	108.87	313.1	331.9	309.8	283.9	287.5	261.7	104.66	432.0	24.91	21.48	44.51
MEAN	3.51	10.4	10.7	9.99	10.1	9.27	8.72	3.38	14.4	.80	.69	1.48
MAX	9.0	12	12	12	19	13	12	6.6	247	2.1	2.7	15
MIN	.89	7.5	9.0	7.0	7.0	7.8	7.0	.70	1.0	.28	.01	0
AC-FT	216	621	658	614	563	570	519	208	857	49	43	88

CAL YR 1970 TOTAL 5,416.99 MEAN 14.8 MAX 1,190 MIN .10 AC-FT 10,740
WTR YR 1971 TOTAL 2,524.33 MEAN 6.92 MAX 247 MIN 0 AC-FT 5,010

PEAK DISCHARGE (BASE, 500 CFS).--June 11 (0930) 730 cfs (12.80 ft).

07301500 North Fork Red River near Carter, Okla.

LOCATION.--Lat 35°10'05", long 99°30'25", in NW 1/4 SE 1/4 sec.15, T.8 N., R.22 W., Beckham County, near left bank on downstream side of pier of bridge on State Highway 34, 3 miles south of Carter, 10.8 miles downstream from Timber Creek, and at mile 110.5.

DRAINAGE AREA.--2,337 sq mi, of which 399 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1944 to September 1962. Annual maximum and occasional low-flow measurements, water years 1963-64. August 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,673.71 ft above mean sea level.

AVERAGE DISCHARGE.--25 years, (1944-62, 1964-71), 122 cfs (88,390 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,860 cfs June 11 (gage height, 8.26 ft); no flow at times.
Period of record: Maximum discharge, 53,400 cfs May 26, 1959 (gage height, 13.42 ft); no flow at times in most years.

REMARKS.--Records good except winter periods, which are poor. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	55	0		215	0	0	0
2					0	21	0		151	25	0	0
3					0	12	0		19	230	0	0
4					0	14	0		192	5.0	0	0
5					0	11	0		192	1.0	0	0
6					0	7.6	0		31	0	0	0
7					0	7.6	0		1.2	0	0	0
8					0	8.2	0		.34	0	6.1	0
9					0	6.5	0		830	0	355	0
10					0	4.3	0		282	0	33	0
11					0	3.6	0		2,040	0	.54	0
12					0	3.3	0		650	0	0	0
13					0	3.0	0		500	0	0	0
14					0	2.5	0		338	0	3.8	0
15					0	1.9	0		195	0	2.3	0
16					0	1.7	0		80	0	.26	0
17					0	1.5	0		20	0	.03	.02
18					0	1.2	0		7.0	0	0	0
19					0	.86	0		2.0	0	0	0
20					0	.54	.22		.50	0	0	0
21					0	.54	.54		.10	0	0	0
22					0	.54	.64		0	.07	0	0
23					0	.54	.34		0	12	0	0
24					0	.54	.34		0	.90	0	0
25					0	.64	.26		0	0	0	21
26					.42	.54	.04		0	0	0	162
27					69	.64	0		0	0	0	69
28					96	.64	0		0	0	0	26
29					------	.54	0		0	0	0	5.5
30					------	.26	0		0	0	0	1.7
31		------			------	.10	------		------	0	0	------
TOTAL	0	0	0	0	165.42	172.82	2.38	0	5,746.14	273.97	401.03	285.22
MEAN	0	0	0	0	5.91	5.57	.079	0	192	8.84	12.9	9.51
MAX	0	0	0	0	96	55	.64	0	2,040	230	355	162
MIN	0	0	0	0	0	.10	0	0	0	0	0	0
AC-FT	0	0	0	0	328	343	4.7	0	11,400	543	795	566

CAL YR 1970 TOTAL 16,004.56 MEAN 43.8 MAX 2,600 MIN 0 AC-FT 31,750
WTR YR 1971 TOTAL 7,046.98 MEAN 19.3 MAX 2,040 MIN 0 AC-FT 13,980

PEAK DISCHARGE (BASE, 3,200 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-11	1115	8.26	4,860

07302500 Lake Altus at Lugert, Okla.

LOCATION.--Lat 34°53'15", long 99°17'47", in SW 1/4 SE 1/4 sec.22, T.5 N., R.20 W., Kiowa County, on upstream face of Altus Dam on North Fork Red River, 1 mile west of Lugert, 2.6 miles upstream from Elm Fork of North Fork, and at mile 73.5.

DRAINAGE AREA.--2,515 sq mi, of which 399 sq mi is probably noncontributing.

PERIOD OF RECORD.--December 1943 to September 1950 (monthly records only), October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Nov. 19, 1948, nonrecording or float gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 34,290 acre-ft Oct. 2 (elevation, 1,535.87 ft); minimum, 15,480 acre-ft Sept. 3 (elevation, 1,527.65 ft).
Period of record: Maximum contents, 170,600 acre-ft May 19, 1951 (elevation, 1,562.10 ft); minimum after initial storage, 4,690 acre-ft Aug. 25, 1944 (elevation, 1,520.2 ft).

REMARKS.--Reservoir is formed by concrete and coursed masonry dam. Storage began in December 1943. Capacity, 134,600 acre-ft at elevation 1,559.0 ft (crest of uncontrolled spillway) and 72,500 acre-ft at elevation 1,547.0 ft (crest of controlled spillway). Dead storage, 1,660 acre-ft below elevation 1,517.5 ft (sill of headgate at irrigation canal). Figures given herein represent total contents. Reservoir is used for flood-control, municipal water supply for city of Altus, and irrigation of about 48,000 acres. Revised capacity table used since Jan. 1, 1969.

COOPERATION.--Data on diversions furnished by Bureau of Reclamation.

Capacity table (elevation, in feet, and contents, in acre-feet)

1527	14,250	1533	26,980
1529	18,160	1535	31,970
1531	22,480	1536	34,650

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.24	33.46	32.18	31.45	31.24	31.19	29.17	28.11	26.09	31.01	22.90	15.57
2	34.24	33.43	32.05	31.45	31.19	31.12	29.29	28.06	26.11	31.12	22.48	15.57
3	34.24	33.38	31.95	31.40	31.19	30.99	29.29	27.94	26.04	31.06	21.95	15.48
4	34.18	33.32	31.89	31.45	31.19	30.81	29.17	27.77	26.04	31.12	21.32	15.86
5	34.05	33.30	31.87	31.48	31.22	31.06	29.04	27.87	26.09	31.12	20.61	16.06
6	34.16	33.30	31.84	31.50	31.19	30.99	28.97	27.84	26.04	30.78	19.84	16.16
7	34.16	33.24	31.84	31.48	31.17	30.94	28.72	27.80	26.16	30.58	19.00	16.16
8	34.02	33.24	31.84	31.48	31.14	30.73	28.77	27.77	26.16	30.42	18.27	16.16
9	33.83	33.22	31.84	31.48	31.12	30.99	28.80	27.84	26.98	30.17	17.55	16.06
10	33.70	33.16	31.82	31.48	31.09	30.76	28.80	27.87	27.82	29.94	17.05	16.06
11	33.83	33.11	31.82	31.48	31.14	30.83	28.75	27.87	28.67	29.87	16.45	16.06
12	33.78	33.11	31.79	31.45	31.12	30.94	28.70	27.82	30.10	29.79	16.06	15.96
13	33.78	33.11	31.76	31.45	31.06	30.76	28.65	27.70	30.65	29.79	16.06	15.96
14	33.75	33.11	31.74	31.45	31.09	30.76	28.60	27.70	31.14	29.59	16.16	15.86
15	33.70	33.08	31.74	31.45	30.81	30.70	28.60	27.70	31.35	29.29	16.16	15.86
16	33.75	33.08	31.71	31.45	31.04	30.48	28.58	27.70	31.53	28.72	16.06	15.86
17	33.78	33.06	31.71	31.45	30.94	30.12	28.55	27.70	31.58	27.94	16.06	15.96
18	33.81	32.98	31.68	31.45	31.12	30.12	28.50	27.58	31.53	27.41	16.06	16.06
19	33.78	33.03	31.68	31.37	31.06	29.99	28.48	27.34	31.48	26.39	16.06	16.06
20	33.78	32.90	31.68	31.32	31.19	29.69	28.43	27.10	31.58	25.76	15.96	15.96
21	33.78	32.95	31.66	31.37	31.40	29.67	28.43	26.75	31.66	25.01	15.96	15.96
22	33.75	32.90	31.66	31.37	31.24	29.64	28.43	26.51	31.71	24.56	15.86	15.96
23	33.75	32.82	31.66	31.35	31.24	29.57	28.40	26.28	31.58	24.78	15.86	15.96
24	33.70	32.76	31.63	31.32	31.22	29.57	28.40	26.16	31.43	24.67	15.86	16.06
25	33.70	32.68	31.63	31.35	31.19	29.52	28.38	26.04	31.27	24.44	15.86	16.06
26	33.70	32.76	31.61	31.32	31.19	29.44	28.36	26.11	31.19	24.33	15.76	16.06
27	33.62	32.68	31.58	31.32	31.17	29.29	28.31	26.09	31.06	24.11	15.76	16.06
28	33.56	32.50	31.56	31.30	31.17	29.22	28.26	26.04	30.94	23.89	15.67	16.06
29	33.56	32.37	31.50	31.32	------	29.24	28.21	26.04	30.94	23.67	15.67	16.06
30	33.56	32.31	31.50	31.35	------	29.27	28.16	26.11	30.99	23.56	15.67	16.06
31	33.51	------	31.45	31.30	------	29.29	------	26.16	------	23.23	15.57	------
(+)	1,535.58	1,535.13	1,534.80	1,534.74	1,534.69	1,533.95	1,533.49	1,532.65	1,534.62	1,531.35	1,527.70	1,527.95
(‡)	-.65	-1.20	-.86	-.15	-.13	-1.88	-1.13	-2.00	+4.83	-7.76	-7.66	+.49
(++)	0	500	500	0	0	1,100	0	922	0	7,740	7,540	0
MAX	34.24	33.46	32.18	31.50	31.40	31.19	29.29	28.11	31.37	31.12	22.90	16.16
MIN	33.51	32.31	31.45	31.30	30.81	29.22	28.16	26.04	26.04	23.23	15.57	15.48

CAL YR 1970..... ++ 73,330 ‡ -54.54
WTR YR 1971..... ++ 18,300 ‡ -18.09

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.
++ Total diversions, in acre-feet.

07303000 North Fork Red River below Altus Dam, near Lugert, Okla.

LOCATION.--Lat 34°53'26", long 99°18'22", in SW 1/4 sec.22, T.15 N., R.20 W., Greer County, on right bank 3,500 ft downstream from Altus Dam, 1.9 miles upstream from Elm Fork of North Fork, 2 miles west of Lugert, and at mile 72.8.

DRAINAGE AREA.--2,515 sq mi, of which 399 sq mi is probably noncontributing.

PERIOD OF RECORD.--March 1930 to December 1932 (published as "at Lugert Dam"), December 1943 to September 1950 (published as spill from Lake Altus), October 1950 to September 1962, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,471.81 ft above mean sea level. Mar. 19, 1930, to Dec. 21, 1932, nonrecording gage at former Lugert Dam, 0.7 mile upstream at datum 1,504.31 ft above mean sea level, unadjusted.

EXTREMES.--Current year: No flow during year.
Period of record: Maximum discharge, 16,100 cfs May 18, 1951 (gage height, 12.70 ft); no flow at times in each year.
Flood of May 16, 1928, reached a stage of 14.5 ft, site and datum then in use (discharge, 14,300 cfs).

REMARKS.--Records good. Some regulation at low flow by Lugert Lake prior to December 1943 (capacity, 13,500 acre-ft) and completely regulated thereafter by Lake Altus (see sta. 07302500). Diversions at Lake Altus bypass most of streamflow. Seepage from Altus Dam not included except for period March 1951 to January 1953.

REVISIONS.--WSP 1311: Drainage area.

07303400 Elm Fork of North Fork Red River near Carl, Okla.

LOCATION.--Lat 35°00'42", long 99°54'12", in SW 1/4 NW 1/4 sec.12, T.6 N., R.26 W., Harmon County, near left bank on downstream side of pier of bridge on State Highway 30, 4 miles northeast of Carl, and at mile 54.0.

DRAINAGE AREA.--416 sq mi.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,714.95 ft above mean sea level (State Highway Department bench mark).

AVERAGE DISCHARGE.--12 years, 37.0 cfs (26,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,090 cfs June 9 (gage height, 5.78 ft); minimum daily, 0.02 cfs July 17-22.
Period of record: Maximum discharge, 17,900 cfs Apr. 27, 1962 (gage height, 11.45 ft), from rating curve extended above 1,000 cfs on basis of slope-area measurement of peak flow; no flow Sept. 4, 1964.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1731: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.5	6.8	8.7	8.3	20	4.2	3.9	15	1.8	7.0	.96
2	2.0	4.0	6.9	9.6	10	16	4.1	3.6	9.8	1.8	4.5	.66
3	1.6	4.0	6.4	12	12	11	3.4	2.8	5.2	1.4	3.1	.47
4	1.3	4.2	6.4	4.7	11	16	3.6	3.0	291	.99	2.6	.36
5	1.3	4.6	6.3	4.5	8.9	15	5.1	2.9	49	.54	1.7	.42
6	1.1	5.0	6.1	5.0	9.2	12	5.6	2.5	15	.32	21	.36
7	.66	4.7	6.7	6.0	6.0	12	5.1	2.2	10	.15	27	.34
8	.58	4.6	7.0	7.5	8.0	11	5.7	2.4	8.1	.10	8.0	.37
9	.65	4.2	7.1	10	13	10	4.8	4.8	1,210	.07	40	1.2
10	1.0	4.6	8.1	13	16	9.6	5.5	4.1	190	.05	36	.45
11	1.4	4.6	7.1	15	17	9.9	5.2	2.6	509	.04	8.0	.41
12	2.1	4.9	6.9	16	13	9.9	4.5	2.2	141	.04	4.2	.36
13	2.4	8.2	7.4	18	12	9.1	3.5	1.8	295	.03	3.0	.37
14	2.9	7.8	7.3	15	12	7.7	5.0	1.7	87	.03	2.7	.40
15	3.4	8.3	11	9.2	11	8.5	5.5	1.5	30	.03	32	.42
16	3.3	7.8	9.5	12	11	8.6	9.8	1.5	20	.03	24	.44
17	5.8	7.1	8.7	10	11	8.1	9.8	1.4	14	.02	11	51
18	4.9	7.0	8.2	9.7	12	7.8	11	1.1	9.3	.02	5.4	59
19	4.6	6.7	7.5	9.3	11	7.8	11	.89	6.6	.02	3.3	34
20	3.9	6.5	8.7	8.6	11	7.6	9.5	.91	4.6	.02	2.3	9.8
21	3.4	6.7	9.0	10	29	7.9	8.0	.89	4.4	.02	1.7	5.1
22	3.2	6.2	9.3	9.8	13	7.7	7.3	1.1	4.1	.02	155	15
23	3.1	6.1	7.9	9.2	24	7.9	5.3	1.2	3.6	184	203	25
24	3.0	5.9	6.8	9.5	26	7.7	6.0	.92	3.1	52	15	156
25	3.1	7.4	8.7	9.7	25	9.0	4.5	.83	2.5	8.3	5.7	332
26	3.1	6.7	8.8	9.0	32	8.4	4.0	2.3	1.7	5.7	3.3	57
27	2.7	6.6	9.9	9.6	32	8.1	3.8	2.1	1.1	4.8	2.7	34
28	3.2	6.9	9.3	10	25	6.3	3.6	1.1	.82	322	2.3	24
29	3.2	7.2	9.3	11	------	6.3	4.4	128	.55	76	1.9	16
30	3.0	7.2	9.3	10	------	5.4	4.4	64	.51	25	1.4	10
31	3.1	------	8.1	9.0	------	5.1	------	26	------	11	1.2	------
TOTAL	80.89	179.2	246.5	310.6	429.4	297.4	173.2	276.24	2,941.98	696.34	640.0	835.89
MEAN	2.61	5.97	7.95	10.0	15.3	9.59	5.77	8.91	98.1	22.5	20.6	27.9
MAX	5.8	8.3	11	18	32	20	11	128	1,210	322	203	332
MIN	.58	3.5	6.1	4.5	6.0	5.1	3.4	.83	.51	.02	1.2	.34
AC-FT	160	355	489	616	852	590	344	548	5,840	1,380	1,270	1,660

CAL YR 1970 TOTAL 3,085.06 MEAN 8.45 MAX 84 MIN .11 AC-FT 6,120
WTR YR 1971 TOTAL 7,107.64 MEAN 19.5 MAX 1,210 MIN .02 AC-FT 14,100

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-9	0545	5.78	3,090

07303500 Elm Fork of North Fork Red River near Mangum, Okla.

LOCATION.--Lat 34°55'36", long 99°30'00", on east line sec.10, T.5 N., R.22 W., Greer County, at bridge on U. S. Highway 283, 3 miles north of Mangum, 5 miles downstream from Haystack Creek, and at mile 17.8.

DRAINAGE AREA.--838 sq mi.

PERIOD OF RECORD.--April 1905 to March 1908 (published as Elm Fork of Red River), March 1930 to September 1931, October 1937 to September 1947, April 1965 to September 1967, August 1968 to current year. Monthly discharge for some periods, published in WSP 1311. Occasional low-flow measurements, water years 1954, 1958-60, 1962-64, April to September 1965.

GAGE.--Water-stage recorder. Datum of gage is 1,520.77 ft above mean sea level (Bureau of Reclamation bench mark). Apr. 12, 1905, to Mar. 31, 1908, nonrecording gage at unknown datum. Mar. 16, 1930, to Sept. 30, 1931, nonrecording gage at datum 5.78 ft higher. Water-stage recorder Jan. 4, 1938, to Sept. 30, 1947, and April 1965 to Sept. 30, 1967, at datum 10.00 ft higher.

AVERAGE DISCHARGE.--18 years (1905-7, 1930-31, 1937-47, 1965-67, 1968-71), 101 cfs (73,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,340 cfs June 9 (gage height, 15.99 ft); no flow at times.
Period of record: Maximum discharge, 30,600 cfs May 12, 1947 (gage height, 13.52 ft, datum then in use); maximum gage height, 15.0 ft May 27, 1905, datum then in use; no flow at times in 1939-40, 1945-46, 1964, 1970-71.
Flood in spring of 1921 reached a stage of 26.4 ft, present datum, from information by State Highway Department.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1087: 1940(M). WSP 1311: 1906-8, 1931(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.60	5.8	8.4	8.6	15	3.5	1.9	22	1.4	15	2.0
2	.30	.93	5.7	8.4	8.4	12	3.3	1.8	9.9	5.0	9.7	1.4
3	.20	1.1	5.6	10	8.3	11	3.2	1.3	5.9	10	6.8	1.0
4	.10	1.3	5.5	7.4	8.5	10	2.7	1.0	5.3	5.0	4.8	6.5
5	.10	1.6	5.4	5.0	9.0	8.7	2.7	.82	114	2.0	3.6	13
6	0	1.7	5.3	5.0	8.7	8.5	2.9	.64	49	1.0	2.8	1.2
7	0	1.9	5.5	5.0	6.8	8.2	3.3	.45	21	.75	2.7	1.1
8	0	2.0	5.7	7.2	6.7	7.7	3.5	.36	13	.50	14	1.1
9	0	2.2	6.0	8.2	7.5	7.5	3.0	5.4	1,200	.35	610	79
10	0	2.3	6.2	9.3	9.4	7.2	2.6	5.4	880	.30	303	90
11	0	2.4	6.0	10	9.8	7.2	2.9	2.6	743	.25	63	8.3
12	0	2.5	6.6	11	10	6.8	2.7	1.4	1,290	.20	25	4.0
13	0	3.5	6.6	11	10	6.9	2.5	.99	429	.20	10	2.6
14	0	4.5	6.6	11	9.3	6.4	2.3	.71	291	.20	180	2.0
15	0	6.3	7.4	12	8.4	6.0	2.3	.48	99	.20	655	1.5
16	0	5.7	8.2	11	8.2	5.9	2.9	.30	44	.10	140	1.3
17	0	5.8	9.2	9.8	8.0	5.8	4.7	.22	20	.10	45	142
18	0	5.6	8.3	10	9.1	5.3	7.0	.15	13	.10	30	790
19	0	5.2	7.9	9.9	9.2	4.8	8.5	.10	9.5	.10	20	115
20	.51	4.8	7.8	9.5	9.3	4.8	5.9	.05	7.5	.10	10	53
21	.60	4.8	7.8	9.3	7.5	4.8	5.2	0	6.0	.05	8.0	21
22	.55	4.4	8.0	8.9	8.0	4.7	4.1	0	4.8	.05	7.0	13
23	.41	4.4	8.1	9.3	13	5.0	3.6	0	4.1	240	30	355
24	.33	4.6	7.9	9.0	17	4.9	3.5	0	3.4	295	119	352
25	.25	4.6	7.6	9.0	16	5.0	3.2	0	2.9	63	30	734
26	.11	4.6	7.6	8.8	16	5.0	2.8	.01	2.6	18	15	296
27	.03	4.7	7.8	8.9	19	5.4	2.3	0	2.3	9.7	10	74
28	.06	5.1	8.4	8.9	18	5.1	2.1	2.8	2.0	26	8.0	43
29	.22	5.4	8.8	9.0	------	5.0	2.0	2.1	1.8	329	6.0	32
30	.39	5.7	8.9	9.0	------	4.4	2.1	27	1.6	76	4.0	20
31	.44	------	8.4	8.8	------	4.0	------	88	------	27	3.0	------
TOTAL	5.00	110.23	220.6	278.0	287.7	209.0	103.3	145.98	5,297.6	1,111.65	2,390.4	3,256.0
MEAN	.16	3.67	7.12	8.97	10.3	6.74	3.44	4.71	177	35.9	77.1	109
MAX	.60	6.3	9.2	12	19	15	8.5	88	1,290	329	655	790
MIN	0	.60	5.3	5.0	6.7	4.0	2.0	0	1.6	.05	2.7	1.0
AC-FT	9.9	219	438	551	571	415	205	290	10,510	2,200	4,740	6,460

CAL YR 1970 TOTAL 4,428.17 MEAN 12.1 MAX 456 MIN 0 AC-FT 8,780
WTR YR 1971 TOTAL 13,415.46 MEAN 36.8 MAX 1,290 MIN 0 AC-FT 26,610

PEAK DISCHARGE (BASE, 2,400 CFS).--No peak above base.

07304500 Elk Creek near Hobart, Okla.

LOCATION.--Lat 34°54'51", long 99°06'49", in NE 1/4 NE 1/4 sec.17, T.5 N., R.18 W., Kiowa County, near right bank on downstream side of pier of county road bridge, 7 miles downstream from Little Elk Creek, 7.5 miles south of Hobart, and at mile 10.9.

DRAINAGE AREA.--549 sq mi.

PERIOD OF RECORD.--September 1904 to March 1908, October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,429.4 ft above mean sea level. See WSP 1920 for history of changes prior to Apr. 28, 1954.

AVERAGE DISCHARGE.--25 years (1904-7, 1949-71), 66.8 cfs (48,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,400 cfs Sept. 4 (gage height, 30.17 ft); no flow at times.
Period of record: Maximum discharge, 22,400 cfs Oct. 4, 1955 (gage height, 30.75 ft, from floodmarks), from rating curve extended above 5,300 cfs on basis of field estimate of peak flow; no flow at times in most years.
Flood of June 9, 1907, reached a stage of 28.9 ft, datum then in use.

REMARKS.--Records good above 5 cfs and poor below.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1241: 1905.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	.26	1.8	1.3	5.2	21	2.0	.19	.66	1.7	.35	2.0
2	2.1	.25	1.8	1.1	4.9	13	1.2	.34	.65	1.3	.35	1.5
3	1.9	.25	1.9	1.6	4.8	7.2	.90	.36	27	1.0	.30	1.0
4	1.7	.26	1.9	1.3	5.9	5.3	.70	.44	8.2	117	.30	2,420
5	1.6	.30	1.6	.92	5.8	3.5	.90	.98	1.5	48	.25	4,880
6	1.5	.34	1.6	.55	6.2	2.5	.72	.69	.05	14	.25	128
7	1.4	.30	1.1	.49	1.5	2.0	.65	.59	.23	6.2	.25	44
8	1.3	.42	.96	.50	1.0	1.5	.60	.31	32	3.0	2.0	15
9	1.2	.38	1.0	1.2	1.0	1.2	.55	1.3	341	2.0	3.5	60
10	1.2	.34	1.3	2.0	1.2	1.0	.50	1.3	214	1.0	357	91
11	1.1	.30	1.9	3.2	5.0	.95	.45	.95	186	.60	100	20
12	1.0	.38	1.9	3.2	6.3	.85	.45	.86	203	.40	26	10
13	.95	.46	2.1	3.9	5.0	.75	.40	.30	102	.20	15	8.0
14	.90	.59	2.4	3.7	4.9	.70	.42	.34	34	.10	14	6.0
15	.80	.59	2.9	3.7	4.6	.65	.46	.22	15	.05	35	5.0
16	.75	.68	3.1	3.9	5.2	.62	.42	.18	8.8	.03	69	4.0
17	.70	.71	3.4	3.8	6.1	.58	.42	.18	5.8	.01	252	140
18	.65	1.2	3.2	3.1	6.2	.54	.59	.10	4.6	0	49	1,200
19	.60	1.3	2.9	2.8	3.9	.52	.59	.06	4.6	0	39	323
20	.60	1.5	2.6	2.6	3.7	.50	.38	.01	4.6	0	14	61
21	.55	1.4	2.7	3.2	5.4	.50	.26	.01	5.5	0	7.0	20
22	.50	1.5	2.8	3.5	8.4	.45	.22	0	6.2	0	4.5	8.3
23	.50	1.8	2.2	4.1	13	.45	.18	0	10	258	3.5	11
24	.45	2.0	2.1	4.1	15	.40	.15	0	13	122	3.0	50
25	.40	1.7	1.6	3.9	10	.40	.12	0	7.8	27	6.0	461
26	.40	1.9	1.8	2.9	14	.40	.16	.06	6.8	5.7	19	76
27	.36	2.5	1.7	3.8	15	.40	.21	0	5.0	2.5	8.0	44
28	.34	1.3	2.0	4.0	22	.90	.26	0	3.8	1.0	6.0	19
29	.32	1.6	2.1	3.8	------	.70	.21	.13	2.9	.70	4.0	9.9
30	.30	1.8	1.6	4.2	------	1.0	.21	.35	2.3	.50	3.0	6.8
31	.28	------	1.2	5.3	------	1.8	------	.46	------	.40	2.5	------
TOTAL	28.65	28.31	63.16	87.66	191.2	72.26	15.28	10.71	1,256.99	614.39	1,044.05	10,125.5
MEAN	.92	.94	2.04	2.83	6.83	2.33	.51	.35	41.9	19.8	33.7	338
MAX	2.3	2.5	3.4	5.3	22	21	2.0	1.3	341	258	357	4,880
MIN	.28	.25	.96	.49	1.0	.40	.12	0	.05	0	.25	1.0
AC-FT	57	56	125	174	379	143	30	21	2,490	1,220	2,070	20,080

CAL YR 1970 TOTAL 5,971.13 MEAN 16.4 MAX 998 MIN 0 AC-FT 11,840
WTR YR 1971 TOTAL 13,538.16 MEAN 37.1 MAX 4,880 MIN 0 AC-FT 26,850

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.HT.	DISCHARGE
9-4	2145	30.17	17,400

07305000 North Fork Red River near Headrick, Okla.

LOCATION.--Lat 34°38'04", long 99°05'47", in NW 1/4 NE 1/4 sec.21, T.2 N., R.18 W., Tillman County, near left bank on downstream side of pier of bridge on U. S. Highway 62, 2.5 miles east of Headrick, 12.9 miles upstream from Otter Creek, and at mile 33.0.

DRAINAGE AREA.--4,244 sq mi, of which 399 sq mi is probably noncontributing.

PERIOD OF RECORD.--April 1905 to March 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to July 1905, published as "near Snyder."

GAGE.--Water-stage recorder. Datum of gage is 1,294.83 ft above mean sea level (Bureau of Reclamation bench mark). Prior to July 18, 1905, nonrecording gage at site 0.2 mile downstream at different datum. July 18, 1905, to Mar. 30, 1908, nonrecording gage at Navajo damsite 10.4 miles upstream at different datum. Oct. 1, 1937, to Jan. 29, 1969, water-stage recorder at present site at datum 5.0 ft higher.

AVERAGE DISCHARGE.--36 years (1905-7, 1937-71), 303 cfs (219,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,200 cfs Sept. 6 (gage height, 13.71 ft); no flow at times.
Period of record: Maximum discharge, 30,700 cfs Oct. 5, 1955 (gage height, 16.50 ft present datum); no flow at times in most years.
A stage of 21.1 ft present datum occurred sometime prior to 1927, from information by State Highway Department.

REMARKS.--Records good. Flow regulated since December 1943 by storage and diversion at Lake Altus, 39.5 miles above station (see sta. 07302500). Diversions for irrigation of about 48,000 acres above station; some return flow may re-enter at Stinking Creek, 16 miles below station. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1241: 1905-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	.70	2.3	6.9	6.4	22	1.6	.20	35	5.2	88	17
2	18	.65	2.5	7.1	6.7	27	1.1	.10	25	44	47	13
3	15	.65	2.8	9.1	7.5	39	1.0	.10	20	77	31	9.9
4	13	.60	3.1	4.2	7.3	24	1.0	.13	14	22	20	36
5	11	.60	2.9	2.9	7.5	22	.81	.05	27	29	15	5,840
6	9.1	.65	2.9	3.4	6.8	19	1.4	0	11	97	13	5,370
7	7.1	.65	3.1	3.4	2.7	17	1.5	0	2.4	42	11	607
8	6.0	.70	3.4	3.3	4.1	16	1.0	0	36	21	10	283
9	5.5	.70	3.7	5.6	6.8	15	.90	7.5	192	13	8.0	153
10	5.0	.75	4.0	8.0	11	15	.70	3.1	1,820	8.7	6.3	93
11	4.7	.75	3.4	10	12	14	.70	.53	2,430	5.2	540	146
12	4.2	.80	3.9	9.6	12	14	.60	0	1,080	3.8	529	129
13	4.2	.80	4.1	9.5	11	11	.40	0	1,630	2.3	145	62
14	3.8	.85	4.2	9.7	9.1	8.4	.10	0	1,170	1.4	102	42
15	3.8	.85	4.9	9.3	9.1	8.2	.10	0	501	.96	313	31
16	3.8	.90	5.4	9.6	9.3	8.6	.30	0	384	.90	446	24
17	3.8	.95	5.4	10	9.9	8.0	.40	0	214	.70	912	52
18	3.4	.95	5.7	11	11	6.9	.20	0	119	.40	581	1,760
19	3.0	1.0	6.4	11	11	5.0	.30	0	80	.20	243	3,130
20	2.8	1.0	6.2	11	9.4	4.6	.30	0	63	.10	133	846
21	2.6	1.3	7.1	11	13	4.1	.10	0	56	.10	79	285
22	2.4	1.4	8.5	10	9.1	3.4	.10	0	53	.50	54	137
23	2.0	1.0	8.9	8.9	17	3.7	0	5.0	50	7.8	44	71
24	2.0	1.4	8.0	8.8	19	3.4	.60	10	34	92	33	72
25	2.0	1.4	7.5	8.9	21	3.8	1.8	1.0	24	484	20	779
26	2.4	1.3	7.7	8.3	21	5.1	.80	0	19	280	56	1,120
27	2.3	1.3	8.2	7.6	21	5.4	.40	0	15	113	59	876
28	1.8	1.6	7.8	7.6	20	5.9	.20	0	10	55	41	419
29	1.4	1.8	8.0	8.1	------	4.7	.40	0	8.7	35	42	263
30	1.1	1.9	7.7	7.8	------	4.1	.40	5.0	6.5	23	27	205
31	.90	------	7.1	6.7	------	2.9	------	35	------	115	20	------
TOTAL	169.10	29.90	166.8	248.3	311.7	351.2	19.21	67.71	10,129.6	1,580.26	4,668.3	22,870.9
MEAN	5.45	1.00	5.38	8.01	11.1	11.3	.64	2.18	338	51.0	151	762
MAX	21	1.9	8.9	11	21	39	1.8	35	2,430	484	912	5,840
MIN	.90	.60	2.3	2.9	2.7	2.9	0	0	2.4	.10	6.3	9.9
AC-FT	335	59	331	493	618	697	38	134	20,090	3,130	9,260	45,360

CAL YR 1970 TOTAL 15,196.84 MEAN 41.6 MAX 1,640 MIN 0 AC-FT 30,140
WTR YR 1971 TOTAL 40,612.98 MEAN 111 MAX 5,840 MIN 0 AC-FT 80,560

07305500 West Otter Creek at Snyder Lake, near Mountain Park, Okla.

LOCATION.--Lat 34°44'04", long 98°59'14", in NE 1/4 sec.16, T.3 N., R.17 W., Kiowa County, at intake tower at Snyder Dam on West Otter Creek, 0.8 mile upstream from small tributary, 3 miles northwest of Mountain Park, and at mile 26.0.

DRAINAGE AREA.--132 sq mi.

PERIOD OF RECORD.--April 1903 to March 1908, October 1951 to current year. Published as Otter Creek near Mountain Park 1903-8 and as Otter Creek at Snyder Lake, near Mountain Park 1951-60. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder and broad-crested masonry spillway. Datum of gage is 1,360.99 ft above mean sea level. April 1903 to March 1908, nonrecording gage at site 1.8 miles downstream at different datum.

AVERAGE DISCHARGE.--24 years (1903-7, 1951-71), 21.6 cfs (15,650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,570 cfs Sept. 18 (gage height, 14.77 ft); no flow most of year. Period of record: Maximum discharge, 14,200 cfs June 6, 1953 (gage height, 19.50 ft, from floodmarks), from rating curve extended above 1,600 cfs on basis of contracted-opening and flow-over-dam measurements of peak flow; no flow at times in most years.

REMARKS.--Records good prior to Aug. 11, poor thereafter. Records of discharge are outflow from reservoir, determined from stage-discharge relation for uncontrolled spillway. Reservoir is formed by earth dam, having a rock masonry broadcrested weir as a spillway. Crest elevation at lowest point is 11.9 ft gage datum (capacity, 1,355 acre-ft). The city of Snyder diverted about 130 acre-ft annually prior to October 1958 and none therafter.

REVISIONS (WATER YEARS).--WSP 1731: 1960(M). WSP 1920: 1959-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									0	0	0	36
2									0	0	0	25
3									0	0	0	17
4									0	.10	0	13
5									0	.08	0	1,260
6									0	0	0	169
7									0	0	0	51
8									0	0	0	38
9									155	0	0	26
10									92	0	0	19
11									252	0	.10	14
12									59	0	.90	10
13									7.6	0	.11	7.8
14									.92	0	0	5.9
15									0	0	228	5.6
16									0	0	161	4.9
17									0	0	167	82
18									0	0	59	1,630
19									0	0	41	320
20									0	0	28	58
21									0	0	19	42
22									.17	0	13	30
23									.36	0	10	23
24									0	0	7.5	202
25									0	0	5.6	515
26									0	0	4.5	82
27									0	0	4.1	46
28									0	0	2.9	32
29					------				0	0	42	22
30					------				0	0	156	15
31		------			------		------		------	0	50	------
TOTAL	0	0	0	0	0	0	0	0	567.05	.18	999.71	4,801.2
MEAN	0	0	0	0	0	0	0	0	18.9	.006	32.2	160
MAX	0	0	0	0	0	0	0	0	252	.10	228	1,630
MIN	0	0	0	0	0	0	0	0	0	0	0	4.9
AC-FT	0	0	0	0	0	0	0	0	1,120	.4	1,980	9,520

CAL YR 1970 TOTAL 111.23 MEAN .30 MAX 29 MIN 0 AC-FT 221
WTR YR 1971 TOTAL 6,368.14 MEAN 17.4 MAX 1,630 MIN 0 AC-FT 12,630

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.HT.	DISCHARGE
9-5	0700	14.42	1,800
9-18	1500	14.77	2,570

NOTE.--Construction breach in dam affected flow after Aug. 11.

07308200 Pease River near Vernon, Tex.

LOCATION.--Lat 34°10'44", long 99°16'40", Wilbarger County, near left bank on downstream side of bridge on U.S. Highway 283, 1.9 miles north of Vernon, and 10 miles upstream from mouth.

DRAINAGE AREA.--3,488 sq mi, of which 559 sq mi is probably noncontributing.

PERIOD OF RECORD.--December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,166.03 ft above mean sea level.

AVERAGE DISCHARGE.--11 years (1960-71), 87.7 cfs (63,540 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,190 cfs Sept. 25 (gage height, 11.86 ft); no flow at times.
Period of record: Maximum discharge 31,000 cfs, Sept. 19, 1965 (gage height, 18.50 ft); no flow at times each year.
Maximum stage since at least 1890, 24 ft in 1891; flood in September 1936 reached a stage of 23.5 ft, and flood of June 2, 1957, reached a stage of 22.0 ft, from information by local residents.

REMARKS.--Records fair. Four small diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0							0	2,310		0	69
2	1.2							0	518		0	36
3	.14							0	132		0	35
4	0							0	45		0	31
5	0							0	22		0	80
6	0							0	14		0	477
7	0							0	11		0	341
8	0							0	8.4		0	144
9	0							0	23		0	74
10	0							0	7.7		0	50
11	0							0	1,130		0	29
12	0							0	1,530		0	49
13	0							0	449		0	48
14	0							0	145		0	22
15	0							0	58		0	15
16	.05							0	35		125	7.7
17	.10							0	16		555	22
18	.08							0	6.0		225	1,780
19	.04							0	2.0		207	1,040
20	0							0	.10		88	500
21	0							0	9.5		52	345
22	0							0	50		29	235
23	0							0	.14		15	479
24	0							0	0		14	1,480
25	0							0	0		47	4,170
26	0							.08	0		485	1,720
27	0							.82	0		284	940
28	0							0	0		162	532
29	0				------			0	0		163	251
30	0				------			910	0		110	168
31	0	------			------		------	2,210	------		72	------
TOTAL	4.61	0	0	0	0	0	0	3,120.90	6,521.84	0	2,633	15,169.7
MEAN	.15	0	0	0	0	0	0	101	217	0	84.9	506
MAX	3.0	0	0	0	0	0	0	2,210	2,310	0	555	4,170
MIN	0	0	0	0	0	0	0	0	0	0	0	7.7
AC-FT	9.1	0	0	0	0	0	0	6,190	12,940	0	5,220	30,090

CAL YR 1970 TOTAL 7,769.46 MEAN 21.3 MAX 831 MIN 0 AC-FT 15,410
WTR YR 1971 TOTAL 27,450.05 MEAN 75.2 MAX 4,170 MIN 0 AC-FT 54,450

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
6- 1	0700	11.85	5,170	9-6	1700	10.52	2,530
6-11	1800	11.45	4,300	9-18	2000	11.85	5,170
				9-25	0800	11.86	5,190

07308500 Red River near Burkburnett, Tex.

LOCATION.--Lat 34°06'30", long 98°32'00", Wichita County, on downstream side of bridge on U.S. Highways 277 and 281, 2 miles northeast of Burkburnett, and at mile 933.

DRAINAGE AREA.--20,570 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1924 to August 1925 (monthly discharge only), December 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 956 ft (from topographic map). July 11, 1924, to Aug. 31, 1925, nonrecording gage at site 1,000 ft downstream at same datum.

AVERAGE DISCHARGE.--11 years (1960-71), 698 cfs (505,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,700 cfs Sept. 6 (gage height, 8.85 ft); no flow at times.
Period of record: Maximum discharge, 62,800 cfs Oct. 19, 1965 (gage height, 11.46 ft); no flow at times.
Flood of June 3, 1957, reached a stage of 13.54 ft (from floodmarks). According to local residents, higher stages occurred in 1891 and June 1941.

REMARKS.--Records poor. Many small diversions for irrigation above station. Water-quality records for the current year are published in Part 2 of the Texas State report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	1.8	1.6	4.3	5.0	19	.20	0	1,460	11	21	262
2	60	1.6	1.6	4.3	5.0	16	0	0	3,600	19	19	460
3	48	1.1	2.0	4.2	6.2	14	0	0	1,760	27	9.6	263
4	37	.91	1.6	4.0	7.1	18	0	0	962	9.1	8.6	173
5	29	.91	1.6	3.6	6.6	22	0	0	451	5.8	15	772
6	24	.81	1.1	3.5	5.4	17	0	0	228	13	34	6,010
7	18	.72	1.5	3.7	4.6	15	0	0	126	156	51	9,540
8	18	.57	1.8	4.0	5.8	14	0	0	86	62	107	6,040
9	18	.28	2.2	4.3	5.8	13	0	0	147	24	37	2,300
10	28	.28	2.2	4.6	6.2	13	0	0	84	16	36	1,090
11	17	.18	1.8	5.8	6.6	11	0	0	42	13	773	606
12	13	.28	1.4	5.8	5.4	11	0	0	566	10	611	425
13	12	1.2	2.4	11	6.2	9.6	0	36	6,240	7.6	989	315
14	12	1.4	2.4	7.6	5.4	6.6	0	118	3,830	7.6	714	288
15	14	2.2	5.0	6.2	5.4	5.8	0	32	7,400	4.6	2,540	281
16	13	2.6	4.6	6.2	5.4	5.8	0	9.1	3,770	2.2	2,300	222
17	13	2.6	3.7	6.2	4.6	6.2	0	.32	2,900	.91	1,320	244
18	19	2.2	3.2	5.4	5.4	5.0	0	0	1,570	.24	1,410	300
19	31	1.5	2.4	5.4	4.6	3.2	0	0	925	.05	3,750	6,930
20	37	.81	3.2	6.2	4.0	2.6	0	0	540	.03	2,020	8,840
21	24	.57	4.3	5.4	4.6	2.2	1.1	0	484	0	1,500	3,510
22	21	.36	5.4	5.0	6.1	2.0	2.8	0	639	0	827	3,580
23	36	.15	4.0	5.0	19	2.0	.21	0	399	1.9	390	1,450
24	19	.18	4.0	5.4	22	2.0	.07	0	363	.57	275	2,220
25	12	.13	3.2	6.2	20	2.0	0	0	192	.36	390	4,940
26	8.6	.11	3.2	6.2	16	2.0	0	0	80	3.2	288	6,530
27	6.6	.11	3.7	6.2	17	1.8	0	4.4	48	2.0	566	5,180
28	5.8	.44	3.7	6.6	19	1.8	0	19	32	70	929	4,780
29	5.0	1.0	3.4	6.6	------	1.8	0	12	22	83	520	3,090
30	3.2	1.8	5.9	7.1	------	1.2	0	11	15	62	351	2,290
31	2.4	------	4.3	5.4	------	.41	------	113	------	38	300	------
TOTAL	677.6	28.80	92.4	171.4	234.4	247.01	4.38	354.82	38,961	650.16	23,101.2	82,931
MEAN	21.9	.96	2.98	5.53	8.37	7.97	.15	11.4	1,299	21.0	745	2,764
MAX	73	2.6	5.9	11	22	22	2.8	118	7,400	156	3,750	9,540
MIN	2.4	.11	1.1	3.5	4.0	.41	0	0	15	0	8.6	173
AC-FT	1,340	57	183	340	465	490	8.7	704	77,280	1,290	45,820	164,500

CAL YR 1970 TOTAL 50,167.29 MEAN 137 MAX 3,230 MIN 0 AC-FT 99,510
WTR YR 1971 TOTAL 147,454.17 MEAN 404 MAX 9,540 MIN 0 AC-FT 292,500

PEAK DISCHARGE (BASE, 9,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-15	0700	8.73	12,500
9- 6	2000	8.85	12,700
9-20	0700	8.81	12,300

07311000 East Cache Creek near Walters, Okla.

LOCATION.--Lat 34°21'44", long 98°16'56", on south line of SE 1/4 SE 1/4 sec.19, T.2 S., R.10 W., Cotton County at right bank on downstream side of bridge on State Highway 53, 1.8 miles east of Walters, 12.2 miles upstream from West Cache Creek, and at mile 19.7.

DRAINAGE AREA.--675 sq mi.

PERIOD OF RECORD.--May 1938 to December 1963; October 1969 to current year. Prior to October 1969, published as Cache Creek near Walters.

GAGE.--Water-stage recorder. Datum of gage is 938.2 ft above mean sea level (State Highway Department bench mark). Prior to Jan. 8, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 174 cfs (126,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,300 cfs Aug. 16 (gage height, 25.49 ft); minimum, 3.3 cfs July 15.
Period of record: Maximum discharge, 28,200 cfs May 18, 1951 (gage height, 29.72 ft); no flow at times in 1939-40.
Flood in 1906 reached a stage about the same as on May 18, 1951, and on May 17, 1947 (gage height, 29.62 ft), from information by local residents.

REMARKS.--Records good. Flow partly regulated by Lake Lawtonka (capacity, 42,300 acre-ft prior to late 1953, and 63,000 acre-ft thereafter) on Medicine Creek, by Lake Thomas (capacity, 8,300 acre-ft) on Little Medicine Creek, and since March 1961 by Lake Ellsworth (capacity, 94,500 acre-ft) on East Cache Creek. Low flow sustained by sewage from cities of Lawton and Walters. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	16	18	20	20	21	14	29	1,180	10	26	20
2	21	16	17	19	19	21	15	24	1,430	11	15	19
3	24	15	17	21	19	21	16	18	254	12	12	17
4	23	14	18	21	19	21	15	16	62	42	11	20
5	22	15	17	20	20	21	15	15	32	32	11	85
6	21	15	16	20	20	21	15	13	25	23	10	124
7	20	16	16	21	20	21	9.1	11	21	38	10	50
8	19	15	16	22	20	21	18	11	19	18	10	27
9	19	14	14	21	20	20	13	13	18	11	13	21
10	25	13	17	20	19	19	20	16	17	9.5	61	18
11	19	13	18	20	20	20	39	48	17	8.9	36	17
12	17	14	18	20	22	20	24	46	16	8.5	24	17
13	16	14	18	21	22	20	18	23	17	7.1	57	16
14	16	15	19	22	21	20	16	18	23	4.1	1,180	15
15	17	15	18	22	21	20	18	14	18	4.4	2,050	16
16	18	19	18	21	21	20	19	15	14	5.3	3,180	15
17	20	16	19	22	20	18	25	15	14	6.1	1,490	15
18	21	14	20	25	21	19	26	12	14	6.5	207	18
19	25	15	20	20	21	19	24	11	12	6.9	82	58
20	20	16	20	19	19	18	22	11	12	5.7	48	62
21	19	16	20	18	28	19	18	13	15	5.3	38	31
22	20	43	19	19	40	19	18	12	203	6.2	32	26
23	20	45	18	20	93	18	19	13	151	8.7	26	36
24	19	30	18	20	53	18	19	14	38	140	24	43
25	18	25	17	20	31	17	19	13	21	249	23	1,060
26	17	23	16	20	25	18	16	11	15	42	25	738
27	16	22	16	19	23	18	14	14	13	20	28	111
28	15	20	17	19	22	16	12	79	12	14	25	50
29	16	19	17	20	------	18	16	89	10	32	23	35
30	16	18	16	20	------	17	15	32	9.9	96	23	29
31	15	------	17	20	------	15	------	25	------	98	22	------
TOTAL	595	561	545	632	719	594	547.1	694	3,702.9	981.2	8,822	2,809
MEAN	19.2	18.7	17.6	20.4	25.7	19.2	18.2	22.4	123	31.7	285	93.6
MAX	25	45	20	25	93	21	39	89	1,430	249	3,180	1,060
MIN	15	13	14	18	19	15	9.1	11	9.9	4.1	10	15
AC-FT	1,180	1,110	1,080	1,250	1,430	1,180	1,090	1,380	7,340	1,950	17,500	5,570

CAL YR 1970 TOTAL 14,116.9 MEAN 38.7 MAX 1,680 MIN 4.2 AC-FT 28,000
WTR YR 1971 TOTAL 21,202.2 MEAN 58.1 MAX 3,180 MIN 4.1 AC-FT 42,050

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
6-1	1845	19.37	1,790	8-16	0615	25.49	3,300

07311200 Blue Beaver Creek near Cache, Okla.
(Hydrologic bench-mark station)

LOCATION.--Lat 34°37'24", long 98°33'48", in NE 1/4 NE 1/4 sec.28, T.2 N., R.13 W., Comanche County, on downstream side of right bank pier of bridge on U. S. Highway 62, 3,000 ft upstream from St. Louis-San Francisco Railway Co. bridge, 4 miles east of Cache, and at mile 12.0.

DRAINAGE AREA.--24.6 sq mi.

PERIOD OF RECORD.--July 1964 to current year.

AVERAGE DISCHARGE.--7 years, 5.67 cfs (4,110 acre-ft per year).

GAGE.--Water-stage recorder. Datum of gage is 1,215.26 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 461 cfs Sept. 24 (gage height, 8.59 ft); no flow at times.

Period of record: Maximum discharge, 3,050 cfs May 6, 1969 (gage height, 12.17 ft from floodmarks) from rating curve extended above 250 cfs on basis of conveyance studies; no flow at times each year.

REMARKS.--Records good. Minor regulation by Lake Rush, Lake Jed Johnson, and Lake Ketch, combined surface-area 132 acres. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.04	.06	.05	.05	.03	.02	0	.37		0	0
2	.04	.03	.05	.05	.05	.05	.02	0	0		0	0
3	.03	.03	.05	.07	.05	.07	.02	0	0		0	0
4	.02	.03	.07	.05	.05	.05	.02	0	0		0	29
5	.04	.05	.06	.05	.03	.05	.02	0	0		0	30
6	.03	.05	.05	.05	.03	.03	.02	0	0		0	1.1
7	.03	.03	.05	.04	.03	.03	.02	0	0		0	.46
8	.03	.03	.05	.04	.03	.05	.04	0	0		0	.34
9	.03	.03	.05	.05	.03	.04	.03	0	0		0	.31
10	.04	.03	.05	.05	.05	.05	.03	0	0		0	.28
11	.05	.03	.06	.05	.05	.05	.03	0	0		0	.26
12	.05	.03	.07	.05	.03	.05	.03	0	0		0	.25
13	.05	.05	.07	.05	.04	.05	.02	0	0		0	.27
14	.03	.06	.07	.05	.05	.04	.02	0	0		.02	.26
15	.05	.06	.08	.05	.05	.03	.02	0	0		.10	.23
16	.02	.07	.08	.06	.05	.03	.02	0	0		4.7	.21
17	.04	.05	.07	.05	.05	.04	.03	0	0		14	.32
18	.02	.05	.07	.05	.07	.03	.03	0	0		3.2	.94
19	.02	.05	.06	.05	.05	.03	.02	0	0		1.1	.73
20	.02	.05	.06	.06	.04	.03	.02	0	0		.48	.78
21	.02	.05	.07	.06	.11	.03	.01	0	0		.21	.71
22	.01	.04	.07	.05	.08	.03	.01	0	0		.10	.60
23	.01	.04	.06	.05	.07	.03	0	0	0		.04	.59
24	.01	.05	.05	.05	.05	.04	0	0	0		.03	110
25	.01	.06	.05	.05	.05	.05	0	0	0		.02	115
26	.01	.07	.05	.05	.03	.05	0	0	0		.01	36
27	.01	.05	.05	.07	.03	.05	0	0	0		0	22
28	.03	.06	.05	.07	.03	.04	0	0	0		0	14
29	.03	.07	.05	.07	------	.03	.02	0	0		0	11
30	.03	.07	.05	.07	------	.03	0	0	0		0	8.3
31	.02	------	.05	.05	------	.03	------	.81	------		0	------
TOTAL	.87	1.41	1.83	1.66	1.33	1.24	.52	.81	.37	0	24.01	383.94
MEAN	.028	.047	.059	.054	.048	.040	.017	.026	.012	0	.77	12.8
MAX	.05	.07	.08	.07	.11	.07	.04	.81	.37	0	14	115
MIN	.01	.03	.05	.04	.03	.03	0	0	0	0	0	0
AC-FT	1.7	2.8	3.6	3.3	2.6	2.5	1.0	1.6	.7	0	48	762

CAL YR 1970 TOTAL 3,887.42 MEAN 10.7 MAX 111 MIN 0 AC-FT 7,710
WTR YR 1971 TOTAL 417.99 MEAN 1.15 MAX 115 MIN 0 AC-FT 829

PEAK DISCHARGE (BASE, 500 CFS).--No peak above base.

07311500 Deep Red Run near Randlett, Okla.

LOCATION.--Lat 34°13'15", long 98°27'10", in SW 1/4 SW 1/4 sec.10, T.4 S., R.12 W., Cotton County, near right bank on downstream side of pier of bridge on U. S. Highway 277, 2.8 miles north of Randlett, and at mile 4.8.

DRAINAGE AREA.--617 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 924.49 ft above mean sea level (State Highway Department bench mark). Prior to Nov. 10, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--22 years, 106 cfs (76,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,500 cfs Aug. 15 (gage height, 24.62 ft); no flow at times.
Period of record: Maximum discharge, 48,700 cfs Sept. 22, 1969 (gage height, 27.51 ft), from rating curve extended above 13,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.
Flood in 1908 reached a stage somewhat exceeding 27 ft, from information by local residents.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1631: 1956. WSP 1920: 1951.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	.51	.70	.66	.43	.89	.32	.12	.02	.34	0	67
2	2.5	.31	.58	.94	.39	.61	.30	.14	5.0	.25	0	14
3	1.8	.18	.40	1.3	.37	.54	.18	.14	6.3	.47	0	6.3
4	1.2	.18	.25	1.7	.38	.54	.04	.09	2.2	.62	0	3.7
5	1.1	.34	.23	1.5	.33	.56	0	.07	1.2	.18	0	251
6	1.7	.33	.23	1.1	.26	.54	0	.05	.60	.05	0	873
7	.75	.28	.28	.93	.22	.46	0	.05	.34	.02	0	1,060
8	.66	.22	.48	.70	.18	.43	0	.03	.13	0	0	124
9	.54	.13	.22	.61	.18	.48	0	.14	.04	0	0	25
10	.54	.27	.20	.74	.25	.54	0	.48	1.3	0	75	9.7
11	.43	.25	.18	.84	.25	.53	0	.27	7.3	0	50	4.5
12	.54	.12	.18	1.5	.33	.54	0	.09	2.5	0	14	3.0
13	.66	.25	.15	1.6	.33	.54	0	.06	1.4	0	6.6	1.9
14	.66	.22	.25	1.1	.33	.71	0	.06	.77	0	3.3	1.4
15	.79	.21	.26	.84	.33	1.0	0	.03	.41	0	4,910	1.1
16	.79	.18	.27	.54	.43	.59	0	.01	.22	0	2,560	.8
17	.81	.15	.25	.59	.54	.18	0	.01	.13	0	993	.7
18	.75	.38	.27	.48	.43	.22	0	.03	.07	0	192	1.9
19	.53	.32	.19	.64	.33	.23	0	0	.04	0	28	306
20	.37	.59	.35	.84	.25	.20	0	0	.03	0	11	1,010
21	.36	.66	.30	.70	14	.18	.06	0	.10	0	7.1	298
22	.67	.66	.52	.78	26	.19	.34	0	341	0	3.9	40
23	1.2	.42	.66	.83	18	.12	.24	0	144	.05	2.4	36
24	.74	.42	.58	.83	16	.08	.24	0	29	0	1.6	222
25	.37	.44	.44	.74	3.1	.08	.17	0	10	0	1.2	1,850
26	.25	.66	.50	.66	1.6	.12	.12	0	4.5	0	.95	2,750
27	.80	.66	.68	.55	1.1	.15	.13	.01	2.6	0	.81	1,590
28	.68	.76	.69	.51	1.1	.22	.16	0	1.5	0	.79	162
29	.60	.70	.45	.54	------	.24	.11	0	.96	.01	.73	46
30	.25	.84	.66	.54	------	.24	.08	0	.61	0	.56	23
31	.43	------	.77	.54	------	.21	------	.01	------	0	14	------
TOTAL	27.17	11.64	12.17	26.37	87.44	12.16	2.49	1.89	564.27	1.99	8,876.94	10,782.0
MEAN	.88	.39	.39	.85	3.12	.39	.083	.061	18.8	.064	286	359
MAX	3.7	.84	.77	1.7	26	1.0	.34	.48	341	.62	4,910	2,750
MIN	.25	.12	.15	.48	.18	.08	0	0	.02	0	0	.70
AC-FT	54	23	24	52	173	24	4.9	3.8	1,120	4.0	17,610	21,390

CAL YR 1970 TOTAL 12,034.28 MEAN 33.0 MAX 2,110 MIN 0 AC-FT 23,870
WTR YR 1971 TOTAL 20,406.53 MEAN 55.9 MAX 4,910 MIN 0 AC-FT 40,480

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
8-15	1245	24.62	12,500	9-26	1045	21.51	2,880

07312500 Wichita River at Wichita Falls, Tex.

LOCATION.--Lat 33°54'34", long 98°32'00", Wichita County, near center of stream on downstream side of bridge on Beverly Drive in Wichita Falls, 4 miles upstream from Fort Worth and Denver Railway Co. bridge, 8.4 miles upstream from Holliday Creek, and at mile 55.3.

DRAINAGE AREA.--3,140 sq mi, of which 2,086 sq mi is above Lake Kemp Dam.

PERIOD OF RECORD.--February 1900 to January 1902 (monthly discharge only, published in WSP 1311), October 1910 to December 1911 (gage heights only), March 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 924.26 ft above mean sea level. February 1900 to February 1902 and Oct. 1, 1910, to Dec. 31, 1911, nonrecording gages at site 4 miles downstream at different datum. Mar. 30, 1938, to Dec. 1, 1959, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--34 years (1900-1, 1938-71), 292 cfs (211,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,950 cfs Aug. 15 (gage height, 20.44 ft); minimum daily, 31 cfs Mar. 8, 15.
Period of record: Maximum discharge, 17,800 cfs Oct. 3, 1941 (gage height, 24.0 ft); no flow Oct. 11, 1960 (construction cofferdam upstream).
Maximum discharge known, 50,000 cfs June 8, 1915, computed by Vernon L. Sullivan, engineer for Big Wichita River Irrigation Co.

REMARKS.--Records good. Flow from 2,086 sq mi is regulated by Lake Kemp (capacity, 461,800 acre-ft) 71 miles upstream. Since completion of dam in 1923 no flow has been permitted to pass over spillway. Water is diverted from Lake Diversion (capacity, 40,000 acre-ft) 51 miles upstream for irrigation (42,000 acres under permit) in the vicinity of Wichita Falls. During the water year, Wichita County Water Improvement District No. 2 diverted 97,380 acre-ft from Lake Diversion for mining, industrial use, recreation, and irrigation of 19,820 acres. The city of Wichita Falls diverted 8,080 acre-ft from Lake Kickapoo on the North Fork Little Wichita River and 11,040 acre-ft from Lake Arrowhead on Little Wichita River for municipal use, of which 9,570 acre-ft was returned to Wichita River below station as sewage effluent and filter plant washwater. Diversion and return flow records furnished by Wichita County Water Improvement District No. 2 and the city of Wichita Falls.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	73	49	67	43	43	95	91	230	137	190	143
2	90	74	38	75	64	42	90	112	236	140	192	122
3	73	73	39	85	72	41	96	110	154	135	180	114
4	72	70	39	81	70	38	100	99	100	143	176	110
5	70	67	37	75	60	34	111	105	62	166	173	1,080
6	71	75	40	70	58	33	101	109	54	165	197	1,080
7	69	72	42	60	57	33	70	119	58	143	308	657
8	69	54	49	55	50	31	78	120	61	148	354	378
9	71	36	44	47	53	37	88	135	57	159	297	233
10	61	43	39	39	56	37	72	158	59	184	332	174
11	64	46	40	34	58	34	81	129	63	177	271	122
12	64	49	37	35	53	41	102	104	70	196	258	96
13	67	53	33	34	49	43	101	97	81	193	268	81
14	62	60	42	39	54	35	103	98	94	183	403	76
15	61	59	53	41	52	31	136	91	101	177	5,330	73
16	63	62	56	36	51	37	135	107	93	192	5,630	73
17	77	63	53	41	45	45	132	105	138	217	1,020	84
18	125	64	49	45	43	46	130	106	110	234	518	121
19	117	56	54	43	49	56	144	103	100	251	284	194
20	87	51	49	39	42	56	153	107	117	237	231	204
21	76	50	49	36	87	51	112	114	143	223	215	124
22	78	49	57	34	117	54	74	110	220	261	205	159
23	104	44	55	33	93	55	67	110	185	415	199	192
24	97	41	59	33	79	65	70	122	148	449	714	845
25	73	43	59	34	60	81	77	136	118	257	2,920	3,120
26	64	41	60	35	49	85	89	111	103	216	2,520	2,940
27	70	39	62	39	43	85	98	95	114	190	921	1,250
28	75	42	66	41	44	100	79	83	118	225	498	700
29	74	45	64	37	------	104	67	98	127	273	348	465
30	73	46	61	42	------	98	82	198	134	233	242	323
31	74	------	64	39	------	97	------	236	------	192	175	------
TOTAL	2,369	1,640	1,538	1,444	1,651	1,668	2,933	3,618	3,448	6,511	25,569	15,333
MEAN	76.4	54.7	49.6	46.6	59.0	53.8	97.8	117	115	210	825	511
MAX	125	75	66	85	117	104	153	236	236	449	5,630	3,120
MIN	61	36	33	33	42	31	67	83	54	135	173	73
AC-FT	4,700	3,250	3,050	2,860	3,270	3,310	5,820	7,180	6,840	12,910	50,720	30,410

CAL YR 1970 TOTAL 52,455 MEAN 144 MAX 2,750 MIN 30 AC-FT 104,000
WTR YR 1971 TOTAL 67,722 MEAN 186 MAX 5,630 MIN 31 AC-FT 134,300

07313500 Beaver Creek near Waurika, Okla.

LOCATION.--Lat 34°13'00", long 98°02'57", on north line of NW 1/4 NW 1/4 sec.16, T.4 S., R.8 W., Jefferson County, on left bank on downstream side of bridge on State Highway 5, 4.5 miles northwest of Waurika, 6.2 miles upstream from Cow Creek, and at mile 25.8.

DRAINAGE AREA.--563 sq mi.

PERIOD OF RECORD.--June 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 874.17 ft above mean sea level (State Highway Department bench mark). Prior to Apr. 5, 1966, water-stage recorder at same site at datum 5.00 ft higher.

AVERAGE DISCHARGE.--18 years, 102 cfs (73,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,260 cfs Aug. 16 (gage height, 23.20 ft); no flow at times.
Period of record: Maximum discharge, 32,200 cfs May 20, 1955 (gage height, 27.42 ft, present datum); no flow at times in most years.
Flood of May 18, 1951, reached a stage of 27.7 ft (present datum) from floodmark (discharge, 65,300 cfs by contracted-opening measurement of peak flow). A similar stage was reached prior to 1889, from information by local resident.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1731: 1954(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.0	1.2	2.9	3.1	9.1	4.8	1.4	44	0	1.2	5.5
2	5.0	2.3	1.7	3.0	3.3	7.5	4.0	1.9	779	.19	.10	3.7
3	4.5	2.0	2.6	3.3	3.3	7.0	3.5	1.3	590	.89	0	2.4
4	4.2	1.7	2.1	4.3	3.1	6.8	2.8	1.1	56	.01	0	1.7
5	4.1	1.6	2.1	3.3	2.9	6.2	2.5	.70	21	0	0	1.1
6	4.0	1.6	2.2	2.3	2.8	6.2	1.2	.65	13	0	0	1.1
7	60	1.5	2.0	2.1	2.5	7.4	.34	.58	8.1	0	0	.95
8	55	1.4	2.1	2.3	2.0	7.8	.22	.34	4.0	0	0	.73
9	18	1.3	1.8	2.5	2.0	6.4	.10	.37	2.4	0	0	.36
10	41	1.4	1.5	2.9	3.0	5.5	.86	.39	3.5	0	0	.20
11	18	1.4	1.3	3.4	2.5	5.3	1.3	.23	2.7	0	6.3	.10
12	7.7	1.6	1.5	4.2	1.9	5.7	2.7	.12	2.5	0	75	.80
13	4.6	2.0	1.7	5.2	3.3	6.2	1.0	.22	5.0	0	57	.40
14	3.4	2.7	1.8	4.9	3.6	7.0	1.6	.46	4.1	0	165	.32
15	2.8	3.2	1.9	4.6	1.6	5.9	1.7	.19	12	0	966	.20
16	2.5	3.9	1.3	3.9	.71	2.7	1.5	.22	4.9	0	2,140	.15
17	2.6	4.1	.75	4.1	2.1	6.4	1.0	.07	2.1	0	1,320	.15
18	2.4	2.8	.53	4.0	3.1	6.4	2.4	.19	.82	0	194	.70
19	2.7	3.7	2.6	3.6	3.3	5.1	1.5	.22	.22	0	43	1.5
20	2.7	2.0	3.2	3.8	3.1	5.1	1.4	.37	.30	0	18	1.4
21	2.8	2.0	3.2	4.0	23	4.6	1.7	.59	.67	0	10	5.3
22	2.9	2.0	2.9	4.0	86	4.0	1.7	.56	.59	0	7.1	5.8
23	3.2	2.2	2.7	3.7	106	4.6	76	.63	.35	0	30	2.7
24	3.1	2.2	2.6	3.5	59	4.6	14	2.2	13	10	18	12
25	14	1.9	2.6	4.1	28	5.0	4.3	2.5	6.7	104	77	171
26	11	1.8	2.9	4.2	20	5.9	1.4	.71	1.1	8.9	27	653
27	5.8	1.7	2.9	1.7	15	5.1	2.0	.32	.44	1.3	18	142
28	3.3	1.5	2.7	4.9	11	2.0	1.6	.45	.22	.07	7.0	53
29	2.6	1.4	2.5	4.0	------	.92	1.4	2.0	.41	.41	7.5	31
30	2.1	1.3	2.6	3.4	------	5.5	1.1	2.0	.12	24	5.0	21
31	2.6	------	2.8	3.1	------	5.3	------	2.0	------	12	11	------
TOTAL	304.6	63.2	66.28	111.2	401.21	173.22	141.62	24.98	1,579.24	161.77	5,203.20	1,120.26
MEAN	9.83	2.11	2.14	3.59	14.3	5.59	4.72	.81	52.6	5.22	168	37.3
MAX	60	4.1	3.2	5.2	106	9.1	76	2.5	779	104	2,140	653
MIN	2.1	1.3	.53	1.7	.71	.92	.10	.07	.12	0	0	.10
AC-FT	604	125	131	221	796	344	281	50	3,130	321	10,320	2,220

CAL YR 1970 TOTAL 12,859.47 MEAN 35.2 MAX 2,410 MIN 0 AC-FT 25,510
WTR YR 1971 TOTAL 9,350.78 MEAN 25.6 MAX 2,140 MIN 0 AC-FT 18,550

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
8-16	1045	23.20	2,260

07315500 Red River near Terral, Okla.

LOCATION.--Lat 33°52'43", long 97°56'03", Jefferson County, near left bank on downstream side of pier of bridge on U.S. Highway 81, 0.5 mile downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 1.2 miles south of Terral, 3.6 miles downstream from Little Wichita River, and at mile 872.

DRAINAGE AREA.--28,723 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--January 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 770.31 ft above mean sea level. Prior to Jan. 12, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 2,198 cfs (1,592,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 30,000 cfs Aug. 16 (gage height, 18.43 ft); minimum daily, 80 cfs Mar. 19.
Period of record: Maximum discharge, 197,000 cfs June 8, 1941 (gage height, 28.12 ft); minimum, 43 cfs Mar. 15, 1939. Maximum stage since at least 1891, that of June 8, 1941. Flood of May 19, 1935, reached a stage of 27.2 ft; floods in 1891 and May 1, 1908, are reported to have reached about the same stage.

REMARKS.--Records good. Some regulation by Lake Kemp on Wichita River (capacity, 461,800 acre-ft), Lake Kickapoo on North Fork Little Wichita River (capacity, 106,000 acre-ft), Lake Arrowhead on Little Wichita River (capacity, 262,100 acre-ft), Lake Altus on North Fork Red River (capacity, 142,900 acre-ft), Lake Lawtonka on Medicine Creek (capacity, 63,000 acre-ft), Lake Thomas on Little Medicine Creek (capacity, 8,300 acre-ft), and Lake Ellsworth on East Cache Creek (capacity, 94,500 acre-ft). Principal diversions are from Wichita River for irrigation of about 20,000 acres in the vicinity of Wichita Falls, Tex., and from North Fork Red River for irrigation of about 48,000 acres in vicinity of Altus, Okla. Many small diversions for irrigation above station. Water-quality records for the current year are published in Part 2 of the Texas State report.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	380	146	115	144	119	177	117	110	243	243	348	770
2	311	144	113	143	121	167	115	92	337	234	333	668
3	260	139	117	142	127	145	113	83	3,760	231	291	620
4	227	137	115	130	131	145	117	88	3,410	246	209	626
5	229	134	111	120	138	151	117	106	1,720	269	174	515
6	201	134	110	130	145	152	119	116	931	223	177	460
7	188	134	108	135	146	145	121	109	588	208	174	5,290
8	198	130	110	140	130	135	121	105	397	217	154	10,700
9	288	121	111	145	140	130	119	114	293	204	215	7,050
10	282	121	111	150	151	124	111	140	270	226	253	3,210
11	236	119	111	164	135	114	102	134	243	212	256	1,810
12	199	113	111	154	132	110	102	133	244	193	243	1,170
13	171	113	110	151	129	113	102	151	211	189	615	819
14	162	119	111	149	127	101	104	140	1,060	183	873	620
15	155	119	115	146	130	96	132	125	2,680	179	2,040	614
16	150	119	115	149	125	95	151	123	3,650	173	22,800	550
17	156	137	117	152	126	106	161	132	2,580	161	25,100	505
18	154	137	130	145	129	83	177	131	1,690	153	14,800	500
19	157	128	144	141	126	80	177	126	1,200	163	5,400	540
20	183	134	130	139	125	88	186	120	828	161	2,610	5,790
21	207	141	132	142	141	85	184	120	605	187	1,720	9,330
22	212	139	146	142	189	88	205	119	567	201	1,620	5,350
23	301	128	151	139	377	81	196	131	676	219	1,570	3,680
24	370	119	148	138	409	81	216	132	1,070	235	1,670	3,190
25	225	126	144	138	305	88	256	127	860	268	1,720	3,900
26	265	132	144	134	270	97	160	142	601	459	4,480	16,000
27	347	139	146	127	234	98	127	217	450	467	3,550	21,500
28	223	137	154	122	200	90	112	191	345	527	2,820	13,900
29	178	130	154	122	------	108	108	212	293	341	1,780	6,600
30	167	121	156	120	------	102	118	210	271	275	1,360	4,140
31	158	------	154	118	------	110	------	180	------	355	991	------
TOTAL	6,940	3,890	3,944	4,311	4,757	3,485	4,246	4,159	32,073	7,602	100,346	130,417
MEAN	224	130	127	139	170	112	142	134	1,069	245	3,237	4,347
MAX	380	146	156	164	409	177	256	217	3,760	527	25,100	21,500
MIN	150	113	108	118	119	80	102	83	211	153	154	460
AC-FT	13,770	7,720	7,820	8,550	9,440	6,910	8,420	8,250	63,620	15,080	199,000	258,700

CAL YR 1970 TOTAL 226,391 MEAN 620 MAX 11,700 MIN 105 AC-FT 449,000
WTR YR 1971 TOTAL 306,170 MEAN 839 MAX 25,100 MIN 80 AC-FT 607,300

PEAK DISCHARGE (BASE, 21,000 CFS).--Aug. 16 (2400) 30,000 cfs (18.43 ft); Sept. 27 (0900) 22,800 cfs (17.43 ft).

07315700 Mud Creek near Courtney, Okla.

LOCATION.--Lat 34°00'20", long 97°34'00", in NW 1/4 SE 1/4 sec.25, T.6 S., R.4 W., Jefferson County, on downstream side of bridge on State Highway 89, 4 miles downstream from North Mud Creek, 6 miles northwest of Courtney, and at mile 11.5.

DRAINAGE AREA.--572 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 730.00 ft above mean sea level (State Highway Department bench mark). Prior to Oct. 1, 1968, auxiliary water-stage recorder 2 miles downstream from base gage.

AVERAGE DISCHARGE.--11 years, 83.6 cfs (60,570 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,240 cfs Oct. 24 (gage height, 21.69 ft); no flow at times.
Period of record: Maximum discharge, 10,900 cfs Apr. 13, 1967 (gage height, 29.32 ft); no flow at times in most years.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	18	2.6	2.8	2.3	8.9	1.1	.84	12	.60	0	2.8
2	16	13	2.6	2.8	2.3	6.1	.97	.97	110	.72	0	1.7
3	13	11	2.6	18	2.3	5.0	1.1	.72	359	.40	0	.84
4	10	9.3	2.6	90	2.3	4.4	1.1	.60	112	.20	0	.60
5	8.9	8.5	2.3	70	2.3	3.8	1.1	.60	32	21	0	.40
6	7.8	8.2	2.1	56	2.3	3.3	1.1	.72	14	23	0	.32
7	37	7.5	2.6	20	2.1	3.3	1.1	.84	8.9	8.5	0	.20
8	23	7.1	3.3	11	2.3	3.3	1.1	1.1	5.4	4.1	0	.15
9	26	6.4	3.1	8.5	2.3	2.8	.97	1.5	3.8	2.6	0	.10
10	150	5.7	3.3	7.5	2.3	2.6	.84	1.5	3.3	1.3	0	.10
11	107	5.0	3.1	7.1	2.1	2.6	.50	1.7	1.5	.72	0	.10
12	40	5.0	2.8	6.8	1.9	2.3	.40	1.7	.84	.50	0	.03
13	18	5.0	2.3	7.1	1.9	2.3	.32	1.7	.84	.20	0	0
14	11	5.7	2.1	7.5	2.1	1.9	.32	1.9	.84	.06	.01	0
15	8.2	6.4	2.3	6.8	1.5	1.1	.32	1.9	.72	.01	0	0
16	6.8	6.4	2.8	6.4	1.9	.84	.50	1.9	.72	0	114	0
17	5.7	5.4	3.3	5.4	2.1	.72	.84	1.9	.72	0	139	0
18	5.0	4.7	3.3	11	2.1	1.5	5.7	1.7	.84	0	102	.03
19	4.7	4.4	2.8	8.9	1.7	1.7	3.1	1.5	.84	0	26	.03
20	4.4	3.8	2.8	6.1	1.9	1.1	2.1	1.7	.97	0	11	.10
21	3.6	3.8	2.8	4.7	2.3	1.1	2.1	1.5	1.1	0	5.7	.10
22	3.3	3.6	3.1	4.1	1.9	1.5	2.1	1.5	35	0	3.3	1.3
23	84	3.6	3.1	3.6	45	1.5	1.7	1.7	86	0	1.9	7.8
24	934	3.1	3.1	3.3	158	1.3	1.9	1.7	20	0	.97	27
25	932	3.1	2.8	3.1	77	1.3	1.5	1.7	9.6	0	.97	39
26	341	3.3	2.6	2.8	40	1.3	1.5	1.3	5.7	0	33	20
27	664	3.3	2.3	2.6	24	1.3	1.3	2.8	2.6	0	135	12
28	307	3.3	2.3	2.6	13	1.3	1.1	6.4	1.5	0	68	25
29	82	2.8	2.3	2.6	------	1.1	1.1	14	1.3	0	22	13
30	43	2.8	2.6	2.6	------	1.1	.97	21	.84	0	8.5	6.4
31	26	------	2.6	2.6	------	1.1	------	26	------	0	4.4	------
TOTAL	3,944.4	179.2	84.3	394.3	403.2	73.46	39.85	106.59	832.87	63.91	675.75	159.10
MEAN	127	5.97	2.72	12.7	14.4	2.37	1.33	3.44	27.8	2.06	21.8	5.30
MAX	934	18	3.3	90	158	8.9	5.7	26	359	23	139	39
MIN	3.3	2.8	2.1	2.6	1.5	.72	.32	.60	.72	0	0	0
AC-FT	7,820	355	167	782	800	146	79	211	1,650	127	1,340	316

CAL YR 1970 TOTAL 38,354.99 MEAN 105 MAX 5,830 MIN 0 AC-FT 76,080
WTR YR 1971 TOTAL 6,956.93 MEAN 19.1 MAX 934 MIN 0 AC-FT 13,800

PEAK DISCHARGE (BASE, 1,300 CFS).--No peak above base.

07315900 Walnut Bayou near Burneyville, Okla.

LOCATION.--Lat 33°56'30", long 97°18'20", in NW 1/4 NE 1/4 sec.21, T.7 S., R.1 W., Love County, near right bank on downstream side of bridge on State Highway 32, 0.8 mile downstream from Simon Creek, 2.5 miles northwest of Burneyville, and at mile 6.5.

DRAINAGE AREA.--314 sq mi.

PERIOD OF RECORD.--October 1960 to December 1963; October 1968 to September 1971 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 690.00 ft above mean sea level (State Highway Department bench mark).

AVERAGE DISCHARGE.--6 years, 38.8 cfs (28,110 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,130 cfs Oct. 27 (gage height, 15.71 ft); no flow at times.
Period of record: Maximum discharge, 3,860 cfs Sept. 24, 1970 (gage height, 15.93 ft); no flow at times each year.
Flood in June 1957 reached a stage of 20.65 ft, from information by local resident.

REMARKS.--Records good. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	4.2	8.1	4.5	7.6	3.6	2.9	15	1.9	1.6	0
2	9.8	9.7	4.0	7.1	4.2	8.2	3.4	3.5	251	13	.81	0
3	9.1	8.1	4.4	20	4.1	10	3.1	2.9	79	48	.39	0
4	8.3	7.0	4.1	40	5.1	12	3.0	2.4	33	18	.16	0
5	7.3	6.4	3.9	45	5.0	11	2.8	3.1	18	7.1	.10	0
6	6.3	5.9	3.6	20	6.5	10	2.6	15	11	2.8	.07	0
7	5.9	5.5	3.8	10	5.9	8.2	2.5	6.3	6.8	1.5	.09	0
8	9.5	5.2	3.8	9.0	6.0	6.9	2.5	4.1	5.0	1.2	.09	0
9	34	4.7	3.9	8.5	4.9	6.4	2.3	5.0	3.8	.82	.08	0
10	51	4.4	4.2	8.0	4.8	6.3	2.6	9.9	2.8	.60	.02	0
11	22	4.1	4.2	7.8	4.8	6.1	3.2	5.3	2.2	.39	0	0
12	12	3.9	4.1	7.5	5.5	6.0	3.0	4.0	1.8	.25	.05	0
13	7.8	4.5	4.1	7.3	4.7	7.0	2.4	3.2	2.0	.17	.03	0
14	5.6	6.2	4.0	7.3	4.3	8.4	2.4	2.3	2.2	.13	1.6	0
15	4.4	7.7	4.2	6.9	4.2	7.3	2.3	1.8	3.8	.07	1.1	0
16	3.7	8.5	4.9	6.3	4.5	6.3	2.4	1.5	8.0	.05	.16	0
17	3.7	7.4	5.4	5.9	4.5	5.2	4.4	1.1	6.1	0	.08	0
18	3.2	6.3	5.6	5.6	12	4.5	7.1	.86	4.0	0	.06	.10
19	2.9	5.5	6.2	5.6	14	4.1	8.0	.74	2.7	0	.03	.13
20	2.6	5.2	5.4	5.3	14	3.6	9.8	.68	2.0	0	.01	.10
21	2.3	4.6	5.3	5.2	16	3.8	9.2	.67	1.6	.07	0	.07
22	2.3	4.3	5.7	5.3	45	4.4	8.7	.69	57	.06	0	.21
23	44	4.0	5.5	5.2	36	4.2	6.5	.70	139	.14	0	.66
24	379	3.6	5.3	5.6	19	3.8	5.8	.63	42	.08	0	.23
25	110	3.6	5.0	5.5	14	3.8	5.3	.54	16	.11	.03	.17
26	421	3.5	4.7	5.1	13	3.7	4.4	.52	7.2	.09	.13	.13
27	2,630	3.7	4.6	4.6	10	4.1	3.9	8.4	3.9	.07	.05	.06
28	340	3.8	4.6	4.5	8.2	4.6	3.2	5.8	2.4	12	.01	.03
29	73	3.8	4.5	4.5	------	5.3	3.2	15	1.7	9.9	0	.03
30	35	4.1	6.4	4.8	------	3.9	2.6	10	1.5	7.5	0	.01
31	20	------	7.8	4.9	------	3.6	------	7.3	------	3.4	0	------
TOTAL	4,276.7	168.2	147.4	296.4	284.7	190.3	126.2	126.83	732.5	129.40	6.75	1.93
MEAN	138	5.61	4.75	9.56	10.2	6.14	4.21	4.09	24.4	4.17	.22	.064
MAX	2,630	13	7.8	45	45	12	9.8	15	251	48	1.6	.66
MIN	2.3	3.5	3.6	4.5	4.1	3.6	2.3	.52	1.5	0	0	0
AC-FT	8,480	334	292	588	565	377	250	252	1,450	257	13	3.8

CAL YR 1970 TOTAL 22,846.03 MEAN 62.6 MAX 3,130 MIN 0 AC-FT 45,320
WTR YR 1971 TOTAL 6,487.31 MEAN 17.8 MAX 2,630 MIN 0 AC-FT 12,870

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-27	1100	15.71	3,130

07316000 Red River near Gainesville, Tex.

LOCATION.--Lat 33°43'40", long 97°09'35", in SW 1/4 sec.36, T.9 S., R.1 E., Love County, Okla., near center of span on downstream side of bridge on U. S. Highway 77, 0.2 mile downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 5 miles downstream from Fish Creek, 7 miles north of Gainesville, and at mile 791.5.

DRAINAGE AREA.--30,782 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--May 1936 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft above mean sea level. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--35 years, 2,744 cfs (1,988,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19,000 cfs Aug. 18 (gage height, 16.64 ft); minimum, 95 cfs Mar. 31.
Period of record: Maximum discharge, 168,000 cfs June 9, 1941 (gage height, 24.15 ft); maximum gage height, 26.53 ft May 21, 1951; minimum discharge, 48 cfs Jan. 27, 1940.

REMARKS.--Records good. Flow slightly regulated by Lake Kemp, in Texas, since 1943 by Lake Altus (see sta. 0730-2500) and since 1946 by Lake Kickapoo, also in Texas.

COOPERATION.--Gage-height record, 43 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,020	429	191	163	144	306	118	159	242	383	321	1,510
2	758	352	181	163	142	270	109	156	277	339	267	1,230
3	617	305	182	163	146	254	115	152	393	311	301	1,030
4	524	277	168	168	152	234	118	142	366	287	294	884
5	463	258	169	173	157	233	124	146	2,490	239	269	779
6	435	246	164	184	161	216	126	263	2,780	211	268	772
7	391	236	165	262	155	191	123	309	1,690	203	236	697
8	409	227	163	237	156	180	126	210	1,030	217	207	781
9	418	215	169	225	160	179	134	191	730	201	186	4,260
10	361	208	164	236	160	178	129	512	549	180	174	6,500
11	364	195	144	225	172	172	126	593	423	175	150	4,520
12	460	185	146	227	163	162	123	324	335	164	153	2,760
13	450	191	158	223	165	165	127	220	296	160	180	1,860
14	348	202	160	204	161	151	116	187	293	155	662	1,400
15	295	196	160	200	151	149	113	173	289	142	550	1,150
16	268	189	158	188	150	139	115	170	468	133	1,180	1,010
17	262	185	156	187	149	124	133	165	2,260	128	8,390	814
18	254	184	153	182	150	132	163	158	3,140	120	17,100	751
19	243	177	151	171	174	117	212	154	2,880	114	10,700	737
20	231	178	151	169	183	120	203	141	1,850	107	6,580	702
21	222	184	153	180	169	117	209	140	1,380	107	3,750	926
22	218	184	153	170	184	121	201	136	992	105	2,980	5,630
23	258	167	160	163	244	115	192	138	842	129	2,450	6,180
24	380	174	158	160	229	112	181	135	786	151	1,810	4,420
25	970	175	158	159	251	109	188	127	767	155	1,640	3,630
26	1,570	184	158	158	448	113	194	126	900	149	2,200	3,090
27	2,670	182	160	156	418	114	203	181	885	147	3,510	6,430
28	3,970	170	160	155	333	123	222	193	657	167	3,700	15,500
29	1,630	170	160	155	------	113	179	200	542	298	3,320	10,600
30	807	182	163	155	------	114	156	214	449	370	2,650	6,270
31	537	------	163	147	------	105	------	223	------	374	1,930	------
TOTAL	21,803	6,407	4,999	5,708	5,427	4,928	4,578	6,338	30,981	6,121	78,108	96,823
MEAN	703	214	161	184	194	159	153	204	1,033	197	2,520	3,227
MAX	3,970	429	191	262	448	306	222	593	3,140	383	17,100	15,500
MIN	218	167	144	147	142	105	109	126	242	105	150	697
AC-FT	43,250	12,710	9,920	11,320	10,760	9,770	9,080	12,570	61,450	12,140	154,900	192,000

CAL YR 1970 TOTAL 392,874 MEAN 1,076 MAX 16,400 MIN 136 AC-FT 779,300
WTR YR 1971 TOTAL 272,221 MEAN 746 MAX 17,100 MIN 105 AC-FT 540,000

PEAK DISCHARGE (BASE, 24,000 CFS).--No peak above base.

07316500 Washita River near Cheyenne, Okla.

LOCATION.--Lat 35°37'35", long 99°40'05", in SE 1/4 sec.5, T.13 N., R.23 W., Roger Mills County, near left bank on downstream side of pier of bridge on U. S. Highway 283, 0.5 mile downstream from Sergeant Major Creek, 1 mile north of Cheyenne, 5.2 miles upstream from Dead Indian Creek, and at mile 543.9.

DRAINAGE AREA.--794 sq mi.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,905.98 ft above mean sea level (levels by Corps of Engineers). May 1, 1938, to Nov. 16, 1946, and Oct. 1, 1947, to Jan. 11, 1948, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--34 years, 32.8 cfs (23,760 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,710 cfs June 10 (gage height, 7.63 ft); no flow at times.
Period of record: Maximum discharge, 69,800 cfs Apr. 29, 1954 (gage height, 15.24 ft); from rating curve extended above 27,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.
Flood of Apr. 3, 1934, reached a stage of 1.0 ft lower than that in 1954 at site on upstream side of highway fill.

REMARKS.--Records good. Some regulation by numerous flood-retarding structures. Records of chemical analyses for water year 1971 are published in Part 2 of this report.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	6.4	5.7	2.3		0		0	
2				0	7.0	4.7	1.9		0		0	
3				0	8.8	3.7	2.1		0		0	
4				0	8.4	5.2	1.7		0		0	
5				0	7.0	4.9	1.7		0		0	
6				0	5.0	3.9	2.0		0		0	
7				0	1.0	3.5	1.9		0		0	
8				0	1.0	3.5	1.4		.24		0	
9				0	2.5	3.3	.79		164		.50	
10				0	5.0	3.1	.67		340		0	
11				0	11	2.6	1.8		525		0	
12				0	6.4	2.6	.89		81		0	
13				.14	5.4	2.4	.41		52		0	
14				2.5	5.1	1.9	.40		40		0	
15				3.0	4.7	2.0	.35		19		0	
16				2.9	4.3	2.0	.46		10		0	
17				3.8	4.0	2.0	.88		6.2		0	
18				3.4	4.7	1.7	.97		3.7		0	
19				3.0	4.7	1.6	1.6		2.2		0	
20				2.9	4.4	1.6	1.4		13		0	
21				3.2	3.5	1.7	1.2		3.8		0	
22				3.0	2.5	1.5	1.0		1.2		0	
23				2.8	2.5	1.5	.63		.35		0	
24				2.8	3.5	1.6	1.4		.01		0	
25				2.6	7.0	1.9	.70		0		0	
26				2.9	14	3.2	.70		0		0	
27				2.6	9.2	3.9	.56		0		0	
28				2.9	6.9	2.8	.42		0		0	
29				3.8	------	2.6	.14		0		0	
30				6.4	------	2.6	0		0		0	
31		------		7.1	------	2.5	------		------		0	------
TOTAL	0	0	0	61.74	155.9	87.7	32.37	0	1,261.70	0	.50	0
MEAN	0	0	0	1.99	5.57	2.83	1.08	0	42.1	0	.016	0
MAX	0	0	0	7.1	14	5.7	2.3	0	525	0	.50	0
MIN	0	0	0	0	1.0	1.5	0	0	0	0	0	0
AC-FT	0	0	0	122	309	174	64	0	2,500	0	1.0	0

CAL YR 1970 TOTAL 2,212.70 MEAN 6.06 MAX 366 MIN 0 AC-FT 4,390
WTR YR 1971 TOTAL 1,599.91 MEAN 4.38 MAX 525 MIN 0 AC-FT 3,170

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-10	2330	7.63	4,710

07317500 Sandstone Creek subwatershed No. 16A (Sandstone Creek) near Cheyenne, Okla.

LOCATION.--Lat 35°28'10", long 99°40'10", in SW 1/4 SE 1/4 sec.31, T.12 N., R.23 W., Roger Mills County, near center of upstream side of dam on Sandstone Creek, 5.2 miles east of Grimes and 10 miles south of Cheyenne.

DRAINAGE AREA.--8.78 sq mi, of which 3.62 sq mi is probably noncontributing.

PERIOD OF RECORD.--January 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 2,069.14 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, 0.38 cfs (275 acre-ft per year).

EXTREMES.--Current year: Maximum outflow, 6.3 cfs June 11 (gage height, 78.50 ft); no outflow at times. Maximum inflow, 2,140 cfs (average for 5-minute interval) June 10 computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 70 cfs May 26, 1959 (gage height, 81.41 ft); no outflow at times. Maximum inflow, 2,710 cfs (average for 5-minute interval) May 26, 1959, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; storage began Dec. 7, 1951. Outlet structure is a drop inlet with an encasement of trash racks and retaining wall with 24-inch concrete pipe. There is an 8-inch diameter iron drain pipe with gate valve at outlet structure. Crest of drop inlet is at gage height 69.89 ft. Crest of emergency earthen spillway is at gage height 102.0 ft. Original capacity at crest of emergency spillway, 2,030 acre-ft and at outlet structure, 270 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	3.0	0	.02		
2							0	3.0	0	.30		
3							0	0	0	.40		
4							0	0	0	.04		
5							0	.75	0	0		
6							0	1.3	0	0		
7							0	0	0	0		
8							0	0	0	0		
9							0	0	5.4	0		
10							0	1.2	5.6	0		
11							0	3.0	6.2	0		
12							0	3.0	6.2	0		
13							0	3.0	6.1	0		
14							0	3.0	6.1	0		
15							0	1.4	6.1	0		
16							0	0	6.0	0		
17							0	0	6.0	0		
18							0	0	6.0	0		
19							0	0	5.9	0		
20							0	0	5.9	0		
21							.60	0	5.8	0		
22							.90	0	5.8	0		
23							.46	0	5.7	0		
24							1.6	.65	5.7	0		
25							1.6	2.4	5.7	0		
26							0	0	5.6	0		
27							0	0	5.6	0		
28							.75	0	5.6	0		
29					------		3.0	0	2.1	0		
30					------		3.0	0	.02	0		
31		------			------		------	0	------	0		------
TOTAL	0	0	0	0	0	0	11.91	25.70	119.12	.76	0	0
MEAN	0	0	0	0	0	0	.40	.83	3.97	.025	0	0
MAX	0	0	0	0	0	0	1.6	3.0	6.2	.40	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
(+)	133	136	142	150	162	164	157	144	173	161	152	155
(‡)	17	18	18	18	19	19	19	18	20	19	19	19
(++)	.18	.38	.40	.32	1.10	0	.16	1.77	8.20	.70	1.02	4.54

CAL YR 1970 TOTAL 40.70 MEAN .11 MAX 9.8 MIN 0 AC-FT 81 ++ 13.57
WTR YR 1971 TOTAL 157.49 MEAN .43 MAX 6.2 MIN 0 AC-FT 312 ++ 18.77

\+ Contents, in acre-feet at end of month.
‡ Surface area, in acres, at end of month.
++ Precipitation, in inches, during month at rain gage 21 R. 5.1 miles northwest of dam.

07318000 Sandstone Creek subwatershed No. 16 (Sandstone Creek) near Cheyenne, Okla.

LOCATION.--Lat 35°28'50", long 99°36'40", in SE 1/4 SE 1/4 sec.27, T.12 N., R.23 W., Roger Mills County, near center of upstream side of dam on Sandstone Creek, 2.2 miles northeast of Berlin and 9 miles southeast of Cheyenne.

DRAINAGE AREA.--11.47 sq mi, excludes that of subwatershed No. 16A (8.78 sq mi).

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,925.96 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, 0.75 cfs (543 acre-ft per year).

EXTREMES.--Current year: Maximum outflow, 3.0 cfs at times; maximum gage height, 62.46 ft June 27; maximum inflow, 1,450 cfs (average for 5-minute interval) June 10, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Period of record: Maximum outflow, 168 cfs May 23, 1954 (gage height, 75.08 ft); no outflow most of time. Maximum inflow known, 18,900 cfs (average for 5-minute interval) May 23, 1954, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure and rated gate-valve openings. Reservoir is formed by earth dam; storage began in August 1952. Outlet structure is a drop-inlet with an encasement of trash racks and retaining wall with a 34-inch concrete pipe. There is a 12-inch diameter iron drain pipe with gate valve at outlet structure. Crest of drop inlet is at gage height 65.62 ft. Crest of emergency earthen spillway is at gage height 81.7 ft. Original capacity at crest of emergency spillway, 4,450 acre-ft and at outlet structure, 1,460 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	0			0				
2				0	0			0				
3				0	0			0				
4				0	0			0				
5				0	0			0				
6				0	0			0				
7				0	0			0				
8				2.8	0			0				
9				3.0	0			0				
10				3.0	0			0				
11				1.5	0			0				
12				.50	0			0				
13				0	0			0				
14				0	0			0				
15				0	0			0				
16				0	0			0				
17				0	0			0				
18				0	0			0				
19				0	0			0				
20				0	0			0				
21				0	0			0				
22				0	0			1.6				
23				0	0			1.7				
24				0	1.2			0				
25				0	3.0			0				
26				0	3.0			0				
27				0	1.8			0				
28				0	0			0				
29				0	------			0				
30				0	------			0				
31		------		0	------		------	0	------			------
TOTAL	0	0	0	10.80	9.0	0	0	3.3	0	0	0	0
MEAN	0	0	0	.35	.32	0	0	.106	0	0	0	0
MAX	0	0	0	3.0	3.0	0	0	1.7	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
(+)	209	200	190	155	120	98	79	86	521	455	437	418
(‡)	43	42	40	35	30	28	25	26	62	57	56	54
(++)	.20	.32	.12	.24	.72	0	.12	1.41	5.10	1.16	1.32	3.78

CAL YR 1970 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0 ++ 10.11
WTR YR 1971 TOTAL 23.1 MEAN .063 MAX 3.0 MIN 0 AC-FT 46 ++ 14.49

\+ Contents, in acre-feet, at end of month.
‡ Surface area, in acres, at end of month.
++ Precipitation, in inches, during month at rain gage 23 R. 3.6 miles west of dam.

07318500 Sandstone Creek subwatershed No. 14 (Sandstone Creek tributary) near Cheyenne, Okla.

LOCATION.--Lat 35°28'40", long 99°36'10", in SW 1/4 NE 1/4 sec.35, T.12 N., R.23 W., Roger Mills County, near center of upstream side of dam on unnamed tributary to Sandstone Creek, 2.5 miles northeast of Berlin and 11 miles southeast of Cheyenne.

DRAINAGE AREA.--1.02 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,896.32 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, .008 cfs (5.8 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 81.15 ft June 10 ; maximum inflow, 138 cfs (average for 5-minute interval) June 10 computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Period of record: Maximum outflow, 6.3 cfs June 7, 1961 (gage height, 90.35 ft); no outflow most of time. Maximum inflow know, 1,160 cfs (average for 5-minute interval) Apr. 18, 1957, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records fair. Records of discharge are outflow from reservoir, determined from stage-discharge relation outlet structure. Reservoir is formed by earth dam; storage began in September 1951. Outlet strucutre is open end of 12-inch concrete pipe with encasement of trash racks and retaining wall with invert at gage height 88.04 ft. There is a 6-inch diameter iron drain pipe with gate valve in face of dam. Crest of emergency earthen spillway is at gage height 98.0 ft. Original capacity at crest of emergency spillway, 311 acre-ft and at outlet pipe, 117 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	a .6	1.5	.29
Nov. 30	a .2	1.0	.23
Dec. 31	a .02	.3	.46
CAL YR 1970	--	--	12.48
Jan. 31	0	0	.60
Feb. 28	0	0	.50
Mar. 31	0	0	0
Apr. 30	0	0	.18
May 31	a 1.3	1.7	1.60
June 30	11.2	4.1	4.38
July 31	a 3.7	2.5	1.34
Aug. 31	a 5.5	3.0	3.34
Sept. 30	a 3.4	2.4	3.90
WTR YR 1971	--	--	16.82

\+ Rain gage 15 R, 1.9 miles south of dam.
a Computed from elevations based on staff-gage readings.

07319000 Sandstone Creek subwatershed No. 17 (Currant Creek) near Cheyenne, Okla.

LOCATION.--Lat 35°30'30", long 99°36'40", in NE 1/4 NE 1/4 sec.22, T.12 N., R.23 W., Roger Mills County, near center of upstream side of dam on Currant Creek, 4 miles northeast of Berlin and 7.5 miles southeast of Cheyenne.

DRAINAGE AREA.--10.13 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,888.17 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, 0.78 cfs (565 acre-ft per year).

EXTREMES.--Current year: Maximum outflow, 51 cfs June 10 (gage height, 98.26 ft); no outflow Oct. 1-8. Maximum inflow, 1,710 cfs (average for 5-minute interval) June 10, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 104 cfs May 26, 1959 (gage height, 109.42 ft); no outflow most of time. Maximum inflow known, 6,030 cfs (average for 5-minute interval) Apr. 29, 1954, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure and rated gate-valve openings. Reservoir is formed by earth dam; storage began in September 1951. Outlet structure is a drop inlet with encasement of trash racks and retaining wall with 28-inch concrete pipe. There is a 12-inch diameter iron drain pipe with gate valve at outlet structure. Crest of drop inlet is at gage height 96.99 ft. Crest of emergency earthen spillway is at gage height 123.0 ft. Original capacity at crest of emergency spillway, 3,620 acre-ft and at outlet structure, 477 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
2	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
3	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
4	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
5	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
6	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
7	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
8	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
9	.05	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
10	.10	.10	.10	.10	.10	.10	.10	.10	3.5	.10	.10	.10
11	.10	.10	.10	.10	.10	.10	.10	.10	38	.10	.10	.10
12	.10	.10	.10	.10	.10	.10	.10	.10	17	.10	.10	.10
13	.10	.10	.10	.10	.10	.10	.10	.10	7.7	.10	.10	.10
14	.10	.10	.10	.10	.10	.10	.10	.10	11	.10	.10	.10
15	.10	.10	.10	.10	.10	.10	.10	.10	8.0	.10	.10	.10
16	.10	.10	.10	.10	.10	.10	.10	.10	4.3	.10	.10	.10
17	.10	.10	.10	.10	.10	.10	.10	.10	6.3	.10	.10	.10
18	.10	.10	.10	.10	.10	.10	.10	.10	5.2	.10	.10	.10
19	.10	.10	.10	.10	.10	.10	.10	.10	1.7	.10	.10	.10
20	.10	.10	.10	.10	.10	.10	.10	.10	4.6	.10	.10	.10
21	.10	.10	.10	.10	.10	.10	.10	.10	7.1	.10	.10	.10
22	.10	.10	.10	.10	.10	.10	.10	.10	5.1	.10	.10	.10
23	.10	.10	.10	.10	.10	.10	.10	.10	3.4	.10	.10	.10
24	.10	.10	.10	.10	.10	.10	.10	.10	1.8	.10	.10	.10
25	.10	.10	.10	.10	.10	.10	.10	.10	.80	.10	.10	.10
26	.10	.10	.10	.10	.10	.10	.10	.10	.30	.10	.10	.10
27	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
28	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
29	.10	.10	.10	.10	------	.10	.10	.10	.10	.10	.10	.10
30	.10	.10	.10	.10	------	.10	.10	.10	.10	.10	.10	.10
31	.10	------	.10	.10	------	.10	------	.10	------	.10	.10	------
TOTAL	2.25	3.00	3.10	3.10	2.80	3.10	3.00	3.10	127.10	3.10	3.10	3.00
MEAN	.073	.10	.10	.10	.10	.10	.10	.10	4.48	.10	.10	.10
MAX	.10	.10	.10	.10	.10	.10	.10	.10	38	.10	.10	.10
MIN	0	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
(+)	124	116	108	72	90	89	76	69	274	232	191	157
(‡)	28	27	27	23	25	25	24	23	42	38	34	30
(++)	.31	.38	.20	.40	.74	0	.08	1.84	5.64	1.25	1.90	3.76

CAL YR 1970 TOTAL 116.66 MEAN .32 MAX 36 MIN 0 AC-FT 231 ++ 11.06
WTR YR 1971 TOTAL 159.75 MEAN .44 MAX 38 MIN 0 AC-FT 317 ++ 16.50

\+ Contents, in acre-feet, at end of month.
‡ Surface area, in acres, at end of month.
++ Precipitation, in inches, during month at rain gage 28 R. 4.5 miles west of dam.

07319500 Sandstone Creek near Berlin, Okla.

LOCATION.--Lat 35°30'26", long 99°33'27", on west line of NW 1/4 NW 1/4 sec.20, T.12 N., R.22 W., Beckham County, on left bank 50 ft downstream from county road bridge, 5.5 miles northeast of Berlin.

DRAINAGE AREA.--44.9 sq mi, of which 4.0 sq mi is probably noncontributing.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge only, published in WSP 1731.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,861.44 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, 3.77 cfs (2,730 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,260 cfs June 10 (gage height, 9.74 ft); no flow at times.
Period of record: Maximum discharge, 5,710 cfs Apr. 30, 1954 (gage height, 16.17 ft), from rating curve extended above 410 cfs on basis of slope-area measurement of peak flow at gage height 13.8 ft and field estimate at 16.17 ft; no flow at times in many years.

REMARKS.--Records good. Flow from 38.7 sq mi regulated by 11 flood-retarding structures (combined original capacity, 12,780 acre-ft). Some diversions for irrigation above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.08	.61	.33	2.4	.44	.18	3.5	.67	.04	.23
2		0	.10	.67	.38	2.0	.33	.18	.38	.82	.08	.12
3		0	.10	1.4	.38	1.6	.28	.23	.28	2.6	.04	.10
4		0	.10	.15	.44	1.4	.28	.18	1.8	.67	0	.10
5		0	.15	.12	.44	1.1	.33	.18	.38	.49	.03	.08
6		0	.12	.10	.16	.92	.38	.12	.15	.38	.02	.03
7		0	.18	.18	.14	.82	.33	.12	.06	.33	.04	0
8		0	.18	.33	.10	.73	.38	.15	4.8	.33	9.0	0
9		0	.23	.49	.23	.44	.33	.23	84	.49	12	0
10		0	.23	.61	.44	.38	.28	.28	96	.61	.67	0
11		0	.15	.67	.44	.44	.33	.23	49	.38	.33	0
12		0	.18	.67	.38	.49	.28	.18	16	.44	.28	0
13		.03	.28	.61	.33	.44	.23	.15	3.1	.38	.23	.33
14		.06	.28	.61	.38	.38	.28	.15	2.0	.38	.55	.04
15		.02	.44	.55	.38	.28	.28	.15	1.5	.28	1.5	.15
16		.02	.33	.61	.61	.38	.28	.15	1.3	.38	.49	.10
17		.03	.33	.61	.44	.33	.33	.15	1.1	.38	.38	.73
18		.04	.33	.55	.61	.33	.33	.15	1.2	.06	.33	3.5
19		.06	.33	.49	.55	.44	.38	.15	1.3	.06	.28	1.0
20		.06	.33	.44	.49	.33	.33	.18	34	.18	.23	.49
21		.08	.33	.49	.15	.33	.23	.18	3.5	.18	.23	.44
22		.06	.44	.44	.04	.38	.23	.18	2.4	.15	.23	.73
23		.06	.49	.38	.55	.44	.28	.15	2.0	.38	.33	.55
24		.08	.67	.33	2.1	.55	.28	.04	1.7	.28	.55	.82
25		.10	.61	.33	2.6	.49	.28	.01	1.2	.28	.28	.49
26		.10	.55	.33	2.4	.49	.23	0	.73	.15	.28	.38
27		.08	.61	.33	2.1	.44	.18	0	.67	.12	.44	.28
28		.10	.61	.38	2.3	.38	.23	0	.61	.15	.28	.23
29		.12	.55	.38	------	.33	.18	0	1.2	.15	.33	.18
30		.10	.67	.38	------	.55	.23	.04	.55	.38	.33	.15
31		------	.61	.38	------	.33	------	2.1	------	.18	.28	------
TOTAL	0	1.20	10.59	14.62	19.89	20.34	8.76	6.19	316.41	12.71	30.08	11.25
MEAN	0	.040	.34	.47	.71	.66	.29	.20	10.5	.41	.97	.38
MAX	0	.12	.67	1.4	2.6	2.4	.44	2.1	96	2.6	12	3.5
MIN	0	0	.08	.10	.04	.28	.18	0	.06	.06	0	0
AC-FT	0	2.4	21	29	39	40	17	12	628	25	60	22

CAL YR 1970 TOTAL 370.19 MEAN 1.01 MAX 59 MIN 0 AC-FT 734
WTR YR 1971 TOTAL 452.04 MEAN 1.24 MAX 96 MIN 0 AC-FT 897

07320000 Sandstone Creek subwatershed No. 10A (Sandstone Creek tributary) near Elk City, Okla.

LOCATION.--Lat 35°28'00", long 99°33'20", in SW 1/4 SW 1/4 sec.32, T.12 N., R.22 W., Beckham County, near center of upstream side of dam on unnamed tributary to Sandstone Creek, 4 miles northeast of Berlin and 8 miles northwest of Elk City.

DRAINAGE AREA.--2.87 sq mi.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,921.13 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--20 years, .030 cfs (22 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 71.60 ft June 11 ; maximum inflow, 767 cfs (average for 5-minute interval) June 10 , computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 6.6 cfs July 5, 1961; maximum gage height, 83.63 ft June 7, 1961; no outflow most of time. Maximum inflow known, 1,700 cfs (average for 5-minute interval) Aug. 16, 1968, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure and rated gate-valve openings. Reservoir is formed by earth dam; storage began in April 1951. Outlet structure is a 15-inch concrete pipe with an encasement of trash racks and retaining wall with invert at gage height 79.52 ft. There is a 6-inch diameter iron drain pipe with gate valve in face of dam. Crest of emergency earthen spillway is at gage height 90.0 ft. Original capacity at crest of emergency spillway, 1,048 acre-ft and at outlet structure, 445 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	30.5	8.7	.50
Nov. 30	26.3	8.0	.60
Dec. 31	23.7	7.5	.32
CAL YR 1970	--	--	16.99
Jan. 31	20.9	7.6	.60
Feb. 28	19.5	6.7	1.22
Mar. 31	14.7	5.7	0
Apr. 30	10.4	4.7	.16
May 31	12.5	5.2	1.91
June 30	71.7	14.3	5.12
July 31	52.3	11.8	1.30
Aug. 31	44.7	10.9	2.42
Sept. 30	38.7	10.0	4.66
WTR YR 1971	--	--	18.81

+ Rain gage 14 R, 2.4 miles southwest of dam.

07320500 Sandstone Creek subwatershed No. 6 (East Branch Sandstone Creek) near Elk City, Okla.

LOCATION.--Lat 35°29'10", long 99°30'10", in NW 1/4 SW 1/4 sec.26, T.12 N., R.22 W., Beckham County, near center of upstream side of dam on East Branch Sandstone Creek, 7.5 miles northeast of Berline and 8 miles northwest of Elk City.

DRAINAGE AREA.--6.46 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,874.32 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, .095 cfs (69 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 75.70 ft July 2 ; maximum inflow recorded, 508 cfs (average for 5-minute interval) July 2, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 46 cfs May 26, 1959 (gage height, 87.80 ft); no outflow most of time. Maximum inflow known, 1,870 cfs (average for 5-minute interval) May 3, 1957, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records fair. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure, and rated gate-valve openings. Reservoir is formed by earth dam; storage began in April 1951. Outlet structure is a 21-inch concrete pipe with an encasement of trash racks and retaining wall with invert at gage height 83.02 ft. There is a 6-inch diameter iron drain pipe with gate valve in face of dam. Crest of emergency earthen spillway is at gage height 100.0 ft. Original capacity at crest of emergency spillway, 2,060 acre-ft, and at outlet structure, 605 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	91.5	14.9	.49
Nov. 30	83.1	13.8	.50
Dec. 31	74.0	13.0	.30
CAL YR 1970	--	--	15.70
Jan. 31	67.8	12.0	.69
Feb. 28	a 61.7	11.5	.80
Mar. 31	a 53.1	10.7	0
Apr. 30	a 43.3	9.8	.10
May 31	a 35.0	8.9	1.71
June 30	118	18.0	5.64
July 31	131	19.0	2.82
Aug. 31	113	17.0	2.30
Sept. 30	98.7	15.7	3.74
WTR YR 1971	--	--	19.09

\+ Rain gage 7 R, 2.6 miles southwest of dam.
a Computed from elevations based on staff-gage readings.

07321000 Sandstone Creek subwatershed No. 5 (East Branch Sandstone Creek tributary) near Elk City, Okla.

LOCATION.--Lat 35°29'30", long 99°29'20", in SE 1/4 NE 1/4 sec.26, T.12 N., R.22 W., Beckham County, near center of upstream side of dam on unnamed tributary of East Branch Sandstone Creek, 7 miles northwest of Elk City and 8.5 miles northeast of Berlin.

DRAINAGE AREA.--3.89 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,893.15 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, .095 cfs (69 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 62.25 ft June 11 ; maximum inflow, 2,350 cfs; (average for 5-minute interval) June 9, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 13 cfs May 26, 1959, Aug. 16-18, 1968; maximum gage height, 75.22 ft Aug. 17, 1968; no outflow most of time. Maximum inflow known, 2,850 cfs (average for 5-minute interval) Aug. 16, 1968, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; storage began in March 1951. Outlet structure is an encasement of trash racks and retaining wall connected to an 18-inch concrete pipe with invert at gage height 67.91 ft. There is a 6-inch diameter iron drain pipe with gate valve in face of dam. Crest of emergency earthen spillway is at gage height 84.0 ft. Original capacity at crest of emergency spillway, 1,147 acre-ft, and at outlet pipe, 326 acre-ft. Storage data given herein are based on capacity curve, interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	26.1	7.4	0.54
Nov. 30	21.7	6.6	.56
Dec. 31	18.5	6.0	.38
CAL YR 1970	--	--	16.98
Jan. 31	16.2	5.5	.60
Feb. 28	14.2	5.1	.80
Mar. 31	12.6	4.8	0
Apr. 30	9.3	4.2	.14
May 31	7.3	3.7	2.22
June 30	62.9	13.0	6.34
July 31	61.1	12.8	2.20
Aug. 31	45.2	10.3	2.92
Sept. 30	37.8	9.3	3.86
WTR YR 1971	--	--	20.56

+ Rain gage 5 R, 2.5 miles southeast of dam.

07321500 Sandstone Creek subwatershed No. 3 (East Branch Sandstone Creek tributary) near Elk City, Okla.

LOCATION.--Lat 35°30'40", long 99°30'40", on south line of SW 1/4 SE 1/4 sec.15, T.12 N., R.22 W., Roger Mills County, near center of upstream side of dam on unnamed tributary to East Branch Sandstone Creek, 7.5 miles northeast of Berlin and 9 miles northwest of Elk City.

DRAINAGE AREA.--0.62 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,828.43 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, .007 cfs (5.1 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 79.00 ft June 10; maximum inflow, 905 cfs (average for 5-minute interval) June 9, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 4.7 cfs May 26, 1959 (gage height, 88.76 ft); no outflow most of time. Maximum inflow known, 1,780 cfs (average for 5-minute interval) Apr. 18, 1957, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; storage began in April 1951. Outlet structure is an encasement of trash racks and retaining wall connected to a 12-inch concrete pipe with invert at gage height 82.08 ft. There ia a 6-inch diameter iron drain pipe with control gate valve in face of dam. Crest of emergency earthen spillway is at gage height 92.0 ft. Original capacity at crest of emergency spillway, 148.2 acre-ft and at outlet pipe, 56.3 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	0	0	.54
Nov. 30	0	0	.52
Dec. 31	0	0	.40
CAL YR 1970	--	--	13.76
Jan. 31	0	0	.66
Feb. 28	0	0	
Mar. 31	0	0	0
Apr. 30	0	0	.24
May 31	a 1.0	1.2	1.64
June 30	5.8	2.2	6.06
July 31	a 2.4	1.5	1.74
Aug. 31	a .6	1.0	1.52
Sept. 30	a .5	1.0	4.18
WTR YR 1971	--	--	18.08

\+ Rain gage 2 R, 1.5 miles northeast of dam.
a Computed from elevation based on staff-gage readings.

07322000 Sandstone Creek subwatershed No. 9 (East Branch Sandstone Creek tributary) near Elk City, Okla.

LOCATION.--Lat 35°29'40", long 99°32'00", in NW 1/4 SW 1/4 sec.28, T.12 N., R.22 W., Beckham County, near center of upstream side of dam on unnamed tributary of East Branch Sandstone Creek, 7.5 miles northeast of Berlin and 9 miles northwest of Elk City.

DRAINAGE AREA.--3.50 sq mi, of which 0.37 sq mi is noncontributing.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,864.85 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--20 years, .056 cfs (41 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 68.22 ft June 11 ; maximum inflow, 2,420 cfs (average for 5-minute interval) June 8, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

Period of record: Maximum outflow, 17 cfs May 26, 1959, July 6, 1961; maximum gage height, 81.30 ft May 26, 1959; no outflow most of time. Maximum inflow known, 2,420 cfs (average for 5-minute interval) June 8, 1971, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation of outlet structure. Reservoir is formed by earth dam; storage began in March 1951. Outlet structure is the open end of a 15-inch concrete pipe in an encasement of trash racks and retaining wall at gage height 71.94 ft. There is a 6-inch diameter iron drain pipe with gate valve in face of dam. Crest of emergency earthen spillway is at gage height 92.0 ft. Original capacity at crest of emergency spillway, 1,250 acre-ft, and at outlet pipe, 252 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	11.5	5.3	.49
Nov. 30	8.7	4.7	.50
Dec. 31	6.4	4.2	.30
CAL YR 1970	--	--	15.70
Jan. 31	4.7	3.8	.69
Feb. 28	3.3	3.4	.80
Mar. 31	2.2	2.8	0
Apr. 30	1.4	2.3	.10
May 31	.9	2.0	1.71
June 30	61.4	11.9	5.64
July 31	55.3	11.4	2.82
Aug. 31	41.4	10.1	2.30
Sept. 30	36.3	9.6	3.74
WTR YR 1971	--	--	19.09

+ Rain gage 7 R, 2.3 miles south of dam.

07322500 East Branch Sandstone Creek near Elk City, Okla.

LOCATION.--Lat 35°31'20", long 99°31'48", on south line sec.9, T.12 N., R.22 W., Roger Mills County, near left bank on downstream side of pier on county road bridge, 7.5 miles northeast of Berlin and 10 miles northwest of Elk City.

DRAINAGE AREA.--23.0 sq mi.

PERIOD OF RECORD.--April 1951 to current year. Monthly discharge only for some periods, published in WSP 1731.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,832.06 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--20 years, 1.60 cfs (1,160 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 300 cfs June 9 (gage height, 11.77 ft, from floodmark); no flow at times.
Period of record: Maximum discharge, 1,130 cfs May 25, 1959 (gage height, 13.67 ft), from rating curve extended above 500 cfs; maximum gage height, 14.3 ft, from floodmark, Aug. 16, 1968; no flow at times in most years.

REMARKS.--Records poor. Flow from 18.2 sq mi regulated by 7 flood-retarding structures (combined original capacity, 5,760 acre-ft). Some diversion for irrigation above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0	.26	.50	.34	.12	.08	.14		0
2			0	0	.30	.48	.30	.10	.60	.16		0
3			0	.60	.30	.46	.24	.09	.10	1.2		0
4			0	.20	.34	.44	.24	.07	.30	.50		0
5			0	.12	.34	.42	.28	.06	.06	.16		0
6			0	.09	.10	.42	.30	.04	0	.08		0
7			0	.12	.08	.40	.28	.03	0	.04		0
8			0	.20	.05	.40	.30	.04	0	0		0
9			0	.30	.18	.28	.28	.08	10	0		0
10			0	.40	.32	.25	.24	.10	15	0		0
11			0	.42	.30	.28	.28	.09	10	0		0
12			0	.38	.28	.32	.22	.07	3.0	0		0
13			0	.36	.26	.28	.20	.06	1.0	0		0
14			0	.34	.28	.26	.26	.04	.50	0		0
15			.04	.36	.26	.20	.24	.06	.18	0		0
16			.20	.34	.35	.32	.28	.06	.13	0		0
17			.03	.34	.26	.28	.25	.06	.10	0		0
18			0	.32	.32	.26	.28	.06	.11	0		.55
19			0	.34	.34	.32	.24	.06	.13	0		0
20			0	.34	.30	.28	.21	.08	3.0	0		0
21			0	.32	.16	.26	.18	.07	1.0	0		0
22			0	.34	.04	.26	.16	.06	.80	0		0
23			0	.32	.30	.30	.18	.04	.26	0		0
24			0	.30	.80	.36	.14	.02	.20	0		0
25			0	.30	.90	.34	.16	0	.16	0		0
26			0	.28	.84	.34	.17	0	.14	0		0
27			0	.26	.62	.32	.14	0	.12	0		0
28			0	.28	.56	.30	.15	0	.10	0		0
29			0	.30	------	.28	.13	0	.80	0		0
30			0	.30	------	.38	.14	0	.30	0		0
31		------	0	.28	------	.28	------	0	------	0		------
TOTAL	0	0	.27	8.85	9.44	10.28	6.82	1.54	48.17	2.28	0	.55
MEAN	0	0	.009	.29	.34	.33	.23	.05	1.61	0.74	0	.018
MAX	0	0	.20	.60	.90	.50	.34	.12	15	1.2	0	.55
MIN	0	0	0	0	.04	.20	.13	0	0	0	0	0
AC-FT	0	0	.5	18	19	20	14	3.1	96	4.5	0	1.1

CAL YR 1970	TOTAL	161.18	MEAN	.44	MAX	16	MIN	0	AC-FT 320
WTR YR 1971	TOTAL	88.20	MEAN	.24	MAX	1.2	MIN	0	AC-FT 175

07323000 Sandstone Creek near Cheyenne, Okla.

LOCATION.--Lat 35°33'10", long 99°31'50", on south line of SE 1/4 SW 1/4 sec.34, T.13 N., R.22 W., Roger Mills County, near left bank on downstream side of pier on county road bridge, 4.5 miles upstream from Wildcat Creek, 9.1 miles southeast of Cheyenne, and at mile 6.0.

DRAINAGE AREA.--87.1 sq mi, of which 4.0 sq mi is probably noncontributing.

PERIOD OF RECORD.--April 1951 to current year. Monthly discharge only for some periods, published in WSP 1731.

GAGE.--Water-stage recorder. Datum of gage is 1,795.62 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--20 years, 6.60 cfs (4,780 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,040 cfs June 10 (gage height, 11.42 ft); no flow at times. Period of record: Maximum discharge, 6,360 cfs Apr. 30, 1954 (gage height, 13.64 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of peak flow; maximum gage height, 16.42 ft May 26, 1959; no flow at times in 1951-57, 1964, 1970-71.

REMARKS.--Records poor. Flow from 65.6 sq mi regulated by 22 flood-retarding structures (combined original capacity, about 21,100 acre-ft). Some diversions for irrigation above station.

REVISIONS (WATER YEARS).--WSP 1711: 1959.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.05	.09	.65	.39	2.7			8.0	.80	.33	.27
2	.06	.06	.11	.75	.39	2.5			1.7	1.0	.27	.21
3	.06	.06	.13	2.0	.42	2.1			.95	3.1	.21	.19
4	.06	.07	.13	.30	.45	1.9			2.1	.80	.17	.17
5	.05	.08	.15	.21	.42	1.7			.60	.72	.15	.15
6	.04	.09	.15	.15	.24	1.5			.30	.70	.13	.15
7	.04	.11	.15	.36	.21	1.4			.17	.65	.11	.13
8	.04	.11	.17	.56	.19	1.2			.21	.56	.09	.11
9	.05	.09	.19	.80	.30	1.1			135	.48	20	.09
10	.07	.07	.17	.95	.42	1.0			61	.65	1.7	.08
11	.06	.07	.17	1.0	.56	.95			91	.52	.65	.07
12	.06	.07	.17	1.1	.70	.90			5.0	.56	.39	.06
13	.07	.15	.19	.95	.80	1.1			3.9	.42	.30	.45
14	.07	.45	.17	.90	.85	1.0			2.6	.45	.45	.19
15	.06	.21	.30	.85	.75	.95			1.9	.45	2.5	.21
16	.04	.13	.60	.80	.70	1.0			1.5	.39	1.0	.21
17	.04	.11	.42	.75	.65	.90			1.2	.33	.70	.30
18	.03	.13	.39	.80	.95	.65			1.0	.30	.56	6.5
19	.03	.15	.39	.70	1.2	.90			.95	.27	.39	2.2
20	.04	.13	.36	.75	1.0	.75			34	.21	.30	.70
21	.04	.13	.36	.70	.60	.56			3.9	.21	.27	.56
22	.04	.15	.48	.60	.42	.56			3.1	.21	.24	.52
23	.04	.13	.52	.45	.30	.56			2.3	.52	.24	.70
24	.05	.15	.70	.45	1.5	.56			1.9	.45	.85	1.2
25	.04	.17	.60	.45	3.0	.70			1.4	.27	.45	.70
26	.03	.15	.56	.42	2.9	.85			.90	.21	.30	.56
27	.04	.15	.70	.42	2.5	.80			.76	.17	.60	.48
28	.06	.15	.65	.42	2.6	.65			.70	.13	.39	.27
29	.05	.15	.65	.45	------	.60			1.5	.13	.36	.24
30	.06	.13	.70	.45	------	0			.70	.56	.39	.21
31	.06	------	.65	.48	------	0	------		------	.45	.33	------
TOTAL	1.55	3.85	11.17	20.62	25.41	32.04	0	0	370.24	16.67	34.82	17.88
MEAN	.05	.13	.36	.67	.91	1.03	0	0	12.3	.54	1.12	.60
MAX	.07	.45	.70	2.0	3.0	2.7	0	0	13.5	3.1	20	6.5
MIN	.03	.05	.09	.15	.19	0	0	0	.17	.13	.09	.06
AC-FT	3.1	7.6	22	41	50	64	0	0	734	33	69	35

CAL YR 1970 TOTAL 700.60 MEAN 1.92 MAX 48 MIN 0 AC-FT 1,390
WTR YR 1971 TOTAL 534.25 MEAN 1.46 MAX 135 MIN 0 AC-FT 1,060

07323500 Sandstone Creek subwatershed No. 22 (Sandstone Creek tributary) near Cheyenne, Okla.

LOCATION.--Lat 35°33'40", long 99°33'00", in SW 1/4 NW 1/4 sec.33, T.13 N., R.22 W., Roger Mills County, near center of upstream side of dam on unnamed tributary to Sandstone Creek, 4 miles southwest of Herring and 8 miles southeast of Cheyenne.

DRAINAGE AREA.--2.25 sq mi.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,810.94 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--19 years, no outflow.

EXTREMES.--Current year: No outflow; maximum gage height, 68.66 ft June 10; maximum inflow, 1,500 cfs (average for 5-minute interval) June 10, computed from change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: No outflow during period. Maximum inflow known, 3,300 cfs (average for 5-minute interval) Apr. 29, 1954, computed from change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records fair. Reservoir is formed by earth dam; storage began in August 1951. Outlet structure is drop inlet with a 12-inch concrete pipe through dam. Crest of emergency spillway is at gage height 89.0 ft. Lip of drop inlet is at gage height 78.25 ft. There is a 6-inch diameter iron drain pipe with control gate valve in face of dam. Original capacity at crest of emergency spillway, 919 acre-ft and at drop inlet, 379 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys.

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	0	0	.34
Nov. 30	0	0	.54
Dec. 31	0	0	.50
CAL YR 1970	--	--	16.23
Jan. 31	0	0	.50
Feb. 28	0	0	1.02
Mar. 31	0	0	0
Apr. 30	0	0	.30
May 31	a 5.2	3.7	1.58
June 30	71.5	10.1	7.04
July 31	48.2	8.8	1.38
Aug. 31	37.6	7.8	2.06
Sept. 30	a 26.7	6.9	3.54
WTR YR 1971	--	--	17.80

\+ Rain gage 35 R, 1.4 miles southwest of dam.
a Computed from elevation based on staff-gage readings.

07324000 Sandstone Creek subwatershed No. 1 (Wildcat Creek) near Cheyenne, Okla.

LOCATION.--Lat 35°34'00", long 99°30'10", on east line of NE 1/4 NE 1/4 sec.35, T.13 N., R.22 W., Roger Mills County, near center of upstream side of dam on Wildcat Creek, 3 miles southeast of Herring and 9.5 miles southeast of Cheyenne.

DRAINAGE AREA.--5.33 sq mi.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1960 monthly discharge and contents only, published in WSP 1731.

GAGE.--Water-stage recorder and recording rain gage. Datum of gage is 1,777.20 ft above mean sea level (U. S. Soil Conservation Service bench mark).

AVERAGE DISCHARGE.--20 years, .070 cfs (51 acre-ft per year).

EXTREMES.--Current year: No outflow; maximum gage height, 70.72 ft July 23 ; maximum inflow, 880 cfs (average for 5-minute interval) July 23, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.
Period of record: Maximum outflow, 12 cfs May 26, 1959 (gage height, 81.00 ft); no outflow most of time. Maximum inflow known, 4,280 cfs (average for 5-minute interval) Apr. 18, 1957, computed from outflow and change in reservoir contents, adjusted for rainfall on reservoir surface during time of peak inflow.

REMARKS.--Records good. Records of discharge are outflow from reservoir, determined from stage-discharge relation for outlet structure. Reservoir is formed by earth dam; storage began in May 1951. Outlet structure is an encasement of trash racks and retaining wall connected to an 18-inch concrete pipe with invert at gage height 78.38 ft. There is a 6-inch diameter iron drain pipe with control gate valve in face of dam. Crest of emergency earthen spillway is at gage height 87.0 ft. Original capacity at crest of emergency spillway, 1,557 acre-ft and at outlet pipe, 730 acre-ft. Storage data given herein are based on capacity curve interpolated successively for each period of storm runoff based on periodic surveys

COOPERATION.--Elevations and contents furnished by Soil Conservation Service.

MONTH-END CONTENTS, SURFACE AREA, AND PRECIPITATION, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	Contents (acre-feet)	Surface area (acres)	Precipitation+ (inches)
Oct. 31	a .1	1.1	.42
Nov. 30	0	0	.70
Dec. 31	0	0	.40
CAL YR 1970	--	--	13.63
Jan. 31	0	0	.72
Feb. 28	0	0	.62
Mar. 31	0	0	0
Apr. 30	0	0	.28
May 31	a .8	3.7	1.42
June 30	75.2	20.5	6.32
July 31	103.5	24.0	2.58
Aug. 31	67.2	18.9	1.58
Sept. 30	52.8	16.0	3.49
WTR YR 1971	--	--	18.53

a Rain gage 1 R, 2.7 miles south of dam.
+ Computed from elevations based on staff-gage readings.

07324200 Washita River near Hammon, Okla.

LOCATION.--Lat 35°39'23", long 99°18'21", on west line of sec.26, T.14 N., R.20 W., Custer County, on right bank near county road bridge, 2.2 miles downstream from Quartermaster Creek, 4.7 miles northeast of Hammon, and at mile 494.5.

DRAINAGE AREA.--1,387 sq mi.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,643.22 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,570 cfs June 11 (gage height, 16.05 ft); minimum, no flow at times.
Period of record: Maximum discharge, 2,540 cfs April 18, 1970 (gage height, 19.23 ft); from rating curve extended above 500 cfs on basis of slope-area measurement of peak flow; no flow at times.

REMARKS.--Records fair prior to February and good thereafter. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	0	.38	.21	.31	1.6	.23	.12	0	19	.16	0
2	.01	.01	.38	.26	.43	.54	.20	.12	0	6.9	.08	0
3	.01	.01	.44	.64	.53	.45	.18	.08	0	16	.06	0
4	.01	.01	.44	.20	.40	.38	.18	.04	0	11	.06	0
5	.01	.02	.56	.06	.30	.62	.18	0	0	4.6	.06	0
6	.01	.04	.38	.05	.20	.58	.19	0	0	2.8	.04	0
7	.01	.06	.56	.06	.05	.38	.17	0	0	1.8	.04	0
8	0	.06	.68	.08	.03	.32	.16	0	.01	1.1	.08	0
9	0	.06	.62	.13	.04	.44	.16	0	719	.63	148	0
10	0	.06	.68	.20	.07	.38	.14	0	303	.39	32	0
11	0	.07	.20	.30	.10	.56	.14	0	1,120	.24	12	0
12	0	.08	.15	.10	.20	.56	.15	0	730	.19	8.1	0
13	0	.28	.13	.12	.35	.44	.12	0	239	.17	5.6	0
14	0	.44	.18	.15	.52	.32	.12	0	115	.16	5.0	0
15	0	.14	.40	.09	.41	.30	.12	0	50	.16	4.6	0
16	0	.18	.21	.21	.60	.23	.17	0	27	.15	4.6	0
17	.02	.26	.18	.20	.33	.16	.28	0	11	.20	5.2	.06
18	.04	.26	.18	.20	.61	.19	.23	0	4.5	.16	2.6	.32
19	.04	.32	.15	.15	.74	.18	.17	0	1.9	.12	.56	.02
20	0	.26	.14	.17	.62	.16	.17	0	37	.10	.14	0
21	0	.26	.14	.18	.24	.17	.14	0	92	.08	.08	0
22	0	.26	.14	.18	.15	.17	.13	0	17	.06	.06	0
23	0	.14	.12	.14	.15	.14	.10	0	9.6	31	.06	0
24	0	.08	.10	.15	.25	.14	.10	0	6.2	20	.04	.04
25	0	.26	.15	.18	.87	.18	.11	0	4.1	6.9	0	.02
26	0	.38	.15	.30	2.5	.23	.10	0	2.9	2.8	.01	.02
27	0	.32	.16	.30	.82	.26	.10	0	2.0	.62	0	0
28	0	.26	.18	.38	3.2	.26	.10	0	1.6	.18	0	0
29	0	.32	.17	.43	------	.24	.11	0	1.4	5.6	0	0
30	0	.38	.24	.47	------	.20	.12	0	1.9	.92	0	0
31	0	------	.19	.32	------	.18	------	0	------	.44	0	------
TOTAL	.17	5.28	8.78	6.61	15.02	10.96	4.57	.36	3,496.11	134.47	229.23	.48
MEAN	.006	.18	.28	.21	.54	.35	.15	.012	117	4.34	7.39	.016
MAX	.04	.44	.68	.64	3.2	1.6	.28	.12	1,120	31	148	.32
MIN	0	0	.10	.05	.03	.14	.10	0	0	.06	0	0
AC-FT	.3	10	17	13	30	22	9.1	.7	6,930	267	455	1.0

CAL YR 1970 TOTAL 6,029.36 MEAN 16.5 MAX 1,240 MIN 0 AC-FT 11,960
WTR YR 1971 TOTAL 3,912.04 MEAN 10.7 MAX 1,120 MIN 0 AC-FT 7,760

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-11	1900	16.05	1,570

07324300 Foss Reservoir near Foss, Okla.

LOCATION.--Lat 35°32'18", long 99°10'40", in S 1/2 sec.2, T.12 N., R.19 W., Custer County, near right end of dam on Washita River, 0.5 mile upstream from Oak Creek, 3.5 miles west of Stafford, 6 miles north of Foss, and at mile 474.4.

DRAINAGE AREA.--1,496 sq mi.

PERIOD OF RECORD.--February 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to October 1961, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 111,700 acre-ft Oct. 1 (elevation, 1,630.60 ft); minimum, 101,000 acre-ft June 6, 7(elevation, 1,628.35 ft).
Period of record: Maximum contents, 121,800 acre-ft May 30, 1970 (elevation, 1,632.60 ft).

REMARKS.--Reservoir is formed by an earth dam. Storage began Feb. 13, 1961. Capacity, 436,500 acre-ft at elevation 1,668.6 ft (crest of drop inlet) and 256,100 acre-ft at elevation 1,652.0 ft (conservation pool). Dead storage, 12,420 acre-ft below elevation 1,597.2 ft (sill of gated outlet). Figures given herein represent total contents. Reservoir is designed for flood control, municipal water supply (inactive), and irrigation release. Revised capacity table used after Sept. 30, 1964. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Elevations and data on diversions furnished by Foss Reservoir Master Conservancy District.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet) +	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,630.60	111,700	--
Oct. 31	1,630.30	110,200	-1,500
Nov. 30	1,630.00	108,700	-1,500
Dec. 31	1,629.90	108,300	-400
CAL YR 1970	--	--	-4,400
Jan. 31	1,629.80	107,800	-500
Feb. 28	1,629.70	107,300	-500
Mar. 31	1,629.50	106,400	-900
Apr. 30	1,629.00	104,000	-2,400
May 31	1,628.40	101,200	-2,800
June 30	1,629.70	107,300	+6,100
July 31	1,628.90	103,500	-3,800
Aug. 31	1,628.70	102,600	-900
Sept. 30	1,628.50	101,700	-900
WTR YR 1971	--	--	-10,000

07324400 Washita River near Foss, Okla.

LOCATION.--Lat 35°32'20", long 99°10'10", in SW 1/4 SW 1/4 sec.1, T.12 N., R.19 W., Custer County, on left bank on downstream side of pile bent of county road bridge, 0.4 mile downstream from Oak Creek, 0.9 mile downstream from Foss Dam, 2.5 miles west of Stafford, 6 miles north of Foss, and at mile 473.5.

DRAINAGE AREA.--1,551 sq mi.

PERIOD OF RECORD.--March 1956 to April 1957, February to December 1958, July 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (from preliminary survey by Topographic Division).

AVERAGE DISCHARGE.--10 years (1961-71), 7.99 cfs (5,790 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 330 cfs June 11 (gage height, 11.60 ft from floodmark); minimum daily, 1.0 cfs Feb. 6-8, 22, 23, Sept. 10.
Period of record: Maximum discharge, 14,000 cfs Apr. 19, 1957 (gage height, 20.40 ft), from rating curve extended above 3,600 cfs on basis of velocity-area study; no flow at times in 1956.
Flood in May 1959 reached a stage of 23.4 ft, from floodmark.

REMARKS.--Records fair. Except for 55 sq mi intervening area, flow completely regulated since 1961 by Foss Reservoir (see sta. 07324300).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	1.9	2.9	5.1	1.5	1.5	8.8	1.9	76	45	1.7	1.5
2	3.7	1.9	3.0	5.2	1.8	1.4	6.8	1.6	4.7	35	1.5	1.4
3	3.5	1.9	3.0	4.0	1.8	1.3	9.9	1.6	3.4	78	1.4	2.6
4	3.4	1.8	2.9	3.0	1.8	1.4	12	2.4	2.5	15	1.4	4.2
5	3.3	1.8	3.0	2.7	1.7	1.5	12	5.0	1.9	4.5	1.4	3.9
6	3.1	1.8	3.2	2.3	1.0	1.5	10	8.8	1.7	3.5	1.5	1.4
7	3.2	1.8	3.4	2.5	1.0	1.4	8.4	9.6	1.4	2.9	1.5	1.3
8	3.1	1.8	3.6	3.5	1.0	1.5	8.2	10	1.4	2.8	3.4	1.2
9	3.0	1.8	3.8	5.0	1.2	1.5	5.7	11	58	3.0	147	1.1
10	3.1	1.8	3.8	6.0	1.6	1.4	1.9	10	11	2.7	74	1.0
11	3.0	1.8	3.8	6.1	1.7	1.4	1.6	6.8	119	2.9	48	1.8
12	2.9	1.9	3.7	6.3	1.7	1.5	6.8	3.3	19	2.6	22	1.6
13	3.1	2.2	3.7	6.3	1.6	1.4	13	8.3	9.9	2.5	10	1.7
14	3.2	2.9	3.8	6.3	1.6	1.6	19	11	7.0	2.6	5.8	1.6
15	3.3	3.6	4.1	6.4	1.6	1.6	22	7.4	5.9	2.5	41	1.4
16	3.3	3.1	4.5	6.3	1.4	2.1	18	7.4	5.7	2.5	11	1.2
17	3.4	3.0	4.5	5.0	1.4	2.5	18	7.7	5.0	2.6	7.9	3.6
18	3.4	3.0	4.5	4.1	1.4	2.4	19	8.0	4.6	2.6	6.1	18
19	3.3	3.0	4.6	3.5	1.6	2.8	17	8.1	4.3	88	4.7	2.9
20	3.2	2.8	4.6	3.2	1.5	2.8	12	8.2	15	116	3.7	2.0
21	3.1	2.6	4.6	3.2	1.5	2.9	6.5	7.3	5.4	113	3.1	1.9
22	2.9	2.6	4.6	3.1	1.0	2.7	12	2.9	4.3	92	2.7	1.8
23	2.8	2.6	4.6	3.0	1.0	2.6	19	2.8	3.8	92	2.7	1.9
24	2.7	2.6	4.7	2.7	1.5	2.4	19	3.4	3.3	63	3.4	6.3
25	2.5	2.6	4.7	2.7	2.6	2.5	18	8.0	2.8	45	3.1	5.3
26	2.4	2.7	4.7	2.7	4.8	2.1	18	9.6	2.7	35	2.6	2.3
27	2.3	2.8	4.8	2.6	1.9	1.3	17	9.8	2.4	21	2.1	2.0
28	2.2	2.8	4.9	2.6	1.5	1.2	16	4.3	2.2	14	1.9	1.9
29	2.1	2.9	5.0	2.5	------	4.8	11	2.3	3.0	15	1.8	1.8
30	2.0	2.9	5.1	2.3	------	10	5.3	2.5	6.6	5.1	1.7	1.7
31	1.9	------	5.1	1.8	------	9.3	------	7.9	------	1.8	1.6	------
TOTAL	92.2	72.7	127.2	122.0	45.7	76.3	371.9	198.9	393.9	914.1	421.7	82.3
MEAN	2.97	2.42	4.10	3.94	1.63	2.46	12.4	6.42	13.1	29.5	13.6	2.74
MAX	3.8	3.6	5.1	6.4	4.8	10	22	11	119	116	147	18
MIN	1.9	1.8	2.9	1.8	1.0	1.2	1.6	1.6	1.4	1.8	1.4	1.0
AC-FT	183	144	252	242	91	151	738	395	781	1,810	836	163

CAL YR 1970 TOTAL 3,000.3 MEAN 8.22 MAX 224 MIN 1.7 AC-FT 5,950
WTR YR 1971 TOTAL 2,918.9 MEAN 8.00 MAX 147 MIN 1.0 AC-FT 5,790

07325000 Washita River near Clinton, Okla.

LOCATION.--Lat 35°31'52", long 98°57'57", in SW 1/4 NE 1/4 sec.11, T.12 N., R.17 W., Custer County, within channel on downstream side of pier of bridge on U. S. Highway 183, 0.5 mile north of Clinton, 0.8 mile upstream from Beaver Creek, 4.8 miles downstream from Barnitz Creek, and at mile 447.4.

DRAINAGE AREA.--1,977 sq mi.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,467.60 ft above mean sea level. See WSP 1920 for history of changes prior to Mar. 19, 1941.

AVERAGE DISCHARGE.--25 years (1935-60), 146 cfs (105,700 acre-ft per year); 11 years (1960-71), 43.0 cfs (31,150 acre-ft per year), since closure of Foss Dam.

EXTREMES.--Current year: Maximum discharge, 732 cfs June 11 (gage height, 10.30 ft); minimum daily, 0.47 cfs Sept. 16.

Period of record: Maximum discharge, 66,800 cfs May 16, 1951 (gage height, 31.09 ft), from rating curve extended above 7,900 cfs by contracted-opening measurement of peak flow; no flow at times in 1952-56, 1964, 1966.

Flood of Apr. 3-4, 1934, reached a stage of 33.9 ft, from floodmarks.

REMARKS.--Records good. Flow regulated since February 1961 by Foss Reservoir (see sta. 07324300) and by numerous flood-retarding structures.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	8.7	8.3	5.8	5.0	18	11	3.9	129	18	2.7	3.8
2	9.4	8.2	8.3	6.0	4.8	16	11	2.6	84	23	2.0	4.4
3	9.0	8.0	8.0	7.1	5.4	14	8.9	2.4	16	17	1.5	3.6
4	9.0	7.1	7.4	4.7	6.2	13	7.8	3.8	8.8	34	1.3	2.4
5	9.7	6.0	7.3	4.0	5.7	16	8.5	3.0	5.5	13	1.2	8.0
6	10	6.5	6.9	3.5	5.7	20	12	3.1	5.2	8.4	1.1	12
7	9.9	6.9	7.0	3.8	4.2	20	11	1.7	6.1	4.5	1.0	10
8	11	7.3	7.3	4.5	3.5	20	8.7	3.5	5.5	3.7	.90	7.0
9	15	6.5	8.0	5.0	5.0	20	8.7	6.1	109	3.8	48	5.6
10	13	6.0	7.6	5.3	5.9	19	9.8	9.1	135	5.0	179	12
11	13	6.5	7.1	5.5	6.8	19	3.1	7.3	520	2.8	82	9.7
12	13	6.7	7.0	5.2	6.8	20	5.6	8.2	225	3.7	45	6.8
13	14	6.7	6.9	5.4	6.5	20	3.8	6.4	57	1.4	19	6.9
14	15	7.1	7.0	5.1	7.0	18	6.5	2.5	28	.91	13	3.4
15	14	7.1	7.4	3.9	7.3	17	9.7	6.3	21	.85	49	1.8
16	14	6.7	7.9	4.4	7.3	16	13	8.6	15	.90	52	.47
17	15	6.9	7.8	4.2	7.6	17	12	6.4	13	1.6	17	4.5
18	15	6.9	7.5	4.5	7.9	14	12	5.9	10	1.4	11	50
19	15	8.0	7.2	4.1	7.6	13	14	2.8	8.8	1.9	8.7	40
20	14	7.8	7.1	4.2	7.5	12	14	4.0	11	66	6.4	10
21	14	8.7	7.2	4.8	4.8	8.0	12	3.8	18	117	5.0	5.9
22	14	8.7	7.3	4.7	1.6	8.7	4.9	6.6	15	112	3.9	7.2
23	14	8.7	7.0	4.6	7.2	9.9	3.9	7.1	8.7	87	3.5	7.2
24	14	8.3	6.4	4.7	9.1	10	12	5.2	8.1	84	3.3	20
25	14	8.8	5.9	4.4	12	11	15	1.9	8.2	51	3.8	42
26	14	9.1	5.8	4.1	21	10	17	1.1	7.8	37	3.8	20
27	11	8.2	5.8	4.6	21	12	16	3.0	8.8	22	3.9	8.9
28	11	8.2	5.8	4.6	19	13	6.7	6.8	8.5	17	4.3	5.1
29	9.7	8.3	5.9	5.0	------	11	3.8	3.7	8.3	17	4.1	3.7
30	9.2	8.6	5.9	5.3	------	9.9	6.8	6.6	11	23	5.0	3.1
31	8.7	------	5.7	5.1	------	10	------	25	------	7.7	4.5	------
TOTAL	380.8	227.2	217.7	148.1	219.4	455.5	289.2	168.4	1,515.3	786.56	586.90	325.47
MEAN	12.3	7.57	7.02	4.78	7.84	14.7	9.64	5.43	50.5	25.4	18.9	10.8
MAX	15	9.1	8.3	7.1	21	20	17	25	520	117	179	50
MIN	8.7	6.0	5.7	3.5	1.6	8.0	3.1	1.1	5.2	.85	.90	.47
AC-FT	755	451	432	294	435	903	574	334	3,010	1,560	1,160	646

CAL YR 1970 TOTAL 8,874.82 MEAN 24.3 MAX 533 MIN .20 AC-FT 17,600
WTR YR 1971 TOTAL 5,320.53 MEAN 14.6 MAX 520 MIN .47 AC-FT 10,550

07325500 Washita River at Carnegie, Okla.

LOCATION.--Lat 35°07'02", long 98°33'49", in NW 1/4 NW 1/4 sec.3, T.7 N., R.13 W., Caddo County, on downstream side of right pier of bridge on State Highway 9, 1,300 ft upstream from Running Creek, 2.7 miles east of Carnegie, and at mile 353.9. Records include flow of Running Creek.

DRAINAGE AREA.--3,129 sq mi, includes that of Running Creek.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,249.23 ft above mean sea level. Prior to October 1942, water-stage recorder at site 8 miles upstream at datum 24.57 ft higher.

AVERAGE DISCHARGE.--34 years, 280 cfs (202,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,310 cfs July 2 (gage height, 10.74 ft); minimum, 0.62 cfs July 22, 23.

Period of record: Maximum discharge, 50,000 cfs May 18, 1949 (gage height, 26.21 ft), from rating curve extended above 35,500 cfs on basis of contracted-opening measurement of peak flow; no flow at times in 1956 and 1964.

Flood of May 23, 1903, reached a stage of about 29 ft at former site and datum, from information by local resident; flood of May 18, 1949, reached a stage of 20.9 ft, from floodmark, at that site and datum.

REMARKS.--Records good. Some diversion above station for irrigation. October 1942 to May 1949, occasional fluctuation caused by power plant at Carnegie, 7.5 miles above station. Some regulation by Foss Reservoir since February 1961 (see sta. 07324300), and by numerous flood-retarding structures. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1087: 1938. WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	21	33	35	32	73	15	12	321	333	40	57
2	31	22	33	35	32	63	14	12	77	1,860	32	29
3	29	22	33	48	33	56	14	12	59	648	25	19
4	27	22	33	42	33	54	12	8.9	118	1,070	18	18
5	26	23	33	35	33	52	11	14	85	177	12	21
6	24	23	32	33	33	47	12	13	48	90	7.6	586
7	22	24	32	33	32	47	10	11	33	64	6.3	330
8	21	24	32	33	31	46	10	8.3	26	44	17	181
9	21	23	32	34	25	40	8.6	14	192	32	17	176
10	20	24	33	36	27	36	8.9	13	351	26	12	168
11	21	24	32	36	37	38	9.4	14	402	21	11	158
12	21	24	30	37	38	38	9.6	12	482	17	24	127
13	23	24	33	41	42	37	8.7	8.8	525	12	83	102
14	23	25	32	38	39	31	9.5	7.5	320	9.9	129	73
15	22	25	33	39	37	28	7.0	7.5	127	5.0	66	47
16	21	27	33	38	36	29	5.6	6.0	84	2.1	149	34
17	22	30	34	37	35	28	6.2	5.2	61	1.8	152	36
18	23	31	34	36	35	23	5.1	4.7	48	6.8	70	410
19	24	31	34	35	33	22	4.9	4.4	40	2.7	53	1,530
20	25	32	35	35	33	22	5.3	2.0	34	1.8	36	1,130
21	26	33	36	35	30	22	8.7	1.3	36	1.2	26	333
22	25	32	36	35	25	22	19	2.6	47	1.2	22	183
23	25	31	35	35	32	21	15	3.6	66	21	21	111
24	24	31	35	36	39	20	17	3.0	42	85	20	422
25	24	32	35	35	42	28	18	3.2	30	67	19	1,930
26	23	31	35	35	47	27	15	3.7	24	61	16	1,830
27	22	31	35	34	55	25	14	6.2	19	53	13	711
28	21	31	35	35	80	23	12	5.8	14	126	7.7	347
29	21	32	35	35	------	22	14	3.8	11	65	176	217
30	21	33	35	34	------	22	14	6.0	7.8	83	258	129
31	21	------	35	32	------	19	------	81	------	56	104	------
TOTAL	732	818	1,043	1,117	1,026	1,061	333.5	310.5	3,729.8	5,043.5	1,642.6	11,445
MEAN	23.6	27.3	33.6	36.0	36.6	34.2	11.1	10.0	124	163	53.0	382
MAX	33	33	36	48	80	73	19	81	525	1,860	258	1,930
MIN	20	21	30	32	25	19	4.9	1.3	7.8	1.2	6.3	18
AC-FT	1,450	1,620	2,070	2,220	2,040	2,100	662	616	7,400	10,000	3,260	22,700

CAL YR 1970 TOTAL 29,753.65 MEAN 81.5 MAX 1,270 MIN .20 AC-FT 59,020
WTR YR 1971 TOTAL 28,301.90 MEAN 77.5 MAX 1,930 MIN 1.2 AC-FT 56,140

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

07325800 Cobb Creek near Eakly, Okla.

LOCATION.--Lat 35°17'26", long 98°35'38", in NW 1/4 NE 1/4 sec.5, T.9 N., R.13 W., Caddo County, near right abutment of bridge on downstream side of State Highway 152, 0.5 mile downstream from Fivemile Creek, 2.4 miles southwest of Eakly, 2.5 miles upstream from Fort Cobb Reservoir, and at mile 22.9.

DRAINAGE AREA.--132 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,369.70 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 2,340 cfs Aug. 29 (gage height, 16.46 cfs); no flow May 26-30. Period of record: Maximum discharge, 2,340 cfs Aug. 29, 1971(gage height, 16.46 ft); from rating curve extended above 500 cfs; no flow Aug. 18, 19, 1970, May 26-30, 1971.

REMARKS.--Records good. Minor regulation by three small reservoirs having combined surface-area 262 acres and capacity of 3,100 acre-feet.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	5.7	7.8	8.4	9.0	11	4.5	4.5	19	410	2.0	12
2	2.6	5.6	7.6	8.9	8.9	11	4.5	5.2	7.4	29	1.9	9.6
3	2.6	5.6	7.5	19	8.8	11	4.4	5.2	3.9	22	1.5	7.9
4	2.6	5.8	7.5	12	9.0	11	4.5	4.7	3.7	18	1.3	6.7
5	2.5	5.8	7.6	10	9.7	10	4.5	4.3	3.4	12	1.1	6.0
6	2.4	5.8	7.5	9.2	8.9	9.8	4.5	3.4	2.5	8.8	1.5	5.8
7	2.4	6.0	7.7	9.0	8.4	9.9	4.6	2.4	13	4.4	1.4	5.4
8	4.5	6.0	7.7	9.5	9.4	9.5	5.1	3.2	586	4.7	42	5.2
9	5.0	6.5	7.7	9.4	9.5	9.4	4.6	4.5	183	4.9	4.7	5.7
10	5.0	7.0	7.7	9.8	9.3	9.0	6.0	5.5	55	4.2	3.1	5.8
11	4.8	7.0	7.6	9.9	9.7	8.8	5.7	5.0	255	2.5	3.0	4.2
12	4.8	7.0	7.5	9.6	9.6	8.7	6.2	3.2	121	1.5	2.8	3.0
13	5.2	7.5	7.6	9.6	9.8	8.6	4.2	3.1	36	1.0	3.2	3.2
14	5.4	7.0	7.8	9.6	9.2	8.8	4.8	2.7	16	.80	3.5	2.8
15	5.4	7.2	8.4	9.1	9.2	8.5	4.3	1.6	9.1	.60	42	1.3
16	5.4	7.2	9.3	9.2	9.5	8.3	3.8	1.5	6.6	.40	4.5	1.1
17	6.4	7.3	8.6	9.4	10	8.0	6.9	1.4	4.9	.40	4.4	16
18	6.3	7.4	8.3	9.2	11	8.0	8.1	.75	3.5	.30	2.4	43
19	5.9	7.1	8.0	9.0	12	8.0	7.0	1.2	2.7	.20	1.8	11
20	5.7	7.1	8.1	9.1	12	7.7	8.7	.93	3.4	.20	1.4	8.5
21	5.6	7.4	8.4	9.1	12	7.7	7.0	.28	3.4	.10	.87	7.1
22	5.6	7.3	8.5	9.2	10	7.7	5.9	.13	3.1	.10	.64	7.1
23	5.4	7.2	8.2	9.2	10	7.7	5.1	.53	2.5	.20	.56	7.6
24	5.4	7.6	8.1	9.0	14	7.7	5.4	.19	1.9	.20	.06	90
25	5.4	7.6	8.2	8.9	19	7.5	4.8	.06	1.5	4.6	.02	35
26	5.2	8.1	8.3	8.6	18	7.5	4.9	0	1.1	13	.08	11
27	5.4	7.7	8.4	8.6	14	7.0	4.2	0	.88	3.9	.26	7.6
28	5.4	7.7	8.6	8.8	12	6.6	4.1	0	.64	47	.37	6.0
29	5.7	7.9	8.5	8.9	------	6.1	4.8	0	.05	5.8	393	5.3
30	5.9	7.8	8.3	9.0	------	4.8	5.0	0	1.3	4.2	29	4.6
31	5.9	------	8.4	9.0	------	4.6	------	21	------	2.6	17	------
TOTAL	148.6	207.9	249.4	297.2	301.9	259.9	158.1	86.47	1,351.47	607.60	571.36	345.5
MEAN	4.79	6.93	8.05	9.59	10.8	8.38	5.27	2.79	45.0	19.6	18.4	11.5
MAX	6.4	8.1	9.3	19	19	11	8.7	21	586	410	393	90
MIN	2.4	5.6	7.5	8.4	8.4	4.6	3.8	0	.05	.10	.02	1.1
AC-FT	295	412	495	590	599	516	314	172	2,680	1,210	1,130	685

CAL YR 1970 TOTAL 4,230.14 MEAN 11.6 MAX 223 MIN 0 AC-FT 8,390
WTR YR 1971 TOTAL 4,585.40 MEAN 12.6 MAX 586 MIN 0 AC-FT 9,100

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
6-8	0500	14.86	1,860	8-29	1130	16.46	2,340
7-1	0330	14.28	1,720				

07325850 Lake Creek near Eakly, Okla.

LOCATION.--Lat 35°17'27", long 98°31'44", in NE 1/4 NW 1/4 sec.1, T.9 N., R.13 W., Caddo County, on downstream side of bridge on State Highway 152, 1.2 miles upstream from Fort Cobb Reservoir, 2 miles southeast of Eakly, and at mile 4.2.

DRAINAGE AREA.--52.0 sq mi.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,365.47 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 409 cfs June 1 (gage height, 10.16 ft); no flow at times. Period of record: Maximum discharge, 409 cfs June 1, 1971 (gage height 10.16 ft); from rating curve extended above 200 cfs; no flow at times each year.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.02	.04	.59	1.4	3.3	1.1	.73	117	57	0	.10
2	0	.07	.03	.89	1.7	2.8	.92	.53	5.6	8.8	0	0
3	0	.05	.07	4.3	2.0	2.9	1.1	.44	2.3	3.1	0	0
4	0	.06	.05	2.6	2.1	2.8	.95	.34	.57	1.3	0	0
5	0	.10	.04	1.2	1.6	3.4	.99	.21	.14	.35	0	0
6	0	.10	.03	.80	1.4	2.2	1.2	.14	0	.21	0	0
7	0	.14	.05	.80	1.0	1.9	1.2	.07	4.9	.20	0	0
8	0	.14	.06	1.1	.90	2.1	1.2	.14	200	.22	1.7	0
9	0	.07	.08	1.7	1.0	2.1	.99	.14	177	.18	1.2	0
10	0	.14	.15	2.0	1.9	2.0	1.1	.91	40	.12	.27	0
11	0	.08	.10	2.1	2.4	2.0	1.2	.28	70	.11	.17	0
12	.01	.11	.11	1.7	2.1	2.2	1.2	.07	20	.06	.08	0
13	.01	.18	.23	2.1	1.7	2.3	.98	.07	5.9	.04	.22	0
14	.01	.17	.25	2.1	2.0	2.0	.90	.07	4.0	.03	.36	0
15	.01	.11	.49	1.5	2.0	1.6	1.3	.07	2.8	.03	15	0
16	.01	.14	.71	1.8	2.1	1.6	1.4	.02	1.9	.02	.71	0
17	.15	.12	.48	2.0	2.0	1.6	1.8	0	1.2	.02	.47	.04
18	.09	.06	.46	1.9	3.0	1.5	1.7	0	.63	.01	.42	3.7
19	.07	.06	.42	1.4	3.3	1.2	1.6	.01	.40	0	.32	1.0
20	.05	.04	.43	1.6	2.2	1.2	1.8	.01	1.3	0	.24	.15
21	.03	.04	.61	1.9	2.0	1.5	1.2	.01	2.3	0	.15	.05
22	.05	.07	.60	1.6	2.0	1.4	.73	.07	2.1	.01	.04	.03
23	.05	.02	.45	1.5	4.0	1.4	.85	.01	.67	.35	.06	.03
24	.06	.02	.33	1.7	7.0	1.5	.93	0	.49	.22	.09	28
25	.02	.04	.40	1.8	13	1.7	.95	0	.42	.12	.04	43
26	.01	.05	.36	1.7	9.9	1.6	.65	0	.35	.02	.01	12
27	.01	.04	.50	1.6	4.6	1.8	.50	.21	.28	0	0	3.4
28	.02	.04	.53	1.8	3.4	2.1	.55	0	.24	.29	.11	1.6
29	.02	.04	.56	2.0	------	1.5	.49	0	.28	.16	16	1.0
30	.05	.11	.65	2.1	------	1.4	.78	.35	.56	.09	2.5	.40
31	.07	------	.50	1.7	------	1.2	------	38	------	.02	.30	------
TOTAL	.80	2.43	9.77	53.58	83.70	59.8	32.26	42.90	663.33	73.08	40.46	94.50
MEAN	.026	.081	.32	1.73	2.99	1.93	1.08	1.38	22.1	2.36	1.31	3.15
MAX	.15	.18	.71	4.3	13	3.4	1.8	38	200	57	16	43
MIN	0	.02	.03	.59	.90	1.2	.49	0	0	0	0	0
AC-FT	1.6	4.8	19	106	166	119	64	85	1,320	145	80	187

CAL YR 1970 TOTAL 1,129.88 MEAN 3.10 MAX 124 MIN 0 AC-FT 2,240
WTR YR 1971 TOTAL 1,156.61 MEAN 3.17 MAX 200 MIN 0 AC-FT 2,290

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
6-1	0100	10.16	409	6-9	0915	9.67	357
6-8	0345	9.49	339				

07325860 Willow Creek near Albert, Okla.

LOCATION.--Lat 34°14'00", long 98°27'57", in NE 1/4 NW 1/4 sec.28, T.9 N., R.12 W., Caddo County, at County road bridge 3.1 miles west of Albert, 5.2 miles above Fort Cobb Dam, and at mile 2.4.

DRAINAGE AREA.--28.0 sq mi.

PERIOD OF RECORD.--Current year.

GAGE.--Water-stage recorder. Datum of gage is 1,340.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 230 cfs June 1 (gage height, 5.63 ft) from rating curve extended above 10 cfs on basis of computed flow over weir at peak stage; no flow part of several days.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.67	.84	1.1	1.2	1.8	1.5	1.2	25	1.6	.02	.23
2	.34	.71	.84	1.2	1.3	1.7	1.5	1.1	2.0	.55	.02	.17
3	.34	.72	.84	3.8	1.5	1.5	1.5	1.1	2.3	.50	.01	.14
4	.34	.79	.84	1.2	1.5	1.7	1.5	1.1	1.2	.34	.01	.15
5	.38	.84	.90	1.0	1.4	1.7	1.6	1.0	.97	.26	.01	.22
6	.42	.84	.91	1.1	1.4	1.6	1.6	.66	.84	.18	.42	.18
7	.30	.85	1.2	1.1	1.4	1.5	1.3	.55	.90	.13	.15	.15
8	.46	.92	1.1	1.2	1.3	1.5	1.4	.50	9.8	.11	1.7	.11
9	.46	.87	.97	1.3	1.4	1.5	1.3	.72	5.8	.09	.66	.09
10	.42	1.0	.97	1.3	1.4	1.5	1.4	.66	1.3	.07	.18	.11
11	.38	1.2	.94	1.3	1.5	1.5	1.4	.50	10	.05	.13	.07
12	.46	1.4	.84	1.4	1.5	1.7	1.4	.46	1.5	.03	.09	.07
13	.46	1.6	.90	1.3	1.4	1.7	.90	.50	2.6	.02	.13	.03
14	.42	.87	.90	1.4	1.5	1.5	.90	.46	1.1	.01	10	.03
15	.42	.78	1.1	1.3	1.5	1.5	.97	.42	.90	.01	21	.02
16	.42	.72	1.2	1.3	1.5	1.5	.90	.42	.84	.01	.97	.04
17	.60	.60	1.1	1.3	1.5	1.5	.97	.38	.72	.01	.60	.46
18	.60	.60	1.0	1.3	1.7	1.4	.97	.46	.60	.01	.50	3.2
19	.55	.60	1.0	1.3	1.8	1.3	1.8	1.3	.55	.01	.42	.66
20	.53	.66	1.0	1.3	1.8	1.6	4.7	.72	.60	.05	.34	.46
21	.50	.66	1.1	1.3	1.7	2.3	1.6	.66	.66	.05	.30	.38
22	.50	.57	1.1	1.3	1.7	2.5	1.5	.60	.66	.05	.26	.34
23	.46	.52	1.1	1.3	2.8	2.4	1.4	.66	.60	1.4	.18	.34
24	.46	.50	.90	1.3	3.0	2.5	1.4	.60	.50	.38	.34	23
25	.47	.72	.97	1.4	2.9	2.0	1.4	.55	.42	.18	.30	4.1
26	.47	.78	1.0	1.3	2.2	1.6	1.2	.55	.38	.09	.22	1.1
27	.58	.84	1.0	1.3	1.6	1.6	1.2	1.6	.34	.07	.18	.84
28	.66	.84	1.1	1.3	1.6	1.6	1.2	.72	.30	.15	.11	.78
29	.87	.84	1.1	1.3	------	1.6	1.2	.72	.27	.09	6.1	.66
30	.90	.84	1.1	1.4	------	1.6	1.2	1.0	.24	.10	.67	.60
31	.98	------	1.1	1.4	------	1.5	------	13	------	.05	.32	------
TOTAL	15.45	24.35	30.96	42.1	47.0	52.4	42.81	34.87	73.89	6.65	46.34	38.73
MEAN	.50	.81	1.00	1.36	1.68	1.69	1.43	1.12	2.46	.21	1.49	1.29
MAX	.98	1.6	1.2	3.8	3.0	2.5	4.7	13	25	1.6	21	23
MIN	.30	.50	.84	1.0	1.2	1.3	.90	.38	.24	.01	.01	.02
AC-FT	31	48	61	84	93	104	85	69	147	13	92	77

WTR YR 1971 TOTAL 455.55 MEAN 1.25 MAX 25 MIN .01 AC-FT 904

07325900 Fort Cobb Reservoir near Fort Cobb, Okla.

LOCATION.--Lat 35°09'30", long 98°27'40", in SE 1/4 sec.21, T.8 N., R.12 W., Caddo County, in control house at right center of dam on Cobb Creek, 4 miles northwest of Fort Cobb, and at mile 7.5.

DRAINAGE AREA.--304 sq mi.

PERIOD OF RECORD.--March 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to October 1961, nonrecording gage at same datum.

EXTREMES.--Current year: Maximum contents, 67,710 acre-ft Oct. 1 (elevation, 1,338.84 ft); minimum, 60,500 acre-ft May 30 (elevation, 1,336.82 ft).
Period of record: Maximum contents, 102,600 acre-ft Sept. 26, 1965 (elevation, 1,347.10 ft); minimum since conservation pool was first filled, 60,500 acre-ft May 30, 1971 (elevation, 1,336.82 ft).

REMARKS.--Reservoir is formed by an earth dam. Storage began Mar. 30, 1959. Conservation pool was first filled in June 1962. Capacity, 143,700 acre-ft at elevation 1,354.8 ft (crest of drop inlet), 80,010 acre-ft at elevation 1,342.0 ft (conservation pool), and 1,664 acre-ft at elevation 1,300.0 ft (crest of gated outlet). Figures given herein represent total contents. Reservoir is used for flood control, for municipal and industrial water supply, and for irrigation releases. Revised capacity table used since May 1, 1964.

COOPERATION.--Elevations and data on diversions furnished by Fort Cobb Reservoir Master Conservancy District.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,338.84	67,710	--	--
Oct. 31	1,338.51	66,500	-1,210	604
Nov. 30	1,338.12	65,080	-1,420	789
Dec. 31	1,337.98	64,580	-500	673
CAL YR 70	--	--	-8,350	8,851
Jan. 31	1,338.00	64,650	+70	573
Feb. 28	1,338.17	65,260	+610	379
Mar. 31	1,337.95	64,470	-790	670
Apr. 30	1,337.44	62,660	-1,810	850
May 31	1,337.18	61,750	-910	1,030
June 30	1,338.14	65,150	+3,400	388
July 31	1,337.22	61,890	-3,260	987
Aug. 31	1,337.34	62,310	+420	752
Sept. 30	1,337.42	62,590	+280	601
WTR YR 71	--	--	-5,120	8,296

07326000 Cobb Creek near Fort Cobb, Okla.

LOCATION.--Lat 35°08'37", long 98°26'33", in NE 1/4 NE 1/4 sec.27, T.8 N., R.12 W., Caddo County, on left bank 10 ft upstream from county road bridge, 0.3 mile upstream from Punjo Creek, 1.2 miles downstream from Fort Cobb Dam, 3.0 miles north of Fort Cobb, and at mile 5.8.

DRAINAGE AREA.--313 sq mi. Area at site used prior to Oct. 1, 1969, 319 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1960, published as Pond Creek near Fort Cobb.

GAGE.--Water-stage recorder. Datum of gage is 1,259.49 ft above mean sea level (Bureau of Reclamation bench mark). Oct. 1, 1939, to Aug. 29, 1940, nonrecording gage and Aug. 30, 1940, to Sept. 30, 1969, water-stage recorder at site 0.8 mile downstream at datum 6.92 ft lower.

AVERAGE DISCHARGE.--19 years (1939-58), 50.2 cfs (36,340 acre-ft per year); 13 years (1958-71), 16.2 cfs (11,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 125 cfs Sept. 7 (gage height, 5.12 ft); minimum daily, 1.2 cfs Aug. 25-28.

Period of record: Maximum discharge, 35,000 cfs May 17, 1949 (gage height, 18.72 ft, from floodmark in gage well at former site and datum, from rating curve extended above 4,300 cfs on basis of contracted-opening measurements at gage heights 16.62, 17.58, and 18.72 ft (at former site and datum); minimum daily, 0.2 cfs Sept. 20, 24-28, 1956.

Flood of June 15, 1937, reached a stage of 19.3 ft (site and datum used in 1939), from information by local resident.

REMARKS.--Records good. Flow regulated since March 1959 by Fort Cobb Reservoir (see sta. 07325900).

REVISION (WATER YEARS).--WSP 1087: 1938. WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.1	2.2	2.1	2.3	2.3	2.3	2.3	4.0	3.2	1.5	1.3
2	2.6	2.1	2.1	2.1	2.3	2.3	2.3	2.1	2.4	2.1	1.5	1.3
3	2.6	2.1	2.1	2.8	2.3	2.3	2.3	2.1	2.4	2.1	1.5	1.3
4	2.6	2.1	2.1	2.5	2.3	2.3	2.3	2.1	2.1	2.1	1.5	1.4
5	2.9	2.1	2.1	2.0	2.3	2.3	2.3	2.1	2.1	2.0	2.7	1.7
6	3.0	2.1	2.1	1.5	2.3	2.3	2.3	2.2	2.1	2.0	1.8	1.4
7	3.0	2.1	2.1	1.5	2.4	2.3	2.3	2.3	2.0	2.9	1.5	15
8	3.2	2.1	2.1	1.6	2.3	2.3	2.3	2.1	2.0	2.7	2.6	2.3
9	2.7	4.9	2.1	1.7	2.3	2.3	2.3	2.9	2.3	2.1	1.8	1.8
10	2.6	2.0	2.2	1.7	2.3	2.4	2.3	2.6	2.1	2.1	1.7	1.8
11	2.6	1.8	2.1	1.8	2.3	2.1	2.3	2.3	2.9	2.1	1.7	1.7
12	2.6	1.8	2.0	1.8	2.3	2.1	2.2	2.3	2.0	1.8	2.0	1.8
13	2.6	1.9	2.0	3.1	2.3	2.1	2.1	2.0	2.0	2.1	2.0	1.9
14	2.6	2.0	2.0	2.6	2.3	2.1	1.8	2.0	2.0	2.0	2.1	2.1
15	2.6	2.0	2.0	2.3	2.3	2.1	2.1	2.0	2.0	2.1	2.1	2.0
16	2.6	2.3	2.1	2.1	2.3	2.1	2.4	1.9	2.0	2.1	2.0	2.1
17	2.9	2.7	2.1	2.1	2.3	2.3	2.4	1.7	2.0	1.8	2.0	3.4
18	2.9	2.0	2.1	2.1	2.3	2.3	2.4	1.6	2.0	1.8	2.0	3.4
19	2.9	2.0	2.1	2.1	2.3	2.3	2.5	9.6	2.0	5.0	3.4	2.4
20	2.9	2.0	2.0	2.1	2.3	2.3	2.5	4.8	2.0	12	1.5	2.4
21	2.3	2.1	2.0	2.2	2.7	2.3	2.2	1.8	2.4	3.2	1.5	2.3
22	2.3	2.1	2.0	2.3	2.1	2.3	2.3	1.8	2.4	28	1.5	2.3
23	2.3	2.1	2.0	2.3	2.2	2.3	2.3	2.0	2.1	67	1.4	2.3
24	2.3	2.1	2.0	2.3	2.3	2.3	2.3	14	1.5	50	1.4	3.8
25	2.4	2.3	2.0	2.3	2.3	2.3	2.3	4.2	1.5	25	1.2	3.1
26	2.6	2.2	2.0	2.0	2.4	2.3	2.2	1.8	1.5	25	1.2	1.9
27	2.6	2.1	2.0	2.1	2.4	2.3	2.1	3.2	1.8	25	1.2	1.8
28	4.4	2.0	2.0	2.1	2.3	2.3	2.1	2.6	1.5	18	1.2	1.8
29	2.1	1.8	2.0	2.3	------	2.3	2.1	2.6	1.5	2.0	1.7	1.8
30	2.1	1.9	2.0	2.3	------	2.3	2.3	2.9	2.4	1.7	1.3	1.9
31	2.1	------	2.1	2.3	------	2.3	------	6.6	------	1.5	1.3	------
TOTAL	82.5	64.9	63.8	66.1	64.8	70.2	67.9	96.5	63.0	302.5	53.8	75.5
MEAN	2.66	2.16	2.06	2.13	2.31	2.26	2.26	3.11	2.10	9.76	1.74	2.52
MAX	4.4	4.9	2.2	3.1	2.7	2.4	2.5	14	4.0	67	3.4	15
MIN	2.1	1.8	2.0	1.5	2.1	2.1	1.8	1.6	1.5	1.5	1.2	1.3
AC-FT	164	129	127	131	129	139	135	191	125	600	107	150

CAL YR 1970 TOTAL 2,483.4 MEAN 6.80 MAX 113 MIN 1.8 AC-FT 4,930
WTR YR 1971 TOTAL 1,071.5 MEAN 2.94 MAX 67 MIN 1.2 AC-FT 2,130

07326500 Washita River at Anadarko, Okla.

LOCATION.--Lat 35°05'06", long 98°14'35", in NW 1/4 sec.15, T.7 N., R.10 W, Caddo County, at left bank 35 ft upstream from bridge on U. S. Highway 281 at north edge of Anadarko, 8.1 miles upstream from Sugar Creek, and about mile 305.2.

DRAINAGE AREA.--3,656 sq mi.

PERIOD OF RECORD.--October 1902 to September 1908; June 1924 to June 1925, published as "near Anadarko", October 1935 to February 1938; October 1963 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,150.00 ft above mean sea level. Oct. 26, 1902, to June 30, 1908, nonrecording gage at former bridge 125 ft downstream at datum estimated to be 2.8 ft higher. May 25, 1924, to June 30, 1925, nonrecording gage at county road bridge 14 miles downstream at different datum. Jan. 10, 1936, to Mar. 7, 1938, nonrecording gage on upstream side of bridge on U. S. Highway 281 at datum 1.88 ft higher.

AVERAGE DISCHARGE.--16 years (1902-8, 1935-37, 1963-71), 409 cfs (296,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,590 cfs Sept. 26 (gage height, 11.17 ft); minimum daily, 4.1 cfs July 24.
Period of record: Maximum discharge, about 29,000 cfs May 25, 1903 (gage height, 26.8 ft, site and datum then in use, affected by backwater); no flow Aug. 1, 1964.
Flood in May 1949, reached an elevation of 1,176.7 ft, from floodmark, at right bank on downstream side of bridge on U. S. Highway 281.

REMARKS.--Some regulation by low-water dams upstream and since March 1959, by Fort Cobb Reservoir (see sta. 07325900), since February 1961, by Foss Reservoir (see sta. 07324300), and by numerous flood-retarding structures. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records of discharge furnished by Agricultural Research Service.

REVISIONS (WATER YEARS).--WSP 1311: 1903, 1907-8, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	32	43	36	55	72	35	12	298	13	72	101
2	44	32	44	36	55	81	30	11	240	206	61	61
3	30	30	46	50	52	77	25	11	52	1,200	46	44
4	36	32	46	50	55	68	25	11	33	597	39	33
5	29	35	43	50	52	59	26	11	25	716	27	30
6	26	32	43	44	53	55	26	11	55	204	21	39
7	19	32	43	44	53	53	24	9.8	39	104	16	265
8	17	35	43	43	46	50	20	9.8	21	74	20	308
9	16	35	39	43	44	52	18	11	24	57	22	152
10	17	38	35	46	53	50	16	11	50	43	22	115
11	20	38	39	63	53	50	14	11	249	38	15	112
12	27	41	39	61	50	50	15	9.8	359	26	16	99
13	26	39	41	53	55	53	14	9.2	349	21	16	94
14	29	43	41	59	55	55	14	8.5	395	18	163	70
15	27	39	41	61	59	53	14	9.8	278	13	136	48
16	30	39	43	59	55	52	13	9.8	124	12	91	38
17	35	39	43	55	55	50	12	9.8	81	9.2	73	39
18	36	35	36	57	57	50	11	9.8	61	7.3	145	55
19	36	36	39	59	57	50	11	9.2	41	5.6	59	310
20	36	39	43	57	55	44	11	8.5	38	5.1	48	1,050
21	35	43	44	53	61	44	11	7.3	27	4.6	38	836
22	36	39	46	57	63	41	11	6.7	22	5.1	36	313
23	38	39	41	55	61	41	11	6.7	20	5.1	25	194
24	39	39	43	53	66	41	11	6.2	33	4.1	24	148
25	35	35	41	53	53	41	11	6.2	32	76	26	436
26	35	36	43	48	57	39	15	6.2	19	86	27	1,480
27	35	39	43	52	57	41	16	6.2	16	77	25	1,340
28	35	36	43	53	63	43	13	6.7	12	79	18	617
29	33	39	36	53	------	41	13	6.7	11	122	18	355
30	33	43	41	55	------	39	14	6.7	11	86	41	241
31	33	------	39	55	------	33	------	27	------	84	227	------
TOTAL	971	1,109	1,290	1,613	1,550	1,568	500	296.6	3,015	3,998.1	1,613	9,023
MEAN	31.3	37.0	41.6	52.0	55.4	50.6	16.7	9.57	101	129	52.0	301
MAX	48	43	46	63	66	81	35	27	395	1,200	227	1,480
MIN	16	30	35	36	44	33	11	6.2	11	4.1	15	30
AC-FT	1,930	2,200	2,560	3,200	3,070	3,110	992	588	5,980	7,930	3,200	17,900

CAL YR 1970 TOTAL 6,411.8 MEAN 17.6 MAX 1,320 MIN 2.7 AC-FT 12,720
WTR YR 1971 TOTAL 26,546.7 MEAN 72.7 MAX 1,480 MIN 4.1 AC-FT 52,660

PEAK DISCHARGE (BASE, 3,000 CFS).--No peak above base.

07327000 Sugar Creek near Gracemont, Okla.

LOCATION.--Lat 35°10'30", long 98°15'20", in NW 1/4 NE 1/4 sec.16, T.8 N., R.10 W., Caddo County, on downstream side of county road bridge, 1.0 mile south of Gracemont, 2.1 miles downstream from Yellow Creek, 1.1 miles upstream from bridge on U. S. Highway 281, and at mile 9.9.

DRAINAGE AREA.--208 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,190.00 ft above mean sea level. Prior to Oct. 1, 1959, at site 1.1 miles downstream at datum 3.72 ft higher. Oct. 1, 1959, to Dec. 31, 1966, at datum 20 ft higher and Jan. 1, 1967, to Mar. 31, 1968, at datum 10 ft higher, at site 1.1 miles upstream.

AVERAGE DISCHARGE.--16 years, 14.9 cfs (10,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 534 cfs May 31 (gage height 7.31 ft); minimum, no flow at times.
Period of record: Maximum discharge, 8,500 cfs Sept. 21, 1965 (gage height, 10.77 ft, datum then in use); no flow at times in most year.
Flood of May 17, 1949, reached a stage of 10.8 ft (at former site and datum), from floodmarks (discharge, 32,000 cfs, on basis of slope-area measurement of peak flow).

REMARKS.--Some regulation by flood-retarding strucutres and some small diversions for irrigation above station.

COOPERATION.--Records furnished by Agricultural Research Service.

REVISIONS (WATER YEARS).--WSP 1731: 1960(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.30	1.2	2.7	2.9	4.7	0	.10	43	21	0	.30
2	.10	2.9	1.3	2.7	3.2	5.1	.10	0	14	15	0	.10
3	.10	.80	1.5	9.6	3.5	4.7	.10	0	66	14	0	.20
4	.10	.20	2.5	2.9	3.5	5.1	.10	1.7	46	5.4	0	.10
5	2.3	.40	7.1	2.7	4.4	4.7	.40	.20	27	.90	0	.10
6	1.2	.40	4.1	2.7	3.5	4.4	.10	.10	16	0	0	.10
7	.20	.20	4.1	2.7	3.2	4.1	.10	0	9.5	.10	0	.10
8	.60	.20	1.6	2.7	2.9	2.9	0	0	61	0	1.7	.10
9	.50	.10	2.2	3.5	3.2	1.8	.30	3.0	139	0	.10	.10
10	.50	.10	12	4.1	3.5	1.8	1.2	1.0	72	0	0	.10
11	.40	3.8	24	4.4	4.7	.90	.10	.30	90	0	0	0
12	.50	1.0	23	2.7	2.9	.50	0	.10	35	0	0	0
13	.10	1.3	22	3.8	2.7	.70	.60	0	22	0	1.2	0
14	.20	1.3	21	4.4	3.5	.80	0	.10	17	0	43	0
15	7.3	1.2	8.0	4.1	4.1	1.2	2.2	.10	13	0	85	0
16	11	1.0	3.8	4.7	3.5	.70	.70	0	9.0	0	5.1	0
17	12	1.2	2.7	4.4	3.2	.90	1.0	0	5.8	0	2.4	1.3
18	8.5	1.0	2.7	3.5	4.4	3.2	1.8	0	3.2	0	1.6	5.8
19	7.1	1.0	2.2	2.7	4.4	2.0	1.8	0	2.0	0	1.0	2.2
20	1.8	1.6	2.2	4.1	2.0	1.6	16	0	1.6	0	.50	2.0
21	.70	1.6	2.0	4.1	8.1	.70	9.0	0	6.6	0	.20	2.7
22	.80	1.2	1.8	3.5	9.0	.90	6.2	0	2.4	0	.10	2.2
23	.80	1.0	1.5	3.5	11	.90	3.8	1.0	.10	2.1	.10	1.6
24	1.2	1.3	1.2	2.7	10	.80	1.8	0	.10	.20	.10	27
25	.90	1.8	.60	2.9	13	.30	1.3	0	0	.10	.10	43
26	.90	1.6	.60	3.2	9.0	.10	1.0	.20	0	.10	.10	17
27	.80	1.8	.80	2.4	5.5	.40	.40	1.0	0	.10	.10	8.0
28	.70	1.6	1.8	2.4	4.4	1.0	.30	.20	0	2.1	.10	5.1
29	.80	1.8	.90	1.8	------	.20	.20	.10	0	.10	21	3.5
30	.30	1.6	5.5	2.0	------	.30	.40	.50	0	0	7.3	2.9
31	.10	------	2.9	2.7	------	.20	------	42	------	0	1.1	------
TOTAL	62.60	35.30	168.80	106.3	139.2	57.60	51.00	51.70	701.30	61.20	171.90	125.60
MEAN	2.02	1.18	5.45	3.43	4.97	1.86	1.70	1.67	23.4	1.97	5.55	4.19
MAX	12	3.8	24	9.6	13	5.1	16	42	139	21	85	43
MIN	.10	.10	.60	1.8	2.0	.10	0	0	0	0	0	0
AC-FT	124	70	335	211	276	114	101	103	1,390	121	341	249

CAL YR 1970 TOTAL 4,017.50 MEAN 11.0 MAX 826 MIN 0 AC-FT 7,970
WTR YR 1971 TOTAL 1,732.50 MEAN 4.75 MAX 139 MIN 0 AC-FT 3,440

PEAK DISCHARGE (BASE, 900 CFS).--No peak above base.

07327490 Little Washita River near Ninnekah, Okla.

LOCATION.--Lat 34°56'41", long 97°57'08" (corrected), in SE 1/4 SE 1/4 sec.32, T.6 N., R.7 W., Grady County, at left bank on downstream side of bridge on U. S. Highway 81, 1.0 mile upstream from Rock Creek, 1.5 miles west of Ninnekah, 5.5 miles south of Chickasha, and at mile 8.4.

DRAINAGE AREA.--208 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,065.94 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 17.0 cfs (12,320 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,680 cfs June 1 (gage height, 14.94 ft); no flow at times.
Period of record: Maximum discharge, 7,560 cfs (revised) May 10, 1964 (gage height, 20.65 ft); no flow at times in most years.
Revisions.--The maximum discharge for the water year 1964 has been revised to 7,560 cfs May 10, 1964 (gage height, 20.65 ft), superseding figures published in WSP 1920.

REMARKS.--Small diversions above station for irrigation. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records of discharge furnished by Agricultural Research Service.

REVISIONS.--The figures of peak discharges for water year 1964, 65 have been revised as shown in following table. They supersede figures published in WSP 1920.

Water year	Date	Time	G.Ht..	Discharge
1964	5-10-64	0315	20.65	7,560
1965	11-17-64	0430	12.99	1,930

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	4.9	6.0	7.6	8.0	9.3	6.0	2.3	531	.70	1.6	3.3
2	2.8	4.6	6.8	7.2	7.2	8.9	5.6	4.9	35	.70	1.0	3.1
3	2.5	4.6	6.8	12	7.6	6.4	6.0	5.3	18	.40	.50	2.3
4	2.0	4.6	6.8	9.8	8.9	14	6.4	3.1	13	.10	.20	1.6
5	2.3	4.3	7.6	7.6	8.9	13	7.2	2.8	9.3	0	0	1.2
6	8.0	4.9	6.4	7.6	7.2	11	6.8	2.0	5.6	0	.10	1.0
7	2.8	4.9	6.0	7.6	6.0	9.8	6.4	1.6	4.3	0	.20	.50
8	2.5	5.3	5.6	7.6	5.3	9.3	4.9	1.6	3.1	0	14	.40
9	3.4	5.3	5.6	7.6	6.0	9.8	3.9	4.1	11	0	22	.50
10	3.9	4.9	6.0	14	16	10	3.9	22	11	0	3.3	.50
11	2.8	4.6	6.4	18	13	8.9	3.6	9.3	5.6	0	1.2	.50
12	3.1	4.6	6.4	11	9.8	8.9	3.6	4.9	35	0	.20	.4
13	3.3	5.6	6.0	10	8.0	8.9	3.9	3.9	14	0	2.0	.1
14	3.6	8.4	6.4	9.8	7.6	7.6	3.6	3.6	5.6	0	338	.1
15	3.6	6.8	6.4	8.4	7.6	7.2	3.3	2.5	3.1	0	75	.1
16	3.3	4.9	7.2	7.6	7.2	7.6	4.6	1.6	2.0	0	24	.1
17	4.3	4.6	7.2	7.6	7.2	6.8	7.2	.80	1.4	0	12	.5
18	5.6	4.6	6.8	7.6	12	5.6	6.0	1.0	1.2	0	8.0	172
19	4.6	3.9	6.4	7.2	18	5.6	6.0	1.2	.70	0	6.0	26
20	4.6	3.3	7.2	7.2	12	5.6	7.2	.80	.80	0	5.3	9.3
21	4.3	3.6	13	7.6	47	5.3	6.4	.40	21	0	5.3	5.6
22	5.5	4.3	8.9	7.2	37	5.6	4.6	.30	15	0	4.3	5.3
23	11	3.6	6.3	7.2	19	6.8	3.6	4.9	6.8	0	3.3	4.9
24	7.6	3.6	6.0	6.8	15	6.0	2.8	3.1	3.6	12	3.1	138
25	6.0	4.6	5.6	6.4	13	6.4	2.0	5.9	2.3	4.9	3.6	165
26	4.9	4.6	5.6	6.4	11	6.4	3.9	1.6	1.6	1.0	4.9	19
27	4.6	4.6	6.8	6.4	9.3	6.4	2.0	7.1	1.0	.40	2.8	11
28	5.3	4.6	7.2	6.8	8.9	6.8	1.0	.40	.80	8.5	2.5	7.2
29	4.9	4.6	7.6	8.9	------	6.8	1.2	.10	.80	16	4.6	6.0
30	5.6	5.6	7.6	9.3	------	6.8	3.3	.10	.70	5.6	6.0	5.3
31	5.3	------	7.6	8.9	------	6.8	------	100	------	2.8	3.6	------
TOTAL	141.8	143.3	212.7	264.9	343.7	244.3	136.9	203.20	764.30	53.10	558.60	590.80
MEAN	4.57	4.78	6.86	8.55	12.3	7.88	4.56	6.55	25.5	1.71	18.0	19.7
MAX	11	8.4	13	18	47	14	7.2	100	531	16	338	172
MIN	2.0	3.3	5.6	6.4	5.3	5.3	1.0	.10	.70	0	0	.10
AC-FT	281	284	422	525	682	485	272	403	1,520	105	1,110	1,170

CAL YR 1970 TOTAL 3,892.30 MEAN 10.7 MAX 350 MIN 0 AC-FT 7,720
WTR YR 1971 TOTAL 3,657.60 MEAN 10.0 MAX 531 MIN 0 AC-FT 7,250

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE
6-1	0415	14.94	1,680

07328070 Winter Creek near Alex, Okla.

LOCATION.--Lat 34°59'35", long 97°45'40", in NE 1/4 sec.18, T.6 N., R.5 W., Grady County, at left bank 1,000 ft downstream from county road bridge, 0.7 mile downstream from East Winter Creek, 3.2 miles upstream from mouth, and 5.5 miles north of Alex.

DRAINAGE AREA.--33 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and broad crest V-notch weir. Datum of gage is 1,048.20 ft above mean sea level.

AVERAGE DISCHARGE.--7 years, 5.92 cfs (4,290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 729 cfs Oct. 8 (gage height, 5.08 ft); no flow July 18.
Period of record: Maximum discharge, 2,420 cfs Sept. 22, 1970 (gage height, 6.81 ft); maximum gage height, 7.28 ft Nov. 17, 1964; no flow at times in most year.
Flood of May 10, 1964, reached a stage of 8.62 ft.

REMARKS.--Flow regulated by 16 flood-retarding structures (combined capacity, 1,050 acre-ft). Minor diversions for irrigation above station.

COOPERATION.--Records furnished by Agricultural Research Service.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	5.8	3.8	3.2	5.6	5.4	2.5	1.2	6.6	3.4	.60	.50
2	12	5.4	3.8	3.6	4.9	5.1	2.0	1.6	6.3	32	.40	.50
3	10	5.1	3.6	14	4.7	5.1	1.9	1.5	132	6.8	.40	.50
4	7.6	4.7	3.2	2.2	4.7	4.9	1.9	1.0	39	3.9	.30	.30
5	27	4.5	3.2	2.2	4.5	4.7	2.0	.80	26	2.0	.40	.20
6	20	4.5	3.1	2.2	4.3	4.7	1.2	.80	17	1.2	3.5	5.8
7	21	4.7	2.9	2.2	3.2	3.8	1.5	.90	12	1.1	1.6	1.4
8	144	4.7	3.1	2.2	2.9	3.6	1.6	1.1	10	1.1	3.2	.80
9	47	4.1	3.2	2.2	3.2	3.6	1.2	4.7	8.2	1.3	2.5	.70
10	38	3.9	3.4	2.2	4.5	3.1	1.1	3.4	6.1	.70	1.2	.70
11	29	3.9	3.8	2.2	4.1	2.9	1.2	2.6	5.8	.50	1.0	.40
12	19	3.6	2.8	2.2	4.1	3.1	1.4	2.2	24	.20	1.1	.10
13	17	7.3	2.9	2.2	3.6	3.1	1.7	1.9	14	.20	3.1	.10
14	13	7.9	2.9	2.2	3.6	2.5	2.0	1.6	7.6	.30	31	.10
15	11	5.4	4.1	2.2	3.4	2.4	1.9	1.6	4.3	.20	14	.20
16	8.4	4.7	4.5	3.6	3.4	2.2	1.6	1.2	3.1	.10	6.3	.10
17	8.4	4.9	3.8	3.6	3.4	2.2	2.4	1.1	2.5	.10	4.5	.70
18	7.1	4.3	3.4	3.9	4.3	2.0	1.9	1.2	1.9	0	2.9	36
19	7.1	4.3	3.6	3.8	5.1	2.4	1.9	.80	1.5	.10	2.1	7.6
20	6.5	4.5	3.4	3.6	4.3	2.2	2.9	.70	9.7	.20	1.5	3.9
21	6.3	3.9	3.8	3.6	26	2.2	2.4	.70	15	.30	.90	2.5
22	19	3.8	3.8	3.6	15	2.2	2.4	.70	4.7	.20	.50	2.0
23	35	2.8	3.8	3.6	12	2.2	2.6	6.7	3.1	4.3	.50	2.1
24	21	2.8	3.4	3.6	9.4	2.5	2.2	1.3	2.2	.80	.50	53
25	14	2.6	3.2	3.8	8.2	3.1	2.4	.70	1.6	.40	.50	44
26	12	2.8	3.2	3.6	7.1	2.8	1.9	.90	1.2	.30	.40	29
27	9.0	2.9	3.4	4.5	6.1	2.9	1.5	3.4	.80	.40	.40	21
28	7.6	3.1	3.4	12	5.6	3.4	1.2	1.5	1.1	4.9	.30	14
29	6.5	3.8	3.4	10	------	2.9	2.5	1.2	1.1	1.2	.30	9.7
30	6.1	3.9	3.6	8.2	------	2.6	2.0	2.0	1.1	.80	.40	6.8
31	5.6	------	3.6	6.5	------	2.1	------	5.3	------	.80	.60	------
TOTAL	609.2	130.6	107.1	128.7	171.2	97.9	56.9	56.30	369.50	69.80	86.90	244.70
MEAN	19.7	4.35	3.45	4.15	6.11	3.16	1.90	1.82	12.3	2.25	2.80	8.16
MAX	144	7.9	4.5	14	26	5.4	2.9	6.7	132	32	31	53
MIN	5.6	2.6	2.8	2.2	2.9	2.0	1.1	.70	.80	0	.30	.10
AC-FT	1,210	259	212	255	340	194	113	112	733	138	172	485

CAL YR 1970 TOTAL 2,692.00 MEAN 7.38 MAX 518 MIN 0 AC-FT 5,340
WTR YR 1971 TOTAL 2,128.80 MEAN 5.83 MAX 144 MIN 0 AC-FT 4,220

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	0730	5.08	729	6-3	0500	4.73	538

07328100 Washita River at Alex, Okla.

LOCATION.--Lat 34°55'35", long 97°46'30", in NW 1/4 sec.7, T.5 N., R.5 W., Grady County, near left bank on downstream side of county road bridge, 1.0 mile north of Alex, 3.8 miles downstream from Winter Creek, and at mile 226.5.

DRAINAGE AREA.--4,787 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above mean sea level.

AVERAGE DISCHARGE.--7 years, 294 cfs (213,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,100 cfs June 3 (gage height, 10.27 ft); minimum daily, 1.6 cfs July 21.
Period of record: Maximum discharge, 9,350 cfs May 7, 1969 (gage height, 17.83 ft); no flow Aug. 13-18, 1970.

REMARKS.--Some regulation by Fort Cobb Reservoir (sta. 07325900), by Foss Reservoir (sta. 07324300), and by numerous flood-retarding structures. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Records of discharge furnished by Agricultural Research Service.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	44	58	64	71	92	38	25	1,230	34	98	24
2	84	45	57	64	69	90	34	17	728	34	63	150
3	70	48	59	102	71	91	34	16	1,940	45	69	113
4	63	48	57	87	75	108	29	22	1,270	473	53	85
5	111	47	57	65	76	112	29	17	399	618	45	52
6	224	48	58	60	71	104	29	14	204	674	45	43
7	220	45	57	59	70	95	26	12	117	389	33	36
8	314	47	61	60	54	89	23	11	1,250	189	30	25
9	216	46	63	61	52	89	22	16	599	126	98	147
10	162	45	65	62	52	85	22	27	282	92	78	229
11	89	44	63	70	83	80	22	29	213	71	45	140
12	68	45	62	117	92	78	21	20	523	59	36	104
13	61	56	62	113	82	78	18	16	489	38	37	94
14	50	74	71	96	79	76	19	12	399	26	389	85
15	47	71	78	91	71	75	17	10	393	19	392	69
16	45	63	84	83	74	76	15	6.7	393	10	295	63
17	48	60	79	83	74	71	20	4.8	265	3.6	206	47
18	51	59	74	83	77	66	22	4.8	156	1.7	129	563
19	55	58	65	79	101	61	21	3.1	117	2.4	88	246
20	59	56	64	74	91	59	23	2.9	95	2.2	130	104
21	58	55	64	76	170	62	27	2.5	252	1.6	91	507
22	58	52	74	76	278	61	24	2.4	548	1.7	65	830
23	140	51	70	75	160	62	19	7.6	158	6.9	52	485
24	83	52	68	73	122	60	21	21	83	12	45	595
25	70	53	68	75	111	58	21	13	57	30	45	1,370
26	64	54	65	74	108	56	20	4.8	46	22	37	503
27	57	55	65	71	101	54	22	65	42	7.4	31	944
28	50	55	66	78	90	54	28	211	40	50	22	1,250
29	47	55	67	76	------	52	28	55	38	111	22	818
30	44	57	68	75	------	50	22	21	36	92	25	474
31	44	------	67	75	------	45	------	20	------	86	27	------
TOTAL	2,852	1,588	2,036	2,397	2,625	2,289	716	709.6	12,362	3,327.5	2,821	10,195
MEAN	92.0	52.9	65.7	77.3	93.8	73.8	23.9	22.9	412	107	91.0	340
MAX	314	74	84	117	278	112	38	211	1,940	674	392	1,370
MIN	44	44	57	59	52	45	15	2.4	36	1.6	22	24
AC-FT	5,660	3,150	4,040	4,750	5,210	4,540	1,420	1,410	24,520	6,600	5,600	20,220

CAL YR 1970 TOTAL 59,334.60 MEAN 163 MAX 2,810 MIN 0 AC-FT 117,700
WTR YR 1971 TOTAL 43,918.10 MEAN 120 MAX 1,940 MIN 1.6 AC-FT 87,110

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
6-3	1900	10.27	3,100				

07328500 Washita River near Pauls Valley, Okla.

LOCATION.--Lat 34°45'17", long 97°15'04", in SE 1/4 sec.1, T.3 N., R.1 W., Garvin County, on downstream side of right pier of bridge on U. S. Highway 77, 2 miles northwest of Pauls Valley, 6 miles downstream from Owl Creek, 7 miles upstream from Washington Creek, and at mile 146.5.

DRAINAGE AREA.--5,330 sq mi.

PERIOD OF RECORD.--May to December 1899 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "at Pauls Valley, Indian Territory" in 1899.

GAGE.--Water-stage recorder. Datum of gage is 854.61 ft above mean sea level. During 1899, nonrecording gage at site 9 miles downstream at different datum. Mar. 29, 1938, to Jan. 25, 1939, nonrecording gage and Jan. 26, 1939, to Oct. 6, 1948, water-stage recorder at site 0.7 mile upstream at datum 1.53 ft higher.

AVERAGE DISCHARGE.--34 years, 703 cfs (509,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,430 cfs Oct. 8 (gage height, 14.45 ft); no flow July 20.
Period of record: Maximum discharge, 35,800 cfs May 18, 1957 (gage height, 27.34 ft); maximum gage height, 29.88 ft May 11, 1950; no flow at times in 1956, 1964, 1966-67, 1970-71
Stream is reported to have receded to no flow in 1882 and in 1897 (from information by local resident).

REMARKS.--Records fair. Some diversion for irrigation above station. Some regulation since March 1959, by Fort Cobb Reservoir (see sta. 07325900), since February 1961, by Foss Reservoir (see sta. 07324300), and by numerous flood-retarding structures.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499	139	100	112	105	152	65	44	67	51	68	19
2	391	130	100	111	100	142	64	42	749	43	55	18
3	304	124	102	235	98	141	64	38	2,980	55	71	21
4	233	117	98	215	103	137	63	38	2,250	54	55	58
5	222	113	100	200	102	135	60	36	1,340	123	40	82
6	302	109	96	150	101	146	57	36	630	532	63	65
7	462	106	95	100	100	148	54	38	392	568	73	56
8	4,700	103	96	100	68	138	50	34	295	516	45	47
9	1,820	98	100	100	82	129	47	35	1,130	298	42	40
10	902	96	104	110	100	123	46	41	795	185	38	40
11	661	94	101	100	89	120	45	43	492	129	44	76
12	478	91	90	100	93	117	40	40	420	60	65	172
13	346	102	88	120	100	115	37	41	500	40	57	113
14	255	176	88	150	107	114	35	38	568	20	307	82
15	191	208	87	200	96	112	38	32	504	13	815	68
16	157	171	102	190	93	106	38	27	440	7.5	543	65
17	141	147	116	170	88	102	47	23	456	4.5	335	59
18	133	132	116	150	87	101	48	20	400	2.5	312	65
19	126	121	112	130	131	95	42	16	265	1.0	212	253
20	120	114	104	120	116	88	52	13	165	0	148	271
21	116	110	100	119	324	82	53	10	137	1.7	115	149
22	112	107	97	114	538	86	51	6.9	135	1.5	129	212
23	452	98	97	112	468	90	405	9.0	420	20	99	610
24	412	96	104	112	339	90	121	11	292	61	72	423
25	271	92	122	108	248	91	59	14	170	42	64	936
26	301	93	120	111	206	91	51	13	101	18	51	1,140
27	464	95	117	115	175	86	47	55	66	9.4	49	479
28	396	94	115	107	162	82	43	67	54	7.8	39	764
29	271	96	113	106	------	78	43	48	48	28	37	965
30	200	98	116	109	------	72	41	172	48	22	36	625
31	163	------	114	109	------	67	------	99	------	52	24	------
TOTAL	15,601	3,470	3,210	4,085	4,419	3,376	1,906	1,179.9	16,309	2,965.9	4,103	7,973
MEAN	503	116	104	132	158	109	63.5	38.1	544	95.7	132	266
MAX	4,700	208	122	235	538	152	405	172	2,980	568	815	1,140
MIN	112	91	87	100	68	67	35	6.9	48	0	24	18
AC-FT	30,940	6,880	6,370	8,100	8,770	6,700	3,780	2,340	32,350	5,880	8,140	15,810

CAL YR 1970 TOTAL 101,063.24 MEAN 277 MAX 9,440 MIN 0 AC-FT 200,500
WTR YR 1971 TOTAL 68,597.80 MEAN 188 MAX 4,700 MIN 0 AC-FT 136,100

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-8	0430	14.45	7,430

07329500 Rush Creek near Maysville, Okla.

LOCATION.--Lat 34°44'36", long 97°24'18", in SW 1/4 SW 1/4 sec.10, T.3 N., R.2 W., Garvin County, near right bank on downstream side of pier of bridge on State Highway 74, 2.8 miles downstream from Panther Creek, 5.3 miles south of Maysville, and at mile 14.2.

DRAINAGE AREA.--206 sq mi.

PERIOD OF RECORD.--December 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 903.04 ft above mean sea level (State Highway Department bench mark).

AVERAGE DISCHARGE.--17 years (1954-71), 48.9 cfs (35,430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,290 cfs Oct. 8 (gage height, 8.31 ft); no flow at times. Period of record: Maximum discharge, 38,500 cfs May 18, 1957 (gage height, 23.62 ft), from rating curve extended above 5,300 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

REMARKS.--Records good. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	9.3	6.6	7.3	5.7	12	6.2	5.3	87		0	7.0
2	81	8.9	6.7	7.4	6.0	12	6.6	4.2	33		0	4.0
3	69	8.6	6.4	19	6.6	13	6.1	3.5	31		0	2.0
4	48	8.0	5.3	11	8.0	14	5.4	3.0	14		0	.80
5	49	7.3	5.0	10	7.6	12	5.3	2.2	6.1		0	.25
6	173	6.8	4.8	7.0	6.0	28	4.8	2.1	4.8		0	.07
7	130	6.1	4.8	7.0	4.0	33	4.3	2.8	2.8		0	.02
8	702	6.1	4.7	12	6.0	28	4.0	1.6	13		0	0
9	144	5.0	4.6	15	10	19	3.4	10	4.4		42	0
10	72	5.7	5.0	22	11	10	4.6	11	3.2		3.4	.07
11	46	7.0	5.9	15	9.3	8.4	4.3	6.7	15		18	4.1
12	26	5.5	8.0	13	8.2	7.0	3.6	2.9	8.0		18	1.5
13	18	8.6	6.6	15	8.0	6.8	2.7	1.7	6.8		15	.89
14	14	18	6.4	21	8.3	6.6	4.1	1.4	5.6		116	.14
15	11	12	7.4	19	8.4	7.5	4.6	1.0	4.4		207	0
16	10	10	8.7	13	8.2	9.4	4.1	.80	4.4		104	0
17	12	8.8	7.9	13	8.3	7.0	7.3	.60	3.6		48	0
18	11	8.5	7.7	13	21	5.9	6.5	.40	3.6		21	16
19	10	7.5	7.2	12	35	5.1	6.1	.20	2.8		11	55
20	9.4	7.5	7.1	12	21	4.5	14	.60	2.0		7.3	6.8
21	9.0	8.5	7.4	12	114	4.2	11	.40	11		5.3	4.2
22	8.8	7.2	8.1	12	46	3.9	63	.40	24		4.3	2.8
23	42	7.3	7.5	12	29	3.5	49	5.8	5.8		3.7	6.0
24	21	6.9	7.0	12	20	3.4	6.7	3.1	4.0		3.6	10
25	14	6.7	7.4	11	36	3.3	4.7	.40	1.2		15	17
26	24	6.7	7.2	10	23	3.3	4.0	.20	.80		8.7	200
27	58	6.3	7.5	10	16	3.3	3.4	27	.60		7.0	17
28	22	6.4	7.6	11	13	3.4	3.0	3.9	.40		6.5	33
29	16	6.3	7.6	11	------	3.5	5.0	1.7	.20		8.0	5.4
30	12	6.4	8.1	7.5	------	3.6	5.6	1.9	0		10	6.6
31	10	------	7.9	6.1	------	4.0	------	1.1	------		8.7	------
TOTAL	1,962.2	233.9	210.1	378.3	503.6	288.6	263.4	107.90	303.50	0	691.5	400.64
MEAN	63.3	7.80	6.78	12.2	18.0	9.31	8.78	3.48	10.1	0	22.3	13.4
MAX	702	18	8.7	22	114	33	63	27	87	0	207	200
MIN	8.8	5.0	4.6	6.1	4.0	3.3	2.7	.20	0	0	0	0
AC-FT	3,890	464	417	750	999	572	522	214	602	0	1,370	795

CAL YR 1970 TOTAL 14,762.67 MEAN 40.4 MAX 4,640 MIN 0 AC-FT 29,280
WTR YR 1971 TOTAL 5,343.64 MEAN 14.6 MAX 702 MIN 0 AC-FT 10,600

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE
10-8	0045	8.31	3,290

07329700 Wildhorse Creek near Hoover, Okla.

LOCATION.--Lat 34°32'29", long 97°14'49", on west line of SW 1/4 sec.19, T.1 N., R.1 E., Garvin County, on downstream left bank at bridge on State Highway 19A, 1.5 miles north of Hoover, 1.8 miles downstream from Sandy Creek, and at mile 7.9.

DRAINAGE AREA.--604 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1951-69. October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 803.3 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 12,400 cfs Oct. 8, (gage height 24.0 ft, from floodmark), no flow Sept. 4-6.
Period of record: Maximum discharge, 12,400 cfs Oct. 8, 1970, (gage height 24.0 ft, from floodmark); no flow at times.

REMARKS.--Records good. Flow regulated by Duncan, Clear Creek, Humphries and Fuqua Lakes (combined surface-area, 3,340 acres, and capacity, 44,800 acre-ft) and numerous flood-retarding structures. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	77	18	9.9	15	27	10	12	391	2.2	.60	.03
2	28	63	16	11	14	24	8.9	9.7	142	2.4	.60	.02
3	24	52	16	224	15	26	8.0	8.1	98	30	.57	.01
4	20	44	16	162	18	28	8.2	7.8	51	8.2	.48	0
5	28	40	16	86	19	28	8.2	7.3	32	3.7	.45	0
6	53	37	15	58	19	29	8.2	136	20	1.6	99	0
7	19	35	14	46	17	25	8.3	245	16	.94	29	.04
8	6,560	34	14	40	13	24	8.2	50	13	.78	6.4	.34
9	1,420	30	19	36	14	23	7.8	108	12	.71	2.1	.16
10	717	28	15	34	16	22	7.6	91	11	.63	.80	.11
11	507	27	13	30	16	21	7.0	219	20	.54	1.8	.10
12	420	25	12	27	16	22	6.1	38	22	.45	42	.09
13	360	29	12	118	14	21	5.4	17	42	.38	19	.08
14	306	51	11	135	14	19	5.1	9.3	25	.31	52	.05
15	246	54	11	54	14	17	5.8	7.6	13	.24	318	.04
16	190	42	11	37	14	16	5.7	6.6	8.7	.31	37	.04
17	134	38	11	34	13	16	8.1	5.7	7.3	.31	18	.08
18	109	35	11	29	14	16	16	4.9	5.9	.17	8.5	.88
19	93	34	11	25	18	14	8.9	4.2	4.9	.24	3.4	1.3
20	79	28	14	22	16	14	16	3.0	3.9	.24	1.4	.74
21	69	27	12	23	73	14	15	2.7	14	.31	.57	.36
22	63	24	13	21	219	14	163	2.4	37	.38	.27	.28
23	1,920	21	11	21	75	14	335	489	41	9.4	.20	.51
24	511	21	10	21	49	13	54	474	16	21	.08	.75
25	293	21	11	19	43	13	24	71	8.5	3.1	1.2	1.2
26	696	20	12	19	39	13	18	28	6.1	1.7	18	1.1
27	494	19	10	17	30	13	15	327	4.1	.89	6.1	.68
28	209	19	10	17	28	13	13	131	3.1	8.6	2.2	.39
29	154	19	9.9	17	------	13	31	33	2.5	6.3	.56	.25
30	122	19	10	17	------	11	19	21	2.1	1.9	.22	.15
31	98	------	10	17	------	10	------	16	------	.88	.07	------
TOTAL	15,976	1,013	394.9	1,426.9	865	573	854.5	2,585.3	1,073.1	108.81	670.57	9.78
MEAN	515	33.8	12.7	46.0	30.9	18.5	28.5	83.4	35.8	3.51	21.6	.33
MAX	6,560	77	19	224	219	29	335	489	391	30	318	1.3
MIN	19	19	9.9	9.9	13	10	5.1	2.4	2.1	.17	.07	0
AC-FT	31,690	2,010	783	2,830	1,720	1,140	1,690	5,130	2,130	216	1,330	19

CAL YR 1970 TOTAL 29,411.67 MEAN 80.6 MAX 6,560 MIN 0 AC-FT 58,340
WTR YR 1971 TOTAL 25,550.86 MEAN 70.0 MAX 6,560 MIN 0 AC-FT 50,680

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	0930	[a]24.0	12,400	5-23	2045	11.91	2,200
10-23	1215	13.42	3,050				

a From floodmark.

07331000 Washita River near Durwood, Okla.

LOCATION.--Lat 34°14'03", long 96°58'32", in NW 1/4 SW 1/4 sec.3, T.4 S., R.3 E., Carter County, near left bank on downstream side of pier of bridge on U. S. Highway 177, 1.3 miles downstream from Caddo Creek, 4 miles north of Durwood, and at mile 63.4.

DRAINAGE AREA.--7,202 sq mi.

PERIOD OF RECORD.--August 1928 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 650.57 ft above mean sea level (levels by Corps of Engineers). Prior to Feb. 16, 1939, nonrecording gage at same site and datum. Dec. 15, 1950, to Feb. 19, 1952, nonrecording gage at site 500 ft upstream at same datum.

AVERAGE DISCHARGE.--43 years, 1,364 cfs (988,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 43,600 cfs Oct. 9 (gage height, 33.14 ft); minimum daily, 34 cfs July 22.
Period of record: Maximum discharge, 98,000 cfs May 19, 1957; (gage height, 42.30 ft, from floodmark); maximum gage height, 44.37 ft Oct. 31, 1941; no flow Aug. 28, Sept. 14 to Oct. 1, Oct. 7-12, 1956.

REMARKS.--Records good. Some diversions above station for irrigation. Some regulation since March 1959 by Fort Cobb Reservoir (see sta. 07325900), since February 1961 by Foss Reservoir (see sta. 07324300), and by numerous flood-retarding structures. Records of chemical analyses and of water temperatures for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Results of 15 discnarge measurements furnished by Corps of Engineers.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1281: 1935(m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,600	749	211	220	252	383	156	156	555	189	57	65
2	1,360	647	213	216	246	363	156	144	851	422	50	58
3	1,140	574	205	245	240	361	156	122	2,330	168	58	52
4	970	505	204	1,270	252	341	162	110	4,660	131	69	46
5	846	449	205	1,080	261	339	142	106	3,320	128	64	41
6	772	411	197	793	298	344	122	110	2,170	109	77	36
7	1,020	383	189	581	284	337	118	170	1,680	206	103	53
8	17,900	360	220	379	258	342	112	340	1,410	441	206	68
9	42,300	334	255	349	191	341	110	172	1,050	524	124	63
10	14,300	318	273	342	192	327	112	192	1,310	374	80	61
11	7,480	365	266	358	198	318	106	815	1,080	255	75	49
12	6,230	370	259	353	209	304	96	362	700	190	80	42
13	5,500	373	262	332	198	318	88	220	577	149	156	38
14	4,960	422	262	681	192	300	92	154	655	124	512	95
15	4,510	545	270	745	193	276	84	136	730	100	263	104
16	4,160	574	273	503	197	234	82	122	698	81	1,040	88
17	3,790	502	266	409	194	206	96	108	557	68	744	76
18	3,510	449	266	366	197	195	124	96	481	61	431	81
19	3,170	412	234	339	209	190	136	86	463	53	351	96
20	1,580	390	226	309	196	185	142	80	422	44	299	94
21	1,300	322	220	285	264	184	138	72	336	38	222	271
22	900	296	224	282	578	180	152	67	307	34	175	253
23	6,100	278	220	270	1,010	180	358	62	234	44	140	216
24	6,290	270	208	255	791	182	1,060	780	306	157	148	475
25	3,310	251	203	237	658	183	736	620	463	86	137	617
26	3,900	249	201	225	563	184	546	306	304	64	108	780
27	4,020	242	219	213	504	182	355	256	212	69	102	1,290
28	2,390	228	220	208	433	178	205	701	172	63	100	714
29	1,760	224	220	252	------	174	178	506	148	52	197	698
30	1,330	216	223	264	------	168	168	312	139	76	124	1,230
31	955	------	222	261	------	160	------	237	------	56	79	------
TOTAL	159,353	11,708	7,136	12,622	9,258	7,959	6,288	7,720	28,320	4,556	6,371	7,850
MEAN	5,140	390	230	407	331	257	210	249	944	147	206	262
MAX	42,300	749	273	1,270	1,010	383	1,060	815	4,660	524	1,040	1,290
MIN	772	216	189	208	191	160	82	62	139	34	50	36
AC-FT	316,100	23,220	14,150	25,040	18,360	15,790	12,470	15,310	56,170	9,040	12,640	15,570

CAL YR 1970 TOTAL 373,948.2 MEAN 1,025 MAX 42,300 MIN 9.6 AC-FT 741,700
WTR YR 1971 TOTAL 269,141.0 MEAN 737 MAX 42,300 MIN 34 AC-FT 533,800

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-9	1400	33.14	43,600	10-23	2230	17.86	10,800

07331250 Mill Creek near Ravia, Okla.

LOCATION.--Lat 34°15'35", long 96°48'37", in SW 1/4 SW 1/4 sec.29, T.3 S., R.5 E., Johnston County, on left bank 500 ft upstream from concrete ford on access road of Daube ranch, 3.2 miles northwest of Ravia, and at mile 4.5.

DRAINAGE AREA.--89.2 sq mi.

PERIOD OF RECORD.--October 1968 to September 1971 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 690 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 15,400 cfs Oct. 8 (gage height, 12.71 ft); minimum, 0.09 Sept. 16-18.
Period of record: Maximum discharge, 15,400 cfs Oct. 8, 1970 (gage height, 12.71 ft); minimum, 0.09 cfs Sept. 16-18, 1971.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	52	18	13	11	10	8.6	8.3	12	2.4	.45	2.3
2	19	44	18	13	10	10	7.7	6.8	12	3.6	.36	2.1
3	16	40	17	15	10	12	7.0	6.1	6.7	4.7	.32	2.0
4	14	36	16	45	11	11	6.6	6.0	18	3.1	.30	1.9
5	13	33	16	29	12	11	6.0	6.6	19	2.0	.28	1.7
6	14	30	15	25	12	11	5.6	7.6	13	1.5	.27	1.4
7	13	28	14	20	10	10	6.0	7.4	8.4	1.3	.26	1.1
8	4,710	27	14	17	10	9.2	6.4	5.9	5.4	1.2	2.9	.85
9	761	28	14	15	9.8	9.2	6.9	6.0	3.8	1.0	3.0	.37
10	301	28	14	14	9.8	9.8	7.3	16	2.8	.91	1.7	.20
11	240	29	13	14	10	9.7	7.3	10	2.5	.86	.93	.20
12	178	29	13	13	10	9.5	7.1	7.6	2.2	.82	.93	.20
13	146	32	13	14	9.7	10	5.5	5.9	2.3	.65	.92	.17
14	116	44	13	15	9.2	10	5.0	5.3	2.6	.62	953	.18
15	100	36	13	14	9.1	10	4.8	4.8	3.2	.49	30	.19
16	90	32	15	13	9.2	8.7	5.2	4.8	3.7	.37	19	.14
17	84	30	14	14	9.1	8.2	6.2	4.7	2.5	.37	11	.09
18	65	27	13	14	12	8.2	20	4.5	2.1	.36	7.9	.30
19	57	26	13	13	17	8.2	12	4.0	1.9	.27	6.8	.84
20	53	23	13	13	14	7.5	8.7	4.0	1.8	.30	6.0	1.1
21	51	23	13	14	14	9.0	10	3.8	1.8	.27	5.2	1.0
22	50	22	13	14	23	10	13	3.8	2.3	.27	4.6	.83
23	1,050	22	13	14	15	11	61	3.9	2.5	.63	4.4	1.0
24	236	22	12	13	13	9.7	24	3.8	2.3	2.1	4.2	1.4
25	128	21	12	13	12	9.3	17	4.7	2.0	2.2	6.0	7.8
26	118	20	12	13	11	9.3	12	4.3	1.6	1.7	4.5	3.1
27	531	20	12	12	10	9.7	10	7.1	1.4	1.3	3.8	2.0
28	118	19	11	11	10	10	8.5	8.5	1.3	1.1	3.3	1.5
29	81	19	12	12	------	9.7	7.7	6.7	1.7	.79	2.9	.92
30	67	18	12	12	------	9.2	7.8	4.8	2.4	.68	2.7	.77
31	57	------	15	11	------	8.6	------	4.5	------	.55	2.5	------
TOTAL	9,498	860	426	482	322.9	298.7	320.9	188.2	145.2	38.41	1,090.42	37.65
MEAN	306	28.7	13.7	15.5	11.5	9.64	10.7	6.07	4.84	1.24	35.2	1.26
MAX	4,710	52	18	45	23	12	61	16	19	4.7	953	7.8
MIN	13	18	11	11	9.1	7.5	4.8	3.8	1.3	.27	.26	.09
AC-FT	18,840	1,710	845	956	640	592	637	373	288	76	2,160	75

CAL YR 1970 TOTAL 22,861.30 MEAN 62.6 MAX 4,710 MIN 1.2 AC-FT 45,350
WTR YR 1971 TOTAL 13,708.38 MEAN 37.6 MAX 4,710 MIN .09 AC-FT 27,190

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	1430	12.71	15,400	10-27	0400	5.95	2,510
10-23	0600	6.27	2,940	8-14	0830	5.99	2,600

07331500 Lake Texoma near Denison, Tex.

LOCATION.--Lat 33°49'05", long 96°34'20", in NE 1/4 sec.33, T.8 S., R.7 E., Bryan County, Okla., in control tower of Denison Dam on Red River, 1.2 miles upstream from Shawnee Creek, 1.8 miles upstream from Sand Creek, 4 miles northwest of Denison, and at mile 725.9.
DRAINAGE AREA.--39,719 sq mi, of which 5,936 sq mi is probably noncontributing.
PERIOD OF RECORD.--July 1942 to current year. Month-end contents only for some periods, published in WSP 1311.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Mar. 30, 1944, nonrecording gage at same site and datum. Prior to Oct. 1, 1948, auxiliary nonrecording gage in Cumberland pool at same datum.
EXTREMES.--Current year: Maximum contents, 2,760,700 acre-ft Nov. 9 (elevation, 617.31 ft); minimum, 2,074,000 acre-ft Aug. 12 (elevation, 608.70 ft).
Period of record: Maximum contents, 5,991,300 acre-ft June 5, 1957 (elevation, 643.18 ft). Minimum contents since power pool was first filled, 1,565,100 acre-ft Sept. 16, 1964; minimum elevation, 599.96 ft Mar. 1, 2, 1957.
REMARKS.--Reservoir is formed by a rolled-fill earth dam. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power-pool was first filled Mar. 15, 1945. Capacity, based on 1962 survey, 5,392,900 acre-ft at elevation 640.0 ft (crest of spillway), 2,733,300 acre-ft at elevation 617.0 ft (maximum power pool), 1,049,200 acre-ft at elevation 590.0 ft (minimum power pool) in Denison pool. Dead storage, 11,000 acre-ft at elevation 610.0 ft in Cumberland pool. When contents are below 2,167,900 acre-ft, the reservoir is divided into two pools by protective levees around the Cumberland oilfield on the Washita River arm with bottom of outlet channel for the upper pool (known as Cumberland pool) at elevation 610 ft. At higher elevations the two pools are considered as being at a common level, contents being computed from gage in the Denison pool. Figures given herein represent total contents of both pools. Reservoir is used principally for flood control and power development. Revised capacity table, based on survey in 1962, used since Oct. 1, 1963.
COOPERATION.--Records furnished by Corps of Engineers.
REVISIONS.--WSP 1211: Drainage area.

Capacity table (elevation, in feet, and contents, in thousands of acre-feet)

608	2,024.8	615	2,561.5
611	2,242.6	617	2,733.3
613	2,397.7		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.369.3	2744.7	2653.7	2450.0	2.355.9	2.329.3	2.285.3	2.214.0	2.197.5	2.231.2	2.109.7	2.189.4
2	2.374.8	2.745.6	2.647.7	2.433.8	2,352.7	2.325.4	2.284.6	2.209.5	2.193.1	2.223.8	2.109.7	2.190.1
3	2.380.3	2.748.3	2.645.2	2.445.1	2.355.1	2.312.3	2.281.5	2.206.5	2.194.5	2.220.8	2.108.3	2.186.4
4	2.381.9	2.746.5	2.637.5	2.424.9	2.359.8	2.305.3	2.282.2	2.205.0	2.201.2	2.218.5	2.108.3	2.179.0
5	2.380.3	2.746.5	2.637.5	2.410.5	2.361.4	2.303.8	2.273.8	2.200.5	2.211.8	2.211.8	2.112.6	2.182.7
6	2.378.7	2.746.5	2.636.6	2.400.9	2.362.2	2.309.2	2.264.6	2.208.0	2.219.2	2.202.8	2.115.5	2.179.7
7	2.385.8	2.745.6	2.629.8	2.389.0	2.360.6	2.308.4	2.254.8	2.205.8	2.226.0	2.196.0	2.113.3	2.176.0
8	2.394.5	2.757.1	2.625.6	2.374.0	2.351.2	2.306.1	2.251.0	2.203.5	2.230.5	2.193.8	2.109.7	2.171.6
9	2.404.1	2.750.9	2.622.2	2.376.4	2.346.5	2.307.6	2.253.2	2.212.5	2.232.0	2.193.8	2099.6	2.170.9
10	2.431.3	2.747.4	2.623.9	2.378.7	2.341.8	2.306.9	2.253.2	2.219.2	2.234.2	2.188.6	2.091.8	2.183.4
11	2.478.6	2.748.3	2.615.4	2.376.4	2.341.8	2.306.1	2.252.5	2.223.8	2.236.5	2.187.1	2.081.1	2.196.0
12	2.505.7	2.735.1	2.615.4	2.375.6	2.341.0	2.314.6	2.251.7	2.221.5	2.233.5	2.179.7	2.075.4	2.199.8
13	2.526.4	2.735.9	2.615.4	2.376.4	2.337.1	2.315.4	2.251.0	2.221.5	2.234.2	2.170.9	2.081.1	2.202.8
14	2.543.9	2.734.2	2.613.7	2.378.0	2.338.7	2.319.2	2.249.4	2.220.8	2.238.0	2.162.0	2.110.4	2.201.2
15	2.550.6	2.729.8	2.614.6	2.375.6	2.337.9	2.318.4	2.245.6	2.220.0	2.237.3	2.155.4	2.111.9	2.199.8
16	2.557.3	2.716.6	2.605.2	2.378.0	2.339.5	2.317.7	2.244.9	2.207.2	2.235.8	2.145.9	2.111.1	2.201.2
17	2.564.0	2.715.7	2.593.4	2.379.5	2.337.1	2.313.0	2.251.7	2.207.2	2.232.0	2.137.1	2.113.3	2.200.5
18	2.573.3	2.705.1	2.588.4	2.379.5	2.340.3	2.318.4	2.254.8	2.208.8	2.232.8	2.131.3	2.140.8	2.202.8
19	2.581.7	2.696.3	2.582.5	2.370.0	2.339.5	2.317.7	2.254.8	2.203.5	2.233.5	2.120.5	2.164.9	2.201.2
20	2.590.1	2.683.2	2.574.1	2.361.4	2.337.9	2.310.0	2.250.2	2.197.5	2.244.9	2.116.9	2.172.3	2.201.2
21	25934	2.685.0	2.564.9	2.362.9	2.348.1	2.309.2	2.243.4	2.191.6	2.251.7	2.114.7	2.173.1	2.200.5
22	2.592.6	2.689.3	2.553.1	2.362.2	2.337.9	2.309.2	2.238.8	2.190.1	2.253.2	2.109.0	2.170.9	2.212.5
23	2.612.0	2.679.7	2.543.0	2.363.7	2.327.8	2.306.1	2.238.8	2.193.8	2.254.8	2.122.7	2.169.4	2.226.8
24	2.628.2	2.667.6	2.532.2	2.363.7	2.327.8	2.300.0	2.234.2	2.193.8	2.253.2	2.123.4	2.171.6	2.242.6
25	2.642.6	2.660.6	2.524.0	2.363.7	2.327.8	2.296.1	2.231.2	2.189.4	2.251.7	2.120.5	2.175.3	2.276.1
26	2.667.6	2.661.5	2.514.0	2.362.2	2.330.9	2.293.0	2.227.5	2.186.4	2.247.2	2.115.5	2.171.6	2.280.7
27	2.705.1	2.664.9	2.504.9	2.360.6	2.330.9	2.293.0	2.223.0	2.193.8	2.247.2	2.116.2	2.172.3	2.285.3
28	2.711.3	2.659.8	2.492.5	2.356.6	2.331.7	2.292.2	2.220.0	2.190.1	2.244.1	2.116.9	2.172.3	2.313.0
29	2.724.5	2.660.6	2.481.1	2.358.2	------	2.288.4	2.216.2	2.192.3	2.242.6	2.116.2	2.176.0	2.337.9
30	2.733.3	2.654.6	2.481.1	2.361.4	------	2.283.8	2.216.2	2.194.5	2.233.5	2.110.4	2.182.7	2.349.6
31	2.739.5	------	2.461.4	2.358.2	------	2.280.7	------	2.196.8	------	2.110.4	2.186.4	------
(+)	617.07	616.10	613.79	612.50	612.16	611.50	610.65	610.39	610.88	609.21	610.25	612.39
(‡)	+369.5	-84.9	-193.2	-103.2	-26.5	-51.0	-64.5	-19.4	+36.7	-123.1	+76.0	+163.2
MAX	2,739.5	2,754.5	2,653.7	2,450.0	2,362.2	2,329.3	2,285.3	2,223.8	2,254.8	2,231.3	2,186.4	2,349.6
MIN	2,369.3	2,654.6	2,461.4	2,356.6	2,327.8	2,280.7	2,216.2	2,186.4	2,193.1	2,109.0	2,075.4	2,170.9

CAL YR 1970..... ‡ +118.0
WTR YR 1971..... ‡ -20.4

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07331600 Red River at Denison Dam, near Denison, Tex.

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, on right bank 1,800 ft downstream from Denison Dam powerhouse, 0.4 mile upstream from Shawnee Creek (spillway flow return), 4.5 miles north of Denison, and at mile 725.5.

DRAINAGE AREA.--39,720 sq mi, of which 5,936 sq mi is probably noncontributing. At site used prior to October 1961, drainage area 39,777 sq mi, of which 5,936 sq mi was probably noncontributing.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, Tex.," and October 1934 to September 1961, published as "near Colbert, Okla." Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of U. S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder at county road bridge 2.5 miles downstream at datum 6.85 ft higher prior to Oct. 1, 1931, at datum 7.07 ft higher Oct. 1, 1931, to Sept. 24, 1934, and at datum 2.64 ft lower July 29, 1942, to Sept. 30, 1961. Sept. 25, 1934, to July 28, 1942, water-stage recorder at railway bridge 1.9 miles downstream at datum 7.36 ft higher.

AVERAGE DISCHARGE.--48 years, 4,756 cfs (3,446,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,700 cfs Jan. 5 (gage height, 9.50 ft); minimum daily, 81 cfs Sept. 10.

Period of record: Maximum discharge, 201,000 cfs May 21, 1935 (gage height, 31.8 ft at site and datum then in use); maximum gage height, 32.0 ft Apr. 25, 1942 (at site and datum used in 1943); minimum daily discharge, 12 cfs Jan. 10, 1944.

Flood of May 26, 1908, reached a stage of 45.5 ft at site and datum used July 29, 1942, to Sept. 30, 1961, from records of U. S. Weather Bureau.

REMARKS.--Records good. Flow regulated since October 1943 by Lake Texoma (see sta. 07331500).

COOPERATION.--Gage-height record, 18 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	508	1,980	5,320	659	3,480	95	701	2,550	3,060	119	992
2	83	964	2,620	6,350	523	5,540	169	1,680	3,070	2,430	121	152
3	85	114	2,210	4,710	221	3,810	96	953	563	1,740	2,550	1,500
4	293	122	3,170	7,790	159	3,130	1,810	857	414	1,760	344	1,190
5	1,780	105	886	7,350	479	425	3,280	2,240	193	3,620	135	1,070
6	2,510	1,180	126	7,470	865	418	3,310	2,940	3,020	3,640	118	1,810
7	3,310	163	2,570	8,180	1,870	174	3,470	1,670	1,740	3,740	1,990	2,080
8	306	88	2,390	7,790	3,610	644	918	634	656	248	2,200	1,390
9	147	748	2,100	981	2,150	684	91	899	1,330	346	4,000	130
10	138	795	2,280	148	1,390	960	87	3,890	1,040	2,290	4,750	81
11	136	2,100	2,280	2,570	2,520	1,580	85	237	1,150	168	5,190	1,160
12	2,620	5,210	160	798	350	378	277	152	2,820	2,980	3,910	110
13	2,030	5,320	109	893	510	1,050	1,150	154	977	3,810	296	1,290
14	2,530	499	247	703	710	219	130	155	1,240	2,860	1,360	1,390
15	1,130	139	3,780	1,090	250	665	1,200	158	1,110	3,480	2,870	1,080
16	2,870	5,920	2,070	225	150	728	1,320	2,390	2,060	4,130	1,580	123
17	155	3,580	4,540	197	475	734	230	4,240	3,510	4,350	3,310	83
18	130	4,700	4,340	1,160	397	482	101	1,990	1,210	2,360	3,850	83
19	128	5,400	3,040	3,620	940	1,120	2,810	2,300	822	3,950	3,410	92
20	1,460	5,270	4,720	3,620	1,880	857	1,940	2,760	454	1,320	4,380	93
21	864	157	5,390	1,220	1,930	478	3,340	2,440	108	128	5,240	93
22	2,290	95	5,080	1,020	2,270	777	4,510	240	89	1,440	4,310	105
23	977	3,160	5,420	211	5,260	1,320	1,860	772	477	204	4,850	108
24	136	3,730	4,140	189	1,210	2,260	1,890	255	912	111	3,530	113
25	109	3,700	4,730	911	1,330	1,940	2,010	1,730	854	111	239	1,050
26	4,320	120	4,770	749	194	1,520	3,760	2,560	2,890	2,820	2,990	1,780
27	1,170	773	4,700	950	1,170	1,970	3,560	2,270	660	1,660	2,500	1,690
28	152	2,490	6,140	2,530	240	334	1,340	1,980	2,310	778	2,630	1,620
29	123	137	6,150	175	------	1,330	1,290	2,080	3,040	2,160	1,260	1,640
30	107	3,270	5,450	162	------	1,350	1,010	794	4,970	209	1,250	1,610
31	105	------	5,470	633	------	126	------	191	------	113	194	------
TOTAL	32,369	60,557	103,058	79,715	33,712	40,483	47,139	46,312	46,239	62,016	75,476	25,708
MEAN	1,044	2,019	3,324	2,571	1,204	1,306	1,571	1,494	1,541	2,001	2,435	857
MAX	4,320	5,920	6,150	8,180	5,260	5,540	4,510	4,240	4,970	4,350	5,240	2,080
MIN	83	88	109	148	150	126	85	152	89	111	118	81
AC-FT	64,200	120,100	204,400	158,100	66,870	80,300	93,500	91,860	91,720	123,000	149,700	50,990

CAL YR 1970 TOTAL 901,960 MEAN 2,471 MAX 8,020 MIN 76 AC-FT 1,789,000
WTR YR 1971 TOTAL 652,784 MEAN 1,788 MAX 8,180 MIN 81 AC-FT 1,295,000

07332400 Blue Creek at Milburn, Okla.
(Headwater of Blue River)

LOCATION.--Lat 34°15'04", long 96°33'05", in SW 1/4 SW 1/4 sec.35, T.3 S., R.7 E., Johnston County, on downstream side of left bank pier of bridge on State Highway 48A, 0.5 mile north of Milburn, and at mile 84.9.

DRAINAGE AREA.--203 sq mi.

PERIOD OF RECORD.--Occasional low flow measurements made in water years 1956-61. October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 650 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 136 cfs (9.10 inches per year, 98,530 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 35,100 cfs Oct. 8 (gage height, 27.87 ft); minimum 28 cfs July 19, 20.
Period of record: Maximum discharge, 35,100 cfs Oct. 8, 1970 (gage height, 27.87 ft); minimum, 20 cfs Mar. 15-19, Apr. 5-7, 1967.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	163	106	78	66	63	46	48	57	35	30	31
2	64	159	103	78	66	62	44	46	47	36	30	31
3	62	153	102	113	66	66	45	45	328	32	39	30
4	59	147	99	254	107	64	45	45	372	31	31	30
5	59	143	98	102	77	63	45	45	69	31	31	30
6	60	142	95	87	71	64	44	50	49	31	32	30
7	59	140	93	83	68	63	44	46	42	31	34	30
8	14,100	139	93	82	66	60	44	44	39	30	33	29
9	7,670	137	94	82	64	58	44	51	38	30	32	31
10	534	132	94	83	64	58	44	62	37	30	32	32
11	350	131	92	82	64	56	44	50	36	30	32	30
12	279	128	90	82	64	66	43	45	36	30	55	31
13	236	141	89	83	62	61	43	43	37	30	38	31
14	197	192	87	84	62	56	43	43	39	29	96	31
15	168	159	92	83	62	53	43	43	38	29	253	32
16	154	140	94	81	61	52	43	43	35	30	59	32
17	145	135	89	81	61	51	45	43	34	30	42	32
18	140	132	88	80	75	51	60	43	34	31	37	35
19	135	128	87	79	93	49	47	43	33	30	36	36
20	128	122	85	80	66	49	96	42	37	29	35	33
21	123	120	86	77	194	50	65	42	38	30	34	31
22	120	119	87	76	120	50	56	43	34	30	33	32
23	486	113	84	75	84	49	127	43	33	37	33	34
24	849	111	82	74	74	49	92	45	33	38	33	36
25	256	112	83	73	73	49	59	43	32	33	33	118
26	605	114	80	72	71	49	53	42	32	32	32	45
27	630	112	79	71	65	48	51	62	31	32	32	34
28	245	109	79	69	64	49	48	87	31	32	31	33
29	202	107	78	69	------	48	48	54	32	36	38	33
30	186	107	82	70	------	47	52	46	34	36	32	34
31	173	------	81	68	------	47	------	45	------	30	31	------
TOTAL	28,539	3,987	2,771	2,651	2,130	1,700	1,603	1,472	1,767	981	1,369	1,057
MEAN	921	133	89.4	85.5	76.1	54.8	53.4	47.5	58.9	31.6	44.2	35.2
MAX	14,100	192	106	254	194	66	127	87	372	38	253	118
MIN	59	107	78	68	61	47	43	42	31	29	30	29
CFSM	4.54	.66	.44	.42	.37	.27	.26	.23	.29	.16	.22	.17
IN.	5.23	.73	.51	.49	.39	.31	.29	.27	.32	.18	.25	.19
AC-FT	56,610	7,910	5,500	5,260	4,220	3,370	3,180	2,920	3,500	1,950	2,720	2,100

CAL YR 1970 TOTAL 70,265 MEAN 193 MAX 14,100 MIN 35 CFSM .95 IN 12.88 AC-FT 139,400
WTR YR 1971 TOTAL 50,027 MEAN 137 MAX 14,100 MIN 29 CFSM .67 IN 9.17 AC-FT 99,230

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-8	1830	27.87	35,100	10-26	2200	16.03	2,510

07332500 Blue River near Blue, Okla.

LOCATION.--Lat 33°59'49", long 96°14'27", on line between secs. 27 and 34, T.6 S., R.10 E., Bryan County, near left bank on downstream side of pier of bridge on U. S. Highway 70, 1 mile west of Blue, 7 miles east of Durant, 7.7 miles upstream from Caddo Creek, and at mile 38.8.

DRAINAGE AREA.--476 sq mi.

PERIOD OF RECORD.--June 1936 to current year. Monthly discharge only for some periods, published in WSP 1311, 1731.

GAGE.--Water-stage recorder. Datum of gage is 503.36 ft above mean sea level. Prior to Mar. 13, 1945, non-recording gage and Mar. 13, 1945, to Feb. 2, 1960, water-stage recorder at site 1.2 miles downstream at datum 5.00 ft lower.

AVERAGE DISCHARGE.--35 years, 288 cfs (8.22 inches per year, 208,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14,700 cfs Oct. 10 (gage height, 29.45 ft); minimum, 18 cfs July 9, Aug. 25.
Period of record: Maximum discharge, 34,400 cfs Feb. 17, 1938 (gage height, 31.81 ft, site and datum then in use); no flow (estimated) Aug. 3, 4, 1936, result of regulation at fish hatchery, and no flow Sept. 19, to Oct. 16, 1956.

REMARKS.--Records good. Some regulation at low flow by State Fish Hatchery, 16 miles above station. Small diversion above station for municipal water supply of city of Durant.

COOPERATION.--Gage-height record, 28 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 957: 1938. WSP 1241: 1936, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	267	123	103	76	94	55	63	85	41	37	34
2	79	244	123	98	75	93	54	63	102	73	30	33
3	74	229	120	598	75	98	55	56	156	47	43	27
4	69	214	115	682	87	105	53	54	376	38	32	28
5	63	205	113	362	124	106	52	54	507	32	76	27
6	60	195	109	176	137	101	53	69	131	31	85	25
7	60	190	107	127	94	93	51	339	82	30	40	25
8	186	188	106	115	84	92	51	120	66	29	120	25
9	2,880	184	107	114	77	88	49	97	54	28	41	24
10	11,500	175	108	113	75	84	50	2,050	49	26	50	24
11	3,460	163	108	113	74	83	51	250	45	26	32	24
12	464	157	106	110	75	85	52	116	45	26	27	24
13	350	162	103	112	73	833	51	83	43	25	180	22
14	300	192	102	111	72	203	51	70	47	24	365	20
15	250	294	106	110	71	110	52	62	97	24	608	21
16	212	224	110	106	71	92	55	58	63	23	322	21
17	191	180	116	104	70	83	57	56	46	22	102	21
18	177	163	111	99	81	76	102	54	43	23	58	21
19	167	155	107	96	146	75	98	78	46	22	48	24
20	156	145	105	93	202	71	212	81	33	22	41	27
21	145	140	108	92	503	70	172	52	38	21	45	28
22	139	135	108	90	804	70	114	48	71	21	28	26
23	406	132	106	90	319	69	504	49	48	32	33	31
24	878	128	103	90	157	67	178	52	42	68	43	31
25	848	125	99	88	130	66	179	49	39	52	28	1,640
26	570	128	97	86	121	64	102	48	33	37	37	3,300
27	3,720	129	97	82	111	64	81	381	32	29	35	202
28	3,140	129	94	81	101	64	74	166	31	33	34	70
29	503	128	95	79	------	62	67	101	46	42	34	50
30	357	124	99	79	------	59	62	90	36	31	33	46
31	302	------	105	79	------	58	------	64	------	45	41	------
TOTAL	31,794	5,224	3,316	4,478	4,085	3,378	2,837	4,973	2,532	1,023	2,728	5,921
MEAN	1,026	174	107	144	146	109	94.6	160	84.4	33.0	88.0	197
MAX	11,500	294	123	682	804	833	504	2,050	507	73	608	3,300
MIN	60	124	94	79	70	58	49	48	31	21	27	20
AC-FT	63,060	10,360	6,580	8,880	8,100	6,700	5,630	9,860	5,020	2,030	5,410	11,740

CAL YR 1970 TOTAL 117,937 MEAN 323 MAX 11,500 MIN 27 AC-FT 233,900
WTR YR 1971 TOTAL 72,289 MEAN 198 MAX 11,500 MIN 20 AC-FT 143,400

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-10	0500	29.45	14,700	9-26	0415	22.02	5,140
10-27	2030	23.15	5,880				

07334000 Muddy Boggy Creek near Farris, Okla.

LOCATION.--Lat 34°16'17", long 95°54'43", in NE 1/4 NW 1/4 sec.26, T.3 S., R.13 E., Atoka County, on downstream side of left bank pier of main span of bridge on State Highway 3, 1.3 miles downstream from McGee Creek, 2.8 miles northwest of Farris, and at mile 57.7.

DRAINAGE AREA.--1,087 sq mi.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 444.58 ft above mean sea level. Prior to Mar. 13, 1945, non-recording gage, and Mar. 13, 1945, to Sept. 30, 1961, water-stage recorder at same site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--34 years, 871 cfs (631,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 27,600 cfs Apr. 20 ; maximum gage height, 42.50 ft Apr. 20; minimum discharge, 0.54 cfs July 22.
Period of record: Maximum discharge, 61,900 cfs June 17, 1945 (gage height, 44.94 ft, datum then in use), from rating curve extended above 37,000 cfs; no flow at times in many years.

REMARKS.--Records good. Some regulation since June 1959 by Atoka Reservoir (capacity, 125,000 acre-ft) on North Boggy Creek (drainage area, 176 sq mi); pipeline diversions to Oklahoma City since November 1963 (normal capacity, 60 mgd).

COOPERATION.--Gage-height records, 33 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	677	54	53	45	192	54	384	563	28	37	47
2	73	498	52	58	44	156	47	343	607	171	27	31
3	55	356	51	2,500	44	186	48	279	3,210	763	24	22
4	43	277	48	1,170	48	194	40	192	3,120	238	126	15
5	41	214	46	840	70	201	35	153	2,970	88	98	11
6	220	152	47	824	125	256	33	167	1,240	54	463	8.3
7	139	115	46	375	228	262	32	3,400	419	39	595	6.2
8	1,250	97	45	229	143	211	32	1,590	298	30	845	5.2
9	11,400	81	40	172	104	154	31	4,550	236	25	975	6.2
10	18,900	87	38	140	77	120	30	7,670	671	21	437	12
11	22,500	67	37	123	68	127	29	2,460	442	16	144	16
12	20,600	59	37	111	67	216	29	1,280	214	12	92	12
13	11,200	77	41	138	62	1,700	27	822	168	9.7	380	8.3
14	1,900	402	37	169	60	706	26	542	217	7.6	428	6.4
15	830	1,150	36	146	60	384	26	368	808	5.3	1,140	3.9
16	570	1,030	39	291	58	253	26	260	387	3.5	431	2.5
17	488	532	41	246	55	184	27	185	319	2.2	198	1.9
18	408	349	41	176	62	140	33	135	228	1.7	111	1.7
19	356	263	41	118	280	115	449	1,150	119	1.3	73	1.8
20	320	219	48	95	598	110	21,000	251	84	.90	51	1.9
21	299	171	60	85	1,660	88	8,710	111	63	.70	38	2.0
22	282	134	56	75	2,620	74	2,670	78	50	.70	31	2.1
23	385	231	51	67	1,980	66	5,090	64	42	81	27	3.1
24	5,180	178	47	64	1,070	60	4,060	54	71	281	29	3.8
25	6,260	91	49	62	644	58	3,870	672	57	111	24	300
26	7,380	72	49	59	426	53	1,550	1,130	41	117	20	2,020
27	10,600	68	53	55	323	49	701	1,690	33	117	16	1,020
28	5,230	63	50	53	244	80	513	2,040	29	60	12	242
29	2,170	59	45	51	------	88	425	1,580	28	46	10	99
30	1,220	56	44	50	------	69	466	480	27	79	8.7	58
31	860	------	48	47	------	62	------	231	------	60	71	------
TOTAL	131,261	7,925	1,417	8,642	11,265	6,614	50,109	34,311	16,761	2,470.60	6,961.7	3,970.3
MEAN	4,234	261	45.7	279	402	213	1,670	1,107	559	79.7	225	132
MAX	22,500	1,150	60	2,500	2,620	1,700	21,000	7,670	3,210	763	1,140	2,020
MIN	41	56	36	47	44	49	26	54	27	.70	8.7	1.7
AC-FT	260,400	15,520	2,810	17,140	22,340	13,120	99,390	68,060	33,250	4,900	13,810	7,880

CAL YR 1970 TOTAL 352,346.90 MEAN 965 MAX 22,500 MIN 0 AC-FT 698,900
WTR YR 1971 TOTAL 281,607.60 MEAN 772 MAX 22,500 MIN .70 AC-FT 558,600

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-11	1500	41.77	22,800	4-20	0600	42.50	27,600
10-26	2300	a32.15	12,500				

a At 0500 Oct. 27.

07334200 Byrds' Mill Spring near Fittstown, Okla.

LOCATION.--Lat 34°35'45", long 96°39'55", in SW 1/4 SW 1/4 sec.34, T.2 N., R.6 E., Pontotoc County, upstream from weir outlet of spring, 0.5 mile upstream from Big Spring Creek, 2 miles west of Fittstown, and 12 miles south of Ada.

PERIOD OF RECORD.--April 1959 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 1,022 ft (from ground-water survey map).

AVERAGE DISCHARGE.--12 years, 7.48 cfs (5,420 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14 cfs Oct. 29 to Nov. 8, minimum daily, 1.6 cfs Sept. 29.

Period of record: Maximum discharge, 30 cfs May 30, 1960 (gage height, 3.22 ft); no flow at times in 1959, 1964-67.

REMARKS.--Records good. Records do not include diversion of about 6 to 10 cfs by city of Ada for municipal water supply, a part of which is discharged as effluent to Sandy Creek, tributary to Canadian River.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	14	12	9.4	7.6	6.3	5.5	5.2	4.3	4.1	3.1	2.5
2	5.9	14	12	9.4	7.7	6.3	5.5	5.1	4.2	4.0	3.2	2.5
3	5.9	14	12	9.4	7.9	6.3	5.5	5.1	4.9	4.0	3.1	2.5
4	5.9	14	12	9.0	7.7	6.3	5.5	5.2	4.8	4.0	6.7	2.5
5	5.9	14	12	8.9	7.5	6.3	5.5	4.9	4.8	3.8	6.2	2.5
6	5.9	14	12	8.9	7.5	6.2	5.5	4.5	4.8	3.8	3.0	2.4
7	5.9	13	11	8.9	7.3	6.1	5.5	4.4	4.8	3.7	2.9	2.4
8	9.6	13	12	8.9	7.1	6.2	10	4.4	4.8	3.7	2.9	2.3
9	10	13	12	8.9	7.1	6.2	11	4.5	4.7	3.6	2.9	2.3
10	10	13	11	8.9	7.1	6.0	8.4	4.4	4.5	3.6	2.9	2.2
11	11	13	11	8.9	7.1	6.1	8.1	4.3	4.5	3.5	2.8	2.1
12	11	13	11	8.9	7.1	6.0	8.0	4.3	4.5	3.4	2.8	2.1
13	11	13	11	8.7	7.1	6.0	8.0	4.2	4.5	6.4	2.7	2.1
14	12	13	11	8.4	7.1	5.9	8.0	4.2	4.5	7.1	2.8	2.1
15	12	13	11	8.4	7.1	5.9	8.0	4.3	4.5	3.4	2.7	2.0
16	12	13	11	8.4	7.1	5.9	8.0	4.3	4.5	3.4	2.7	2.0
17	12	13	11	8.4	7.1	6.0	8.0	4.3	4.5	3.4	2.7	2.0
18	12	13	10	8.4	7.1	6.0	8.0	4.2	4.5	3.5	2.7	2.0
19	12	13	10	8.4	7.1	5.9	8.0	4.1	4.4	3.5	2.7	2.0
20	12	13	10	8.3	7.1	5.9	8.0	4.1	4.4	3.5	2.7	1.9
21	12	13	10	8.2	7.0	6.0	8.0	4.1	4.5	3.4	2.7	1.9
22	12	13	10	8.1	6.7	5.9	6.8	4.2	4.4	3.5	2.7	1.9
23	13	13	9.9	8.0	6.7	5.9	5.2	4.1	4.5	3.5	2.7	1.8
24	13	13	10	8.0	6.7	5.9	5.2	4.0	4.5	3.4	2.7	1.8
25	13	13	9.9	8.0	6.6	5.9	5.2	4.0	4.4	3.4	2.7	1.9
26	13	13	9.9	8.0	6.4	5.8	5.3	4.1	4.4	3.3	2.7	1.9
27	13	12	9.9	8.0	6.3	5.8	5.2	4.4	4.3	3.2	2.7	1.8
28	13	12	9.9	8.0	6.3	5.7	5.2	4.4	4.3	3.2	2.6	1.7
29	13	12	9.9	8.0	------	5.5	5.2	4.4	4.3	3.2	2.6	1.6
30	14	12	9.9	8.0	------	5.5	5.2	4.3	4.3	3.2	2.6	1.7
31	14	------	9.7	8.0	------	5.5	------	4.3	------	3.2	2.6	------
TOTAL	330.9	392	334.0	264.1	198.2	185.2	204.5	136.3	135.3	115.9	93.5	62.4
MEAN	10.7	13.1	10.8	8.52	7.08	5.97	6.82	4.40	4.51	3.74	3.02	2.08
MAX	14	14	12	9.4	7.9	6.3	11	5.2	4.9	7.1	6.7	2.5
MIN	5.9	12	9.7	8.0	6.3	5.5	5.2	4.0	4.2	3.2	2.6	1.6
AC-FT	656	778	662	524	393	367	406	270	268	230	185	124

CAL YR 1970 TOTAL 3,471.8 MEAN 9.51 MAX 17 MIN 4.3 AC-FT 6,890
WTR YR 1971 TOTAL 2,452.3 MEAN 6.72 MAX 14 MIN 1.6 AC-FT 4,860

0733500 Clear Boggy Creek near Caney, Okla.

LOCATION.--Lat 34°15'09", long 96°12'19", in NW 1/4 SE 1/4 sec.36, T.3 S., R.10 E., Atoka County, on downstream side of left pier of bridge on old U. S. Highways 69 and 75, 0.5 mile downstream from Caney Creek, 1.5 miles north of Caney, and at mile 24.1.

DRAINAGE AREA.--720 sq mi.

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 485.05 ft above mean sea level. Prior to Mar. 13, 1945, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 467 cfs (8.81 inches per year, 338,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19,500 cfs Oct. 9 (gage height, 24.25 ft); minimum, 9.0 cfs July 21.
Period of record: Maximum discharge, 52,800 cfs Dec. 11, 1946 (gage height, 26.77 ft); no flow at times in 1954, 1956, 1964.
Flood in February 1938 reached a stage of 26.9 ft, from information by local resident.

REMARKS.--Records good. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 33 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	599	100	83	63	145	71	237	456	27	18	33
2	128	509	98	82	61	135	58	189	453	62	18	31
3	104	436	100	286	61	141	53	155	1,780	85	20	29
4	87	376	95	231	69	142	63	134	2,480	69	20	28
5	73	325	93	271	138	148	53	118	1,120	47	26	26
6	63	286	90	185	216	157	48	112	564	33	37	25
7	58	254	86	143	142	147	45	345	464	27	173	24
8	1,270	226	82	125	111	133	44	184	411	21	473	22
9	12,000	198	81	111	93	123	43	310	277	18	193	21
10	16,000	174	85	116	83	115	44	1,370	243	17	135	20
11	9,880	161	83	104	80	108	45	508	163	16	96	19
12	5,560	151	81	97	79	105	49	275	129	15	169	17
13	3,340	151	78	94	73	209	45	254	114	13	235	16
14	2,260	186	77	93	70	146	42	157	463	11	434	13
15	1,990	318	79	91	67	116	39	121	641	9.4	2,120	11
16	1,770	359	86	94	66	103	40	93	197	9.4	706	11
17	1,610	249	88	92	65	91	41	82	116	9.4	329	13
18	1,490	206	88	85	68	83	242	89	87	9.4	227	17
19	1,360	187	87	82	314	74	298	179	69	9.4	172	18
20	1,220	168	86	79	229	70	1,490	85	57	9.4	125	21
21	1,040	150	86	76	408	66	908	78	60	9.0	95	22
22	889	139	85	75	1,170	63	564	64	55	17	74	23
23	846	123	85	73	706	62	832	55	51	34	59	30
24	2,380	106	83	73	392	62	1,600	48	48	30	47	32
25	3,170	101	81	71	280	63	737	129	44	14	38	610
26	2,660	102	81	69	232	65	480	158	40	12	33	1,230
27	4,960	108	81	67	194	72	372	2,390	37	19	31	283
28	2,550	110	77	66	164	123	293	2,090	34	20	29	137
29	1,230	110	75	69	------	131	240	723	30	22	28	91
30	901	105	78	67	------	121	244	432	28	17	26	63
31	711	------	83	65	------	111	------	334	------	18	35	------
TOTAL	82,158	6,673	2,638	3,315	5,694	3,430	9,123	11,498	10,711	729.4	6,221	2,936
MEAN	2,650	222	85.1	107	203	111	304	371	357	23.5	201	97.9
MAX	16,000	599	100	286	1,170	209	1,600	2,390	2,480	85	2,120	1,230
MIN	58	101	75	65	61	62	39	48	28	9.0	18	11
AC-FT	163,000	13,240	5,230	6,580	11,290	6,800	18,100	22,810	21,250	1,450	12,340	5,820

CAL YR 1970 TOTAL 209,811.1 MEAN 575 MAX 16,000 MIN 8.8 AC-FT 416,200
WTR YR 1971 TOTAL 145,126.4 MEAN 398 MAX 16,000 MIN 9.0 AC-FT 287,900

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-9	2400	24.25	19,500	10-27	0730	21.87	6,240

07335500 Red River at Arthur City, Tex.

LOCATION.--Lat 33°52'32", long 95°30'08", in NW 1/4 sec.11, T.8 S., R.17 E., Choctaw County, Okla., near right bank on downstream side of pier of bridge on U. S. Highway 271 at Arthur City, 10.6 miles downstream from Muddy Boggy River, 26.0 miles upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,531 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of U. S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft above mean sea level. 1905-11, nonrecording gage at St. Louis-San Francisco Railway Co. bridge 200 ft upstream at same datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--41 years, 8,048 cfs (5,831,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 28,100 cfs Oct. 15 (gage height, 16.0o ft); minimum, 295 cfs Sept. 22 (gage height, 3.85 ft).
Period of record: Maximum discharge, about 400,000 cfs May 28, 1908 (gage height, 43.2 ft), from rating curve extended above 41,000 cfs on basis of records for later years; minimum, 130 cfs Dec. 11, 12, 1956 (gage height, 4.49 ft).

REMARKS.--Records good. Flow regulated since October 1943 by Lake Texoma, 92.8 miles above station (see sta. 07331500).

COOPERATION.--Gage-height record, 36 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1241: Drainage area. WSP 1311: 1906-11.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,590	8,530	3,110	6,390	1,060	2,190	2,130	3,360	3,900	2,260	2,510	1,640
2	2,390	4,320	2,820	6,300	757	2,460	2,020	2,980	2,740	4,110	1,270	1,440
3	2,220	2,660	3,880	6,440	818	2,860	1,120	2,550	3,070	4,410	741	827
4	1,090	2,380	3,830	9,180	1,090	5,630	813	2,100	6,020	3,750	576	907
5	827	2,400	3,970	12,300	1,090	5,570	715	2,660	8,200	3,390	581	726
6	801	1,720	4,180	9,870	931	4,700	694	2,090	7,120	2,590	2,220	1,250
7	914	1,460	3,470	8,300	839	3,340	2,950	1,960	5,820	2,740	1,930	1,430
8	2,580	1,330	2,290	7,280	1,070	2,150	4,190	4,770	2,790	3,780	1,960	1,300
9	3,620	1,750	2,350	7,360	1,690	1,810	4,350	6,320	2,980	3,990	1,620	1,910
10	8,220	1,460	3,770	7,300	3,540	1,550	3,350	5,270	2,460	3,560	3,410	2,180
11	11,500	1,230	3,510	3,990	2,850	1,550	1,700	8,600	1,670	1,260	3,830	1,650
12	20,700	1,310	3,590	2,530	2,580	1,670	907	10,900	2,130	719	4,650	774
13	23,400	1,980	3,740	3,080	4,120	2,410	643	8,010	1,650	1,890	5,560	404
14	24,400	5,040	2,900	3,830	2,590	4,020	512	3,430	1,500	1,020	5,550	731
15	26,900	6,790	1,980	3,100	1,450	5,110	483	2,150	2,540	2,730	4,760	610
16	22,400	4,770	1,560	2,780	1,140	3,290	1,150	1,560	2,410	3,550	4,730	866
17	17,300	3,730	2,760	2,330	1,400	1,960	918	1,230	2,730	3,220	6,270	1,420
18	13,500	4,990	4,000	2,480	1,070	1,680	1,380	1,010	2,000	3,720	4,690	1,270
19	8,580	5,560	5,160	1,810	1,240	1,620	1,650	2,450	2,550	4,170	3,310	720
20	4,150	5,730	5,370	1,630	2,380	1,540	1,580	3,920	3,260	3,630	3,930	392
21	2,980	6,070	4,360	3,050	3,360	1,320	6,430	3,360	2,050	2,950	4,110	320
22	2,710	6,800	5,320	4,400	7,330	1,750	14,100	2,920	1,890	4,080	3,930	344
23	3,140	3,990	5,690	3,590	11,300	1,600	17,500	2,940	1,340	3,530	4,770	410
24	3,420	2,160	5,990	2,320	9,230	1,310	16,400	2,760	895	1,520	4,700	392
25	7,040	2,730	5,760	1,890	7,650	1,410	13,900	1,520	631	1,860	4,760	434
26	8,500	4,870	5,040	1,290	5,050	2,140	11,200	1,600	573	1,560	4,540	518
27	8,740	5,410	5,660	1,050	3,590	2,860	9,290	2,860	994	1,020	3,100	5,660
28	12,800	3,300	5,410	1,370	3,210	2,750	6,370	5,190	1,210	1,360	1,340	8,200
29	16,800	2,020	5,400	1,550	------	2,480	5,950	8,290	2,500	5,200	2,830	4,140
30	15,500	2,860	6,350	2,200	------	2,550	4,690	7,560	1,540	4,230	2,860	2,880
31	11,500	------	6,900	2,420	------	1,570	------	5,260	------	2,230	2,550	------
TOTAL	290,212	109,350	130,120	133,410	84,425	78,850	139,085	121,580	81,163	90,029	103,588	45,745
MEAN	9,362	3,645	4,197	4,304	3,015	2,544	4,636	3,922	2,705	2,904	3,342	1,525
MAX	26,900	8,530	6,900	12,300	11,300	5,630	17,500	10,900	8,200	5,200	6,270	8,200
MIN	801	1,230	1,560	1,050	757	1,310	483	1,010	573	719	576	320
AC-FT	575,600	216,900	258,100	264,600	167,500	156,400	275,900	241,200	161,000	178,600	205,500	90,740

CAL YR 1970 TOTAL 2,294,573 MEAN 6,287 MAX 41,800 MIN 696 AC-FT 4,551,000
WTR YR 1971 TOTAL 1,407,557 MEAN 3,856 MAX 26,900 MIN 320 AC-FT 2,792,000
PEAK DISCHARGE (BASE, 50,000 CFS).--No peak above base.

07335700 Kiamichi River near Big Cedar, Okla.

(Hydrologic bench mark station)

LOCATION.--Lat 34°38'18", long 94°36'45", in SW 1/4 SE 1/4 sec.18, T.2 N., R.26 E., LeFlore County, in Ouachita National Forest, on downstream side of right bank pier of bridge on State Highway 63, 0.2 mile upstream from Rattlesnake Creek, 1.1 miles upstream from Big Branch, 2.1 miles east of Big Cedar, and at mile 157.6.

DRAINAGE AREA.--40.1 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 886.97 ft above mean sea level (State Highway Department bench mark).

AVERAGE DISCHARGE.-- 6 years, 72.8 cfs (24.7 inches per year, 52,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,700 cfs Oct. 27 (gage height, 15.56 ft); minimum, 0.30 cfs July 16, 17.
Period of record: Maximum discharge, 16,300 cfs Oct. 30, 1967 (gage height, 16.16 ft), from rating curve extended above 9,000 cfs; no flow at times in most years.

REMARKS.--Records good. Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	109	19	31	29	57	24	40	89	3.5	31	4.7
2	21	99	18	29	26	57	23	31	47	3.8	26	4.3
3	16	74	17	264	25	68	22	28	100	2.8	36	4.3
4	13	56	16	304	82	64	20	25	82	2.2	26	4.2
5	11	42	15	183	106	66	19	22	59	1.8	57	3.5
6	16	36	14	130	87	72	18	58	43	1.6	97	3.1
7	18	31	14	94	75	67	17	352	33	1.5	85	2.8
8	23	91	13	74	60	61	16	175	34	1.3	60	2.3
9	46	213	13	62	54	64	16	144	37	1.1	43	2.0
10	46	142	13	53	41	80	15	224	25	1.0	30	1.9
11	95	112	13	43	41	62	15	193	20	1.3	26	1.7
12	243	91	12	35	140	89	14	201	16	1.0	43	1.5
13	151	82	12	115	148	361	14	165	13	.77	47	1.4
14	105	111	11	167	128	216	13	123	12	.59	31	1.3
15	75	95	14	136	108	157	13	92	12	.41	25	1.2
16	54	88	26	117	88	123	12	68	9.2	.33	21	1.0
17	42	80	25	105	69	100	12	54	7.5	1.3	17	.92
18	34	72	24	90	67	83	24	44	6.2	1.5	14	.83
19	27	62	24	77	110	68	31	45	5.2	1.2	11	.97
20	22	52	26	68	81	55	353	34	4.7	1.0	8.8	1.1
21	18	43	130	62	116	48	214	26	4.2	.87	7.3	.88
22	16	40	244	58	145	43	225	22	4.0	.90	6.6	.78
23	449	33	184	60	126	38	1,540	21	3.7	36	7.1	.80
24	368	29	134	71	111	32	276	36	3.6	74	7.5	.86
25	181	27	106	57	97	40	169	23	3.2	33	11	1.1
26	1,290	26	81	50	87	38	119	18	2.8	81	7.4	1.2
27	2,530	25	66	44	70	31	87	28	2.6	50	6.1	1.1
28	479	23	56	41	59	29	61	22	2.5	287	8.0	1.1
29	252	22	46	37	------	28	64	18	2.4	151	6.8	1.1
30	177	20	41	36	------	25	52	15	2.9	77	5.8	1.0
31	135	------	37	33	------	24	------	13	------	45	5.2	------
TOTAL	6,981	2,026	1,464	2,726	2,376	2,346	3,498	2,360	686.7	865.77	813.6	54.94
MEAN	225	67.5	47.2	87.9	84.9	75.7	117	76.1	22.9	27.9	26.2	1.83
MAX	2,530	213	244	304	148	361	1,540	352	100	287	97	4.7
MIN	11	20	11	29	25	24	12	13	2.4	.33	5.2	.78
CFSM	5.61	1.68	1.18	2.19	2.12	1.89	2.92	1.90	.57	.70	.65	.05
IN.	6.48	1.88	1.36	2.53	2.20	2.18	3.25	2.19	.64	.80	.75	.05
AC-FT	13,850	4,020	2,900	5,410	4,710	4,650	6,940	4,680	1,360	1,720	1,610	109

CAL YR 1970 TOTAL 27,201.89 MEAN 74.5 MAX 2,530 MIN 0 CFSM 1.86 IN 25.23 AC-FT 53,950
WTR YR 1971 TOTAL 26,198.01 MEAN 71.8 MAX 2,530 MIN .33 CFSM 1.79 IN 24.30 AC-FT 51,960

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-27	0115	15.56	13,700	4-23	0130	13.15	7,120

07336500 Kiamichi River near Belzoni, Okla.

LOCATION.--Lat 34°12'02", long 95°29'03", in SE 1/4 sec.14, T.4 S., R.17 E., Pushmataha County, near left bank on downstream side of pier of bridge on State Highway 7, 1.8 miles northwest of Belzoni, 6.5 miles downstream from Cedar Creek, 10 miles upstream from Possum Creek, and at mile 47.7.

DRAINAGE AREA.--1,423 sq mi.

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 389.91 ft above mean sea level. Prior to Aug. 14, 1940, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 1,702 cfs (16.24 inches per year, 1,233,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,200 cfs Oct. 27 maximum gage height, 28.00 ft; minimum discharge, 9.1 cfs July 22.
Period of record: Maximum discharge, 71,400 cfs Feb. 18, 1938, (gage height, 44.0 ft); no flow at times in many years.
Flood in October 1915 reached a stage of 44.2 ft, from information by local residents.

REMARKS.--Records good. Small diversion above station for municipal water supply of city of Antlers.

COOPERATION.--Gage-height record, 30 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1037: 1927-28, 1938. WSP 1211: Drainage area. WSP 1241: 1926(M), 1931(M), 1936.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	514	1,510	400	402	350	1,130	339	1,160	299	60	275	53
2	394	1,150	300	366	333	1,040	316	880	302	113	229	48
3	296	940	262	3,980	312	1,130	285	680	832	418	202	44
4	283	815	252	10,200	336	1,340	271	570	2,170	129	184	38
5	227	690	236	6,490	442	1,460	250	510	1,350	85	262	34
6	199	595	221	3,050	680	1,280	238	454	780	64	406	30
7	182	518	204	2,000	730	1,070	223	1,260	518	54	706	26
8	273	458	189	1,520	610	930	208	4,070	390	47	1,190	22
9	2,250	426	182	1,190	526	855	199	2,860	309	44	830	19
10	2,750	595	179	1,040	470	1,100	190	8,340	312	39	630	38
11	1,280	840	168	930	434	1,130	184	5,390	386	34	418	67
12	1,680	640	162	830	680	1,040	170	2,770	309	29	316	55
13	3,550	590	155	1,160	980	1,700	160	1,760	238	25	528	47
14	2,140	1,550	151	2,000	1,460	2,770	152	1,280	223	23	319	38
15	1,340	2,990	153	2,700	1,040	2,440	145	1,010	285	19	333	30
16	965	2,330	177	1,820	830	1,700	143	780	316	17	295	24
17	715	1,510	184	1,340	730	1,220	138	630	268	15	259	19
18	564	1,150	184	1,100	655	980	170	518	205	13	250	16
19	470	965	186	930	4,240	805	235	454	162	11	187	13
20	398	790	196	780	3,280	705	1,280	466	131	10	131	13
21	342	640	358	680	5,090	620	10,600	458	111	9.5	107	12
22	303	530	534	625	10,700	550	8,480	367	95	11	89	10
23	2,100	454	915	570	6,630	502	13,200	309	83	67	78	12
24	15,000	370	1,020	535	3,580	462	15,100	285	74	510	77	12
25	16,500	390	815	540	2,500	426	8,550	250	65	319	71	14
26	6,700	1,720	640	575	2,060	406	3,060	214	60	360	95	55
27	18,900	1,600	546	535	1,640	438	2,120	355	54	370	105	80
28	12,300	1,040	486	458	1,340	486	1,580	941	51	262	117	57
29	8,440	700	438	414	------	462	1,220	478	111	238	89	39
30	3,330	500	414	386	------	410	1,520	356	91	282	74	29
31	2,080	------	426	370	------	370	------	295	------	333	62	------
TOTAL	106,465	28,996	10,733	49,516	52,658	30,957	70,726	40,150	10,580	4,010.5	8,914	994
MEAN	3,434	967	346	1,597	1,881	999	2,358	1,295	353	129	288	33.1
MAX	18,900	2,990	1,020	10,200	10,700	2,770	15,100	8,340	2,170	510	1,190	80
MIN	182	370	151	366	312	370	138	214	51	9.5	62	10
CFSM	2.41	.68	.24	1.12	1.32	.70	1.66	.91	.25	.09	.20	.02
IN.	2.78	.76	.28	1.29	1.38	.81	1.85	1.05	.28	.10	.23	.03
AC-FT	211,200	57,510	21,290	98,210	104,400	61,400	140,300	79,640	20,990	7,950	17,680	1,970

CAL YR 1970 TOTAL 596,392.30 MEAN 1,634 MAX 23,400 MIN .10 CFSM 1.15 IN 15.59 AC-FT 1,183,000
WTR YR 1971 TOTAL 414,699.50 MEAN 1,136 MAX 18,900 MIN 9.5 CFSM .80 IN 10.84 AC-FT 822,600

PEAK DISCHARGE (BASE, 18,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-27	0700	28.00	21,200				

07336820 Red River near De Kalb, Tex.

LOCATION.--Lat 33°41'15", long 94°41'39", Bowie (Tex.)-McCurtain (Okla.) County line, near left bank at downstream side of bridge on U.S. Highway 259, 4.8 miles upstream from North Mill Creek, 13 miles north of De Kalb, and at mile 556.9.

DRAINAGE AREA.--47,348 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 31,200 cfs Oct. 30 (gage height, 18.93 ft); minimum, 615 cfs Sept. 23 (gage height, 9.15 ft).
Period of record: Maximum discharge, 112,200 cfs May 9, 1969 (gage height, 27.38 ft); maximum gage height, 29.00 ft May 19, 1968; minimum discharge, 615 cfs Sept. 23, 1971.
Maximum stage since 1957, 32.2 ft in June 1957. Greatest flood since 1936 occurred in February 1938, stage unknown.

REMARKS.--Records good. Flow partly regulated by Lake Texoma (station 07331500), approximately 169 miles upstream. Water-quality records for the current year are published in Part 2 of the Texas State report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,060	18,200	2,830	7,360	2,430	5,900	3,160	6,360	5,900	1,940	4,290	3,080
2	3,250	13,800	3,420	7,620	2,350	5,060	2,510	5,060	4,480	1,690	3,160	2,510
3	2,830	9,640	3,250	7,360	1,610	4,670	2,670	4,290	3,590	2,040	2,750	1,850
4	2,830	6,600	3,340	8,460	1,340	4,760	2,510	3,760	3,080	3,500	1,720	1,750
5	2,350	5,260	3,590	15,300	1,410	5,900	1,860	3,340	4,020	3,850	1,140	1,140
6	1,890	4,760	3,850	19,700	1,750	7,360	1,470	3,160	7,100	3,420	960	1,340
7	1,620	4,290	3,850	15,500	1,920	6,840	1,260	3,250	7,360	2,910	960	1,300
8	1,620	3,760	3,930	12,300	1,850	5,900	1,320	2,830	6,360	2,350	1,850	1,370
9	1,820	3,590	3,340	10,900	1,840	4,380	2,670	4,020	4,860	2,350	2,270	1,580
10	3,080	3,420	2,430	9,940	1,850	3,680	3,930	9,940	3,340	3,000	2,670	1,530
11	6,360	3,500	2,510	9,640	2,270	3,340	4,020	12,600	3,160	3,250	2,350	1,910
12	11,600	3,250	3,420	7,620	4,110	3,420	3,160	16,800	2,670	2,830	3,420	2,120
13	21,200	3,250	3,340	4,960	4,480	5,900	2,120	17,300	2,270	1,570	3,760	1,860
14	25,700	4,290	3,340	4,960	4,580	7,620	1,320	13,000	2,350	984	4,290	1,340
15	26,900	6,840	3,420	6,600	5,470	7,360	960	7,620	2,040	1,360	5,470	864
16	27,500	9,940	2,830	6,840	4,200	8,740	864	4,860	1,970	1,200	5,470	840
17	23,900	10,300	1,970	6,120	3,080	7,620	828	3,590	2,510	1,970	4,860	960
18	19,200	8,180	1,680	5,060	2,430	5,470	1,240	3,080	2,670	2,830	5,260	888
19	15,500	6,840	2,510	4,110	2,350	4,020	1,610	2,590	2,670	2,830	5,680	1,270
20	11,600	7,620	3,590	3,590	2,510	3,590	2,120	2,200	2,200	3,080	4,880	1,400
21	6,840	7,360	5,060	2,910	5,680	3,340	2,510	3,160	2,510	3,500	3,590	1,140
22	4,760	7,620	5,900	2,590	7,360	3,080	9,040	3,930	2,910	3,420	3,760	713
23	4,020	7,620	6,360	4,020	13,800	2,910	23,500	3,590	2,270	3,160	3,930	626
24	4,200	6,840	6,840	4,860	20,200	2,910	27,500	3,680	1,910	4,020	3,850	637
25	8,670	4,290	7,620	3,850	16,800	2,750	28,700	3,760	1,480	3,500	4,480	725
26	18,200	3,250	7,620	3,000	13,400	2,430	27,500	3,160	1,090	2,590	4,480	681
27	24,500	3,930	6,840	2,270	10,600	2,510	19,700	2,510	725	3,160	4,580	637
28	24,500	5,260	6,600	1,960	7,360	3,160	13,400	2,830	659	2,830	3,500	725
29	29,300	5,260	6,600	1,750	------	3,590	8,740	3,780	792	2,120	2,750	3,930
30	30,500	3,590	6,360	1,920	------	3,590	6,840	6,120	1,080	3,120	2,430	6,120
31	24,500	------	6,360	1,780	------	3,340	------	7,360	------	5,260	2,670	------
TOTAL	395,800	192,350	134,600	204,850	149,030	145,140	209,032	173,530	90,026	85,634	107,230	46,836
MEAN	12,770	6,412	4,342	6,608	5,323	4,682	6,968	5,598	3,001	2,762	3,459	1,561
MAX	30,500	18,200	7,620	19,700	20,200	8,740	28,700	17,300	7,360	5,260	5,680	6,120
MIN	1,620	3,250	1,680	1,750	1,340	2,430	828	2,200	659	984	960	626
AC-FT	785,100	381,500	267,000	406,300	295,600	287,900	414,600	344,200	178,600	169,900	212,700	92,900

CAL YR 1970 TOTAL 3,200,880 MEAN 8,770 MAX 66,600 MIN 1,180 AC-FT 6,349,000
WTR YR 1971 TOTAL 1,934,058 MEAN 5,299 MAX 30,500 MIN 626 AC-FT 3,836,000

07337000 Red River at Index, Ark.

LOCATION.--Lat 33°33'07", long 94°02'28", in NW 1/4 SW 1/4 sec.7, T.14 S., R.28 W., Miller County, near right bank on downstream side of bridge on U.S. Highway 71 at Index, 2.2 miles south of Ogden, 20.6 miles upstream from Little River, and at mile 485.3.

DRAINAGE AREA.--48,030 sq mi, of which 5,936 sq mi is probably noncontributing.

PERIOD OF RECORD.--July 1936 to current year. Gage-height records collected at same site since 1917 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 246.87 ft above mean sea level. Prior to Dec. 12, 1939, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--35 years, 11,720 cfs (8,491,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 27,800 cfs Oct. 30 (gage height, 12.99 ft); minimum, 976 cfs Sept. 30.
Period of record: Maximum discharge, 297,000 cfs Feb. 23, 1938 (gage height, 34.25 ft); minimum, 378 cfs Nov. 28, 1956.

REMARKS.--Records good. Some regulation since Oct. 31, 1943, by Lake Texoma (Texas), 241 miles upstream (capacity, 5,392,900 acre-ft). Records of chemical analyses for the current year are published in Part 2 of the Arkansas State report.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,300	21,400	4,170	5,800	2,300	8,340	3,020	8,600	7,360	1,400	4,000	2,420
2	7,840	16,800	3,160	6,220	2,360	6,880	2,880	7,360	7,360	1,690	5,000	2,880
3	5,200	13,500	3,020	6,660	2,810	6,440	2,540	6,440	5,800	2,060	4,260	2,810
4	3,520	10,300	3,230	6,880	2,600	5,600	2,360	5,200	4,440	1,960	3,440	2,360
5	3,160	7,360	3,020	7,360	2,180	5,400	2,420	4,440	3,600	2,300	2,810	2,010
6	3,020	5,600	3,300	14,900	2,060	5,600	2,180	3,920	3,370	3,370	2,480	1,790
7	2,540	4,800	3,520	18,000	2,060	6,880	1,840	3,520	5,560	3,440	2,670	1,490
8	2,360	4,620	3,600	14,500	2,240	7,600	1,640	3,300	8,080	3,160	2,060	1,400
9	2,060	4,080	3,680	11,500	2,300	6,660	1,490	3,160	7,840	2,670	1,790	1,320
10	1,960	3,600	3,600	9,960	2,240	5,400	1,590	3,370	6,660	2,300	2,180	1,400
11	2,360	3,520	2,880	9,120	2,240	4,170	2,670	8,100	4,800	2,480	2,420	1,590
12	5,260	3,300	2,480	8,860	3,020	3,760	3,370	13,500	3,680	2,880	2,480	1,590
13	11,600	3,370	2,810	8,080	4,260	7,840	3,300	16,800	3,370	3,020	2,540	1,790
14	20,600	3,600	3,230	6,000	5,000	11,200	2,670	16,800	2,950	2,420	3,300	1,900
15	24,800	3,680	3,300	4,800	4,800	11,200	1,960	14,100	2,740	1,690	3,840	1,690
16	25,800	5,400	3,370	5,600	5,200	9,680	1,590	9,960	2,600	1,400	4,620	1,400
17	25,300	8,600	3,300	6,220	5,000	9,120	1,400	6,880	2,360	1,590	5,600	1,160
18	21,900	9,960	2,600	6,220	3,920	9,120	1,320	5,000	2,420	1,490	5,600	1,160
19	18,400	8,600	2,180	5,400	3,160	6,880	1,320	3,920	2,670	2,120	5,000	1,160
20	15,600	6,880	2,120	4,620	2,880	5,000	1,540	3,300	2,880	2,540	5,600	1,090
21	12,800	6,660	3,370	4,080	2,810	3,920	1,790	2,880	2,740	2,670	5,600	1,320
22	9,120	7,120	4,170	3,600	4,270	3,440	2,120	2,810	2,540	2,950	4,350	1,490
23	6,440	6,880	5,000	3,160	6,880	3,160	5,700	3,520	2,880	3,230	3,840	1,320
24	5,000	7,120	5,600	3,370	13,900	2,950	20,800	3,840	2,880	3,600	4,170	1,090
25	4,620	6,880	6,000	4,440	18,400	2,880	24,300	3,600	2,420	4,350	4,620	1,030
26	7,920	5,200	6,660	4,350	15,200	2,810	25,300	3,760	2,120	4,260	4,260	1,030
27	17,400	3,760	7,120	3,520	12,400	2,600	22,800	3,760	1,790	3,300	4,620	1,030
28	22,800	3,300	6,660	3,020	10,900	2,420	22,400	3,160	1,540	3,160	5,000	1,030
29	23,300	4,260	6,000	2,600	------	2,480	13,800	2,740	1,400	3,920	4,620	1,030
30	26,800	4,800	6,000	2,360	------	2,880	10,600	3,020	1,320	3,600	3,920	1,320
31	26,800	------	5,800	2,240	------	3,090	------	4,770	------	3,020	2,740	------
TOTAL	376,580	204,950	124,950	203,440	147,390	175,400	192,710	185,530	112,170	84,040	119,430	46,100
MEAN	12,150	6,832	4,031	6,563	5,264	5,658	6,424	5,985	3,739	2,711	3,853	1,537
MAX	26,800	21,400	7,120	18,000	18,400	11,200	25,300	16,800	8,080	4,350	5,600	2,880
MIN	1,960	3,300	2,120	2,240	2,060	2,420	1,320	2,740	1,320	1,400	1,790	1,030
AC-FT	746,900	406,500	247,800	403,500	292,300	347,900	382,200	368,000	222,500	166,700	236,900	91,440

CAL YR 1970 TOTAL 3,501,800 MEAN 9,594 MAX 62,700 MIN 1,810 AC-FT 6,946,000
WTR YR 1971 TOTAL 1,972,690 MEAN 5,405 MAX 26,800 MIN 1,030 AC-FT 3,913,000

07337300 Pine Creek Lake near Wright City, Okla.
(Formerly published as Pine Creek Reservoir near Wright City)

LOCATION.--Lat 34°06'43", long 95°04'46", in NE 1/4 NW 1/4 sec.23, T.5 S., R.21 E., McCurtain County, at left of outlet works of dam on Little River, 4.7 miles upstream from bridge on State Highway 98, 5 miles northwest of Wright City, and at mile 145.3.

DRAINAGE AREA.--635 sq mi.

PERIOD OF RECORD.--June 1969 to current year. Prior to October 1970 published as Pine Creek Reservoir near Wright City.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 121,610 acre-ft Oct. 28 (elevation, 450.84 ft); minimum since conservation pool was first filled, 50,710 acre-ft Oct. 19 (elevation, 437.17 ft).
Period of record: Maximum contents, 126,800 acre-ft May 2, 1970 (elevation, 451.64 ft); minimum since conservation pool was first filled, 46,550 acre-ft Aug. 19, 1970 (elevation, 435.97 ft).

REMARKS.--Reservoir is formed by rolled earth dam; regulated storage began June 1, 1969; conservation pool was first filled Jan. 7, 1970. Total capacity, 1,136,000 acre-ft at elevation 509.0 ft (top of dam), 465,800 acre-ft at elevation 480.0 ft (crest of spillway), 53,800 acre-ft at elevation 438.0 ft (top of conservation pool), 7,140 acre-ft dead storage at elevation 414.0 ft. Figures given herein represent total contents. Reservoir is designed for flood control, municipal and industrial water supply, and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

437	50,100	447	96,650
440	61,680	449	108,900
443	75,230	451	122,300

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54,580	103,400	54,200	53,560	53,490	54,240	54,130	54,430	53,830	53,830	68,110	57,610
2	52,340	96,880	54,130	53,380	53,600	53,980	54,090	54,280	53,750	53,940	68,430	56,310
3	52,120	90,130	53,940	55,580	53,860	53,750	54,090	53,940	55,310	54,010	68,930	55,500
4	52,010	83,740	53,900	56,350	54,620	53,680	53,980	53,860	56,240	54,280	69,570	55,230
5	51,790	77,350	54,090	58,810	54,850	54,050	53,940	54,090	55,930	54,350	70,120	54,700
6	51,860	71,050	54,090	60,770	55,960	54,200	54,900	54,240	54,930	54,470	72,030	54,390
7	51,790	64,620	54,130	58,850	56,390	54,280	53,830	54,170	54,350	54,510	75,230	54,010
8	52,230	58,490	54,200	58,890	56,510	54,240	53,790	54,660	54,090	54,510	77,300	53,830
9	54,200	53,790	54,320	58,810	55,960	54,240	53,860	56,080	53,830	54,510	78,350	53,790
10	54,240	52,340	54,430	58,410	55,460	54,240	53,900	57,850	53,900	54,510	76,310	53,750
11	57,410	53,040	54,390	57,770	55,420	54,510	53,980	58,530	53,940	54,470	69,570	53,640
12	68,840	53,380	54,350	57,100	55,230	55,460	54,090	58,170	53,940	54,470	64,660	53,560
13	69,750	54,280	54,350	58,010	54,930	58,650	54,090	57,250	53,900	54,350	63,800	53,450
14	63,330	55,810	54,390	59,780	55,040	61,510	54,010	56,700	53,680	54,320	62,860	53,380
15	64,060	57,490	54,700	59,780	54,620	61,680	54,090	56,120	53,560	54,280	61,980	53,300
16	57,650	58,050	54,810	58,770	53,980	60,070	54,090	55,310	53,380	54,130	60,850	53,270
17	54,130	58,010	54,930	57,330	53,560	58,130	54,200	54,770	53,410	53,940	60,230	53,190
18	51,940	57,770	55,080	55,580	54,010	55,890	54,850	54,390	53,410	53,830	59,900	53,000
19	50,710	56,470	55,230	54,540	55,040	54,510	55,270	54,010	53,410	53,530	59,660	52,970
20	50,920	55,730	55,350	54,010	55,580	53,490	58,170	53,750	53,380	53,380	59,660	52,930
21	51,320	55,650	55,850	53,830	57,570	52,520	59,010	53,560	53,530	53,300	59,700	52,860
22	51,720	55,350	56,120	54,130	61,430	52,230	55,650	53,560	53,450	54,090	59,700	53,080
23	59,900	54,890	56,430	54,090	62,100	52,410	73,260	53,900	53,450	55,540	59,860	53,150
24	74,600	54,430	56,630	54,170	61,680	52,780	74,220	53,940	53,450	57,250	60,190	53,190
25	78,040	54,170	56,630	54,280	60,640	53,150	71,420	53,900	53,410	59,210	60,230	53,380
26	82,220	54,350	56,390	54,130	59,210	53,410	67,390	53,900	53,410	61,060	60,270	53,380
27	117,900	54,320	56,000	53,900	57,410	53,900	62,610	54,090	53,380	62,100	60,640	53,380
28	121,200	54,350	55,460	53,750	55,270	54,280	57,690	53,900	53,270	63,120	60,680	53,380
29	119,000	54,350	54,890	53,830	------	54,350	54,660	53,900	53,270	65,400	60,680	53,380
30	114,600	54,320	54,320	53,790	------	54,320	54,320	53,900	53,410	66,770	60,230	53,380
31	109,300	------	53,750	53,560	------	54,280	------	53,900	------	67,570	58,970	------
(+)	449.06	438.15	438.00	437.95	438.40	438.14	438.15	438.04	437.91	441.36	439.34	437.90
(‡)	+51,530	-54,980	-570	-190	+1,710	-990	+40	-42	-49	+14,160	-8,600	-5,590
MAX	121,200	103,400	56,630	60,770	62,100	61,680	74,220	58,530	56,240	67,570	78,350	57,610
MIN	50,710	52,340	53,750	53,380	53,490	52,230	53,790	53,560	53,270	53,300	58,970	52,860

CAL YR 1970..... ‡ +9,270
WTR YR 1971..... ‡ -4,390

\+ Elevation, in feet at end of month.
‡ Change in contents, in acre-feet.

07337500 Little River near Wright City, Okla.

LOCATION.--Lat 34°04'10", long 95°02'47", in NE 1/4 NW 1/4 sec.6, T.6 S., R.22 E., McCurtain County, on left bank on downstream side of bridge on State Highway 98, 1.8 miles upstream from White Oak Creek, 2 miles west of Wright City, 4.7 miles downstream from Pine Creek Lake, and at mile 140.6.

DRAINAGE AREA.--645 sq mi.

PERIOD OF RECORD.--October 1929 to September 1931, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 346.76 ft above mean sea level. Oct. 12, 1929, to Sept. 30, 1931, nonrecording gage at railroad bridge 1 mile downstream at datum 4.15 ft higher. Dec. 6, 1944, to July 30, 1951, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--29 years, 898 cfs (650,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,980 cfs Oct. 28; maximum gage height, 20.87 ft. Oct. 27; minimum daily discharge, 1.4 cfs Aug. 26.
Period of record: Maximum discharge, 78,200 cfs May 6, 1961 (gage height, 45.60 ft); maximum gage height, 45.77 ft Sept. 16, 1950; no flow at times in 1930, 1954, 1956, 1964.

REMARKS.--Records good. Except for 10 sq mi intervening area, flow completely regulated since June 1969 by Pine Creek Lake. (See sta. 07337300).

COOPERATION.--Gage-height record, 36 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,920	3,970	216	351	191	1,320	219	438	240	10	30	686
2	1,610	3,930	213	351	91	693	181	437	240	13	26	695
3	369	3,890	213	388	91	707	121	436	310	11	27	451
4	327	3,850	162	636	98	653	120	323	678	9.8	27	219
5	265	3,760	69	1,730	111	467	119	135	889	9.5	27	218
6	86	3,720	67	2,610	177	462	119	162	887	9.3	28	216
7	85	3,680	66	2,180	178	459	120	254	637	11	30	169
8	90	3,640	67	800	339	459	116	255	345	15	31	64
9	243	3,210	67	822	579	459	71	262	288	8.7	32	5.4
10	962	1,640	69	822	580	459	54	484	148	7.8	944	1.9
11	998	165	66	822	596	459	54	892	149	7.1	3,740	12
12	1,510	154	66	822	1,140	481	54	1,120	150	7.3	3,080	13
13	2,450	292	66	873	1,400	556	53	1,170	150	7.6	656	13
14	2,960	661	66	1,330	1,090	500	53	955	150	7.4	651	15
15	2,920	612	72	1,840	1,080	1,000	53	706	150	8.1	646	16
16	2,550	884	78	1,840	1,060	1,750	53	703	112	24	644	17
17	1,680	1,010	71	1,800	787	1,750	55	590	39	45	431	18
18	1,640	866	69	1,800	412	1,730	89	400	37	61	245	17
19	1,130	1,330	69	1,330	456	1,340	226	398	37	63	138	18
20	164	973	69	822	619	877	662	318	37	54	11	18
21	27	478	148	618	661	873	1,980	207	35	27	1.5	18
22	25	478	448	396	1,040	565	3,260	121	23	31	4.9	25
23	194	478	622	396	1,780	162	3,390	124	17	48	12	25
24	906	478	622	396	1,800	75	3,450	143	16	41	26	19
25	893	424	606	397	1,790	76	3,320	123	16	34	3.1	23
26	1,560	216	606	396	1,840	76	3,410	122	16	30	1.4	20
27	3,450	218	606	394	1,790	76	3,350	259	16	29	5.0	18
28	4,670	218	606	330	1,760	75	3,290	450	16	31	9.6	18
29	4,290	218	606	261	------	125	2,540	238	16	32	5.1	17
30	4,090	218	606	262	------	218	617	237	11	31	272	16
31	4,060	------	542	261	------	221	------	237	------	30	684	------
TOTAL	48,124	45,661	7,919	28,076	23,536	19,123	31,199	12,699	5,855	753.6	12,468.6	3,081.3
MEAN	1,552	1,522	255	906	841	617	1,040	410	195	24.3	402	103
MAX	4,670	3,970	622	2,610	1,840	1,750	3,450	1,170	889	63	3,740	695
MIN	25	154	66	261	91	75	53	121	11	7.1	1.4	1.9
AC-FT	95,450	90,570	15,710	55,690	46,680	37,930	61,880	25,190	11,610	1,490	24,730	6,110

CAL YR 1970 TOTAL 319,144.0 MEAN 874 MAX 5,690 MIN 10 AC-FT 633,000
WTR YR 1971 TOTAL 238,495.5 MEAN 653 MAX 4,670 MIN 1.4 AC-FT 473,100

07337900 Glover Creek near Glover, Okla.

LOCATION.--Lat 34°05'51", long 94°54'07", in NW 1/4 NE 1/4 sec.28, T.5 S., R.23 E., McCurtain County, near right bank on downstream side of pier of bridge on State Highways 3 and 7, 2 miles north of Glover, 11 miles northwest of Broken Bow, and at mile 9.2.

DRAINAGE AREA.--315 sq mi.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 378.70 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 390 cfs (16.81 inches per year, 282,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 30,000 cfs Oct. 27 (gage height, 20.46 ft); minimum, 3.7 cfs July 22.
Period of record: Maximum discharge, 33,100 cfs Jan. 30, 1969 (gage height, 21.40 ft); no flow at times in 1966, 1968, 1970.
Flood in May 1961 reached a stage of 28.84 ft, from floodmark. Flood in 1908 was higher than that in May 1961, from information by local residents.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 34 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	423	77	135	112	371	90	250	160	61	164	78
2	84	346	73	125	103	341	84	211	173	302	116	63
3	67	287	69	334	93	349	75	186	326	1,480	600	51
4	56	236	66	2,170	93	367	72	166	962	288	817	53
5	47	202	62	1,070	104	346	65	154	500	92	414	52
6	653	174	60	678	151	318	60	144	335	71	273	42
7	1,570	151	56	506	152	286	56	135	237	65	215	33
8	527	138	52	414	137	249	54	164	179	53	206	28
9	799	203	51	359	130	227	52	174	148	35	168	24
10	383	331	49	319	123	216	51	432	178	44	125	22
11	296	256	50	290	128	297	50	565	145	56	94	19
12	2,400	216	49	257	1,220	295	48	435	113	36	75	17
13	1,130	208	51	350	1,080	2,450	44	331	93	26	63	13
14	615	659	50	1,400	705	1,450	40	258	75	20	55	11
15	396	739	50	1,010	540	808	38	208	63	15	51	9.1
16	286	547	61	704	429	545	37	170	51	11	50	8.3
17	214	435	83	566	355	417	37	141	46	10	48	6.9
18	167	359	101	476	301	347	53	121	42	10	43	6.9
19	135	297	98	395	287	301	114	106	37	7.7	42	6.9
20	111	249	92	325	377	258	291	95	32	5.9	44	7.7
21	92	206	91	283	394	224	622	87	26	4.9	35	7.0
22	83	176	331	255	1,410	200	464	81	22	4.2	29	7.6
23	116	150	619	238	1,040	190	4,120	73	20	23	29	19
24	3,050	126	455	224	740	174	2,010	79	16	239	381	16
25	1,200	109	358	217	602	159	987	92	13	429	667	14
26	704	102	295	195	601	147	656	92	8.6	1,110	229	14
27	14,000	97	241	172	516	139	516	143	8.6	482	127	14
28	3,140	93	207	153	421	125	432	576	8.6	327	880	11
29	1,400	88	182	141	------	115	344	351	48	636	301	10
30	804	82	163	129	------	107	294	248	171	400	161	9.2
31	566	------	148	124	------	97	------	193	------	256	105	------
TOTAL	35,200	7,685	4,390	14,014	12,344	11,915	11,856	6,461	4,236.8	6,599.7	6,607	673.6
MEAN	1,135	256	142	452	441	384	395	208	141	213	213	22.5
MAX	14,000	739	619	2,170	1,410	2,450	4,120	576	962	1,480	880	78
MIN	47	82	49	124	93	97	37	73	8.6	4.2	29	6.9
CFSM	3.60	.81	.45	1.43	1.40	1.22	1.25	.66	.45	.68	.68	.07
IN.	4.16	.91	.52	1.65	1.46	1.41	1.40	.76	.50	.78	.78	.08
AC-FT	69,820	15,240	8,710	27,800	24,480	23,630	23,520	12,820	8,400	13,090	13,100	1,340

CAL YR 1970 TOTAL 162,445.10 MEAN 445 MAX 14,000 MIN 0 CFSM 1.41 IN 19.18 AC-FT 322,200
WTR YR 1971 TOTAL 121,982.10 MEAN 334 MAX 14,000 MIN 4.2 CFSM 1.06 IN 14.41 AC-FT 242,000

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
10-27	0915	20.46	30,000	4-23	1130	12.22	9,710

07338500 Little River below Lukfata Creek, near Idabel, Okla.

LOCATION.--Lat 33°56'28", long 94°45'30", in SE 1/4 SE 1/4 sec.14, T.7 S., R.24 E., McCurtain County, on left bank at downstream side of bridge on U. S. Highway 70 just downstream from Lukfata Creek, 5 miles northeast of Idabel, and at mile 103.4.

DRAINAGE AREA.--1,226 sq mi.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 312.08 ft above mean sea level. Oct. 1, 1946, to Oct. 26, 1950, and for stages below 9 ft Oct. 26, 1950, to Oct. 10, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 1,605 cfs (1,163,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,400 cfs Oct. 29 (gage height, 24.07 ft); minimum daily, 29 cfs June 30.
Period of record: Maximum discharge, 76,000 cfs Jan. 26, 1949 (gage height, 39.22 ft); minimum, 0.4 cfs Sept. 15, 16, Sept. 21 to Oct. 1, 1956.
Flood in February 1938 reached a stage of 39.7 ft, from information by local residents (discharge, 86,000 cfs).

REMARKS.--Records good. Flow regulated since June 1969 by Pine Creek Lake 41.9 miles upstream. (See sta. 07337300). Records of chemical analyses for the water year 1971 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 38 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS.--WSP 1211: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,950	5,090	368	757	450	2,340	375	980	444	32	336	825
2	1,900	4,500	361	577	385	1,730	362	717	409	37	239	915
3	1,330	4,260	352	713	273	1,420	327	664	433	35	189	817
4	450	4,080	344	2,160	270	1,360	258	632	880	202	751	560
5	378	3,950	314	3,180	307	1,210	241	505	1,540	231	821	329
6	364	3,850	219	3,350	334	1,000	233	335	1,400	163	505	306
7	1,280	3,770	184	3,680	429	927	223	324	1,230	119	368	291
8	1,230	3,690	178	3,800	422	853	218	400	824	91	321	259
9	868	3,720	176	1,540	533	805	213	445	536	71	372	181
10	1,090	3,200	173	1,340	575	781	188	861	461	61	296	110
11	1,290	1,650	171	1,280	761	776	161	1,200	356	51	1,460	69
12	2,260	556	168	1,210	1,810	853	148	1,570	318	48	3,540	50
13	3,940	528	163	1,240	3,330	3,410	144	1,570	286	53	2,730	41
14	3,910	1,400	159	2,040	2,840	4,300	142	1,480	262	45	866	42
15	3,680	2,010	166	3,130	2,140	2,690	138	1,130	245	37	743	41
16	3,330	1,620	202	3,080	1,860	2,400	136	895	231	32	735	39
17	2,550	1,630	238	2,740	1,700	2,610	135	847	212	33	728	38
18	1,800	1,460	240	2,520	1,230	2,440	177	677	145	38	525	37
19	1,680	1,330	252	2,420	926	2,310	349	506	100	53	326	35
20	1,010	1,580	248	1,680	971	1,720	579	486	86	73	276	34
21	387	1,090	244	1,260	1,250	1,310	1,580	410	77	79	153	35
22	233	739	799	925	1,980	1,250	3,230	306	73	82	97	40
23	198	697	1,180	722	2,940	830	4,840	247	68	77	72	49
24	1,320	660	1,240	705	3,040	484	6,850	351	60	97	167	88
25	3,290	634	1,180	688	2,790	366	6,580	298	51	245	703	100
26	2,140	558	1,100	671	2,820	340	5,320	247	43	728	654	75
27	3,600	408	1,000	639	2,750	325	4,470	258	38	820	346	65
28	9,340	391	945	607	2,520	312	4,070	508	34	531	499	58
29	10,100	383	906	533	------	297	3,810	932	31	485	1,150	52
30	8,640	375	887	464	------	297	2,580	583	29	682	497	50
31	6,430	------	868	464	------	373	------	486	------	479	494	------
TOTAL	81,968	59,809	15,025	49,115	41,636	42,119	48,077	20,850	10,902	5,810	20,959	5,531
MEAN	2,644	1,994	485	1,584	1,487	1,359	1,603	673	363	187	676	184
MAX	10,100	5,090	1,240	3,680	3,330	4,300	6,850	1,570	1,540	820	3,540	825
MIN	198	375	159	464	270	297	135	247	29	32	72	34
AC-FT	162,600	118,600	29,800	97,420	82,590	83,540	95,360	41,360	21,620	11,520	41,570	10,970

CAL YR 1970 TOTAL 554,427 MEAN 1,519 MAX 10,700 MIN 16 AC-FT 1,100,000
WTR YR 1971 TOTAL 401,801 MEAN 1,101 MAX 10,100 MIN 29 AC-FT 797,000

07338900 Broken Bow Lake near Broken Bow, Okla.
(Formerly published as Broken Bow Reservoir near Broken Bow)

LOCATION.--Lat 34°08'35", long 94°41'00", in SW 1/4 SW 1/4 sec.3, T.5 S., R.25 E., McCurtain County, at intake structure on upstream side of dam on Mountain Fork, 9 miles northeast of Broken Bow, and at mile 20.3.

DRAINAGE AREA.--754 sq mi.

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1970 published as Broken Bow Reservoir near Broken Bow.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

EXTREMES.--Current year: Maximum contents, 863,600 acre-ft Nov. 16 (elevation, 595.59 ft); minimum, 684,200 acre-ft Sept. 30 (elevation, 581.52 ft).
Period of record: Maximum contents, 989,500 acre-ft Apr. 29, 1970 (elevation, 604.41 ft); minimum since conservation pool was first filled, 684,200 acre-ft Sept. 30, 1971 (elevation, 581.52 ft).

REMARKS.--Reservoir is formed by a rolled earth and gravel structure. Regulated storage began Oct. 3, 1968; conservation pool was first filled Jan. 30, 1969. Total capacity, 1,368,000 acre-ft at elevation 627.5 ft (top of flood pool and spillway gates), 918,100 acre-ft at elevation 599.5 ft (top of power pool), and 448,200 acre-ft at elevation 559.0 ft (conservation pool). Figures given herein represent total contents. Reservoir is used for flood control, power development and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

Capacity table (elevation, in feet, and contents, in acre-feet)

581	678,100	591	802,300
584	714,000	593	828,700
588	763,700	595	855,600

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	738.2	862.7	816.8	810.8	826.8	830.0	811.2	810.3	809.5	769.6	738.0	709.8
2	736.7	860.4	815.2	811.5	824.0	826.6	808.9	810.8	808.6	768.1	737.9	708.7
3	736.8	861.3	812.2	819.5	821.2	824.2	809.1	808.1	808.7	768.3	738.8	707.4
4	736.7	862.0	807.9	825.4	820.1	819.5	810.0	808.6	808.1	768.4	738.6	707.2
5	736.8	861.7	808.2	826.7	820.9	817.3	807.4	807.4	808.7	768.4	738.6	707.1
6	744.2	859.0	808.1	826.6	820.7	819.1	803.4	807.8	809.5	765.3	738.2	705.6
7	743.8	860.0	806.4	826.0	822.0	820.1	799.7	807.6	807.7	762.1	738.5	704.0
8	743.0	860.6	806.6	825.0	819.9	818.1	796.6	809.5	807.9	757.4	739.4	702.4
9	743.5	860.0	804.4	827.1	817.2	816.9	794.0	811.8	808.1	753.9	738.5	701.0
10	744.2	859.3	803.1	828.0	815.6	816.6	794.4	813.5	805.3	753.6	737.3	699.0
11	747.6	859.7	802.4	827.5	814.1	815.2	794.5	817.4	804.3	753.3	736.2	699.2
12	753.5	859.8	801.3	828.3	823.0	817.6	791.7	816.8	803.5	750.3	734.7	698.8
13	756.5	859.8	800.9	831.5	829.6	834.0	789.3	816.2	803.6	746.4	733.1	696.8
14	759.7	861.0	799.2	837.9	833.5	841.0	784.3	816.8	802.3	744.4	733.9	695.6
15	760.7	863.0	798.2	838.2	834.0	843.2	781.0	818.0	800.2	741.1	734.7	694.6
16	761.2	859.7	795.9	841.8	833.4	842.3	778.4	818.9	798.3	740.3	733.1	693.3
17	761.6	855.7	795.3	844.9	831.0	842.2	779.8	816.4	796.3	739.5	730.7	693.3
18	762.0	852.1	796.1	845.3	830.2	841.1	780.4	816.1	793.7	738.2	728.4	693.0
19	758.8	848.7	796.3	842.6	827.8	839.1	778.0	814.1	793.4	736.7	727.9	694.4
20	760.1	846.7	797.1	839.4	828.2	836.0	780.2	811.5	793.4	734.1	723.0	693.6
21	758.9	846.4	797.9	836.6	830.0	835.4	784.8	807.6	791.4	732.2	723.2	693.5
22	758.7	845.8	802.3	836.2	832.3	833.4	789.3	808.2	788.4	731.6	723.1	694.0
23	761.3	841.8	805.3	837.0	829.1	829.4	805.2	809.8	786.5	733.2	720.8	694.1
24	769.5	831.4	806.9	837.9	828.3	827.8	812.3	808.3	784.7	734.7	718.1	692.9
25	772.8	827.4	808.2	839.1	828.7	823.8	816.4	807.9	782.4	737.8	716.4	693.5
26	779.7	827.2	810.2	838.6	828.6	820.5	814.9	805.5	782.1	737.6	714.9	693.8
27	835.6	825.5	811.4	835.8	828.8	821.5	813.1	809.5	781.2	736.7	713.4	691.5
28	848.3	823.5	811.0	831.9	830.0	822.3	814.1	811.4	778.3	736.4	713.4	689.4
29	854.2	822.7	810.4	831.2	------	819.4	810.7	812.7	774.2	737.2	713.3	686.5
30	858.3	819.0	810.8	830.7	------	816.9	809.6	813.3	770.5	737.4	711.6	684.2
31	859.8	------	810.6	830.3	------	814.2	------	811.1	------	737.6	710.2	------
(+)	595.31	592.27	591.63	593.12	593.10	591.91	591.56	591.67	588.53	585.92	583.68	581.52
(‡)	+113.6	-40.8	-8.4	+19.7	-0.3	-15.8	-4.6	+1.5	-40.6	-32.9	-27.4	-26.0
MAX	859.8	863.0	816.8	845.3	834.0	843.2	816.4	818.9	809.5	769.6	739.4	709.8
MIN	736.7	819.0	795.3	810.8	814.1	814.2	778.0	805.5	770.5	731.6	710.2	684.2

CAL YR 1970..... ‡ -87.2
WTR YR 1971..... ‡ -62.0

\+ Elevation, in feet, at end of month.
‡ Change in contents, in thousands of acre-feet.

07339000 Mountain Fork near Eagletown, Okla.

LOCATION.--Lat 34°02'30", long 94°37'15", in SE 1/4 SE 1/4 sec.7, T.6 S., R.26 E., McCurtain County, near center of span on downstream side of pier of bridge on U. S. Highway 70, 2 miles west of Eagletown, 10.7 miles downstream from Broken Bow Dam, and at mile 8.9.

DRAINAGE AREA.--787 sq mi.

PERIOD OF RECORD.--March 1924 to December 1925, October 1929 to current year. Published as Mountain Fork River near Broken Bow 1924-25 and as Mountain Fork River near Eagletown 1929-60. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 333.87 ft above mean sea level. See WSP 1920 for history of changes prior to July 23, 1950.

AVERAGE DISCHARGE.--43 years, 1,258 cfs (911,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,770 cfs Nov. 24 (gage height, 7.78 ft); minimum daily, 103 cfs Sept. 24.
Period of record: Maximum discharge, 101,000 cfs May 20, 1960 (gage height, 26.73 ft), from rating curve extended above 65,000 cfs; no flow at times.
Flood of Aug. 18-19, 1915, reached a stage of 26.4 ft, from information by local residents (discharge, 92,500 cfs).

REMARKS.--Records good. Except for 33 sq mi intervening area, flow completely regulated since October 1968 by Broken Bow Lake. (See sta. 07338900).

COOPERATION.--Gage-height record, 11 discharge measurements, and computations of daily discharge furnished by Corps of Engineers; records reviewed by Geological Survey.

REVISIONS (WATER YEARS).--WSP 1211: Drainage area. WSP 1241: 1924-26, 1930(M), 1936-37(M), 1938, 1939(M), 1942(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	968	443	1,550	446	1,060	728	1,570	784	1,210	1,250	285	510
2	869	749	1,060	390	1,590	1,860	1,730	260	1,280	1,140	268	650
3	659	693	1,600	271	1,760	2,490	719	675	1,040	703	292	564
4	247	288	2,810	710	1,560	2,540	277	572	1,380	280	354	422
5	224	275	1,140	2,050	710	2,300	462	549	634	252	528	271
6	383	1,190	243	2,300	832	952	1,420	503	286	536	510	255
7	1,070	799	286	1,950	842	316	2,060	620	475	1,500	391	550
8	1,230	239	528	1,600	1,130	784	1,750	460	492	1,920	280	684
9	742	464	627	840	1,720	1,390	1,610	277	276	2,170	409	643
10	295	1,140	814	249	1,460	1,130	883	923	599	1,100	705	648
11	324	634	716	425	1,750	1,040	277	662	1,300	287	753	451
12	461	443	405	520	2,010	1,330	507	1,090	593	606	801	267
13	343	1,110	276	666	859	1,880	1,380	1,770	488	1,480	1,160	293
14	268	1,040	281	812	724	753	2,000	807	347	1,320	650	464
15	246	265	776	1,990	1,660	1,510	1,790	394	872	1,320	281	399
16	228	1,370	1,360	1,010	1,820	2,000	1,890	271	805	891	444	462
17	236	2,740	1,070	259	2,160	2,200	903	680	985	408	1,080	380
18	231	2,420	761	485	1,800	1,990	286	587	1,270	293	1,290	262
19	213	2,820	395	1,610	1,940	2,030	964	991	655	624	1,290	229
20	985	1,710	229	2,130	1,470	1,730	1,960	1,330	277	978	1,310	183
21	858	1,200	227	2,180	365	1,520	1,260	1,640	395	786	664	187
22	292	791	632	1,280	485	1,280	1,080	1,000	881	612	280	140
23	421	1,650	637	719	2,310	1,510	1,740	291	1,210	463	719	148
24	395	4,290	1,140	244	2,600	1,880	909	315	920	360	1,460	103
25	265	2,740	457	224	1,520	2,010	288	646	1,060	302	1,260	208
26	346	1,420	411	236	1,260	2,210	940	1,360	560	295	885	189
27	264	500	240	1,360	877	1,010	2,170	1,640	277	457	817	183
28	246	1,220	375	1,950	519	297	980	657	866	853	508	932
29	222	594	594	1,450	------	738	1,350	356	1,690	986	275	1,770
30	223	1,690	641	922	------	1,440	1,420	276	2,030	838	248	1,310
31	300	------	589	563	------	1,530	------	426	------	627	328	------
TOTAL	14,054	36,927	22,870	31,841	38,793	46,378	36,575	22,812	25,153	25,637	20,525	13,757
MEAN	453	1,231	738	1,027	1,385	1,496	1,219	736	838	827	662	459
MAX	1,230	4,290	2,810	2,300	2,600	2,540	2,170	1,770	2,030	2,170	1,460	1,770
MIN	213	239	227	224	365	297	277	260	276	252	248	103
AC-FT	27,880	73,240	45,360	63,160	76,950	91,990	72,550	45,250	49,890	50,850	40,710	27,290

CAL YR 1970 TOTAL 475,172 MEAN 1,302 MAX 4,290 MIN 158 AC-FT 942,500
WTR YR 1971 TOTAL 335,322 MEAN 919 MAX 4,290 MIN 103 AC-FT 665,100

As the number of streams on which stream flow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data ollected at these partial-record station are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1971

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Arkansas River basin				
07149700	Sandy Creek near Byron, Okla.	Lat 36°53'03", long 98°13'02", in NE 1/4 NE 1/4 sec.25, T.28 N., R.10 W., Alfalfa County, at county road bridge, 0.2 mile downstream from Little Sandy Creek, 4.5 miles southeast of Byron, and about 6 miles upstream from Great Salt Plains Lake.	434	1965-71	11-10-70 3-23-71 5- 5-71 8-18-71	6.0 8.7 6.6 8.7
07150590	Wild Horse (Sand Creek) near Pond Creek, Okla.	Lat 36°37'30", long 97°48'00", on west line SW 1/4 SW 1/4 sec.24, T.25 N., R.6 W., Grant County, at county road bridge on FAS road, 3 miles south of Pond Creek and about 5 miles upstream from mouth.	105	1965-71	10-20-70 3-23-71 5- 5-71 8-17-71	0 0 0 .20
07150900	Deer Creek near Tonkawa, Okla	Lat 36°42'33", long 97°22'22", on south line SW 1/4 SE 1/4 sec.23, T.26 N., R.2 W., Kay County, at county road bridge, 4.5 miles northwest of Tonkawa and about 3.5 miles upstream from mouth.	150	1965-71	11- 6-70 3-23-71 6-24-71 8-20-71	0 .09 est. .01 0
07152250	Bois d' Arc Creek near Ponca City, Okla.	Lat 36°40'00", long 97°07'30", on south line SW 1/4 SE 1/4 sec.6, T.25 N., R.2 E., Kay County, at county road bridge 1 mile south and 0.5 mile east of junction of U. S. Highways 60 and 77, 5 miles southwest of Ponca City and about 4 miles upstream from mouth.	100	1965-71	11-12-70 3-23-71 6-24-71 8-19-71	.87 2.8 2.8 est. .05
07155200	Cold Springs Creek near Castaneda, Okla. (discontinued)	Lat 36°52'30", long 102°38'15", in SW 1/4 NW 1/4 sec.28, T.5 N., R.4 E., Cimarron County, at county road bridge, 6 miles west of Castaneda and 9.7 miles northwest of Boise City.	129	1967-71	11-10-70 3- 1-71 6-22-71 9-14-71	0 0 0 0
07158010	Main Creek near Waynoka, Okla.	Lat 36°29'30", long 98°53'30", on south line SE 1/4 SE 1/4 sec.3, T.23 N., R.16 W., Major County, at county road bridge on FAS road, 0.5 mile west of U. S. Highway 281, 6 miles south of Waynoka and about 2 miles upstream from mouth.	105	1965-71	11-18-70 3-11-71 6- 8-71 9-16-71 9-29-71	5.7 8.8 1.7 0 3.1
07158100	Eagle Chief Creek near Aline, Okla.	Lat 36°30'23", long 98°26'24", in NW 1/4 sec.1, T.23 N., R.12 W., Alfalfa County, at bridge on State Highway 8B, at Aline.	406	1953-55, 1958-59, 1961-71	11-11-70 3-24-71 5-. 5-71 8-18-71	2.0 3.0 2.1 3.2
*07159000	Turkey Creek near Drummond, Okla.	Lat 36°19'05", long 98°00'03", in NE 1/4 NE 1/4 sec.12, T.21 N., R.8 W., Garfield County, at county road bridge, 2.2 miles northeast of Drummond, and 9 miles southwest of Enid.	248	1947-70‡ 1971	12- 2-70 3-23-71 5- 7-71 9- 8-71	.47 1.5 1.9 .06
*07159200	Kingfisher Creek near Kingfisher, Okla.	Lat 35°50'03", long 98°03'57", in NW 1/4 SW 1/4 sec.28, T.16 N., R.8 W., Kingfisher County, at county road bridge, 7.6 miles west of Kingfisher, and at mile 17.6.	157	1966-70‡ 1971	11-13-70 1-15-71 4- 9-71 7-29-71 9- 9-71	.25 1.6 1.2 .28 0
07159800	Cottonwood Creek near Guthrie, Okla.	Lat 35°52'45", long 97°26'30", in SE 1/4 sec.18, T.16 N., R.2 W., Logan County, at county road bridge, 2 miles southwest of Guthrie.	366	1952-71	11- 5-70 3-17-71 8- 4-71 9- 1-71	16 17 11 5.2

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Arkansas River basin--Continued				
*07165500	Snake Creek near Bixby, Okla.	Lat 35°49'08", long 95°53'18", in NW 1/4 SW 1/4 sec.36, T.16 N., R.13 E., Okmulgee County, on right bank 5.5 miles upstream from Duck Creek, 8.8 miles south of Bixby, and at mile 11.0.	50	1961-70‡ 1971	2-17-71 5-21-71 7-30-71 9- 2-71	2.2 .04 0 0
*07188500	Lost Creek at Seneca, Mo.	Lat 36°50'28", long 94°36'30", in SE 1/4 SE 1/4 sec.35, T.25 N., R.34 W., Newton County, at Seneca Street bridge in Seneca, 0.5 mile upstream from ittle Lost Creek and 9.5 miles upstream from mouth.	42	1949-59‡ 1960-71	11-30-70 1-21-71 6-23-71 8-17-71	26 24 9.6 6.2
*07189700	Horse Creek at Afton, Okla.	Lat 36°49'50", long 94°57'20", in NE 1/4 NW 1/4 sec.33, T.26 N., R.22 E., Ottawa County, at bridge on U. S. Highway 66, at northeast edge of Afton, and about 3 miles upstream from Lake O' The Cherokees.	21.9	1965-71	11-24-70 1-21-71 6-21-71 8-17-71	1.5 .47 .04 0
07228220	Turkey Creek near Camargo, Okla.	Lat 36°02'30", long 99°24'30", in NE 1/4 NW 1/4 sec.14, T.18 N., R.21 W., Ellis County, at pasture 0.1 mile south of county road, 7.5 miles northwest of Camargo, and about 3.5 miles upstream from mouth.	86	1965-71	11- 6-70 3- 4-71 5-27-71 9- 8-71	0 2.1 0 0
07232400	Beaver (Sand) Creek near Texhoma, Okla. (discontinued)	Lat 36°36'08", long 101°47'50", on east line sec.31, T.2 N., R.12 E., Texas County, at bridge on State Highway 95, 6.5 miles north of Texhoma.	217	1967-71	12- 2-71 3- 5-71 6-15-71 9-21-71	0 0 0 0
07232450	Tepee Creek near Eva, Okla.	Lat 36°42'30", long 101°43'30", on west line sec.29, T.3 N., R.13 E., Texas County, at low water crossing on county road, 8 miles northwest of Goodwell.	95	1967-71	11-10-70 3- 1-71 6-15-71 9-27-71	.09 .20 .20 .01
07232580	Goff Creek near Hough, Okla. (discontinued)	Lat 36°45', long 101°29', in NW 1/4 SE 1/4 sec.29, T.4 N., R.14 E., Texas County, at low water crossing on oil field service road, 9 miles northeast	470	1968-71	11- 9-70 3- 1-71 6-15-71 9- 3-71	0 .18 0 .01
07232620	Pony Creek near Optima, Okla. (discontinued)	Lat 36°45'39", long 101°17'26", on south line sec.36, T.4 N., R.16 E., Texas County, at county road bridge, 4 miles east of Optima.	223	1967-71	12- 2-70 3- 5-71 6-15-71 9- 3-71	0 0 0 0
07233700	Palo Duro Creek near Range, Okla.	Lat 36°37'00", long 101°01'24", in SW 1/4 sec.21, T.2 N., R.19 E., Texas County, at bridge on State Highway 3, 6 miles northeast of Range.	1,745	1952-71	12- 2-70 2-16-71 6-25-71 7-26-71 9-30-71	4.4 5.2 .68 3.2 1.6
07234130	Duck Pond Creek near Clear Lake, Okla.	Lat 36°44'50", long 100°17'05", in NW 1/4 sec.8, T.3 N., R.26 E., Beaver County, at county road bridge, 4 miles north of Clear Lake.	97	1967-71	11- 6-70 3-11-71 5-28-71 7-27-71 9-23-71	.16 2.1 0 0 0
07234200	Kiowa Creek near Slapout, Okla.	Lat 36°36'55", long 100°10'00", on south line sec.20, T.2 N., R.27 E., Beaver County, at bridge on U. S. Highway 270, 3 miles west of Slapout.	371	1945 1949-61 1963-71	11- 6-70 3-11-71 5-28-71 9- 9-71	4.4 6.6 1.7 .11
07234300	Clear Creek near May, Okla.	Lat 36°39'22", long 99°51'00", in SW 1/4 sec.24, T.25 N., R.25 W., Harper County, at bridge on U. S. Highway 270, 8.5 miles west of May.	109	1953-71	11- 6-70 3-11-71 5-28-71 9- 9-71	7.0 10. 7.3 1.2
07237700	Persimmon Creek near Mutual, Okla.	Lat 36°15'45", long 99°10'30", in NW 1/4 NW 1/4 sec.31, T.21 N., R.18 W., Woodward County, at bridge on U. S. Highway 270, 2 miles north of Mutual, and 5 miles upstream from mouth.	164	1958-59 1961 1965-71	11- 5-70 3- 4-71 5-27-71 9- 8-71	0 13 0 0
*07237800	Bent Creek near Seiling, Okla.	Lat 36°11'26", long 99°00'36", in NW 1/4 SE 1/4 sec.21, T.20 N., R.17 W., Woodward County, at bridge on U. S. Highways 183 and 270, 6 miles northwest of Seiling, and at mile 2.0.	139	1966-70‡ 971	11- 5-70 3- 4-71 5-27-71 9- 8-71	.63 1.5 .77 0

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Red River basin				
07299780	Gypsum Creek near Olustee, Okla.	Lat 34°28'45", long 99°26'15", in SW 1/4 sec.21, T.1 S., R.21 W., Jackson County, at county bridge on FAS road, 6.5 miles south of Olustee and about 2.5 miles upstream from mouth.	107	1954-57 1965-71	10- 7-70 1-20-71 6- 3-71 8- 4-71	1.0 1.3 .02 .24
07301100	Turkey Creek at Olustee, Okla.	Lat 34°35'58", long 99°26'12", in NW 1/4 sec.5, T.1 N., R.21 W., Jackson County, at county road bridge, 3.2 miles north of Olustee, and at mile 6.4.	293	1951-57 1960-63‡ 1970-71	10- 7-70 1-20-71 8- 4-71	.15 .57 0
07301452	Starvation Creek near Prentiss, Okla.	Lat 35°19'25", long 99°45'30", in SW 1/4 SE 1/4 sec.20, T.10 N., R.24 W., Beckham County, at bridge on State Highway 152, 3 miles southeast of Prentiss, and about 2 miles upstream from mouth.	44.5	1965-71	11-24-70 1-27-71 5-19-71 8-12-71	.12 1.3 .66 .19
07301460	Turkey Creek near Sayre, Okla.	Lat 35°15'35", long 99°43'20", in NE 1/4 NE 1/4 sec.15, T.9 N., R.24 W., Beckham County, at east-bound bridge on U. S. Highway 66, 5.5 miles southwest of Sayre, and about 1 mile upstream from mouth.	47.5	1953-56 1965-71	11-25-70 1-27-71 5-20-71 8-12-71	.47 2.9 1.1 .16
07311240	West Cache Creek near Cookietown, Okla.	Lat 34°16'30", long 98°23'15", in NE 1/4 sec.30, T.3 S., R.11 W., Cotton County, at bridge on State Highway 5A, 3.5 miles east of Cookietown, and about 11 miles upstream from mouth.	1,112	1951-55 1965-71	11-18-70 1-20-71 4- 7-71 7-21-71	0 0 0 0
*07313600	Cow Creek at Waurika, Okla.	Lat 34°10'55", long 98°00'05", in SE 1/4 NE 1/4 sec.26, T.4S., R.8 W., Jefferson County, at Chicago, Rock Island and Pacific Railway Co. bridge, near north edge of Waurika, and at mile 1.7.	193	1966-70‡ 1971	11-18-70 1-20-71 4- 6-71 7-21-71	7.5 4.4 4.2 1.9
07316070	Hickory Creek near Marietta, Okla.	Lat 34°00'46", long 97°04'59", in NE 1/4 NW 1/4 sec.27, T.6 S., R.2 E., Love County, at bridge on State Highway 77S, 5.5 miles northeast of Marietta, and 5.5 miles upstream from Lake Texoma.	116	1965-71	11-19-70 3- 2-71 5- 5-71 7- 8-71	6.2 5.0 3.8 0
07328300	Finn Creek near Story, Okla. (discontinued)	Lat 34°51'15", long 97°25'30", in NE 1/4 sec.5, T.4 N., R.2 W., Garvin County, at bridge on State Highway 24, 2 miles east of Story.	67.2	1951-71	11-16-70 1-18-71 4- 5-71 7-20-71	13 5.2 4.6 1.8
07331200	Mill Creek near Mill Creek, Okla. (discontinued)	Lat 34°24'18", long 96°51'47", in NW 1/4 sec.11, T.2 S., R.4 E., Johnston County, at county road bridge, 2 miles west of Mill Creek.	46.4	1952-55 1958-71	11-19-70 3-10-71 6- 8-71 7- 8-71	14 4.5 3.6 2.6
07331300	Pennington Creek near Reagan, Okla.	Lat 34°21'51", long 96°43'01", in SE 1/4 sec.30, T.2 S., R.6 E., Johnston County, at low-water dam, 0.8 mile above bridge on State Highway 7, 0.8 mile northeast of Reagan.	65.7	1951-55 1958-71	12- 8-70 3-10-71 4- 8-71 8- 3-71 8-11-71	35 24 17 11 10
07332250	Island Bayou near Albany, Okla.	Lat 33°51'25", long 96°09'55", in southeast corner sec.17, T.8 S., R.11 E., Bryan County, at county road bridge, 2 miles south of Albany, and about 3.5 miles upstream from mouth.	132	1965-71	12- 2-70 3- 9-71 6-23-71 8-31-71	.05 3.0 .02 .05
07332700	Muddy Boggy Creek near Parker, Okla.	Lat 34°44'28", long 96°15'51", in SW 1/4 sec.9, T.3 N., R.10 E., Coal County, at bridge on U. S. Highway 75, 5 miles west of Parker.	174	1958-71	11-30-70 3-10-71 6-23-71 8-31-71	15 18 13 .63
07334400	Clear Boggy Creek near Tupelo, Okla.	Lat 34°32'45", long 96°24'30", in NE 1/4 sec.24, T.1 N., R.8 E., Coal County, at bridge on State Highway 48, 700 ft downstream from Goose Creek and 4 miles south of Tupelo.	248	1958-71	12- 1-70 3- 4-71 6-23-71 7-29-71	64 54 22 10
07334420	Leader Creek at Tupelo, Okla.	Lat 34°35'55", long 96°23'45", in NW 1/4 sec.31, T.2 N., R.9 E., Coal County, at bridge on State Highway 3, 1 mile east of Tupelo.	64.3	1958-71	12- 1-70 3- 4-71 6-23-71 7-29-71	11 12 .05 0
07334440	Delaware Creek near Wapanucka, Okla.	Lat 34°24'30", long 96°25'15", in SW 1/4 sec.1, T.2 S., R.8 E., Johnston County, at bridge on State Highway 48, 2 miles north of Wapanucka.	45.8	1958-71	12- 1-70 3- 4-71 6- 8-71 6-23-71 7-29-71	13 21 8.3 1.5 0
07335900	Buck Creek near Moyers, Okla.	Lat 34°20'22", long 95°37'55", in NE 1/4 sec.32, T.2 S., R.16 E., Pushmataha County, at bridge on State Highway 144, 1 mile northeast of Moyers.	100	1956-71	3-11-71 6-22-71 7-28-71 8-31-71	64 1.8 5.9 .18

‡ Operated as a continuous-record gaging station.
* Also a crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1971--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Red River basin--Continued				
*07336000	Tenmile Creek near Miller, Okla.	Lat 34°17'55", long 95°44'40", in NW 1/4 sec.16, T.3S., R.15 E., Pushmataha County, at county road bridge, 1.2 mile miles south of Miller, and at mile 11.6.	68	1955-70‡ 1971	3-11-71 6-22-71 7-28-71 8-31-71	28 4.3 2.9 0

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record gaging station.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Arkansas River basin					
07150580	Sand Creek tributary near Kremlin, Okla.	Lat 36°33'00", long 97°48'38", in SE 1/4 SW 1/4 sec.14, T.24 N., R.6 W., Garfield County, at county road bridge, 1.2 miles east of Kremlin.	7.21	1964-71	9-17-71	a4.77	192
07150870	Salt Fork Arkansas River tributary near Eddy, Okla.	Lat 36°41'42", long 97°25'30", in SW 1/4 SW 1/4 sec.28, T.26 N., R.2 W., Kay County, at culvert on U.S. Highway 60, 3.0 miles southeast of Eddy.	2.35	1964-71	6- 2-71	13.05	313
07152360	Elm Creek near Foraker, Okla.	Lat 36°52'08", long 96°36'50", in SE 1/4 SW 1/4 sec.25, T.28 N., R.6 E., Osage County, at county road bridge, 2.8 miles west of Foraker.	18.2	1964-71	7- 4-71	2.98	145
07152410	Rock Creek near Shidler, Okla.	Lat 36°44'50", long 96°37'30", in SW 1/4 NE 1/4 sec.11, T.26 N., R.6 E., Osage County, at concrete ford of oil field service road at upstream end of Lake Phillips, 3.0 miles southeast of Shidler.	9.13	1965-71	7- 4-71	8.82	1,000
07152520	Black Bear Creek tributary near Garber, Okla.	Lat 36°23'25", long 97°37'20", in SE 1/4 SE 1/4 sec.9, T.22 N., R.4 W., Garfield County, at culvert on old U.S. Highway 64, 4.0 miles southwest of Garber.	.97	1964-71	4-26-71	4.60	333
07154650	Tesesquite Creek near Kenton, Okla.	Lat 36°53'52", long 102°54'04", in NE 1/4 SE 1/4 sec.13, T.5 N., R.1 E., Cimarron County, at county road bridge, 3.9 miles east of Kenton.	25.4	1964-71	8- 6-71	19.81	7,250
07155100	Cold Springs Creek near Wheeless, Okla.	Lat 36°46'20", long 102°48'16", in SE 1/4 NE 1/4 sec.35, T.4 N., R.2 E., Cimarron County, at county road multi-barrel culvert, 6.0 miles northeast of Wheeless.	11.0	1964-71	4 30 71	15.40	1,160
07155510	Flagg Springs Creek tributary near Boise City, Okla.	Lat 36°52'30", long 102°31'10", in NE 1/4 NE 1/4 sec.28, T.5 N., R.5 E., Cimarron County, on downstream side of multi-barrel masonry box culvert on State Highway 3, 10 miles north of Boise City.	5.15	1965-71	7-19-71	a2.96	1
07157550	West Fork Creek near Knowles, Okla.	Lat 36°52'30", long 100°07'20", in SE 1/4 SE 1/4 sec.22, T.5 N., R.27 E., Beaver County, at county road culvert, 4.2 miles east of Knowles.	4.22	1964-71	7-22-71	a10.80	9
07158020	Cimarron River tributary near Lone Wolf, Okla.	Lat 36°24'25", long 98°44'10", in SW 1/4 SE 1/4 sec.6, T.22 N., R.14 W., Major County, at multi-barrel culvert on State Highway 15, 5.4 miles west of Lone Wolf.	4.07	1964-71	6-11-71	4.21	404
07158080	Sand Creek tributary near Waynoka, Okla.	Lat 36°35'40", long 98°44'00", in NW 1/4 NE 1/4 sec.6, T.24 N., R.14 W., Woods County, at multi-barrel culvert on U.S. Highway 281, 8.0 miles east of Waynoka.	1.61	1964-71	6- 9-71	2.92	69
07158120	Cimarron River tributary near Isabella, Okla.	Lat 36°16'30", long 98°21'00", in NW 1/4 NE 1/4 sec.26, T.21 N., R.11 W., Major County, at culvert on State Highway 8, 2.7 miles north of Isabella.	.62	1964-71	6- 2-71	5.88	118
07158180	Salt Creek tributary near Okeene, Okla.	Lat 36°03'00", long 98°19'00", in SW 1/4 NW 1/4 sec.7, T.18 N., R.10 W., Blaine County, at multi-barrel culvert on State Highway 8, 4.4 miles south of Okeene.	8.23	1964-71	6-11-71	4.55	328
07158500	Preacher Creek near Dover, Okla.	Lat 36°02'37", long 98°00'48", in NW 1/4 NW 1/4 sec.13, T.18 N., R.8 W., Kingfisher County, at county road bridge, 7.1 miles northwest of Dover.	14.5	1952-57, 1964-71	6- 2-71	a3.90	66

See footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Arkansas River basin--Continued					
07158550	Turkey Creek tributary near Goltry, Okla.	Lat 36°28'40", long 98°08'05", in SE 1/4 SW 1/4 sec.11, T.23 N., R.9 W., Alfalfa County, at multi-barrel culvert on State Highway 45, 4.1 miles south of Goltry.	5.08	1964-71	6- 2-71	a4.80	75
*07159000	Turkey Creek near Drummond, Okla.	Lat 36°19'05", long 98°00'03", in NE 1/4 NE 1/4 sec.12, T.21 N., R.8 W., Garfield County, at county road bridge, 2.2 miles northeast of Drummond.	248	1948-70, 1971	6- 3-71	4.11	473
07159200	Kingfisher Creek near Kingfisher, Okla.	Lat 35°50'03", long 98°03'57", in NW 1/4 SW 1/4 sec.28, T.16 N., R.8 W., Kingfisher County, at county road bridge, 7.6 miles west of Kingfisher.	157	1967-70, 1971	9-24-71	17.58	1,080
07160550	West Beaver Creek near Orlando, Okla.	Lat 36°08'45", long 97°28'05", in NW 1/4 NE 1/4 sec.12, T.19 N., R.3 W., Logan County, at county road bridge, 5.0 miles west of Orlando.	13.9	1964-71	6- 2-71	4.55	612
07163020	Corral Creek near Yale, Okla.	Lat 36°07'50", long 96°49'50", in NE 1/4 NW 1/4 sec.13, T.19 N., R.4 E., Payne County, at multi-barrel culvert on Old State Highway 51, 7.7 miles west of Yale.	2.89	1964-71	10- 8-7	8.95	353
07164940	Deep Creek near Olive, Okla.	Lat 36°00'10", long 96°25'30", in SE 1/4 SE 1/4 sec.26, T.18 N., R.8 E., Creek County, at culvert on State Highway 33, 3.6 miles southeast of Olive.	3.25	1967-71	9- 5-71	11.21	433
*07165550	Snake Creek near Bixby, Okla.	Lat 35°49'08", long 95°53'18", in NW 1/4 SW 1/4 sec.36, T.16 N., R.13 E., Okmulgee County, on right bank 5.5 miles upstream from Duck Creek, 8.8 miles south of Bixby, and at mile 11.0.	50	1962-70, 1971	9- 6-71	19.53	5350
07171120	Clear Creek tributary near Hollow, Okla.	Lat 36°52'50", long 95°16'00", in SW 1/4 NW 1/4 sec.27, T.28 N., R.19 E., Craig County, on downstream side of multi-barrel box culvert on State Highway 10, 1.2 miles southeast of Hollow.	2.19	1966-71	1- 3-71	6.26	67
07174570	Dry Hollow near Pawhuska, Okla.	Lat 36°45'30", long 96°12'30", in NE 1/4 SE 1/4 sec.3, T.26 N., R.10 E., Osage County, at multi-barrel culvert on U. S. Highway 60, 9.5 miles northeast of Pawhuska.	1.67	1965-71	1- 3-71	6.67	133
07174720	Hogshooter Creek tributary near Bartlesville, Okla.	Lat 36°43'40", long 95°50'52", in SE 1/4 SE 1/4 sec.18, T.26 N., R.14 E., Washington County, at multi-barrel culvert on U.S. Highway 60, 4.9 miles east of junction with U.S. Highway 75 southeast of Bartlesville.	.94	1965-71	10- 8-70	8.11	318
07178580	Otter Creek near Tiawah, Okla.	Lat 36°14'32", long 95°33'21", in center of sec.1, T.20 N., R.16 E., Rogers County, on downstream side of bridge on State Highway 88, 1.2 miles southeast of Tiawah.	15.2	1966-71	10- 5-70	11.90	1,100
07178640	Bull Creek near Inola, Okla. (Previously published as Bull Creek tributary)	Lat 36°08'55", long 95°27'05", in NE 1/4 NW 1/4 sec.12, T.19 N., R.17 E., Rogers County, at county road bridge, 3.2 miles east of Inola.	b10.7	1965-71	10- 5-70	10.00	890
07178650	Billy Creek tributary near Wagoner, Okla.	Lat 35°57'32", long 95"27'41", in NE 1/4 NE 1/4 sec.14, T.17 N., R.17 E., Wagoner County, on downstream side of multi-barrel box culvert on State Highway 51, 5.0 miles west of Wagoner.	5.71	1966-71	6- 3-71	11.10	377
07188140	Flint Branch near Peoria, Okla.	Lat 36°52'25", long 94°41'35", in SW 1/4 SW 1/4 sec.26, T.28 N., R.24 E., Ottawa County, at upstream side of dam, 3.2 miles southwest of Peoria.	4.90	1964-71	1- 3-71	13.79	400
*07188500	Lost Creek at Seneca, Mo.	Lat 36°50'28", long 94°36'30", in SE 1/4 SE 1/4 sec.35, T.25 N., R.34 W., Newton County, at Seneca Street bridge in Seneca, half a mile upstream from Little Lost Creek and 9.5 miles upstream from mouth.	42	1949-59, 1960-71	10- 8-70	1.20	110

See footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Arkansas River basin--Continued					
07189480	Wolf Creek near Grove, Okla.	Lat 36°37'18", long 94°44'50", in SW 1/4 NW 1/4 sec.28, T.25 N., R.24 E., Delaware County, on upstream side of county road concrete ford, 2.4 miles northeast of Grove.	7.21	1966-71	10-26-70	7.10	1,010
*07189700	Horse Creek at Afton, Okla.	Lat 36°41'50", long 94°57'20", in NE 1/4 NW 1/4 sec.33, T.26 N., R.22 E., Ottawa County, on downstream side of bridge on U.S. Highway 60 at east edge of Afton.	21.9	1966-71	1- 3-71	10.25	1,280
07189720	Horse Creek tributary near Afton, Okla.	Lat 36°41'06", long 94°52'36", in SW 1/4 SE 1/4 sec.31, T.26 N., R.23 E., Ottawa County, upstream of multi-barrel box culvert on U.S. Highway 59, 5.0 miles east of Afton.	.81	1966-71	10-26-70	c6.57	148
07191260	Brushy Creek near Jay, Okla.	Lat 36°25'15", long 94°46'10", in NW 1/4 NW 1/4 sec.5, T.22 N., R.24 E., Delaware County, at bridge on State Highway 20, 1.2 miles east of Jay.	16.0	1965-71	10- 8-70	6.00	540
07194515	Mill Creek near Park Hill, Okla.	Lat 35°48'37", long 95°04'07", in NE 1/4 NW 1/4 sec.3, T.15 N., R.21 E., Cherokee County, at multi-barrel culvert on U.S. Highway 62, 6.3 miles southwest of junction with State Highway 82 near Park Hill.	2.57	1965-71	10- 8-70	11.18	1,470
07196010	Flint Creek tributary near Flint, Okla.	Lat 36°12'00", long 94°44'00", in SE 1/4 NW 1/4 sec.22, T.20 N., R.24 E., Delaware County, upstream of multi-barrel box culvert on State Highway 33, 1.8 miles northwest of Flint.	.94	1966-71			(d)
07196380	Illinois River tributary near Tahlequah, Okla.	Lat 35°58'45", long 94°55'25", in SE 1/4 SE 1/4 sec.2, T.17 N., R.22 E., Cherokee County, at multi-barrel culvert on State Highway 10, 4.9 miles northeast of Tahlequah.	3.59	1965-71	10- 8-70	7.45	780
07228280	Little Robe Creek near Oakwood,	Lat 36°01'00", long 98°46'30", in NW 1/4 NW 1/4 sec.26, T.18 N., R.15 W., Dewey County, upstream of multi-barrel box culvert on State Highway 3, 7.0 miles northwest of Oakwood.	c6.3	1966-71			(d)
07228290	Rough Creek near Thomas, Okla.	Lat 35°48'08", long 98°47'15", in NW 1/4 SW 1/4 sec.3, T.15 N., R.15 W., Custer County, at county road bridge, 4.7 miles northwest of Thomas.	10.4	1964-71	7-29-71	8.90	715
07228450	Deer Creek tributary near Hydro, Okla.	Lat 35°32'10", long 98°28'50", in NW 1/4 NW 1/4 sec.9, T.12 N., R.12 W., Caddo County, at county road culvert, 5.5 miles east of Hydro.	2.31	1964-71	6- 8-71	11.23	610
07228600	Canyon View Creek Geary, Okla.	Lat 35°32'55", long 98°15'50", in SE 1/4 NW 1/4 sec.4, T.12 N., R.10 W., Canadian County, at bridge on U.S. Highway 281 spur, 6.4 miles southeast of Geary.	11.8	1964-71	6- 3-71	8.85	650
07228930	Worley Creek near Tuttle, Okla.	Lat 35°17'28", long 97°45'10", in SE 1/4 SW 1/4 sec.32, T.10 N., R.5 W., Grady County, at multi-barrel culvert on State Highway 37, 3.3 miles east of Tuttle.	11.2	1965-71	6- 3-71	10.60	1,300
07228960	Canadian River tributary near Newcastle, Okla.	Lat 35°17'27", long 97°37'20", in NW 1/4 NE 1/4 sec.4, T.9 N., R.4 W., McClain County, at multi-barrel culvert on State Highway 37, 1.3 miles west of junction with U.S. Highway 62 north of Newcastle.	3.32	1965-71	6- 3-71	19.78	860
07229220	Walnut Creek near Blanchard, Okla. Previously published as Walnut Creek tributary)	Lat 35°07'20", long 97°42'15", in NW 1/4 SW 1/4 sec.35, T.8 N., R.5 W., Grady County, at culvert on U.S. Highway 62, 2.0 miles west of junction with State Highway 76 southwest of Blanchard.	1.26	1964-71	6- 3-71	10.44	150
07229420	Julian Creek tributary near Asher, Okla.	Lat 34°59'09", long 96°58'48", in SW 1/4 SW 1/4 sec.15, T.6 N., R.3 E, Pottawatomie County, at multi-barrel culvert on State Highway 39, 3.4 miles west of Asher.	2.28	1964-71	10- 8-70	16.36	1,330

See footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Arkansas River basin--Continued					
07231280	Arbeca Creek near Allen, Okla.	Lat 34°54'10", long 96°23'20", in NE 1/4 SE 1/4 sec.18, T.5 N., R.9 E., Hughes County, at multi-barrel culvert on State Highway 12, 1.7 miles northeast of Allen.	2.26	1965-71	10- 8-70	a13.86	2,600
07231320	Leader Creek near Atwood, Okla. (Previously published as Leader Creek tributary)	Lat 34°57'10", long 96°20'40", in NW 1/4 NW 1/4 sec.34, T.6 N., R.9 E., Hughes County, at multi-barrel culvert on State Highway 12, 0.7 mile southwest of Atwood.	.72	1965-71	10- 8-70	a16.10	1,470
07231560	Middle Creek near Carson, Okla.	Lat 35°11'10", long 96°04'20", in NE 1/4 NE 1/4 sec.7, T.8 N., R.12 E., Hughes County, at multi-barrel culvert on State Highway 84, 1.2 miles northeast of Carson.	7.40	1965-71	9- 6-71	12.14	1,660
07231950	Pine Creek near Higgins, Okla.	Lat 34°47'40", long 95°20'50", in NE 1/4 NE 1/4 sec.30, T.4 N., R.19 E., Latimer County, at bridge on State Highway 63, 5.4 miles east of Higgins.	9.99	1964-71	10-23-70	10.50	3,180
07232550	South Fork tributary near Guymon, Okla.	Lat 36°40'06", long 101°29'54", in SW 1/4 NE 1/4 sec.1, T.2 N., R.14 E., Texas County, at multiple culvert on Chicago, Rock Island, and Pacific Railroad, 1.8 miles southwest of junction of U.S. Highways 54 and 64 at Guymon.	.26	1964-71	5-29-71	a6.14	6
07232650	Aqua Frio Creek near Felt, Okla.	Lat 36°33'23", long 102°47'10", in SW 1/4 NW 1/4 sec.18, T.1 N., R.3 E., Cimarron County, at county road culvert, 1.1 miles south of junction with U.S. Highway 64 at Felt.	31.0	1964-71	7- 1-71	a12.86	1,000
07233850	Sharp Creek tributary near Turpin, Okla.	Lat 36°51'50", long 100°54'45", in SE 1/4 SE 1/4 sec.29, T.5 N., R.20 E., Beaver County, at culvert on U.S. Highway 64, 2.1 miles west of Turpin.	d1	1964-71	8- 8-71	11.70	13
07234050	North Fork Clear Creek tributary near Balko, Okla.	Lat 36°37'01", long 100°39'50", in SW 1/4 SW 1/4 sec.23, T.2 N., R.22 E., Beaver County, at multi-barrel culvert on State Highway 3, 1.5 miles southeast of Balko.	d4.0	1964-71	9-18-71	a10.09	3
07234250	Kiowa Creek tributary near Laverne, Okla.	Lat 36°42'35", long 99°58'20", in NE 1/4 NW 1/4 sec.26, T.26 N., R.26 W., Harper County, at county road culvert, 4.4 miles west of Laverne.	2.14	1964-71			(d)
07234290	Clear Creek tributary near Catesby, Okla.	Lat 36°29'30", long 99°57'20", in SE 1/4 SW 1/4 sec.2, T.23 N., R.26 W., Ellis County, on downstream side of county road bridge, 0.1 mile east of Catesby.	9.18	1966-71	8- 6-71	a2.48	25
07235700	Little Wolf Creek tributary near Gage, Okla.	Lat 36°14'26", long 99°46'30", in SW 1/4 NW 1/4 sec.4, T.20 N., R.24 W., Ellis County, at multi-barrel culvert on State Highway 46, 5.5 miles south of Gage.	18.4	1964-71	7- 1-71	3.80	180
07236050	Wolf Creek tributary near Tangier, Okla.	Lat 36°24'42", long 99°32'40", in NE 1/4 SW 1/4 sec.3, T.22 N., R.22 W., Woodward County, at multi-barrel culvert on State Highway 15, 0.7 mile southwest of Tangier.	6.23	1964-71			(d)
07237750	Cottonwood Creek near Vici, Okla.	Lat 36°08'45", long 99°12'00", in SE 1/4 SW 1/4 sec.2, T.19 N., R.19 W., Dewey County, at bridge on U.S. Highway 60, 5.4 miles east of Vici.	11.5	1964-71	6-11-71	6.70	300
07237800	Bent Creek near Seiling, Okla.	Lat 36°11'26", long 99°00'36", in NW 1/4 SE 1/4 sec.21, T.20 N., R.17 W., Woodward County, at bridge on U.S. Highway 183 and 270, 6 miles northwest of Seiling.	139	1967-70, 1971	6-11-71	14.81	1,930
07239050	North Canadian River tributary near Eagle City, Okla.	Lat 35°55'30", long 98°35'00", in SE 1/4 NE 1/4 sec.28, T.17 N., R.13 W., Blaine County, at culvert on State Highway 58, 0.5 mile south of Eagle City.	.52	1964-71	6- 3-71	a1.76	45
07241880	Sand Creek near Cromwell, Okla.	Lat 35°20'56", long 96°29'40", in SE 1/4 SE 1/4 sec.7, T.10 N., R.8 E., Seminole County, at bridge on State Highway 99A, 2.2 miles west of Cromwell.	9.48	1965-71	7- 1-71	11.92	1,260

See footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Arkansas River basin--Continued					
07242160	Alabama Creek near Weleetka, Okla.	Lat 35°21'40", long 96°08'55", in NW 1/4 NE 1/4 sec.9, T.10 N., R.11 E., Okfuskee County, at county road multi-barrel culvert, 2.0 miles north of Weleetka.	16.5	1965-71	9- 5-71	e11.00	1,850
07242180	Stidham Creek near Dustin, Okla. (Previously published as Stidham Creek tributary)	Lat 35°17'16", long 96°03'05", in NW 1/4 NW 1/4 sec.3, T.9 N., R.12 E., Hughes County, at multi-barrel culvert on State Highway 84, 1.1 miles north of Dustin.	2.56	1964-71	9- 5-71	10.34	550
07243550	Adams Creek near Beggs, Okla.	Lat 35°44'55", long 96°02'15", in NE 1/4 SE 1/4 sec.28, T.15 N., R.12 E., Okmulgee County, at county road bridge, 2.0 miles northeast of Beggs.	5.90	1965-71	9- 5-71	12.77	2,640
07244790	Brooken Creek near Enterprise, Okla.	Lat 35°14'50", long 95°22'50", in SE 1/4 SE 1/4 sec.15, T.9 N., R.18 E., Haskell County, at county road multi-barrel culvert, 1.5 miles north of Enterprise.	5.66	1964-71	10-26-70	12.71	3,690
07245090	Vian Creek near Vian, Okla.	Lat 35°32'30", long 94°58'05", in NE 1/4 SW 1/4 sec.3, T.12 N., R.22 E., Sequoyah County on downstream side of bridge on State Highway 82, 2.9 miles north of Vian.	19.6	1966-71	10-26-70	10.20	3,000
07246600	Cache Creek near Cowlington, Okla.	Lat 35°17'10", long 94°45'35", in NW 1/4 NW 1/4 sec.3, T.9 N., R.24 E., LeFlore County, at bridge on U.S. Highway 59, 2.3 miles southeast of Cowlington.	20.6	1964-71	10-26-70	11.89	1,810
07246610	Pecan Creek near Spiro, Okla.	Lat 35°14'40", long 94°44'35", in NE 1/4 NE 1/4 sec.22, T.9 N., R.24 E., LeFlore County, at multi-barrel culvert on U.S. Highway 59, 4.2 miles west of Junction with U.S. Highway 271 west of Spiro.	.90	1965-71	10-26-70	8.62	214
07246630	Big Black Fox Creek near Long, Okla.	Lat 35°31'15", long 94°37'10", in NE 1/4 NE 1/4 sec.14, T.12 N., R.25 E., Sequoyah County, at county road bridge, 2.3 miles northwest of Long.	5.32	1964-71	10-26-70	10.25	2,500
		Red River basin					
07299705	Bitter Creek near Hollis, Okla.	Lat 34°42'40", long 99°57'30", in NE 1/4 NW 1/4 sec.29, T.3 N., R.26 W., Harmon County, at county road bridge, 3.1 miles northwest of Hollis.	11.3	1964-71	6-10-71	4.88	100
07299720	Mule Creek near Eldorado, Okla.	Lat 34°27'00", long99°32'10", in NE 1/4 NE 1/4 sec.30, T.1 S., R.22 W., Jackson County, at county road bridge, 6.8 miles southeast of Eldorado.	3.84	1964-71	9-18-71	7.57	950
07300150	Salt Fork Red River tributary near Vinson, Okla.	Lat 34°54'10", long 99°58'50", in NW 1/4 NE 1/4 sec.19, T.5 N., R.26 W., Harmon County, at bridge on State Highway 9, 6.9 miles west of Vinson.	7.49	1964-71	6-10-71	a10.20	1,000
07301455	Turkey Creek near Erick, Okla.	Lat 35°12'05", long 99°47'55", in NW 1/4 NW 1/4 sec.1, T.8 N., R.25 W., Beckham County, at county road multi-barrel culvert, 3.8 miles southeast of Erick.	19.8	1964-71	6- 8-71	2.53	189
07301480	Short Creek near Sayre, Okla.	Lat 35°18'20", long 99°39'15", in SW 1/4 SE 1/4 sec.29, T.10 N., R.23 W., Beckham County, at county road multi-barrel culvert, 0.9 mile northwest of Sayre.	9.12	1965-71	6- 8-71	a12.95	300
07301485	Spring Creek near Elk City, Okla.	Lat 35°24'25", long 99°33'05", in SE 1/4 SW 1/4 sec.20, T.11 N., R.22 W., Beckham County, at upstream end of concrete box culvert on State Highway 6, 8.2 miles west of Elk City.	.93	1968-71	6- 9-71	9.74	351
07301495	Indian Creek near Carter, Okla.	Lat 35°17'30", long 99°30'35", in NW 1/4 NE 1/4 sec.3, T.9 N., R.22 W., Beckham County, at bridge on State Highway 152, 5.0 miles north of Carter.	24.9	1965-71	6-10-71	9.60	955
07303450	Deer Creek near Plainview, Okla.	Lat 35°02'50", long 99°46'10", in NW 1/4 SE 1/4 sec.31, T.7 N., R.24 W., Greer County, at county road bridge, 3.8 miles southwest of Plainview.	27.8	1964-71	6- 9-71	7.32	560

See footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Red River basin--Continued					
07309480	Canyon Creek near Medicine Park, Okla.	Lat 34°49'55", long 98°32'10", in NW 1/4 SE 1/4 sec.11, T.4 N., R.13 W., Comanche County, at multi-barrel culvert on State Highway 58, 7.3 miles northwest of Medicine Park.	3.35	1965-71	9-24-71	a8.10	1,230
07311410	Red Creek near Snyder, Okla.	Lat 34°40'58", long 98°51'40", in SE 1/4 SE 1/4 sec.34, T.3 N., R.16 W., Kiowa County, at multi-barrel culvert on State Highway 54, 5.4 miles northeast of Snyder.	6.12	1965-71	9- 5-71	5.50	180
07311420	Deadman Creek tributary at Manitou, Okla.	Lat 34°30'17", long 98°59'01", in NW 1/4 NE 1/4 sec.4, T.1 S., R.17 W., Tillman County, at multi-barrel culvert on U.S. Highway 183, at south edge of Manitou.	2.57	1965-71	8-29-71	5.73	365
07312850	Nine Mile Beaver Creek near Elgin, Okla.	Lat 34°46'40", long 98°15'25", in SE 1/4 NW 1/4 sec.33, T.4 N., R.10 W., Comanche County, at multi-barrel culvert on State Highway 17, 2.0 miles east of Elgin.	6.29	1964-71	5-31-71	a9.05	1,500
07312950	Little Beaver Creek near Marlow, Okla.	Lat 34°40'55", long 98°00'30", in SW 1/4 SE 1/4 sec.35, T.3 N., R.8 W., Grady County, at county road bridge, 3.6 miles northwest of Marlow.	35.4	1964-71	8-15-71	a5.00	1,550
*07313600	Cow Creek at Waurika, Okla.	Lat 34°10'55", long 98°00'05", in SE 1/4 NE 1/4 sec.26, T.4 S., R.8 W., Jefferson County, at Chicago, Rock Island and Pacific Railway Co. bridge, near north edge of Waurika.	193	1967-70†, 1971	8-15-71	12.46	528
07315680	Cottonwood Creek tributary near Loco, Okla.	Lat 34°18'40", long 97°34'00", in SE 1/4 NE 1/4 sec.12, T.3 S., R.4 W., Stephens County, at multi-barrel culvert on State Highway 53, 6.6 miles southeast of Loco.	1.74	1964-71	10- 8-70	8.18	470
07315880	Demijohn Creek near Wilson, Okla.	Lat 34°08'10", long 97°25'20", in SW 1/4 NW 1/4 sec.9, T.5 S., R.2 W., Carter County, at multi-barrel culvert on State Highway 76, 1.7 miles south of Wilson.	5.74	1964-71	10-26-70	9.82	1,920
07316130	Wilson Creek tributary near McMillan, Okla.	Lat 34°06'00", long 96°58'35", in NW 1/4 NE 1/4 sec.27, T.5 S., R.3 E., Carter County, at county road culvert, 2.5 miles northwest of McMillan.	2.97	1965-71	10-26-70	6.30	956
07316140	Brier Creek near Powell, Okla.	Lat 33°59'54", long 96°49'35", in NW 1/4 NW 1/4 sec.31, T.6 S., R.5 E., Marshall County, at bridge on State Highway 32, 3.6 miles northeast of Powell.	12.0	1965-71	8-14-71	13.80	4,390
07316410	Washita River tributary near Crawford, Okla.	Lat 35°48'46", long 99°51'48", in SE 1/4 SW 1/4 sec.33, T.16 N., R.25 W., Roger Mills County, at multi-barrel culvert on State Highway 33, 3.7 miles southwest of Crawford.	2.18	1965-71	9-18-71	12.42	25
07328030	Big Dry Creek near Alex, Okla.	Lat 34°56'44", long 97°50'18", in NE 1/4 SW 1/4 sec.33, T.6 N., R.6 W., Grady County, upstream from box culvert on State Highway 19, 4.5 miles northwest of Alex.	7.57	1962-71	9-24-71	3.60	176
07328040	Little Dry Creek near Alex, Okla.	Lat 34°57'06", long 97°50'48", in SW 1/4 NW 1/4 sec.33, T.6 N., R.6 W., Grady County, upstream from box culvert on State Highway 19, 5 miles northwest of Alex.	.88	1962-71	8-14-71	2.24	91
07329870	Honey Creek near Davis, Okla.	Lat 34°26'50", long 97°07'40", in NW 1/4 NE 1/4 sec.30, T.1 S., R.2 E., Murray County, at bridge on State Highway 77D, 4.0 miles south of Davis.	18.7	1964-71	10- 8-70	a14.8	7,000
07331410	Buzzard Creek near Reagan, Okla. (Previously published as Big Sand Creek)	Lat 34°19'50", long 96°39'28", in NE 1/4 NE 1/4 sec.3, T.3 S., R.6 E., Johnson County, at bridge on State Highway 99, 4.0 miles southeast of Reagan.	4.30	1965-71	10- 8-70	9.15	750
07332070	Rock Creek near Achille, Okla.	Lat 33°48'35", long 96°22'38", in SW 1/4 SW 1/4 sec.33, T.8 S., R.9 E., Bryan County, at county road culvert, 2.0 miles south of Achille.	.72	1965-71	2-21-71	2.76	176
07333330	Chickasaw Creek tributary near Stringtown, Okla.	Lat 34°29'34", long 95°56'39", in SW 1/4 SE 1/4 sec.4, T.1 S., R.13 E., Atoka County, at multi-barrel culvert on State Highway 43, 6.3 miles northeast of Stringtown.	3.19	1965-71	4-20-71	16.80	4,930

See Footnotes at end of table, p. 201.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Red River basin--Continued					
0733350	Chickasaw Creek near Stringtown, Okla.	Lat 34°27'41", long 96°01'36", in NE 1/4 NE 1/4 sec.22, T.1 S., R.12 E., Atoka County, on right upstream pier of county road bridge, 1.5 miles east of Stringtown.	32.7	1956-68††, 1969-71	4-20-70	19.50	10,500
07333800	McGee Creek near Stringtown, Okla.	Lat 34°26'33", long 95°52'10", in NE 1/4 sec.30, T.1 S., R.14 E., Atoka County, on right bank 10.6 miles east of Stringtown.	86.6	1956-68††, 1969-71	4-20-71	14.30	7,700
07335310	Rock Creek near Boswell, Okla.	Lat 33°57'57", long 95°52'02", in NE 1/4 NE 1/4 sec.7, T.7 S., R.14 E., Choctaw County, at culvert on State Highway 109, 4.2 miles south of Boswell.	.94	1965-71	7-23-71	e2.35	65
07335320	Bokchito Creek near Soper, Okla.	Lat 34°02'20", long 95°40'10", in NE 1/4 NW 1/4 sec.18, T.6 S., R.16 E., Choctaw County, at bridge on U.S. Highway 70, 1.9 miles east of Soper.	16.6	1965-71	2-21-71	3.46	590
07335760	Kiamichi River tributary near Albion, Okla.	Lat 34°37'26", long 95°02'26", in NW 1/4 SE 1/4 sec.24, T.2 N., R.21 E., Pushmataha County, at county road multi-barrel culvert, 3.8 miles southeast of Albion.	1.50	1965-71	4-22-71	2.48	86
*07336000	Tenmile Creek near Miller, Okla.	Lat 34°17'55", long 95°44'40", in NW 1/4 sec.16, T.3 S., R.15 E., Pushmataha County, at county road bridge, 1.2 miles south of Miller.	68	1956-70††, 1971	10-23-70	17.52	3,260
07336520	Frazier Creek near Oleta, Okla.	Lat 34°11'50", long 95°21'00", in NW 1/4 NE 1/4 sec.19, T.4 S., R.19 E., Pushmataha County, at bridge on State Highway 3, 0.5 mile west of Oleta.	19.4	1964-71	4-23-71	9.55	1,808
07336710	Rock Creek near Sawyer, Okla.	Lat 34°01'05", long 95°21'30", in NW 1/4 SW 1/4 sec.19, T.6 S., R.19 E., Choctaw County, at county road bridge, 0.5 mile east of Sawyer.	3.39	1964-71	7-22-71	4.62	419
07336780	Perry Creek near Idabel, Okla.	Lat 33°53'44", long 94°53'15", in NE 1/4 NW 1/4 sec.3, T.8 S., R.23 E., McCurtain County, at multi-barrel culvert on State Highway 37, 3.5 miles west of Idabel.	7.53	1965-71	3-12-71	6.90	640
07336785	Bokchito Creek near Garvin, Okla.	Lat 33°53'44", long 94°54'23", in NE 1/4 NW 1/4 sec.4, T.8 S., R.23 E., McCurtain County, at multi-barrel culvert on State Highway 37, 4.5 miles southeast of Garvin.	2.96	1965-71	1- 3-71	4.55	230
07337220	Big Branch near Ringold, Okla.	Lat 34°10'27", long 95°04'33", in NW 1/4 SW 1/4 sec.26, T.4 S., R.21 E., McCurtain County, at multiple culvert on State Highway 3, 3.8 miles southeast of Ringold.	1.99	1964-71	10-26-70	8.86	305
07337920	Fifteen Creek near Glover, Okla.	Lat 34°06'33", long 94°55'42", in SW 1/4 NW 1/4 sec.20, T.5 S., R.23 E., McCurtain County, at culvert on State Highways 3 and 7, 2.7 miles northwest of Glover.	1.23	1967-71	2-11-71	a4.0	26
07338520	Yanubbee Creek near Broken Bow, Okla.	Lat 34°03'35", long 94°44'22", in NW 1/4 SW 1/4 sec.6, T.6 S., R.25 E., McCurtain County, at bridge on U.S. Highway 259, 2.3 miles north of Broken Bow.	9.10	1964-71	3-12-71	8.20	525
07338780	Mountain Fork tributary near Smithville, Okla.	Lat 34°29'48", long 94°40'06", in NW 1/4 SE 1/4 sec.3, T.1 S., R.25 E., McCurtain County, at multi-barrel culvert on U.S. Highway 259, 2.5 miles northwest of Smithville.	.85	1965-71	10-26-70	4.62	226

* Also a low-flow partial-record station.
†† Operated as a continuous-record station.
a From floodmark.
b Revised.
c Approximately.
d No evidence of flow during 1971 water year.
e Based on partial record graph.

A series of discharge measurements was made at selected sites on the North Canadian River between Canton Reservoir and Yukon, Okla., during periods of release from Canton Reservoir. Gates at Canton Dam were open Apr. 16-22, June 25-29, Aug. 20-27 to release water for municipal use at Oklahoma City, Okla.

Station No.	Stream	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Arkansas River Basin				
07239000	North Canadian River.	Lat 36°04'45", long 98°35'25", in NE 1/4 SW 1/4 sec.33, T.19 N., R.13 W., Blaine County, 2,700 ft downstream from Canton Dam, 1.5 miles northwest of Canton, Okla., and at mile 393.8.	12,484	1938-70‡	4-16-71	1,020
					4-19-71	1,050
					4-20-71	960
					6-28-71	901
					6-29-71	899
					8-23-71	1,000
	Do.....	Lat 35°50'42", long 98°27'54", in NE 1/4 sec.27, T.16 N., R.12 W., Blaine County, at bridge on U.S. Highways 270 and 281, 3 miles west of Watonga, Okla Okla., and at mile 364.9.	12,692	1951-54, 1956-57, 1963-70	4-19-71	759
					4-20-71	760
					4-23-71	207
					4-26-71	26
07239500	Do.....	Lat 35°33'44", long 97°57'32", on east line sec.32, T.13 N., R.7 W., Canadian County, at bridge on U.S. Highway 81, 2 miles north of court house in El Reno, Okla., and at mile 307.4.	13,042	1903-8‡, 1938-70‡	4-19-71	551
					4-20-71	676
					4-21-71	517
					4-23-71	745
					6-28-71	420
					8-24-71	593
					8-26-71	763
	Do.....	Lat 35°32'22", long 97°44'31", on west line sec.4, T.12 N., R.5 W., Canadian County, at bridge on State Highway 4, 2 miles north of Yukon, Okla., and at mile 292.0.	13,183	1943-44, 1948-54, 1956-57, 1963-67, 1969-70	4-20-71	573
					4-21-71	675
					4-23-71	665
					6-30-71	509
					8-24-71	485
					8-26-71	658

‡ Operated as a continuous-record gaging station.

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