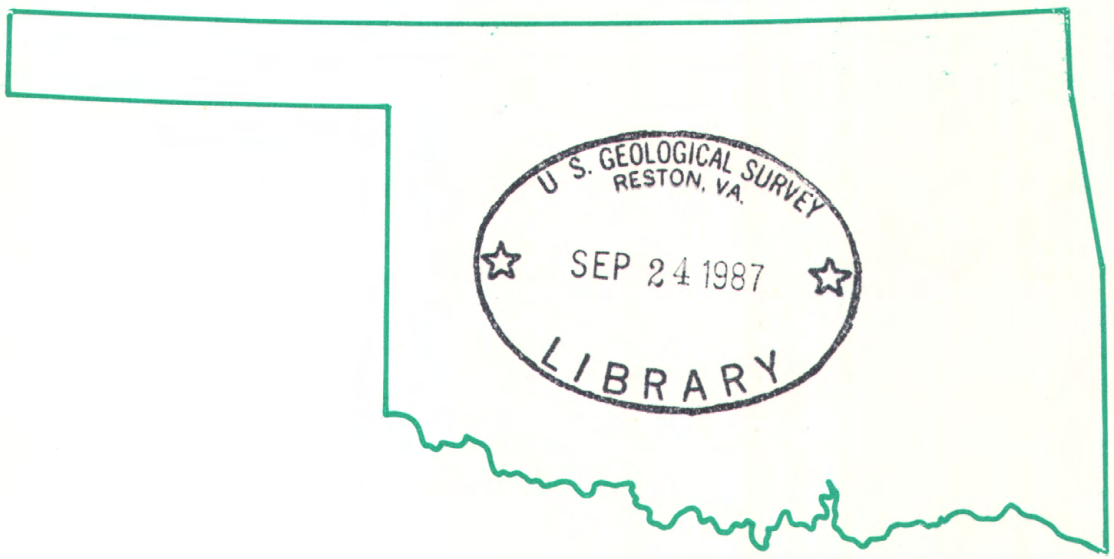
Water Resources Data Oklahoma Water Year 1985



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-85-1
Prepared in cooperation with the State of Oklahoma
and with other agencies

CALENDAR FOR WATER YEAR 1985

1984

OCTOBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

1985

JANUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

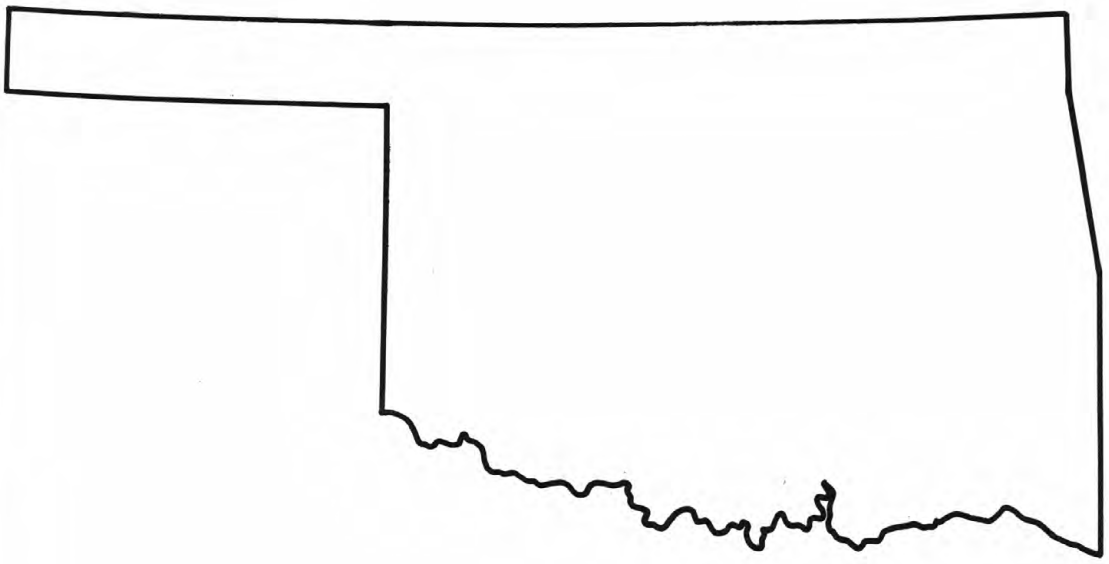
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Water Resources Data Oklahoma Water Year 1985

by L.D. Hauth, J.K. Kurklin, D.M. Walters and T.E. Coffey



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-85-1
Prepared in cooperation with the State of Oklahoma
and with other agencies

DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Oklahoma write to
District Chief, Water Resources Division
U.S. Geological Survey
215 Dean A. McGee Avenue, Room 621
Oklahoma City, Oklahoma 73102

1985

PREFACE

This hydrologic-data report for Oklahoma is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface-water data-collection network in each state, Puerto Rico, and the Trust Territories. These records of streamflow and water quality provide the hydrologic information needed by state, local, and federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines.

Report preparation was under the direct supervision of Joanne K. Kurklin, Hydrologic Records Unit Chief. The data were collected, computed, and processed by the following personnel:

D.L. Adams	T.E. Coffey	R.E. Johnson	R.L. Tortorelli
L.A. Alf	J.W. Ferguson, Jr.	S.J. Kaye	D.M. Walters
D.L. Boyle	D.M. Ferree	S.W. Lehman	J.R. Wells
C.R. Bullock	R.D. Gist	L.D. Mize	D.K. White
R.W. Chadd	D.C. Heimann	W.B. Simons	G.L. Young

N.L. Newell typed the text of the report.

This report was prepared in cooperation with the State of Oklahoma and with other agencies under the general supervision of Leland D. Hauth, Hydrologic Records Section Chief, and Charles R. Burchett, District Chief, Oklahoma.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/222	2.	3. Recipient's Accession No.

4. Title and Subtitle
Water Resources Data for Oklahoma, Water Year 1985

5. Report Date March 1987

6.

7. Author(s)
L.D. Hauth, J.K. Kurklin, D.M. Walters, and T.E. Coffey

8. Performing Organization Rept. No. USGS-WDR-OK-85-1

9. Performing Organization Name and Address
U.S. Geological Survey
Water Resources Division
215 Dean A. McGee Avenue, Room 621
Oklahoma City, OK 73102

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address
U.S. Geological Survey
Water Resources Division
215 Dean A. McGee Avenue, Room 621
Oklahoma City, OK 73102

13. Type of Report & Period Covered
Annual - Oct. 1, 1984 to Sept. 30, 1985

14.

15. Supplementary Notes
Prepared in cooperation with the State of Oklahoma and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1985 water year for Oklahoma consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes or reservoirs. This report contains discharge records for 122 gaging stations; stage and contents for 29 lakes or reservoirs; water quality for 41 gaging stations and 3 lakes. Also included are 30 crest-stage partial-record stations and 3 low-flow station. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma.

17. Document Analysis a. Descriptors
*Oklahoma, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperature, Sampling sites, Water analyses.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161	UNCLASSIFIED	302
	20. Security Class (This Page) UNCLASSIFIED	22. Price

CONTENTS

ILLUSTRATIONS

[Letters after station name designate type of data: (d) discharge, (c) chemical, (b) biological, (e) contents, (m) microbiological, (t) water temperature, (s) sediment]

WATER RESOURCES DATA - OKLAHOMA, 1985

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Oklahoma each water year (October 1 to September 30). These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Oklahoma."

This report includes records on surface water in the State. Specifically, it contains: (1) Discharge records for 122 streamflow-gaging stations, for 3 partial-record or miscellaneous streamflow stations, and for 30 crest-stage, partial-record streamflow stations; (2) stage and content records for 29 lakes and reservoirs; and (3) water-quality records for 41 streamflow-gaging stations, and 3 lakes.

This series of annual reports for Oklahoma began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantity and quality of surface water.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Oklahoma were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface Water Supply of the United States, Parts 7A and 7B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OK-85-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on back of title page or by telephone (405) 231-4256.

COOPERATION

The U.S. Geological Survey and organizations of the State of Oklahoma have had cooperative agreements for the systematic collection of streamflow records since 1935, and for water quality records since 1941. Organizations that assisted in collecting the data through cooperative agreement with the Survey are:

Oklahoma Water Resources Board, Gerald E. Borelli, Chairman
and James R. Barnett, Executive Director.
Oklahoma Department of Transportation, Richard A. Ward, Chief Engineer.
Oklahoma Geological Survey, Charles J. Mankin, Director.
Oklahoma State Department of Health, Environmental Health Services, Mark S. Coleman, Deputy Commissioner.
Oklahoma City Water Department, Earl Potts, Director of Water Services.

The following Federal agencies assisted in the data collection program by providing funds or services:

Corps of Engineers, U.S. Army
Bureau of Reclamation, U.S. Department of Interior
Bureau of Land Management, U.S. Department of Interior

Assistance in the form of funds or services was rendered by the city of Oklahoma City and the following organizations through the Oklahoma Water Resources Board: Grand River Dam Authority; Central Oklahoma Master Conservancy District; Fort Cobb Reservoir Master Conservancy District; Lugert-Altus Irrigation District; Foss Reservoir Master Conservancy District; Mountain Park Master Conservancy District; Oklahoma Gas and Electric Company; the cities of Ada, Altus, Claremore, Lawton, Sapulpa, and Tulsa.

Organizations that supplied data are acknowledged in the station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Streamflow in the State was greater than average, except for the western one-fourth where streamflow was less than average. Intense rains during February 21-24 caused flooding in the northeast corner of the State, with moderate rises elsewhere.

Discharge at the index station in south-central Oklahoma, Washita River near Dickson, was in the upper 75-percent quartile for 8 months of the year. Reservoir contents were near normal for the year, except in Lake Altus near Lugert in the southwestern part of the State, which was substantially below normal.

Chemical Quality of Streamflow

The quality of Oklahoma's surface water had no significant trend in the 1985 water year. Concentrations of dissolved solids were less across most of the State during water year 1985 than during water year 1984, with the largest decreases occurring in the North Canadian and Canadian River basins. Concentrations of dissolved solids were slightly greater in the Kiamichi River basin and the upstream reaches of the Cimarron River basin during water year 1985 compared to water year 1984.

Nutrient concentrations increased slightly across the State, except for river basins in central Oklahoma. Nutrient concentrations in these basins had a slight downward trend as compared to the previous year. Trace-metal concentrations were relatively constant in all areas of the State.

Sediment concentrations were larger across most of Oklahoma during water year 1985 than during water year 1984. In the northeastern quarter of the State, however, sediment concentrations decreased as compared to the previous year.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

EXPLANATION OF THE RECORDS

The surface-water and water-quality records published in this report are for the 1985 water year that began October 1, 1984, and ended September 30, 1985. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figures 1-3. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-waters stations are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations where only miscellaneous measurements are made.

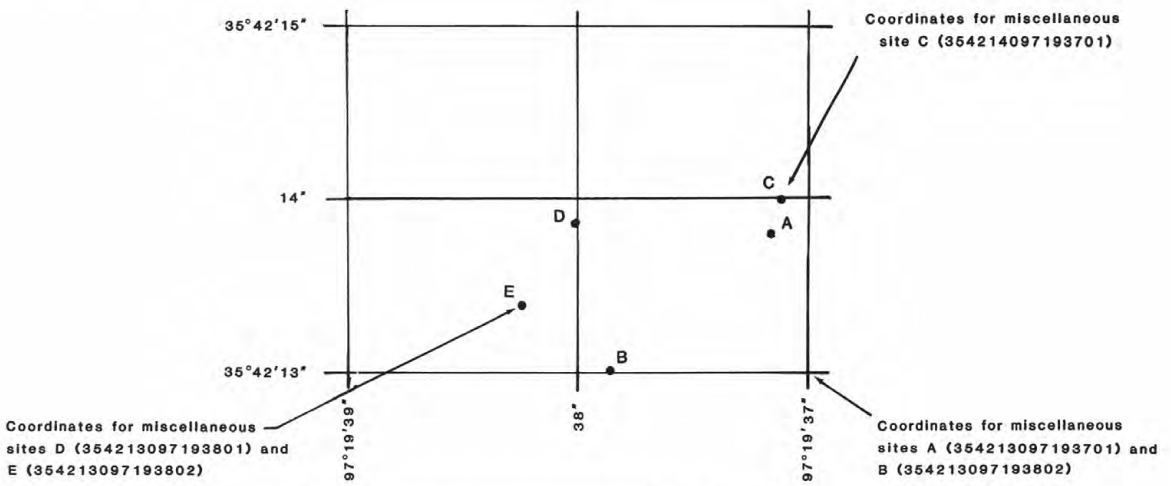
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other 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 series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 07152500, which appears just to the left of the station name, includes the two-digit Part number "07" plus the six-digit downstream-order number "152500." The Part number designates the major river basin; for example, part "07" is the Lower Mississippi River basin.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



System for numbering miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharge may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Location of all complete-record, crest-stage partial-record, and low-flow partial-record stations for which data are given in this report are shown in figures 1-2.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. It is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. 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 the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slopemethod in which the slope or fall in a reach of the stream is a factor in computing discharge. 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 computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

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 from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information.

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted 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 most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--This paragraph is used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. 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 is usually 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 for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversions, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements and others collected for some special reason are called measurements at miscellaneous sites.

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges 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, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. 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 losses are large in comparison with the observed discharge.

Other Records Available

Records of discharge, not published by the Geological Survey, are collected in Oklahoma at several sites by the U.S. Army Corps of Engineers. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Oklahoma District office. Also, most of the daily mean discharges are in computer-readable form.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 3.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on p. 17 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office whose address is given on the back of the title page of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

Suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, and water temperature then follow in sequence.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organisms may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

DEFINITIONS OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorphyll and lacking roots, stems, and leaves.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C ± 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C ± 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C ± 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area of volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll *a* and *b* are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloro-platinate ion. Color is expressed in units of the platinum-cobalt scale.

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 gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic foot per second (ft^3/s)[1] 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 or 0.02832 cubic meters per second.

Cubic feet per second per square mile $[(ft^3/s)/mi^2]$[1] 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.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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 hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

---

[1]Until appropriate changes can be made to the WATSTORE and Prime computer systems, the unit abbreviations "CFS" and "CFSM" will appear in some computer-generated table headings and summaries.

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part of all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentrations of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf or Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-site distribution given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of ratioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly know as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen release (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/m^2.time)] for periphyton and macrophytes and [mg C/(m^3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O/(m^2.time)] for periphyton and macrophytes and [mg O/(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, 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.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactry for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	hexagenia limbata

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sume of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1985, is called the "1985 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentratons of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open- File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A13. *Computation of continuous records of streamflow,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge,* by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*. by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*. edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*. by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*. by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*. by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

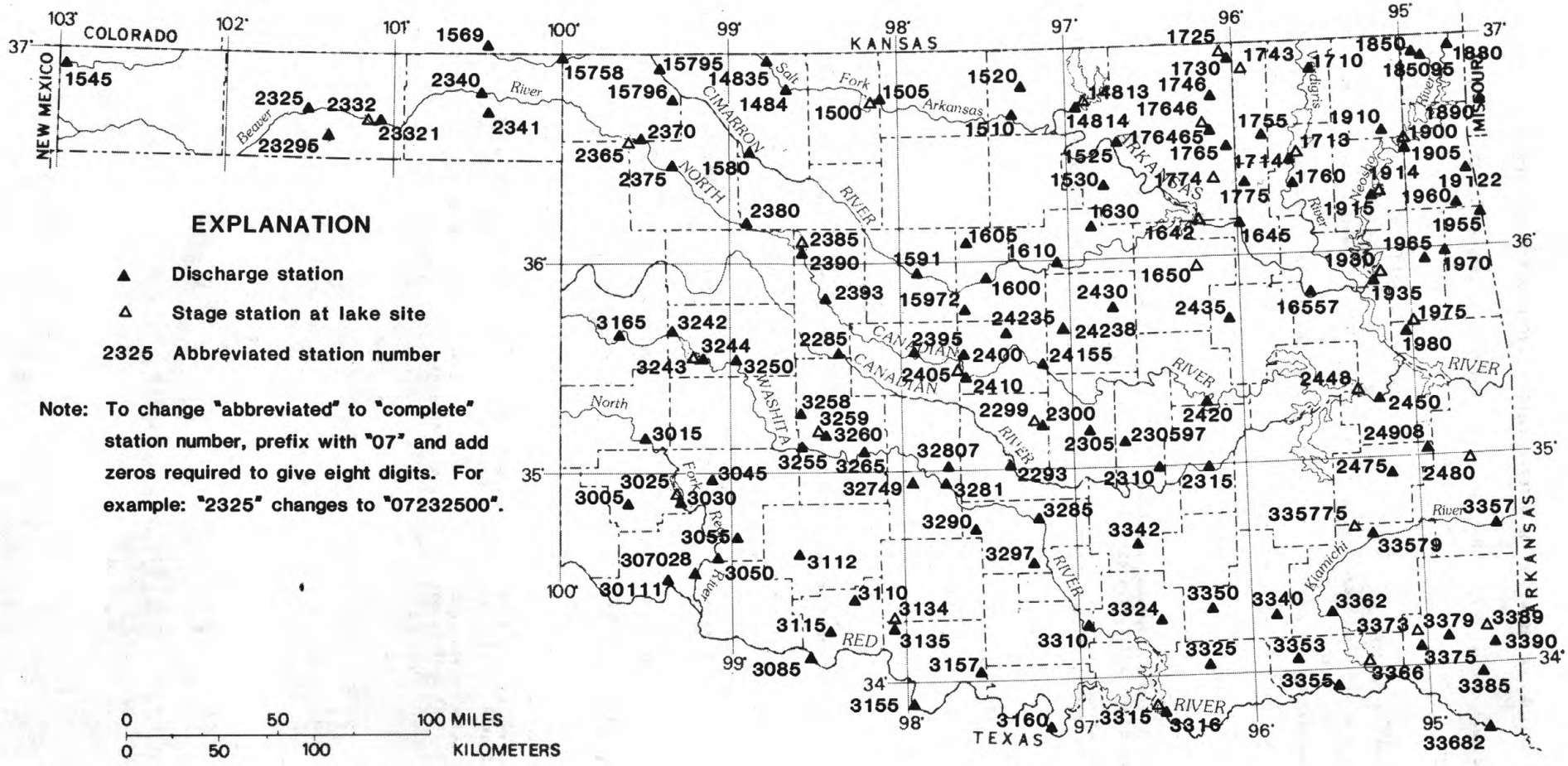


Figure 1.--Location of continuous-record surface-water stations, water year 1985.

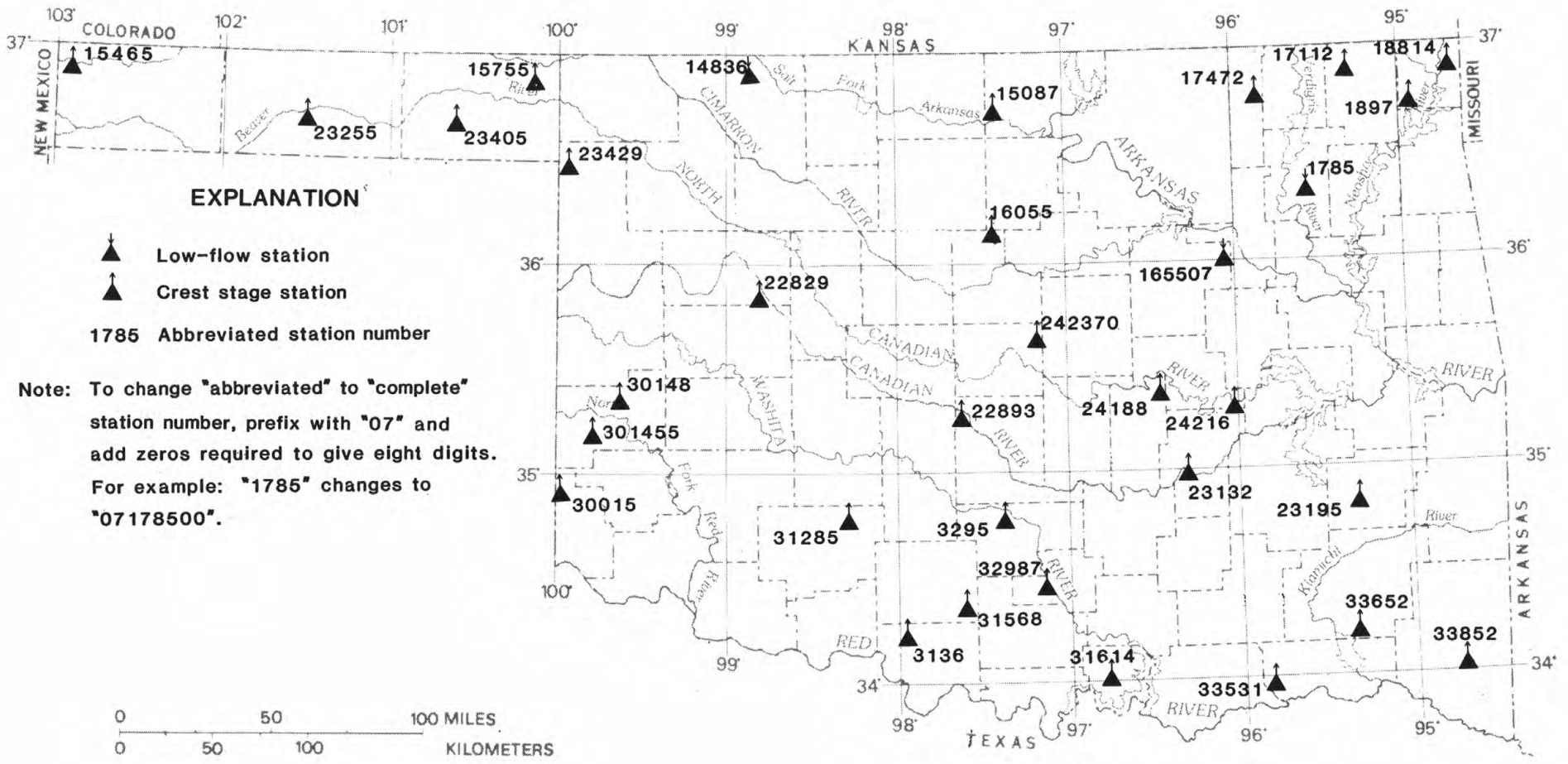


Figure 2.--Location of partial-record stations, water year 1985.

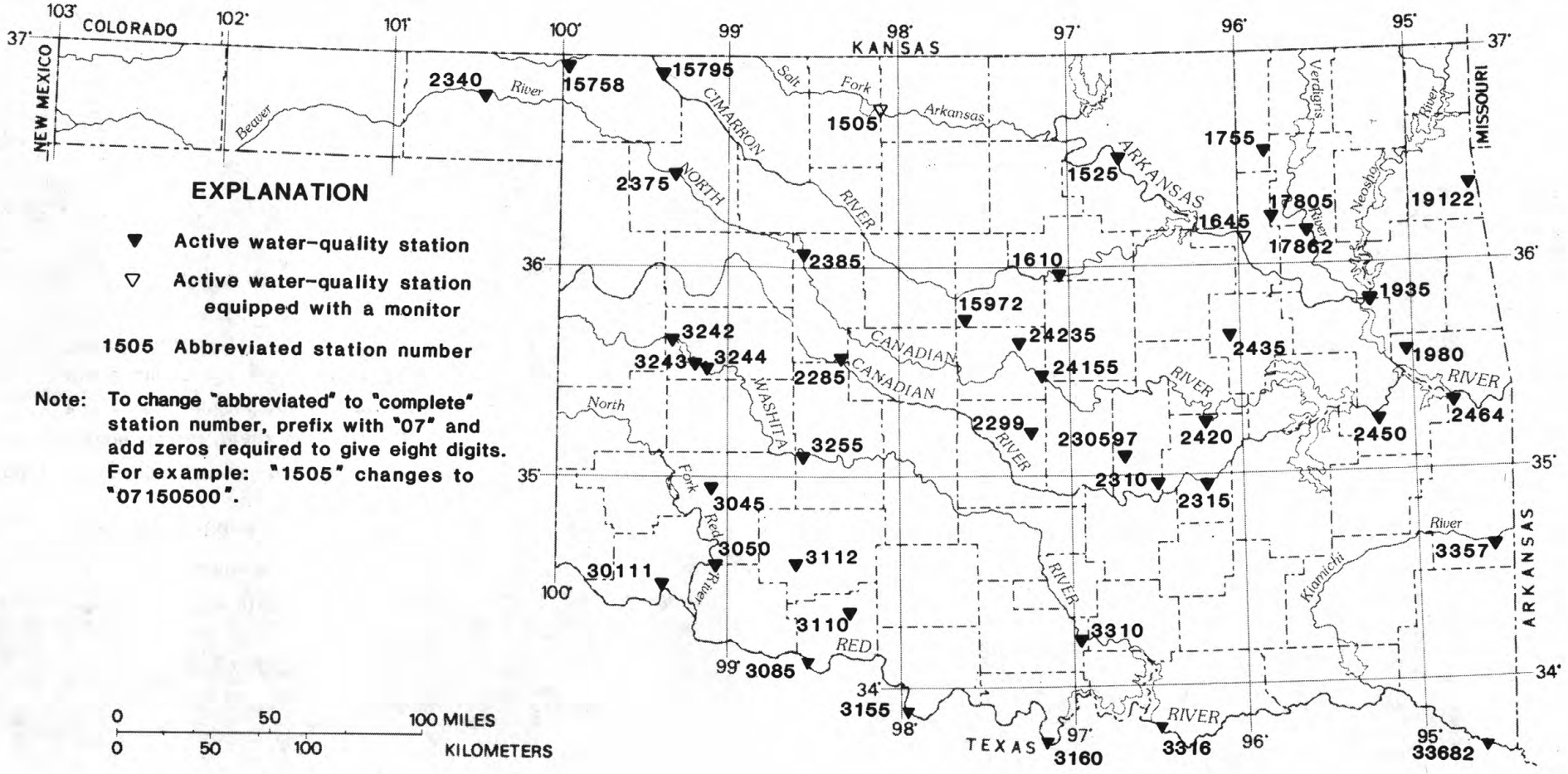


Figure 3.--Location of water-quality stations, water year 1985.

07148130 KAW LAKE NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'58", long 96°55'18", in NW 1/4 SW 1/4 sec.30, T.26 N., R.4 E., Osage County, Hydrologic Unit 11060001, 1,700 ft east of centerline of spillway on dam on Arkansas River, about 8 mi east of Ponca City, and at mile 653.7.

DRAINAGE AREA.--46,530 mi^2, of which 7,607 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to July 8, 1976 nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a rolled, earthfill dam. Spillway is concrete, gravity ogee-weir type controlled by eight 50-foot taintor gates. Outlet works consist of two sluice gates. Regulated storage began April 22, 1976; conservation pool first filled July 6, 1976. Capacity, 1,348,000 acre-ft, at elevation 1,044.5 ft, top of flood control pool, 428,600 acre-ft, at elevation 1,010.0 ft, top of conservation pool, and 250,700 acre-ft, at elevation 997.5 ft, crest of controlled spillway. Dead storage 85,100 acre-ft below elevation 978.0 ft. Figures given herein represent total contents. Reservoir is designed for flood control, water quality control, recreation, fish and wildlife, and water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 799,200 acre-ft June 6, 1982, elevation, 1,027.27 ft, minimum since conservation pool first filled, 223,100 acre-ft March 25, 1977, elevation, 995.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 673,500 acre-ft Mar. 11, elevation, 1,022.18 ft: minimum, 385,000 acre-ft Feb. 26, elevation, 1,007.34 ft.

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

1,007	379,700	1,020	624,000
1,012	463,700	1,025	741,200
1,016	539,800	1,030	873,000

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	396500	424900	437500	468200	385900	669500	469900	460000	437400	501100	405400	405900
2	395800	425200	438400	471000	385200	667000	464100	468500	434000	497300	402000	405600
3	396200	429300	439100	472600	385200	670700	459600	478900	432200	492700	402000	405600
4	395700	431700	440000	473700	386500	671400	455700	489100	431700	487800	402300	405100
5	396300	430300	441700	473700	388400	670200	450400	497500	432900	484200	407600	404600
6	396800	425400	440700	475000	389000	670500	445700	502800	441700	479100	410300	404600
7	396800	422700	441700	476100	389200	670500	440200	506100	450200	473600	409400	404500
8	398900	420700	422600	476500	389700	671200	435300	510700	454300	467500	405300	404000
9	399400	422700	443400	476600	390100	670900	429300	517500	457300	462300	399200	407900
10	400200	420500	444100	477000	390900	670500	427300	513100	514400	456400	400700	408700
11	400700	420200	445000	474600	391100	670700	427300	507600	544500	450500	401400	407200
12	402200	419700	446400	468800	391700	670200	426200	502200	570900	444900	404500	403000
13	405100	419400	448400	464200	392200	670700	427800	496000	593500	440400	405800	401900
14	408700	420900	449800	460500	392300	669300	432900	491000	593300	435900	415500	405800
15	410800	421200	460500	455300	391400	664000	438300	487200	599400	432200	410000	417500
16	413300	421400	486800	449900	390400	656200	438300	480200	594100	427800	403500	420700
17	414300	423200	512800	445200	389500	648000	436700	475200	586200	423400	402700	415800
18	415800	425100	532800	440000	388400	639500	435900	468300	575900	418500	401000	408700
19	416800	425600	533600	436400	388200	628500	433600	460900	563000	414200	399600	404800
20	418700	426600	523900	426800	389800	619200	432800	456800	551200	410000	399400	404100
21	418900	427800	514200	420200	396500	603700	430800	453700	543700	405800	400700	403800
22	419400	428600	500200	414500	425100	587300	430300	452500	538600	403300	402500	415000
23	419400	430300	484400	409000	494200	571300	428600	451200	531900	402800	402200	440400
24	419900	431200	474800	403700	552400	555800	428100	449800	524200	403200	401700	449600
25	421000	432400	469300	400100	601300	539800	428800	448200	516300	403000	402000	445900
26	422000	433600	464200	396500	637400	524200	429100	445900	511700	402700	404100	431400
27	426100	434300	458700	394600	656700	511700	433300	445600	508400	403800	405600	418200
28	426100	434700	456900	392700	665400	501100	435000	445700	512700	405400	406600	415000
29	425400	436000	457800	391700	---	493200	439200	444900	513100	403700	405900	420000
30	424400	436800	459300	391400	---	485200	450500	444900	506500	403000	404800	421000
31	423600	---	464200	387600	---	477600	---	439300	---	406700	405600	---
MAX	426100	436800	533600	477000	665400	671400	469900	517500	599400	501100	415500	449600
MIN	395700	419400	422600	387600	385200	477600	426200	439300	431700	402700	399200	401900
(†)	1009.70	1010.48	1012.03	1007.50	1021.03	1012.76	1011.26	1010.62	1014.30	1008.69	1008.62	1009.55
(††)	+27,400	+13,200	+27,400	-76,600	+277,800	-187,800	-27,100	-11,200	+67,200	-99,800	-1,100	+15,400

CAL YR 1984 MAX 789400 MIN 387300 (††) +17,200
WTR YR 1985 MAX 671400 MIN 385200 (††) +24,500

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07148140 ARKANSAS RIVER NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'55", long 96°55'40", in SW 1/4 SE 1/4 sec.25, T.26 N., R.3 E., Kay County, Hydrologic Unit 11060001, at spillway of Kaw Dam, about 8 mi east of Ponca City, and at mile 653.7.

DRAINAGE AREA.--46,530 mi^2, of which 7,607 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Nonrecording gage. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--(Since regulation by Kaw Dam) 9 years 2,732 ft^3/s, 1,979,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft^3/s Mar. 30, 1984; no flow May 13, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,300 ft^3/s Sept. 26; minimum daily, 88 ft^3/s Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	560	93	2000	1450	5040	6100	1400	3100	4960	2730	950
2	150	875	120	2000	1000	6400	5160	1400	3100	4000	2730	950
3	150	1100	120	2000	1000	6400	4300	1400	2640	4000	800	856
4	150	1100	120	2000	505	6400	4300	1400	2200	4000	800	800
5	150	1970	120	2000	120	5190	4100	1400	2200	4000	3920	800
6	150	2700	120	2000	494	3500	4050	2420	2540	4000	5970	800
7	150	2700	120	2000	750	3500	3950	3400	3200	4000	3190	800
8	150	1680	120	3130	750	3500	3900	3400	3200	4000	4860	800
9	150	560	120	3900	750	3500	3900	5510	3200	3950	5240	800
10	150	560	120	3900	750	3500	2840	7300	3200	3900	1810	800
11	150	560	120	3900	750	3500	1900	7300	3200	3900	1100	1420
12	150	560	120	3900	958	3500	1610	7300	4500	3480	1100	2600
13	150	368	120	3900	1100	3500	1400	7300	7780	2900	710	2600
14	150	120	120	3900	1380	3500	1400	7300	10400	2900	5800	2600
15	150	120	120	4430	1980	5160	2000	7300	10400	2900	11200	2600
16	150	120	120	4800	2100	6200	3100	7300	10400	2900	7720	4000
17	150	120	1410	4800	2100	6200	3100	5660	10400	2900	3280	5750
18	150	120	4140	4800	2100	6200	3100	5880	10300	2900	2700	5750
19	150	120	7130	4800	1810	7480	3100	5830	10200	2900	2700	3910
20	150	120	10400	4800	1600	8400	3100	5220	9210	2900	1380	2020
21	150	120	12000	4800	1600	9590	3100	3270	7260	2900	550	1500
22	378	120	12000	4800	1600	10600	3100	2200	5800	2030	550	1500
23	385	120	12000	4600	1600	10600	2750	2200	5800	800	1170	4220
24	406	120	7920	4400	1600	10600	1780	2200	5800	663	1650	9170
25	150	120	4000	3660	1600	10600	1400	2200	5800	2420	1650	13400
26	334	120	4000	3100	717	10600	1400	2200	5240	2000	1650	15300
27	560	120	4000	3100	1060	9430	1400	2200	4200	800	2600	12300
28	560	120	2900	2620	3500	7500	1400	2200	4930	800	3200	4910
29	869	88	2000	2100	---	6870	1400	2720	6200	1570	3200	3600
30	1100	115	2000	2100	---	6100	1400	3100	6200	1370	2290	3600
31	681	---	2000	2100	---	6100	---	3100	---	800	950	---
TOTAL	8573	17296	89793	106340	36724	199160	85540	123010	172600	87543	89200	111106
MEAN	277	577	2897	3430	1312	6425	2851	3968	5753	2824	2877	3704
MAX	1100	2700	12000	4800	3500	10600	6100	7300	10400	4960	11200	15300
MIN	150	88	93	2000	120	3500	1400	1400	2200	663	550	800
AC-FT	17000	34310	178100	210900	72840	395000	169700	244000	342400	173600	176900	220400

CAL YR 1984	TOTAL	1305987	MEAN	3568	MAX	22500	MIN	88	AC-FT 2590000
WTR YR 1985	TOTAL	1126885	MEAN	3087	MAX	15300	MIN	88	AC-FT 2235000

07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK

LOCATION.--Lat 36°57'45", long 98°46'55", in NE 1/4 SE 1/4 sec.26, T.29 N., R.15 W., Woods County, Hydrologic Unit 11060002, near left bank on downstream side of pier of county road bridge, 1 mi northeast of Winchester, 2.5 mi upstream from Greenwood Creek, 4.9 mi downstream from Yellowstone Creek, 5 mi downstream from State line, 19 mi northwest of Alva, and at mile 156.2.

DRAINAGE AREA.--856 mi^2.

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

REVISED RECORDS.--WSP 1731: Drainage area. WSP 1921: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,410.05 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 31 to Jan. 4, 9-14, 17-26, Jan. 30 to Feb. 13. Records good.

AVERAGE DISCHARGE.--26 years, 87.6 ft^3/s, 63,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft^3/s Aug. 19, 1961, gage height, 13.95 ft, from rating curve extended above 17,400 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957 reached a stage of 15.4 ft, from information by county engineer, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Apr. 27	0500	5730	10.57	June 11	2015	5720	10.56
Apr. 30	1930	*7770	*11.49	June 26	2130	6230	10.82

Minimum daily discharge, 0.13 ft^3/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	144	13	60	28	145	81	2000	87	307	7.5	.70
2	.23	18	13	44	26	136	73	990	80	264	7.1	.48
3	.23	2.0	11	38	28	134	66	743	76	229	6.8	.33
4	1.1	.84	13	49	34	118	60	609	135	202	7.7	.23
5	4.7	.47	20	71	32	106	54	517	215	178	6.6	.16
6	.23	.44	17	92	38	97	51	453	304	156	5.2	.14
7	.17	.40	17	81	44	95	50	483	268	136	6.7	.14
8	.16	.40	22	71	50	89	45	481	356	120	5.0	.13
9	.49	.35	22	64	54	81	43	411	206	111	3.9	.16
10	.27	.26	20	44	66	80	45	362	209	92	3.9	.19
11	.39	.30	19	39	79	77	47	346	3970	77	2.9	.56
12	.21	.32	20	48	90	69	48	276	1290	61	2.5	.50
13	.25	.34	25	70	107	66	54	237	633	46	6.2	.38
14	.21	.34	33	94	133	63	61	240	408	36	12	.52
15	.21	.31	113	111	105	61	53	254	329	51	34	.93
16	16	.29	548	96	79	57	45	222	279	73	15	1.6
17	4.9	1.4	263	89	70	57	40	189	221	57	7.9	1.9
18	.53	6.2	199	79	66	61	36	170	179	36	5.0	1.3
19	.25	35	183	70	62	63	29	159	157	22	4.7	.65
20	.28	26	151	41	60	76	27	154	146	80	13	537
21	.26	22	143	42	79	142	28	156	133	18	14	1190
22	.23	18	124	49	115	134	26	157	132	14	9.2	283
23	.21	14	116	51	181	117	26	150	125	20	6.6	190
24	.28	14	109	52	285	99	33	137	114	53	6.2	101
25	.58	15	112	54	235	84	30	129	106	49	5.1	74
26	.27	13	109	68	189	76	97	118	1420	44	4.1	56
27	.24	13	103	94	162	77	2390	110	3190	37	3.2	46
28	.18	12	92	86	152	71	385	102	1110	21	2.5	39
29	.21	12	85	72	---	60	1390	99	551	16	1.9	44
30	.24	14	77	67	---	69	6220	100	382	13	1.5	51
31	.34	---	70	36	---	82	---	93	---	10	1.1	---
TOTAL	34.11	384.66	2862	2022	2649	2742	11633	10647	16811	2629	219.0	2622.00
MEAN	1.10	12.8	92.3	65.2	94.6	88.5	388	343	560	84.8	7.06	87.4
MAX	16	144	548	111	285	145	6220	2000	3970	307	34	1190
MIN	.16	.26	11	36	26	57	26	93	76	10	1.1	.13
AC-FT	68	763	5680	4010	5250	5440	23070	21120	33340	5210	434	5200

CAL YR 1984	TOTAL	17069.74	MEAN	46.6	MAX	548	MIN	.04	AC-FT	33860
WTR YR 1985	TOTAL	55254.77	MEAN	151	MAX	6220	MIN	.13	AC-FT	109600

ARKANSAS RIVER BASIN

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

LOCATION.--Lat 36°48'45", long 98°38'50", in SW 1/4 SW 1/4 sec.18, T.27 N., R.13 W., Woods County, Hydrologic Unit 11060002, at bridge on U.S. Highway 281, 1.0 mi northeast of Alva, 19 mi upstream from Medicine Lodge River, and at mile 126.0.

DRAINAGE AREA.--1,009 mi^2.

PERIOD OF RECORD.--April 1904 to December 1905 (gage heights only), October 1937 to September 1951, monthly discharge only for some periods, published in WSP 1311, October 1979 to current year. Occasional low flow measurements water years 1952-54, 1977-79.

GAGE.--Water stage recorder. Datum of gage is 1,292.04 ft, National Geodetic Vertical Datum of 1929. April 1904 to December 1905, chain gage at site 0.8 mi upstream at different datum, and February 1938 to September 1951, water stage recorder at present site and at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 7-11, Jan. 1-5, 9-13, 19-25, Jan. 30 to Feb. 9, Mar. 2-20, 27-31, June 13-26, June 30 to July 2, 8-13, 16, 19-20, July 25 to Aug. 11, 13-15, 18-19, Aug. 24 to Sept. 13. Records good.

AVERAGE DISCHARGE.--14 years (water years 1938-51), 109 ft^3/s, 78,970 acre-ft/yr; 6 years (water years 1980-85), 109 ft^3/s, 78,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s Oct. 23, 1941, from rating curve extended above 13,000 ft^3/s. Maximum gage height, 15.04 ft Oct. 30, 1979; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,950 ft^3/s May 1, gage height 13.74 ft, no peak above base of 8,000 ft^3/s; minimum daily discharge, 3.1 ft^3/s Sept. 16, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	33	16	70	36	149	105	3060	104	307	34	11
2	4.8	56	17	56	31	142	100	1020	100	257	28	9.1
3	3.9	19	15	47	33	140	96	737	104	226	24	7.3
4	4.5	8.8	16	51	38	137	93	579	134	191	21	6.0
5	273	6.6	20	88	37	126	90	477	210	168	18	4.7
6	31	5.9	21	92	42	118	86	403	311	144	17	3.6
7	12	5.1	19	92	48	112	81	932	269	122	19	3.2
8	6.6	4.7	20	85	54	104	80	477	334	120	18	3.4
9	6.4	5.1	22	74	58	98	71	388	274	115	16	4.2
10	6.6	4.5	22	54	72	93	71	339	229	108	18	6.1
11	7.5	5.2	22	47	77	92	76	323	1790	101	16	7.3
12	14	5.5	21	58	86	87	77	300	1660	87	15	8.7
13	8.7	5.5	25	67	92	85	86	275	625	72	27	7.5
14	5.8	5.5	29	74	104	83	84	255	446	62	36	5.9
15	5.7	5.2	69	70	102	82	88	252	376	61	45	3.9
16	31	5.5	517	82	88	77	82	241	334	75	49	3.1
17	41	14	310	93	83	76	73	223	282	64	32	3.6
18	17	25	202	93	82	74	70	210	245	56	25	3.6
19	10	32	170	58	78	79	66	203	218	51	30	3.1
20	8.5	33	156	45	76	96	63	199	190	60	20	30
21	7.9	25	143	40	88	127	61	188	177	92	29	1150
22	7.7	21	125	44	113	141	60	181	166	48	33	480
23	7.2	19	115	49	178	131	72	173	155	41	24	442
24	8.1	17	111	56	336	121	65	160	143	49	31	178
25	11	18	102	64	260	107	64	146	136	72	32	136
26	8.9	17	97	74	206	101	109	141	128	78	30	95
27	7.5	17	107	90	174	95	2560	133	2310	70	25	79
28	6.9	16	106	93	154	96	609	128	1030	60	22	68
29	6.7	16	102	88	---	92	929	122	598	53	19	68
30	7.0	16	93	70	---	97	4030	113	420	48	15	64
31	15	---	90	61	---	102	---	108	---	40	13	---
TOTAL	595.8	467.1	2900	2125	2826	3260	10197	12486	13498	3098	781	2895.3
MEAN	19.2	15.6	93.5	68.5	101	105	340	403	450	99.9	25.2	96.5
MAX	273	56	517	93	336	149	4030	3060	2310	307	49	1150
MIN	3.9	4.5	15	40	31	74	60	108	100	40	13	3.1
AC-FT	1180	926	5750	4210	5610	6470	20230	24770	26770	6140	1550	5740

CAL YR 1984	TOTAL	22588.15	MEAN	61.7	MAX	517	MIN	.43	AC-FT	44800
WTR YR 1985	TOTAL	55129.2	MEAN	151	MAX	4030	MIN	3.1	AC-FT	109300

07150000 GREAT SALT PLAINS LAKE NEAR JET, OK

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, Hydrologic Unit 11060004, at right end of Great Salt Plains Dam on Salt Fork Arkansas River, 4.5 mi upstream from Wagon Creek, 5.5 mi northeast of Jet, and at mile 103.3.

DRAINAGE AREA.--3,200 mi^2, of which 8 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

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, 257,700 acre-ft at elevation 1,138.5 ft, crest of upper weir, and 31,420 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 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 189,400 acre-ft July 2, 1951, elevation, 1,134.38 ft; minimum, 17,180 acre-ft Sept. 6, 1973, elevation, 1,123.16 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,430 acre-ft May 4, elevation 1,127.20 ft; minimum, 17,730 acre-ft Oct. 16, elevation 1,123.24 ft.

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

1,123	16,080	1,126	40,070
1,124	23,280	1,127	51,180
1,125	31,420	1,128	62,940

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18890	20400	27510	36380	34350	38470	35410	45940	34390	40240	32720	31790
2	19320	20760	27590	36290	34080	38290	35320	51300	34110	40700	32720	31260
3	19030	21770	27680	35820	33720	38750	35130	53410	33830	40700	32810	31090
4	18380	21770	27510	35540	33630	37270	35040	53060	34390	40330	32440	31180
5	19100	21700	28250	35540	33630	36710	34850	51300	34580	39590	32530	31180
6	18820	21550	28410	35540	33630	37080	34580	49710	35220	38940	32530	30610
7	18960	21770	28820	35540	33630	36250	34480	48560	36250	38290	32530	30360
8	18820	21910	28900	34990	33630	36250	34390	47930	37080	37640	32160	30040
9	18670	22250	29630	34990	33540	36250	34390	47410	36150	37080	32070	29300
10	18530	22340	29470	35820	33540	36250	34300	46360	36620	36340	31510	29060
11	18600	21550	29790	35730	33630	35500	34110	45310	38190	35780	31610	29390
12	18460	21840	29710	35450	33630	35410	35040	43220	39120	35410	31980	29710
13	18600	22270	30040	35080	34630	35410	35320	42800	41010	35040	32720	29950
14	18530	22630	30520	34990	33990	35410	35320	42170	42380	34670	33930	30850
15	18460	22270	32440	34990	34300	35320	35040	40330	42380	34110	34110	31260
16	20760	22130	34020	34720	34300	35320	34850	39220	42170	33740	34200	31610
17	18740	22490	35040	34630	34390	35220	34760	38470	40510	33460	34300	31790
18	22060	24010	36570	34630	34390	34760	34200	37920	39860	33370	33650	31340
19	18890	24660	37700	33720	34480	34580	34300	37450	39030	33180	33550	31340
20	18960	24910	38170	34260	34850	35040	33740	36990	38660	32900	33280	31420
21	19180	25320	39130	34080	35870	35500	33460	36430	37640	32720	33280	34200
22	19100	25800	38270	34080	36250	35970	34300	36340	36430	32630	33280	39420
23	19030	26050	37980	34080	37540	35870	33740	36250	36150	32530	33180	46630
24	19250	26050	37220	34080	37820	35320	33180	35970	35500	32530	33370	46410
25	19970	27430	37030	34170	38100	35320	33180	35780	35130	32720	33000	46940
26	19970	27020	36940	34170	38750	35690	33550	35600	34850	32810	32810	44430
27	20540	27680	36750	34080	38940	35500	34580	35220	34580	32810	32630	42390
28	19750	27350	36750	34260	39030	34020	37270	34760	35690	32720	32440	41690
29	19970	27350	35910	34260	---	34950	39960	34580	38470	32630	32630	41890
30	19820	27430	35730	34450	---	36250	41850	34580	39680	32810	32160	40700
31	20470	---	36100	34450	---	35500	---	34390	---	32810	31980	---
MAX	22060	27680	39130	36380	39030	38750	41850	53410	42380	40700	34300	46940
MIN	18380	20400	27510	33720	33540	34020	33180	34390	33830	32530	31510	29060
(†)	1,123.61	1,124.51	1,125.52	1,125.34	1,125.82	1,125.44	1,126.11	1,125.32	1,125.89	1,125.15	1,125.06	1,126.00
(††)	+1,220	+6,960	+8,670	-1,650	+4,580	-3,530	+6,350	-7,460	+5,290	-6,870	-830	+8,720

CAL YR 1984 MAX 56470 MIN 18380 (††) +3,100
WTR YR 1985 MAX 53410 MIN 18380 (††) +21,450

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK

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, Hydrologic Unit 11060004, near center of span on downstream side of county road bridge, 0.6 mi downstream from Great Salt Plains Dam, 4 mi upstream from Wagon Creek, 6 mi northeast of Jet, and at mile 102.7.

DRAINAGE AREA.--3,202 mi^2, of which 8 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.20 ft, National Geodetic Vertical Datum of 1929 (levels by U.S Army Corps of Engineers). Prior to Mar. 17, 1938, nonrecording gage at site 2.5 mi 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.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since June 1941 by Great Salt Plains Lake (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 44 years (water years 1942-85), 373 ft^3/s, 270,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 25,900 ft^3/s May 19, 1938, gage height, 13.80 ft, present datum; no flow at times in 1939-41, 1944, 1955-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,770 ft^3/s May 4, gage height, 6.28 ft; minimum daily discharge, 0.09 ft^3/s Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	.85	.95	537	263	890	376	1390	310	1240	135	38
2	10	.98	.98	488	229	795	383	1930	214	1260	120	17
3	11	.49	1.0	444	201	799	368	2600	181	1180	128	11
4	11	.27	1.3	431	202	844	338	2700	295	1070	95	18
5	11	.77	1.4	422	208	577	390	2490	331	944	117	28
6	13	.79	1.0	433	202	561	302	2200	383	854	77	9.2
7	14	.46	1.0	438	200	645	308	2050	553	763	136	7.2
8	14	.82	1.0	331	185	490	276	1970	708	679	104	7.7
9	15	.69	1.0	355	191	506	268	1900	562	567	86	7.6
10	15	.85	1.0	523	204	518	302	1740	610	440	39	7.3
11	15	1.1	.87	451	202	488	256	1660	877	411	34	7.4
12	15	1.1	.82	574	200	390	269	1300	963	376	73	4.8
13	15	.98	1.9	473	217	396	422	1290	1210	322	99	4.9
14	15	.49	2.1	314	236	406	435	1330	1400	303	221	10
15	16	.92	47	294	258	387	393	1010	1370	193	251	15
16	17	1.1	252	298	265	403	343	914	1300	176	264	27
17	14	1.8	313	303	275	362	343	828	1120	155	332	43
18	14	2.2	559	318	288	375	322	763	1060	158	231	24
19	13	1.4	746	233	293	308	285	705	953	147	240	14
20	14	1.1	812	394	274	289	250	606	934	107	161	12
21	14	.97	959	333	380	417	211	525	734	99	162	137
22	13	.80	826	297	505	455	218	537	516	81	193	594
23	9.5	.82	784	243	595	500	284	524	541	91	138	1390
24	3.1	.90	647	240	753	440	192	487	451	122	182	1880
25	2.8	.84	621	246	785	370	144	473	379	173	148	1840
26	2.3	.09	615	239	851	456	171	439	384	163	113	1660
27	1.6	.87	601	257	918	462	218	335	311	132	83	1290
28	1.1	.96	628	276	924	404	381	342	550	94	79	1190
29	.78	.90	500	290	---	210	793	327	1040	63	98	1160
30	.67	.98	461	301	---	436	1150	333	1220	170	58	1090
31	.88	---	515	294	---	501	---	269	---	118	49	---
TOTAL	322.73	27.29	9902.32	11070	10304	15080	10391	35967	21460	12651	4246	12544.1
MEAN	10.4	.91	319	357	368	486	346	1160	715	408	137	418
MAX	17	2.2	959	574	924	890	1150	2700	1400	1260	332	1880
MIN	.67	.09	.82	233	185	210	144	269	181	63	34	4.8
AC-FT	640	54	19640	21960	20440	29910	20610	71340	42570	25090	8420	24880

CAL YR 1984	TOTAL 135050.34	MEAN 369	MAX 3140	MIN .09	AC-FT 267900
WTR YR 1985	TOTAL 143965.44	MEAN 394	MAX 2700	MIN .09	AC-FT 285600

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.
WATER TEMPERATURE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.
CHLORIDES: October 1955 to September 1959.

INTRUMENTATION.--Water quality monitor since July 1968.

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis. Samples were collected quarterly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 57,000 microsiemens Jan. 28, 1977; minimum daily, 1,280 microsiemens Nov. 4, 1980.
WATER TEMPERATURE: Maximum daily, 36.0 °C, Aug. 11, 1980; minimum daily, 0.0 °C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 43,200 microsiemens Dec. 12; minimum daily, 2,670 microsiemens May 10.
WATER TEMPERATURE: Maximum daily, 33.0 °C Sept. 3; minimum daily, 0.5 °C Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARBONATE (MG/L AS CACO3)
MAR												
22...	1000	1028	80020	466	5890	7.90	11.0	726	11.9	116	570	572
MAY												
16...	1100	1028	80020	939	3950	7.90	19.0	751	9.8	109	730	726
AUG												
21...	1100	1028	80020	194	7980	8.40	26.5	745	8.1	106	660	655

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
MAR											
22...	140	54	980	79	18	5.8	131	3.2	500	1600	3380
MAY											
16...	200	55	530	61	9	6.9	152	3.7	470	--	2500
AUG											
21...	180	50	1800	85	32	8.7	93	0.7	670	2900	4810

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14400	27500	33400	9260	8370	5040	5460	7120	4430	4770	6660	8450
2	14300	28300	40200	9330	8460	6820	4520	5690	4460	4210	6760	8420
3	14200	31800	34100	9210	8540	6800	4530	6000	4470	4150	6720	8930
4	14400	32600	35400	9220	8450	6160	5050	5460	4730	3760	6710	8710
5	13400	32000	33300	9160	---	5960	5260	2720	5100	4410	6760	8750
6	13700	31000	29500	8800	8540	6690	6070	3570	5140	4460	6750	10200
7	13600	32300	20600	8730	8600	5730	6010	3660	5300	4470	6610	10200
8	14400	32600	24200	8360	8460	6000	6120	3850	5090	3120	6550	10200
9	14500	35400	30400	10500	8270	5990	6130	4300	3640	3140	6540	10900
10	14400	34500	32900	10100	8180	5930	6190	2670	5430	3980	6960	10700
11	14800	32900	30600	9770	8050	5840	5470	4130	6340	4110	7100	10800
12	14800	33000	43200	9840	8290	5950	5160	4220	---	4190	7010	11600
13	15200	33000	31000	9460	8100	6320	5830	4020	---	4610	6990	11600
14	15100	34600	39300	9510	8120	6430	5910	3820	3620	4600	6610	10500
15	15200	38900	39500	9460	7930	6270	5870	3950	3660	4530	6750	9700
16	15100	32800	11900	9460	7560	6240	5830	3980	4600	4600	7240	9800
17	15600	32700	12200	9480	7420	6120	5910	4000	3350	4570	7180	9520
18	14800	34500	12400	9270	7200	4620	4940	4300	4430	4530	7020	9870
19	15200	31300	12400	7950	7170	4520	6070	4400	4270	4720	7030	9840
20	15300	20900	11400	8250	7160	5370	6830	4250	4300	4760	7910	11300
21	15200	24100	11200	8620	7060	5340	6890	4220	3940	4850	8250	9530
22	15800	30000	7840	8660	6850	5730	6610	4150	4620	4840	8220	9650
23	16500	31200	8350	8690	6440	5640	6630	4150	4450	4770	8160	9060
24	16400	32600	9400	8820	6420	5770	6770	4070	4320	4670	8020	9010
25	16700	33600	10300	8840	6400	5730	6800	3710	4260	4760	8040	8480
26	17300	37700	10200	8870	6240	5920	6860	3670	4430	4730	8470	6600
27	23000	37300	9200	8890	6950	4730	7210	4370	4640	6000	8550	5880
28	23500	38300	9700	8800	5000	5520	7420	4160	4670	10400	8520	5730
29	23900	37300	6340	8780	---	5430	7240	4330	3350	10600	8600	5880
30	24700	36700	7620	8730	---	5450	7230	4230	3310	7350	8120	6200
31	28800	---	9440	8230	---	5520	---	4460	---	7090	8050	---
MEAN	16600	32700	21200	9070	7560	5790	6090	4250	4440	5020	7380	9200

WTR YR 1985 MEAN 10800 MAX 43200 MIN 2670

ARKANSAS RIVER BASIN

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	14.0	10.5	3.0	.5	13.0	11.0	21.0	27.0	24.5	26.5	30.0
2	---	13.0	6.0	2.0	4.0	10.5	13.5	23.0	26.5	27.5	27.0	30.0
3	21.5	15.5	6.5	4.0	3.0	13.0	13.0	22.0	25.0	30.0	27.0	33.0
4	18.0	15.0	4.0	3.0	1.0	10.0	17.0	23.0	24.5	30.0	29.0	28.0
5	18.5	16.0	6.0	5.0	---	10.0	16.0	24.0	25.0	28.5	31.0	28.0
6	20.0	---	6.0	4.0	3.0	8.5	17.0	24.0	24.0	28.5	30.0	29.0
7	22.0	18.0	6.5	5.0	3.5	11.0	15.5	23.5	24.0	29.5	28.0	31.5
8	23.0	17.5	8.0	4.0	5.0	11.0	15.0	23.0	29.5	29.5	28.0	30.5
9	21.5	15.0	12.0	4.0	3.5	11.5	15.5	24.5	27.0	30.0	30.0	27.0
10	24.0	15.0	10.0	4.0	2.0	12.0	16.0	24.0	26.0	28.0	26.5	27.5
11	22.0	12.5	14.0	4.0	3.5	14.5	20.0	23.5	24.5	31.0	28.0	25.5
12	21.0	12.0	8.0	4.0	3.5	11.5	21.5	23.0	---	31.5	26.0	25.0
13	24.0	16.0	9.0	2.0	5.0	11.5	22.0	23.0	---	27.0	26.5	24.0
14	21.5	14.0	8.0	2.0	6.0	11.5	22.0	20.0	25.5	27.5	25.0	24.0
15	19.0	14.0	7.0	4.0	6.0	12.0	22.5	19.0	25.0	26.0	25.0	27.5
16	14.5	10.0	5.0	5.0	7.0	12.5	23.0	18.0	26.5	29.0	26.5	24.0
17	15.5	8.0	5.0	3.0	6.5	13.5	22.0	19.0	27.0	29.5	28.0	24.0
18	15.0	9.0	4.0	4.0	7.0	13.5	22.0	24.0	27.5	27.5	29.0	25.5
19	15.0	7.0	4.0	6.0	6.0	14.0	22.0	22.5	28.0	28.0	30.5	25.0
20	13.0	7.0	5.0	1.0	7.0	14.0	22.0	24.0	24.0	28.5	27.0	22.0
21	13.0	7.0	4.0	1.0	8.0	12.0	22.0	22.0	25.0	31.0	27.0	20.0
22	14.0	9.5	5.0	4.0	9.5	11.5	22.5	23.0	25.0	30.5	29.0	20.5
23	11.0	10.0	6.0	1.0	9.0	13.0	19.0	24.5	26.5	30.0	27.0	22.0
24	11.0	9.0	4.0	2.5	9.0	14.5	20.0	26.0	28.0	29.5	26.5	18.5
25	14.5	10.5	3.0	3.0	8.5	15.0	20.0	26.0	27.5	28.0	27.0	18.5
26	17.5	6.5	5.0	4.0	8.5	15.0	21.0	26.0	26.0	27.0	26.0	19.0
27	15.0	6.0	10.0	4.0	10.0	17.0	20.0	25.5	25.0	29.0	25.5	17.0
28	14.0	5.0	11.0	3.0	10.5	17.0	20.0	26.5	28.5	28.5	27.5	16.5
29	17.0	10.0	15.0	4.0	---	10.5	21.0	27.0	28.0	28.0	28.0	13.0
30	15.0	9.0	10.0	3.0	---	10.0	21.0	31.5	25.0	28.0	27.5	12.5
31	14.5	---	7.0	3.0	---	11.5	---	27.0	---	28.0	27.0	---
MEAN	17.5	11.5	7.0	3.5	6.0	12.5	19.0	23.5	26.0	28.5	27.5	24.0

WTR YR 1985 MEAN 17.5 MAX 33.0 MIN .5

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

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, Hydrologic Unit 11060004, near right bank on downstream side of pier of bridge on U.S. Highway 77 in Tonkawa, 4 mi downstream from Thompson Creek, 7.8 mi upstream from Chikaskia River, and at mile 33.8.

DRAINAGE AREA.--4,528 mi^2, of which 8 mi^2 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 as Arkansas River (Salt Fork) near Tonkawa 1903-4 and as "near Tonkawa" 1905.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.22 ft, U.S. Army Corps of Engineers datum. 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.

REMARKS.--Estimated daily discharges: Jan. 2, 12-15, 20-24, 26, Jan. 31 to Feb. 1-11. Records good. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 mi upstream (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 44 years (water years 1942-85) 735 ft^3/s, 532,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,300 ft^3/s Oct. 11, 1973, gage height, 28.98 ft; no flow Aug. 31 to Oct. 12, Oct. 14-16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of 26.8 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,600 ft^3/s, Feb. 24, gage height, 14.51 ft, no peak above base of 11,000 ft^3/s; minimum daily discharge, 38 ft^3/s Nov. 11-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	45	45	630	370	1130	699	6140	416	898	211	152
2	45	42	43	600	360	1100	661	4570	390	1050	210	141
3	45	45	42	640	350	1030	561	3130	387	1120	198	130
4	44	45	42	607	340	1620	547	3300	395	1120	184	120
5	45	41	42	551	330	1450	534	3530	416	1030	175	105
6	45	40	49	585	320	990	507	3460	614	920	175	91
7	45	42	48	640	310	806	515	3240	537	821	164	83
8	43	42	47	673	300	781	479	3520	477	746	161	81
9	42	42	47	674	320	781	469	2950	536	675	167	81
10	42	40	47	676	340	706	448	2720	642	611	172	79
11	42	38	47	661	360	691	686	2480	712	552	160	87
12	43	38	45	600	385	697	469	2280	707	474	159	86
13	98	39	50	650	3.9	717	621	2020	785	435	158	84
14	186	41	59	600	382	638	566	1930	873	403	158	90
15	119	40	103	900	327	611	582	2120	1130	372	175	625
16	116	40	1210	1070	371	600	563	1550	1310	362	283	978
17	226	49	919	961	394	590	527	1310	1240	317	419	512
18	121	65	567	885	401	581	485	1170	1170	277	329	271
19	74	70	504	563	403	568	474	1060	991	259	313	197
20	67	70	535	400	413	558	466	971	928	242	278	166
21	67	68	959	390	742	624	499	901	835	241	260	159
22	62	63	964	370	3290	634	586	812	827	235	229	261
23	60	59	886	360	7440	614	647	726	822	221	204	1400
24	58	55	779	400	7630	623	498	696	712	212	205	2460
25	65	53	746	491	3850	631	451	661	575	818	200	2870
26	66	52	671	480	2030	612	379	614	651	1390	194	2520
27	107	47	655	474	1500	562	771	680	974	732	192	2440
28	117	46	637	388	1230	573	809	572	670	352	173	1880
29	67	45	617	386	---	589	690	504	492	247	160	1640
30	54	45	625	407	---	627	4020	440	512	248	158	2050
31	52	---	595	380	---	710	---	413	---	238	156	---
TOTAL	2308	1447	12625	18092	34877	23444	20209	60470	21726	17618	6380	21839
MEAN	74.5	48.2	407	584	1246	756	674	1951	724	568	206	728
MAX	226	70	1210	1070	7630	1620	4020	6140	1310	1390	419	2870
MIN	42	38	42	360	300	558	379	413	387	212	156	79
AC-FT	4580	2870	25040	35890	69180	46500	40080	119900	43090	34950	12650	43320

CAL YR 1984	TOTAL	302893	MEAN	828	MAX	14800	MIN	28	AC-FT	600800
WTR YR 1985	TOTAL	241035	MEAN	660	MAX	7630	MIN	38	AC-FT	478100

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

LOCATION.--Lat 36°48'41", long 97°16'41", in NE 1/4 NW 1/4 sec.23, T.27 N., R.1 W., Kay County, Hydrologic Unit 11060005, near left bank on downstream side of State Highway 11 bridge at northeast edge of Blackwell, 0.2 mi downstream from Bitter Creek, and at mile 28.2.

DRAINAGE AREA.--1,859 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.41 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1921 for history of changes prior to April, 1952.

REMARKS.--Estimated daily discharges: Dec. 31 to Jan. 2, 12-13, 15, 19-23, Jan. 31 to Feb. 8, 11-12. Records good. Some regulation at low flow by Lake Blackwell, capacity 3,600 acre-ft 12.6 mi above station. Small diversion made from reservoir for municipal supply of city of Blackwell.

AVERAGE DISCHARGE.--50 years, 490 ft^3/s 355,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 85,000 ft^3/s June 22, 1942, gage height, 33.3 ft, from floodmark present site and datum; no flow at times in 1954, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of about 34 ft, present site and datum, from information by local residents, discharge 100,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Feb. 24	0500	10,000	24.14	Sept. 22	1900	9,730	23.92
Sept. 14	1600	*12,100	*26.08				

Minimum daily discharge, 33 ft^3/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	286	199	290	220	660	302	2540	186	384	428	98
2	42	1240	198	300	200	597	352	1890	178	309	276	91
3	44	1000	190	346	180	662	338	1430	172	259	209	87
4	43	515	191	326	170	1820	324	980	187	240	171	84
5	44	362	197	356	160	920	325	688	217	248	356	81
6	47	298	196	422	144	543	314	549	939	202	358	80
7	45	258	195	602	139	512	303	2080	609	174	205	78
8	109	236	198	834	160	481	289	2770	423	158	154	76
9	110	222	207	810	239	452	275	900	349	153	134	103
10	82	212	202	700	247	443	275	541	367	140	129	88
11	67	196	204	486	226	437	278	457	2250	131	209	41
12	101	196	207	320	214	433	279	399	4090	129	254	33
13	1760	188	216	290	236	420	375	381	2440	121	193	1160
14	6060	188	226	268	256	388	441	387	995	119	1140	10700
15	1150	184	472	250	282	364	641	364	649	116	4380	5270
16	558	178	5030	334	325	365	439	335	488	132	1350	909
17	410	189	4260	374	301	359	351	305	403	116	456	552
18	391	219	1550	443	273	352	306	283	340	109	308	416
19	413	245	947	400	261	346	284	267	290	102	259	345
20	312	323	802	331	260	344	275	257	254	98	224	307
21	257	355	1020	280	775	369	264	250	230	102	225	351
22	246	322	867	260	5160	386	264	250	216	135	217	7430
23	243	281	561	240	7460	397	274	246	202	146	258	6260
24	197	256	456	283	8960	397	254	234	190	122	237	3780
25	196	240	403	317	3630	375	247	226	179	506	208	2340
26	141	235	366	295	1460	351	238	215	184	574	182	1640
27	249	230	354	308	983	337	372	207	944	364	160	942
28	202	215	340	338	764	328	1210	205	876	172	146	665
29	179	212	342	331	---	329	1650	207	760	410	132	746
30	166	204	332	288	---	357	1490	219	560	1590	121	2610
31	159	---	310	240	---	368	---	207	---	1080	109	---
TOTAL	14063	9285	21238	11662	33685	14892	13029	20269	20167	8641	13188	47363
MEAN	454	310	685	376	1203	480	434	654	672	279	425	1579
MAX	6060	1240	5030	834	8960	1820	1650	2770	4090	1590	4380	10700
MIN	40	178	190	240	139	328	238	205	172	98	109	33
AC-FT	27890	18420	42130	23130	66810	29540	25840	40200	40000	17140	26160	93940

CAL YR 1984 TOTAL 286110.8 MEAN 782 MAX 23700 MIN 7.8 AC-FT 567500
WTR YR 1985 TOTAL 227482 MEAN 623 MAX 10700 MIN 33 AC-FT 451200

07152500 ARKANSAS RIVER AT RALSTON, OK

LOCATION.--Lat 36°30'09", long 96°43'22", in NW 1/4 sec.1, T.23 N., R.5 E., Osage County, Hydrologic Unit 11060006, near left bank on downstream side of pier of bridge on State Highway 18 at Ralston, 2 mi downstream from Salt Creek, 2 mi upstream from Grayhorse Creek, and at mile 594.0.

DRAINAGE AREA.--54,465 mi^2, of which 7,615 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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 National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft, National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Oct. 26-27, 31, Jan. 31 to Feb. 15, and Aug. 12. Records good. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941.

AVERAGE DISCHARGE.--(Prior to regulation by Kaw Dam) 50 years (water years 1926-75), 4,826 ft^3/s, 3,496,000 acre-ft/yr; (since regulation by Kaw Dam) 9 years (water years 1977-85), 4,470 ft^3/s, 3,239,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 211,000 ft^3/s Oct. 13, 1973, gage height, 22.98 ft; minimum discharge, 14 ft^3/s Oct. 12, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,400 ft^3/s Feb. 23, gage height, 10.44 ft, minimum daily discharge, 167 ft^3/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	1300	661	9340	3500	8660	11200	13600	3620	8980	2520	1850
2	167	1310	648	6620	3000	9260	10400	12700	3480	8050	2920	1470
3	176	1150	637	5080	2700	11400	9280	10600	3420	6590	4670	1390
4	200	1200	617	4620	2500	19200	7480	7830	4150	6440	1990	1350
5	186	2400	611	4350	1850	12600	7190	6240	7660	6440	1560	1210
6	176	1880	611	4250	1800	12400	6820	5860	8340	6450	2250	1130
7	181	2670	609	4200	1750	8880	6560	6170	6590	6200	7700	1100
8	176	2840	601	4230	1600	7550	6300	7760	5760	5910	4470	1060
9	176	2790	594	4850	3000	7060	6160	10600	4930	5880	4720	1100
10	186	1570	583	7850	2500	6900	5960	11100	12200	5550	6870	1580
11	186	1130	575	7640	2000	6650	5290	12200	16300	5420	3740	1320
12	200	1100	574	7460	1800	6320	3700	11800	9390	5250	2800	1350
13	205	1040	588	7200	1600	6350	3600	11500	10200	4920	1870	2320
14	589	972	629	5670	1450	6740	2830	11600	15900	3970	1530	3140
15	517	882	1410	5900	1400	6230	3020	11200	22300	3790	5360	4510
16	4890	768	9650	6320	2520	7180	2860	11200	16300	3810	17200	12200
17	2620	753	4600	7430	2950	9670	4330	10800	15700	3720	13500	9190
18	1550	774	8620	7310	3060	9690	4340	8780	15500	3620	6750	8750
19	1170	753	10100	7210	3110	9660	4150	8580	15200	3520	4720	7900
20	1030	724	10900	7200	3200	10600	7470	8330	14900	3430	4240	6430
21	884	755	13600	7760	5740	12800	7550	10100	13400	3400	3560	3990
22	779	757	15000	8780	9750	14100	5180	7620	11600	3510	1900	3090
23	732	767	15400	7990	24300	14500	6050	4570	9300	3570	1570	4890
24	625	776	14900	6760	27400	14000	5330	4010	8410	2470	1460	14600
25	755	762	12400	6520	25300	13900	3980	3690	8220	1580	2120	18800
26	810	739	8780	6180	19300	13700	2750	3490	7840	2550	2230	23100
27	996	724	8200	5230	11700	13500	6890	3310	8140	7440	2180	22600
28	2270	708	7930	5490	7320	12700	4770	3370	8320	3600	2410	17200
29	1300	687	6990	4940	---	11200	4650	3420	8810	2440	3670	9120
30	1290	672	4810	4080	---	12700	11400	3330	9510	2160	3770	7950
31	1240	---	5410	3800	---	12300	---	3700	---	2920	3620	---
TOTAL	26434	35353	167238	192260	178100	328400	177490	249060	305390	143580	129870	195690
MEAN	853	1178	5395	6202	6361	10590	5916	8034	10180	4632	4189	6523
MAX	4890	2840	15400	9340	27400	19200	11400	13600	22300	8980	17200	23100
MIN	167	672	574	3800	1400	6230	2750	3310	3420	1580	1460	1060
AC-FT	52430	70120	331700	381300	353300	651400	352100	494000	605700	284800	257600	388200

CAL YR 1984	TOTAL	2173725	MEAN	5939	MAX	57600	MIN	159	AC-FT	4312000
WTR YR 1985	TOTAL	2128865	MEAN	5833	MAX	27400	MIN	167	AC-FT	4223000

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-63, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1950 to September 1963, July 1968 to current year.
WATER TEMPERATURE: January 1950 to September 1963, July 1968 to current year.

INSTRUMENTATION.--Water quality monitor July 1968 to September 1980.

REMARKS.--Samples were collected by a local observer on a daily basis. Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,510 microsiemens Sept. 14, 1955: minimum daily, 157 microsiemens Nov. 21, 1979.
WATER TEMPERATURE: Maximum daily, 37.0 °C, July 28, 1956; minimum daily, -0.5 °C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,180 microsiemens May 7; minimum daily, 243 microsiemens June 11.
WATER TEMPERATURE: Maximum daily, 29.0 °C July 23; minimum daily, 0.0 °C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
08...	1500	1028	1028	2870	1050	7.80	20.5	--	748	8.9	101
JAN											
15...	1315	1028	80020	5950	1110	7.60	2.0	22	750	13.2	97
FEB											
26...	1600	1028	80020	18500	649	7.50	8.5	500	762	14.0	120
MAR											
19...	1400	1028	80020	9620	850	8.20	14.0	24	723	11.4	117
MAY											
14...	1500	1028	80020	11600	973	7.30	19.0	32	749	9.7	107
JUL											
09...	1300	1028	80020	5740	1240	8.40	29.5	26	753	10.5	140
SEP											
10...	1500	1028	80020	1700	1060	8.70	25.5	130	755	8.2	102

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)
NOV											
08...	390	K130	--	--	--	--	--	--	--	--	--
JAN											
15...	K15	52	240	90	70	15	130	54	4	4.7	181
FEB											
26...	--	--	140	43	42	9.0	67	50	3	3.0	--
MAR											
19...	K38	K25	210	76	64	13	89	47	3	4.1	--
MAY											
14...	98	200	230	80	68	15	100	48	3	3.9	--
JUL											
09...	K18	K10	240	110	70	17	160	58	5	5.8	--
SEP											
10...	92	300	190	80	51	14	140	61	5	4.9	--

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	0	147	148	7.2	85	210	0.3	5.9	610	610	0.83
FEB 26...	--	99	--	6.1	40	90	0.2	11	328	320	0.45
MAR 19...	--	137	--	1.7	70	140	0.3	8.5	480	470	0.65
MAY 14...	--	153	--	15	81	160	0.3	6.7	546	530	0.74
JUL 09...	--	132	--	1.0	120	250	0.3	7.2	722	710	0.98
SEP 10...	--	106	--	0.4	74	210	0.3	3.0	584	560	0.79

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
NOV 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	9800	1.10	0.09	0.12	0.9	0.17	--	0.13	0.13	0.4	30
FEB 26...	16400	1.20	0.21	0.27	2.0	0.43	--	0.09	0.09	0.28	350
MAR 19...	12500	1.40	0.10	0.13	0.8	0.23	--	0.21	0.06	0.18	--
MAY 14...	17100	1.10	0.09	0.12	0.6	0.17	--	0.14	0.10	0.31	10
JUL 09...	11200	0.45	0.04	0.05	1.0	0.20	0.61	0.11	0.08	0.25	--
SEP 10...	2680	0.21	0.04	0.05	1.2	0.19	0.58	0.07	0.04	0.12	60

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	2	140	<0.5	<1	2	<3	4	30	8	17	4
FEB 26...	<1	95	<0.5	<1	1	<3	28	350	<1	6	6
MAR 19...	--	--	--	--	--	--	--	--	--	--	--
MAY 14...	1	120	<0.5	<1	<1	<3	4	5	3	15	4
JUL 09...	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	2	120	<0.5	2	1	<3	4	30	3	15	7

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
15...	<0.1	<10	3	<1	<1	790	<6	18	53	851	70
FEB											
26...	0.2	<10	4	<1	<1	350	<6	16	733	36600	94
MAR											
19...	--	--	--	--	--	--	--	--	34	883	98
MAY											
14...	--	<10	1	1	<1	790	<6	12	101	3160	92
JUL											
09...	0.1	--	--	--	--	--	--	--	--	--	--
SEP											
10...	0.2	<10	<1	<1	<1	640	<6	<3	--	--	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1060	1310	372	1660	1170	734	255	1160	812	976	---
2	1780	1100	1320	978	2550	1050	755	709	1180	811	---	---
3	1840	1250	1360	1220	---	990	757	914	1160	1090	780	1380
4	1840	1300	1370	1270	1470	292	940	---	---	1330	---	1370
5	---	989	1330	1450	1620	573	991	1640	638	---	---	1360
6	---	916	1340	1550	1700	807	982	2350	901	1420	1370	1430
7	1860	1010	1350	1540	1800	907	---	3180	841	---	752	1460
8	1870	1040	1360	1600	---	1040	1000	1080	1020	1280	985	---
9	1870	1060	---	1610	2560	1090	983	1310	---	---	---	1370
10	1890	1080	1360	842	1960	1130	---	1010	---	1160	741	1190
11	1880	---	1370	803	1910	1180	988	---	243	968	---	1050
12	1890	1180	1380	---	1920	1240	1190	---	586	966	1090	1070
13	690	1190	1380	1090	1890	1170	1540	975	853	---	1280	1280
14	691	1220	1300	1010	1880	1020	1030	960	805	---	1290	890
15	1170	1230	853	1100	1970	1100	1290	921	477	1120	---	---
16	510	1290	290	1210	---	836	1420	992	672	1090	732	557
17	644	---	256	1260	---	828	1280	---	810	1080	1580	714
18	672	---	569	1240	1640	833	1160	1030	807	---	1720	768
19	876	1330	677	1220	710	874	1180	1090	840	1080	---	---
20	1060	1340	933	1250	---	874	556	1070	---	---	920	---
21	1090	1300	932	1490	681	738	907	---	815	---	956	---
22	1090	1270	980	1340	364	666	---	966	693	976	---	777
23	1010	---	1050	1060	256	682	978	1270	915	967	1590	726
24	1120	1270	1060	1150	398	690	---	1430	901	1100	1720	446
25	1180	---	---	1150	442	700	1030	1410	927	1240	1720	693
26	---	1280	1480	1240	543	704	1120	1400	---	1210	1320	750
27	---	1280	1330	---	694	730	771	---	---	---	---	760
28	254	1290	1390	1420	895	729	499	1410	---	---	---	766
29	745	1300	1390	1360	---	725	---	1370	781	840	---	---
30	1120	1310	1880	1480	---	---	377	1280	---	944	1050	983
31	251	---	1930	1610	---	---	---	1220	---	977	1020	---
MEAN	1190	1200	1190	1240	1370	875	978	1250	819	1070	1180	990

WTR YR 1985 MEAN 1110 MAX 3180 MIN 243

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	16.0	6.0	3.0	.0	10.0	9.0	19.0	24.0	25.0	28.0	---
2	14.0	16.0	7.0	.0	.0	10.0	11.0	18.0	25.0	23.0	---	---
3	16.0	16.0	3.0	.0	---	10.0	14.0	19.0	25.0	26.0	26.0	23.0
4	19.0	18.0	7.0	.0	.0	10.0	16.0	---	---	27.0	---	24.0
5	---	11.0	5.0	3.0	.0	12.0	15.0	20.0	24.0	---	---	25.0
6	---	10.5	.0	3.0	.0	9.0	14.0	22.0	23.0	26.0	25.0	27.0
7	20.0	12.0	2.0	4.0	.0	6.0	---	24.0	23.0	---	27.0	27.0
8	18.0	11.5	6.0	4.0	---	9.0	19.0	---	26.0	26.0	28.0	---
9	20.0	16.0	---	4.0	3.0	11.0	14.0	23.0	---	---	---	26.0
10	17.0	11.0	6.0	3.0	1.0	10.0	---	---	---	27.0	27.0	25.0
11	18.0	---	8.0	8.0	.0	12.0	15.0	---	22.0	26.0	---	24.0
12	19.0	16.0	11.0	---	.0	15.0	18.0	---	20.0	26.0	26.0	25.0
13	20.0	19.0	7.0	.0	.0	16.0	10.0	22.0	20.0	---	25.0	24.0
14	20.0	12.0	5.0	1.0	.0	10.0	18.0	19.0	23.0	---	25.0	24.0
15	20.0	11.0	7.0	1.0	.0	9.0	16.0	17.0	20.0	27.0	---	---
16	16.0	19.0	10.0	3.0	---	11.0	19.0	20.0	20.0	27.0	26.0	24.0
17	12.0	---	8.0	3.0	---	9.0	19.0	---	23.0	27.0	26.0	23.0
18	15.0	---	5.0	4.0	1.0	8.0	19.0	20.0	24.0	---	25.0	25.0
19	11.0	16.0	5.0	4.0	5.0	10.0	20.5	21.0	23.0	27.0	---	---
20	14.0	14.0	5.0	.0	---	10.0	19.0	21.0	---	---	26.0	---
21	11.0	15.0	9.0	.0	1.0	12.0	20.0	---	23.0	---	26.0	---
22	11.0	8.0	5.0	.0	10.0	10.0	---	20.0	25.0	28.0	---	24.0
23	10.0	---	6.0	.0	10.0	10.0	18.0	21.0	26.0	29.0	26.0	23.0
24	10.0	6.0	6.0	2.0	10.0	10.0	---	23.0	26.0	28.0	27.0	23.0
25	13.0	---	---	3.0	9.0	17.0	18.0	24.0	26.0	28.0	23.0	22.0
26	---	10.0	5.0	.0	8.0	11.0	20.0	24.0	---	25.0	23.0	22.0
27	---	6.0	9.0	---	6.0	12.0	20.0	---	---	---	---	22.0
28	14.0	4.0	10.0	2.0	6.0	15.0	19.0	25.0	---	---	---	23.0
29	14.0	5.0	13.5	3.0	---	11.0	---	24.0	25.0	27.0	---	---
30	16.0	5.0	9.0	3.0	---	---	19.0	25.0	---	28.0	25.0	21.0
31	---	---	7.0	.0	---	---	---	25.0	---	27.0	26.0	---
MEAN	15.5	12.0	6.5	2.0	3.0	11.0	17.0	21.5	23.5	26.5	26.0	24.0

WTR YR 1985 MEAN 15.0 MAX 29.0 MIN .0

07153000 BLACK BEAR CREEK AT PAWNEE, OK

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, Hydrologic Unit 11060006, on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 300 ft downstream from Skedee Creek, and at mile 23.4.

DRAINAGE AREA.--576 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.73 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army 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.

REMARKS.--Estimated daily discharges: Apr. 8-20, May 3-6, June 22-26, July 3-5, 7, 10. Records good.

AVERAGE DISCHARGE.--41 years, 172 ft^3/s, 124,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 30,200 ft^3/s Oct. 3, 1959, gage height, 31.43 ft; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1943, reached a stage of 28.19 ft, from flood mark, discharge 17,800 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 16	0800	4,740	11.64	Mar. 4	0900	5,490	13.02
Feb. 23	1600	*6,920	*15.49	Apr. 29	2400	5,280	12.63

No flow Oct. 1-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	61	7.2	2080	39	778	817	1750	81	57	82	4.6
2	.00	16	7.1	743	29	562	496	982	172	43	37	4.2
3	.00	7.2	6.1	350	20	600	353	800	82	38	21	4.2
4	.00	4.5	6.1	204	16	4890	264	370	65	34	48	4.0
5	.00	3.9	12	135	15	2020	217	280	1990	31	26	3.8
6	.00	3.7	9.8	105	14	1690	169	180	3260	45	15	3.2
7	.00	4.2	8.4	90	14	790	134	130	3200	32	9.4	2.9
8	.00	4.8	8.0	69	14	517	100	113	1650	22	7.2	3.0
9	.00	4.1	8.2	57	16	430	85	99	982	15	6.0	2.6
10	.00	3.2	11	204	35	377	72	80	1110	12	5.3	3.5
11	.00	1.8	15	192	45	248	61	65	772	10	5.0	3.3
12	.00	1.5	18	81	35	199	54	71	592	8.3	4.6	2.9
13	.00	1.8	51	55	31	171	49	543	389	6.7	6.1	5.2
14	.00	2.5	137	47	27	153	54	375	277	6.9	11	6.8
15	.00	3.5	957	37	24	134	48	427	213	6.1	6.1	87
16	.00	3.7	3960	37	23	116	45	246	168	7.2	20	174
17	.00	10	1440	34	23	107	41	136	136	12	42	104
18	.00	22	541	28	21	98	39	91	104	5.5	25	55
19	.00	29	299	27	19	92	38	69	80	5.5	20	35
20	.00	24	161	20	53	160	37	120	59	5.6	14	22
21	.00	25	102	17	2230	1420	802	1810	43	5.7	37	17
22	.00	23	69	14	2740	1020	331	1780	38	11	54	14
23	4.2	19	48	13	6270	572	392	655	34	12	35	168
24	4.0	16	35	12	5070	379	306	449	44	18	23	329
25	6.4	13	27	12	3160	277	226	335	39	13	15	279
26	4.3	13	24	11	1920	212	188	236	35	9.5	11	224
27	444	10	21	17	1550	302	1080	170	65	6.3	8.4	127
28	308	8.4	18	27	1130	226	1050	435	379	57	7.5	78
29	107	8.7	17	47	---	157	1120	289	141	35	6.1	80
30	35	8.1	15	71	---	1640	3450	184	86	17	5.4	173
31	20	---	703	45	---	1620	---	119	---	97	5.1	---
TOTAL	932.90	356.6	8741.9	4881	24583	21957	12118	13389	16286	684.3	618.2	2020.2
MEAN	30.1	11.9	282	157	878	708	404	432	543	22.1	19.9	67.3
MAX	444	61	3960	2080	6270	4890	3450	1810	3260	97	82	329
MIN	.00	1.5	6.1	11	14	92	37	65	34	5.5	4.6	2.6
AC-FT	1850	707	17340	9680	48760	43550	24040	26560	32300	1360	1230	4010

CAL YR 1984 TOTAL 53553.46 MEAN 146 MAX 4310 MIN .00 AC-FT 106200
WTR YR 1985 TOTAL 106568.10 MEAN 292 MAX 6270 MIN .00 AC-FT 211400

07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SE 1/4 sec. 4, T.5 N., R.1 E., Cimarron County, Hydrologic Unit 11040001, near right bank on downstream side of pier of county road bridge, 1.5 mi upstream from North Carrizo Creek, 1.7 mi northeast of Kenton, 2.2 mi downstream from Carrizozo Creek, and at mile 594.0.

DRAINAGE AREA.--1,106 mi^2, of which 68 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WSP 1711: 1956 (M).

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft, National Geodetic Vertical Datum of 1929 (levels by Oklahoma State Highway Department). April 1904 to July 1905 nonrecording gage at site 0.9 mi upstream at different datum. Oct. 1, 1950 to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 5-7, 13-16, 23-25, Jan. 15-25, July 26-28, Aug. 6-13, 15-17. Records fair. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--35 years (water years 1951-85), 20.6 ft^3/s, 14,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft^3/s Oct. 17, 1965, gage height, 22.32 ft, present datum; from rating curve extended above 7,000 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft^3/s May 6, gage height, 10.74, no peak above base of 2,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.5	6.0	1.9	1.9	1.9	.06	1.6	.26	.00	.05	.00
2	.00	1.1	5.8	1.5	1.5	1.6	.04	1.7	.17	.00	204	.00
3	.00	.77	5.2	2.3	2.1	1.4	.06	1.3	.11	.00	163	.00
4	.00	.65	5.8	2.4	2.5	1.0	.19	.63	1.5	.00	242	.00
5	.00	.62	5.5	2.1	2.7	1.0	.06	.43	1.6	.00	30	.00
6	.00	.78	4.5	2.1	3.1	1.2	.05	102	1.1	.00	7.0	.00
7	.00	.90	4.8	2.8	3.5	1.2	.00	129	.50	.00	3.0	.00
8	.00	1.6	5.7	3.0	3.9	.85	.00	26	.19	.00	1.5	.00
9	.00	2.0	5.6	3.8	3.9	1.2	.04	7.0	.06	.00	.90	.00
10	.02	2.0	6.1	3.5	4.4	1.2	.09	3.2	.01	.00	.50	.00
11	.02	2.0	6.2	3.4	5.2	1.6	.29	1.6	.00	.00	.35	.00
12	.00	1.9	6.0	3.3	4.1	1.9	.99	.91	.00	.00	.25	.00
13	.01	2.3	5.8	2.9	3.9	2.4	.77	.52	.00	.00	.20	.00
14	.06	2.5	5.6	2.9	3.6	.85	.63	.47	.00	.00	.17	.00
15	.40	2.4	5.4	2.9	3.5	.31	.53	.49	.00	.00	.14	.00
16	1.0	2.5	5.3	2.8	3.0	1.2	.29	.37	.00	.00	.12	.00
17	1.2	2.5	6.1	2.8	1.9	2.1	.17	.49	.00	.00	.11	.00
18	.51	2.6	6.3	2.8	1.9	1.9	.21	.71	.00	.00	.10	.00
19	.31	2.7	5.9	2.8	1.9	.85	.34	27	.00	.00	.04	.00
20	.31	2.8	5.9	2.7	1.8	.65	.41	11	.00	.00	.00	.00
21	.34	2.8	5.9	2.7	2.0	.79	.37	3.2	.00	.00	.00	.00
22	.47	2.9	5.9	2.6	2.2	1.0	.30	2.4	.00	1.1	.00	.00
23	.49	3.0	5.5	2.5	2.2	.54	.77	6.5	.00	206	.00	.00
24	.67	3.1	3.1	3.5	2.1	.92	1.1	31	.00	86	.00	.00
25	1.2	3.1	4.8	6.0	2.1	.41	1.1	23	.00	30	.00	.00
26	1.0	3.4	5.9	6.0	1.9	.10	.82	5.2	.00	10	.00	.00
27	.99	3.1	5.4	6.1	1.9	.10	.54	2.5	.00	2.0	.00	.00
28	.85	2.9	5.4	6.3	1.9	.19	.59	1.6	.00	1.0	.00	.00
29	.65	3.1	5.9	6.0	---	.05	1.9	.97	.00	.40	.00	.00
30	.98	5.1	3.1	5.3	---	.06	2.4	.59	.00	.18	.00	.00
31	1.8	---	1.9	2.9	---	.05	---	.36	---	.03	.00	---
TOTAL	13.28	68.62	166.3	104.6	76.6	30.52	15.11	393.74	5.50	336.71	653.43	.00
MEAN	.43	2.29	5.36	3.37	2.74	.98	.50	12.7	.18	10.9	21.1	.00
MAX	1.8	5.1	6.3	6.3	5.2	2.4	2.4	129	1.6	206	242	.00
MIN	.00	.62	1.9	1.5	1.5	.05	.00	.36	.00	.00	.00	.00
AC-FT	26	136	330	207	152	61	30	781	11	668	1300	.00

CAL YR 1984	TOTAL	2812.28	MEAN	7.68	MAX	845	MIN	.00	AC-FT	5580	
WTR YR 1985	TOTAL	1864.41	MEAN	5.11	MAX	242	MIN	.00	AC-FT	3700	

07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'45", long 100°29'30", in SE 1/4 SE 1/4 sec.8, T.35 S., R.24 E., Mead County, KS, Hydrologic Unit 11040006, near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mi north of Oklahoma-Kansas State Line, 7.8 mi north of Forgan, and at mile 375.7.

DRAINAGE AREA.--8,536 mi^2, of which 4,316 mi^2 is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 2,326.05 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-16, Jan. 2-3, 11-15, 19-25, Jan. 30 to Feb. 13. Records good. Extensive diversion for irrigation above station.

AVERAGE DISCHARGE.--20 years, 72.4 ft^3/s, 52,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft^3/s Oct. 20, 1965, gage height, 8.10 ft; minimum discharge, 14 ft^3/s July 10, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121 ft^3/s July 23, gage height, 3.36 ft, no peak above base of 3,000 ft^3/s; minimum daily discharge, 14 ft^3/s July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	45	47	34	29	58	67	63	30	21	29	24
2	35	41	47	34	28	60	65	53	31	26	32	22
3	29	41	45	40	30	60	55	46	38	25	27	21
4	34	38	49	47	31	54	51	45	65	24	26	27
5	37	37	54	51	32	53	54	45	57	20	25	23
6	31	37	50	52	39	54	52	48	47	20	24	21
7	31	35	50	50	73	55	49	48	42	17	22	21
8	30	36	50	59	91	55	48	43	37	16	20	26
9	42	37	44	55	77	56	50	41	35	15	21	27
10	37	40	42	44	67	64	48	36	39	14	22	29
11	33	43	39	38	62	59	45	37	39	18	24	45
12	32	41	40	31	58	55	47	37	33	19	22	39
13	31	40	43	33	53	62	51	40	37	18	23	39
14	33	42	51	38	46	57	48	40	35	22	22	35
15	40	46	69	56	37	50	46	34	35	26	26	34
16	54	46	74	47	42	56	40	36	29	23	23	32
17	47	46	72	43	49	60	44	38	22	23	20	29
18	46	54	63	48	51	60	39	40	22	21	24	23
19	41	52	58	50	40	56	41	36	23	21	26	42
20	39	50	61	38	31	72	47	39	15	24	27	47
21	39	51	58	33	79	78	44	38	17	24	27	51
22	39	52	50	32	93	71	44	34	26	23	25	44
23	36	52	46	34	87	64	50	34	25	55	30	43
24	34	50	41	37	84	57	47	33	33	35	33	38
25	42	52	28	51	64	50	43	33	28	37	28	39
26	36	51	28	42	53	52	48	35	29	30	25	35
27	41	52	28	42	45	49	51	34	27	27	25	33
28	36	49	48	43	53	56	45	29	24	22	23	36
29	34	45	46	48	---	59	103	35	23	27	23	58
30	33	45	39	49	---	70	78	35	22	30	27	45
31	42	---	35	37	---	62	---	32	---	29	26	---
TOTAL	1149	1346	1495	1336	1524	1824	1540	1217	965	752	777	1028
MEAN	37.1	44.9	48.2	43.1	54.4	58.8	51.3	39.3	32.2	24.3	25.1	34.3
MAX	54	54	74	59	93	78	103	63	65	55	33	58
MIN	29	35	28	31	28	49	39	29	15	14	20	21
AC-FT	2280	2670	2970	2650	3020	3620	3050	2410	1910	1490	1540	2040

CAL YR 1984	TOTAL	15139	MEAN	41.4	MAX	112	MIN	15	AC-FT	30030
WTR YR 1985	TOTAL	14953	MEAN	41.0	MAX	103	MIN	14	AC-FT	29660

07157580 CIMARRON RIVER NEAR ENGLEWOOD, KS

LOCATION.--Lat 36°58'38", long 99°58'32", in SE 1/4 sec.23, T.9 N., R.26 W., Harper County, OK, Hydrologic Unit 11040008, on the downstream side of bridge on U.S. Highway 283, 4 mi south of Englewood, KS, 10.5 mi north of junction of U.S. Highways 283 and 64, and at mile 341.6.

DRAINAGE AREA.--10,096 mi^2, of which 4,813 mi^2 is probably noncontributing.

PERIOD OF RECORD.--March 11, 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,965.62 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14-17, 26-27, Jan. 1-5, 10-17, 21-27, Jan. 30 to Feb. 14. Records fair. Flow regulated by canal gates 4.9 mi above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,560 ft^3/s June 10, 1983, gage height, 7.11 ft; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 361 ft^3/s Feb. 23, gage height, 6.34 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	36	31	13	12	37	41	47	22	.85	6.8	.00
2	.00	27	42	12	11	44	39	15	17	.60	7.3	.00
3	.00	23	48	17	14	66	39	12	33	.54	9.0	.00
4	23	14	58	19	18	48	43	2.7	113	.52	8.2	.00
5	62	5.3	63	23	23	32	46	1.6	108	.29	6.9	.00
6	48	4.7	53	16	20	40	22	23	63	.07	5.1	.00
7	31	5.3	41	27	21	56	24	47	47	.00	3.6	.00
8	2.7	11	46	33	26	54	25	53	38	.00	.67	.00
9	64	17	46	37	34	51	24	45	28	.00	.07	.00
10	90	16	39	35	53	48	11	49	31	.00	4.0	.00
11	68	18	36	21	47	49	3.0	45	49	.00	1.7	.01
12	43	24	38	13	64	45	8.8	39	45	.00	.00	21
13	26	34	55	14	68	45	148	31	32	.00	.00	23
14	24	40	66	18	44	44	84	39	28	.00	.00	18
15	36	38	109	28	35	46	26	40	27	.00	.36	17
16	112	28	102	62	35	54	14	32	23	.00	5.6	16
17	79	40	65	58	30	72	9.3	27	22	.00	2.5	15
18	48	100	45	22	44	61	4.2	26	17	.00	.00	12
19	40	86	31	19	66	55	.75	28	14	.00	.00	11
20	38	71	41	8.5	82	49	.11	24	11	.00	2.1	31
21	39	56	61	15	224	176	1.2	22	6.2	.00	5.8	44
22	36	53	30	21	224	122	2.0	22	5.9	.00	1.8	38
23	32	51	24	27	298	111	.51	27	2.0	8.6	.01	31
24	32	59	25	37	271	90	.09	23	27	33	6.7	24
25	47	62	19	63	159	42	.13	25	30	29	8.4	21
26	52	46	24	54	78	42	.32	25	19	22	7.2	18
27	33	42	32	45	82	25	.31	21	13	16	4.7	17
28	18	38	26	36	45	5.4	.14	15	8.4	13	.92	17
29	4.0	38	25	49	---	1.3	38	15	4.7	11	.00	36
30	14	37	19	47	---	11	69	17	1.5	9.5	.00	44
31	28	---	17	23	---	117	---	19	---	7.4	.00	---
TOTAL	1169.70	1120.3	1357	912.5	2128	1738.7	723.86	857.3	885.7	152.37	99.43	454.01
MEAN	37.7	37.3	43.8	29.4	76.0	56.1	24.1	27.7	29.5	4.92	3.21	15.1
MAX	112	100	109	63	298	176	148	53	113	33	9.0	44
MIN	.00	4.7	17	8.5	11	1.3	.09	1.6	1.5	.00	.00	.00

CAL YR 1984 TOTAL 14293.93 MEAN 39.1 MAX 303 MIN .00
WTR YR 1985 TOTAL 11598.87 MEAN 31.8 MAX 298 MIN .00

07157580 CIMARRON RIVER NEAR ENGLEWOOD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year February, 1982 to current year.

REMARKS.--Samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)
OCT									
25...	1630	1028	80020	46	3700	8.40	11.5	13.5	--
NOV									
28...	1400	1028	80020	45	4040	8.80	15.0	9.0	--
JAN									
17...	1200	1028	80020	86	3600	8.80	10.0	0.5	--
FEB									
19...	1230	1028	80020	70	3750	8.20	14.0	7.0	--
MAR									
22...	1200	1028	80020	115	4010	8.40	7.5	8.0	22
APR									
19...	1500	1028	80020	1.0	4300	8.40	24.0	22.0	--
MAY									
17...	1400	1028	80020	27	3850	8.40	19.5	20.0	--
JUN									
14...	1345	1028	80020	24	4130	8.30	30.0	28.5	--
JUL									
30...	1500	1028	80020	9.7	4670	8.50	35.5	32.0	--
AUG									
21...	1300	1028	80020	5.8	4690	8.60	31.5	29.0	--
SEP									
16...	1415	1028	80020	17	4380	8.30	27.0	26.0	--

DATE	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT								
25...	710	9.7	101	410	250	96	42	590
NOV								
28...	700	10.8	103	460	250	110	44	600
JAN								
17...	705	12.4	94	460	260	120	40	570
FEB								
19...	712	11.3	101	450	240	110	42	560
MAR								
22...	702	12.4	115	460	--	110	45	710
APR								
19...	698	8.3	105	660	430	140	75	720
MAY								
17...	710	8.3	99	420	260	91	46	650
JUN								
14...	700	7.2	103	430	270	95	48	670
JUL								
30...	706	7.3	110	420	260	87	50	830
AUG								
21...	708	7.5	107	460	320	88	59	770
SEP								
16...	704	7.7	105	440	290	89	53	750

07157580 CIMARRON RIVER NEAR ENGLEWOOD, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT								
25...	75	13	5.4	166	1.3	190	940	0.9
NOV								
28...	74	13	5.5	206	0.6	200	1000	0.9
JAN								
17...	72	12	5.1	207	0.6	190	870	0.8
FEB								
19...	73	12	5.3	203	2.5	200	970	0.8
MAR								
22...	77	15	5.7	--	--	230	1100	0.9
APR								
19...	70	13	8.3	229	1.7	320	1200	1.0
MAY								
17...	77	14	5.9	157	1.2	170	--	0.9
JUN								
14...	77	14	6.3	165	1.6	230	1200	1.0
JUL								
30...	81	18	7.8	160	1	240	1300	1.1
AUG								
21...	78	16	7.6	140	0.7	120	1300	1.1
SEP								
16...	78	16	7.2	146	1.4	230	1200	1.0

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
25...	9.1	1850	2000	2.5	230	<0.10	0.03	0.27	0.3
NOV									
28...	17	1950	2100	2.7	237	0.20	0.02	0.58	0.6
JAN									
17...	19	1900	1900	2.6	441	0.70	0.03	0.37	0.4
FEB									
19...	19	1970	2000	2.7	372	0.50	0.08	0.22	0.3
MAR									
22...	14	2220	--	3.0	689	<0.10	0.02	0.48	0.5
APR									
19...	18	--	2600	3.6	7.1	<0.10	0.06	0.44	0.5
MAY									
17...	14	2160	--	--	--	<0.10	0.06	1.4	1.5
JUN									
14...	5.6	2370	2400	3.2	154	<0.10	0.09	0.21	0.3
JUL									
30...	6.2	2650	2600	3.6	69	<0.10	0.05	0.55	0.6
AUG									
21...	6.3	2600	2400	3.5	41	<0.10	0.05	0.55	0.6
SEP									
16...	4.4	2430	2400	3.3	112	<0.10	<0.01	--	--

07157580 CIMARRON RIVER NEAR ENGLEWOOD, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT								
25...	--	--	0.03	--	1	140	<10	<10
NOV								
28...	0.8	3.5	0.05	--	2	150	<10	<10
JAN								
17...	1.1	4.9	0.06	--	2	130	10	10
FEB								
19...	0.8	3.5	0.04	--	2	140	10	20
MAR								
22...	--	--	0.06	--	1	150	<10	30
APR								
19...	--	--	0.07	--	--	210	<10	20
MAY								
17...	--	--	0.01	0.03	--	170	<10	<10
JUN								
14...	--	--	0.02	0.06	--	180	<10	<10
JUL								
30...	--	--	0.01	0.03	--	120	<10	<10
AUG								
21...	--	--	0.03	0.09	--	230	10	<10
SEP								
16...	--	--	0.02	0.06	1	200	10	<10

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
25...	20	80	<100	<10	0.2	3	10	89	11	85
NOV										
28...	<10	20	100	<10	0.1	4	20	306	37	22
JAN										
17...	40	80	100	<10	0.1	--	10	125	29	67
FEB										
19...	10	20	100	<10	<0.1	--	<10	137	26	59
MAR										
22...	40	40	<100	10	0.3	--	<10	57	18	66
APR										
19...	40	20	200	50	2.9	--	20	12	0.03	48
MAY										
17...	10	30	<100	20	0.2	--	10	18	1.3	56
JUN										
14...	<10	40	100	10	<0.1	--	10	24	1.6	72
JUL										
30...	<10	30	200	<10	<0.1	2	40	36	0.94	39
AUG										
21...	20	20	<100	<10	0.1	--	40	11	0.17	82
SEP										
16...	10	20	<100	10	<0.1	2	10	18	0.83	84

07157950 CIMARRON RIVER NEAR BUFFALO, OK

LOCATION.--Lat 36°51'07", long 99°18'54", in SE 1/4 NE 1/4 sec.2, T.27 N., R.20 W., Harper County, Hydrologic Unit 11050001, near left bank on downstream side of pier of U.S. Highway 64, 0.5 mi downstream from Keno Creek, 17.0 mi northeast of Buffalo, and at mile 289.1.

DRAINAGE AREA.--12,004 mi^2, of which 4,813 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,599.67 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1979, at site 6.9 mi upstream at an altitude of 1,650 ft.

REMARKS.--Estimated daily discharges: Jan. 2-6, 9-17, 19 to Feb. 15, July 17-21. Records fair.

AVERAGE DISCHARGE.--25 years, 138 ft^3/s, 99,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 26,400 ft^3/s Sept. 26, 1973, gage height, 5.57 ft datum then in use; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Apr. 13	0500	5,270	8.11	June 11	1600	6,050	8.33
Apr. 29	2300	*6,480	*8.41				

No flow Oct. 1-30, Nov. 1-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	3.7	38	14	168	69	344	7.9	73	2.7	.27
2	.00	.00	4.0	14	13	140	87	227	7.1	59	2.7	.26
3	.00	.00	3.9	16	16	139	85	142	26	49	2.6	.25
4	.00	.00	4.3	28	21	131	76	78	232	37	3.2	.24
5	.00	.00	6.0	51	19	110	70	57	808	28	2.8	.22
6	.00	.00	5.1	106	24	103	64	43	783	22	1.7	.22
7	.00	.00	6.2	100	26	104	61	1070	497	18	2.0	.21
8	.00	.00	8.0	85	28	103	54	1080	347	15	1.9	.22
9	.00	.00	10	81	32	95	47	496	235	15	.79	.21
10	.00	.00	8.6	73	44	102	49	308	167	13	.55	.27
11	.00	.00	8.6	43	76	107	48	233	2660	12	.56	3.9
12	.00	.00	8.3	23	136	98	42	182	1590	9.9	.94	3.9
13	.00	.00	14	27	166	100	2350	148	584	8.9	16	2.2
14	.00	.00	23	49	174	97	581	124	320	7.8	5.2	1.4
15	.00	.00	166	87	159	94	300	98	218	17	4.8	1.1
16	.00	.00	464	102	120	94	173	89	155	11	2.8	.88
17	.00	.03	468	170	89	90	97	78	110	8.5	1.6	.64
18	.00	2.1	307	159	81	86	69	72	84	7.6	1.1	.37
19	.00	1.4	218	101	76	85	52	64	70	7.0	36	.33
20	.00	8.5	182	15	79	110	39	61	58	6.2	6.9	33
21	.00	8.1	169	17	152	137	26	56	48	5.3	4.0	52
22	.00	4.9	132	21	279	130	23	49	40	4.4	2.9	15
23	.00	3.8	110	29	392	184	19	47	33	39	2.7	10
24	.00	3.4	103	32	519	144	13	44	44	42	4.4	4.7
25	.00	4.0	67	36	441	104	11	48	38	82	2.5	5.9
26	.00	3.9	79	41	308	89	42	39	426	73	1.7	4.4
27	.00	4.1	70	109	232	80	80	32	1140	24	1.2	3.3
28	.00	3.1	122	118	196	75	25	25	404	12	.85	2.6
29	.00	3.2	104	102	---	63	1040	19	174	6.9	.64	14
30	.00	3.3	89	74	---	67	1550	15	103	4.9	.46	11
31	.03	---	88	21	---	78	---	8.9	---	3.5	.34	---
TOTAL	.03	53.83	3051.7	1968	3912	3307	7242	5376.9	11409.0	721.9	118.53	172.99
MEAN	.00	1.79	98.4	63.5	140	107	241	173	380	23.3	3.82	5.77
MAX	.03	8.5	468	170	519	184	2350	1080	2660	82	36	52
MIN	.00	.00	3.7	14	13	63	11	8.9	7.1	3.5	.34	.21
AC-FT	.06	107	6050	3900	7760	6560	14360	10670	22630	1430	235	343

CAL YR 1984	TOTAL	19610.40	MEAN	53.6	MAX	468	MIN	.00	AC-FT	38900
WTR YR 1985	TOTAL	37333.88	MEAN	102	MAX	2660	MIN	.00	AC-FT	74050

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1961-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to January 1982.
WATER TEMPERATURE: July 1968 to January 1982.

INSTRUMENTATION.--Water quality monitor from March 1969 to September 1979.

REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
DEC												
28...	1030	1028	80020	129	13600	8.50	20.0	10.0	74	714	10.2	101
MAR												
06...	1300	1028	80020	109	7350	8.50	18.0	8.0	28	722	11.2	103
MAY												
22...	1330	1028	80020	50	13200	8.40	21.5	21.5	2.1	719	8.0	101
JUL												
23...	1400	1028	80020	74	54500	8.30	32.0	30.5	62	715	5.1	89

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
DEC											
28...	1500	420	710	470	170	68	2500	88	42	7.1	256
MAR											
06...	950	K26	620	400	150	60	1400	83	25	5.9	261
MAY											
22...	K96	K7	840	620	200	82	2800	88	43	8.1	241
JUL											
23...	320	1600	1000	890	270	81	--	--	--	13	75

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
DEC											
28...	15	235	235	1.3	340	4300	0.8	20	7450	7600	10.1
MAR											
06...	7.0	222	225	1.3	350	2200	0.8	17	4270	4300	5.8
MAY											
22...	12	138	217	1.5	580	4500	0.7	14	8030	8300	10.9
JUL											
23...	0	72	125	0.6	450	15000	0.1	6.3	37200	--	--

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
DEC											
28...	2590	0.36	0.07	0.09	0.8	0.13	--	0.02	0.02	0.06	20
MAR											
06...	1260	<0.10	0.03	0.04	0.4	0.03	--	<0.01	0.01	0.03	<10
MAY											
22...	1080	<0.10	0.12	0.15	0.4	0.02	0.06	0.01	0.01	0.03	<10
JUL											
23...	--	0.24	0.19	0.24	1.1	0.08	0.25	<0.01	0.02	0.06	20

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC											
28...	2	200	<10	1	<0.5	<1	<1	40	<1	60	10
MAR											
06...	2	100	<10	<1	<1	1	<1	30	<1	60	20
MAY											
22...	2	400	<10	1	1	4	<1	30	2	70	20
JUL											
23...	3	400	10	1	<1	<1	3	220	1	40	80

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC											
28...	<0.1	--	<1	2	1	2600	21	20	142	49	97
MAR											
06...	<0.1	4	1	2	<1	2400	34	<10	38	11	89
MAY											
22...	0.2	4	7	1	8	2900	64	<10	10	1.4	51
JUL											
23...	0.4	7	2	<1	3	3200	300	640	111	22	96

07157960 BUFFALO CREEK NEAR LOVEDALE, OK

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, Hydrologic Unit 11050001, near center of channel on downstream side of pier of bridge on State Highway 34, 1.2 mi east of Lovedale, 1.3 mi upstream from Sleeping Bear Creek, and at mile 7.6.

DRAINAGE AREA.--408 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,602.56 ft, Oklahoma State Highway Department datum.

REMARKS.--Estimated daily discharges: Jan. 9-12, 21, 22, Feb. 1-6. Records good.

AVERAGE DISCHARGE.--19 years, 9.78 ft^3/s, 7,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 15,800 ft^3/s Aug. 9, 1967, gage height, 14.80 ft, from rating curve extended above 7,000 ft^3/s on basis of slope-area determination of peak flow; maximum gage height, 16.17 ft May 10, 1979; no flow each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Apr. 13	0900	*3,420	*11.49	May 7	1745	1,060	8.75

No flow Oct. 1 to Dec. 12, Sept. 2-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.96	.53	7.0	6.6	64	3.5	6.3	1.1	.04
2	.00	.00	.00	1.1	.52	6.1	6.3	34	3.3	5.3	1.1	.00
3	.00	.00	.00	1.1	.56	5.9	6.0	25	4.1	4.7	.93	.00
4	.00	.00	.00	1.2	.64	5.1	5.8	20	198	4.2	.87	.00
5	.00	.00	.00	1.2	.73	4.4	5.7	16	90	3.7	.80	.00
6	.00	.00	.00	1.3	.80	4.1	4.8	14	34	3.3	.73	.00
7	.00	.00	.00	1.2	.87	3.9	4.2	650	25	3.0	.72	.00
8	.00	.00	.00	1.1	1.0	4.0	3.9	248	17	2.7	.58	.00
9	.00	.00	.00	1.2	1.1	3.9	3.6	66	11	2.5	.44	.00
10	.00	.00	.00	1.3	1.2	4.0	3.4	41	8.9	2.3	.40	.00
11	.00	.00	.00	1.2	1.0	4.0	3.3	28	8.5	2.1	.37	.00
12	.00	.00	.00	1.1	1.2	3.7	3.2	21	8.1	1.9	.30	.00
13	.00	.00	.02	1.3	1.2	3.3	1060	17	7.2	1.7	.35	.00
14	.00	.00	.81	1.2	1.2	3.2	126	14	6.4	1.5	.50	.00
15	.00	.00	5.6	1.2	1.1	3.1	59	12	6.1	1.8	1.9	.00
16	.00	.00	22	1.3	1.1	3.0	42	11	5.4	1.7	2.5	.00
17	.00	.00	9.9	1.3	1.1	3.1	33	9.9	5.3	1.5	1.3	.00
18	.00	.00	4.2	1.3	1.1	3.0	28	9.6	4.7	1.3	.88	.00
19	.00	.00	2.8	1.2	1.1	3.0	24	9.1	4.0	1.2	.88	.00
20	.00	.00	2.5	.64	1.1	4.4	21	8.5	3.6	1.1	.98	.15
21	.00	.00	2.4	.70	1.7	8.7	19	7.9	3.2	1.2	.79	.47
22	.00	.00	1.7	.84	3.6	11	17	7.3	2.9	1.1	.71	1.3
23	.00	.00	1.6	1.0	11	11	15	6.8	2.7	.95	.55	1.2
24	.00	.00	1.5	1.1	20	9.9	14	6.5	3.5	5.4	.48	.88
25	.00	.00	1.2	1.1	22	7.7	13	6.1	3.9	38	.43	.84
26	.00	.00	1.3	.95	17	6.7	15	5.7	7.2	8.6	.33	1.1
27	.00	.00	1.3	1.1	11	6.1	17	5.3	118	4.0	.26	1.4
28	.00	.00	1.4	1.1	8.1	5.5	17	5.0	21	2.4	.21	1.7
29	.00	.00	1.3	1.1	---	4.8	33	4.7	13	1.8	.15	2.1
30	.00	.00	1.2	1.0	---	5.7	317	4.4	8.4	1.6	.11	2.6
31	.00	---	1.2	.58	---	6.6	---	3.9	---	1.2	.10	---
TOTAL	.00	.00	63.93	33.97	113.55	165.9	1926.8	1381.7	637.9	120.05	21.75	13.78
MEAN	.00	.00	2.06	1.10	4.06	5.35	64.2	44.6	21.3	3.87	.70	.46
MAX	.00	.00	22	1.3	22	11	1060	650	198	38	2.5	2.6
MIN	.00	.00	.00	.58	.52	3.0	3.2	3.9	2.7	.95	.10	.00
AC-FT	.00	.00	127	67	225	329	3820	2740	1270	238	43	27

CAL YR 1984	TOTAL	702.70	MEAN	1.92	MAX	22	MIN	.00	AC-FT	1390
WTR YR 1985	TOTAL	4479.33	MEAN	12.3	MAX	1060	MIN	.00	AC-FT	8880

07158000 CIMARRON RIVER NEAR WAYNOKA, OK

LOCATION.--Lat 36°31'02", long 98°52'45", in NW 1/4 NE 1/4 sec.35, T.24 N., R.16 W., Woods County, Hydrologic Unit 11050001, near left bank on downstream side of bridge on U.S. Highway 281, 4 mi south of Waynoka, and at mile 247.0.

DRAINAGE AREA.--13,334 mi^2, of which 4,830 mi^2 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 1,367.35 ft, National Geodetic Vertical Datum of 1929. September 1903 to December 1905, nonrecording gage at the Atchison, Topeka and Santa Fe Railway Co. bridge 5 mi 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.

REMARKS.--Estimated daily discharges: Jan. 2-3, 10-14, 18-21, Jan. 30 to Feb. 12. Records fair. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, (water years 1938-85), 320 ft^3/s, 231,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 94,500 ft^3/s May 16, 1957, gage height, 15.10 ft, from rating curve extended above 45,000 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 14 ft occurred probably in 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft^3/s at 0545 Apr. 30, gage height, 9.36 ft, no other peaks above base of 10,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	4.0	111	49	214	151	1010	22	104	4.1	.00
2	.00	.00	3.9	69	41	192	131	451	17	72	2.2	.00
3	.00	.00	3.5	66	45	183	122	319	20	53	1.2	.00
4	.00	.00	5.7	83	53	165	131	229	454	40	.56	.00
5	55	.00	16	93	48	156	124	180	673	28	.25	.00
6	45	.00	17	105	46	150	120	145	780	17	14	.00
7	4.3	.00	28	149	54	150	108	294	641	11	20	.00
8	1.9	.00	25	138	50	152	105	1560	371	6.3	7.4	.00
9	.30	.00	22	126	54	151	102	965	243	3.8	2.8	.00
10	.00	.00	23	117	62	154	97	450	184	2.4	.83	.56
11	.00	.00	29	98	48	150	94	303	605	1.4	.20	.00
12	.00	.00	30	56	56	141	93	225	2180	.56	.00	.00
13	.00	.00	43	68	130	144	1160	189	1010	.01	106	.00
14	.00	.00	70	99	146	144	1040	175	517	.00	169	.00
15	.00	.00	156	94	198	140	582	156	758	.00	140	.00
16	.00	.00	557	92	202	138	357	137	464	.02	75	.00
17	14	5.3	381	99	185	139	230	125	226	1.5	72	.00
18	10	21	364	94	166	140	154	121	154	.69	38	.00
19	2.5	65	294	71	157	138	109	115	121	.00	67	.00
20	.55	55	241	52	154	167	86	103	99	.00	108	51
21	.00	26	226	90	174	243	80	94	76	.00	73	1240
22	.00	12	199	111	244	235	71	88	69	46	38	502
23	.00	11	173	111	366	200	59	83	52	35	20	2200
24	.00	18	157	108	524	208	48	74	45	30	9.8	528
25	.00	15	146	113	406	203	38	66	52	51	4.3	256
26	.00	7.9	128	99	349	189	65	57	54	115	2.7	194
27	.00	5.2	125	96	274	176	564	53	297	98	1.3	109
28	.00	4.9	127	132	237	152	333	51	791	63	.42	80
29	.00	4.5	126	168	---	126	302	46	350	42	.08	83
30	.00	4.4	131	145	---	145	2700	38	171	22	.00	105
31	.00	---	128	102	---	164	---	29	---	6.2	.00	---
TOTAL	133.55	255.20	3979.1	3155	4518	5149	9356	7931	11496	849.88	978.14	5348.56
MEAN	4.31	8.51	128	102	161	166	312	256	383	27.4	31.6	178
MAX	55	65	557	168	524	243	2700	1560	2180	115	169	2200
MIN	.00	.00	3.5	52	41	126	38	29	17	.00	.00	.00
AC-FT	265	506	7890	6260	8960	10210	18560	15730	22800	1690	1940	10610

CAL YR 1984	TOTAL	30316.60	MEAN	82.8	MAX	808	MIN	.00	AC-FT	60130
WTR YR 1985	TOTAL	53149.43	MEAN	146	MAX	2700	MIN	.00	AC-FT	105400

07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06", long 97°54'51", in SW 1/4 NE 1/4 sec.14, T.17 N., R.7 W., Kingfisher County, Hydrologic Unit 11050002, near right bank on downstream bridge on U.S. Highway 81, 1.0 mi downstream from Turkey Creek, 2.0 mi south of Dover, 2.5 mi upstream from Kingfisher Creek, and at mile 160.6.

DRAINAGE AREA.--15,713 mi^2, of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 999.19 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20-22, Jan. 31 to Feb. 7, Sept. 4-8, 11-13. Records poor.

AVERAGE DISCHARGE.--12 years, 718 ft^3/s, 520,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,900 ft^3/s May 17, 1982, gage height, 22.87 ft from high-water mark; minimum daily, 4.3 ft^3/s Sept. 23, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,240 ft^3/s Sept. 25, gage height, 15.40 ft, from graph of gage readings; no other peaks above base of 12,000 ft^3/s; minimum daily discharge, 22 ft^3/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	41	45	596	260	688	546	1540	118	722	200	82
2	29	42	44	407	250	574	435	585	119	433	223	71
3	24	46	44	286	240	500	384	297	109	288	453	54
4	24	43	41	270	230	509	337	289	113	210	331	45
5	28	38	41	250	240	509	287	314	865	164	169	39
6	33	41	44	307	200	450	276	242	1140	137	189	32
7	26	44	47	265	220	344	260	279	1320	119	154	29
8	24	54	44	251	196	310	244	565	1160	104	273	29
9	22	52	44	251	189	292	230	507	1180	92	296	54
10	36	33	47	265	226	282	222	1350	775	71	396	82
11	39	32	44	401	246	276	245	702	857	63	252	41
12	34	34	44	358	226	258	393	349	770	62	170	30
13	32	33	51	299	226	248	425	370	665	56	157	30
14	49	34	109	299	226	283	548	427	2810	51	897	1060
15	42	35	1120	285	218	235	1460	228	1460	53	2310	761
16	36	38	4350	285	230	221	992	232	948	52	884	246
17	135	44	2070	226	230	218	592	232	685	109	674	121
18	70	51	2770	173	230	218	385	240	1020	115	489	93
19	45	54	1740	173	230	219	260	272	550	93	533	57
20	40	59	1050	230	255	393	218	272	379	76	1150	39
21	35	55	969	210	276	1800	221	477	287	62	1030	605
22	34	57	767	190	374	1320	574	390	242	71	760	1120
23	34	55	615	160	659	835	469	418	209	78	489	1660
24	34	59	538	160	3040	700	441	390	189	114	459	3780
25	39	45	477	166	1410	542	285	343	176	119	266	6790
26	47	51	366	203	1560	431	223	267	158	469	242	4370
27	51	44	324	234	1070	423	442	238	186	591	230	1490
28	49	47	300	255	878	390	1380	200	257	446	242	1360
29	46	48	299	255	---	340	1680	170	180	308	148	1240
30	40	45	281	238	---	561	1550	146	412	439	132	1140
31	40	---	257	280	---	779	---	124	---	295	111	---
TOTAL	1247	1354	18982	8228	13835	15148	16004	12455	19339	6062	14309	26550
MEAN	40.2	45.1	612	265	494	489	533	402	645	196	462	885
MAX	135	59	4350	596	3040	1800	1680	1540	2810	722	2310	6790
MIN	22	32	41	160	189	218	218	124	109	51	111	29
AC-FT	2470	2690	37650	16320	27440	30050	31740	24700	38360	12020	28380	52660

CAL YR 1984	TOTAL	134174.6	MEAN	367	MAX	8460	MIN	9.3	AC-FT	266100
WTR YR 1985	TOTAL	153513	MEAN	421	MAX	6790	MIN	22	AC-FT	304500

07159720 COTTONWOOD CREEK NEAR NAVINA, OK

LOCATION.--Lat 35°46'36", long 97°32'45", SW 1/4 NW 1/4 sec.17, T.15 N., R.4 W., Logan County, Hydrologic Unit 11050002 on downstream right bank, 0.5 mi downstream from Deer Creek, 1.7 mi southeast of Navina, 10.7 mi southwest of Guthrie, and at mile 25.0.

DRAINAGE AREA.--247 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1980, March 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 962.10 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 31, Jan. 4, 20, Jan. 31 to Feb. 1. Records good. Low flow sustained in part by sewage effluent.

AVERAGE DISCHARGE.--6 years (water years 1978-80, 1983-85), 106 ft^3/s, 76,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft^3/s Oct. 20, 1983, gage height, 23.94 ft; minimum daily discharge, 8.0 ft^3/s Oct. 14, 15, 1977.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	---	3,280	20.53	Mar. 21	0300	3,000	20.29
Feb. 23	1700	3,600	20.76	Apr. 30	1400	2,980	20.19
Mar. 4	1100	*3,620	*20.77	June 5	2400	2,290	19.45

Minimum daily discharge, 15 ft^3/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	32	36	2390	94	262	366	814	44	52	30	19
2	17	77	31	493	93	233	279	308	53	49	28	18
3	16	35	29	302	99	331	234	234	55	46	26	19
4	17	32	28	233	103	3040	216	191	52	45	26	19
5	15	27	32	192	102	1290	184	168	1240	44	39	18
6	16	24	38	174	104	532	162	144	1510	41	42	18
7	19	24	34	163	102	435	148	165	842	38	43	18
8	18	27	33	145	104	351	138	152	509	38	34	19
9	18	25	34	140	112	277	134	130	392	37	29	19
10	20	26	32	169	131	246	130	118	249	36	27	18
11	19	24	33	139	120	228	123	110	273	35	26	18
12	18	26	31	106	114	192	118	101	368	33	24	18
13	17	27	47	130	103	173	135	107	206	32	23	19
14	19	27	446	128	100	167	163	171	146	31	24	193
15	18	28	248	125	98	159	137	107	118	30	60	55
16	23	27	1500	122	98	153	119	92	96	30	42	36
17	33	28	603	119	100	157	106	81	81	30	35	31
18	20	207	188	117	96	148	102	76	78	31	30	29
19	19	89	125	106	93	140	94	80	68	29	28	46
20	21	48	98	103	105	1250	91	76	62	27	35	123
21	42	38	182	99	480	2440	87	73	59	27	31	96
22	38	35	143	92	554	794	262	76	53	27	28	69
23	27	33	95	94	2970	433	358	78	51	34	26	685
24	21	33	81	95	2510	307	190	71	47	31	26	263
25	39	32	69	97	730	252	134	69	46	34	26	99
26	54	33	63	93	471	220	107	63	45	107	24	62
27	400	37	64	104	370	398	349	60	349	48	23	69
28	248	41	65	167	301	308	334	58	171	42	21	71
29	50	48	71	148	---	224	521	55	96	114	20	558
30	35	40	80	140	---	1310	2470	51	69	46	20	892
31	31	---	534	120	---	991	---	49	---	37	19	---
TOTAL	1366	1230	5093	6845	10457	17441	7991	4128	7428	1281	915	3617
MEAN	44.1	41.0	164	221	373	563	266	133	248	41.3	29.5	121
MAX	400	207	1500	2390	2970	3040	2470	814	1510	114	60	892
MIN	15	24	28	92	93	140	87	49	44	27	19	18
AC-FT	2710	2440	10100	13580	20740	34590	15850	8190	14730	2540	1810	7170

CAL YR 1984	TOTAL	23674	MEAN	64.7	MAX	1500	MIN	11	AC-FT	46960
WTR YR 1985	TOTAL	67792	MEAN	186	MAX	3040	MIN	15	AC-FT	134500

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to November 1980.
WATER TEMPERATURE: October 1977 to November 1980.

REMARKS.--Samples collected monthly. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
OCT												
24...	1500	1028	80020	21	1160	7.40	13.5	28	730	7.6	76	300
NOV												
29...	1130	1028	80020	51	1050	7.30	8.0	5.9	730	8.6	76	350
JAN												
08...	1530	1028	80020	140	1110	7.30	6.0	33	730	10.4	88	380
FEB												
26...	1100	1028	80020	300	788	7.60	9.5	170	740	12.0	108	280
MAR												
28...	1345	1028	80020	286	804	7.80	17.0	72	730	8.6	93	300
APR												
09...	1700	1028	80020	125	1170	7.80	14.5	34	740	9.1	92	430
MAY												
22...	1600	1028	80020	72	1330	7.90	19.5	45	740	8.0	90	460
JUN												
21...	0930	1028	80020	52	1270	7.80	21.0	39	730	6.3	74	420
JUL												
09...	1400	1028	80020	40	1340	8.00	24.5	--	730	6.1	77	450
AUG												
16...	1200	1028	80020	37	980	7.60	25.0	11	730	6.0	76	270
SEP												
27...	1300	1028	80020	70	960	7.80	17.5	94	740	8.2	89	290

DATE	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT												
24...	110	78	26	120	46	3	8.5	196	15	190	140	721
NOV												
29...	140	91	31	100	38	2	5.7	212	21	170	120	704
JAN												
08...	140	92	37	93	34	2	4.1	238	23	190	100	716
FEB												
26...	110	69	27	66	33	2	3.5	177	8.6	140	64	484
MAR												
28...	100	73	29	66	32	2	4.0	201	6.2	140	66	520
APR												
09...	160	100	43	100	33	2	4.6	270	8.3	210	110	773
MAY												
22...	170	110	45	120	36	3	6.6	291	7.1	230	120	855
JUN												
21...	140	100	41	110	36	2	8.2	280	8.6	220	130	849
JUL												
09...	190	110	42	130	38	3	7.2	253	4.9	240	150	911
AUG												
16...	110	66	25	90	42	2	6.0	159	7.7	170	98	595
SEP												
27...	130	72	26	83	38	2	5.5	157	4.8	170	81	582

07160000 CIMARRON RIVER NEAR GUTHRIE, OK

LOCATION.--Lat 35°55'07", long 97°25'34", near center of east line of sec.29, T.17 N., R.2 W, Logan County, Hydrologic Unit 11050002, on downstream side of second pier from left bank of State Highway 77 bridge, 1.6 mi downstream from Cottonwood Creek, 2.5 mi north of Guthrie, 6.1 mi upstream from Skeleton Creek, and at mile 122.4.

DRAINAGE AREA.--16,892 mi^2, of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937-76, October 1983 to current year. Monthly discharge only for some periods, published in WSP's 1311 and 1731.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 896.50 ft above mean sea level (U.S. Army Corps of Engineers' benchmark). Prior to Mar. 19, 1939, nonrecording gage at railway bridge 1,200 ft upstream at datum 4.00 ft higher. From Mar. 19, 1939 to Sept. 30, 1976, recording gage 125 ft upstream from railway bridge at datum 4.00 ft higher. From Sept. 14, 1967 to Sept. 30, 1976, supplementary water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-23, 25-26, Oct. 30 to Dec. 12, 26-30, Jan. 7, 10-19, 21-31, Feb. 2-8, 11, 14-20, Apr. 7-8, May 20-21, May 29 to June 3, 21-25, June 29 to July 1, 3-8, July 10 to Aug. 14, 18-20, Aug. 22 to Sept. 22. Records poor.

AVERAGE DISCHARGE.--41 years (water years 1938-76, 1984-85), 890 ft^3/s, 644,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 158,000 ft^3/s May 17, 1957, gage height, 18.58 ft site and datum then in use; minimum discharge, 0.1 ft^3/s Nov. 2, 1939.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 17,000 ft^3/s Feb. 24, gage height, 9.71 ft, no other peak above base of 16,000 ft^3/s; minimum daily discharge, 46 ft^3/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	110	80	3750	648	1390	2210	7830	350	500	335	130
2	54	92	77	2100	580	1170	1280	5120	340	647	260	96
3	48	97	76	1030	545	1560	1050	3340	330	550	230	105
4	47	90	75	731	520	7640	944	2110	800	450	202	90
5	47	85	75	630	490	8220	864	1460	2820	350	184	100
6	46	82	74	579	480	2680	806	1120	8850	310	171	88
7	48	80	74	564	462	1740	740	1010	5340	270	160	72
8	47	77	80	532	449	1320	700	948	3140	250	310	66
9	52	76	73	520	735	1100	660	1060	1930	240	265	59
10	51	75	71	510	595	997	637	998	1490	230	220	57
11	49	74	71	630	560	940	622	2180	1160	210	190	54
12	118	73	70	570	530	897	609	1640	1810	185	175	80
13	80	72	200	520	519	860	668	1050	1390	175	163	210
14	86	71	682	485	490	837	743	974	955	172	330	770
15	88	70	701	460	440	828	1100	1050	2220	170	800	650
16	89	70	2160	450	390	813	1930	796	1340	235	1660	420
17	130	500	2910	440	360	798	1720	717	901	200	720	270
18	225	400	1090	430	335	789	1210	671	750	180	600	220
19	160	288	1110	450	320	780	907	637	876	165	440	200
20	115	200	862	730	430	1820	712	600	676	160	380	320
21	103	131	773	625	652	8510	632	570	610	158	643	470
22	93	112	770	600	1170	8660	659	540	540	155	550	590
23	91	101	665	580	5690	3350	1700	719	460	154	475	1190
24	88	92	593	565	14900	1870	1200	533	420	152	410	2040
25	87	87	558	510	6980	1480	962	472	395	150	355	7180
26	86	84	510	470	2980	1240	704	450	570	147	315	5090
27	400	81	490	430	2330	1430	1080	543	1030	180	250	1970
28	921	79	470	410	1650	1560	3560	440	921	238	190	1080
29	480	77	460	400	---	1210	3070	425	612	400	160	1020
30	250	77	450	390	---	2540	9140	400	530	820	140	1070
31	122	---	1600	560	---	4990	---	370	---	500	123	---
TOTAL	4364	3603	17950	21651	46230	74019	42819	40773	43556	8703	11406	25757
MEAN	141	120	579	698	1651	2388	1427	1315	1452	281	368	859
MAX	921	500	2910	3750	14900	8660	9140	7830	8850	820	1660	7180
MIN	46	70	70	390	320	780	609	370	330	147	123	54

CAL YR 1984	TOTAL	225863	MEAN	617	MAX	17900	MIN	34
WTR YR 1985	TOTAL	340831	MEAN	934	MAX	14900	MIN	46

07160500 SKELETON CREEK NEAR LOVELL, OK

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, Hydrologic Unit 11050002, near right bank on downstream side of pier of bridge on State Highway 74, 2 mi upstream from Otter Creek, 2.8 mi east of Lovell, and at mile 14.6.

DRAINAGE AREA.--410 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 909.76 ft, Oklahoma State Highway Department datum. Prior to Dec. 5, 1949, nonrecording gage at site 60 ft downstream at datum 4.70 ft higher. Prior to Oct. 1, 1979, gage at present site and datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-13, 19, 21-22, 29 to Nov. 16, 21-25, 27 to Dec. 2, 5-14, 20 to Jan. 16, 18-23, Sept. 10-18. Records fair.

AVERAGE DISCHARGE.--36 years, 116 ft^3/s, 84,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft^3/s May 16, 1957, gage height, 34.58 ft, no flow at times in 1953-54, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,790 ft^3/s Feb. 24, gage height, 17.90 ft, no peak above base of 2,300 ft^3/s; minimum daily discharge, 3.3 ft^3/s several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	10	9.6	540	27	88	193	401	26	33	44	15
2	3.3	8.4	8.4	310	19	81	109	154	29	25	28	13
3	3.4	6.8	12	210	24	73	87	101	24	29	31	15
4	3.3	6.6	16	150	24	103	73	77	147	25	23	13
5	3.3	5.8	23	100	23	96	67	65	1130	24	23	12
6	3.3	6.0	14	72	27	70	62	51	1190	21	19	11
7	3.3	6.4	11	56	23	59	57	57	359	21	20	11
8	3.3	7.2	10	47	19	54	53	200	171	20	18	11
9	3.3	6.8	11	110	31	55	46	100	81	19	18	8.4
10	3.4	6.0	11	90	37	57	49	62	56	20	16	8.1
11	3.3	5.6	12	62	37	60	48	52	91	18	17	12
12	3.3	5.0	13	49	30	54	47	46	175	19	17	11
13	18	6.0	15	42	31	46	116	83	85	18	16	10
14	25	7.0	19	38	29	109	247	558	56	18	16	131
15	9.0	8.8	68	36	27	58	105	160	44	16	442	50
16	4.5	13	785	35	26	47	66	78	40	16	128	23
17	170	30	606	33	23	45	57	55	31	18	52	20
18	80	37	76	30	21	45	51	47	30	19	29	19
19	30	60	28	28	23	45	43	41	26	19	33	18
20	10	50	16	26	26	298	324	41	29	17	279	19
21	4.5	33	14	25	92	823	221	87	25	16	104	23
22	4.5	28	13	24	275	439	460	206	33	16	48	128
23	4.5	25	12	23	1220	184	260	66	156	15	32	443
24	15	22	11	21	1720	114	207	44	59	17	24	530
25	20	19	10	29	640	89	92	35	38	16	37	523
26	37	16	9.6	30	192	76	64	33	27	167	27	607
27	67	14	9.0	33	123	72	681	35	210	66	20	105
28	36	13	9.4	40	97	71	636	47	206	32	20	54
29	33	12	9.6	68	---	63	222	47	72	65	18	256
30	22	10	9.8	48	---	383	1080	36	41	476	15	1030
31	15	---	10	30	---	563	---	29	---	98	17	---
TOTAL	644.8	484.4	1881.4	2435	4886	4420	5823	3094	4687	1399	1631	4129.5
MEAN	20.8	16.1	60.7	78.5	175	143	194	99.8	156	45.1	52.6	138
MAX	170	60	785	540	1720	823	1080	558	1190	476	442	1030
MIN	3.3	5.0	8.4	21	19	45	43	29	24	15	15	8.1
AC-FT	1280	961	3730	4830	9690	8770	11550	6140	9300	2770	3240	8190

CAL YR 1984	TOTAL	39179.1	MEAN	107	MAX	3520	MIN	2.7	AC-FT	77710
WTR YR 1985	TOTAL	35515.1	MEAN	97.3	MAX	1720	MIN	3.3	AC-FT	70440

07161000 CIMARRON RIVER AT PERKINS, OK

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, Hydrologic Unit 11050003, near right bank at downstream side of bridge on U.S. Highway 177, 1.0 mi south of Perkins, 1.5 mi upstream from Dugout Creek, 4.0 mi downstream from Wildhorse Creek, and at mile 87.3.

DRAINAGE AREA.--17,852 mi^2 of which 4,962 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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 National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 814.88 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to June 26, 1940 and Jan. 9 to Apr. 7, 1957, nonrecording gage at same site and datum 5.00 ft higher. Prior to Oct. 1, 1977, at same site and datum 5.00 ft higher.

REMARKS.--Estimated daily discharge: Jan. 20-25, Jan. 31 to Feb. 9, Sept. 30. Records poor.

AVERAGE DISCHARGE.--46 years, 1,192 ft^3/s, 863,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149,000 ft^3/s May 17, 1957, gage height, 19.53 ft datum then in use; minimum discharge, 0.8 ft^3/s Dec. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 5, 1926, reached a stage of 17.0 ft from floodmarks, information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Feb. 24	1800	16,100	14.50	Apr. 30	0200	*20,600	*15.25

Minimum daily discharge, 39 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	255	150	3140	386	2410	5150	11100	324	712	758	183
2	49	186	157	4580	595	2060	2950	6400	515	661	447	200
3	53	180	135	2980	600	2280	2060	5340	633	941	349	166
4	51	281	135	1740	616	10400	1710	3760	1660	820	289	160
5	51	144	147	1350	633	6780	1450	2650	5600	595	293	150
6	49	129	150	1180	611	4880	1310	2300	10400	568	386	138
7	44	123	154	1080	500	3190	1090	2110	9290	480	316	123
8	39	120	157	1010	550	2270	1010	2020	6000	403	297	117
9	44	117	163	925	595	1830	918	1900	3760	403	240	95
10	60	86	166	878	900	1480	877	1900	2950	374	222	103
11	53	100	150	828	758	1310	819	1660	2620	349	305	97
12	48	103	157	898	616	1180	752	2480	2350	328	251	100
13	53	97	157	876	621	1090	791	2580	2620	309	274	160
14	60	92	236	717	595	1010	959	2570	2060	289	240	197
15	63	92	1080	648	552	959	1360	2360	1990	289	274	887
16	73	84	3160	627	510	912	1350	1900	2620	349	1200	797
17	81	111	3950	643	460	819	1980	1280	1900	281	1990	510
18	84	173	3060	692	451	752	1750	1050	1510	266	1200	520
19	197	186	1730	626	434	741	1330	924	1140	255	842	324
20	150	429	1690	578	541	1860	1120	859	1060	278	763	270
21	132	297	1380	515	1400	6120	1850	797	965	281	900	238
22	117	270	1230	672	2960	10000	1480	1110	918	255	1160	416
23	95	200	1200	595	10300	5720	1650	1710	848	259	865	1420
24	117	180	1020	557	14500	3380	2030	1180	848	278	655	2650
25	132	163	889	515	10900	2460	1510	713	672	270	622	4750
26	109	166	811	447	5640	2030	1230	678	597	324	495	7160
27	244	166	752	557	3390	2280	2580	1120	1590	374	460	4900
28	1460	147	686	600	2900	2120	4100	1230	1200	586	369	2460
29	1270	157	657	638	---	2110	7620	750	1550	623	313	1910
30	490	141	632	752	---	3800	12100	515	935	755	259	2300
31	285	---	1530	672	---	5110	---	447	---	1100	255	---
TOTAL	5797	4975	27671	32516	63514	93343	66886	67393	71125	14055	17289	33501
MEAN	187	166	893	1049	2268	3011	2230	2174	2371	453	558	1117
MAX	1460	429	3950	4580	14500	10400	12100	11100	10400	1100	1990	7160
MIN	39	84	135	447	386	741	752	447	324	255	222	95
AC-FT	11500	9870	54890	64500	126000	185100	132700	133700	141100	27880	34290	66450

CAL YR 1984	TOTAL	347387	MEAN	949	MAX	15300	MIN	38	AC-FT	689000
WTR YR 1985	TOTAL	498065	MEAN	1365	MAX	14500	MIN	39	AC-FT	987900

07161000 CIMARRON RIVER AT PERKINS, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1953-63, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1952 to September 1963, June 1965 to Jan. 1982.
WATER TEMPERATURE: October 1962 to September, 1963, June 1965 to Jan. 1982.

INSTRUMENTATION.--Water-quality monitor from April 1969 to September 1980.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV												
19...	1200	1028	80020	185	4100	8.50	3.5	7.5	15	750	13.2	113
FEB												
06...	1215	1028	80020	400	9500	8.20	5.0	0.5	5.3	750	12.9	94
MAR												
26...	1600	1028	80020	1760	4600	7.60	21.0	15.0	67	740	9.5	99
MAY												
29...	1630	1028	80020	681	5000	8.00	35.0	27.5	140	740	9.5	126
JUL												
16...	1415	1028	80020	338	7220	8.30	35.0	30.0	12	750	11.0	151
SEP												
11...	1530	1028	80020	99	7500	8.10	32.0	30.0	15	750	11.1	153
13...	1415	1028	1028	135	6900	8.00	30.0	30.0	--	750	10.6	146

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)
NOV											
19...	270	79	400	210	95	39	770	81	17	5.5	234
FEB											
06...	150	--	740	450	180	70	1700	83	28	6.2	348
MAR											
26...	K1900	190	480	290	120	44	790	78	16	5.3	232
MAY											
29...	K900	K1200	--	--	--	--	--	--	--	6.0	--
JUL											
16...	59	K1500	540	390	120	57	1200	83	23	7.0	180
SEP											
11...	--	--	560	380	130	56	1400	84	27	7.7	220
13...	220	K2000	--	--	--	--	--	--	--	--	--

DATE	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV											
19...	0	195	192	1.2	240	1100	0.3	7.2	2330	2400	3.2
FEB											
06...	0	344	285	3.5	430	2600	0.4	14	5430	5200	7.4
MAR											
26...	0	195	190	9.3	300	1200	0.3	8.4	2700	2600	3.7
MAY											
29...	--	166	--	3.2	210	1300	0.3	8.4	2750	--	--
JUL											
16...	0	180	148	1.4	280	1800	0.4	8.4	4230	3600	5.8
SEP											
11...	0	178	180	2.8	340	2200	0.5	6.8	4270	4200	5.8
13...	--	--	--	--	--	--	--	--	--	--	--

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
19...	1160	1.20	0.06	0.08	1.1	0.71	--	0.62	0.59	1.8	10
FEB											
06...	5860	1.90	0.62	0.8	1.3	0.44	--	0.44	0.44	1.3	--
MAR											
26...	12800	1.10	0.07	0.09	1.8	0.30	--	0.14	0.13	0.4	60
MAY											
29...	--	0.35	0.07	0.09	1.1	0.39	1.2	0.08	0.07	0.21	--
JUL											
16...	3860	<0.10	0.07	0.09	1.4	0.24	0.74	0.05	0.04	0.12	<10
SEP											
11...	1140	<0.10	0.05	0.06	1.6	0.30	0.92	0.14	0.12	0.37	30
13...	--	--	--	--	--	--	--	--	--	--	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
19...	3	<100	<10	<1	1	<1	3	<10	<1	20	<10
FEB											
06...	--	--	--	--	--	--	--	--	--	--	--
MAR											
26...	2	200	<10	1	<1	<1	6	30	<1	20	10
MAY											
29...	--	--	--	--	--	--	--	--	--	--	--
JUL											
16...	6	500	<10	1	<1	<1	6	30	1	40	10
SEP											
11...	7	200	<10	3	2	<1	4	60	3	30	50
13...	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
19...	<0.1	3	3	2	<1	580	21	<10	18	9.0	59
FEB											
06...	--	--	--	--	--	--	--	--	17	18	71
MAR											
26...	--	1	3	2	<1	1500	21	<10	165	784	89
MAY											
29...	--	--	--	--	--	--	--	--	288	530	96
JUL											
16...	0.4	4	<1	1	<1	1800	30	10	40	37	48
SEP											
11...	--	2	4	<1	<1	--	36	20	18	4.8	76
13...	--	--	--	--	--	--	--	--	--	--	--

07163000 COUNCIL CREEK NEAR STILLWATER, OK

LOCATION.--Lat 36°06'58", long 96°52'03", in NW 1/4 NE 1/4 sec.22, T.19 N., R.4 E., Payne County, Hydrologic Unit 11050003, on right bank downstream side of bridge on State Highway 51, 10.0 mi east of Stillwater, and at mile 10.0.

DRAINAGE AREA.--31 mi^2.

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 828.28 ft, National Geodetic Vertical Datum of 1929. Prior to May 4, 1934, nonrecording gage at same site and datum. Prior to Nov. 9, 1982, gage 200 ft upstream at 10.00 ft higher datum.

REMARKS.--No estimated daily discharges. Records poor.

AVERAGE DISCHARGE.--51 years, 11.3 ft^3/s, 5.46 in/yr, 8,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 25,000 ft^3/s Oct. 2, 1959, gage height, 18.9 ft, from floodmarks, from rating curve extended above 2,500 ft^3/s on basis of slope-area measurements at gage heights 13.4 ft and 17.5 ft; no flow at times in each year except 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--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.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 15	2300	2,650	17.02	Mar. 30	0700	1,460	13.70
Dec. 31	1600	1,910	15.10	Apr. 27	0745	1,540	13.97
Feb. 22	2130	*3,570	*19.03	Apr. 30	0130	3,390	18.69
Mar. 4	0130	2,160	15.80	May 13	0315	3,000	17.89

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	18	.11	105	1.7	11	19	64	65	.80	.24	.12
2	.00	3.6	.10	22	1.4	9.6	13	27	101	.87	.25	.10
3	.00	.20	.11	12	1.2	214	11	16	8.0	.87	.27	.08
4	.00	.10	.12	8.5	1.1	521	9.5	11	112	.84	.27	.07
5	.00	.05	.18	6.7	1.2	37	7.1	9.0	495	2.1	.23	.06
6	.00	.05	.20	5.7	1.3	20	5.7	6.5	137	1.0	.23	.04
7	.00	.04	.18	5.1	1.4	16	4.8	9.0	83	.73	.23	.01
8	.00	.04	.18	4.2	1.4	13	4.2	8.0	17	.67	.23	.00
9	.00	.05	.21	3.7	3.7	10	4.3	5.7	6.8	.59	.20	.00
10	.00	.04	.23	5.3	14	11	4.3	4.8	4.6	.53	.18	.00
11	.00	.03	.29	4.4	5.2	9.9	4.3	4.4	15	.53	.19	.00
12	.00	.02	.32	2.2	3.1	6.7	4.1	141	6.5	.49	.18	.00
13	.00	.03	58	2.0	3.1	6.4	3.6	761	3.5	.44	.15	.00
14	.00	.05	29	2.1	3.3	6.3	4.2	175	2.8	.38	.36	.08
15	.00	.05	705	2.2	3.1	5.4	3.9	31	2.4	.35	.45	.15
16	.00	.04	351	2.3	3.0	5.2	3.3	16	2.3	.39	.27	.15
17	.00	1.4	26	2.4	3.0	4.9	3.1	11	2.5	.40	.23	.14
18	.00	3.0	9.0	2.4	2.8	4.7	2.9	8.7	2.2	.37	.20	.12
19	.00	.63	4.6	2.3	2.5	4.5	2.7	7.0	1.6	.37	.34	.10
20	.00	.21	3.3	1.5	122	134	2.4	31	1.6	.31	.33	.09
21	.00	.11	3.3	1.2	335	153	2.2	86	1.5	.59	.23	.19
22	.00	.08	2.2	1.2	1310	40	6.3	26	1.4	2.0	.21	3.2
23	.00	.08	1.9	1.5	1340	18	9.0	7.4	1.4	.45	.18	23
24	.00	.07	1.7	1.8	148	9.8	3.1	5.0	1.3	.34	.19	.46
25	.00	.08	1.5	1.9	48	7.1	2.0	4.0	1.2	1.2	.19	58
26	.00	.08	1.5	1.8	27	6.2	1.8	3.4	1.3	.51	.18	1.2
27	46	.08	1.6	2.4	17	142	388	2.7	15	.37	.18	.31
28	6.6	.09	1.9	3.2	13	21	29	2.3	1.7	.32	.18	.20
29	.19	.09	2.2	5.3	---	9.2	433	2.5	1.1	.32	.18	32
30	.06	.09	1.9	6.6	---	433	744	2.6	.89	.32	.15	4.2
31	.02	---	678	3.4	---	49	---	1.8	---	.27	.14	---
TOTAL	52.87	28.48	1885.83	232.3	3417.5	1938.9	1735.8	1490.8	1096.59	19.72	7.04	124.07
MEAN	1.71	.95	60.8	7.49	122	62.5	57.9	48.1	36.6	.64	.23	4.14
MAX	46	18	705	105	1340	521	744	761	495	2.1	.45	58
MIN	.00	.02	.10	1.2	1.1	4.5	1.8	1.8	.89	.27	.14	.00
AC-FT	105	56	3740	461	6780	3850	3440	2960	2180	39	14	246

CAL YR 1984	TOTAL	5450.08	MEAN	14.9	MAX	886	MIN	.00	AC-FT	10810
WTR YR 1985	TOTAL	12029.90	MEAN	33.0	MAX	1340	MIN	.00	AC-FT	23860

07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK

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, Hydrologic Unit 11110101, in stair tower of intake structure near left end of Keystone Dam on Arkansas River, 8.5 mi west of Sand Springs, and at mile 538.8.

DRAINAGE AREA.--74,506 mi^2, of which 12,541 mi^2 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 National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1964, nonrecording gage nearby at same datum.

REMARKS.--Reservoir is formed by rolled-fill earth dam. Spillway is concrete ogee-type weir controlled by 18 40-foot taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power pool was first filled Nov. 20, 1964. Capacity, 1,738,000 acre-ft, at elevation 754.0 ft, top of flood control pool, 557,600 acre-ft (688 hm^3), at elevation 723.0 ft (220.37 m) top of power pool, 260,900 acre-ft (322 hm^3) at elevation 706.0 ft, minimum power pool. Figures given herein represent total contents. Reservoir is designed for flood control, power development, and conservation. Revised capacity table, based on survey in 1977, used since Oct. 1, 1983.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,886,000 acre-ft Nov. 6, 1974, elevation, 754.86 ft; minimum since power pool was first filled, 297,800 acre-ft Jan. 19, 1965, elevation, 705.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,070,000 acre-ft Mar. 6, elevation 739.52 ft; minimum, 395,100 acre-ft Oct. 12, elevation, 714.99 ft.

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

715	395,300	725	606,700
718	450,200	733	840,100
721	512,000	740	1,088,000

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401300	447600	488900	743500	594200	1008200	762700	854000	651500	693700	590400	608200
2	401500	448700	489300	750700	592200	993400	757200	848400	653400	688800	592200	594400
3	399500	450600	485700	747100	592200	994800	745600	825600	649600	677400	599200	589900
4	399400	453000	486600	737200	584200	1052500	733700	797100	662600	671200	607200	586200
5	397600	453200	485600	734300	575400	1066500	714200	766900	688800	665700	609800	583200
6	398100	455200	485200	729200	571800	1069900	696300	770300	709300	662900	602400	580000
7	398800	456400	484700	719400	565300	1061600	677900	754400	731900	661200	597700	582200
8	399000	460300	485400	709300	560700	1046500	662100	717100	741700	658500	597200	583700
9	396400	466600	487200	700900	559800	1029100	649300	683200	748000	655000	593900	580500
10	397400	470400	485400	693700	561500	1008900	639400	668200	760500	652000	603400	574200
11	397600	473200	487200	688500	557800	991200	637500	681500	782400	646900	612700	572000
12	395100	473200	486600	685200	556000	969300	630600	692600	773300	640500	606900	569600
13	395700	474500	506200	679900	556400	949200	631900	712700	740500	642100	599900	566800
14	397100	475300	512500	670700	557400	927900	632700	706700	715900	643700	594900	570600
15	395800	476900	528200	661000	557600	900400	628800	691400	718600	636400	584200	574700
16	398000	476700	580000	650700	563600	867300	624900	685400	707500	628800	583900	581000
17	402500	480800	607700	639400	569400	837200	621500	695200	692600	620200	603200	587400
18	406800	482700	621000	632100	562900	808400	620700	697200	681000	610300	612900	587400
19	406900	482700	626900	637800	555500	780800	619100	689100	677900	601700	612100	583400
20	409800	483500	623000	635600	553200	760500	618900	684900	677600	599700	607700	579000
21	411000	480000	625400	624300	571100	760800	623600	686800	679300	597400	603700	578600
22	408300	481500	634300	616800	644500	770600	628200	684300	683800	588200	598200	582700
23	409900	480800	643400	609500	825900	780200	628500	674600	689100	579300	595700	576900
24	410500	482100	664600	608800	939300	781100	631400	662300	692000	570800	598700	578300
25	414900	483900	682400	609000	1020600	769400	634000	660700	693400	573300	601700	591900
26	415300	483500	681500	617800	1057000	752300	634500	656900	692300	575900	603200	603700
27	424300	485000	670100	624600	1054400	734000	672600	658200	690800	584200	601200	624100
28	429600	485400	658500	619900	1029100	717400	694900	657900	687700	594900	599400	636700
29	433300	487600	653100	617800	---	705800	735800	655800	690300	598700	601400	638800
30	437300	488900	645600	613700	---	743500	835900	650100	692900	597200	599400	625400
31	439000	---	689400	604400	---	758100	---	647200	---	592700	605900	---
MAX	439000	488900	689400	750700	1057000	1069900	835900	854000	782400	693700	612900	638800
MIN	395100	447600	484700	604400	553200	705800	618900	647200	649600	570800	583900	566800
(†)	717.41	719.92	728.07	724.91	738.43	730.40	732.87	726.54	728.19	724.44	724.97	725.72
(††)	+35,300	+49,900	+200,500	-85,000	+424,700	-271,000	+77,800	-188,700	+45,700	-100,200	+13,200	+19,500

CAL YR 1984 MAX 872600 MIN 395100 (††) +170,300
WTR YR 1985 MAX 1069900 MIN 395100 (††) +221,700

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07164500 ARKANSAS RIVER AT TULSA, OK

LOCATION.--Lat 36°08'37", long 96°00'13", in NW 1/4 sec.11, T.19 N., R.12 E., Tulsa County, Hydrologic Unit 11110101, near left bank on downstream side of pier of 11th Street bridge on U.S. Highway 66 in Tulsa, 10.1 mi upstream from Polecat Creek, 15.1 mi downstream from Keystone Dam, and at mile 523.7.

DRAINAGE AREA.--74,615 mi^2, of which 12,541 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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 National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft, U.S. Army Corps of Engineers datum. Prior to Feb. 2, 1939, nonrecording gage and Feb. 2, 1939 to Sept. 30, 1952, water-stage recorder at datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Mar. 30, 31. Records good. Except for 109 mi^2 intervening area, flow completely regulated by Keystone Lake (station 07164200) since September 1964. Prior to September 1964, minor regulation by John Martin Lake in Colorado and by Great Salt Plains Lake (station 07150000).

COOPERATION.--Gage height record and 3 discharge measurements furnished by U.S Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Keystone Lake) 39 years (water years 1926-64), 6,554 ft^3/s, 4,745,000 acre-ft/yr; (since regulation by Keystone Lake) 21 years (water years 1965-85), 7,093 ft^3/s, 5,139,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft^3/s Oct. 5, 1959, gage height, 22.00 ft; minimum, 27 ft^3/s Oct. 12, 13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1904, 22.8 ft, June 13, 1923, present datum, from reports of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,900 ft^3/s June 14, gage height, 7.74 ft; minimum daily discharge 313 ft^3/s Nov. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	616	1440	1120	4470	7330	23300	17900	17500	4640	8500	4730	2780
2	1230	579	453	3680	3790	19100	17700	25100	3670	10400	3480	10200
3	629	1500	339	12900	3080	19400	17800	29400	5810	12700	2410	4130
4	1080	482	1170	12900	6270	21200	17700	28900	9980	11000	572	3600
5	515	357	2070	9340	7080	19200	17800	28300	10500	10400	503	2990
6	1450	1270	1950	7960	5710	19200	17800	9720	13700	8090	3640	5100
7	469	1110	1000	9050	5220	19100	17600	14700	13200	7540	5860	4350
8	376	1390	1440	9940	5180	18900	16200	28900	13000	7590	6430	2860
9	571	468	1190	10600	3010	18800	13300	28100	10200	7900	6200	2550
10	1220	1190	1000	10300	3020	18600	13300	23400	9260	8520	3590	3550
11	450	431	1610	9780	4770	18800	8660	6790	12700	8560	584	3550
12	486	331	968	7710	3870	18900	9790	6870	15300	9350	2460	3050
13	1350	1120	3410	7580	3200	19000	7030	7110	26600	4900	6090	3300
14	534	445	1560	10200	3060	18800	5110	15900	28600	4140	5970	2160
15	570	1200	1980	10500	2920	20400	6290	22500	26000	6130	6640	529
16	1090	458	1480	12900	2030	25200	7120	16900	25100	9380	8980	1430
17	539	1280	767	12800	524	24900	7150	10800	24700	8930	6120	5550
18	1020	567	2050	11100	3670	24600	7220	5850	22600	8470	4550	6840
19	607	468	8090	6500	7180	24200	7130	12700	16600	8290	6840	9160
20	1700	977	13200	4960	6070	24200	8070	12800	13600	6690	7050	9550
21	493	1050	13800	6830	5760	23400	6270	8650	13200	7390	6650	6490
22	772	2270	9030	9110	10700	18500	9420	12800	9930	8180	6790	5410
23	1640	509	10100	10400	15400	18400	10000	12800	7770	8220	3750	5200
24	480	1690	7600	7300	1490	18200	6510	13000	6980	7920	3690	6630
25	1440	479	2200	7650	820	20200	6630	6670	6960	4550	575	9280
26	496	381	6370	4270	11300	25100	6350	6800	8870	3100	1040	15200
27	1540	1450	12900	2910	17200	24500	6590	6990	8440	3750	2390	15800
28	545	473	13100	5900	25400	24100	4420	7110	10700	550	3320	16400
29	388	352	11300	7860	---	22900	7150	6840	8350	427	2800	16700
30	1160	313	11900	7930	---	22000	14900	10100	8340	2240	5340	16500
31	459	---	15500	7050	---	18000	---	5570	---	5140	3710	---
TOTAL	25915	26030	160647	262380	175054	651100	318910	449570	395300	218947	132754	200839
MEAN	836	868	5182	8464	6252	21000	10630	14500	13180	7063	4282	6695
MAX	1700	2270	15500	12900	25400	25200	17900	29400	28600	12700	8980	16700
MIN	376	313	339	2910	524	18000	4420	5570	3670	427	503	529
AC-FT	51400	51630	318600	520400	347200	1291000	632600	891700	784100	434300	263300	398400

CAL YR 1984 TOTAL 2888684 MEAN 7893 MAX 67500 MIN 128 AC-FT 5730000
WTR YR 1985 TOTAL 3017446 MEAN 8267 MAX 29400 MIN 313 AC-FT 5985000

07164500 ARKANSAS RIVER AT TULSA, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to current year.
WATER TEMPERATURE: March 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1977.

REMARKS.--In addition to water-quality monitor, samples were collected by a local observer on a daily basis. Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,820 microsiemens Feb. 16, 1978; minimum daily, 518 microsiemens July 27, 1977.
WATER TEMPERATURE: Maximum daily, 32.0 °C July 3-6, 14, 1978; minimum daily, 0.0 °C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV											
26...	1350	1028	80020	369	1500	8.30	17.0	4.2	739	9.6	103
JAN											
29...	1045	1028	80020	1210	2000	7.70	3.0	15	744	12.0	92
APR											
18...	1340	1028	80020	8440	1570	7.40	21.0	21	745	8.7	100
JUN											
03...	1300	1028	80020	2450	2040	7.50	25.5	14	741	7.8	99
JUL											
30...	1200	1028	80020	1100	*1860	7.50	28.5	3.0	745	--	--
SEP											
17...	1400	1028	80020	531	1520	7.50	25.0	3.0	741	7.8	98

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
NOV											
26...	62	44	240	75	61	20	200	64	6	5.8	196
JAN											
29...	--	K15	230	100	64	18	300	73	9	4.3	158
APR											
18...	--	--	230	92	59	19	240	69	7	4.0	164
JUN											
03...	K26	89	260	120	70	20	310	72	9	4.8	172
JUL											
30...	100	210	240	100	64	19	270	71	8	5.3	166
SEP											
17...	K17	44	220	94	60	17	200	66	6	6.9	--

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV											
26...	0	150	161	1.6	130	290	1.0	3.2	822	810	1.1
JAN											
29...	0	122	130	5.0	98	480	0.3	5.6	1080	1000	1.5
APR											
18...	0	121	134	10	100	360	0.3	7.7	876	870	1.2
JUN											
03...	0	135	141	8.6	130	490	0.5	7.5	1140	1100	1.6
JUL											
30...	0	129	136	8.3	110	440	0.3	5.1	995	1000	1.4
SEP											
17...	--	127	--	7.8	94	310	0.8	2.7	796	770	1.1

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
26...	819	0.61	0.65	0.84	1.6	0.26	--	0.22	0.20	0.61	300
JAN											
29...	3530	0.71	0.18	0.23	0.8	0.13	--	0.10	0.10	0.31	--
APR											
18...	20000	0.91	0.11	0.14	1.1	0.13	--	0.13	0.10	0.31	60
JUN											
03...	7540	0.74	0.05	0.06	0.5	0.13	0.4	0.01	0.09	0.28	<10
JUL											
30...	2960	0.24	0.06	0.08	0.9	0.12	0.37	0.05	0.05	0.15	--
SEP											
17...	1140	0.47	0.06	0.08	0.7	0.12	0.37	0.13	0.08	0.25	20

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
26...	2	140	<0.5	2	8	<3	4	8	3	18	99
JAN											
29...	--	--	--	--	--	--	--	--	--	--	--
APR											
18...	<1	140	2	<1	<1	<3	3	14	3	11	13
JUN											
03...	1	300	<10	2	<1	8	4	20	3	10	40
JUL											
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
17...	3	130	<0.5	<1	<1	<3	2	<3	1	13	11

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
26...	<0.1	<10	1	1	<1	720	<6	9	17	17	58
JAN											
29...	--	--	--	--	--	--	--	--	16	52	88
APR											
18...	<0.1	<10	2	<1	<1	680	<6	8	28	638	92
JUN											
03...	<0.1	<1	12	<1	4	800	11	<10	12	79	92
JUL											
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
17...	0.1	<10	3	<1	<1	680	<6	<3	3	4.3	92

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	955	---	---	2060	1460	1100	1830	---	2130		
2	1470	955	1380	1580	---	---	1180	1820	1980	1340		
3	1480	1280	1380	1590	---	---	1340	1960	1990	1860		
4	1440	---	1370	1580	2100	1350	1330	1630	545	---		
5	1490	1410	1400	---	2070	1260	---	1680	826	---		
6	---	1410	1400	---	2080	1190	---	1570	1230	---		
7	---	1440	1330	1520	3190	1200	---	1540	1720	---		
8	1440	1440	1390	1510	---	1140	1400	1440	---	1130		
9	1450	1410	---	1330	---	---	1410	1460	---	892		
10	1520	---	1100	1320	---	---	1330	1530	1670	1570		
11	1520	---	1350	1260	2250	1110	1420	---	1660	1570		
12	1520	---	1260	---	2270	1110	1390	---	1580	1560		
13	---	1410	---	---	2150	1140	---	1640	1170	---		
14	---	1410	---	870	2500	1100	---	1500	1580	1480		
15	1220	1410	---	1160	2720	1130	1410	1280	---	1830		
16	1210	1470	---	982	---	---	---	1280	---	1820		
17	951	---	934	1050	---	---	1550	2230	1370	1920		
18	---	1180	900	1130	2750	1100	1650	---	1200	1770		
19	1380	1400	1050	---	2410	1090	---	---	1350	1390		
20	1370	---	1140	---	2250	922	---	2200	1550	---		
21	1380	---	1320	1140	1880	928	---	2170	---	---		
22	1390	---	---	1520	2360	1010	---	2040	---	1700		
23	1020	---	---	1360	---	---	---	2210	---	1690		
24	956	---	---	1400	---	---	---	2250	---	1420		
25	948	---	---	---	2310	1400	---	---	1820	1130		
26	1010	1370	1080	---	2070	1660	---	---	2500	1690		
27	---	1360	949	---	---	1100	---	1900	2060	---		
28	958	1380	1340	1980	2120	1230	---	1440	2080	---		
29	1270	1370	---	1730	---	1310	1610	1820	---	1610		
30	1280	1360	---	1350	---	---	1680	1960	---	1500		
31	1270	---	---	1770	---	---	---	1820	---	1650		
MEAN	1300	1340	1230	1390	2310	1190	1410	1770	1570	1580		

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	15.0	---	---	1.0	8.0	16.0	21.0	---	25.5		
2	19.0	12.5	7.0	5.0	---	---	16.5	21.0	26.0	26.0		
3	18.0	14.0	6.5	8.0	---	---	17.0	21.5	27.0	28.0		
4	21.0	---	6.0	6.0	1.0	9.0	17.5	---	24.0	---		
5	20.0	16.0	6.0	---	1.0	9.5	---	---	24.0	---		
6	---	17.0	5.0	---	1.0	10.0	---	21.0	24.0	---		
7	---	18.0	7.0	8.0	1.0	10.0	---	21.0	27.0	---		
8	23.0	19.0	9.0	7.0	---	9.5	16.0	21.0	---	28.0		
9	21.0	19.0	---	6.0	---	---	16.5	21.5	---	29.0		
10	22.0	---	10.5	5.5	---	---	17.0	21.5	27.0	27.0		
11	21.0	---	12.0	4.0	2.0	11.0	19.0	---	25.5	30.0		
12	21.0	---	11.0	---	4.0	9.5	19.0	---	26.0	29.0		
13	---	16.0	---	---	4.0	10.0	---	21.0	25.5	---		
14	---	15.0	---	6.0	5.0	12.0	---	21.0	26.0	30.0		
15	20.0	15.0	---	5.0	5.5	12.0	16.5	21.0	---	29.0		
16	18.0	13.0	---	6.0	---	---	---	22.0	---	29.0		
17	19.0	---	7.0	7.0	---	---	18.0	22.0	25.0	29.0		
18	---	8.0	6.0	6.5	5.0	13.0	19.0	---	26.0	29.0		
19	20.0	7.0	6.5	---	4.5	13.5	---	---	26.0	30.0		
20	16.0	---	8.0	---	6.0	12.0	---	23.0	26.0	---		
21	12.5	---	11.0	2.5	10.0	11.5	---	23.0	---	---		
22	13.0	---	---	4.0	10.0	12.0	---	23.5	---	30.0		
23	14.0	---	---	5.0	---	---	---	24.0	---	---		
24	15.0	---	---	5.5	---	---	---	24.0	---	---		
25	15.5	---	---	---	8.0	14.0	---	---	27.0	28.0		
26	15.5	9.0	8.5	---	5.5	14.5	---	---	28.0	29.0		
27	---	8.5	10.0	---	---	15.0	---	24.0	28.0	---		
28	15.0	10.0	12.0	4.0	2.0	15.0	---	22.5	28.0	---		
29	17.5	11.0	---	3.5	---	14.0	19.5	23.0	---	30.0		
30	17.0	11.0	---	3.0	---	---	21.0	25.0	---	31.0		
31	17.5	---	---	1.0	---	---	---	26.0	---	31.0		
MEAN	18.0	13.5	8.5	5.0	4.5	11.5	18.0	22.5	26.0	29.0		

07165000 HEYBURN LAKE NEAR HEYBURN, OK

LOCATION.--Lat 35°56'52", long 96°17'55", in SE 1/4 sec.13, T.17 N., R.9 E., Creek County, Hydrologic Unit 11110101, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 mi northwest of Heyburn, 3.5 mi upstream from bridge on U.S. Highway 66, 11.0 mi southwest of Sapulpa, and at mile 48.6.

DRAINAGE AREA.--123 mi^2.

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 National Geodetic Vertical Datum of 1929.

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 at a concrete stilling basin near downstream toe of dam and three, 36-inch gated lowflow pipes which drain into the conduit below the drop inlet. Spillway is 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, 144,800 acre-ft, at elevation 802.0 ft maximum pool, 55,030 acre-ft, at elevation 784.0 ft, spillway crest and top of flood control pool, and 6,620 acre-ft at elevation 761.5, conservation pool. Dead storage, 226 acre-ft below elevation 740.0 ft, invert of lowflow sluices. Reservoir was designed for flood control and conservation. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft, Nov. 4, 1974, elevation, 776.85 ft; minimum since conservation pool was first filled, 4,070 acre-ft May 8, 9, 1981, elevation 757.95 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,020 acre-ft, Feb. 23, elevation, 776.26 ft: minimum, 6,030 acre-ft Oct. 19, elevation 760.19 ft.

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

760	5,420	769	15,940
763	8,130	772	21,090
766	11,690	775	27,550

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6190	7600	7200	17920	7420	11720	8910	13620	7620	7260	7210	6720
2	6170	7520	7190	14930	7420	9830	8440	11030	7640	7260	7100	6690
3	6160	7450	7170	11970	7370	9520	8160	9480	7550	7250	7080	6680
4	6150	7400	7180	9980	7370	12190	8020	8700	16650	7260	7100	6650
5	6150	7350	7210	9000	7370	10170	7980	8280	21050	7280	7170	6620
6	6140	7310	7190	8440	7360	9120	7860	8020	19310	7260	7170	6600
7	6130	7280	7190	8140	7340	8570	7750	7950	16930	7250	7160	6570
8	6120	7260	7200	7930	7330	8230	7670	7850	13900	7220	7130	6560
9	6110	7240	7210	7860	7350	8120	7610	7740	11140	7210	7100	6580
10	6100	7200	7220	7830	7420	8090	7570	7640	9540	7190	7090	6570
11	6090	7180	7220	7740	7400	8050	7540	7580	8750	7180	7070	6600
12	6070	7180	7220	7710	7390	7960	7520	7540	8280	7160	7040	6600
13	6070	7150	12540	7640	7380	8000	7620	7580	8000	7120	7010	6610
14	6090	7150	11580	7540	7370	7940	7680	7600	7820	7100	7050	6590
15	6080	7130	13280	7510	7370	7830	7640	7530	7780	7090	7040	6570
16	6070	7120	11580	7500	7370	7800	7600	7490	7660	7090	7040	6550
17	6060	7230	10050	7470	7360	7800	7540	7450	7580	7080	7020	6530
18	6040	7520	8850	7460	7350	7800	7510	7420	7520	6830	6990	6520
19	6030	7540	8330	7450	7350	7800	7470	7390	7460	6820	6990	6490
20	6110	7490	8960	7400	7400	8780	7450	7370	7420	6790	6970	6480
21	6100	7430	9810	7390	8520	9590	7470	7390	7380	6780	6960	6480
22	6080	7390	8940	7380	17870	9020	8920	7380	7420	6770	6930	6480
23	6060	7350	8410	7370	30790	8540	8550	7360	7370	6740	6920	6480
24	6110	7330	8100	7360	27830	8220	8200	7340	7350	6720	6900	6460
25	6740	7290	7880	7360	24440	8150	7960	7320	7330	7180	6880	6580
26	6870	7280	7740	7360	21030	8150	7820	7300	7310	7250	6840	6570
27	8160	7260	7650	7390	17690	8200	13470	8310	7330	7230	6830	6550
28	7960	7240	7610	7400	14620	8080	11040	8070	7310	7210	6800	6540
29	7750	7240	7640	7430	---	8280	12560	7870	7290	7190	6780	6720
30	7620	7240	7740	7480	---	11010	16230	7730	7270	7170	6770	6750
31	7520	---	18110	7460	---	9700	---	7620	---	7150	6740	---
MAX	8160	7600	18110	17920	30790	12190	16230	13620	21050	7280	7210	6750
MIN	6030	7120	7170	7360	7330	7800	7450	7300	7270	6720	6740	6460
(†)	761.96	761.65	770.17	761.90	767.91	764.10	769.00	762.08	761.69	761.55	761.08	761.09
(††)	+1,320	-280	+10,870	-10,650	+7,160	-4,920	+6,530	-8,610	-350	-120	-410	+10

CAL YR 1984 MAX 18110 MIN 6030 (††) +10,930
WTR YR 1985 MAX 30790 MIN 6030 (†† +550

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

ARKANSAS RIVER BASIN

07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'23", long 95°38'39", in NE 1/4 sec.31, T.16 N., R.16 E., Muskogee County, Hydrologic Unit 11110101, near right bank on downstream side of bridge on State Highway 104, 2 mi east of Haskell, 23.5 mi upstream from Verdigris River, and at mile 483.7.

DRAINAGE AREA.--75,473 mi^2, of which 12,541 mi^2 probably is noncontributing.

PERIOD OF RECORD.--June 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 7-26, Mar. 5 to Apr. 3. Records fair. Flow regulated by Keystone Lake (station 07164200) 55.1 mi upstream.

COOPERATION.--Gage-height record and 12 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--13 years, 8,810 ft^3/s, 6,383,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 108,000 ft^3/s Nov. 6, 1974, gage height, 17.30 ft; minimum daily, 193 ft^3/s Feb. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,100 ft^3/s Jan. 1, gage height, 12.45 ft; minimum daily discharge, 363 ft^3/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	611	617	35500	7580	27700	18000	21600	8300	7990	3890	2020
2	435	1000	827	14500	9410	23700	18200	24700	7570	8170	4090	1020
3	766	859	869	12100	4830	21200	19600	29700	5990	9760	2920	7320
4	572	914	630	16000	3210	27100	19300	31100	8510	11000	2240	2950
5	730	675	877	14700	7040	27000	19000	30200	22700	9720	1390	3170
6	549	439	1630	10300	6940	24000	18600	25500	23800	9220	1640	2720
7	799	646	1690	9540	4950	20100	18200	11100	29600	7190	3220	2530
8	583	868	1130	10500	4730	20300	17900	21600	22100	6730	5170	2270
9	400	917	1270	11000	4200	18000	15900	30300	18600	6550	5530	1070
10	363	598	916	11600	3700	18000	13900	29600	15400	6540	5160	1330
11	688	615	676	11300	3200	19900	12700	20900	14600	6720	3120	3030
12	541	522	900	10800	4710	19800	8950	9750	16500	6990	1070	3120
13	392	370	1460	8800	4190	19900	10100	10800	19300	7520	2160	2620
14	721	524	10800	8410	3190	19800	7780	11500	24800	4360	5190	2780
15	733	541	9080	11000	3310	19700	5900	21400	25700	3810	6150	2400
16	613	593	8870	11900	4500	21000	6790	23500	23700	5860	6570	1070
17	810	562	6770	13700	5000	22000	7270	18600	21900	7510	8210	1030
18	534	1350	4020	13400	6000	25500	7290	12200	21300	7390	4890	4710
19	598	1390	3460	11200	6930	25200	7320	9610	18200	7510	3940	6550
20	675	874	9430	6390	9180	24600	7310	15500	14300	7480	6160	8590
21	1720	1780	20500	5950	11900	23000	8110	14800	12700	5030	6400	9090
22	701	905	17800	9280	16100	23000	7880	12700	14200	5330	5970	6080
23	426	1720	11600	10300	25000	24000	14000	15500	11300	7000	6370	5390
24	982	967	11100	10900	22000	25000	11600	15600	8090	7330	3810	4580
25	781	1190	7280	7940	19000	27000	7440	14900	7350	7610	3280	6760
26	1460	967	3380	8070	18000	26000	7080	9230	7310	5490	1270	10500
27	789	754	7710	4880	15700	25200	9300	9520	8580	2660	1020	14000
28	1610	1110	13500	3780	23600	25000	13600	10500	8240	1920	1940	14600
29	900	949	13400	6760	---	24000	10500	11200	9680	1360	2790	14900
30	568	682	13100	8390	---	21000	18100	9980	8010	980	2550	15200
31	658	---	18900	8690	---	19000	---	12100	---	1720	3580	---
TOTAL	22645	25892	204192	337580	258100	706700	367620	545190	458330	194450	121690	163400
MEAN	730	863	6587	10890	9218	22800	12250	17590	15280	6273	3925	5447
MAX	1720	1780	20500	35500	25000	27700	19600	31100	29600	11000	8210	15200
MIN	363	370	617	3780	3190	18000	5900	9230	5990	980	1020	1020
AC-FT	44920	51360	405000	669600	511900	1402000	729200	1081000	909100	385700	241400	324100

CAL YR 1984 TOTAL 2926872 MEAN 7997 MAX 63800 MIN 363 AC-FT 5805000
WTR YR 1985 TOTAL 3405789 MEAN 9331 MAX 35500 MIN 363 AC-FT 6755000

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'05", long 95°35'06", at center of sec.3, T.27 N., R.16 E., Nowata County, Hydrologic Unit 11070103, on right bank on downstream side of county road bridge, 2.8 mi east of Lenapah, 4.5 mi upstream from Cedar Creek, and at mile 144.6.

DRAINAGE AREA.--3,639 mi^2.

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

REVISED RECORDS.--WSP 977: 1942 (M). WSP 1117: drainage area.

GAGE.--Water-stage recorder. Datum of gage is 644.89 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 10-15, Jan. 9, Apr. 22-23, July 8-9, Sept. 27-30. Records fair. Some regulation, by dams in Kansas, since April 1949.

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation) 11 years (water years 1939-49), 2,599 ft^3/s, 1,833,000 acre-ft/yr; (since regulation) 19 years (water years 1967-85), 2,567 ft^3/s, 1,860,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft^3/s May 20, 1943, gage height, 40.44 ft, from floodmarks; no flow at times in 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,200 ft^3/s Feb 23, gage height, 35.26 ft; minimum daily discharge, 50 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	1140	140	23200	1100	13700	4090	16300	4810	5280	96	4520
2	52	1260	130	10400	1070	13200	3030	5190	4680	4050	80	4380
3	50	1130	121	6030	1000	13500	2860	3530	4890	3240	73	4220
4	54	662	112	6780	900	25500	2880	2420	10500	2100	479	4040
5	63	397	112	7250	800	26700	2820	1810	28900	1040	4610	3880
6	69	289	110	7230	720	24500	2170	1710	19300	443	2120	3050
7	71	235	106	7700	640	14000	1780	4100	10900	236	1240	1790
8	448	193	106	8290	830	13500	1600	15500	8890	194	1220	1230
9	403	137	109	9100	753	13300	1500	11400	8130	175	1250	895
10	196	110	107	8290	1420	13000	1310	4270	9660	164	1190	849
11	120	95	108	6660	1800	13100	1330	5580	16700	149	1520	736
12	96	86	114	4030	1340	14000	1400	6910	23100	134	1540	505
13	88	81	729	2260	1030	13700	1380	9760	16200	123	1530	757
14	87	77	5740	2180	1010	14100	1360	9040	4710	108	5690	3030
15	85	74	5400	2260	1310	13600	1590	6890	9720	87	12400	2480
16	87	70	10500	2170	1640	12100	1510	3800	12900	78	8840	1040
17	101	84	10600	2050	1750	11300	2100	2720	9890	75	6890	2100
18	149	232	5960	1860	1720	10900	3240	2480	7510	72	7540	2790
19	227	1050	4210	2080	1750	10500	3320	1880	8460	70	10600	3080
20	237	1400	4840	2630	1940	10000	3260	1670	9550	66	6700	3040
21	157	850	9990	1920	9310	11300	3120	1860	9470	61	5700	1970
22	113	590	10100	1780	30000	5750	2960	1520	16200	61	5410	1550
23	88	392	4180	1810	48400	3290	2430	1010	13000	59	17300	5520
24	74	295	2340	1990	45600	2540	1460	976	7820	79	17100	11200
25	119	237	2020	1850	38400	2090	934	674	6190	193	10300	3250
26	840	207	1850	1650	30300	1820	842	484	6660	369	5490	2280
27	2440	187	2160	1280	12100	1440	1170	619	6950	794	5850	3000
28	6510	166	2330	1110	12900	1320	1450	783	7540	384	6060	4300
29	2520	161	1880	1100	---	1480	997	3460	5960	214	6270	5000
30	1060	150	3580	1200	---	6490	8700	8200	5600	148	6160	7000
31	500	---	15200	1140	---	8220	---	7250	---	116	5040	---
TOTAL	17160	12037	104984	139280	251533	339940	68593	143796	314790	20362	166288	93482
MEAN	554	401	3387	4493	8983	10970	2286	4639	10490	657	5364	3116
MAX	6510	1400	15200	23200	48400	26700	8700	16300	28900	5280	17300	11200
MIN	50	70	106	1100	640	1320	842	484	4680	59	73	505
AC-FT	34040	23880	208200	276300	498900	674300	136100	285200	624400	40390	329800	185400

CAL YR 1984 TOTAL 1258754.2 MEAN 3439 MAX 39400 MIN 6.9 AC-FT 2497000
WTR YR 1985 TOTAL 1672245 MEAN 4581 MAX 48400 MIN 50 AC-FT 3317000

07171300 OOLOGAH LAKE NEAR OOLOGAH, OK

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, Hydrologic Unit 11070103, in gage tower 1,000 ft from left end of dam on Verdigris River, 2.0 mi southeast of Oologah, and at mile 90.3.

DRAINAGE AREA.--4,339 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 7 taintor gates. Storage began May 15, 1963, conservation pool was first filled Apr. 4, 1964. Capacity 1,519,000 acre-ft at elevation 661.0 ft, top of flood control pool, 553,400 acre-ft at elevation 638.0 ft, conservation pool. 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 U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,426,000 acre-ft Apr. 26, 1973, elevation, 659.33 ft; minimum since conservation pool first filled 33,750 acre-ft Aug. 28, Oct. 27, 1969, elevation, 602.87 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,131,500 acre-ft Mar. 6, elevation, 653.49 ft; minimum, 489,000 acre-ft Oct. 18, elevation, 635.73 ft.

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

636	496,290	644	750,470
638	553,420	646	819,420
641	645,970	649	935,900

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492800	536500	552000	812000	618900	1093100	698100	647600	591200	686700	541300	565200
2	491400	536200	551700	834000	608300	1071100	696100	653500	592700	678200	538200	565200
3	491700	537600	552000	838400	599400	1063000	691000	654100	591200	672000	535600	565500
4	491400	540200	552800	839900	590900	1097200	693100	650500	609200	668100	536700	562400
5	491200	541100	553400	889900	584100	1122800	703200	648900	657100	661900	542200	562700
6	491700	539600	551700	843600	578100	1126000	696400	642200	713300	653800	550000	563600
7	491400	539600	550800	845900	565800	1110700	691000	639000	728600	645300	551700	565500
8	491400	539000	551100	846600	550300	1089100	671700	652200	724400	636100	552800	565800
9	492000	540200	551400	848500	541100	1067000	658700	660600	722300	628500	554000	565800
10	491700	539300	550500	850300	534700	1042800	643100	650200	759700	618600	556400	565200
11	491200	538500	550300	849200	532100	1035400	630700	646900	783500	605000	557000	563900
12	491700	537900	554600	832100	539300	1011600	621500	646000	803100	587800	560000	564200
13	490100	532400	565500	819400	540800	995500	635200	646900	826500	572100	562100	571500
14	490600	539000	583500	811600	544200	976500	629400	655700	843300	555500	566700	576300
15	491200	539000	599100	796100	547100	954800	624700	654400	861800	548500	577800	580800
16	490600	538200	616100	785700	550300	933100	623400	646900	884000	542800	579900	578400
17	489600	542200	647900	773200	553400	908200	613500	637100	904600	540200	575100	574800
18	490400	545700	653800	760500	556700	882400	610500	625900	902600	537900	574800	575100
19	490600	546500	654400	750200	563300	857500	605600	612000	879700	537600	579900	576900
20	492300	547400	656700	734800	564200	835400	600700	603100	850000	536200	579300	577500
21	493600	548200	668800	721600	580500	817200	597300	600700	823100	540500	573600	577800
22	493300	548500	680600	706900	677900	793100	594800	597300	820900	537300	570300	580500
23	492800	550000	681900	694400	833200	764700	589600	594500	820200	536500	577500	582900
24	493300	550000	688700	681600	944700	735500	587500	591800	809100	535600	589300	591200
25	494700	550300	680900	672000	1032300	707500	582300	588700	781000	540200	590200	592700
26	495200	553700	679900	663200	1090900	693000	576600	582000	749500	541300	578700	585300
27	501700	552600	680300	658400	1099400	675000	580500	578400	723700	541300	567300	578400
28	515300	550300	681300	648900	1101700	663200	578400	582600	711600	541600	563600	570900
29	522700	552300	688000	641800	---	664900	581700	585600	703500	541300	559700	570600
30	524700	552000	693700	638000	---	675000	610800	591800	694700	539900	562100	572700
31	526100	---	771800	627200	---	692400	---	597300	---	540200	563900	---
MAX	526100	553700	771800	889900	1101700	1126000	703200	660600	904600	686700	590200	592700
MIN	489600	532400	550300	627200	532100	663200	576600	578400	591200	535600	535600	562400
(†)	637.05	637.95	644.70	640.41	652.84	642.41	639.89	639.45	642.48	637.54	638.75	638.64
(††)	+32,200	+25,900	+219,800	-144,600	+474,500	-409,300	-81,600	-13,500	+97,400	-154,500	+23,700	+8,800

CAL YR 1984 MAX 793500 MIN 489600 (††) +219,500
WTR YR 1985 MAX 1126000 MIN 489600 (††) +78,800

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'17", long 95°41'01", in NW 1/4 sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on right bank 0.2 mi downstream from Oologah Dam, 1.2 mi upstream from Fourmile Creek, 2 mi southeast of Oologah, and at mile 90.0.

DRAINAGE AREA.--4,339 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 552.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-29, Dec. 21, Dec. 29 to Jan. 1, Feb. 1-2, 23-25, Mar. 3-4, 29-31, Apr. 5, 27-30, May 1-2, June 10-20. Records fair. Some regulation by several dams in Kansas prior to May 1963 and completely regulated thereafter by Oologah Lake (station 07171300).

COOPERATION.--Gage height record and 4 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Since regulation by Oologah Lake) 21 years (water years 1965-85), 2,820 ft^3/s, 2,043,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s May 16, 1973, gage height, 38.05 ft; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,000 ft^3/s Mar. 7, gage height, 33.51 ft; minimum daily discharge, 5.2 ft^3/s Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	85	83	2560	5790	15400	1320	3640	5500	9510	86	4110
2	80	85	83	3460	5790	23400	4870	3650	5500	8510	85	4110
3	80	85	83	4810	5790	20300	5820	3720	5500	6610	85	4110
4	80	85	83	5520	5760	18900	5810	3710	3600	4680	85	4110
5	80	83	83	6760	5740	15000	5820	3700	487	4670	50	4110
6	80	83	83	6760	5730	17300	5820	7550	1050	4660	5.2	1400
7	80	80	83	6740	5710	24700	5800	4940	5720	4660	16	1100
8	80	80	83	8300	5700	23300	5780	7060	10900	4650	90	1100
9	80	80	83	9510	5690	23300	5770	8580	10800	4650	89	1090
10	80	80	83	9630	5710	23400	5760	8580	10800	5340	88	1100
11	80	80	83	9580	3130	23300	5750	8580	10800	7300	88	1100
12	80	80	83	9570	103	23300	5740	8580	10800	8530	88	801
13	80	83	82	9510	100	23200	5730	8600	550	8490	314	97
14	80	83	81	9480	97	23000	5720	8600	200	8460	4400	95
15	80	83	82	9460	95	23400	5710	8590	200	5420	7850	95
16	80	83	82	9420	95	23700	5710	8570	200	2640	7900	1180
17	80	83	81	9390	94	23700	5710	8540	200	1200	7900	2910
18	80	82	2460	9370	93	23700	5690	8510	9000	580	7890	2910
19	80	82	4710	9310	1060	23600	5690	8490	20000	137	7900	2910
20	80	83	4690	9290	2100	23500	5680	8490	23700	135	7890	2630
21	80	83	4730	9270	2780	22200	5670	7070	23700	130	7890	2350
22	80	83	4720	9260	6800	19500	5690	2310	19500	122	7930	2350
23	80	83	4730	9240	1600	19300	4590	2300	14600	94	11400	3030
24	80	83	3540	9210	500	19100	3660	2310	14700	71	11400	5620
25	80	83	2520	7820	200	15700	3640	2310	19300	71	11500	5640
26	80	83	2510	5860	5430	10400	3630	2300	23200	70	11400	5630
27	80	83	2510	5860	9580	10300	3620	2310	22000	68	11000	6240
28	83	83	2510	5850	9020	10300	3620	2320	14100	65	7480	7810
29	85	83	2510	5850	---	10300	3620	2320	10400	78	5390	7800
30	85	83	2530	5830	---	10300	3630	4120	10400	85	4110	6800
31	85	---	2540	5820	---	5240	---	5500	---	86	4100	---
TOTAL	2498	2478	48614	238300	100287	592040	151070	175850	307407	101772	146499.2	94338
MEAN	80.6	82.6	1568	7687	3582	19100	5036	5673	10250	3283	4726	3145
MAX	85	85	4730	9630	9580	24700	5820	8600	23700	9510	11500	7810
MIN	80	80	81	2560	93	5240	1320	2300	200	65	5.2	95
AC-FT	4950	4920	96430	472700	198900	1174000	299600	348800	609700	201900	290600	187100

CAL YR 1984 TOTAL 1250926 MEAN 3418 MAX 20000 MIN 29 AC-FT 2481000
WTR YR 1985 TOTAL 1961153.2 MEAN 5373 MAX 24700 MIN 5.2 AC-FT 3890000

07172500 HULAH LAKE NEAR HULAH, OK

LOCATION.--Lat 36°55'44", long 96°05'18", in SE 1/4 sec.2, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, in stair tower at right end of Hulah Dam on Caney River, 0.5 mi downstream from Hickory Creek, 2.0 mi west of Hulah, 15.7 mi upstream from Little Caney River, and at mile 96.2.

DRAINAGE AREA.--732 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Feb. 15, 1951, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Spillway is 472-foot 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, 289,000 acre-ft at elevation 765.0 ft, top of taintor gates, 61,360 acre-ft at elevation 740.0 ft, crest of spillway, and 31,120 acre-ft at elevation 733.0 ft conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, conservation, and municipal water supply. Revised capacity table, based on survey in 1973, used since Oct. 1, 1977.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 158,100 acre-ft Mar. 6, elevation 753.32 ft, minimum, 24,240 acre-ft Oct. 12, elevation 730.94 ft.

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

727	13,750	743	78,170
732	27,660	749	120,500
737	47,070	756	184,200

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24710	39010	32880	49730	32920	134800	69910	77460	36930	87420	32960	31340
2	24680	35610	32730	51970	32920	129600	67780	80100	36000	85980	32810	31300
3	24620	34280	32590	52110	32920	130900	64810	79170	35180	82280	32810	31230
4	24550	33030	32220	51220	32960	153400	62210	75570	36000	77400	32730	31150
5	24490	31710	31260	50640	32960	156800	58760	71650	38920	72560	32700	31010
6	24490	31260	31080	50370	32700	156700	55580	68340	45130	67620	32700	30870
7	24450	31450	31190	49960	32260	151900	52250	68460	47380	62480	32620	30770
8	24360	31630	31340	49240	31850	146100	48870	67340	47610	57900	32550	30770
9	24360	31930	31480	48600	31480	140300	45430	63800	47340	54970	32480	30840
10	24300	31930	31630	48690	31480	134500	42110	60110	57650	53630	32330	30840
11	24270	32000	31740	47470	31190	128800	39370	56110	75160	49820	32220	30770
12	24240	32070	31930	45690	31150	124600	37320	52350	79540	45910	32070	30940
13	70020	32180	35730	44100	31410	124400	36310	50280	82030	42730	32040	31670
14	69300	32290	38920	42400	31630	120700	36040	48290	84400	39540	32960	33470
15	64600	32400	51870	40640	31820	115100	34680	45820	108500	36460	33690	34320
16	60660	32440	75450	38840	32040	109200	32550	43150	112300	33800	34060	33910
17	54970	32920	76810	37090	32260	103400	31930	40480	114300	33210	33950	32770
18	49330	34280	71700	36110	32440	97390	32480	37470	113200	33100	33800	31480
19	43970	34460	65070	35730	32550	91660	32620	34650	109500	33030	33690	30980
20	40150	32070	60210	34760	33470	88930	32510	33180	106600	32960	33360	31120
21	36040	31150	59560	34020	49010	93320	32290	33730	102900	33140	33140	31450
22	33140	31520	54010	33180	71590	89530	32590	32620	118600	33030	32920	32040
23	31740	31820	47650	32400	110000	84280	32990	31370	119400	32960	32620	36770
24	31450	32110	43200	31670	123600	78800	32990	30940	117400	32960	32330	34430
25	32220	32330	40150	31480	130500	73270	32730	31190	112800	32960	31960	32770
26	32480	32660	36970	31630	134800	68400	32550	31370	108900	33140	31710	31630
27	54780	32960	33870	31930	136900	65020	50910	34910	104700	33180	31710	31450
28	56600	33140	32550	32220	137200	62480	52630	36930	100300	33140	31670	31600
29	54920	33180	33100	32440	---	61010	54300	38100	95520	33100	31630	34430
30	49960	33030	34570	32810	---	67560	71870	38250	90770	33030	31450	36500
31	44360	---	43370	32920	---	69800	---	37590	---	32960	31370	---
MAX	70020	39010	76810	52110	137200	156800	71870	80100	119400	87420	34060	36770
MIN	24240	31150	31080	31480	31150	61010	31930	30940	35180	32960	31370	30770
(†)	736.37	733.52	736.14	733.49	751.00	741.56	741.93	734.72	744.97	733.50	733.07	734.44
(††)	+19,590	-11,330	+10,340	-10,450	+104,280	-67,400	+2,070	-34,280	+53,180	-57,810	-1,590	+5,130

CAL YR 1984 MAX 98150 MIN 24240 (††) +10,810
WTR YR 1985 MAX 156800 MIN 24240 (††) +11,730

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07173000 CANEY RIVER NEAR HULAH, OK

LOCATION.--Lat 36°55'34", long 96°05'01", in NE 1/4 NE 1/4 sec.11, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, on left bank 1,200 ft downstream from Hulah Dam, 2.1 mi upstream from Opossum Creek, 2.5 mi west of Hulah, and at mile 95.9.

DRAINAGE AREA.--733 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 699.00 ft, National Geodetic Vertical Datum of 1929. Prior to Feb. 18, 1939, nonrecording gage. Feb. 18, 1939 to Sept. 30, 1948, waterstage recorder at county road bridge, 0.2 mi upstream at datum 14.04 ft lower. Oct. 1, 1948 to Sept. 30, 1972, at site 0.6 mi downstream at datum 17.04 ft lower.

REMARKS.--Estimated daily discharges: Nov. 30 to Jan. 9, June 6 to July 10, Sept. 20-23. Records fair. Flow completely regulated since February 1950 by Hulah Lake (station 07172500). About 5 to 9 ft^3/s is diverted above station by city of Bartlesville for municipal water supply.

COOPERATION.--Gage-height record and 3 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Hulah Dam) 13 years (water years 1938-50), 413 ft^3/s, 299,200 acre-ft/yr; (since regulation by Hulah Dam) 35 years (water years 1951-85), 347 ft^3/s, 251,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft^3/s Apr. 10, 1944, gage height, 39.45 ft, at former site and datum; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.2 ft occurred at former site and datum, date unknown, from floodmark, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,480 ft^3/s Dec. 19, gage height, 7.28 ft. Minimum daily discharge, 0.35 ft^3/s on July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3210	180	250	153	2370	643	12	527	1800	4.0	2.1
2	2.1	2120	180	250	153	3560	1630	7.2	527	813	4.9	2.1
3	1.9	737	122	980	153	2560	1990	1420	524	1900	4.1	1.9
4	1.5	737	287	1400	153	20	2190	2780	316	2500	3.9	1.9
5	1.5	735	587	1400	153	13	2170	2760	12	2600	3.9	1.9
6	1.6	319	93	1400	253	1540	2150	2780	5.0	2550	4.0	1.8
7	1.7	1.7	9.0	1400	318	3440	2120	1600	206	2500	6.2	1.7
8	1.7	1.6	4.5	1300	318	3670	2100	2120	541	2500	5.9	1.7
9	1.7	1.5	4.2	1200	318	3640	2100	2920	480	1500	4.2	1.7
10	1.8	1.4	4.0	1300	318	3620	2070	2890	200	645	4.2	1.4
11	1.8	5.2	3.7	1290	316	3540	1700	2860	12	1830	4.2	.83
12	1.8	8.2	3.7	1230	165	3060	1150	2660	12	2140	4.2	.91
13	111	1.3	4.7	1220	72	1940	916	1830	12	1450	7.6	1.1
14	1430	1.3	6.0	1200	72	2720	906	1300	375	1420	10	.81
15	3080	11	5.0	1200	72	3510	1110	1540	60	1390	15	.75
16	3340	9.7	4.7	1190	72	3490	1450	1530	25	1170	69	290
17	3300	1.3	1090	1160	72	3480	591	1510	25	277	145	580
18	3250	5.7	3640	846	72	3360	7.4	1490	1040	5.7	149	577
19	2780	688	4480	598	110	3230	176	1470	2200	2.8	150	200
20	2080	1360	4460	616	147	1700	312	1180	1900	.35	150	1.0
21	2020	881	4470	612	179	1720	313	737	2100	.38	150	1.0
22	1390	6.2	4470	602	96	2770	313	736	240	2.5	150	1.0
23	618	6.2	4470	598	62	3380	310	732	30	3.1	152	600
24	177	6.2	2920	594	18	3370	308	319	1100	3.1	150	1540
25	14	6.2	1800	336	19	3380	310	14	2360	3.5	150	1370
26	133	10	1800	156	18	3060	311	14	2500	3.2	76	828
27	348	14	1800	156	334	2260	347	14	2500	3.2	2.1	286
28	337	14	1040	156	1130	1600	340	15	2500	3.2	2.2	8.9
29	1340	78	250	156	---	1010	201	15	2500	4.0	2.1	18
30	2990	180	250	155	---	16	29	288	2450	4.1	9.8	447
31	3230	---	250	153	---	8.5	---	526	---	4.0	2.1	---
TOTAL	31989.3	11157.7	38688.5	25104	5316	77037.5	30263.4	40069.2	27279.0	29028.13	1595.6	6770.50
MEAN	1032	372	1248	810	190	2485	1009	1293	909	936	51.5	226
MAX	3340	3210	4480	1400	1130	3670	2190	2920	2500	2600	152	1540
MIN	1.5	1.3	3.7	153	18	8.5	7.4	7.2	5.0	.35	2.1	.75
AC-FT	63450	22130	76740	49790	10540	152800	60030	79480	54110	57580	3160	13430

CAL YR 1984 TOTAL 230474.44 MEAN 630 MAX 4700 MIN .94 AC-FT 457100
WTR YR 1985 TOTAL 324298.83 MEAN 888 MAX 4480 MIN .35 AC-FT 643200

07174300 COPAN LAKE NEAR COPAN, OK

LOCATION.--Lat 36°53'13", long 95°57'10", in NW 1/4, NW 1/4 sec.29, T.28 N., R.13 E., Washington County, Hydrologic Unit 11070106, 600 ft northwest of project office, 1.5 mi southwest of Copan and at mile 7.4.

DRAINAGE AREA.--505 mi^2.

PERIOD OF RECORD.--April 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 4 taintor gates. A 36-inch diameter low-flow pipe and a 12-inch diameter future water-supply pipe extend through the spillway. Storage began Apr. 1, 1983, conservation pool was first filled Apr. 23, 1983. Capacity 227,700 acre-feet at elevation 732.0 ft, top of flood control pool: 43,400 acre-ft at elevation, 710.0 ft, top of conservation pool. Dead storage 600 acre-ft below elevation 687.5 ft. Figures given herein represent total contents. Reservoir is used for flood control, water conservation, and future water supply.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 153,700 acre-ft Mar. 7, 1985, elevation, 725.59 ft; minimum since conservation pool first filled, 30,830 acre-ft Oct. 14, 1983, elevation, 707.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 153,700 acre-ft Mar. 7, elevation, 725.59 ft; minimum, 35,910 acre-ft Oct. 5, elevation, 708.37 ft.

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

708	34,270	717	84,210
711	48,390	720	105,900
714	65,070	726	158,200

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36170	43990	43490	57760	44400	134100	92420	70720	49430	81460	43200	43390
2	36080	42870	43340	58540	44450	131400	90150	74530	49120	78140	43100	43340
3	36040	43010	43440	57820	44450	131900	86400	75370	48540	74730	42920	43250
4	35990	43060	43340	56820	44550	143300	82460	73700	54210	71270	42920	43150
5	35910	43060	43490	55490	44500	150900	78740	71780	59850	67910	42920	42960
6	36080	42960	43540	54380	44350	153500	74340	69560	62530	64400	42870	42920
7	36080	43060	43640	53500	44040	152400	70230	68820	65950	61130	42920	42870
8	36130	43100	43690	52140	43690	149400	66140	70780	66380	57870	42920	42780
9	36130	43150	43740	50210	43640	145600	61890	70230	66750	54540	42920	42730
10	36130	43100	43740	49740	43590	142000	58040	68460	70960	51360	42960	42640
11	36130	43100	43690	48240	44140	138200	54820	65830	78540	48240	42920	42640
12	36130	43150	43890	46420	44090	134400	52450	63640	84120	46060	42640	42730
13	38020	43060	46160	44550	43990	133400	50940	62060	87300	45260	42680	44040
14	39300	43200	49580	43490	43890	130900	49950	60320	88760	44450	44250	47380
15	39530	43490	54880	43740	43690	126900	47580	58320	99230	43990	45760	48280
16	40280	43290	62880	43990	43640	122800	45050	56040	104800	43840	45810	48030
17	40280	43790	68090	44090	43390	118400	43640	53710	107800	43640	46220	46820
18	40470	44400	67970	44200	43290	114000	43990	51410	108500	43490	46010	45460
19	40380	44600	65950	44300	43290	109300	43990	49120	106400	43440	45860	44250
20	40420	44300	64750	44040	44040	107800	44040	47330	103300	43440	45460	44040
21	40380	44100	65590	43940	51570	112300	43890	48340	100300	43690	45160	44140
22	40380	43990	65040	43890	65710	112300	44300	47780	103600	43540	44950	44600
23	40330	43790	63350	43890	96310	109500	44650	46770	104500	43490	44700	47780
24	40330	43590	61830	43790	111300	106200	44600	45710	103900	43250	44350	50470
25	41370	43250	60960	43740	120600	102100	44550	45160	100900	43490	43990	51360
26	41510	43340	59100	43840	126800	97760	44450	44350	97830	43590	43740	50580
27	47170	43250	56260	44040	131900	93860	49840	44400	95160	43590	43640	49010
28	50310	43340	53880	44200	133300	89250	53180	44550	91910	43490	43640	46920
29	49740	43490	52300	44300	---	85220	55210	45810	88550	43440	43640	46670
30	47830	43390	50520	44450	---	87790	61540	49220	85150	43290	43490	49480
31	45410	---	53880	44450	---	91620	---	49690	---	43250	43440	---
MAX	50310	44600	68090	58540	133300	153500	92420	75370	108500	81460	46220	51360
MIN	35910	42870	43340	43490	43290	85220	43640	44350	48540	43250	42640	42640
(†)	710.40	710.00	712.04	710.21	723.37	718.07	713.40	711.24	717.14	709.97	710.01	711.20
(††)	+9,190	-2,020	+10,490	-9,430	+88,850	-41,680	-30,080	-11,850	+35,460	-41,900	+190	+6,040

CAL YR 1984 MAX 85160 MIN 35660 (††) +15,010
WTR YR 1985 MAX 153500 MIN 35910 (††) +13,260

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07174600 SAND CREEK AT OKESA, OK

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, Hydrologic Unit 11070106, on downstream side of left abutment of county road bridge, 0.5 mi northeast of Okesa, 9 mi southwest of Bartlesville, and at mile 17.2.

DRAINAGE AREA.--139 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 689.20 ft, National Geodetic Vertical Datum of 1929. Prior to May 25, 1960, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 20, Feb. 6, June 15 to July 9, Aug. 26 to Sept. 13. Records fair.

COOPERATION.--Gage-height record and 6 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--26 years, 73.6 ft^3/s, 53,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft^3/s Sept. 13, 1961, gage height, 27.7 ft, from floodmarks; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 16	0630	4,200	13.15	Apr. 27	1515	5,180	14.56
Dec. 31	2345	4,000	12.66	Apr. 30	1900	3,460	12.02
Feb. 21	2215	4,880	14.14	June 5	0030	3,550	12.16
Feb. 23	0045	9,090	19.25	June 10	1600	*14,300	*24.38
Mar. 4	0830	5,790	15.38	June 15	0830	9,720	19.85

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	46	9.0	1230	37	139	164	615	49	16	2.8	.12
2	.00	17	7.7	231	29	125	114	250	38	24	3.1	.11
3	.00	10	7.2	150	24	185	95	148	30	18	2.9	.10
4	.00	7.2	6.6	122	21	2460	83	102	629	16	2.4	.10
5	.00	4.4	6.5	110	21	349	119	78	1720	16	2.3	.05
6	.00	2.8	6.3	113	20	207	99	67	442	15	2.2	.05
7	.00	2.5	6.2	105	19	162	77	59	358	15	2.1	.00
8	.00	2.2	5.9	89	19	141	61	56	159	16	2.1	.00
9	.00	2.2	5.3	78	20	124	53	49	119	15	1.8	.10
10	.00	3.9	5.2	286	81	110	47	43	6910	9.9	1.1	.90
11	.00	4.5	5.2	159	80	109	47	37	2370	9.9	1.5	.66
12	.00	4.1	5.2	82	47	100	45	32	435	10	1.2	.50
13	.00	2.9	133	57	38	98	289	90	210	9.7	.86	3.0
14	.00	2.9	299	50	37	132	574	80	137	8.5	2.3	56
15	.10	3.4	856	48	35	104	175	51	3020	7.8	2.3	.22
16	.10	3.9	2080	46	35	85	103	37	800	7.6	2.3	.00
17	.05	4.7	282	45	34	74	75	30	250	7.0	1.9	.00
18	.05	20	140	45	34	68	59	26	160	6.7	1.7	.00
19	.00	48	103	43	33	63	50	23	333	6.4	1.5	.00
20	.00	26	93	39	64	64	264	24	211	5.8	1.3	.00
21	.35	25	280	32	1990	739	126	399	176	6.5	.77	.00
22	.30	22	170	28	3280	310	286	132	5000	9.5	.80	.00
23	.15	18	94	26	6460	178	414	65	800	8.7	.53	107
24	.05	16	71	26	1020	130	176	44	250	9.8	.57	10
25	.43	14	59	26	383	104	98	35	150	9.3	.72	8.5
26	.35	13	48	26	260	84	68	29	100	7.0	.72	19
27	228	12	45	30	191	81	1810	493	66	5.8	.62	1.3
28	183	10	46	32	157	76	395	558	34	5.2	.52	.85
29	55	9.7	51	57	---	68	299	290	14	4.7	.42	100
30	28	8.9	58	64	---	674	2370	122	13	4.3	.35	87
31	18	---	922	52	---	348	---	76	---	3.5	.19	---
TOTAL	513.93	367.2	5906.3	3527	14469	7691	8635	4140	24983	314.6	45.87	395.56
MEAN	16.6	12.2	191	114	517	248	288	134	833	10.1	1.48	13.2
MAX	228	48	2080	1230	6460	2460	2370	615	6910	24	3.1	107
MIN	.00	2.2	5.2	26	19	63	45	23	13	3.5	.19	.00
AC-FT	1020	728	11720	7000	28700	15260	17130	8210	49550	624	91	785

CAL YR 1984	TOTAL	36364.55	MEAN	99.4	MAX	2640	MIN	.00	AC-FT	72130
WTR YR 1985	TOTAL	70988.46	MEAN	194	MAX	6910	MIN	.00	AC-FT	140800

07175500 CANEY RIVER NEAR RAMONA, OK

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, Hydrologic Unit 11070106, on left bank near downstream abutment of county road bridge, 1 mi upstream from Buck Creek, 2.2 mi downstream from Double Creek, 4.5 mi southeast of Ramona, and at mile 32.0.

DRAINAGE AREA.--1,955 mi^2

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1945 to current year. Monthly discharge only for some periods, published in WSP 1311. Previous reports have included Caney River near Collinsville from Oct. 1935 to Feb. 1939; this record has been separated from Ramona.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft, National Geodetic Vertical Datum of 1929. Sept. 1, 1945 to Feb. 15, 1946, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 27 to Jan. 2, May 10-12, 27, 31, June 11, July 19-21. Records fair. Regulation since February 1950 by Hulah Lake (station 07172500) and since April 1983 by Copan Lake (station 07174300).

COOPERATION.--Gage-height record and 10 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Since regulation by Hulah Reservoir) 32 years, (water years 1951-1982), 925 ft^3/s, 670,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft^3/s Oct. 3, 1945, gage height, 30.12 ft; no flow Sept. 11 to Nov. 3, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,000 ft^3/s Feb. 23, gage height, 29.79 ft; minimum daily discharge, 37 ft^3/s Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	6460	140	10300	490	2560	3530	14700	1200	4650	53	53
2	37	6690	256	7570	490	3220	1900	11300	918	4470	52	55
3	37	4460	252	4450	470	5250	3800	5860	871	3490	51	59
4	43	1400	240	2640	470	10100	4880	3060	1090	3210	49	53
5	41	1120	194	2740	425	11600	5760	4790	4700	3960	48	48
6	50	1090	582	2650	450	7780	6000	5130	8240	4400	47	46
7	58	905	398	2560	500	2820	5580	5190	4620	4400	46	46
8	58	356	167	2430	540	4730	5250	4920	4140	4300	47	46
9	50	162	93	2390	561	6470	5080	3890	2290	4220	49	43
10	50	114	81	3340	721	7290	4980	4860	6130	3840	50	42
11	58	93	69	3470	912	7490	4880	5200	11100	2840	49	51
12	58	76	66	2590	703	7420	4670	5190	11400	2820	47	67
13	41	60	844	2280	553	7130	3950	5160	10400	3410	44	93
14	540	63	5200	2170	461	5820	3980	4700	6180	2510	46	178
15	922	82	3950	1840	444	4810	4320	3210	6160	2030	67	281
16	3370	80	6500	1340	434	5880	3540	3100	9540	1910	87	246
17	4580	100	6040	1270	428	6630	3730	3100	6950	1630	73	212
18	4590	325	2510	1250	423	6800	3330	3110	2120	827	188	1160
19	4440	802	4270	1140	425	6760	1150	3190	1340	150	306	1440
20	4170	1190	5300	550	424	6660	660	3160	3590	70	311	1300
21	2970	2540	5860	575	1830	6020	1580	3060	4460	61	310	594
22	2620	1810	6280	625	9090	6210	1450	2860	5400	65	310	228
23	2160	458	5740	690	24300	5720	2280	2150	8790	89	311	154
24	886	304	5200	739	22200	6230	2360	1860	6540	89	307	460
25	526	280	4440	708	17700	6620	1540	1530	2180	92	311	2100
26	277	275	2700	634	9110	6630	1200	833	3560	110	318	2500
27	690	255	2200	455	3200	6520	1980	683	4520	95	315	2240
28	4230	142	2200	443	1730	5970	5510	1460	4970	73	203	1790
29	1510	80	1500	459	---	5320	4040	1800	4800	64	97	1320
30	1820	72	800	485	---	8620	10900	2500	4740	61	68	1840
31	4980	---	4350	506	---	8040	---	1500	---	58	57	---
TOTAL	45903	31844	78422	65289	99484	199120	113810	123056	152939	59994	4317	18745
MEAN	1481	1061	2530	2106	3553	6423	3794	3970	5098	1935	139	625
MAX	4980	6690	6500	10300	24300	11600	10900	14700	11400	4650	318	2500
MIN	37	60	66	443	423	2560	660	683	871	58	44	42
AC-FT	91050	63160	155600	129500	197300	395000	225700	244100	303400	119000	8560	37180

CAL YR 1984	TOTAL	592925	MEAN	1620	MAX	10400	MIN	13	AC-FT	1176000
WTR YR 1985	TOTAL	992923	MEAN	2720	MAX	24300	MIN	37	AC-FT	1969000

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-62, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to April 1982.
WATER TEMPERATURE: October 1966 to April 1982.

REMARKS.--Samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)
OCT										
31...	1300	1028	80020	5130	270	7.00	--	16.5	746	9.0
NOV										
20...	1145	1028	80020	831	520	7.20	--	7.5	760	13.3
DEC										
11...	1215	1028	80020	66	370	7.10	--	8.0	740	11.0
JAN										
16...	1050	1028	80020	1320	373	7.50	8.0	2.5	745	12.2
FEB										
19...	1230	1028	80020	433	600	7.50	--	6.0	753	11.9
MAR										
25...	1245	1028	80020	6640	*269	7.20	--	13.5	750	9.8
APR										
16...	1230	1028	80020	3450	*363	7.20	--	18.0	747	9.4
MAY										
08...	1200	1028	80020	5090	340	7.10	--	21.0	749	7.1
JUN										
24...	1330	1028	80020	6410	*240	6.00	26.0	25.5	--	6.3
JUL										
18...	1125	1028	80020	928	*348	6.90	--	28.0	746	6.5
AUG										
23...	1230	1028	80020	317	470	6.90	--	29.0	744	6.2
SEP										
30...	1415	1028	80020	1860	347	6.70	--	19.0	753	7.8

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)
OCT										
31...	94	100	19	34	4.7	12	20	0.5	2.8	86
NOV										
20...	111	160	67	49	8.1	42	36	2	3.8	89
DEC										
11...	96	140	28	46	6.2	18	21	0.7	2.7	113
JAN										
16...	92	150	33	47	6.8	18	21	0.7	2.3	113
FEB										
19...	97	190	67	59	9.7	44	34	1	2.2	121
MAR										
25...	--	120	28	38	5.1	11	17	0.5	2.3	88
APR										
16...	--	140	42	44	6.7	20	24	0.8	2.4	96
MAY										
08...	81	140	34	44	6.2	17	21	0.7	2.2	102
JUN										
24...	--	85	27	27	4.2	15	27	0.7	3.4	58
JUL										
18...	--	150	27	47	7.0	14	17	0.5	2.9	120
AUG										
23...	83	150	30	49	7.3	23	24	0.8	3.4	123
SEP										
30...	85	120	25	38	5.6	19	--	0.8	--	93

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT										
31...	17	14	18	4.4	142	140	0.19	1970	0.40	0.07
NOV										
20...	11	33	79	7.5	269	280	0.37	604	0.76	0.24
DEC										
11...	17	20	28	7.5	203	200	0.28	36	0.45	0.03
JAN										
16...	6.9	21	29	8.3	204	200	0.28	727	0.50	0.09
FEB										
19...	7.4	33	86	7.0	321	320	0.44	375	0.66	0.34
MAR										
25...	11	22	17	7.7	148	160	0.2	2650	0.45	0.11
APR										
16...	12	23	35	7.4	203	200	0.28	1890	0.36	0.09
MAY										
08...	16	23	27	7.4	198	190	0.27	2720	0.34	0.08
JUN										
24...	112	19	29	7.3	139	140	0.19	2410	0.18	0.07
JUL										
18...	29	16	21	6.4	200	190	0.27	501	0.18	0.04
AUG										
23...	30	17	42	6.1	236	220	0.32	202	0.61	0.06
SEP										
30...	36	14	31	3.7	182	--	--	--	0.56	0.05

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT										
31...	0.09	0.02	0.06	<1	63	<0	<1	<10	<3	<10
NOV										
20...	0.31	0.23	0.71	<1	86	<0	<1	<10	<3	<10
DEC										
11...	0.04	0.05	0.15	<1	69	<0.5	<1	<10	<3	10
JAN										
16...	0.12	0.04	0.12	<1	67	<0.5	<1	<10	<3	<10
FEB										
19...	0.44	0.10	0.31	<1	94	<0.5	<1	<10	<3	<10
MAR										
25...	0.14	0.02	0.06	<1	55	<0.5	<1	<10	<3	<10
APR										
16...	0.12	0.02	0.06	<1	68	0.5	<1	10	<3	<10
MAY										
08...	0.1	0.03	0.09	<1	69	<0.5	<1	<10	<3	<10
JUN										
24...	0.09	0.03	0.09	3	61	<0.5	2	<10	<3	<10
JUL										
18...	0.05	0.03	0.09	1	76	<0.5	<1	<10	<3	<10
AUG										
23...	0.08	0.09	0.28	1	91	<0.5	<1	<10	<3	<10
SEP										
30...	0.06	0.06	0.18	1	76	0.5	<1	<10	<3	<10

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT									
31...	46	<10	5	6	<0.1	<10	240	<6	<3
NOV									
20...	110	<10	8	110	--	<10	480	<6	20
DEC									
11...	30	<10	7	46	<0.1	<10	320	<6	12
JAN									
16...	75	<10	7	30	<0.1	<10	330	<6	<3
FEB									
19...	54	<10	8	91	<0.1	<10	550	<6	31
MAR									
25...	93	<10	6	13	<0.1	<10	240	<6	5
APR									
16...	83	<10	11	14	<0.1	<10	320	<6	<3
MAY									
08...	51	<10	5	5	<0.1	<10	310	<6	7
JUN									
24...	96	<10	<4	6	<0.1	<10	210	<6	56
JUL									
18...	31	<10	5	22	<0.1	<10	320	<6	23
AUG									
23...	<3	<10	6	20	0.4	<10	390	<6	<3
SEP									
30...	22	<10	4	2	<0.1	<10	300	<6	11

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

LOCATION.--Lat 36°18'26", long 95°41'52", SE 1/4 SW 1/4 sec.10, T.21 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on left bank on downstream side of bridge on State Highway 20, 2.3 mi downstream from Caney River, 4.5 mi west of Claremore, 12.4 mi upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 538.62 ft, National Geodetic Vertical Datum of 1929. Prior to Feb. 24, 1939, and May 17 to Aug. 24, 1967, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: June 1-6. Records fair. Flow regulated since May 1963 by Oologah Lake 14.3 mi upstream (station 07171300); some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950 (station 07172500).

COOPERATION.--Gage-height record and 3 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Oologah Lake) 27 years (water years 1936-62), 3,723 ft^3/s, 2,695,000 acre-ft/yr; (since regulation by Oologah Lake) 21 years (water years 1965-85), 4,039 ft^3/s, 2,926,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 182,000 ft^3/s May 21, 1943, gage height, 55.05 ft; no flow at times in 1936, 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,100 ft^3/s Mar. 7, gage height, 27.90 ft; minimum daily discharge, 56 ft^3/s Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	4680	219	16800	6270	14500	7810	14800	6050	13900	153	4080
2	143	6160	262	14400	6280	25000	6990	14800	5600	12600	145	4050
3	143	4750	367	14100	6630	24300	8050	14300	5200	11000	143	4060
4	143	2270	309	9480	6080	25900	9640	8870	5400	7870	143	4080
5	143	1180	404	9810	6050	23000	10700	6950	7800	8110	145	4090
6	143	1060	363	9720	6190	23500	11300	10100	8190	8770	83	3180
7	143	1020	802	9590	6000	29000	11100	10900	12500	8930	56	984
8	143	687	473	10500	6060	25700	10700	9820	14200	8900	85	976
9	145	351	324	11800	6240	26900	10500	12300	12500	8830	143	978
10	147	235	288	12700	6560	27700	10300	12200	13600	9170	143	977
11	147	196	266	13400	5300	28000	10200	12800	19500	10400	143	977
12	147	182	245	12500	1310	27900	10100	12800	21000	10900	143	831
13	149	171	1370	11800	1020	27900	9820	13000	20700	11300	134	169
14	150	168	7790	11600	801	27500	9440	13000	14800	11300	1670	156
15	714	166	7200	11400	649	26700	9640	12400	12800	8300	5900	187
16	1640	164	7890	10700	617	26900	9260	11300	9100	4660	7900	1110
17	2920	184	8530	10400	593	27600	8830	11400	9030	3420	7930	2810
18	3330	301	6490	10400	579	27900	9000	11400	11100	2270	7890	2930
19	3190	1030	8550	10400	1160	27900	7910	11300	18500	963	8040	4190
20	3150	1180	10100	9960	2270	27800	6480	11200	24100	420	8230	3990
21	2550	1720	12100	9570	3950	27500	6390	9400	26200	277	8170	3230
22	2100	2060	11600	9610	13700	24400	7240	5470	25500	290	8170	2520
23	2020	1190	11500	9740	24300	23900	6680	5030	20500	285	9530	3040
24	1470	546	10400	9680	25400	23500	5770	4350	21300	207	11600	5920
25	1020	440	8670	8530	26000	22000	5480	4120	22100	210	11600	6610
26	678	421	7090	6620	24100	15900	4840	3460	24700	228	11600	7970
27	745	410	5940	6370	21200	15800	6110	2800	25200	212	11500	8580
28	2430	382	6240	6180	11800	15600	7220	3040	19300	199	9750	9700
29	2570	298	6410	6200	---	16300	8900	4070	15000	162	6820	9280
30	1120	240	7220	6300	---	19100	12600	5490	14700	161	5040	8100
31	2730	---	10500	6320	---	15900	---	6500	---	161	4100	---
TOTAL	36406	33842	159912	316580	227109	741500	259000	289370	466170	164405	147099	109755
MEAN	1174	1128	5158	10210	8111	23920	8633	9335	15540	5303	4745	3659
MAX	3330	6160	12100	16800	26000	29000	12600	14800	26200	13900	11600	9700
MIN	143	164	219	6180	579	14500	4840	2800	5200	161	56	156
AC-FT	72210	67130	317200	627900	450500	1471000	513700	574000	924600	326100	291800	217700

CAL YR 1984 TOTAL 1919789 MEAN 5245 MAX 25000 MIN 131 AC-FT 3808000
WTR YR 1985 TOTAL 2951148 MEAN 8085 MAX 29000 MIN 56 AC-FT 5854000

07176460 BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'05", long 96°09'45", in NW 1/4 NE 1/4 sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 450 ft north of dam on Birch Creek, 1.5 mi south of Barnsdall and at mile 0.8.

DRAINAGE AREA.--66.0 mi^2.

PERIOD OF RECORD.--March 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to May 31, 1977 nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Storage began Mar. 18, 1977; conservation pool was first filled Mar. 23, 1978. The outlet work is a gated intake structure. Capacity, 58,180 acre-ft at elevation 774.0 ft, crest of uncontrolled spillway and 19,180 acre-ft at elevation 750.5 ft, top of conservation pool. Dead storage, 3,360 acre-ft below elevation 730.0 ft. Figures given herein represent total contents. Reservoir is used for flood control, water supply, water quality, recreation, and fish and wildlife.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,320 acre-ft Feb. 26, 1985, elevation, 763.01 ft; minimum since conservation pool was first filled, 13,080 acre-ft Oct. 26-29, 1977, elevation, 744.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 36,320 acre-ft Feb. 26, elevation, 763.01 ft, minimum, 17,290 acre-ft Oct. 24, elevation, 748.80 ft.

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

749	17,510	754	23,350
750	18,620	758	28,650
751	19,750	763	36,300

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17480	18410	18550	23390	19390	30760	21700	27360	19770	23330	19160	18560
2	17470	18410	18540	23210	19400	29090	21160	27220	19740	23030	19140	18540
3	17460	18420	18520	22610	19400	27960	20620	26170	19740	22990	19120	18530
4	17430	18420	18500	22080	19420	31290	20340	24930	20770	22980	19110	18510
5	17420	18410	18520	21360	19430	31180	20480	23580	21620	22970	19090	18480
6	17420	18400	18510	20870	19420	29990	20110	22390	21770	22940	19070	18440
7	17410	18380	18510	20220	19380	28230	19770	21160	21440	22930	19050	18430
8	17400	18380	18510	19620	19320	26280	19440	20250	20860	22920	19030	18410
9	17390	18360	18520	19380	19330	24610	19290	19520	20690	22910	19000	18410
10	17390	18340	18500	19630	19390	22750	19240	19250	35250	22880	18970	18430
11	17380	18330	18510	19510	19380	21090	19220	19240	35510	22650	18950	18410
12	17360	18300	18530	19340	19350	19580	19190	19240	35550	22210	18910	18400
13	17360	18260	19650	19170	19340	19250	19500	19560	34660	21760	18900	18650
14	17370	18250	20100	19120	19300	19190	19640	19600	32760	21320	18910	18650
15	17390	18240	21650	19130	19280	19200	19650	19600	34680	20870	18910	18640
16	17390	18230	22970	19150	19250	19220	19640	19580	34770	20450	18900	18640
17	17370	18300	22710	19170	19250	19240	19630	19550	34770	20020	18870	18640
18	17360	18510	22270	19190	19230	19280	19610	19540	33700	19580	18850	18640
19	17340	18580	21620	19160	19220	19300	19610	19500	31690	19410	18860	18640
20	17350	18580	21140	19160	19740	19410	19600	19470	29710	19380	18830	18510
21	17350	18600	20640	19170	21220	19770	19660	19460	27720	19320	18820	18590
22	17340	18600	20030	19170	24780	19760	20090	19440	29870	19310	18810	18610
23	17300	18600	19460	19170	35760	19680	20180	19410	29940	19260	18780	18630
24	17360	18600	19240	19190	36040	19500	20210	19390	28940	19250	18780	18640
25	17450	18600	19170	19170	36280	19380	19870	19350	26990	19300	18730	18690
26	17430	18610	19130	19160	35990	19250	19480	19340	25520	19290	18720	18680
27	17940	18610	19130	19250	34710	19220	20770	19380	24610	19260	18700	18650
28	18040	18590	19160	19290	32790	19230	20780	19740	24090	19250	18670	18650
29	18040	18580	19230	19330	---	19750	23480	19820	23870	19240	18640	18990
30	18040	18560	19290	19370	---	21690	26990	19810	23620	19230	18620	19020
31	18040	---	22880	19390	---	21870	---	19800	---	19210	18600	---
MAX	18040	18610	22970	23390	36280	31290	26990	27360	35550	23330	19160	19020
MIN	17300	18230	18500	19120	19220	19190	19190	19240	19740	19210	18600	18400
(†)	749.48	749.95	753.62	750.63	760.81	752.79	756.80	751.04	754.21	750.52	749.98	750.35
(††)	+540	+520	+4,320	-3,490	+13,400	-10,920	+5,120	-7,190	+3,820	-4,410	-610	+420

CAL YR 1984 MAX 26790 MIN 17300 (††) +3,950
WTR YR 1985 MAX 36280 MIN 17300 (††) +1,510

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07176465 BIRCH CREEK BELOW BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'08", long 96°09'38", NW 1/4 NE 1/4 sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 300 ft downstream from Birch Dam, 1.5 mi south of Barnsdall, and at mile 0.7.

DRAINAGE AREA.--66.0 mi^2.

PERIOD OF RECORD.--February 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 690.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 17-24, Dec. 31 to Jan. 7, Feb. 21-24, Feb. 26 to Apr. 21, 27, Apr. 29 to May 1, June 4-5, 10-12, 15, 22. Records fair. Flow completely regulated since March 1977 by Birch Lake (station 07176460).

COOPERATION.--Gage-height record and 3 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--8 years, 40.7 ft^3/s, 29,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft^3/s June 13, 1985, gage height, 11.50 ft; maximum gage height 26.40 ft June 10, 1985 (backwater from Bird Creek); no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft^3/s June 13, gage height, 11.50 ft; maximum gage height, 26.40 ft June 10 (backwater from Bird Creek); minimum daily discharge 0.96 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.9	2.3	3.8	2.2	1000	143	23	15	256	1.5	1.3
2	2.5	2.7	2.3	170	2.2	1000	350	170	14	208	1.5	1.3
3	2.5	2.7	2.2	326	2.2	719	350	543	14	21	1.5	1.3
4	2.5	2.8	2.2	326	2.2	2.5	350	630	14	1.8	1.5	1.3
5	2.5	2.6	2.2	326	2.2	117	249	695	14	1.6	1.5	1.3
6	2.3	2.3	2.2	326	21	675	175	685	16	1.6	1.5	1.3
7	2.2	2.3	2.2	326	33	1000	175	675	238	1.6	1.5	1.3
8	2.2	2.5	2.2	326	33	1000	175	476	376	1.6	1.5	1.3
9	2.4	2.5	2.2	228	33	1000	62	391	371	1.6	1.5	1.3
10	2.5	2.5	2.3	118	33	1000	12	130	50	1.6	1.5	1.3
11	2.5	2.5	2.2	118	33	1000	12	17	2.5	156	1.5	1.3
12	2.5	2.5	2.2	118	33	745	12	17	2.5	268	1.5	1.3
13	2.5	2.5	2.3	118	33	177	12	17	834	268	1.5	1.4
14	2.6	2.5	2.3	43	33	31	12	15	1510	268	1.5	1.3
15	2.6	2.4	2.3	2.2	29	2.5	12	15	800	268	1.5	1.3
16	2.5	2.3	2.3	2.2	25	2.5	12	15	40	264	1.5	1.3
17	2.3	2.3	230	2.2	25	2.5	12	15	39	264	1.5	1.3
18	2.3	2.3	326	2.2	25	2.5	12	15	878	264	1.5	1.3
19	2.2	2.3	326	2.2	12	2.5	12	15	1480	91	1.5	1.3
20	2.2	2.3	326	2.2	2.1	2.5	12	15	1450	14	1.5	1.3
21	2.2	2.3	326	2.2	2.1	2.5	12	15	1420	14	1.5	1.3
22	2.2	2.3	326	2.2	2.1	45	12	15	800	14	1.3	1.4
23	2.3	2.3	326	2.2	3.1	75	13	15	47	8.9	1.3	1.5
24	2.5	2.3	160	2.2	3.1	75	13	15	787	1.5	1.3	1.3
25	2.3	2.3	52	2.2	3.1	75	195	15	1390	1.5	1.3	1.3
26	2.2	2.3	36	2.2	50	75	229	15	1070	1.5	1.3	1.3
27	2.6	2.3	12	2.2	761	27	53	15	651	1.5	1.3	1.2
28	2.2	2.3	3.8	2.2	1000	2.5	53	16	373	1.5	1.3	.96
29	2.2	2.3	3.8	2.2	---	2.5	53	16	190	1.5	1.3	1.4
30	2.2	2.3	3.8	2.2	---	2.5	23	15	190	1.5	1.3	1.0
31	2.4	---	3.8	2.2	---	2.5	---	15	---	1.5	1.3	---
TOTAL	73.4	72.7	2497.1	2910.2	2238.6	9866.0	2817	4741	15076.0	2670.3	44.5	38.76
MEAN	2.37	2.42	80.6	93.9	80.0	318	93.9	153	503	86.1	1.44	1.29
MAX	2.6	2.9	326	326	1000	1000	350	695	1510	268	1.5	1.5
MIN	2.2	2.3	2.2	2.2	2.1	2.5	12	15	2.5	1.5	1.3	.96
AC-FT	146	144	4950	5770	4440	19570	5590	9400	29900	5300	88	77

CAL YR 1984	TOTAL	20025.61	MEAN	54.7	MAX	569	MIN	.70	AC-FT	39720
WTR YR 1985	TOTAL	43045.56	MEAN	118	MAX	1510	MIN	.96	AC-FT	85380

07176500 BIRD CREEK NEAR AVANT, OK

LOCATION.--Lat 36°29'12", long 96°03'50", in NW 1/4 sec.7, T.23 N., R.12 E., Osage County, Hydrologic Unit 11070107, 150 ft upstream from county road bridge at Avant, 1.5 mi upstream from Candy Creek, and at mile 54.2.

DRAINAGE AREA.--364 mi^2.

PERIOD OF RECORD.--August 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Small diversions above station for municipal water supply of cities of Pawhuska and Barnsdall.

COOPERATION.--Gage-height record and 4 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--40 years, 207 ft^3/s, 150,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 32,400 ft^3/s, Oct. 2, 1959, gage height, 31.40 ft; maximum gage height, 32.03 ft Mar. 11, 1974; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 31	2200	10,300	14.48	Apr. 30	0730	14,710	21.48
Feb. 22	0200	6,370	8.34	June 5	0100	7,560	9.93
Feb. 23	0700	20,100	26.73	June 10	2000	*27,900	*30.70
Mar. 4	0800	10,900	15.44	June 15	1500	11,100	15.96
Mar. 30	0700	6,540	8.54	June 22	1700	10,700	15.22
Apr. 27	1900	8,470	11.27				

Minimum daily discharge, 3.8 ft^3/s Nov. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	146	7.4	3890	61	1570	488	2860	70	214	9.1	4.3
2	5.4	128	6.5	580	39	1500	612	999	56	290	6.1	4.3
3	5.2	34	6.2	617	27	1730	547	1100	46	96	5.1	4.3
4	4.9	15	5.3	545	22	8260	513	1120	896	48	4.7	4.3
5	4.5	8.4	7.3	516	24	1570	893	1010	4260	37	4.7	4.7
6	5.9	5.1	7.4	508	20	1330	445	950	1480	33	4.9	4.7
7	6.7	3.8	7.4	491	33	1720	380	919	1090	35	5.2	4.3
8	6.3	3.8	6.9	462	37	1610	342	744	842	35	5.2	4.3
9	5.6	4.5	7.5	407	41	1520	262	551	650	30	4.7	4.1
10	5.6	4.3	8.9	826	161	1440	105	388	15300	24	4.7	4.7
11	5.2	4.1	9.8	491	205	1400	100	102	17500	30	4.7	6.7
12	5.2	4.1	10	260	124	1210	98	90	2070	266	4.9	35
13	5.2	4.4	1790	186	94	462	552	135	1200	282	5.2	28
14	9.8	4.2	1100	152	87	264	1410	294	2150	285	7.3	83
15	9.9	4.3	1870	65	86	167	341	153	8870	279	7.8	124
16	11	4.0	4030	56	81	136	185	100	1760	279	9.2	42
17	13	5.8	755	59	75	120	137	80	632	279	8.6	17
18	12	127	558	57	73	105	104	69	829	279	7.3	10
19	8.9	253	485	54	69	101	87	62	1750	224	7.2	7.8
20	13	99	456	42	69	121	382	58	1640	40	7.4	6.1
21	12	44	523	32	3000	1130	394	127	1560	21	7.4	6.1
22	9.5	23	570	23	6670	815	604	292	6790	23	7.4	9.0
23	6.5	14	462	17	17000	500	991	130	1770	23	7.3	131
24	5.7	9.8	349	19	5550	375	492	83	949	32	6.7	290
25	38	7.8	103	20	1340	307	358	65	1750	30	5.9	121
26	32	7.4	82	21	799	263	521	52	1380	28	5.4	153
27	614	7.7	58	29	1110	239	4370	82	895	19	5.2	127
28	224	6.5	44	46	1640	166	2180	291	572	15	5.0	66
29	51	5.9	52	86	---	413	1870	436	249	14	4.7	169
30	16	6.7	177	123	---	3600	11000	187	219	13	4.7	424
31	7.5	---	4000	96	---	1150	---	105	---	12	4.4	---
TOTAL	1164.9	995.6	17554.6	10776	38537	35294	30763	13634	79225	3315	188.1	1899.7
MEAN	37.6	33.2	566	348	1376	1139	1025	440	2641	107	6.07	63.3
MAX	614	253	4030	3890	17000	8260	11000	2860	17500	290	9.2	424
MIN	4.5	3.8	5.3	17	20	101	87	52	46	12	4.4	4.1
AC-FT	2310	1970	34820	21370	76440	70010	61020	27040	157100	6580	373	3770

CAL YR 1984 TOTAL 110200.54 MEAN 301 MAX 7610 MIN .05 AC-FT 218600
WTR YR 1985 TOTAL 233346.9 MEAN 639 MAX 17500 MIN 3.8 AC-FT 462800

07177400 SKIATOOK LAKE NEAR SKIATOOK, OK

LOCATION.--Lat 36°21'02", long 96°05'13", in NE 1/4 SE 1/4 sec.26, T.22 N., R.11 E., Osage County, Hydrologic Unit 11070107, at right end of dam, 5.0 mi west of Skiatook and at mile 14.3.

DRAINAGE AREA.--354 mi^2.

PERIOD OF RECORD.--October 31, 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rolled earthfill dam. Spillway is a concrete uncontrolled structure in right abutment. Outlet works consists of a controlled intake structure with a 10-foot, 6-inch diameter tunnel, a 2-foot, 6-inch by 5-foot low-flow sluice and a 36-inch water-supply pipe. Regulated storage began Oct. 31, 1984. Capacity, 893,000 acre-ft, at elevation 750.8 ft, maximum pool; 513,500 acre-ft at elevation 729.0 ft, top of flood control pool; 331,200 acre-ft, at elevation 714.0 ft, top of conservation pool; 11,800 acre-ft, at elevation 657.0 ft, top of inactive pool. Figures given herein represent total contents. Reservoir is designed for flood control, water supply, water quality, recreation and conservation.

EXTREMES FOR CURRENT YEAR.--October 31, 1984 to September 1985; maximum contents, 87,370 acre-ft Feb. 26, elevation 681.70 ft..

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	751	1770	39420	9650	75980	22370	63140	9390	14360	9290	9140
2	---	1080	1770	40480	9840	71160	20020	64220	9370	11310	9290	9110
3	---	1080	1770	36930	9840	67160	16560	62930	9330	9690	9290	9100
4	---	1080	1780	33150	9840	83770	13300	59850	9930	9390	9290	9100
5	---	1100	1810	29220	10090	86270	12350	56730	13630	9200	9310	9060
6	---	1100	1810	25570	10030	83770	11550	52890	15410	9200	9310	9020
7	---	1110	1830	22280	9970	78900	10530	49350	15300	9200	9310	9350
8	---	1120	1850	18690	9880	73110	9890	44580	13270	9200	9310	9350
9	---	1120	1860	16840	9720	68000	9840	39300	11070	8950	9290	9340
10	---	1120	1870	16620	9540	62690	9760	34440	16840	8930	9260	9310
11	---	1120	1900	16300	9460	57660	9700	30630	31970	8930	9260	9310
12	---	1120	1940	15210	7950	52460	9620	26880	32960	8930	9230	9310
13	---	1120	4640	14350	7000	47340	10380	24050	33040	8940	9210	9330
14	---	1120	9970	12530	7140	42650	10800	21400	31150	8960	9290	9330
15	---	1110	14630	10420	7260	37790	10870	18000	44480	8940	9300	9330
16	---	1110	21960	9460	7390	33040	10870	14530	50590	8860	9310	9330
17	---	1190	22820	9020	7510	28590	10300	12310	51310	8970	9340	9310
18	---	1310	20880	8850	7630	24300	9420	11110	50070	8970	9300	9290
19	---	1480	18850	8850	7660	19860	9120	9890	46390	8970	9370	9290
20	---	1610	17700	8850	8400	17310	9190	8750	42110	8970	9350	9260
21	---	1660	17030	8850	12680	16840	9170	8490	37930	8970	9340	9290
22	---	1690	16560	8850	29970	14960	9620	8630	38430	9150	9350	9370
23	---	1710	16030	8850	68830	12380	10180	8740	41480	9170	9330	9600
24	---	1730	16030	8850	84240	9970	10530	8800	40150	9200	9330	9670
25	---	1750	16030	8850	86800	8060	10290	8860	36560	9200	9290	9860
26	---	1760	16030	8850	86800	7890	10030	8940	32740	9280	9230	9920
27	---	1770	16030	9070	84720	8400	18750	9340	28770	9300	9210	9970
28	---	1770	16030	9070	80610	8620	20510	10120	25160	9300	9190	9970
29	---	1770	17050	9390	---	9070	27470	10200	21490	9290	9190	10220
30	---	1770	18480	9460	---	20630	58990	9710	17980	9330	9170	10670
31	336	---	29720	9460	---	22540	---	9380	---	9340	9150	---
MAX	---	1770	29720	40480	86800	86270	58990	64220	51310	14360	9370	10670
MIN	---	751	1770	8850	7000	7890	9120	8490	9330	8860	9150	9020
(†)	629.90	641.40	665.90	655.30	680.27	662.87	675.15	655.24	660.65	655.21	655.06	656.23
(††)	---	+1,434	+27,950	-20,260	+71,150	-58,070	+36,450	-49,610	+8,600	-8,640	-190	+1,520

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07177500 BIRD CREEK NEAR SPERRY, OK

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, Hydrologic Unit 11070107, on downstream side of right pier of county road bridge, 1.5 mi upstream from Delaware Creek, 2.4 mi downstream from Hominy Creek, 2.5 mi southeast of Sperry, and at mile 25.0.

DRAINAGE AREA.--905 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1921: 1943.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 1-3, 6. Records good.

COOPERATION.--Gage-height record and 4 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--47 years, 507 ft^3/s, 367,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft^3/s Oct. 3, 1959, gage height, 32.60 ft, from rating curve extended above 49,000 ft^3/s; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 31.68 ft, discharge 72,200 ft^3/s. Flood in 1915 reached a stage similar to flood of Oct. 31, 1941, 30.14 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	0800	13,000	25.35	May 1	0600	16,200	27.24
Feb. 23	2400	*28,400	*29.49	June 12	0500	25,000	29.16

Minimum daily discharge 5.2 ft^3/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	667	15	12100	143	4600	1090	15000	192	3160	25	6.6
2	7.6	410	15	4720	96	4520	2600	6710	140	2950	23	6.0
3	7.9	140	15	2740	78	4450	3390	1670	122	1670	20	5.8
4	7.9	65	14	3230	67	8170	3240	3740	288	324	17	5.8
5	7.9	39	16	3100	61	7790	3270	3650	5870	233	15	5.8
6	7.9	26	17	3000	80	2990	1720	3590	4150	113	15	5.8
7	7.9	19	17	2910	493	4950	1260	4110	2390	105	15	5.8
8	7.9	16	21	2810	445	5340	1140	4080	3050	105	13	5.8
9	8.4	14	71	2400	436	5200	531	3980	2720	104	13	5.2
10	8.7	9.6	68	1760	595	5070	358	4600	3750	97	12	6.5
11	8.7	9.5	42	1300	651	4990	272	3300	12000	65	11	11
12	8.7	9.5	33	1180	570	4870	261	2960	21500	63	11	7.0
13	8.7	8.9	2660	1040	424	4500	260	2900	7880	231	11	23
14	27	7.8	7340	1050	145	3950	2040	2200	2640	236	17	42
15	32	7.2	3120	1440	130	3720	934	3000	6550	242	18	62
16	25	7.2	6000	1050	125	3580	468	2800	8030	244	17	102
17	17	13	3020	504	116	3500	426	2330	2040	240	17	48
18	12	299	1830	427	110	3420	755	894	1000	237	17	27
19	10	572	1680	155	108	3250	609	859	3930	234	15	19
20	23	261	1580	126	103	3190	200	867	4950	172	15	14
21	26	123	1780	122	2400	4350	578	669	4860	59	15	12
22	17	73	1120	116	7370	4040	433	200	5440	49	14	11
23	13	51	942	73	22400	2880	997	232	6060	46	14	36
24	11	39	763	59	24000	2440	947	135	1790	41	13	139
25	342	32	265	59	10200	1960	539	99	4350	50	11	221
26	95	27	142	57	2080	914	797	81	4780	53	11	115
27	1840	23	125	63	2150	406	2640	128	4340	44	21	127
28	1490	22	103	87	3860	326	6120	155	3900	36	12	108
29	328	20	245	136	---	631	1860	686	3530	31	9.4	77
30	142	17	1580	226	---	5910	11700	1000	3270	29	8.1	210
31	66	---	4650	204	---	5470	---	518	---	27	7.3	---
TOTAL	4621.4	3027.7	39289	48244	79436	121377	51435	77143	135512	11290	452.8	1470.1
MEAN	149	101	1267	1556	2837	3915	1715	2488	4517	364	14.6	49.0
MAX	1840	667	7340	12100	24000	8170	11700	15000	21500	3160	25	221
MIN	7.2	7.2	14	57	61	326	200	81	122	27	7.3	5.2
AC-FT	9170	6010	77930	95690	157600	240800	102000	153000	268800	22390	898	2920

CAL YR 1984 TOTAL 236667.3 MEAN 647 MAX 9490 MIN 3.5 AC-FT 469400
WTR YR 1985 TOTAL 573298.0 MEAN 1571 MAX 24000 MIN 5.2 AC-FT 1137000

ARKANSAS RIVER BASIN

07178050 BIRD CREEK NEAR CATOOSA, OK

LOCATION.--Lat 36°14'21", long 95°50'52", in NW 1/4 SW 1/4 sec.5, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at bridge on U.S. Highway 75, approximately 5.5 mi northwest of Catoosa.

DRAINAGE AREA.--1,080 mi^2.

PERIOD OF RECORD.--Water years 1965 to current year.

REMARKS.--Samples were collected on a monthly basis and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)
OCT												
31...	1530	1028	80020	538	7.00	20.0	60	746	8.0	90	160	47
NOV												
20...	1425	1028	80020	395	7.10	9.0	--	759	--	--	130	46
DEC												
11...	1500	1028	80020	750	7.20	11.0	18	738	9.8	92	--	--
JAN												
16...	1315	1028	80020	257	7.10	4.0	85	746	12.0	94	73	26
FEB												
19...	1500	1028	80020	720	7.40	8.5	17	750	10.6	92	210	71
MAR												
25...	1500	1028	80020	390	6.90	15.5	71	749	9.0	92	120	48
APR												
16...	1430	1028	80020	--	6.60	20.0	74	747	8.0	--	130	55
MAY												
08...	1415	1028	80020	230	6.40	21.5	230	749	6.2	72	71	24
JUN												
24...	1530	1028	80020	290	6.20	26.5	210	746	6.2	79	98	29
JUL												
18...	1330	1028	80020	390	6.50	29.0	60	748	6.2	82	97	33
AUG												
23...	1430	1028	80020	800	6.60	29.0	70	744	5.2	70	180	78
SEP												
30...	1630	1028	80020	694	6.80	19.5	29	753	7.2	80	190	67

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	COPPER, DISSOLVED (UG/L AS CU)
OCT												
31...	47	9.7	45	37	2	5.3	110	21	48	69	308	--
NOV												
20...	40	7.5	27	30	1	4.8	85	13	37	39	237	--
DEC												
11...	--	--	--	--	--	--	105	13	55	110	382	--
JAN												
16...	21	4.9	17	33	0.9	3.0	47	7.2	20	29	--	4
FEB												
19...	61	13	56	37	2	4.3	135	10	70	85	365	--
MAR												
25...	36	7.9	26	31	1	2.5	74	18	25	46	298	--
APR												
16...	38	8.5	28	31	1	3.0	75	36	36	42	214	--
MAY												
08...	20	5.1	16	32	0.9	2.3	47	36	22	28	142	--
JUN												
24...	30	5.6	19	29	0.9	3.3	69	84	20	30	173	--
JUL												
18...	29	6.0	26	36	1	3.7	64	39	22	44	205	--
AUG												
23...	54	11	61	41	2	8.5	102	50	59	82	407	--
SEP												
30...	58	12	56	38	2	4.5	127	39	35	98	365	--

07178620 VERDIGRIS RIVER NEAR INOLA, OK
(National stream-quality accounting network station)

LOCATION.--Lat 36°09'43", long 95°37'07", in NW 1/4 NW 1/4 sec.4, T.9 N., R.16 E., Rogers County, Hydrologic Unit 11070105, at bridge on State Highway 33, 6.0 mi west of Inola, and at navigation channel mile 36.6.

DRAINAGE AREA.--7,911 mi^2.

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1971 to September 1976.
WATER TEMPERATURE: December 1971 to September 1976.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV											
27...	1230	1028	80020	530	7.90	9.0	28	750	11.0	97	43
JAN											
29...	1300	1028	80020	350	7.40	3.0	33	744	11.8	90	--
APR											
17...	1245	1028	80020	*333	7.00	19.0	56	749	9.0	--	--
MAY											
29...	1335	1028	80020	*440	7.10	24.0	47	740	7.9	--	K15
JUL											
24...	1200	1028	80020	*356	7.20	30.5	44	740	5.7	--	--
SEP											
25...	1100	1028	80020	340	7.00	23.0	35	745	7.2	86	530

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)
NOV											
27...	49	160	51	50	8.8	40	34	1	3.4	136	0
JAN											
29...	180	150	44	45	8.1	14	17	0.5	2.8	124	0
APR											
17...	--	130	45	41	7.3	15	19	0.6	2.5	108	0
MAY											
29...	K19	--	--	<50	9.5	25	--	--	3.1	146	0
JUL											
24...	--	130	23	42	7.0	17	21	0.7	3.1	136	0
SEP											
25...	280	140	34	44	6.7	13	17	0.5	3.0	--	--

DATE	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
NOV											
27...	102	111	2.7	32	80	0.2	7.4	306	290	0.42	--
JAN											
29...	96	102	7.8	45	18	0.2	6.4	207	200	0.28	0.60
APR											
17...	86	88	17	33	22	0.2	7.2	194	180	0.26	0.59
MAY											
29...	105	120	18	45	37	0.2	7.2	251	--	--	0.98
JUL											
24...	109	111	14	21	24	0.2	7.0	204	190	0.28	--
SEP											
25...	104	--	20	25	17	0.2	6.9	182	180	0.25	0.55

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07178620 VERDIGRIS RIVER NEAR INOLA, OK

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)
NOV 27...	--	--	0.9	0.22	--	--	--	--	50	<1
JAN 29...	0.27	0.35	1.0	0.16	--	0.11	0.10	0.31	--	--
APR 17...	0.06	0.08	0.9	0.13	--	0.08	0.04	0.12	50	<1
MAY 29...	0.18	0.23	1.0	0.30	0.92	0.20	0.18	0.55	20	<1
JUL 24...	--	--	0.6	0.16	--	0.11	--	--	--	--
SEP 25...	0.03	0.04	0.6	0.18	0.55	0.11	0.10	0.31	30	1

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 27...	85	<0.5	<1	<1	<3	3	47	9	8	11
JAN 29...	--	--	--	--	--	--	--	--	--	--
APR 17...	59	0.5	<1	<1	<3	4	32	<1	10	19
MAY 29...	78	<0.5	1	<1	<3	5	28	5	6	2
JUL 24...	--	--	--	--	--	--	--	--	--	--
SEP 25...	67	<0.5	<1	<1	<3	3	12	<1	<4	3

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 27...	<0.1	<10	5	<1	<1	470	<6	7	42	89
JAN 29...	--	--	--	--	--	--	--	--	36	95
APR 17...	<0.1	<10	4	1	<1	290	<6	4	90	93
MAY 29...	<0.1	<10	4	<1	<1	370	<6	<3	71	100
JUL 24...	--	--	--	--	--	--	--	--	67	94
SEP 25...	0.1	<10	2	<1	<1	330	<6	<3	58	97

LOCATION.--Lat 36°55'43", long 94°57'26", in SW 1/4 SE 1/4 sec.5, T.28 N., R.22 E., Ottawa County, Hydrologic Unit 11070206, on downstream side of right pier of county road bridge, 1.3 mi upstream from Mud Creek, 2.2 mi downstream from Four Mile Creek, 4.5 mi west of Commerce, and at mile 153.4.

DRAINAGE AREA.--5,876 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft, U.S. Army Corps of Engineers datum.

REMARKS.--Estimated daily discharges: Jan. 18, 24, Feb. 23, May 1, 2, 30. Records fair. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi upstream.

AVERAGE DISCHARGE.--46 years, 3,559 ft^3/s, 2,578,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 267,000 ft^3/s July 15, 1951, computed by flood-routing methods 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	1100	32,500	18.81	June 7	1400	36,900	19.47
Feb. 24	1300	*71,900	*22.84	June 13	0700	19,300	14.92
Mar. 5	1200	28,400	17.98	June 24	1600	27,400	17.63
May 9	0200	20,900	14.72	Aug. 26	0200	36,400	19.40
May 14	0700	22,600	15.53				

Minimum daily discharge 23 ft^3/s Oct. 3, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	1170	307	31500	2370	23600	8540	7300	5120	11600	520	11900
2	24	2860	286	30200	2280	12300	3860	8390	3130	11700	500	12000
3	23	4330	250	17800	1870	13500	2360	7770	2660	11300	500	11500
4	25	2900	220	5870	1160	23500	1890	5930	6680	11100	587	10900
5	26	2560	215	4940	757	28200	4680	5020	17900	10100	543	10400
6	28	1840	204	4590	641	28100	3270	4760	27300	6850	1180	10300
7	29	946	191	3790	671	27900	2020	5690	33300	5330	1650	7550
8	26	567	190	4240	656	16500	2100	16400	34800	4330	785	3070
9	23	396	187	5240	566	6340	2090	18500	25300	3940	493	1640
10	56	303	186	5370	1150	11000	1970	10300	8580	3550	681	1220
11	93	248	185	4170	2580	14100	2290	7600	10500	2150	1280	1100
12	92	215	190	3540	2510	18600	3850	7040	16900	1190	1770	948
13	79	189	371	3510	1620	16300	3230	12600	18800	669	1900	679
14	100	172	3750	3330	1450	14500	2500	21400	14600	548	3270	527
15	762	165	6510	2960	1560	14800	2720	13600	11900	502	4360	530
16	2990	151	7290	2660	1680	10100	3800	5470	13400	416	3980	890
17	3250	137	8930	2400	1510	10900	2710	2950	13100	307	2520	996
18	2140	193	6490	2550	1460	11900	2140	4040	8480	251	2920	935
19	1080	634	3380	3000	1720	11700	1900	3980	7790	235	3260	795
20	694	1600	5460	3330	2580	11100	1780	2820	10100	226	2060	526
21	552	2260	12100	7300	9420	13800	1680	2630	11300	229	1210	347
22	435	1670	17300	9200	28500	9940	1610	2500	15000	255	7860	276
23	566	1220	7250	4800	56000	5880	1590	3150	23800	245	26900	491
24	398	938	2760	2550	70800	3880	1540	4010	27100	262	33800	6280
25	353	700	1710	1650	66600	2420	1590	4060	21400	458	35900	3900
26	2550	552	1210	1470	52300	1830	1500	3570	12500	755	36300	5890
27	3400	473	923	1320	40300	1760	1030	1950	11800	696	36000	10300
28	12200	408	781	1140	36600	1640	1330	1220	11900	697	24300	11700
29	9840	372	787	1100	---	3250	1340	4440	10200	619	8800	11800
30	3960	343	3580	1130	---	11200	4240	4980	10600	560	9260	14600
31	1600	---	17900	1050	---	14000	---	7300	---	539	10700	---
TOTAL	47419	30512	111093	177700	391311	394540	77150	211370	445940	91609	265789	153990
MEAN	1530	1017	3584	5732	13980	12730	2572	6818	14860	2955	8574	5133
MAX	12200	4330	17900	31500	70800	28200	8540	21400	34800	11700	36300	14600
MIN	23	137	185	1050	566	1640	1030	1220	2660	226	493	276
AC-FT	94060	60520	220400	352500	776200	782600	153000	419300	884500	181700	527200	305400

CAL YR 1984 TOTAL 1578862 MEAN 4314 MAX 33200 MIN 17 AC-FT 3132000
WTR YR 1985 TOTAL 2398423 MEAN 6571 MAX 70800 MIN 23 AC-FT 4757000

07185095 TAR CREEK AT 22ND STREET BRIDGE AT MIAMI, OK

LOCATION.--Lat 36°54'00", long 94°52'05", in NW 1/4 NE 1/4 sec.19, T.28 N., R.23 E., Ottawa County, Hydrologic Unit 11070206, near downstream left abutment of 22nd Street bridge in Miami, 0.5 mi east of intersection of Main and 22nd Street.

DRAINAGE AREA.--44.7 mi^2.

PERIOD OF RECORD.--January 11, 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 762.23 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,200 ft^3/s Feb. 23, gage height, 14.13 ft; minimum daily discharge, 0.37 ft^3/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	274	6.4	1770	15	39	98	224	26	3.3	.49	8.1
2	.41	104	6.0	144	13	33	54	76	52	2.9	.40	7.0
3	.63	31	5.3	70	11	32	40	41	23	2.9	.43	6.3
4	.60	20	4.4	46	11	769	34	29	18	2.8	9.1	6.1
5	.99	14	5.9	36	11	163	713	23	35	2.6	15	5.9
6	1.5	11	6.9	33	10	65	202	19	194	2.5	5.6	4.9
7	2.0	8.9	6.0	30	9.6	44	76	54	461	2.3	5.1	4.5
8	1.9	7.9	6.7	28	9.0	36	45	311	75	2.3	4.9	5.2
9	2.3	7.5	8.4	29	13	32	31	59	33	2.5	3.2	5.4
10	2.6	5.9	6.8	76	130	40	26	34	92	2.2	2.1	4.8
11	3.1	5.4	5.8	66	118	51	24	26	91	1.9	1.7	3.7
12	2.7	5.0	6.1	29	44	35	22	20	70	1.7	1.2	3.5
13	4.4	5.2	252	22	35	35	29	364	36	1.4	.80	6.7
14	4.1	5.4	312	19	48	34	39	391	23	1.1	13	12
15	4.9	5.5	89	16	41	29	31	76	20	1.1	13	7.4
16	11	3.6	73	16	33	25	23	39	19	1.1	7.7	6.0
17	4.0	8.6	50	16	28	21	20	27	18	.77	5.6	5.3
18	1.8	51	31	17	27	19	18	22	16	.72	110	4.1
19	1.4	64	25	16	30	18	15	19	14	.62	161	3.9
20	18	32	34	14	36	19	14	17	13	.60	30	3.1
21	9.8	18	252	13	298	127	12	17	12	1.9	17	2.9
22	3.9	14	90	13	1280	77	13	17	339	8.9	681	3.9
23	1.9	12	41	13	3580	43	14	16	149	.92	569	15
24	1.4	11	28	14	527	31	11	15	33	.55	74	11
25	20	11	19	14	157	24	9.8	14	18	9.3	34	19
26	11	11	17	11	86	22	9.1	14	13	9.6	23	17
27	19	11	17	13	59	30	29	15	8.9	4.1	18	11
28	16	9.0	17	14	46	40	22	22	6.7	2.2	14	8.5
29	7.4	7.9	21	14	---	682	17	56	5.3	1.4	12	17
30	7.4	7.2	72	17	---	855	499	44	4.1	.90	11	29
31	6.1	---	922	18	---	267	---	30	---	.72	9.3	---
TOTAL	172.60	782.0	2436.7	2647	6705.6	3737	2189.9	2131	1918.0	77.80	1852.62	248.2
MEAN	5.57	26.1	78.6	85.4	239	121	73.0	68.7	63.9	2.51	59.8	8.27
MAX	20	274	922	1770	3580	855	713	391	461	9.6	681	29
MIN	.37	3.6	4.4	11	9.0	18	9.1	14	4.1	.55	.40	2.9

WTR YR 1985 TOTAL 24898.42 MEAN 68.2 MAX 3580 MIN .37

07188000 SPRING RIVER NEAR QUAPAW, OK

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, Hydrologic Unit 11070207, near center of span on downstream side of pier of county road bridge, 0.1 mi upstream from Rock Creek, 3.0 mi southeast of Quapaw, and at mile 13.9. Records include flow of Rock Creek.

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

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft, National Geodetic Vertical Datum of 1929. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

REMARKS.--Estimated daily discharges: Jan. 20-22, Jan. 31 to Feb. 2. Records good. Occasional releases from floodgates at old Riverton Hydroelectric plant, 15 mi above station.

AVERAGE DISCHARGE.--46 years, 1,982 ft^3/s, 10.72 in/yr, 1,436,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190,000 ft^3/s May 19, 1943, gage height, 43.4 ft, from floodmark, from rating curve extended above 54,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily discharge, 5.8 ft^3/s July 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	0700	37,300	21.60	May 13	2000	19,300	16.09
Feb. 24	1800	*105,000	*33.59	June 23	1800	33,600	20.61
Mar. 4	1900	21,000	16.72	Aug. 22	1900	25,200	18.12
Mar. 31	1500	31,600	20.05				

Minimum daily discharge, 206 ft^3/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	3970	1560	36000	1480	6560	21200	12100	2940	1740	503	1050
2	219	6520	1430	34100	1430	5450	9910	12000	1970	1700	324	965
3	208	5230	1340	20900	1370	4920	6340	5910	1740	1400	283	896
4	206	3210	1270	9160	1290	16400	5270	3860	2460	1300	519	844
5	218	2380	1050	5530	1230	16900	12500	3260	12000	1330	724	778
6	232	1950	968	4590	1230	9740	12500	2920	12700	1240	686	509
7	461	1770	1070	4230	1180	5920	8310	4910	14200	1170	829	598
8	441	1640	1040	3990	1140	4930	5060	5110	10300	1120	663	587
9	339	1470	1020	3620	1140	4500	4300	3950	5860	1070	550	561
10	307	1280	1010	3570	2280	4630	3900	2700	4980	977	479	530
11	284	1250	990	3410	3240	5040	4530	2390	4790	928	435	513
12	267	1160	969	3030	2910	5260	4320	2150	5470	894	413	806
13	269	1200	2620	2750	2530	4490	3700	12900	4800	863	440	715
14	289	1140	12400	2600	2700	6240	4010	10100	3130	790	888	652
15	307	799	9850	2400	2820	4690	3980	4770	2630	792	1080	663
16	806	1040	5630	2170	2680	3630	3180	3190	2510	825	933	598
17	2300	1090	3980	2300	2490	3150	2750	2420	2300	803	793	545
18	2060	1070	2880	2290	2480	2910	2630	2190	2140	686	1690	500
19	1390	2190	2750	2430	3180	2790	2470	2010	2050	715	2400	463
20	1520	3330	2690	2470	4400	2670	2340	1870	1970	472	1760	433
21	2020	3250	5190	2320	7450	2630	2230	1830	1540	634	1080	418
22	2730	2560	9740	2120	24000	2590	2140	1800	17800	720	12000	420
23	1890	2150	6290	1970	72200	2520	2130	1810	31000	631	20500	455
24	1410	1940	4030	1850	99900	2360	2060	1810	13900	731	19200	970
25	1610	1710	3430	1810	74000	2100	1970	1520	4030	803	9840	965
26	2820	1440	2770	1750	33000	2160	1720	1920	3180	909	5230	821
27	3030	1520	2600	1700	11000	2220	1790	2010	2680	927	2360	449
28	3310	1510	2530	1640	7520	2190	1910	1660	2340	782	1770	497
29	2690	1740	2420	1610	---	4780	1860	2070	2080	638	1450	684
30	1790	1630	4880	1580	---	22600	4650	3660	1870	554	1150	823
31	1550	---	13400	1530	---	31000	---	4030	---	672	1150	---
TOTAL	37198	63139	113797	171420	372270	197970	145660	124830	181360	28816	92122	19708
MEAN	1200	2105	3671	5530	13300	6386	4855	4027	6045	930	2972	657
MAX	3310	6520	13400	36000	99900	31000	21200	12900	31000	1740	20500	1050
MIN	206	799	968	1530	1140	2100	1720	1520	1540	472	283	418
CFSM	.48	.84	1.46	2.20	5.30	2.54	1.93	1.60	2.41	.37	1.18	.26
IN.	.55	.94	1.69	2.54	5.52	2.93	2.16	1.85	2.69	.43	1.37	.29
AC-FT	73780	125200	225700	340000	738400	392700	288900	247600	359700	57160	182700	39090

CAL YR 1984	TOTAL	937913	MEAN	2563	MAX	29100	MIN	206	CFSM	1.02	IN.	13.90	AC-FT 1860000
WTR YR 1985	TOTAL	1548290	MEAN	4242	MAX	99900	MIN	206	CFSM	1.69	IN.	22.95	AC-FT 3071000

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, Hydrologic Unit 11070208, on downstream side of second pier from right bank of bridge on State Highway 43, 0.8 mi downstream from Blackfoot Branch, 2.8 mi upstream from Buffalo Creek, 3.0 mi southeast of Tiff City, and at mile 15.8.

DRAINAGE AREA.--872 mi^2.

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

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 750.61 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Sept. 6, 1960 to Aug. 25, 1961, at site 100 ft downstream.

REMARKS.--Estimated daily discharges: May 2, May 17 to June 10. Records fair.

AVERAGE DISCHARGE.--46 years, 786 ft^3/s, 12.24 in/yr, 569,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft^3/s Apr. 19, 1941, gage height, 28.4 ft, from floodmark, from rating curve extended above 60,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily discharge, 5.1 ft^3/s, Sept. 5-6, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 21	1200	13,600	14.59	Feb. 24	0400	*33,800	*20.54
Dec. 14	0800	19,300	17.03	Mar. 30	2100	26,000	19.00
Dec. 21	2330	30,900	19.98	May 1	0730	16,900	16.15
Jan. 1	1300	32,100	20.22	Aug. 6	0700	9,540	12.02

Minimum daily discharge, 97 ft^3/s Oct. 4-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	1180	1000	24900	700	2560	6530	13500	1300	549	199	231
2	106	3740	875	9070	680	2160	4350	5960	1000	520	199	220
3	101	2850	778	5110	658	1910	3310	3860	800	498	197	208
4	97	2050	680	3710	644	2540	2790	2870	1500	475	195	203
5	97	1530	625	2980	638	3790	2530	2280	2500	453	403	197
6	99	1200	583	2500	621	3170	2270	1860	3600	430	5080	187
7	99	999	539	2160	602	2670	1980	1570	4500	411	1330	182
8	99	868	508	1890	580	2320	1760	1610	3800	393	856	177
9	102	765	489	1700	566	2030	1580	1370	3300	393	626	172
10	113	673	475	1640	664	1800	1440	1200	2800	356	493	177
11	116	598	463	1630	1030	1640	1360	1090	2410	338	438	180
12	140	539	450	1540	1110	1500	1250	1010	2080	332	386	231
13	171	495	3210	1460	1040	1430	1160	1410	1770	324	345	229
14	447	463	14300	1410	1020	1730	1100	1460	1520	309	340	211
15	796	435	5860	1350	1000	1770	1040	1180	1340	294	417	187
16	816	427	3630	1260	966	1610	980	1030	1200	284	366	175
17	3200	418	2640	1210	924	1490	925	922	1100	275	330	168
18	1990	843	2000	1160	891	1390	879	850	1010	265	458	162
19	3070	2040	1680	1090	863	1310	843	810	938	248	627	158
20	3580	2010	1450	1050	852	1230	806	780	878	244	513	153
21	10900	1620	15800	963	952	1230	777	750	830	237	432	146
22	4530	1300	15000	914	1470	1160	770	730	820	237	392	145
23	2490	1080	5590	875	11800	1080	819	710	1130	245	366	148
24	1750	926	3770	850	21200	1040	777	700	914	237	338	150
25	1410	815	2870	822	7800	998	714	680	826	237	323	173
26	1420	736	2350	784	5060	957	693	670	767	259	322	183
27	1530	800	1990	774	3720	995	898	660	714	245	303	182
28	1430	1220	1790	769	2980	1150	1580	660	644	234	282	173
29	1230	1270	1630	746	---	2450	1450	880	613	225	267	164
30	1060	1150	2130	730	---	19100	5940	1150	580	214	253	164
31	924	---	5520	719	---	13700	---	1500	---	206	242	---
TOTAL	44030	35040	100675	77766	71031	83910	53301	55712	47184	9967	17318	5436
MEAN	1420	1168	3248	2509	2537	2707	1777	1797	1573	322	559	181
MAX	10900	3740	15800	24900	21200	19100	6530	13500	4500	549	5080	231
MIN	97	418	450	719	566	957	693	660	580	206	195	145
CFSM	1.63	1.34	3.72	2.88	2.91	3.10	2.04	2.06	1.80	.37	.64	.21
IN.	1.88	1.49	4.29	3.32	3.03	3.58	2.27	2.38	2.01	.43	.74	.23
AC-FT	87330	69500	199700	154200	140900	166400	105700	110500	93590	19770	34350	10780

CAL YR 1984	TOTAL	387437	MEAN	1059	MAX	15800	MIN	46	CFSM	1.21	IN.	16.53	AC-FT	768500
WTR YR 1985	TOTAL	601370	MEAN	1648	MAX	24900	MIN	97	CFSM	1.89	IN.	25.65	AC-FT	1193000

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'17", long 95°02'19", in SW 1/4 sec.14, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 mi upstream from Big Cabin Creek, and at mile 77.0.

DRAINAGE AREA.--10,298 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft, U.S. Army Corps of Engineers datum. Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

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.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,098,000 acre-ft, Feb. 26, gage height, 753.31 ft; minimum, 1,511,000 acre-ft Oct. 2, gage height, 741.40 ft.

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

739	1,411,000	747	1,767,000
741	1,494,000	751	1,970,000
744	1,626,000	754	2,138,000

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1514000	1566000	1570000	1940000	1544000	2073000	1900000	1719000	1622000	1735000	1560000	1763000
2	1512000	1570000	1569000	1968000	1546000	2041000	1873000	1746000	1615000	1728000	1556000	1764000
3	1513000	1575000	1567000	1962000	1551000	2015000	1836000	1752000	1607000	1725000	1552000	1764000
4	1514000	1574000	1564000	1918000	1555000	2036000	1805000	1746000	1610000	1726000	1555000	1761000
5	1515000	1570000	1561000	1898000	1561000	2046000	1803000	1736000	1663000	1729000	1556000	1757000
6	1516000	1571000	1555000	1881000	1563000	2034000	1787000	1728000	1721000	1723000	1566000	1755000
7	1516000	1574000	1552000	1865000	1562000	2018000	1759000	1722000	1771000	1714000	1565000	1748000
8	1517000	1572000	1553000	1849000	1561000	2000000	1737000	1736000	1803000	1700000	1558000	1731000
9	1522000	1571000	1554000	1829000	1562000	1960000	1722000	1752000	1815000	1691000	1549000	1712000
10	1522000	1561000	1554000	1803000	1567000	1933000	1713000	1749000	1792000	1682000	1548000	1694000
11	1522000	1553000	1552000	1781000	1570000	1916000	1707000	1739000	1771000	1673000	1542000	1673000
12	1523000	1548000	1558000	1761000	1566000	1906000	1705000	1730000	1765000	1662000	1536000	1659000
13	1527000	1544000	1577000	1739000	1559000	1901000	1701000	1747000	1766000	1651000	1531000	1640000
14	1528000	1545000	1628000	1723000	1560000	1893000	1697000	1783000	1764000	1641000	1538000	1617000
15	1533000	1545000	1655000	1706000	1559000	1881000	1691000	1789000	1762000	1634000	1550000	1597000
16	1537000	1543000	1677000	1698000	1557000	1860000	1685000	1768000	1757000	1630000	1555000	1575000
17	1548000	1549000	1689000	1682000	1558000	1838000	1675000	1745000	1757000	1627000	1552000	1564000
18	1549000	1553000	1688000	1673000	1554000	1821000	1664000	1727000	1747000	1619000	1566000	1564000
19	1557000	1551000	1683000	1668000	1557000	1804000	1652000	1708000	1736000	1611000	1577000	1563000
20	1570000	1555000	1683000	1649000	1558000	1791000	1642000	1697000	1727000	1600000	1583000	1562000
21	1583000	1553000	1738000	1637000	1573000	1781000	1629000	1688000	1721000	1596000	1584000	1563000
22	1579000	1553000	1796000	1624000	1648000	1771000	1625000	1680000	1750000	1595000	1595000	1557000
23	1572000	1553000	1795000	1611000	1876000	1756000	1611000	1669000	1802000	1587000	1651000	1546000
24	1563000	1557000	1785000	1599000	2037000	1741000	1600000	1661000	1818000	1586000	1705000	1537000
25	1556000	1553000	1776000	1584000	2097000	1719000	1593000	1652000	1813000	1593000	1748000	1528000
26	1555000	1560000	1765000	1568000	2088000	1698000	1591000	1639000	1799000	1591000	1780000	1517000
27	1555000	1563000	1753000	1560000	2076000	1688000	1597000	1633000	1783000	1590000	1801000	1515000
28	1566000	1566000	1742000	1551000	2072000	1679000	1597000	1623000	1771000	1588000	1814000	1513000
29	1576000	1568000	1735000	1548000		1708000	1600000	1617000	1758000	1581000	1785000	1519000
30	1572000	1567000	1730000	1553000	---	1801000	1651000	1620000	1746000	1571000	1764000	1525000
31	1560000	---	1807000	1544000	---	1886000	---	1626000	---	1562000	1761000	---
MAX	1583000	1575000	1807000	1968000	2097000	2073000	1900000	1789000	1818000	1735000	1814000	1764000
MIN	1512000	1543000	1552000	1544000	1544000	1679000	1591000	1617000	1607000	1562000	1531000	1513000
(†)	742.53	742.69	747.81	742.17	752.86	749.40	744.55	744.01	746.57	742.57	746.88	741.71
(††)	+44,000	+7,000	+240,000	-263,000	+528,000	-186,000	-235,000	-25,000	+120,000	-184,000	+199,000	-236,000

CAL YR 1984 MAX 1883000 MIN 1462000 (††) +346,000
WTR YR 1985 MAX 2097000 MIN 1512000 (††) +9,000

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'15", long 95°02'44", in SE 1/4 sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi upstream from bridge on State Highway 82, 1.5 mi south of Langley, 3.6 mi downstream from Pensacola Dam, 6.3 mi upstream from Big Cabin Creek, and at mile 73.4.

DRAINAGE AREA.--10,335 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 607.65 ft, U.S. Army Corps of Engineers datum. Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mi upstream at same datum. Feb. 10, 1954 to Sept. 30, 1963, water-stage recorder at site 0.5 mi downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi upstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 1-7, Feb. 24-26, Mar. 1-7, May 14-19, June 5-19, Aug. 23-30. Records fair. Low flow values of 25 ft^3/s consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (station 07190000).

AVERAGE DISCHARGE.--46 years, 7,013 ft^3/s, 5,081,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300,000 ft^3/s May 20, 1943, gage height, 45.5 ft, from floodmarks, from computation of outflow from Lake O' The Cherokees; minimum daily, 9 ft^3/s, Mar. 25, 1940 (caused by closure of Pensacola Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 143,000 ft^3/s Feb. 25, gage height, 34.54 ft; minimum daily discharge, 25 ft^3/s at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	9100	1640	34600	3100	43800	34000	14400	11400	18800	4510	12300
2	364	10400	3100	60100	1350	34500	33200	20800	11300	17600	831	12200
3	88	10100	4210	55300	391	28000	31300	19500	10500	12600	2740	12300
4	91	10000	4010	39500	855	34600	27100	17200	11600	11400	1860	12100
5	28	9240	3580	23200	253	44400	25700	17200	13000	12100	1250	12300
6	466	5980	4100	18400	1080	46200	28200	17100	21500	11900	2610	12200
7	25	2020	2510	18400	2780	45200	26800	16700	28500	11800	5520	12000
8	278	3690	1930	18000	3750	34600	21600	16800	32200	12100	4580	11800
9	25	3050	1180	20000	1560	27500	17000	17200	34100	10600	6190	11700
10	25	7900	2210	22700	1930	26900	14100	17400	34300	10400	3040	11600
11	25	5950	1110	24800	6540	25600	12400	17200	28400	7880	3690	11600
12	32	5530	640	10300	9440	24300	12300	16900	25300	8460	6070	11400
13	99	2550	4000	15100	8780	21900	12200	16900	25300	7170	4980	11400
14	130	2080	8190	15200	6510	22300	12400	16000	21800	6430	242	11500
15	409	1970	10600	13400	6150	24200	12300	18600	19000	5980	1000	11500
16	3700	2630	10700	12000	7420	23500	12300	20900	19000	3580	3910	11900
17	3960	1040	12400	12400	5230	23000	12200	17800	17500	2520	4760	8100
18	4710	2560	12400	12400	6320	23200	12200	15200	16600	5320	1030	1510
19	2920	5550	12500	12300	5440	23100	11700	15000	16600	5250	1500	1620
20	1300	6080	12500	11900	6680	22800	11100	12600	15600	6030	2190	1990
21	7520	7970	12200	11800	11200	22400	11200	10500	16500	4750	2170	812
22	9840	5420	17100	11700	12300	19500	11100	10400	16200	843	7800	3180
23	9110	5400	22800	11500	46500	17400	11000	11000	25100	4720	15100	6860
24	8800	3470	15400	11500	110000	17300	11300	11000	34300	1720	16900	11400
25	8990	3440	12300	11500	133000	16900	8420	11100	29300	2730	19000	11900
26	8730	1350	12000	11400	113000	13500	5770	11100	23400	2730	20600	11600
27	7830	616	11700	11500	73200	11500	5930	11100	20500	2300	21900	11600
28	10200	1560	11600	8950	48000	12300	6350	10900	18900	2850	24200	12200
29	10300	2130	12000	1500	---	12300	6390	10900	19000	5140	24900	11800
30	10400	3470	12500	2950	---	14800	6130	10400	19100	1010	18800	11900
31	9830	---	12700	7750	---	28900	---	10900	---	4890	12600	---
TOTAL	120759	142246	265810	552050	632759	786400	463690	460700	635800	221603	246473	296272
MEAN	3895	4742	8575	17810	22600	25370	15460	14860	21190	7148	7951	9876
MAX	10400	10400	22800	60100	133000	46200	34000	20900	34300	18800	24900	12300
MIN	25	616	640	1500	253	11500	5770	10400	10500	843	242	812
AC-FT	239500	282100	527200	1095000	1255000	1560000	919700	913800	1261000	439500	488900	587700

CAL YR 1984 TOTAL 2951205 MEAN 8063 MAX 47000 MIN 25 AC-FT 5854000
WTR YR 1985 TOTAL 4824562 MEAN 13220 MAX 133000 MIN 25 AC-FT 9570000

07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE 1/4 NE 1/4 sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near downstream side of right bank end of county road bridge, 4.9 mi northeast of Big Cabin, 0.9 mi downstream from White Oak Creek, 6.8 mi upstream from Mustang Creek, and at mile 13.0.

DRAINAGE AREA.--450 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi downstream at same datum and present site used as supplemental gage.

REMARKS.--Estimated daily discharges: Jan. 16-19, Jan. 30 to Feb. 8. Records good. Low flow sustained in part by sewage from city of Vinita.

AVERAGE DISCHARGE.--38 years, 317 ft^3/s, 9.24 in/yr, 229,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft^3/s Oct. 3, 1959, gage height, 34.55 ft, at former site; maximum gage height, 46.65 ft Feb. 23, 1985; minimum discharge, 0.10 ft^3/s at times in 1954, 1956 and 1963.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft at former site: discharge, 63,000 ft^3/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 31	2130	12,400	34.01	Mar. 30	1515	12,100	33.83
Feb. 23	1715	*46,100	*46.65	June 10	1815	10,600	32.55

Minimum daily discharge, 0.84 ft^3/s Oct. 1-2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	580	34	4780	78	355	798	3720	87	15	3.5	1.3
2	.84	1340	31	2210	74	311	496	784	56	13	3.1	1.2
3	.86	248	25	622	71	275	375	408	41	11	2.5	1.2
4	.86	115	20	435	69	6040	303	268	524	9.0	5.2	1.1
5	.86	76	21	354	67	2800	3160	196	2150	7.6	7.6	1.1
6	1.2	53	21	320	65	597	1440	151	396	6.1	4.5	.92
7	2.9	39	21	301	64	439	481	130	1620	4.9	5.7	.90
8	3.3	30	25	265	63	350	326	132	440	4.5	9.8	.90
9	1.7	25	32	267	139	323	254	129	206	3.4	7.7	.90
10	2.4	19	34	1360	1170	289	219	104	6470	3.1	4.8	.97
11	1.9	15	38	770	843	291	203	87	3190	2.8	4.2	4.0
12	1.6	13	39	280	362	245	189	77	1270	2.8	2.8	7.1
13	2.5	10	1840	211	285	292	221	399	421	2.3	1.9	17
14	4.7	8.5	4180	175	279	384	462	2120	238	1.7	29	32
15	4.3	8.9	2050	150	241	264	291	401	161	1.6	112	6.6
16	129	13	1720	138	206	207	196	190	116	1.4	88	3.0
17	62	18	911	129	181	175	150	122	86	1.4	38	3.3
18	8.6	812	404	120	169	152	126	93	70	1.4	22	2.9
19	3.1	1020	277	110	173	136	107	76	56	1.4	15	1.8
20	120	410	333	100	178	127	94	66	44	1.3	10	1.3
21	160	192	3970	84	2430	1120	88	60	34	1.2	7.1	1.2
22	40	119	951	73	5530	896	94	56	266	1.1	5.2	1.1
23	14	88	407	75	37000	420	117	52	434	1.4	8.5	1.6
24	8.1	71	281	78	28000	283	111	49	138	1.9	9.8	4.2
25	573	59	203	86	2890	210	95	45	77	8.2	35	4.5
26	225	52	151	79	748	166	79	40	50	11	24	9.7
27	176	49	137	86	533	248	310	33	37	7.2	12	5.4
28	393	46	134	94	416	340	554	33	27	5.5	7.5	3.2
29	185	45	249	109	---	3450	217	40	21	7.6	4.3	8.7
30	81	41	2040	96	---	11200	4210	182	17	7.6	2.9	49
31	49	---	5020	84	---	4530	---	164	---	5.4	2.0	---
TOTAL	2257.56	5615.4	25599	14041	82324	36915	15766	10407	18743	153.8	495.6	178.09
MEAN	72.8	187	826	453	2940	1191	526	336	625	4.96	16.0	5.94
MAX	573	1340	5020	4780	37000	11200	4210	3720	6470	15	112	49
MIN	.84	8.5	20	73	63	127	79	33	17	1.1	1.9	.90
CFSM	.16	.42	1.84	1.01	6.53	2.65	1.17	.75	1.39	.01	.04	.01
IN.	.19	.46	2.12	1.16	6.81	3.05	1.30	.86	1.55	.01	.04	.01
AC-FT	4480	11140	50780	27850	163300	73220	31270	20640	37180	305	983	353

CAL YR 1984	TOTAL	131132.44	MEAN	358	MAX	8500	MIN	.78	CFSM	.80	IN.	10.84	AC-FT	260100
WTR YR 1985	TOTAL	212495.45	MEAN	582	MAX	37000	MIN	.84	CFSM	1.29	IN.	17.57	AC-FT	421500

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'24", in NE 1/4 NW 1/4 sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi upstream from Cherokee Creek, 4.8 mi northeast of Row, 6.5 mi southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2121: 1965 (M).

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

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--24 years, 106 ft^3/s, 10.82 in/yr, 76,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft^3/s, July 27, 1975, gage height, 22.07 ft; minimum, 1.2 ft^3/s Aug. 9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, a flood of approximately the same magnitude as the July 27, 1975 flood occurred in the early 1880's.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 13	1430	5,500	11.99	Mar. 30	1600	4,160	11.05
Dec. 21	1100	5,460	11.97	May 1	0315	2,790	9.86
Dec. 31	2300	4,590	11.37	June 5	0315	*5,680	*12.11
Feb. 23	1715	3,330	10.36				

Minimum daily discharge, 24 ft^3/s Oct. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	113	129	2360	115	347	703	1600	131	79	41	34
2	29	114	121	857	115	301	500	664	123	76	40	33
3	28	113	114	550	113	270	404	437	117	74	39	32
4	26	108	109	418	112	391	343	341	363	73	38	32
5	26	105	106	337	111	443	305	281	2940	70	38	30
6	24	101	102	287	110	378	268	237	1100	69	38	30
7	24	97	99	251	108	334	241	213	935	67	46	30
8	24	95	96	226	106	300	221	199	556	66	50	29
9	24	92	94	212	106	266	205	181	390	64	50	29
10	24	89	92	212	119	240	194	168	318	62	48	28
11	24	87	91	205	150	221	183	157	280	61	46	27
12	24	85	89	197	165	204	173	150	244	59	44	27
13	25	82	2370	190	162	204	164	207	214	58	42	28
14	26	80	1330	184	157	264	159	218	192	57	40	32
15	28	80	673	174	151	273	152	184	177	55	39	36
16	31	81	489	168	144	254	146	164	160	53	38	39
17	35	84	395	161	140	232	141	149	148	52	37	39
18	47	146	322	154	135	210	137	139	138	51	37	39
19	136	246	271	149	133	196	132	131	129	49	37	37
20	491	238	253	141	133	185	128	126	122	48	39	35
21	813	207	3270	134	159	177	125	130	115	47	42	33
22	398	177	1110	130	219	168	128	192	115	47	42	32
23	284	155	589	126	1830	159	135	194	110	46	41	31
24	219	140	416	123	1370	153	133	175	105	45	40	30
25	181	130	322	121	813	145	128	157	99	45	39	30
26	160	122	268	118	584	137	123	141	96	45	38	30
27	156	123	231	120	465	190	141	132	93	45	38	32
28	149	142	207	118	397	269	173	128	89	45	37	32
29	137	145	192	116	---	385	172	127	86	44	37	34
30	128	138	258	116	---	2770	927	138	82	43	36	34
31	119	---	1700	116	---	1260	---	138	---	42	35	---
TOTAL	3870	3715	15908	8771	8422	11326	7084	7598	9767	1737	1252	964
MEAN	125	124	513	283	301	365	236	245	326	56.0	40.4	32.1
MAX	813	246	3270	2360	1830	2770	927	1600	2940	79	50	39
MIN	24	80	89	116	106	137	123	126	82	42	35	27
CFSM	.94	.93	3.86	2.13	2.26	2.74	1.77	1.84	2.45	.42	.30	.24
IN.	1.08	1.04	4.45	2.45	2.36	3.17	1.98	2.13	2.73	.49	.35	.27
AC-FT	7680	7370	31550	17400	16710	22470	14050	15070	19370	3450	2480	1910

CAL YR 1984	TOTAL	51918	MEAN	142	MAX	3270	MIN	14	CFSM	1.07	IN.	14.52	AC-FT	103000
WTR YR 1985	TOTAL	80414	MEAN	220	MAX	3270	MIN	24	CFSM	1.65	IN.	22.49	AC-FT	159500

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968, 1977, January 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN DIS-SOLVED (MG/L AS N)
OCT												
02...	1205	1028	80020	29	324	7.00	22.5	19.5	--	--	--	--
NOV												
29...	1015	1028	80020	146	270	7.60	--	12.5	--	9.8	96	--
DEC												
17...	1300	1028	80020	390	240	7.10	21.5	14.0	--	9.3	93	--
JAN												
23...	1150	1028	80020	125	270	7.10	--	10.0	0.4	10.7	97	--
FEB												
28...	1615	1028	80020	386	230	6.80	15.5	11.5	--	9.2	87	--
MAR												
26...	1400	1028	80020	136	240	6.80	20.0	13.0	--	10.0	98	--
APR												
24...	1520	1028	80020	123	245	6.80	--	16.5	--	9.2	97	--
MAY												
15...	1530	1028	80020	183	290	6.80	27.5	17.5	--	8.0	86	--
JUN												
19...	1300	1028	80020	129	*246	7.00	--	19.0	--	--	--	--
JUL												
31...	1330	1028	80020	42	275	6.60	35.5	21.5	--	8.6	101	2.3
AUG												
26...	1050	1028	80020	43	275	6.60	--	21.0	--	7.7	89	--
SEP												
25...	1615	1028	80020	30	310	6.60	--	20.5	--	7.1	82	2.4

DATE	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
OCT											
02...	60	150	9	55	1.9	6.9	9	0.3	2.5	136	26
NOV											
29...	11	130	22	48	1.6	5.2	8	0.2	2.1	104	5.1
DEC											
17...	12	110	24	40	1.3	4.1	8	0.2	2.0	81	12
JAN											
23...	--	110	30	43	1.4	4.5	8	0.2	1.7	83	13
FEB											
28...	<10	92	20	35	1.2	4.0	8	0.2	1.7	72	22
MAR											
26...	<10	110	24	42	1.4	4.4	8	0.2	1.9	87	27
APR											
24...	42	110	23	43	1.4	4.6	8	0.2	2.1	90	28
MAY											
15...	<10	120	23	44	1.3	3.6	6	0.2	2.1	92	28
JUN											
19...	70	110	18	43	1.3	4.4	8	0.2	2.1	95	18
JUL											
31...	14	120	9	46	1.6	5.4	9	0.2	2.5	112	54
AUG											
26...	<10	130	20	51	1.6	5.8	8	0.2	2.5	114	55
SEP											
25...	<10	120	9	47	1.7	6.4	10	0.3	2.4	115	56

*SPECIFIC CONDUCTANCE, LAB (US/CM)

ARKANSAS RIVER BASIN

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT											
02...	5.6	13	<0.1	11	--	180	0.24	14	2.30	<0.2	0.05
NOV											
29...	7.0	9.2	<0.1	8.6	--	140	0.2	57	2.80	0.9	0.05
DEC											
17...	8.6	6.9	<0.1	8.8	--	120	0.16	127	0.83	0.5	0.05
JAN											
23...	6.9	7.9	--	--	116	--	--	--	--	--	--
FEB											
28...	7.3	6.3	<0.1	8.0	--	110	0.15	111	3.10	0.3	0.02
MAR											
26...	7.2	8.2	<0.1	7.7	--	120	0.17	46	2.60	0.3	0.01
APR											
24...	6.1	8.0	<0.1	8.5	--	130	0.17	42	2.30	0.9	0.03
MAY											
15...	6.9	6.5	<0.1	9.2	--	130	0.18	64	1.90	0.6	0.03
JUN											
19...	6.8	6.5	<0.1	9.7	--	130	0.18	46	2.00	<0.2	0.03
JUL											
31...	5.3	9.9	0.1	11	--	150	0.2	17	1.90	0.4	0.03
AUG											
26...	6.3	10	<0.1	11	--	160	0.21	18	2.00	<0.2	0.03
SEP											
25...	6.2	12	<0.1	11	--	160	0.21	13	2.20	0.2	0.03

07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

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, Hydrologic Unit 11070209, at left side of Robert S. Kerr dam on Neosho River, 2.0 mi northwest of Locust Grove, 3.5 mi downstream from Salina Creek, and at mile 47.3.

DRAINAGE AREA.--11,534 mi^2.

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

GAGE.--Remote-controlled indicator and non-recording gage. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam and concrete spillway controlled by seventeen 22-foot taintor gates. 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 gages, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 436,300 acre-ft Nov. 9, 1974, elevation, 635.56 ft: minimum since power pool first filled, 183,100 acre-ft Dec. 24, 1967, elevation, 617.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 394,100 acre-ft Feb. 26, elevation, 633.18 ft: minimum, 196,700 acre-ft Aug. 22, elevation, 618.66 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	619.32	203,800	-
Oct. 31	620.31	214,900	+11,100
Nov. 30	619.08	201,200	-13,700
Dec. 31	621.80	232,100	+30,900
CAL YR 84	-	-	+25,200
Jan. 31	619.80	209,100	-23,000
Feb. 28	632.27	378,800	+169,700
Mar. 31	624.87	270,300	-108,500
Apr. 30	620.65	218,800	-51,500
May 31	619.94	210,700	-8,100
June 30	621.52	228,800	+18,100
July 31	619.65	207,500	-21,300
Aug. 31	619.43	205,100	-2,400
Sept. 30	619.26	203,200	-1,900
WTR YR 85	-	-	-600

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'45", long 95°10'59", in SE 1/4 NW 1/4 sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 300 ft downstream from Robert S. Kerr Dam, 2.2 mi northwest of Locust Grove, 10 mi northeast of Chouteau, and at mile 47.2.

DRAINAGE AREA.--11,534 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 554.00 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 3, 1941, nonrecording gage at bridge on State Highway 33, 8.2 mi downstream, at datum 17.63 ft lower. Apr. 3, 1941 to Sept. 30, 1950, Oct. 1963 to Apr. 6, 1964, at site 2.5 mi downstream at datum 2.17 ft lower. Supplemental water-stage recorder Oct. 4, 1963, to July 10, 1973, at site 8.2 mi downstream.

REMARKS.--Estimated daily discharges: Jan. 1-8, Feb. 23 to Mar. 25. Records fair. Some regulation since 1940 by Lake O' The Cherokees (station 07190000), and completely regulated since 1963 by Lake Hudson (station 07191400).

AVERAGE DISCHARGE.--(Since regulation by Lake Hudson), 22 years (water years 1964-85), 7,995 ft^3/s, 5,792,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft^3/s May 20, 1943, gage height, 45.00 ft, site and datum then in use, from rating curve extended above 140,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily discharge, 12 ft^3/s Nov. 13, 1963 (caused by closure of Robert S. Kerr Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 134,000 ft^3/s Feb. 25, gage height, 34.38 ft; maximum gage height, 35.04 ft, Feb. 26 (backwater from Ft. Gibson Lake, station 07193000); minimum daily discharge, 167 ft^3/s Oct. 12-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	669	15200	245	34800	4250	44000	34900	23600	13500	13600	4880	12200
2	712	11600	3790	55700	662	38300	37800	22500	11200	16800	251	6830
3	334	8860	4960	64800	1040	34600	37400	24400	10600	17300	2690	18400
4	185	11000	3630	50600	1810	38400	37400	24300	10200	11000	320	9240
5	176	8290	3760	32700	222	47900	33700	19600	23400	15300	1530	13600
6	176	6110	4190	29400	4450	49700	29800	19300	31600	7070	7350	11700
7	284	1310	2020	29400	2470	49400	29600	13300	29800	12600	2890	9980
8	239	2660	2830	27000	4230	44700	28900	18100	34800	15500	4710	10900
9	173	3260	2210	28400	1740	37800	26800	15400	34600	7330	4950	12300
10	401	9070	4370	30500	5270	37500	17800	18000	37900	13300	516	12400
11	176	7210	246	28900	5910	36800	14100	20400	37800	8450	6880	11700
12	167	5850	838	16900	11000	34800	16500	16800	31900	3490	5330	14200
13	167	1390	6930	19600	8850	32000	4810	17100	35100	8010	4510	12500
14	170	2820	21300	21700	5720	28600	18100	20200	29200	4200	1450	13700
15	658	3140	20200	15300	8480	28700	12900	20600	20600	3120	1330	12700
16	2200	3110	13200	17600	6880	28800	12000	21000	15000	4620	2970	12200
17	4400	1810	19100	15900	6980	28000	13100	20900	17800	7670	4030	7360
18	6550	4050	13900	9720	5640	28100	8710	13300	19600	3990	3500	3470
19	1780	7520	11600	13600	5670	28000	13400	14000	20900	1650	806	3330
20	266	6710	17000	12900	7080	24100	7500	17400	17800	7510	1550	1140
21	8550	8250	19900	10700	12600	26600	13200	11100	17000	1780	9830	221
22	11100	8070	30900	8310	22000	22400	13100	10900	17200	5040	7580	4450
23	10500	4360	23500	15700	54000	23000	7730	12300	18800	292	15900	6560
24	8050	3740	17500	10600	101000	20500	13500	11400	24300	8660	11800	9150
25	10400	3610	8960	11800	125000	13600	5960	11800	21000	721	18200	12600
26	3720	1280	12200	10500	115000	8630	10500	6750	23800	3530	21700	11600
27	8890	1490	13300	9680	80800	17700	7040	13100	27100	2000	21800	10400
28	14600	1130	16900	13100	53200	16300	7970	12900	24300	2590	23300	11700
29	8140	4340	19300	3050	---	20700	7120	16500	24300	3320	22600	11800
30	9800	4970	17900	3040	---	31600	9050	7950	23800	7050	20800	10000
31	7800	---	25500	6130	---	31000	---	9870	---	4420	17000	---
TOTAL	121433	162210	362179	658030	661954	952230	530390	504770	704900	221913	252953	298331
MEAN	3917	5407	11680	21230	23640	30720	17680	16280	23500	7158	8160	9944
MAX	14600	15200	30900	64800	125000	49700	37800	24400	37900	17300	23300	18400
MIN	167	1130	245	3040	222	8630	4810	6750	10200	292	251	221
AC-FT	240900	321700	718400	1305000	1313000	1889000	1052000	1001000	1398000	440200	501700	591700

CAL YR 1984	TOTAL	3268207	MEAN	8930	MAX	47200	MIN	167	AC-FT	6482000
WTR YR 1985	TOTAL	5431293	MEAN	14880	MAX	125000	MIN	167	AC-FT	10773000

07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK

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, Hydrologic Unit 11070209, in control tower near left end of Fort Gibson Dam on Neosho River, 4.0 mi north of Fort Gibson, and at mile 7.7.

DRAINAGE AREA.--12,492 mi^2.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1970, published as Fort Gibson Reservoir near Fort Gibson.

REVISED RECORDS.--WSP 1731: 1950 (M).

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Jan. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-gravity and earth-fill dam. Spillway is concrete ogee-type weir controlled by thirty 40-foot tainter gates; outlet works consists of ten, 5-foot, 8-inch by 7-foot sluice gates. 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 U.S. Army Corps of Engineers.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,208,000 acre-ft Feb. 27, elevation, 580.45 ft: minimum, 341,300 acre-ft Feb. 8, elevation 552.71 ft.

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

552	328,500	566	650,900
558	447,000	571	812,100
561	516,600	581	1,234,000

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	357700	407400	370200	598500	383500	1122900	623500	455700	389500	406800	384500	404300
2	357500	409900	374500	672700	375800	1066100	610400	471700	389100	404100	372100	382600
3	357700	408300	373500	735700	368500	1007100	591600	478400	382800	401700	373900	388900
4	357200	411000	369600	753800	362200	981300	572100	479100	400100	397500	372000	376800
5	357200	405300	369800	724800	351500	981300	552200	469600	465600	394100	365600	376800
6	359600	395700	369800	692000	347100	965100	522100	459500	518300	390400	373500	377200
7	361300	377700	368700	658700	341500	950300	492600	440300	538600	372900	374500	372500
8	360300	367100	369800	627900	347400	926600	466000	427800	539300	378900	372500	372700
9	359800	365200	367300	597900	345800	892100	445100	410800	532600	367700	375600	377900
10	359800	370400	370000	579000	356800	859100	426300	403500	529800	373100	376400	376600
11	360700	370000	367100	561800	361500	833600	411800	408700	533600	373300	383900	380600
12	361300	369600	365200	528800	370800	804500	389500	407000	516100	363500	387100	386500
13	361600	357300	402900	502200	374900	790000	392500	404100	508000	372300	384300	396900
14	362800	358700	432500	482900	378500	768500	399300	408900	497200	374100	383500	399100
15	362400	360200	447400	450600	383900	747100	399100	410800	485600	369100	381200	394700
16	365800	361500	442500	435800	382600	724500	394100	417900	455100	366000	378500	388500
17	367900	366700	445100	420400	382600	701000	393700	422300	436000	369300	382800	381400
18	378900	375600	434300	398100	378300	678100	386500	410400	431700	372000	383900	375400
19	370800	375000	418900	393900	375400	657200	386900	397500	434000	367300	380100	375200
20	378700	373300	425200	388900	377600	640200	376800	403500	430600	379100	374700	370600
21	386500	376400	478900	377700	393900	630200	375600	406800	431700	378500	387900	366900
22	397900	372900	511600	366600	428000	612900	381600	411800	436600	383100	387700	368900
23	400300	367500	507700	379500	576600	594300	371400	412400	438100	373300	384900	380100
24	400300	367500	498600	384100	801700	574200	375800	406600	437900	377900	375600	383900
25	404100	369100	499100	384500	1020400	536100	363000	404300	423700	382800	379100	395100
26	393300	366000	504800	396900	1174300	487500	362600	394100	413700	385700	389100	395100
27	394100	365600	501500	398900	1204700	466700	370000	394900	417700	384500	393300	393100
28	409300	362800	491400	406200	1171500	456900	371800	395900	418500	384900	397300	391700
29	407600	366900	479400	392700	---	485200	374500	406800	420000	379700	400100	396300
30	409900	371600	467200	388300	---	588900	412700	393900	422500	385300	404900	392900
31	400900	---	516100	385700	---	623800	---	388500	---	385500	408700	---
MAX	409900	411000	516100	753800	1204700	1122900	623500	479100	539300	406800	408700	404300
MIN	357200	357300	365200	366600	341500	456900	362600	388500	382800	363500	365600	366900
(†)	555.82	554.33	560.98	555.06	579.70	565.06	556.39	555.20	556.86	555.05	556.20	555.42
(††)	+40,300	-29,300	+144,500	-130,400	+785,800	-547,700	-211,100	-24,200	+34,000	-37,000	+23,200	-15,800

CAL YR 1984 MAX 630600 MIN 342200 (††) +149,800
WTR YR 1985 MAX 1204700 MIN 341500 (††) +32,300

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK

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, Hydrologic Unit 11070209, on left bank 1.1 mi downstream from Fort Gibson Dam, 3.5 mi north of Fort Gibson, and at mile 6.6.

DRAINAGE AREA.--12,495 mi^2.

WATER-DISCHARGE RECORDS

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, National Geodetic Vertical Datum of 1929. May 11, 1950 to Aug. 20, 1951, nonrecording gage and Aug. 21, 1951 to June 11, 1952, water-stage recorder, at site 4.4 mi downstream at datum 8.00 ft lower and used as auxiliary gage since June 10, 1971.

REMARKS.--Estimated daily discharges: Oct. 14-16, Feb. 1-24. Records good. Flow completely regulated by Fort Gibson Lake (station 07193000).

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S. Army Corps of Engineers, records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--35 years, 7,953 ft^3/s, 5,762,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 223,000 ft^3/s May 26, 1957, gage height, 37.60 ft, minimum discharge, 12 ft^3/s Oct. 10, 1957, Aug. 23, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 43.0 ft, from high-water profile by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 87,300 ft^3/s Feb. 27, gage height, 22.49 ft; minimum daily discharge, 15 ft^3/s at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	14000	1560	4980	6000	79200	38000	15000	14100	22600	6170	16400
2	489	11100	15	24000	4540	71200	47000	19700	14100	19400	6500	16500
3	739	11600	6980	41900	4970	70100	49600	24200	14100	17800	649	16600
4	408	11500	7300	46900	5550	61800	48900	26700	14000	16300	1990	16500
5	15	11500	4080	46600	6140	52100	48100	26600	14100	16300	4540	14900
6	15	11500	3720	45700	6230	59000	46700	26400	18200	16100	4250	12600
7	15	11800	3220	45000	4840	62500	45300	26200	26200	15500	3000	11900
8	700	7840	3030	44100	2260	60500	44000	25700	37700	13900	5380	12100
9	479	5190	3250	43400	1900	56000	39100	24900	43000	14000	3200	11700
10	15	6500	3270	42700	1880	55400	30100	22500	42700	12500	785	11900
11	15	7840	2150	39000	4700	53000	23400	20500	42500	8150	1900	12200
12	15	6920	2320	35100	6790	51000	19500	20700	41900	8230	4160	12200
13	15	7090	6950	34200	6330	44800	15900	20500	41500	3450	6060	12200
14	15	4200	18400	33600	5780	40800	15900	20800	37200	3140	3880	14600
15	438	2440	22700	32800	5730	43800	15900	20600	31900	6070	1880	16100
16	2140	2230	22600	27300	7900	42800	16000	20400	31400	6440	3870	16000
17	2370	2430	22400	25200	7910	42500	14800	20900	28900	5350	1650	13900
18	4790	3700	22300	22300	6970	42900	13800	20700	23400	3340	1670	5970
19	5140	10500	22100	18500	7870	42200	14000	20600	20600	3080	3960	4620
20	4440	8430	18700	16300	7410	40600	14000	17300	20700	2260	4030	4310
21	5140	8100	18100	16400	7950	34900	13900	12500	18900	1980	2110	2130
22	7430	10900	23200	14300	12000	32800	13900	13200	16000	2690	9010	2280
23	9760	9770	30200	9750	11600	34800	13400	14100	19200	5600	17600	1510
24	9450	3650	25400	11300	8800	34100	13600	14100	26000	5760	17600	7140
25	9750	2400	16200	11100	30000	33200	12600	13900	30100	2030	17600	9170
26	10900	4090	10800	8070	53600	33500	11800	14200	29500	1590	17700	12000
27	9280	2150	14500	9460	76400	30600	8600	14300	27600	1940	21300	12000
28	9490	2260	23500	11100	82600	24300	8240	14400	25200	2140	23500	12000
29	8850	3290	27600	11100	---	20700	8120	14300	25300	5610	23500	11900
30	9750	2420	27500	6650	---	4300	9360	14000	25400	4160	21000	11700
31	12700	---	24600	7600	---	21600	---	14000	---	4240	16700	---
TOTAL	126003	207340	438645	786410	394650	1377000	713520	593900	801400	251650	257144	335030
MEAN	4065	6911	14150	25370	14090	44420	23780	19160	26710	8118	8295	11170
MAX	12700	14000	30200	46900	82600	79200	49600	26700	43000	22600	23500	16600
MIN	15	2150	15	4980	1880	4300	8120	12500	14000	1590	649	1510
AC-FT	249900	411300	870100	1560000	782800	2731000	1415000	1178000	1590000	499100	510000	664500

CAL YR 1984	TOTAL	3663656	MEAN	10010	MAX	46600	MIN	15	AC-FT	7267000
WTR YR 1985	TOTAL	6282692	MEAN	17210	MAX	82600	MIN	15	AC-FT	12462000

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to Jan. 1982.
WATER TEMPERATURE: October 1951 to September 1963, October 1973 to Jan. 1982.

REMARKS: Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV												
28...	1200	1028	80020	2260	286	7.90	15.5	11.0	5.5	749	11.4	105
JAN												
22...	1200	1028	80020	14300	270	7.30	--	4.0	13	760	13.0	99
APR												
30...	1315	1028	80020	9360	250	6.80	--	20.0	28	745	6.0	68
MAY												
30...	1300	1028	80020	14000	*259	7.00	26.5	24.0	7.5	739	7.8	--
JUL												
23...	1215	1028	80020	5600	280	6.40	--	30.5	4.2	746	6.0	82
SEP												
24...	1250	1028	80020	7140	290	6.80	--	29.0	12	752	6.0	79

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)
NOV											
28...	K13	K7	130	19	42	6.5	9.0	13	0.4	2.9	138
JAN											
22...	K15	240	120	30	41	5.1	7.3	11	0.3	2.5	114
APR											
30...	64	520	100	22	34	4.6	6.1	11	0.3	2.7	100
MAY											
30...	240	100	110	31	38	4.8	6.1	10	0.3	2.6	102
JUL											
23...	--	--	130	30	41	6.0	7.2	11	0.3	3.1	--
SEP											
24...	1200	K31	120	32	39	5.6	7.1	11	0.3	3.3	--

DATE	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV											
28...	0	100	113	2.8	32	9.5	0.2	2.2	180	170	0.24
JAN											
22...	0	84	93	9.1	27	7.4	0.2	6.2	152	150	0.21
APR											
30...	0	70	82	25	28	6.1	0.1	8.0	144	140	0.2
MAY											
30...	0	78	84	16	30	6.5	0.1	6.2	149	140	0.2
JUL											
23...	--	97	--	75	33	7.1	0.1	6.0	172	160	0.23
SEP											
24...	--	89	--	27	27	6.8	0.2	4.8	153	150	0.21

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
28...	1100	0.18	0.12	0.15	0.6	0.05	--	0.01	0.01	0.03	10
JAN											
22...	5870	1.00	0.08	0.1	0.4	0.07	--	0.04	0.04	0.12	--
APR											
30...	3640	1.10	0.05	0.06	0.8	0.10	--	0.05	0.04	0.12	170
MAY											
30...	5630	0.90	0.09	0.12	0.4	0.06	0.18	0.02	0.03	0.09	<10
JUL											
23...	2600	0.27	0.04	0.05	2.1	0.03	0.09	0.01	0.01	0.03	--
SEP											
24...	2950	0.30	0.07	0.09	0.4	0.07	0.21	0.04	0.04	0.12	20

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
28...	<1	67	<0.5	<1	3	<3	2	5	5	6	<1
JAN											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
30...	<1	56	<0.5	<1	<1	<3	3	50	<1	<4	5
MAY											
30...	<1	60	<0.5	<1	<1	<3	4	12	3	4	2
JUL											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
24...	1	70	<0.5	1	<1	<3	4	6	3	<4	4

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
28...	<0.1	<10	3	<1	<1	230	<6	14	11	67	86
JAN											
22...	--	--	--	--	--	--	--	--	13	502	86
APR											
30...	<0.1	<10	2	<1	<1	150	<6	8	28	708	89
MAY											
30...	<0.1	<10	4	<1	<1	140	<6	21	4	151	63
JUL											
23...	--	--	--	--	--	--	--	--	2	30	81
SEP											
24...	<0.1	<10	3	<1	<1	190	<6	29	6	116	82

ARKANSAS RIVER BASIN

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'12", in NE 1/4 sec.18, T.19 N., R.26 E., Adair County, Hydrologic Unit 11110103, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 mi north of Watts, 4.5 mi downstream from Cincinnati Creek, and at mile 106.2.

DRAINAGE AREA.--635 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 893.78 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20-22, Jan. 31 to Feb. 2. Records good. Some regulations at low flow by Lake Frances Dam, 0.8 mile above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

AVERAGE DISCHARGE.--30 years, 568 ft^3/s, 12.16 in/yr, 411,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 68,000 ft^3/s July 25, 1960, gage height, 25.96 ft, from rating curve extended above 51,000 ft^3/s; minimum, 8.6 ft^3/s Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	0745	6,520	11.33	Feb. 23	2215	*23,600	*21.01
Dec. 21	1800	22,400	20.50 from HWM	Mar. 30	1700	20,300	19.52
Jan. 1	1000	19,200	19.00 from HWM	June 5	2300	7,760	12.34

Minimum discharge, 101 ft^3/s Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	710	853	14300	511	1300	3390	3520	439	268	180	166
2	113	2290	723	4340	508	1210	2260	1960	417	260	175	159
3	108	1210	640	2630	502	1070	1770	1340	429	255	169	153
4	105	909	576	1970	480	1750	1480	1040	518	250	165	150
5	107	739	558	1650	469	2180	1300	866	4740	244	487	150
6	137	628	534	1410	465	1470	1170	734	4690	238	1240	146
7	197	564	495	1260	451	1230	1020	665	3770	232	1010	145
8	198	503	492	1130	437	1100	895	657	2090	229	707	142
9	158	471	552	1040	427	1020	826	632	1410	227	395	141
10	157	425	558	1270	566	927	769	596	1080	224	312	141
11	237	397	526	1200	883	852	736	562	934	220	270	152
12	197	367	489	1010	740	803	698	526	799	218	238	154
13	193	348	1460	913	663	950	669	533	690	211	214	157
14	201	345	4860	858	643	2580	649	537	601	204	228	166
15	195	384	2360	820	614	1690	623	518	560	206	233	167
16	691	427	1790	772	580	1350	595	474	526	201	239	163
17	903	413	1610	755	555	1150	567	450	484	199	228	161
18	592	3150	1230	721	535	999	541	432	454	195	236	155
19	669	3730	1170	688	542	904	526	417	429	192	385	153
20	2460	1830	1230	640	596	850	501	403	403	189	324	151
21	5630	1280	15500	629	557	952	484	404	387	187	261	150
22	1950	983	9410	576	568	1100	525	497	384	181	237	147
23	1220	823	3560	570	9490	960	672	557	381	178	224	147
24	916	715	2370	561	12000	845	640	499	356	175	281	146
25	1180	649	1800	545	3880	764	564	446	334	174	251	149
26	1910	617	1490	531	2540	713	517	416	320	180	218	151
27	1250	2730	1320	521	1830	993	532	394	307	203	203	155
28	967	1840	1180	526	1460	1180	646	400	296	215	191	160
29	796	1260	1100	522	---	1190	580	437	288	213	187	159
30	675	1020	2060	515	---	13900	1870	496	277	195	175	157
31	612	---	5010	518	---	8330	---	502	---	182	170	---
TOTAL	24846	31757	67506	45391	43492	56312	28015	21910	28793	6545	9833	4593
MEAN	801	1059	2178	1464	1553	1817	934	707	960	211	317	153
MAX	5630	3730	15500	14300	12000	13900	3390	3520	4740	268	1240	167
MIN	105	345	489	515	427	713	484	394	277	174	165	141
CFSM	1.26	1.67	3.43	2.31	2.45	2.86	1.47	1.11	1.51	.33	.50	.24
IN.	1.46	1.86	3.95	2.66	2.55	3.30	1.64	1.28	1.69	.38	.58	.27
AC-FT	49280	62990	133900	90030	86270	111700	55570	43460	57110	12980	19500	9110

CAL YR 1984	TOTAL	258408	MEAN	706	MAX	15500	MIN	32	CFSM	1.11	IN.	15.14	AC-FT	512600
WTR YR 1985	TOTAL	368993	MEAN	1011	MAX	15500	MIN	105	CFSM	1.59	IN.	21.62	AC-FT	731900

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'54", long 94°42'30", in SW 1/4 sec.24, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at bridge on State Highway 33, 6.0 mi southeast of Kansas, 6.0 mi downstream from Sager Creek, and at mile 2.8.

DRAINAGE AREA.--110 mi^2.

PERIOD OF RECORD.--August 1955 to September 1976, April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good below 4,000 ft^3/s and poor above. Small diversion above station for irrigation.

AVERAGE DISCHARGE.--27 years, (water years 1956-76, 80-85), 113 ft^3/s 13.94 in/yr, 81,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,400 ft^3/s June 8, 1974, gage height, 19.42 ft; minimum daily discharge, 0.6 ft^3/s Oct. 11-13, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 20	1915	2,960	8.91	Feb. 23	1415	3,960	9.34
Dec. 13	1330	3,740	9.22	Mar. 30	1115	5,110	9.91
Dec. 21	1045	*11,300	*12.32	June 5	0745	2,800	8.85
Dec. 31	2200	4,690	9.71				

Minimum daily discharge 26 ft^3/s Sept. 8-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	142	112	2320	114	374	851	1220	99	58	35	32
2	31	184	103	1000	111	319	664	706	103	56	34	30
3	30	145	97	725	108	281	554	510	95	55	32	30
4	29	130	89	596	107	575	461	391	324	55	31	30
5	29	119	89	489	107	536	421	315	1900	51	72	29
6	55	108	84	418	104	422	357	258	885	50	255	28
7	55	99	81	366	101	359	305	223	704	49	137	27
8	42	94	81	323	99	317	264	195	508	48	91	26
9	44	91	82	299	98	281	241	168	381	47	71	26
10	53	86	82	318	129	246	217	149	318	45	58	28
11	50	81	83	283	148	226	204	138	258	43	50	27
12	47	77	87	250	138	203	186	133	210	42	44	29
13	47	74	1630	234	136	615	174	150	179	41	41	45
14	46	72	1220	222	131	758	165	175	158	40	39	43
15	51	79	710	207	126	538	156	150	149	38	41	35
16	215	78	559	193	115	424	148	134	133	39	39	33
17	320	88	437	181	110	356	141	121	118	38	36	32
18	292	343	357	171	109	307	135	112	107	38	37	30
19	402	390	320	161	110	268	128	106	99	37	41	29
20	1640	292	309	148	108	251	124	97	94	36	37	29
21	1340	226	5110	141	134	238	120	164	89	36	35	27
22	662	178	1330	136	195	214	144	335	93	36	35	27
23	444	149	816	131	2290	195	150	199	87	36	38	30
24	326	130	631	128	1430	180	130	159	82	35	77	32
25	288	117	492	124	862	169	117	138	79	38	68	37
26	268	112	410	119	647	163	117	121	74	66	52	38
27	244	149	351	122	511	406	138	114	70	53	46	34
28	218	140	311	119	420	379	143	119	67	44	41	32
29	186	130	285	117	---	532	132	128	63	40	38	33
30	161	122	912	117	---	3570	1610	126	60	38	36	36
31	141	---	2070	118	---	1380	---	108	---	36	34	---
TOTAL	7789	4225	19330	10276	8798	15082	8697	7162	7586	1364	1721	944
MEAN	251	141	624	331	314	487	290	231	253	44.0	55.5	31.5
MAX	1640	390	5110	2320	2290	3570	1610	1220	1900	66	255	45
MIN	29	72	81	117	98	163	117	97	60	35	31	26
CFSM	2.28	1.28	5.67	3.01	2.85	4.43	2.64	2.10	2.30	.40	.50	.29
IN.	2.63	1.43	6.54	3.48	2.98	5.10	2.94	2.42	2.57	.46	.58	.32
AC-FT	15450	8380	38340	20380	17450	29920	17250	14210	15050	2710	3410	1870

CAL YR 1984	TOTAL	52244	MEAN	143	MAX	5110	MIN	15	CFSM	1.30	IN.	17.67	AC-FT	103600
WTR YR 1985	TOTAL	92974	MEAN	255	MAX	5110	MIN	26	CFSM	2.32	IN.	31.44	AC-FT	184400

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'17", long 94°55'15", in SE 1/4 sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of span on downstream side of pier of bridge, 0.2 mi downstream from U.S. Highway 62, 2.2 mi northeast of Tahlequah, 6.5 mi upstream from Baron Fork, and at mile 55.8.

DRAINAGE AREA.--959 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 664.14 ft, U.S. Army Corps of Engineers datum. Prior to Feb. 23, 1939, nonrecording gage.

REMARKS.--Estimated daily discharges: Oct. 21-22. Records good.

AVERAGE DISCHARGE.--50 years, 877 ft^3/s 12.42 in/yr, 635,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft^3/s May 10, 1950, gage height, 27.94 ft, from rating curve extended above 77,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft^3/s Oct. 10-14, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1916 reached a stage of about 26 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 22	1400	*45,700	*20.35	Mar. 31	0600	12,600	12.65
Jan. 2	0700	21,100	15.56	May 1	0700	9,610	11.29
Feb. 24	2300	25,300	16.56	June 6	2000	10,300	11.61

Minimum discharge, 140 ft^3/s Oct 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	1230	1590	13100	813	2710	10100	9260	686	465	209	283
2	182	1350	1370	17700	812	2380	5420	6470	642	440	191	268
3	163	2850	1190	6880	781	2170	3920	3730	581	421	187	255
4	150	2040	1060	4510	750	2480	3180	2650	643	403	184	246
5	144	1620	976	3520	731	3640	2740	2070	4640	388	192	235
6	151	1360	911	2930	716	3630	2410	1710	9360	372	260	226
7	192	1180	856	2520	695	2830	2140	1450	7650	363	1960	224
8	205	1050	810	2230	671	2410	1890	1290	5670	345	1930	219
9	236	929	784	2020	654	2140	1710	1170	3650	333	1620	211
10	237	839	825	1940	682	1940	1580	1060	2780	324	1040	205
11	220	748	848	2090	825	1760	1480	974	2330	315	761	201
12	239	683	822	1960	1230	1610	1400	902	1980	307	608	205
13	277	626	2450	1740	1180	1700	1330	910	1710	296	506	248
14	266	581	7750	1610	1090	2940	1270	1040	1510	285	445	289
15	289	615	7520	1510	1040	4130	1200	960	1360	272	397	269
16	478	608	4340	1450	997	3120	1150	880	1220	262	383	259
17	979	696	3300	1380	936	2560	1090	800	1120	258	370	249
18	1790	1480	2740	1320	891	2190	1040	732	1030	253	366	238
19	1960	4690	2270	1250	860	1930	987	680	931	243	363	229
20	2650	5270	2150	1190	854	1770	946	639	865	236	410	223
21	4000	3210	8660	1110	970	1690	902	618	801	233	512	218
22	7000	2370	33700	1030	1080	1720	940	804	804	234	446	217
23	3800	1890	14700	980	2960	1820	998	1030	769	227	398	229
24	2570	1580	5500	944	15400	1660	1120	957	723	220	432	222
25	2050	1370	3730	912	15300	1510	1100	848	678	232	519	246
26	2150	1240	2850	879	6170	1400	1010	730	627	254	509	250
27	2740	1180	2320	867	4240	1580	998	653	582	247	443	240
28	2170	3050	2010	850	3230	2070	1030	621	544	247	386	233
29	1800	2570	1820	834	---	2390	1130	648	514	252	353	253
30	1540	1920	2240	826	---	7880	4060	651	488	250	324	256
31	1340	---	4870	812	---	12600	---	673	---	233	303	---
TOTAL	42172	50825	126962	82894	66558	86360	60271	47610	56888	9210	17007	7146
MEAN	1360	1694	4096	2674	2377	2786	2009	1536	1896	297	549	238
MAX	7000	5270	33700	17700	15400	12600	10100	9260	9360	465	1960	289
MIN	144	581	784	812	654	1400	902	618	488	220	184	201
CFSM	1.42	1.77	4.27	2.79	2.48	2.91	2.09	1.60	1.98	.31	.57	.25
IN.	1.64	1.97	4.92	3.22	2.58	3.35	2.34	1.85	2.21	.36	.66	.28
AC-FT	83650	100800	251800	164400	132000	171300	119500	94430	112800	18270	33730	14170

CAL YR 1984	TOTAL	423638	MEAN	1157	MAX	33700	MIN	71	CFSM	1.21	IN.	16.43	AC-FT 840300
WTR YR 1985	TOTAL	653903	MEAN	1792	MAX	33700	MIN	144	CFSM	1.87	IN.	25.37	AC-FT 1297000

07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in SE 1/4 sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream side of second pier from left bank of bridge on State Highway 51, 0.4 mi southeast of Eldon, 6.0 mi downstream from Tyner Creek, and at mile 8.8.

DRAINAGE AREA.--307 mi^2.

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, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 22-25, 27-29, Dec. 5-13, 15-31. Records fair.

AVERAGE DISCHARGE.--37 years, 288 ft^3/s, 12.73 in/yr, 208,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft^3/s Apr. 3, 1957, gage height, 20.33 ft, maximum gage height, 22.73 ft, Apr. 20, 1976; minimum, 1.7 ft^3/s Oct. 25, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1945, reached a stage of 23.8 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 21	0115	6,310	11.94	Mar. 30	1530	13,400	16.13
Feb. 23	2045	*15,300	*17.07				

Minimum daily discharge, 18 ft^3/s Sept. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	473	473	4920	390	926	2330	2530	185	119	40	49
2	50	1000	418	2570	379	845	1590	1490	203	114	36	43
3	48	760	371	1800	368	740	1200	1030	223	109	33	39
4	46	614	323	1430	359	1200	964	782	209	106	32	36
5	44	519	290	1220	357	1500	821	625	1090	101	44	33
6	45	448	270	1080	354	1120	705	517	1390	96	65	30
7	47	399	250	980	348	948	598	438	2200	91	308	28
8	48	362	230	888	337	831	515	383	1370	86	211	27
9	48	331	220	822	334	741	455	338	955	82	154	25
10	48	303	215	826	352	666	413	301	735	76	128	25
11	50	283	210	790	494	606	383	275	601	72	111	23
12	55	259	205	720	535	550	356	258	494	70	99	22
13	65	244	700	673	506	559	332	262	410	66	88	27
14	68	229	2310	643	494	854	324	302	347	60	80	33
15	77	229	1700	613	485	797	313	275	309	59	76	32
16	169	244	1300	587	475	725	292	241	278	101	74	30
17	345	262	1100	570	460	668	271	221	252	76	69	27
18	356	1690	900	552	450	605	258	209	231	63	66	23
19	497	2240	760	529	439	556	243	200	214	57	80	21
20	1720	1280	700	502	436	532	234	191	200	55	94	19
21	4090	886	3500	474	434	580	225	188	188	52	90	18
22	1440	650	2800	457	442	690	246	203	188	52	82	18
23	998	540	2000	448	5530	622	442	207	190	50	78	21
24	770	460	1400	436	5700	561	427	200	181	49	104	22
25	851	420	1100	429	2610	515	360	187	167	51	99	35
26	1280	400	980	416	1790	478	322	177	155	56	93	45
27	954	1300	820	408	1330	558	320	170	146	56	82	45
28	782	1000	740	409	1050	619	329	187	138	53	71	40
29	663	720	680	398	---	644	312	226	133	51	63	47
30	571	566	1200	394	---	8050	2070	221	127	49	58	50
31	501	---	2300	392	---	4270	---	200	---	44	53	---
TOTAL	16779	19111	30465	27376	27238	33556	17650	13034	13509	2222	2761	933
MEAN	541	637	983	883	973	1082	588	420	450	71.7	89.1	31.1
MAX	4090	2240	3500	4920	5700	8050	2330	2530	2200	119	308	50
MIN	44	229	205	392	334	478	225	170	127	44	32	18
CFSM	1.76	2.07	3.20	2.88	3.17	3.52	1.92	1.37	1.47	.23	.29	.10
IN.	2.03	2.32	3.69	3.32	3.30	4.07	2.14	1.58	1.64	.27	.33	.11
AC-FT	33280	37910	60430	54300	54030	66560	35010	25850	26800	4410	5480	1850

CAL YR 1984	TOTAL	133346	MEAN	364	MAX	4090	MIN	14	CFSM	1.19	IN.	16.16	AC-FT	264500
WTR YR 1985	TOTAL	204634	MEAN	561	MAX	8050	MIN	18	CFSM	1.83	IN.	24.80	AC-FT	405900

07197500 TENKILLER FERRY LAKE NEAR GORE, OK

LOCATION.--Lat 35°35'43", long 95°02'57", in SE 1/4 SW 1/4 sec.14, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, at gage tower on right bank, 0.6 mi upstream from Tenkiller Ferry Dam on Illinois River, 6.0 mi northeast of Gore, and at mile 12.8.

DRAINAGE AREA.--1,610 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam. Spillway consists of 590 ft concrete modified ogee-type 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 U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,218.000 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 837,600 acre-ft Mar. 8, elevation, 645.08 ft; minimum, 555,100 acre-ft Oct. 1, elevation, 623.85 ft.

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

622	533,900	637	720,800
627	591,800	642	791,900
632	654,100	647	867,600

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555100	681300	686100	803200	677300	804500	827900	704200	652800	686900	649800	656600
2	555500	683100	682700	834100	677300	806700	824900	713000	652100	685800	648900	655500
3	555500	687800	678600	831600	677300	811200	815700	713400	652300	684600	648900	654600
4	555800	690900	676100	823700	675300	821600	803800	710100	653200	685100	649900	654100
5	556000	693100	674300	818400	673100	831100	791600	705400	661600	684100	650700	652500
6	556600	693300	671400	811000	670900	836200	778700	699700	679600	684500	650000	650800
7	556600	691300	668800	802600	668400	837500	765000	695000	697000	685000	652100	650800
8	556900	689200	668500	793400	665900	837600	753700	691600	707500	683300	653200	651000
9	557300	687000	668800	783500	665600	836400	743000	687500	712700	680300	654600	649900
10	557500	687000	666200	773500	666300	834600	732100	683200	714800	679900	656500	650300
11	557700	687000	663400	763200	664800	832600	722700	681900	716100	678500	657500	650600
12	558400	683400	661000	752900	663800	829500	715800	680800	715500	676900	657200	650600
13	558900	679800	670300	741800	663700	828100	709400	678200	714500	674800	655000	652800
14	560400	677900	683400	730900	662900	827900	702400	675800	713000	673100	654800	653300
15	561000	676100	696800	721900	663400	830200	696100	674300	715200	671500	655100	653300
16	563900	674000	703700	714100	666400	834300	690800	672700	713900	670900	655700	653400
17	565200	678500	707200	706200	668800	833800	686500	671000	712500	669400	655900	653400
18	569400	687800	708300	701100	667600	829900	684500	668600	709500	667900	656300	653100
19	574500	694900	708800	700200	667300	823000	683300	668600	706400	666300	656700	652400
20	584600	701800	711600	701000	666200	815100	682100	666500	703300	664600	657000	651300
21	609300	703500	731600	699700	664600	804700	680800	664700	699600	662900	657600	651500
22	629700	703100	789000	697200	664300	794100	681500	662700	699500	661200	657200	651500
23	639000	701500	817600	694500	690600	783500	682300	661200	698500	658600	658200	652400
24	645700	698500	816200	692100	733600	772600	682000	659200	696100	656500	658600	652300
25	652700	695200	813700	689600	776500	760800	680300	659300	693400	655700	658900	653600
26	658700	692900	811200	689900	794000	750300	675800	658900	690800	655300	659600	653700
27	667100	690800	811500	690100	801200	739000	675700	659300	688800	655300	659300	653400
28	673500	690900	804000	587600	803200	730700	675100	657600	686900	655400	659100	654000
29	676800	690900	790000	684500	---	728200	673000	654800	686900	653700	658300	655300
30	677400	689100	775700	681700	---	758600	684400	654000	687800	652100	658200	655100
31	677900	---	776800	679400	---	805000	---	652900	---	649900	657600	---
MAX	677900	703500	817600	834100	803200	837600	827900	713400	716100	686900	659600	656600
MIN	555100	674000	661000	587600	662900	728200	673000	652900	652100	649900	648900	649900
(†)	633.82	634.67	640.97	633.93	642.77	642.89	634.31	631.91	634.57	631.68	632.27	632.08
(††)	+122,400	+11,200	+87,700	-97,400	+123,800	+1,800	-120,600	-31,500	+34,900	-37,900	+7,700	-2,500

CAL YR 1984 MAX 817600 MIN 553800 (††) +206,300
WTR YR 1985 MAX 837600 MIN 555100 (††) +99,600

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07198000 ILLINOIS RIVER NEAR GORE, OK

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, Hydrologic Unit 11110104, on right bank 4.5 mi downstream from Tenkiller Ferry Dam, 4.5 mi northeast of Gore, and at mile 8.5.

DRAINAGE AREA.--1,626 mi^2.

WATER-DISCHARGE RECORDS

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, National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to Feb. 19, 1952.

REMARKS.--Estimated daily discharges: Feb. 10 to Mar. 4. Records fair. Except for 16 mi^2 intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (station 07197500).

COOPERATION.--Gage-height record and 8 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--47 years (water years 1925, 1940-85), 1,488 ft^3/s, 1,078,000 acre-ft/yr adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft^3/s May 11, 1950, gage height, 29.6 ft, from floodmark, present site and datum, from rating curve extended above 42,000 ft^3/s by velocity-area studies; minimum discharge, 2.0 ft^3/s Sept. 16, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,500 ft^3/s Jan. 3, gage height, 12.65 ft; minimum daily discharge 65 ft^3/s Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	1090	3680	5360	2380	3700	5510	2610	1170	1070	510	773
2	135	1110	3690	6840	1120	3300	9540	5000	1170	1090	590	697
3	115	850	3700	12300	1090	1100	10500	5750	1190	1120	115	679
4	97	1030	3010	11300	2270	1190	10700	5730	1200	151	100	494
5	93	1090	2450	8220	2300	1260	10800	5720	1080	1080	380	998
6	99	1460	2510	8170	2190	2700	10300	5700	2180	153	750	1080
7	92	2440	2530	8130	2210	3800	9970	5160	2130	138	200	506
8	93	2490	1390	8100	2240	3830	8620	3960	2350	1290	1140	143
9	92	2420	1030	8030	1160	3870	7860	3960	2700	1330	665	672
10	93	980	2450	8010	1100	3870	7830	3950	2740	1280	115	124
11	103	958	2360	7980	2100	3860	7060	2420	2500	1110	104	113
12	93	2530	2550	8030	2200	3860	5600	2230	2690	1090	650	116
13	95	2640	2940	8030	1930	3870	5590	3540	2650	1390	1590	129
14	100	2630	3920	8000	2030	3920	5590	2880	2490	1230	700	113
15	95	2580	3860	6860	1570	3940	5190	2360	1530	1280	475	117
16	105	2030	3890	5920	70	2190	4430	2210	2250	1140	132	111
17	95	1090	3870	5910	75	3820	4030	2200	2280	1110	111	115
18	99	1010	3810	4760	2200	4850	2890	1760	2630	1050	94	361
19	101	3120	3820	1930	1850	6230	2270	1700	2660	1160	93	540
20	191	3740	3970	1650	2000	6980	2270	2270	2700	1050	100	778
21	170	3690	4300	2280	2300	8120	2250	2160	2710	1050	149	124
22	940	3660	5210	2650	2200	8040	2260	2080	1730	1090	620	121
23	568	3630	9620	2820	1600	7970	1790	2170	1570	1600	125	114
24	363	3620	10400	2720	70	7910	2230	2340	2170	1240	130	149
25	104	3600	7120	2650	750	7890	2620	1180	2160	1100	123	128
26	149	3620	6030	1290	700	7890	3950	1160	2190	1070	125	120
27	109	3680	3760	1360	3000	7890	2330	1150	1650	270	486	117
28	65	3690	6830	2610	3700	8000	2240	2160	1620	108	533	122
29	826	3680	11200	2730	---	7800	3190	2260	634	1180	696	115
30	1830	3680	11100	2830	---	5890	2270	1710	142	1150	357	126
31	1580	---	10100	2470	---	4010	---	1690	---	1320	587	---
TOTAL	8784	73838	147100	169940	48405	153550	161680	91170	58866	31490	12545	9895
MEAN	283	2461	4745	5482	1729	4953	5389	2941	1962	1016	405	330
MAX	1830	3740	11200	12300	3700	8120	10800	5750	2740	1600	1590	1080
MIN	65	850	1030	1290	70	1100	1790	1150	142	108	93	111
AC-FT	17420	146500	291800	337100	96010	304600	320700	180800	116800	62460	24880	19630

CAL YR 1984	TOTAL	575118	MEAN	1571	MAX	11200	MIN	48	AC-FT	1141000
WTR YR 1985	TOTAL	967263	MEAN	2650	MAX	12300	MIN	65	AC-FT	1919000

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.
WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)
OCT									
30...	1341	1028	80020	3600	190	7.00	27.0	17.5	6.0
NOV									
29...	1330	1028	80020	3680	188	7.20	16.5	13.5	4.0
MAR									
05...	1045	1028	80020	3610	172	7.40	--	6.0	10
APR									
02...	1030	1028	80020	8820	165	6.40	22.5	11.0	15
MAY									
03...	1115	1028	80020	5730	165	7.10	22.0	13.0	7.0
JUL									
09...	1200	1028	80020	272	*247	--	39.0	18.0	2.0
SEP									
24...	1325	1028	80020	876	220	7.50	22.0	16.0	2.0

DATE	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT								
30...	705	30.0	340	97	14	36	1.8	4.4
NOV								
29...	700	9.0	94	90	14	33	1.8	4.7
MAR								
05...	760	11.9	96	74	17	27	1.6	4.1
APR								
02...	750	11.3	104	79	22	29	1.6	3.6
MAY								
03...	750	9.4	91	77	18	28	1.6	3.5
JUL								
09...	750	6.4	--	88	24	32	2.0	12
SEP								
24...	760	4.9	50	84	10	31	1.6	4.8

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT								
30...	9	0.2	2.2	83	16	9.5	6.9	127
NOV								
29...	10	0.2	2.4	76	9.3	10	6.6	110
MAR								
05...	10	0.2	2.4	57	4.4	11	6.8	102
APR								
02...	9	0.2	2.1	57	44	14	4.9	110
MAY								
03...	9	0.2	2.3	59	9.1	10	5.2	103
JUL								
09...	22	0.6	2.5	64	--	9.4	23	135
SEP								
24...	11	0.2	2.2	74	4.5	7.9	7.8	120

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°32'37", long 98°19'03", SE 1/4 NW 1/4 sec.1, T.12 N., R.11 W., Caddo County, Hydrologic Unit 11090202, on downstream side of pier near center of bridge on U.S. Highway 281, 3.3 mi east of Bridgeport, 1.6 mi downstream from Lumpmouth Creek, and at mile 263.3.

DRAINAGE AREA.--25,276 mi^2, of which 4,801 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,360.00 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1947, at site 3.8 mi upstream at datum 24.25 ft higher. Oct. 1, 1947 to Sept. 30, 1948, nonrecording gage and Oct. 1, 1948 to September 1964, Oct. 1, 1969 to Dec. 17, 1980 at site 4.0 mi upstream and at datum 24.25 ft higher.

REMARKS.--Estimated daily discharges: Oct. 20, 28-29, Oct. 31 to Nov. 15, 30, Dec. 5-13, Jan. 1-5, 10-15, Mar. 5-6, 9-10, 28, Apr. 5, 21-27, May 1-21, 24-29, June 1-2, June 15 to July 1, 3-21, 26-28, Aug. 1-19. Records poor. Occasional slight regulation by dams in New Mexico and Texas since 1964.

AVERAGE DISCHARGE.--36 years (water years 1945-64, 1970-85), 363 ft^3/s, 263,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft^3/s June 23, 1948, gage height, 14.60 ft, from floodmarks, from rating curve extended above 50,000 ft^3/s, no flow at times in 1946, 1951-56, 1964, 1970, 1984, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft, a higher stage probably occurred during flood in October 1904.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 500 ft^3/s Feb. 23. No peaks above base of 6,000 ft^3/s; no flow Aug. 25 to Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	15	61	88	108	366	235	255	31	22	3.0	.00
2	5.6	14	103	71	100	328	220	201	28	22	2.5	.00
3	5.6	15	90	61	95	288	210	178	27	22	2.2	.00
4	5.0	16	72	75	90	265	195	142	40	20	2.0	.00
5	5.8	16	50	97	87	240	188	121	158	20	1.8	.00
6	5.8	15	27	122	83	220	182	100	110	19	1.6	.00
7	5.4	16	24	151	77	200	176	115	65	18	1.5	.00
8	5.2	16	23	149	74	185	170	98	42	18	1.3	.00
9	5.2	16	21	144	71	178	164	85	44	18	1.2	.00
10	5.6	16	20	135	68	165	160	76	72	17	1.2	.00
11	5.4	16	20	130	66	145	158	69	143	16	1.1	.00
12	5.8	15	19	125	65	136	155	65	69	16	1.0	.00
13	6.3	16	19	116	64	126	195	61	42	16	.90	.00
14	7.5	15	60	112	62	120	175	57	37	15	.85	.00
15	11	16	46	105	60	112	162	54	34	15	2.1	.00
16	10	16	62	91	60	110	158	51	33	14	2.1	.00
17	10	34	68	97	58	108	156	49	30	14	1.4	.00
18	11	27	97	102	57	104	154	47	28	13	1.2	.00
19	10	19	141	74	56	100	152	45	27	13	1.0	.00
20	11	19	145	67	90	200	150	43	26	12	.84	4.6
21	13	18	124	65	150	398	149	102	25	12	.68	34
22	13	19	120	64	270	350	150	80	24	16	.56	44
23	12	18	118	63	500	300	149	72	24	15	.46	36
24	12	19	113	62	470	270	148	63	23	14	.38	13
25	12	19	106	62	450	255	146	55	23	13	.00	9.4
26	17	19	98	68	430	240	147	45	22	13	.00	8.5
27	16	18	93	72	400	235	205	43	22	11	.00	8.3
28	16	18	86	78	380	324	200	42	22	8.8	.00	10
29	15	19	91	96	---	306	190	41	21	6.7	.00	23
30	15	32	83	120	---	281	184	37	21	5.2	.00	17
31	16	---	80	115	---	250	---	34	---	3.9	.00	---
TOTAL	299.8	547	2280	2977	4541	6905	5183	2526	1313	458.6	32.87	207.80
MEAN	9.67	18.2	73.5	96.0	162	223	173	81.5	43.8	14.8	1.06	6.93
MAX	17	34	145	151	500	398	235	255	158	22	3.0	44
MIN	5.0	14	19	61	56	100	146	34	21	3.9	.00	.00
AC-FT	595	1080	4520	5900	9010	13700	10280	5010	2600	910	65	412

CAL YR 1984	TOTAL	58822.80	MEAN	161	MAX	1650	MIN	.00	AC-FT	116700
WTR YR 1985	TOTAL	27271.07	MEAN	74.7	MAX	500	MIN	.00	AC-FT	54090

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-61, 1964, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1948 to September 1960, October 1969 to April 1982.
WATER TEMPERATURE: October 1948 to September 1960, October 1969 to April 1982.

REMARKS: Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV											
09...	1400	1028	80020	1360	16	1100	8.40	24.0	18.0	10.4	117
JAN											
16...	1330	1028	80020	1360	91	1950	8.20	14.0	5.0	12.8	105
FEB											
28...	1230	1028	80020	1360	380	2280	8.10	11.0	8.5	10.8	97
MAR											
28...	1230	1028	80020	1360	324	2250	8.00	34.0	18.0	9.2	104
MAY											
01...	1300	1028	80020	1360	252	2350	7.90	26.0	20.0	8.2	95
29...	1200	1028	80020	1360	41	2350	8.40	34.0	29.0	8.6	120
JUL											
02...	1400	1028	80020	1360	22	*1360	8.50	31.0	30.0	8.9	--
31...	1210	1028	80020	1360	3.9	1020	7.30	28.0	30.0	--	--
SEP											
24...	1400	1028	80020	1360	13	1100	7.20	27.0	22.0	10.0	120

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
NOV											
09...	500	310	150	30	--	--	--	2.6	188	1.4	380
JAN											
16...	620	400	170	47	190	40	3	4.5	219	2.7	--
FEB											
28...	660	--	170	57	250	--	4	--	--	--	--
MAR											
28...	600	--	150	54	240	--	4	--	--	--	--
MAY											
01...	660	480	170	57	230	43	4	6.4	182	4.4	490
29...	690	--	180	58	260	--	4	--	--	--	--
JUL											
02...	510	400	140	38	90	28	2	4.7	103	0.6	440
31...	440	--	130	28	46	--	1	--	--	--	--
SEP											
24...	510	330	160	26	41	--	0.8	--	180	22	300

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
NOV										
09...	21	12	829	--	--	--	--	--	--	<0.01
JAN										
16...	--	18	--	--	--	--	0.96	2.58	0.04	0.02
FEB										
28...	--	18	--	--	--	--	--	--	--	--
MAR										
28...	--	18	--	--	--	--	--	0.38	--	0.02
MAY										
01...	370	16	1490	1500	2.0	1010	--	0.09	<0.01	0.02
29...	--	18	--	--	--	--	--	--	--	<0.01
JUL										
02...	120	12	945	910	1.3	55	--	--	<0.01	<0.01
31...	--	16	--	--	--	--	--	--	<0.01	<0.01
SEP										
24...	20	21	709	--	--	--	0.36	0.32	0.04	0.03

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
NOV										
09...	--	--	0.51	--	0.09	0.12	--	0.29	0.89	--
JAN										
16...	0.07	1.00	2.60	--	0.25	0.32	--	0.13	0.4	3
FEB										
28...	--	--	--	--	--	--	--	--	--	4
MAR										
28...	0.07	--	0.40	--	0.07	0.09	--	0.05	0.15	5
MAY										
01...	0.07	0.60	0.11	--	0.10	0.13	--	0.03	0.09	--
29...	--	--	<0.10	--	0.07	0.09	--	0.04	0.12	--
JUL										
02...	--	<0.10	<0.10	0.07	0.08	0.1	0.08	<0.01	--	10
31...	--	<0.10	<0.10	0.05	0.06	0.08	0.14	0.11	0.34	14
SEP										
24...	0.1	0.40	0.35	0.11	0.13	0.17	0.41	0.45	1.4	8

DATE	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV										
09...	--	5	100	0	1	2	<1	10	<3	--
JAN										
16...	--	3	110	<0.5	<1	<1	7	<10	<3	--
FEB										
28...	--	2	130	2	3	2	12	<10	<3	--
MAR										
28...	--	3	140	<0.5	2	<1	18	<10	<3	--
MAY										
01...	--	3	190	<0.5	4	3	<5	<10	<3	--
29...	--	5	170	<2	1	<3	--	<10	<9	--
JUL										
02...	3	7	120	<0.5	<2	<1	<1	<10	<3	--
31...	2	12	99	<0.5	1	<1	10	<10	<3	--
SEP										
24...	1	7	140	<0.5	<1	<1	<1	<10	<3	4

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)
NOV										
09...	<10	23	3	<10	33	13	--	--	<0.1	<10
JAN										
16...	10	5	4	<10	65	18	0.1	--	<0.1	<10
FEB										
28...	<10	5	4	<10	59	42	<0.1	--	<0.1	<10
MAR										
28...	<10	9	8	<10	80	19	0.2	--	<0.1	<10
MAY										
01...	<10	97	13	<10	76	75	--	--	<0.1	<10
29...	<30	28	6	<30	83	6	--	--	--	<30
JUL										
02...	<10	5	2	<10	41	5	0.1	0	0.1	<10
31...	<10	4	<1	<10	34	7	0.2	--	<0.1	<10
SEP										
24...	<10	38	<1	<10	30	4	--	--	--	<10

DATE	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	PCB, DIS-SOLVED (UG/L)	PCB, TOTAL (UG/L)	PCN DISSOLV (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, DIS-SOLVED (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, DIS-SOLVED (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, DIS-SOLVED (UG/L)
NOV												
09...	1200	11	26	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.1	<0.1	<0.01
JAN												
16...	1800	7	18	--	--	--	--	--	--	--	--	--
FEB												
28...	2100	7	23	--	--	--	--	--	--	--	--	--
MAR												
28...	1900	11	6	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.1	<0.1	<0.01
MAY												
01...	2100	11	21	--	--	--	--	--	--	--	--	--
29...	2300	<18	<9	--	--	--	--	--	--	--	--	--
JUL												
02...	1400	18	10	--	--	--	--	--	--	--	--	--
31...	1100	21	9	--	--	--	--	--	--	--	--	--
SEP												
24...	1000	14	21	--	--	--	--	--	--	--	--	--

DATE	DDD, TOTAL (UG/L)	DDE, DIS-SOLVED (UG/L)	DDE, TOTAL (UG/L)	DDT, DIS-SOLVED (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, DIS-SOLVED (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN DIS-SOLVED (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN DISSOLV (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, DIS-SOLVED (UG/L)
NOV												
09...	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
JAN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MAY												
01...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
24...	--	--	--	--	--	--	--	--	--	--	--	--

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ENDRIN, TOTAL (UG/L)	ETHION DISSOLV (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, DIS-SOLVED (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE DIS-SOLVED (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE DIS-SOLVED (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, DIS-SOLVED (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR DISSOLV (UG/L)
NOV												
09...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JAN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MAY												
01...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
24...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, DIS-SOLVED (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL-TRI-THION DISSOLV (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, DIS-SOLVED (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, DIS-SOLVED (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE DISSOLV (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, DIS-SOLVED (UG/L)
NOV												
09...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<1.0
JAN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
28...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<1.0
MAY												
01...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
24...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOX-APHENE, TOTAL (UG/L)	TRI-THION DISSOLV (UG/L)	TOTAL TRI-THION (UG/L)	2,4-D, DIS-SOLVED (UG/L)	2,4-D, TOTAL (UG/L)	2,4-DP DISSOLV (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T DIS-SOLVED (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, DIS-SOLVED (UG/L)	SILVEX, TOTAL (UG/L)
NOV											
09...	<1	<0.01	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	<1	<0.01	<0.01	0.06	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
24...	--	--	--	--	--	--	--	--	--	--	--

07229300 WALNUT CREEK AT PURCELL, OK

LOCATION.--Lat 34°59'56", long 97°22'00", NW 1/4 NW 1/4 sec.13, T.6 N., R.2 W., McClain County, Hydrologic Unit 11090202, 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 mi^2.

PERIOD OF RECORD.--Water years 1951-55, 1958-65 (occasional low-flow measurements). October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,014.57 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1984, datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-12, 15-19, 22-24, 26, 31, Nov. 3-16, Nov. 20 to Dec. 11, 17-18, 21-29, Jan. 1-16, Jan. 18 to Feb. 20, Feb. 25 to Mar. 3, 5-18, 22-26, 28-29, Mar. 31 to Apr. 10, 12-21, 24-28, June 8-10, 12-26, June 28 to July 14, 16-21, 24-25, July 27 to Aug. 4, 10-13, 16-23, Aug. 25 to Sept. 2, 4-9, 11-12, 15-21, 24-28, 30. Records poor.

AVERAGE DISCHARGE.--20 years, 61.2 ft^3/s, 44,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,700 ft^3/s Oct. 20, 1983, gage height, 21.40 ft (datum then in use), from rating curve extended above 20,000 ft on basis of multiple contracted opening measurement at peak; no flow at times in 1966-67, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 27	1015	3,670	11.61	Mar. 4	1400	5,070	12.95
Dec. 13	2000	3,600	11.54	Mar. 20	1600	11,300	16.35
Dec. 16	0130	3,920	11.85	Mar. 27	0400	3,460	11.40
Dec. 31	2145	*14,300	*17.36	Apr. 29	2200	6,350	13.92
Feb. 23	1200	14,200	17.33				

Minimum daily discharge 3.5 ft^3/s Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	109	21	2970	80	900	285	351	56	56	28	18
2	4.6	85	20	400	76	700	245	245	54	52	26	17
3	4.4	79	20	235	84	600	218	201	53	49	25	17
4	4.3	60	19	173	96	1470	202	174	89	46	23	17
5	4.3	41	20	150	90	800	190	154	1680	44	225	16
6	4.3	32	20	140	85	600	178	139	1060	42	130	16
7	4.2	29	19	131	90	500	167	180	409	40	222	16
8	4.1	27	18	126	100	400	156	137	266	39	123	16
9	4.0	25	17	119	110	300	148	117	170	37	74	16
10	3.9	24	16	180	128	250	143	108	115	36	40	16
11	3.7	23	15	160	120	200	138	106	465	35	26	16
12	3.6	22	15	130	110	180	133	96	213	34	24	16
13	3.5	21	1120	120	100	250	160	451	180	33	21	152
14	36	21	423	110	96	200	140	158	150	32	93	189
15	29	20	558	100	90	180	130	91	132	31	144	46
16	24	20	1400	98	88	162	124	86	110	30	92	26
17	21	319	98	90	86	152	122	81	100	30	60	22
18	18	207	81	88	84	141	120	78	110	29	51	20
19	18	80	65	85	81	135	119	76	100	28	46	19
20	204	43	56	84	90	5670	118	76	95	28	42	18
21	45	34	276	82	740	1140	118	80	88	27	39	17
22	33	30	110	80	965	520	812	79	85	56	36	19
23	31	27	87	82	10700	175	385	74	81	111	34	145
24	58	25	74	90	1800	135	171	71	76	65	87	70
25	174	24	67	100	1200	125	152	68	74	38	53	26
26	84	22	63	90	1000	112	142	66	72	110	31	23
27	1420	30	62	110	800	1320	132	64	287	63	25	22
28	160	26	60	135	700	320	125	64	98	45	23	20
29	44	24	59	120	---	200	2540	67	71	38	22	384
30	34	22	58	110	---	996	1390	64	61	34	20	100
31	30	---	7030	94	---	360	---	57	---	30	19	---
TOTAL	2516.7	1551	11967	6782	19789	19193	9203	3859	6600	1368	1904	1515
MEAN	81.2	51.7	386	219	707	619	307	124	220	44.1	61.4	50.5
MAX	1420	319	7030	2970	10700	5670	2540	451	1680	111	225	384
MIN	3.5	20	15	80	76	112	118	57	53	27	19	16
AC-FT	4990	3080	23740	13450	39250	38070	18250	7650	13090	2710	3780	3010

CAL YR 1984	TOTAL	25411.49	MEAN	69.4	MAX	7030	MIN	.00	AC-FT	50400
WTR YR 1985	TOTAL	86247.7	MEAN	236	MAX	10700	MIN	3.5	AC-FT	171100

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

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, Hydrologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek, 13 mi east of Norman, and at mile 96.4.

DRAINAGE AREA.--256 mi^2.

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

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by 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, 1,200 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 diverted to Del City, Midwest City, and Norman.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 172,900 acre-ft Mar. 5, 1985, elevation, 1,046.61 ft; minimum since conservation pool first reached, 15,370 acre-ft Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 172,900 acre-ft Mar. 5, elevation, 1,046.61 ft; minimum, 106,800 acre-ft Oct. 13, elevation, 1,036.82 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)*	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1037.04	108,100	-	-
Oct. 31	1037.62	111,400	+3,300	1,512
Nov. 30	1037.87	112,900	+1,500	768
Dec. 31	1039.84	124,800	+11,900	653
CAL YR 84	-	-	+4,700	14,972
Jan. 31	1039.38	121,900	-2,900	642
Feb. 28	1046.11	168,900	+47,000	564
Mar. 31	1046.59	172,700	+3,800	802
Apr. 30	1044.83	159,100	-13,600	1,284
May 31	1041.21	133,600	-25,500	1,563
June 30	1040.36	128,100	-5,500	1,594
July 31	1038.85	118,700	-9,400	1,884
Aug. 31	1038.32	115,500	-3,200	1,844
Sept. 30	1038.22	114,900	-600	1,469
WTR YR 85	-	-	+6,800	14,619

*Elevation at 0800 on the following day.

351307097132401 LAKE THUNDERBIRD DAMSITE CROSS SECTION SITE NO. 1

LOCATION.--Lat 35°13'07", long 97°13'24".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1335	1028	1028	1.00	108000	339	7.80	20.0	730	6.9	79
01...	1336	1028	1028	5.00	108000	338	--	20.0	730	7.2	83
01...	1337	1028	1028	10.0	108000	336	--	20.0	730	7.2	83
01...	1338	1028	1028	15.0	108000	337	--	19.5	730	7.1	81
01...	1339	1028	1028	20.0	108000	337	7.80	19.5	730	7.0	80
01...	1340	1028	1028	25.0	108000	337	--	19.5	730	7.0	80
01...	1341	1028	1028	30.0	108000	336	--	19.5	730	6.9	79
01...	1342	1028	1028	35.0	108000	337	--	19.0	730	7.0	79
01...	1343	1028	1028	40.0	108000	338	7.80	19.0	730	6.8	77
JUL											
23...	1415	1028	1028	1.00	120000	327	8.60	28.0	730	8.7	116
23...	1417	1028	1028	5.00	120000	329	8.60	27.0	730	8.6	113
23...	1419	1028	1028	10.0	120000	329	8.40	26.0	730	6.5	84
23...	1421	1028	1028	15.0	120000	330	8.20	25.5	730	6.0	77
23...	1423	1028	1028	20.0	120000	331	7.80	24.0	730	2.8	35
23...	1425	1028	1028	25.0	120000	330	7.80	23.0	730	0.8	10
23...	1427	1028	1028	32.0	120000	326	7.60	21.0	730	0.2	2
SEP											
27...	1350	1028	1028	1.00	113000	353	7.80	23.5	750	6.9	83
27...	1353	1028	1028	5.00	113000	355	7.90	23.0	750	6.9	82
27...	1356	1028	1028	10.0	113000	355	7.90	22.5	750	6.9	81
27...	1359	1028	1028	15.0	113000	356	7.90	22.5	750	6.9	81
27...	1402	1028	1028	20.0	113000	356	7.90	22.5	750	6.9	81
27...	1405	1028	1028	25.0	113000	357	8.00	22.0	750	6.8	79
27...	1408	1028	1028	30.0	113000	358	8.00	22.0	750	6.8	79
27...	1411	1028	1028	34.0	113000	358	8.00	22.0	750	6.6	77

351320097131801 LAKE THUNDERBIRD DAMSITE CROSS SECTION SITE NO. 2

LOCATION.--Lat 35°13'20", long 97°13'18".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1300	1028	80020	1.00	108000	348	7.80	20.0	730	7.6	87
01...	1301	1028	1028	5.00	108000	341	--	20.0	730	7.4	85
01...	1302	1028	1028	10.0	108000	339	--	20.0	730	7.3	84
01...	1303	1028	1028	15.0	108000	340	--	20.0	730	7.2	83
01...	1304	1028	80020	20.0	108000	338	7.80	20.0	730	7.2	83
01...	1305	1028	1028	25.0	108000	338	--	19.5	730	7.2	82
01...	1306	1028	1028	30.0	108000	337	--	19.5	730	7.2	82
01...	1307	1028	1028	35.0	108000	340	--	19.5	730	7.1	81
01...	1308	1028	80020	40.0	108000	338	7.80	19.0	730	7.0	79
JAN											
15...	1507	1028	80020	1.00	133000	343	8.10	4.5	750	11.0	86
15...	1509	1028	1028	5.00	133000	323	7.80	4.5	750	10.9	86
15...	1511	1028	1028	10.0	133000	334	7.80	4.5	750	11.1	87
15...	1513	1028	1028	15.0	133000	335	8.00	4.0	750	11.1	86
15...	1515	1028	1028	20.0	133000	345	8.10	4.0	750	11.2	87
15...	1517	1028	80020	25.0	133000	351	8.10	4.0	750	11.6	90
15...	1519	1028	1028	30.0	133000	355	8.10	4.0	750	11.7	91
15...	1521	1028	1028	35.0	133000	345	8.00	4.0	750	11.6	90
15...	1523	1028	1028	40.0	133000	347	8.00	4.0	750	11.2	87
15...	1525	1028	1028	45.0	133000	349	8.00	4.0	750	11.0	85
15...	1527	1028	80020	48.0	133000	349	8.00	4.0	750	10.7	83
MAR											
21...	1235	1028	80020	1.00	171000	307	7.60	10.5	730	9.6	90
JUL											
23...	1315	1028	80020	1.00	120000	330	8.60	27.5	730	8.5	113
23...	1317	1028	1028	5.00	120000	327	8.60	27.0	730	8.3	109
23...	1319	1028	1028	10.0	120000	329	8.40	26.0	730	7.2	93
23...	1321	1028	1028	15.0	120000	329	8.20	25.5	730	5.2	67
23...	1323	1028	1028	20.0	120000	332	7.80	24.0	730	3.2	40
23...	1325	1028	80020	25.0	120000	330	7.80	22.5	730	0.3	4
23...	1327	1028	1028	30.0	120000	331	7.70	21.5	730	0.1	1
23...	1331	1028	1028	40.0	120000	335	7.60	20.0	730	0.1	1
23...	1333	1028	1028	45.0	120000	338	7.60	19.0	730	0.1	1
23...	1335	1028	80020	49.0	120000	350	7.60	18.0	730	0.1	1
23...	1329	1028	1028	35.0	120000	331	7.60	20.5	730	0.1	1
SEP											
27...	1250	1028	80020	1.00	113000	359	7.90	22.5	750	6.9	81
27...	1255	1028	1028	5.00	113000	360	7.90	22.0	750	6.9	80
27...	1300	1028	1028	10.0	113000	359	7.90	21.5	750	6.9	80
27...	1305	1028	1028	15.0	113000	368	8.00	21.0	750	7.0	80
27...	1310	1028	1028	20.0	113000	361	8.00	21.5	750	7.0	81
27...	1315	1028	80020	25.0	113000	361	8.00	21.5	750	6.9	80
27...	1320	1028	1028	30.0	113000	362	8.00	21.5	750	6.9	80
27...	1325	1028	1028	35.0	113000	361	8.00	21.5	750	6.9	80
27...	1328	1028	1028	40.0	113000	360	8.00	21.5	750	7.0	81
27...	1330	1028	80020	42.0	113000	359	8.00	21.5	750	7.0	81

351320097131801 LAKE THUNDERBIRD DAMSITE CROSS SECTION SITE NO. 2--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	RESERVOIR STORAGE (AC-FT)	TURBIDITY (NTU)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT									
01...	1300	1.00	108000	9.5	2.4	K1	K1	K1	170
01...	1304	20.0	108000	14	--	--	--	--	170
01...	1308	40.0	108000	630	--	--	--	--	170
JAN									
15...	1507	1.00	133000	28	--	--	--	--	150
15...	1517	25.0	133000	29	--	--	--	--	150
15...	1527	48.0	133000	52	--	--	--	--	110
MAR									
21...	1235	1.00	171000	53	0	K20	K30	--	--
JUL									
23...	1315	1.00	120000	4.0	--	--	--	--	150
23...	1325	25.0	120000	29	--	--	--	--	150
23...	1335	49.0	120000	75	--	--	--	--	150
SEP									
27...	1250	1.00	113000	15	--	--	--	--	150
27...	1315	25.0	113000	16	--	--	--	--	150
27...	1330	42.0	113000	140	--	--	--	--	160

DATE	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT									
01...	9	35	21	16	16	0.5	4.1	165	5.0
01...	9	35	21	15	15	0.5	4.0	165	5.0
01...	9	35	21	15	15	0.5	3.8	165	5.0
JAN									
15...	13	32	18	13	15	0.5	3.8	141	2.2
15...	10	31	18	13	15	0.5	3.7	142	2.2
15...	--	33	7.8	27	33	1	3.7	142	2.7
MAR									
21...	--	--	--	--	--	--	--	187	9.1
JUL									
23...	12	32	17	12	14	0.4	3.3	138	0.7
23...	12	31	17	14	17	0.5	3.5	135	4.1
23...	4	32	17	11	13	0.4	3.1	146	7.1
SEP									
27...	6	33	17	12	14	0.4	3.6	146	3.5
27...	6	33	17	12	14	0.4	3.5	146	2.8
27...	14	34	18	13	15	0.5	3.4	145	2.8

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT									
01...	10	20	217	9	0.09	0.01	0.10	0.01	--
01...	11	21	213	--	--	--	--	--	--
01...	11	21	223	--	--	--	--	--	--
JAN									
15...	11	17	191	--	--	--	--	--	--
15...	8.2	17	179	--	--	--	--	--	--
15...	10	17	182	--	--	--	--	--	--
MAR									
21...	--	--	173	29	0.18	0.02	0.20	0.12	0.58
JUL									
23...	9.5	12	165	--	--	--	--	--	--
23...	11	13	181	--	--	--	--	--	--
23...	8.1	12	204	--	--	--	--	--	--
SEP									
27...	18	16	235	--	--	--	--	--	--
27...	9.9	15	195	--	--	--	--	--	--
27...	9.6	16	190	--	--	--	--	--	--

351320097131801 LAKE THUNDERBIRD DAMSITE CROSS SECTION SITE NO. 2--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT								
01...	<0.2	--	--	0.02	<0.01	--	4.9	5.0
01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
JAN								
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
MAR								
21...	0.7	0.9	4.0	0.06	0.01	0.03	3.6	2.7
JUL								
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
SEP								
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--

DATE	TIME	OOCYSTIS	CRUCIGENIA	SCENEDESMUS	GOLENKINIA	CYCLOTELLA	MELOSIRA	STEPHANODISCUS	NAVICULA	DACTYLOCOCCOPSIS	LYNGBYA	OSCILLATORIA	ANABAENA
OCT													
01...	1300	32	22	22	11	120	86	54	11	11	54	43	22

351333097131201 LAKE THUNDERBIRD DAMSITE CROSS SECTION NO. 3

LOCATION.--Lat 35°13'33", long 97°13'12".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1250	1028	1028	1.00	108000	348	7.60	20.0	730	7.5	86
01...	1251	1028	1028	5.00	108000	340	--	20.0	730	7.2	83
01...	1252	1028	1028	10.0	108000	339	--	20.0	730	7.2	83
01...	1253	1028	1028	15.0	108000	339	7.80	20.0	730	7.1	82
01...	1254	1028	1028	20.0	108000	338	--	20.0	730	7.1	82
01...	1255	1028	1028	25.0	108000	339	--	19.5	730	7.0	80
01...	1256	1028	1028	30.0	108000	338	--	19.5	730	7.1	81
01...	1257	1028	1028	34.0	108000	339	7.70	19.5	730	6.9	79
JAN											
15...	1554	1028	1028	1.00	133000	356	8.10	4.5	750	11.3	89
15...	1556	1028	1028	5.00	133000	351	8.10	4.5	750	11.1	87
15...	1558	1028	1028	10.0	133000	352	8.10	4.5	750	11.1	87
15...	1600	1028	1028	15.0	133000	354	8.10	4.0	750	11.6	90
15...	1602	1028	1028	20.0	133000	352	8.10	4.0	750	11.7	91
15...	1604	1028	1028	25.0	133000	354	8.20	4.0	750	11.6	90
15...	1606	1028	1028	30.0	133000	352	7.90	4.0	750	11.5	89
15...	1608	1028	1028	35.0	133000	353	8.10	4.0	750	11.5	89
15...	1610	1028	1028	40.0	133000	351	8.20	4.0	750	11.1	86
JUL											
23...	1250	1028	1028	1.00	120000	333	8.60	27.5	730	8.6	114
23...	1252	1028	1028	5.00	120000	325	8.60	27.0	730	8.0	105
23...	1254	1028	1028	10.0	120000	327	8.40	26.5	730	7.5	98
23...	1256	1028	1028	15.0	120000	333	8.40	26.0	730	5.8	75
23...	1258	1028	1028	20.0	120000	329	7.80	24.5	730	3.0	38
23...	1300	1028	1028	25.0	120000	332	7.60	23.0	730	0.5	6
23...	1302	1028	1028	30.0	120000	335	7.60	22.0	730	0.2	2
23...	1304	1028	1028	33.0	120000	333	7.60	21.0	730	0.1	1
SEP											
27...	1225	1028	1028	1.00	113000	358	7.70	22.0	750	6.9	80
27...	1228	1028	1028	5.00	113000	359	7.80	22.0	750	6.8	79
27...	1231	1028	1028	10.0	113000	359	7.90	22.0	750	6.8	79
27...	1233	1028	1028	15.0	113000	360	7.90	21.5	750	6.8	78
27...	1236	1028	1028	20.0	113000	360	7.90	21.5	750	6.9	80
27...	1239	1028	1028	25.0	113000	360	7.90	21.5	750	6.9	80
27...	1242	1028	1028	30.0	113000	359	8.00	21.5	750	6.8	78
27...	1245	1028	1028	33.0	113000	362	8.00	21.5	750	7.0	81

351317097145101 LAKE THUNDERBIRD LITTLE RIVER CROSS SECTION

LOCATION.--Lat 35°13'17", long 97°14'51".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1215	1028	1028	1.00	108000	344	--	19.5	730	7.6	87
01...	1216	1028	1028	5.00	108000	343	--	20.0	730	7.5	86
01...	1217	1028	1028	10.0	108000	341	--	20.0	730	7.5	86
01...	1218	1028	1028	15.0	108000	341	--	20.0	730	7.5	86
01...	1219	1028	1028	20.0	108000	339	--	19.5	730	7.4	84
01...	1220	1028	1028	25.0	108000	337	--	19.0	730	7.4	83
01...	1221	1028	1028	30.0	108000	339	--	18.5	730	7.4	83
01...	1222	1028	1028	35.0	108000	338	--	18.5	730	7.4	83
01...	1223	1028	1028	40.0	108000	339	--	18.0	730	7.4	82
01...	1224	1028	1028	41.0	108000	339	--	18.0	730	7.2	80
JAN											
15...	1153	1028	1028	1.00	133000	332	8.00	4.0	750	10.8	84
15...	1156	1028	1028	5.00	133000	334	8.00	4.0	750	10.7	83
15...	1158	1028	1028	10.0	133000	336	8.00	4.0	750	11.1	86
15...	1200	1028	1028	15.0	133000	323	8.00	4.0	750	11.0	85
15...	1202	1028	1028	20.0	133000	338	7.90	4.0	750	11.2	87
15...	1205	1028	1028	25.0	133000	333	8.00	4.0	750	11.4	88
15...	1207	1028	1028	30.0	133000	336	8.00	4.0	750	11.4	88
15...	1210	1028	1028	37.0	133000	335	8.10	4.0	750	11.6	90
JUL											
23...	1140	1028	1028	1.00	120000	337	8.60	27.5	730	8.9	118
23...	1142	1028	1028	5.00	120000	334	8.60	27.0	730	8.4	110
23...	1144	1028	1028	10.0	120000	332	8.50	26.5	730	7.8	102
23...	1146	1028	1028	15.0	120000	332	8.20	26.0	730	6.9	89
23...	1148	1028	1028	20.0	120000	335	7.80	24.5	730	2.5	31
23...	1150	1028	1028	25.0	120000	335	7.70	24.0	730	2.0	25
23...	1152	1028	1028	30.0	120000	340	7.60	22.0	730	0.1	1
23...	1154	1028	1028	35.0	120000	343	7.60	21.5	730	0.1	1
SEP											
27...	1055	1028	1028	1.00	113000	362	7.80	21.5	750	7.2	83
27...	1057	1028	1028	5.00	113000	362	7.80	21.0	750	7.1	81
27...	1059	1028	1028	10.0	113000	361	7.90	21.5	750	7.0	81
27...	1101	1028	1028	15.0	113000	362	7.90	21.5	750	7.0	81
27...	1103	1028	1028	20.0	113000	361	7.90	21.5	750	6.8	78
27...	1106	1028	1028	25.0	113000	362	7.90	21.0	750	6.6	75
27...	1109	1028	1028	30.0	113000	364	7.90	21.0	750	6.5	74
27...	1112	1028	1028	33.0	113000	365	8.00	20.5	750	6.3	71

351255097151001 LAKE THUNDERBIRD CLEAR CREEK CROSS SECTION

LOCATION.--Lat 35°12'55", long 97°15'10".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1200	1028	1028	1.00	108000	340	7.60	19.5	730	7.9	90
01...	1201	1028	1028	5.00	108000	341	--	19.5	730	7.9	90
01...	1202	1028	1028	10.0	108000	341	--	19.5	730	7.8	89
01...	1203	1028	1028	15.0	108000	339	7.80	19.5	730	7.8	89
01...	1204	1028	1028	20.0	108000	338	--	19.5	730	7.7	88
01...	1205	1028	1028	25.0	108000	337	--	19.5	730	7.7	88
01...	1206	1028	1028	29.0	108000	338	7.70	18.0	730	7.7	85
JAN											
15...	1030	1028	1028	1.00	133000	341	7.80	4.0	750	13.4	104
15...	1037	1028	1028	5.00	133000	347	8.00	4.0	750	11.4	88
15...	1042	1028	1028	10.0	133000	339	7.90	4.0	750	10.8	84
15...	1047	1028	1028	15.0	133000	339	8.00	4.0	750	10.5	81
15...	1050	1028	1028	20.0	133000	335	7.70	4.0	750	10.0	78
15...	1052	1028	1028	25.0	133000	320	7.60	4.0	750	10.2	79
15...	1054	1028	1028	30.0	133000	337	7.60	4.0	750	10.2	79
15...	1057	1028	1028	37.0	133000	339	7.90	4.0	750	10.1	78
JUL											
23...	1105	1028	1028	1.00	120000	338	8.60	27.5	730	8.6	114
23...	1107	1028	1028	5.00	120000	325	8.60	27.0	730	8.5	112
23...	1109	1028	1028	10.0	120000	327	8.50	26.5	730	8.1	106
23...	1111	1028	1028	15.0	120000	327	8.20	26.0	730	6.3	81
23...	1113	1028	1028	20.0	120000	333	7.80	25.0	730	2.7	34
23...	1115	1028	1028	25.0	120000	332	7.60	23.0	730	0.1	1
23...	1117	1028	1028	31.0	120000	334	7.60	22.0	730	0.2	2
SEP											
27...	0930	1028	1028	1.00	113000	385	7.80	20.0	750	7.0	78
27...	0935	1028	1028	5.00	113000	376	7.90	20.5	750	7.0	79
27...	0940	1028	1028	10.0	113000	369	7.90	20.5	750	7.0	79
27...	0945	1028	1028	15.0	113000	369	7.90	20.5	750	7.0	79
27...	0950	1028	1028	20.0	113000	367	7.90	20.5	750	7.0	79
27...	0955	1028	1028	25.0	113000	367	8.00	20.5	750	7.0	79
27...	1000	1028	1028	30.0	113000	368	8.00	20.5	750	6.8	77
27...	1005	1028	1028	33.0	113000	367	8.00	20.5	750	6.0	68

351318097155901 LAKE THUNDERBIRD LITTLE RIVER ABOVE CLEAR CREEK

LOCATION.--Lat 35°13'18", long 97°15'59".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Samples were collected in a Kemmerer Sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SAMPLING DEPTH (FEET)	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT											
01...	1130	1028	80020	1.00	108000	343	7.80	20.0	730	7.6	87
01...	1131	1028	1028	5.00	108000	340	--	20.0	730	7.5	86
01...	1132	1028	1028	10.0	108000	341	--	20.0	730	7.5	86
01...	1133	1028	1028	15.0	108000	340	7.90	19.5	730	7.4	84
01...	1134	1028	1028	20.0	108000	340	--	19.5	730	7.4	84
01...	1135	1028	1028	25.0	108000	340	7.80	18.0	730	7.2	80
JAN											
15...	1119	1028	1028	1.00	133000	323	8.00	3.5	750	10.7	82
15...	1121	1028	1028	5.00	133000	317	8.10	3.5	750	11.2	86
15...	1123	1028	1028	10.0	133000	315	8.00	3.5	750	11.3	87
15...	1125	1028	1028	15.0	133000	319	8.00	3.5	750	11.4	87
15...	1127	1028	1028	20.0	133000	319	8.00	3.5	750	11.5	88
15...	1129	1028	1028	25.0	133000	318	8.00	3.5	750	11.5	88
15...	1131	1028	1028	30.0	133000	319	8.00	3.5	750	11.3	87
MAR											
21...	1145	1028	80020	1.00	171000	299	7.80	11.0	730	9.8	93
JUL											
23...	1030	1028	1028	1.00	120000	346	8.60	28.0	730	8.0	107
23...	1032	1028	1028	5.00	120000	336	8.60	27.0	730	7.3	96
23...	1034	1028	1028	10.0	120000	340	8.30	26.5	730	5.5	72
23...	1036	1028	1028	15.0	120000	336	8.00	26.0	730	5.0	65
23...	1038	1028	1028	20.0	120000	340	7.70	25.5	730	4.0	51
23...	1040	1028	1028	22.0	120000	337	7.60	25.0	730	3.2	41
SEP											
27...	1030	1028	1028	1.00	113000	364	7.70	21.0	750	6.8	78
27...	1033	1028	1028	5.00	113000	362	7.80	21.0	750	6.9	79
27...	1036	1028	1028	10.0	113000	362	7.80	21.0	750	6.9	79
27...	1039	1028	1028	15.0	113000	362	7.90	21.0	750	6.8	78
27...	1042	1028	1028	20.0	113000	362	7.90	21.0	750	6.8	78
27...	1045	1028	1028	23.0	113000	365	7.90	20.5	750	6.2	70

ARKANSAS RIVER BASIN

351318097155901 LAKE THUNDERBIRD LITTLE RIVER ABOVE CLEAR CREEK

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLING DEPTH (FEET)	RESERVOIR STORAGE (AC-FT)	TURBIDITY (NTU)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKALINITY LAB (MG/L AS CACO3)
OCT 01...	1130	1.00	108000	9.5	2.5	K3	<20	<20	165
MAR 21...	1145	1.00	171000	72	1.8	1300	950	--	122

DATE	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT 01...	5.0	223	6	0.07	0.03	0.10	0.02	--
MAR 21...	3.7	163	55	0.18	0.02	0.20	0.09	0.61

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 01...	<0.2	--	--	0.02	<0.01	--	4.8	5.0
MAR 21...	0.7	0.9	4.0	0.07	0.02	0.06	6.9	6.3

DATE	TIME	ANKISTRODESMUS	GOLENKINIA	CYCLOTELLA	MELOSIRA	STEPHANODISCUS	DACTYLOCOCCOPSIS	LYNGBYA-	OSCILLATORIA	ANABAENA
OCT 01...	1130	11	22	54	120	54	32	190	22	22

351442097140201 LAKE THUNDERBIRD HOG CREEK CROSS SECTION

LOCATION.--Lat 35°14'42", long 97°14'02".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured quarterly in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT											
01...	1230	1028	1028	1.00	108000	333	7.60	20.0	730	8.2	94
01...	1231	1028	1028	5.00	108000	334	--	20.0	730	8.0	92
01...	1232	1028	1028	10.0	108000	335	--	20.0	730	7.8	90
01...	1233	1028	1028	15.0	108000	335	7.80	20.0	730	7.7	89
01...	1234	1028	1028	20.0	108000	336	--	19.5	730	7.6	87
01...	1235	1028	1028	25.0	108000	334	--	18.5	730	7.6	85
01...	1236	1028	1028	28.0	108000	338	7.70	18.0	730	7.6	84
JAN											
15...	1250	1028	1028	1.00	133000	345	7.90	4.0	750	--	--
15...	1252	1028	1028	5.00	133000	336	8.10	4.0	750	--	--
15...	1254	1028	1028	10.0	133000	346	8.10	3.5	750	--	--
15...	1256	1028	1028	15.0	133000	346	8.20	3.5	750	--	--
15...	1258	1028	1028	20.0	133000	343	8.20	3.5	750	--	--
15...	1300	1028	1028	25.0	133000	345	8.10	3.5	750	--	--
JUL											
23...	1215	1028	1028	1.00	120000	334	8.60	27.5	730	8.3	110
23...	1217	1028	1028	5.00	120000	328	8.60	27.0	730	8.0	105
23...	1219	1028	1028	10.0	120000	327	8.40	26.0	730	6.5	84
23...	1221	1028	1028	15.0	120000	330	8.30	25.5	730	5.0	64
23...	1223	1028	1028	20.0	120000	332	8.10	25.0	730	3.3	42
23...	1225	1028	1028	25.0	120000	333	7.70	23.0	730	0.4	5
23...	1227	1028	1028	32.0	120000	333	7.60	21.5	730	0.1	1
SEP											
27...	1130	1028	1028	1.00	113000	358	7.70	21.5	750	7.2	83
27...	1131	1028	1028	5.00	113000	359	7.80	21.5	750	7.3	84
27...	1132	1028	1028	10.0	113000	358	7.90	21.0	750	7.3	83
27...	1133	1028	1028	15.0	113000	360	8.00	21.0	750	7.3	83
27...	1134	1028	1028	20.0	113000	360	8.00	21.0	750	7.2	82
27...	1135	1028	1028	25.0	113000	359	8.00	21.0	750	7.2	82
27...	1136	1028	1028	28.0	113000	360	8.00	21.0	750	7.0	80

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'18", long 97°12'49", in NE 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit, 11090203, at right bank of outlet channel, 170 ft upstream from State Highway 9, 1,200 ft downstream from Lake Thunderbird, 1.0 mi upstream from Prairie Creek, 13.0 mi east of Norman, and at mile 96.2.

DRAINAGE AREA.--257 mi^2.

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 965.62 ft, National Geodetic Vertical Datum of 1929. 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.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Thunderbird since March 1965 (station 07229900). In prior years, occasional small diversions above station for irrigation.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 12 years (water years 1952-64), 58.9 ft^3/s, 42,640 acre-ft/yr; (after regulation by Lake Thunderbird) 20 years, (water years 1966-85), 33.7 ft^3/s, 24,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft^3/s May 25, 1957, gage height, 28.85 ft, from high-water mark, at site then in use, from rating curve extended above 15,000 ft^3/s; no flow at times in 1954-56, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 955 ft^3/s Apr. 22, gage height, 7.16 ft; minimum daily discharge, .51 ft^3/s Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	.86	.53	1.1	.61	480	447	.98	623	474	.79	.78
2	.59	.55	.53	.69	.61	487	557	217	619	472	.85	.78
3	.56	.56	.53	243	.61	492	668	434	616	470	.84	.78
4	.58	.56	.59	533	.62	218	707	504	531	470	.85	.76
5	.58	.53	.62	616	.61	378	696	552	2.2	320	.89	.75
6	.55	.53	.54	609	128	785	693	626	1.3	208	1.0	.75
7	.53	.54	.53	605	341	886	690	527	.92	209	1.1	.75
8	.53	.55	.53	603	341	877	780	583	281	210	.78	.74
9	.56	.56	.53	599	339	864	834	679	420	210	.78	.74
10	.54	.51	.53	593	336	848	842	672	408	83	.83	.75
11	.54	.53	.57	591	335	840	850	666	156	.89	.86	.75
12	.58	.53	.56	590	124	835	873	597	252	.87	.78	.77
13	.64	.53	1.3	588	.61	569	197	265	481	.87	.78	.88
14	.65	.54	.65	650	.61	530	322	540	521	.87	.99	.75
15	.55	.53	1.7	687	.61	756	666	700	513	.87	.83	.69
16	.60	.53	.80	683	.61	829	856	694	507	1.2	.78	.69
17	.53	1.3	120	680	.61	825	906	691	504	.87	.78	.70
18	.53	.68	325	677	.61	825	899	690	501	.87	.78	.83
19	.56	.54	411	674	.63	721	895	684	539	.87	.79	.82
20	1.1	.53	408	671	.75	207	901	679	562	.87	.79	.82
21	.58	.53	406	669	1.1	1.1	910	674	556	.87	.78	.78
22	.53	.53	403	666	170	227	381	669	460	.83	.78	.78
23	.55	.53	401	661	32	455	243	664	374	.82	.79	.77
24	.71	.55	398	469	.71	634	550	660	479	.81	.84	.82
25	1.6	.55	395	208	.69	713	635	668	549	.85	.78	.83
26	.61	.59	392	.62	212	700	629	662	532	.82	.78	.70
27	1.2	.52	389	.80	428	210	458	655	1.8	.78	.78	.69
28	.58	.53	386	.62	476	254	397	648	264	.79	.78	.69
29	.53	.53	384	.61	---	314	237	643	483	.78	.78	1.2
30	.53	.53	380	.59	---	1.2	31	637	476	.79	.77	.69
31	.55	---	285	.61	---	231	---	629	---	.78	.78	---
TOTAL	19.80	17.38	5494.04	13570.64	3272.60	16992.3	18750	18209.98	12213.22	3143.97	25.51	23.23
MEAN	.64	.58	177	438	117	548	625	587	407	101	.82	.77
MAX	1.6	1.3	411	687	476	886	910	700	623	474	1.1	1.2
MIN	.53	.51	.53	.59	.61	1.1	31	.98	.92	.78	.77	.69
AC-FT	39	34	10900	26920	6490	33700	37190	36120	24220	6240	51	46

CAL YR 1984 TOTAL 14043.05 MEAN 38.4 MAX 411 MIN .51 AC-FT 27850
WTR YR 1985 TOTAL 91732.67 MEAN 251 MAX 910 MIN .51 AC-FT 182000

07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'25", long 96°55'55", near northwest corner sec.18, T.8 N., R.4 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi downstream from Dance Creek, 5.0 mi south of Tecumseh, and at mile 77.2.

DRAINAGE AREA.--456 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: Nov. 9 to Dec. 19, Dec. 21 to Jan. 8, 19-23, Jan. 31 to Feb. 6, July 11-13, 16-27, July 30 to Aug. 1, Aug. 4 to Sept. 18. Records fair. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi upstream (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 21 years (water years 1944-64), 149 ft^3/s, 107,900 acre-ft/yr; (since regulation by Lake Thunderbird) 20 years (water years 1966-85), 104 ft^3/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s May 25, 1957, gage height, 18.84 ft, maximum gage height, 19.68 ft, May 18, 1949; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 9,230 ft^3/s Feb. 23, gage height, 17.97 ft; minimum daily discharge, 1.00 ft^3/s Aug. 21-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	304	15	3500	210	821	753	2690	631	495	26	5.5
2	2.9	93	14	3300	30	683	806	997	619	471	114	5.4
3	2.8	30	13	2000	160	669	866	1010	608	451	47	5.2
4	2.8	20	13	1200	100	1480	901	863	651	427	25	5.0
5	2.7	15	12	1000	91	408	884	916	3140	302	7.6	4.6
6	2.8	13	13	860	84	827	858	874	2000	185	1.5	4.4
7	2.8	12	14	800	101	874	834	979	636	166	2.2	4.1
8	2.6	12	15	750	223	913	832	601	340	153	15	3.8
9	2.6	11	15	740	419	927	926	929	502	133	3.5	3.6
10	2.7	10	16	712	400	927	940	898	413	38	2.0	3.5
11	3.1	10	18	667	333	900	960	890	656	30	1.6	3.7
12	2.8	9.4	16	613	262	891	959	880	144	20	1.2	4.1
13	2.8	8.5	50	605	93	996	808	756	348	24	1.1	4.6
14	3.5	8.0	1580	637	77	623	540	803	491	52	1.5	6.4
15	4.2	7.9	1090	702	70	782	912	842	456	33	64	12
16	3.5	6.9	2030	695	68	902	896	802	434	28	8.2	8.0
17	3.8	30	1500	680	63	876	910	768	418	24	3.1	6.0
18	3.2	888	800	678	61	874	955	749	415	21	1.6	5.2
19	2.8	350	520	678	60	858	952	740	430	19	1.3	4.8
20	56	140	703	680	91	3550	919	730	526	18	1.1	4.6
21	30	50	1500	681	1710	2070	952	726	518	17	1.0	4.5
22	8.6	40	1300	680	2310	825	2320	749	642	15	1.0	5.3
23	5.5	37	820	677	7250	853	833	721	273	14	1.2	10
24	5.1	31	520	650	4100	907	949	712	272	13	9.4	6.1
25	814	27	450	470	1120	1040	1060	698	512	12	9.0	5.7
26	68	25	440	200	717	1090	980	690	518	15	7.6	5.2
27	777	22	410	269	843	1480	1000	698	2090	27	6.7	4.8
28	140	20	390	328	872	641	748	690	419	44	6.4	11
29	45	17	385	240	---	1160	2560	666	638	30	6.0	56
30	28	16	400	157	---	1340	6430	652	551	22	5.8	28
31	21	---	1500	320	---	621	---	634	---	18	5.7	---
TOTAL	2055.6	2263.7	16562	26169	21918	31808	35243	26353	20291	3317	388.3	241.1
MEAN	66.3	75.5	534	844	783	1026	1175	850	676	107	12.5	8.04
MAX	814	888	2030	3500	7250	3550	6430	2690	3140	495	114	56
MIN	2.6	6.9	12	157	30	408	540	601	144	12	1.0	3.5
AC-FT	4080	4490	32850	51910	43470	63090	69900	52270	40250	6580	770	478

CAL YR 1984	TOTAL	36090.62	MEAN	98.6	MAX	2030	MIN	.81	AC-FT	71590
WTR YR 1985	TOTAL	186609.7	MEAN	511	MAX	7250	MIN	1.0	AC-FT	370100

07230597 LITTLE RIVER NEAR BOWLEGS, OK

LOCATION.--Lat 35°06'19", long 96°40'06", in NW 1/4 SE 1/4 sec.3, T.7 N., R.6 E., Seminole County, Hydrologic Unit 11090203, on the right downstream abutment of state highways 3 and 99, 6.7 miles south of Seminole and at river mile 57.8.

DRAINAGE AREA.--550 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1983 to current year.

GAGE.--Water-stage recorder and a crest stage gage. Datum of gage is 826.20 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-15, 21-23, Nov. 4, 12, 19-21, Dec. 24-26, Jan. 1-2, 13, 20, Jan. 22 to Feb. 19, 21, Mar. 5-20, 22, Mar. 24 to Apr. 19, July 16, 23-29, July 31 to Aug. 5. Records poor. Flow regulated by Lake Thunderbird (station 07229900) 38.8 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s Oct. 22, 1983, gage height, 24.84 ft. No flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,370 ft^3/s May 1, gage height, 23.09 ft.
Minimum daily discharge, 0.89 ft^3/s Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	324	20	2770	220	616	1500	6160	700	703	62	6.1
2	3.7	391	18	1120	40	570	1370	3590	675	663	160	6.0
3	3.5	86	17	974	165	502	1240	1770	663	644	60	6.0
4	3.4	34	16	961	115	1740	1150	992	659	631	29	5.9
5	3.3	23	17	1000	95	1210	1100	1330	2070	644	9.6	5.4
6	3.4	20	22	901	90	1100	1050	1210	3950	442	1.9	5.1
7	3.5	16	25	804	110	1130	990	1120	3780	224	18	5.0
8	3.3	14	24	742	210	1170	1010	1190	2780	195	43	4.6
9	3.1	13	24	705	521	1090	1030	1160	1120	189	21	4.2
10	3.2	13	25	688	475	1010	1050	1050	570	158	14	4.2
11	3.9	11	22	688	400	995	1040	1010	684	59	10	4.5
12	3.2	10	20	660	325	977	1020	985	488	26	8.0	4.9
13	3.5	9.7	497	685	200	1070	1000	940	328	19	6.5	5.6
14	4.1	9.2	1270	629	108	1130	820	900	281	19	5.0	9.0
15	2.7	9.0	1540	649	87	930	790	895	561	20	138	16
16	5.6	8.5	2100	744	81	920	845	890	532	119	48	9.3
17	3.9	239	1010	715	75	950	940	880	532	26	19	6.9
18	3.1	1080	655	712	72	930	1000	860	522	24	12	6.2
19	3.6	600	533	715	70	900	980	840	529	21	1.5	5.9
20	31	230	800	702	150	1600	739	810	596	20	1.3	5.5
21	228	130	1760	681	1500	3850	995	821	640	19	1.0	5.5
22	160	54	715	697	2400	2780	2040	841	691	18	.89	5.4
23	101	42	507	700	3610	1700	1830	810	542	17	5.7	8.6
24	8.0	35	480	680	4990	1310	974	770	446	16	10	14
25	632	29	470	550	6080	1220	798	760	550	15	9.9	11
26	174	26	450	180	2040	1190	767	751	707	23	9.1	7.8
27	613	25	397	300	877	2280	893	792	1460	34	7.8	7.3
28	335	23	388	352	674	2400	597	786	929	54	7.5	6.5
29	94	21	382	248	---	1510	1320	757	850	42	7.0	50
30	41	19	391	172	---	3490	4470	748	793	29	6.6	87
31	26	---	2230	330	---	3700	---	722	---	22	6.3	---
TOTAL	2511.0	3544.4	16825	22454	25780	45970	35348	37140	29628	5135	739.59	329.4
MEAN	81.0	118	543	724	921	1483	1178	1198	988	166	23.9	11.0
MAX	632	1080	2230	2770	6080	3850	4470	6160	3950	703	160	87
MIN	2.7	8.5	16	172	40	502	597	722	281	15	.89	4.2

CAL YR 1984 TOTAL 43769.05 MEAN 120 MAX 2230 MIN .00
WTR YR 1985 TOTAL 225404.39 MEAN 618 MAX 6160 MIN .89

07230597 LITTLE RIVER NEAR BOWLEGS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1959, 1961, February 1983 to current year.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)
OCT											
25...	1200	1028	80020	984	*342	7.70	--	13.0	4000	750	8.4
FEB											
22...	2300	1028	1028	2680	210	7.60	10.0	15.0	--	740	8.6
23...	1830	1028	80020	3880	175	7.40	9.0	13.0	820	740	8.3
24...	1900	1028	80020	5660	196	6.70	9.5	12.0	730	750	8.4
25...	1400	1028	80020	6450	187	6.60	10.0	12.0	800	750	8.4
26...	1600	1028	80020	1470	305	6.80	2.0	10.0	70	750	8.6
MAR											
22...	0945	1028	80020	2130	306	7.40	11.0	12.0	480	740	8.9

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)
OCT										
25...	--	84	28	19	8.8	36	48	2	1.8	56
FEB										
22...	88	--	--	--	--	--	--	--	--	--
23...	81	65	2	16	6.0	8.7	22	0.5	2.5	63
24...	80	70	0	17	6.7	11	25	0.6	2.3	70
25...	80	70	5	17	6.8	9.8	22	0.5	2.6	65
26...	77	110	17	25	11	22	30	1	2.6	91
MAR										
22...	85	110	15	26	11	20	28	0.9	3.5	95

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)
OCT												
25...	2.2	21	56	0.4	4.0	180	0.25	481	0.20	0.8	1.0	4.4
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
23...	4.9	14	11	0.2	5.3	100	0.14	1070	0.20	2.8	3.0	13
24...	27	12	16	0.2	5.7	110	0.15	1730	0.20	2.8	3.0	13
25...	32	12	13	0.2	6.7	110	0.15	1870	0.20	2.3	2.5	11
26...	28	15	32	0.2	6.9	170	0.23	673	0.10	1.4	1.5	6.6
MAR												
22...	7.3	13	33	0.2	7.1	170	0.23	983	0.10	1.5	1.6	7.1

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT									
25...	1.10	190	190	40	14	0.5	13500	35900	63
FEB									
22...	--	--	--	--	--	--	--	--	--
23...	0.45	50	120	22	17	0.1	1710	17900	91
24...	0.45	50	120	22	17	0.1	2580	39400	72
25...	0.35	50	400	37	17	0.1	866	15100	100
26...	0.18	150	130	21	18	0.1	1100	4370	88
MAR									
22...	0.24	60	140	15	10	--	1380	7940	55

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", NE 1/4 sec.22, T.6 N., R.7 E., Seminole County, Hydrologic Unit 11090203, near left abutment on downstream side of county road bridge, 2.8 mi northwest of Sasakwa, 8.7 mi downstream from Salt Creek, and at mile 24.1.

DRAINAGE AREA.--865 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 744.34 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum. Prior to Oct. 1, 1979, gage at same site and datum 4.87 ft higher.

REMARKS.--Estimated daily discharges: July 31 to Aug.14, Aug. 21 to Sept. 11, 13-23. Records poor. Flow regulated by Lake Thunderbird (station 07229900) 72.3 mi upstream since March 1965.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 23 years (water years 1943-65), 398 ft^3/s 288,400 acre-ft/yr; (since regulation by Lake Thunderbird) 20 years (water years 1966-85), 280 ft^3/s, 202,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,600 ft^3/s May 11, 1950, gage height, 33.48 ft; no flow at times most years after 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,500 ft^3/s May 1, gage height, 31.73 ft, from high-water mark; no flow Oct. 7-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	52	31	6040	358	1480	2460	15600	709	664	41	7.6
2	.28	503	30	6270	37	1300	1740	10200	702	584	60	7.2
3	.16	157	29	4560	195	1210	1570	6120	685	540	200	6.8
4	.10	54	27	3000	116	2620	1490	3600	703	507	59	6.6
5	.10	45	26	1930	97	1960	1370	1980	3640	494	5.8	6.4
6	.05	39	28	1360	94	1220	1250	1630	8570	452	1.8	6.2
7	.00	31	29	1210	126	1240	1170	1450	5870	180	2.4	5.8
8	.00	27	31	1080	155	1270	1120	1490	3880	121	4.5	5.4
9	.00	23	32	1020	818	1200	1130	1410	1610	120	28	4.5
10	.00	22	32	959	1130	1150	1160	1210	1220	111	10	2.8
11	.00	20	34	856	571	1130	1160	1130	1040	101	3.5	1.9
12	.09	19	30	783	408	1070	1150	1070	1120	80	1.9	.90
13	.08	16	119	754	266	1120	1110	997	627	56	1.6	6.4
14	.08	15	1540	760	151	1260	1000	946	792	43	1.5	8.4
15	.01	15	3230	754	109	999	879	931	831	33	5.7	30
16	.87	12	4090	904	96	954	834	949	820	33	155	13
17	.58	102	3140	955	85	1020	1010	931	777	83	53	8.4
18	1.7	1620	1520	842	82	975	1060	891	757	72	25	7.6
19	.81	962	967	780	83	995	1030	874	750	62	16	7.2
20	330	334	892	719	162	3710	1020	852	718	54	6.1	7.0
21	137	166	2070	701	2270	4770	1510	879	768	38	4.0	6.8
22	72	122	2330	716	3510	4070	6220	905	802	27	8.5	6.6
23	23	87	1100	724	5240	3210	4730	857	1050	23	11	11
24	24	66	843	740	6130	1880	3060	802	519	20	15	17
25	352	58	645	552	6040	1520	1660	775	497	20	35	24
26	777	49	535	333	6530	1420	1410	756	694	18	15	35
27	555	46	493	158	3810	3280	1350	838	1230	16	12	44
28	1040	40	464	270	1750	3380	1340	828	2130	17	10	34
29	239	35	442	365	---	2260	1120	764	899	23	9.0	33
30	83	33	578	164	---	5460	7530	746	756	19	8.5	31
31	36	---	3270	256	---	5910	---	723	---	35	8.0	---
TOTAL	3673.88	4770	28627	40515	40419	65043	54643	63134	45166	4646	817.8	392.50
MEAN	119	159	923	1307	1444	2098	1821	2037	1506	150	26.4	13.1
MAX	1040	1620	4090	6270	6530	5910	7530	15600	8570	664	200	44
MIN	.00	12	26	158	37	954	834	723	497	16	1.5	.90
AC-FT	7290	9460	56780	80360	80170	129000	108400	125200	89590	9220	1620	779

CAL YR 1984 TOTAL 71848.43 MEAN 196 MAX 4090 MIN .00 AC-FT 142500
WTR YR 1985 TOTAL 351847.18 MEAN 964 MAX 15600 MIN .00 AC-FT 697900

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to April 1982.
WATER TEMPERATURE: October 1955 to April 1982.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV 05...	1545	1028	80020	45	609	7.40	--	14.0	720	9.4	97
MAR 21...	1300	1028	80020	4700	372	7.30	8.0	12.0	740	9.9	95
SEP 12...	1230	1028	80020	0.89	1130	7.40	25.0	28.0	750	6.8	89

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
NOV 05...	160	52	38	16	56	42	2	4.0	109	8.4	19
MAR 21...	100	6	25	10	29	37	1	2.8	98	9.5	11
SEP 12...	250	58	54	27	130	53	4	3.6	189	15	25

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
NOV 05...	120	7.4	429	330	0.58	52	<1	230	0	<1	<10
MAR 21...	52	6.0	185	200	0.25	2350	1	110	2	2	<10
SEP 12...	220	8.0	649	580	0.88	1.6	2	330	<0.5	<1	--

DATE	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 05...	<3	<10	100	<10	8	17	<0.1	<10	300	<6	9
MAR 21...	<3	<10	120	<10	4	8	--	<10	200	<6	13
SEP 12...	<3	<10	8	<10	12	1500	--	<10	570	<6	12

07231500 CANADIAN RIVER AT CALVIN, OK

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, Hydrologic Unit 11090202, near left bank on downstream side of pier of bridge on old U.S. Highway 75, 0.5 mi northeast of Calvin, 2.4 mi upstream from Shawnee Creek, 8.5 mi downstream from Little River, and at mile 93.9.

DRAINAGE AREA.--27,952 mi^2, of which 4,801 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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 National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1391: 1941.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft, National Geodetic Vertical Datum of 1929. January 1905 to December 1908, nonrecording gage at site 0.8 mi upstream at datum 4.00 ft higher. Oct. 1, 1938 to Aug. 12, 1944, nonrecording gage at present site and datum. Aug. 13, 1944 to July 31, 1977, water-stage recorder at present site and datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 23 to Dec. 12, Jan. 12-13, 20-22, Jan. 31 to Feb. 11. Records fair. Occasional slight regulation by dams in New Mexico and Texas since 1964.

AVERAGE DISCHARGE.--46 years (water years 1906, 1939-42, 1945-85), 1,561 ft^3/s, 1,131,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174,000 ft^3/s 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 several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	0530	61,000	10.91	Feb. 23	1800	64,500	11.12
Mar. 21	0030	49,000	9.88	Apr. 22	0600	38,700	8.96
Mar. 30	0630	38,800	8.89	June 6	0900	58,900	10.60
Apr. 30	1100	*77,300	*11.92				

Minimum daily discharge 8.2 ft^3/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	638	179	45000	1880	5860	8440	24400	2990	1500	86	39
2	14	972	170	14800	1760	5640	5520	17900	2940	1180	78	41
3	13	2060	188	9330	1810	5410	5650	11500	3020	986	70	39
4	12	744	205	7050	2000	12000	5880	7700	2970	895	64	37
5	12	442	189	5150	2350	16400	5770	5370	6570	906	58	32
6	11	287	180	4550	2570	7360	5370	5160	41400	834	71	25
7	10	187	175	4000	2300	5820	5160	5360	22700	670	246	19
8	10	145	198	3880	2500	5380	4950	5610	9830	438	480	33
9	9.5	119	180	3980	3250	5260	5060	5390	5550	374	527	39
10	8.5	106	200	3970	5120	4950	5150	5220	4170	338	412	33
11	8.2	111	220	3890	3640	4620	5220	5000	3050	318	210	29
12	9.2	119	400	3730	2830	4380	5300	4760	4230	294	142	21
13	10	116	844	3670	1860	4990	5340	5260	3630	222	92	13
14	15	111	6660	3510	1670	5720	5540	5810	3130	179	82	20
15	58	106	11800	3360	1600	5100	5850	5160	2600	161	101	162
16	206	101	16300	3700	1690	4800	5820	4480	2260	150	80	277
17	99	287	12900	3640	1740	5120	5660	4750	1920	261	241	202
18	66	6290	6140	3510	1630	5080	5310	4280	2480	325	223	139
19	46	4580	3180	3420	2310	4860	5120	4120	4390	270	130	109
20	2420	1820	2430	2780	2160	21500	5070	3970	2470	212	95	84
21	1680	930	4810	2490	8070	35100	5080	4890	2010	174	82	70
22	782	636	5790	2670	15000	12200	32300	5320	1740	160	80	64
23	533	400	3730	3300	48000	8940	17300	4490	3830	135	59	83
24	262	320	2790	4020	33000	5900	8240	3850	2230	124	142	89
25	1170	270	2120	3700	15700	5450	4770	3660	1460	118	131	123
26	2940	240	1650	2910	14300	5140	4390	3330	1090	130	104	182
27	1940	210	1290	2400	10600	18900	4400	4370	3700	114	88	140
28	6390	200	1140	2130	6310	11800	4880	4270	8000	120	71	102
29	4010	187	1140	2600	---	9990	5350	3600	3170	118	55	115
30	1500	196	1210	2990	---	31300	52100	3330	1940	112	41	229
31	815	---	14100	2160	---	18600	---	3100	---	92	38	---
TOTAL	25079.4	22930	102508	168290	197650	303570	249990	185410	161470	11910	4379	2590
MEAN	809	764	3307	5429	7059	9793	8333	5981	5382	384	141	86.3
MAX	6390	6290	16300	45000	48000	35100	52100	24400	41400	1500	527	277
MIN	8.2	101	170	2130	1600	4380	4390	3100	1090	92	38	13
AC-FT	49740	45480	203300	333800	392000	602100	495900	367800	320300	23620	8690	5140

CAL YR 1984 TOTAL 331114.5 MEAN 905 MAX 16300 MIN 2.5 AC-FT 656800
WTR YR 1985 TOTAL 1435776.4 MEAN 3934 MAX 52100 MIN 8.2 AC-FT 2848000

07231500 CANADIAN RIVER AT CALVIN, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-53, 1960-61, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1965 to Jan. 1982.
WATER TEMPERATURE: July 1965 to Jan. 1982.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV												
06...	1330	1028	80020	285	630	7.80	15.5	14.0	79	750	11.8	117
MAR												
20...	1415	1028	80020	20100	483	7.20	9.0	13.0	610	740	9.8	96
JUN												
11...	1130	1028	80020	3100	693	7.50	20.5	27.0	160	750	6.8	87
SEP												
11...	1300	1028	80020	33	1230	7.60	28.5	29.0	11	750	9.1	121

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
NOV											
06...	K1700	530	180	15	44	16	59	41	2	4.6	196
MAR											
20...	5900	4700	140	36	35	13	43	39	2	3.5	128
JUN											
11...	480	730	240	62	58	22	57	34	2	5.8	212
SEP											
11...	K92	780	280	53	49	39	140	51	4	5.6	--

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV											
06...	0	146	161	4.9	37	100	0.3	8.4	370	370	0.5
MAR											
20...	0	100	105	13	39	68	0.2	6.7	272	270	0.37
JUN											
11...	0	166	174	11	60	87	0.3	9.8	389	410	0.53
SEP											
11...	--	231	--	11	54	220	0.4	9.5	667	660	0.91

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
NOV											
06...	285	0.60	0.14	0.18	1.5	0.39	--	0.17	0.15	0.46	60
MAR											
20...	14800	0.19	0.11	0.14	2.9	0.43	--	0.05	0.04	0.12	200
JUN											
11...	3260	0.22	0.05	0.06	1.4	0.27	0.83	0.07	0.05	0.15	90
SEP											
11...	59	<0.10	0.04	0.05	0.9	0.09	0.28	0.03	0.01	0.03	10

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
06...	2	190	1	4	<1	<3	5	30	4	12	11
MAR											
20...	1	130	2	1	<1	<3	14	300	7	9	62
JUN											
11...	2	230	<0.5	<1	<1	<3	6	31	3	11	2
SEP											
11...	7	280	<0.5	<1	<1	<3	1	<3	1	19	7

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
06...	0.5	<10	6	<1	<1	440	6	21	359	276	82
MAR											
20...	<0.1	<10	3	<1	--	310	<6	17	2300	125000	92
JUN											
11...	--	<10	2	<1	<1	490	7	<3	776	6500	60
SEP											
11...	--	<10	1	<1	<1	760	7	7	25	2.2	34

07232500 BEAVER RIVER NEAR GUYMON, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°43'24", long 101°29'30", NW 1/4 SW 1/4 sec.18, T.3 N., R.15 E., Texas County, Hydrologic Unit 11100101, near center of span on downstream side of pier of bridge on U.S. Highway 64 at Dry Sand Draw, 1.2 mi upstream from Goff Creek, 2.5 mi north of Guymon, and at mile 650.7.

DRAINAGE AREA.--2,139 mi^2, which includes that of Dry Sand Draw and of which 964 mi^2 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.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,970.69 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair.

AVERAGE DISCHARGE.--48 years, 21.9 ft^3/s, 15,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,400 ft^3/s 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 422 ft^3/s July 2, gage height, 7.86 ft, no peaks above base of 2,400 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.2	3.2	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	1.1	1.8	.00	113	.00	.00
3	.00	.00	.00	.00	.00	.00	1.1	1.3	.00	27	.00	.00
4	.00	.00	.00	.00	.00	.00	.86	.76	.00	4.4	.00	.00
5	.00	.00	.00	.00	.00	.00	.61	.00	.00	.44	.00	.00
6	.00	.00	.00	.00	.00	.00	.49	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.91	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.65	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.18	.00	.00	.00	.00	.26
12	.00	.00	.00	.00	.00	.00	.28	.00	2.3	.00	.00	8.8
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	1.1
21	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	7.1
22	.00	.00	.00	.00	.00	1.4	.24	.00	.00	.00	.00	.05
23	.00	.00	.00	.00	.00	1.9	.97	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	2.0	.72	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	1.6	.19	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.91	.44	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.68	5.9	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.0	4.6	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.1	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	15.89	21.14	7.06	2.30	144.84	.00	17.31
MEAN	.00	.00	.00	.00	.00	.51	.70	.23	.08	4.67	.00	.58
MAX	.00	.00	.00	.00	.00	2.0	5.9	3.2	2.3	113	.00	8.8
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	32	42	14	4.6	287	.00	34

CAL YR 1984	TOTAL	186.44	MEAN	.51	MAX	12	MIN	.00	AC-FT	370
WTR YR 1985	TOTAL	208.54	MEAN	.57	MAX	113	MIN	.00	AC-FT	414

07232900 COLDWATER CREEK NR GUYMON, OK

LOCATION.--Lat 36°34'19", long 101°22'52", NW 1/4 NW 1/4 sec.7, T.1 N., R.16 E., Texas County, Hydrologic Unit 11100103, near left bank on downstream side of pier of bridge on county road, 0.3 mi downstream from Frisco Creek, 4.0 mi east and 7.5 mi south of Guymon, and at mile 18.0.

DRAINAGE AREA.--1,903 mi^2, of which 1,178 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,870.83 ft; National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 19 to Jan. 2, Jan. 4 to Feb. 5. Records good.

AVERAGE DISCHARGE.--5 years, 2.16 ft^3/s, 1,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft^3/s June 20, 1982, gage height, 14.34 ft; no flow each year.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 809 ft^3/s Sept. 20, gage height, 12.53 ft, no other peaks above base discharge of 300 ft^3/s; no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	38
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	89
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.61
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	91
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	312
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	59
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	112
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.9
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	103
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	825.51
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	27.5
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	312
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1984	TOTAL	.00	MEAN	.00	MAX	.00	MIN	.00
WTR YR 1985	TOTAL	825.51	MEAN	2.26	MAX	312	MIN	.00

07233200 OPTIMA LAKE NEAR HARDESTY, OK

LOCATION.--Lat 36°39'23", long 101°08'13", in NE 1/4 NE 1/4 sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, in control tower for dam on Beaver River, 4.5 mi northeast of Hardesty, and at mile 623.2.

DRAINAGE AREA.--5,029 mi^2, of which 1,788 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earth dam having a concrete gate tower with a 12- by 16-foot, 5-inch oblong conduit. Discharges are controlled by two drum-hoist operated tractor-type service gates and a 36-inch low-flow control pipe. Closure for storage was made Oct. 2, 1978. Capacity, 618,500 acre-ft at elevation 2,814.2 ft, maximum pool; 382,500 acre-ft at elevation 2,796.0 ft, uncontrolled spillway crest; 229,500 acre-ft at elevation 2,779.0 ft, top of flood-control pool; 129,000 acre-ft at elevation 2,763.5 ft, top of conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, and water supply. Capacity table based on original survey.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,610 acre-ft May 30 to June 2, 1980, elevation, 2,722.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,000 acre-ft May 24-29, June 6-9, elevation, 2,716.20 ft; minimum, 1,130 acre-ft Sept. 15, elevation, 2,714.20 ft.

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

2,714	1,060	2,717	2,450
2,715	1,430	2,718	3,110
2,716	1,890	2,719	3,870

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	1480	1390	1370	1430	1570	1640	1780	1970	1780	1250	1370
2	1450	1480	1390	1370	1430	1570	1640	1780	1970	1750	1320	1360
3	1450	1480	1390	1370	1430	1570	1640	1780	1970	1750	1340	1360
4	1450	1480	1390	1370	1430	1570	1640	1780	1970	1730	1320	1340
5	1450	1480	1390	1370	1430	1570	1640	1780	1970	1710	1320	1320
6	1450	1480	1390	1370	1430	1570	1640	1820	2000	1680	1300	1320
7	1450	1450	1370	1370	1430	1570	1640	1820	2000	1660	1280	1320
8	1480	1450	1370	1370	1430	1570	1610	1800	2000	1640	1250	1300
9	1480	1450	1370	1370	1430	1570	1610	1800	1970	1590	1250	1320
10	1480	1450	1360	1370	1430	1570	1610	1780	1970	1570	1230	1320
11	1480	1430	1370	1370	1450	1570	1610	1780	1970	1550	1210	1360
12	1480	1430	1370	1370	1450	1570	1610	1750	1970	1520	1190	1410
13	1480	1430	1370	1370	1450	1570	1610	1750	1950	1500	1170	1480
14	1480	1430	1370	1390	1450	1570	1610	1750	1950	1480	1150	1480
15	1520	1430	1390	1390	1450	1570	1610	1730	1950	1430	1130	1480
16	1520	1430	1390	1390	1450	1570	1610	1730	1950	1410	1360	1450
17	1520	1430	1390	1390	1450	1570	1590	1730	1950	1390	1520	1450
18	1520	1430	1390	1390	1450	1570	1590	1730	1920	1360	1520	1450
19	1520	1430	1390	1390	1450	1590	1570	1780	1920	1370	1500	1660
20	1500	1430	1390	1390	1450	1680	1570	1820	1920	1360	1480	1710
21	1500	1430	1390	1410	1480	1680	1570	1820	1890	1340	1450	1710
22	1500	1390	1390	1410	1500	1680	1550	1920	1870	1340	1450	1680
23	1480	1390	1390	1410	1570	1680	1550	1970	1840	1320	1450	1680
24	1480	1390	1390	1410	1570	1680	1550	2000	1820	1320	1450	1780
25	1480	1390	1390	1410	1570	1680	1550	2000	1820	1300	1450	1800
26	1480	1390	1390	1410	1570	1660	1550	2000	1800	1300	1430	1780
27	1480	1390	1390	1410	1570	1660	1550	2000	1800	1280	1430	1780
28	1480	1390	1390	1410	1570	1660	1660	2000	1800	1300	1430	1750
29	1480	1390	1390	1430	---	1660	1780	1970	1780	1280	1410	1750
30	1480	1390	1370	1430	---	1660	1780	1970	1780	1280	1390	1800
31	1480	---	1370	1430	---	1640	---	1970	---	1260	1390	---
MAX	1520	1480	1390	1430	1570	1680	1780	2000	2000	1780	1520	1800
MIN	1450	1390	1360	1370	1430	1570	1550	1730	1780	1260	1130	1300
(†)	2715.10	2714.90	2714.85	2715.00	2715.30	2715.45	2715.75	2716.15	2715.75	2714.55	2714.90	2715.80
(††)	+30	-90	-20	+60	+140	+70	+140	+190	-190	-520	+130	+410

CAL YR 1984 MAX 3150 MIN 1360 (††) -1600
WTR YR 1985 MAX 2000 MIN 1130 (††) +350

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07233210 BEAVER RIVER NEAR HARDESTY, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°39'23", long 101°08'06", in SE 1/4 NE 1/4 sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, on left bank of outlet channel, 500 ft downstream from Optima Dam, 5 mi northeast of Hardesty, and at mile 623.1.

DRAINAGE AREA.--5,029 mi^2, of which 1,788 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,690.00 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Apr. 22 to May 8. Records poor. Flow completely regulated by Optima Lake (07233200) since Oct. 1978.

AVERAGE DISCHARGE.--(Since regulation by Optima Lake) 7 years (water years 1979-85) 0.11 ft^3/s, 79.7 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft^3/s June 8, 1978, gage height, 10.42 ft; no flow at times in 1978, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 185 ft^3/s Apr. 28, gage height, 10.03 ft; minimum daily discharge, 0.03 ft^3/s Feb. 1, 4-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.10	.08	.05	.03	.05	.08	.14	.04	.05	.09	.07
2	.07	.09	.09	.05	.04	.05	.08	.12	.04	.06	1.8	.07
3	.08	.09	.08	.05	.04	.04	.09	.11	.05	.05	.11	.07
4	.12	.10	.09	.06	.03	.04	.09	.11	.11	.06	.10	.08
5	.12	.10	.11	.05	.03	.04	.09	.10	.11	.06	.10	.07
6	.11	.10	.09	.05	.04	.05	.08	.12	.10	.06	.10	.07
7	.10	.09	.08	.05	.04	.05	.09	.10	.09	.06	.09	.07
8	.10	.10	.08	.05	.05	.05	.09	.09	.08	.06	.09	.06
9	.11	.09	.08	.05	.05	.05	.09	.09	.06	.05	.08	.09
10	.12	.08	.08	.04	.05	.05	.10	.09	.06	.05	.08	.10
11	.12	.07	.08	.04	.04	.06	.08	.07	.08	.05	.07	.24
12	.11	.08	.07	.04	.04	.06	.09	.06	.07	.05	.08	.28
13	.10	.09	.07	.05	.05	.05	.09	.06	.06	.05	.08	.20
14	.11	.09	.08	.06	.04	.05	.09	.06	.06	.05	.08	.13
15	.12	.10	.13	.06	.05	.05	.10	.06	.06	.06	.08	.09
16	.17	.10	.10	.05	.05	.06	.09	.05	.05	.06	.28	.09
17	.12	.10	.08	.05	.05	.06	.08	.06	.05	.06	.20	.08
18	.11	.13	.07	.05	.05	.05	.09	.06	.04	.05	.11	.07
19	.11	.13	.06	.05	.05	.06	.08	.08	.04	.05	.11	.21
20	.11	.12	.07	.04	.06	.21	.08	.14	.04	.10	.10	.09
21	.10	.12	.07	.04	.09	.14	.08	.09	.04	.08	.10	.09
22	.11	.12	.07	.05	.12	.11	.09	.09	.04	.07	.09	.09
23	.11	.11	.06	.04	.11	.11	.08	.08	.05	.07	.09	.08
24	.11	.11	.06	.05	.09	.10	.08	.07	.05	.06	.09	.08
25	.13	.10	.05	.05	.06	.10	.07	.07	.05	.06	.09	.08
26	.12	.08	.05	.05	.06	.09	.07	.07	.05	.06	.09	.07
27	.11	.08	.06	.05	.06	.09	.07	.07	.05	.07	.08	.08
28	.10	.09	.06	.05	.05	.08	.08	.06	.05	.08	.08	.08
29	.10	.09	.06	.06	---	.09	.19	.06	.04	.12	.07	.17
30	.09	.08	.05	.05	---	.10	.24	.05	.05	.10	.07	.09
31	.10	---	.06	.04	---	.09	---	.05	---	.09	.07	---
TOTAL	3.35	2.93	2.32	1.52	1.52	2.28	2.80	2.53	1.76	2.00	4.75	3.14
MEAN	.11	.10	.07	.05	.05	.07	.09	.08	.06	.06	.15	.10
MAX	.17	.13	.13	.06	.12	.21	.24	.14	.11	.12	1.8	.28
MIN	.06	.07	.05	.04	.03	.04	.07	.05	.04	.05	.07	.06
AC-FT	6.6	5.8	4.6	3.0	3.0	4.5	5.6	5.0	3.5	4.0	9.4	6.2

CAL YR 1984	TOTAL	30.14	MEAN	.08	MAX	.34	MIN	.01	AC-FT	60
WTR YR 1985	TOTAL	30.90	MEAN	.08	MAX	1.8	MIN	.03	AC-FT	61

07234000 BEAVER RIVER AT BEAVER, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'05", SW 1/4 sec.7, T.4 N., R.24 E., Beaver County, Hydrologic Unit 11100201, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.5 mi downstream from Home Creek, 5 mi upstream from Clear Creek, and at mile 576.0.

DRAINAGE AREA.--7,955 mi^2, of which 4,270 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Mar. 29, 1904 to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938 to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 20, Dec. 31 to Jan. 3, 9-13, 19-23, Jan. 30 to Feb. 7, 11-14, Sept. 19-22, 28-30. Records poor.

AVERAGE DISCHARGE.--48 years, 90.8 ft^3/s, 65,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft^3/s Oct. 8, 1946, maximum gage height, 14.55 ft by slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 ft^3/s; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,200 ft^3/s Apr. 30, gage height, 7.41 ft, no peak above base of 4,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.11	.06	.30	15	474	.16	.09	.00	.00
2	.00	.00	.00	.12	.04	.28	15	159	.13	.08	.00	.00
3	.00	.00	.00	.12	.03	.25	14	89	.45	.07	.00	.00
4	.00	.00	.00	.13	.04	.14	13	57	20	.05	.00	.00
5	.00	.00	.00	.13	.07	.27	11	41	146	.05	.00	.00
6	.00	.00	.00	.08	.06	.19	8.5	32	87	.03	.00	.00
7	.00	.00	.00	.09	.07	.12	7.2	28	297	.03	.00	.00
8	.00	.00	.00	.07	.54	.10	7.1	24	231	.03	.00	.00
9	.00	.00	.00	.09	.61	.24	9.5	21	117	.01	.00	.00
10	.00	.00	.00	.10	.20	1.6	13	18	73	.00	98	.00
11	.00	.00	.00	.09	.10	2.0	12	39	55	.00	2.8	.00
12	.00	.00	.00	.08	.08	1.6	11	26	40	.00	.16	.00
13	.00	.00	.00	.08	.09	4.3	9.0	39	32	.00	.09	31
14	.00	.00	.00	.12	.09	4.9	7.7	43	27	.00	.04	357
15	.00	.00	3.9	.13	.15	5.1	8.0	25	22	.00	.01	257
16	.00	.00	1.6	.07	.10	6.2	7.1	15	16	.00	.00	123
17	.00	.00	.78	.09	.18	7.4	5.7	11	12	.00	.00	54
18	.00	.00	.12	.09	.08	7.4	5.8	10	8.9	.00	.00	31
19	.00	.00	.42	.05	.10	7.0	4.4	8.4	7.3	.00	.00	13
20	.00	.00	1.0	.04	.30	19	2.6	57	5.6	.00	.00	6.2
21	.00	.00	.22	.04	.37	31	1.2	56	3.8	.00	.00	3.9
22	.00	.00	.08	.07	.17	29	.79	22	4.2	.00	.00	3.6
23	.00	.00	.14	.10	.29	24	2.1	13	3.1	.00	.00	5.2
24	.00	.00	.17	.06	.18	19	3.4	9.0	4.2	.00	.00	92
25	.00	.00	.12	.04	.20	16	3.2	6.2	2.5	.00	.00	289
26	.00	.00	.21	.06	.30	14	3.9	4.0	.93	.00	.00	89
27	.00	.00	.16	.05	.28	11	4.8	1.8	.52	.00	.00	36
28	.00	.00	.16	.06	.29	9.1	5.6	1.0	.26	.00	.00	26
29	.00	.00	.09	.07	---	7.7	41	.76	.16	.00	.00	22
30	.00	.00	.09	.07	---	13	526	.46	.12	.00	.00	17
31	.00	---	.10	.07	---	14	---	.21	---	.00	.00	---
TOTAL	.00	.00	9.36	2.57	5.07	256.19	778.59	1330.83	1217.33	.44	101.10	1455.90
MEAN	.00	.00	.30	.08	.18	8.26	26.0	42.9	40.6	.01	3.26	48.5
MAX	.00	.00	3.9	.13	.61	31	526	474	297	.09	98	357
MIN	.00	.00	.00	.04	.03	.10	.79	.21	.12	.00	.00	.00
AC-FT	.00	.00	19	5.1	10	508	1540	2640	2410	.9	201	2890

CAL YR 1984	TOTAL	831.74	MEAN	2.27	MAX	30	MIN	.00	AC-FT	1650
WTR YR 1985	TOTAL	5157.38	MEAN	14.1	MAX	526	MIN	.00	AC-FT	10230

07234000 BEAVER RIVER AT BEAVER, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958-59, 1962-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to Jan. 1982.
WATER TEMPERATURE: October 1967 to Jan. 1982.

REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
DEC												
27...	1130	1028	80020	0.14	6070	8.20	15.5	10.0	14	700	10.6	105
MAR												
05...	1200	1028	80020	0.22	6000	8.20	10.0	11.5	3.0	704	12.3	125
MAY												
21...	1245	1028	80020	51	1920	8.20	18.5	20.0	170	700	7.9	95
SEP												
17...	1330	1028	80020	51	750	8.20	31.0	23.5	200	693	7.5	98

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
DEC											
27...	48	180	1700	1500	400	180	770	49	8	6.6	316
MAR											
05...	47	K53	1400	1200	310	150	810	56	10	7.4	289
MAY											
21...	K22000	K7100	290	180	71	27	270	66	7	7.6	128
SEP											
17...	K19000	K4300	180	60	51	12	74	45	3	13	143

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
DEC											
27...	0	242	259	3.2	910	1400	0.8	27	3740	3900	5.1
MAR											
05...	0	225	237	2.9	970	1400	0.8	23	3960	3800	5.4
MAY											
21...	0	111	105	1.3	160	440	0.6	11	1050	1100	1.4
SEP											
17...	0	117	117	1.4	57	110	0.8	17	410	410	0.56

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
DEC											
27...	1.4	0.10	0.16	0.21	0.5	0.03	--	0.01	0.01	0.03	20
MAR											
05...	2.4	<0.10	0.09	0.12	0.7	0.01	--	<0.01	<0.01	--	<10
MAY											
21...	145	0.28	0.09	0.12	1.9	0.41	1.3	0.06	0.04	0.12	50
SEP											
17...	56	2.00	0.07	0.09	3.2	0.89	2.7	0.22	0.17	0.52	60

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
DEC											
27...	1	<100	<10	1	<0.5	<1	1	40	<1	110	120
MAR											
05...	1	200	<10	<1	<1	<1	<1	30	<1	120	110
MAY											
21...	2	150	<0.5	<1	<1	<3	3	44	4	54	4
SEP											
17...	6	160	<0.5	<1	<1	<3	6	44	1	25	<1

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC											
27...	0.4	6	<1	<1	<1	4600	29	20	37	0.01	90
MAR											
05...	<0.1	2	<1	<1	<1	4600	21	20	33	0.02	91
MAY											
21...	0.1	<10	4	<1	<1	1100	8	130	527	73	99
SEP											
17...	<0.1	<10	3	1	<1	500	20	67	1170	161	99

07234100 CLEAR CREEK NEAR ELMWOOD, OK

LOCATION.--Lat 36°38'42", long 100°30'07", SW 1/4 SW 1/4 sec.8, T.2 N., R.24 E., Beaver County, Hydrologic Unit 11100201, on downstream side of right pile bent of county road bridge, 1,000 ft downstream from small irrigation dam, 2.8 mi northeast of Elmwood, and at mile 16.9.

DRAINAGE AREA.--170 mi^2.

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

REVISED RECORDS.--WSP 2121: 1966.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,541.26 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years, 6.48 ft^3/s, 4,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s Oct. 16, 1969, gage height, 13.97 ft, from floodmark, from rating curve extended above 12,500 ft^3/s on basis of slope-area measurement at gage height 13.15 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 836 ft^3/s June 3, from high-water mark, no other peak above base of 500 ft^3/s; minimum daily discharge 0.79 ft^3/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.9	2.4	3.1	2.4	3.0	2.4	6.6	2.6	1.5	1.3	.90
2	.79	1.9	2.3	3.0	2.3	2.9	2.4	5.3	2.7	1.5	1.6	.94
3	.80	1.9	2.4	3.1	2.3	2.9	2.5	4.9	3.7	1.4	1.2	.92
4	.82	1.8	2.4	3.1	2.3	2.9	2.4	4.4	332	1.4	1.3	.99
5	.85	1.9	2.3	3.1	2.3	2.8	2.4	3.9	32	1.2	1.3	.96
6	.86	1.9	2.4	3.0	2.4	2.8	2.4	3.6	8.6	1.2	1.2	1.2
7	.89	2.0	2.4	3.0	2.3	2.8	2.5	3.5	5.1	1.2	1.2	1.3
8	.90	2.0	2.3	2.9	2.3	2.9	2.5	3.6	2.9	1.1	1.1	1.4
9	.90	2.0	2.4	2.9	2.3	2.8	2.4	3.5	2.6	1.1	1.1	1.5
10	.90	2.1	2.5	2.9	2.4	2.8	2.6	3.4	2.4	1.0	1.1	1.6
11	.91	2.1	2.5	3.0	2.4	2.8	2.6	3.4	2.3	1.1	1.1	1.9
12	.91	2.2	2.4	2.9	2.4	2.9	6.2	3.3	2.2	.99	1.0	1.8
13	.90	2.2	2.4	2.9	2.5	2.9	25	3.3	2.2	.98	1.0	1.7
14	.92	2.2	2.5	2.8	2.4	2.8	5.4	3.3	2.1	.99	1.1	1.8
15	1.9	2.3	3.8	2.8	2.5	2.8	3.7	3.2	2.1	1.0	1.2	1.8
16	2.0	2.4	3.6	2.8	2.5	2.7	3.4	3.2	2.1	1.0	1.1	1.7
17	1.7	2.4	3.5	2.7	2.5	2.8	3.4	3.3	2.0	1.1	1.1	1.7
18	1.6	2.5	3.5	2.7	2.6	2.8	3.3	3.2	2.0	1.0	.96	1.6
19	1.6	2.6	3.3	2.7	2.6	2.8	3.3	3.2	2.0	.98	.94	1.7
20	1.7	2.7	3.2	2.6	2.7	3.0	3.2	3.2	2.1	1.1	.95	1.8
21	1.8	2.6	3.2	2.7	2.8	3.7	3.2	3.3	2.1	1.1	.90	1.8
22	1.8	2.5	3.1	2.6	3.4	2.8	3.2	3.1	2.0	1.2	.89	1.7
23	1.8	2.4	3.1	2.6	3.6	2.6	3.2	3.1	2.0	1.2	1.0	1.7
24	1.9	2.4	3.0	2.5	3.5	2.5	3.1	2.9	32	1.3	1.1	1.7
25	1.9	2.5	3.0	2.5	3.2	2.5	3.2	2.9	2.6	1.4	1.0	1.7
26	1.9	2.5	3.0	2.6	3.1	2.4	3.2	2.8	2.1	1.2	.98	1.4
27	1.8	2.5	2.9	2.6	3.0	2.4	3.2	2.8	1.9	1.2	.97	1.4
28	1.9	2.5	3.0	2.5	3.0	2.3	4.0	2.8	1.8	1.2	.93	1.4
29	1.9	2.4	3.0	2.6	---	2.3	215	2.9	1.6	1.2	.92	1.9
30	1.8	2.4	3.0	2.5	---	2.5	36	2.7	1.5	1.2	.91	1.6
31	1.8	---	3.1	2.4	---	2.4	---	2.7	---	1.2	.93	---
TOTAL	42.95	67.7	87.9	86.1	74.0	85.3	361.3	107.3	465.3	36.24	33.38	45.51
MEAN	1.39	2.26	2.84	2.78	2.64	2.75	12.0	3.46	15.5	1.17	1.08	1.52
MAX	2.0	2.7	3.8	3.1	3.6	3.7	215	6.6	332	1.5	1.6	1.9
MIN	.79	1.8	2.3	2.4	2.3	2.3	2.4	2.7	1.5	.98	.89	.90
AC-FT	85	134	174	171	147	169	717	213	923	72	66	90

CAL YR 1984	TOTAL	668.45	MEAN	1.83	MAX	4.6	MIN	.60	AC-FT	1330
WTR YR 1985	TOTAL	1492.98	MEAN	4.09	MAX	332	MIN	.79	AC-FT	2960

07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK

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, Hydrologic Unit 11100203, in control tower at left end of Fort Supply Dam on Wolf Creek, 2.0 mi southeast of Fort Supply and at mile 5.5.

DRAINAGE AREA.--1,735 mi^2, of which 241 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1942 to current year. Prior to October 1970, published as Fort Supply Reservoir near Fort Supply.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of a 540-foot uncontrolled gravity-type concrete weir, one 36-inch diameter gated bypass, and one 18-foot oval-shaped conduit controlled by three vertical-lift sluice gates. Regulated storage began May 4, 1942; conservation pool first filled in June 1942. Capacity, 100,700 acre-ft at elevation 2,028.0 ft, crest of spillway, 13,890 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 1969, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,500 acre-ft June 25, 1957, elevation, 2,026.97 ft: no contents at times November 1942 to January 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,840 acre-ft May 9, elevation, 2,005.49 ft; minimum, 10,680 acre-ft Nov. 1, elevation 2,002.15 ft.

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

2,001	8,930	2,004	13,890
2,002	10,430	2,005	15,830
2,003	12,080	2,006	17,890

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11070	10780	11210	13170	14380	14840	14120	14880	13460	13910	12840	12050
2	11040	10780	11220	13200	14340	14940	14200	14820	13420	13870	12840	12010
3	11010	10740	11290	13240	14300	14800	14340	14760	13510	13850	12770	11960
4	11010	10760	11290	13270	14280	14880	14280	14630	13650	13820	12750	11910
5	10990	10740	11300	13400	14260	14820	14220	14490	13730	13780	12750	11870
6	10960	10760	11370	13400	14240	14610	14120	15350	13800	13760	12680	11850
7	10920	10740	11370	13470	14220	14240	14060	16020	13820	13730	12680	11770
8	10890	10740	11440	13530	14220	13990	13990	16780	13840	13650	12660	11680
9	10890	10740	11420	13550	14220	13840	13870	16740	13800	13600	12510	11630
10	10890	10740	11490	13620	14220	13750	13820	16590	13910	13580	12510	11750
11	10910	10730	11470	13650	14200	13620	13840	16060	13890	13550	12500	11770
12	10880	10710	11450	13690	14180	13750	13950	15710	13890	13510	12410	11900
13	10840	10760	11540	13730	14160	13760	14030	15330	13950	13440	12390	12320
14	10810	10730	11600	13760	14160	13840	14100	15000	13950	13370	12480	12500
15	10890	10710	12120	13840	14220	13910	14140	14610	14030	13290	12480	12640
16	10910	10710	12130	13890	14140	14010	14140	14220	14010	13270	12530	12750
17	10970	10730	12170	13950	14160	14080	14280	14060	13950	13270	12410	12790
18	10840	10710	12300	14010	14140	14220	14140	14030	13950	13180	12390	12790
19	10840	10740	12370	13990	14120	14220	14010	14010	13970	13110	12510	12790
20	10830	10730	12510	14060	14240	14490	14050	13990	13990	13060	12510	13060
21	10830	10710	12510	14100	14220	14670	14010	13930	13780	12990	12530	13290
22	10810	10710	12600	14140	14410	14630	13910	13890	13800	12970	12460	13350
23	10790	10730	12660	14200	14590	14470	13850	13850	13910	12930	12440	13440
24	10780	10730	12700	14240	14700	14320	13870	13780	13950	13080	12410	13470
25	10810	11120	12790	14320	14740	14260	14030	13780	13950	13060	12370	13510
26	10790	11140	13000	14380	14760	13990	14180	13650	13990	13060	12350	13580
27	10760	11170	13000	14430	14820	13840	14340	13600	14010	13060	12320	13620
28	10760	11190	13020	14490	14860	13750	14470	13550	14010	13020	12300	13560
29	10790	11190	13020	14470	---	13730	14720	13530	13990	13000	12220	13670
30	10780	11210	13090	14380	---	13930	14840	13510	13930	12970	12170	13750
31	10730	---	13110	14410	---	14030	---	13470	---	12860	12100	---
MAX	11070	11210	13110	14490	14860	14940	14840	16780	14030	13910	12840	13750
MIN	10730	10710	11210	13170	14120	13620	13820	13470	13420	12860	12100	11630
(†)	2002.18	2002.47	2003.57	2004.27	2004.50	2004.07	2004.49	2003.77	2004.02	2003.43	2003.01	2003.92
(††)	-330	+480	+1,900	+1,300	+450	-830	+810	-1,370	+460	-1,070	-760	+1,650

CAL YR 1984 MAX 15060 MIN 10710 (††) -1,790
WTR YR 1985 MAX 16780 MIN 10710 (††) +2,690

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07237000 WOLF CREEK NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°34'00", long 99°33'05", SE 1/4 SE 1/4 sec.9, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, near left bank on downstream side of pier of bridge on U.S. Highway 270, 1.0 mi southeast of Fort Supply, 1.6 mi downstream from Fort Supply Dam, and at mile 3.9.

DRAINAGE AREA.--1,739 mi^2, of which 241 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1, 1941, published as "Near Supply".

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,958.38 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

REMARKS.--Estimated daily discharges: Oct. 1-3, Dec. 23-24, Dec. 31 to Jan. 1, 19-20, 29, Feb. 5, Mar. 16-17, 23, Apr. 19, May 4 to July 8, 16, 30, Aug. 18-19, Sept. 8-9, 23. Records fair. Flow completely regulated since May 1942 by Fort Supply Lake (station 07236500).

AVERAGE DISCHARGE.--(Prior to regulation by Fort Supply Dam) 5 years, (water years 1938-42), 104 ft^3/s, 73,350 acre-ft/yr; (since regulation by Fort Supply Dam) 43 years (water years 1943-85), 54.4 ft^3/s, 39,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s June 24, 1939, gage height, 15.60 ft, present datum, from rating curve extended above 8,000 ft^3/s; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.6 ft, present datum, was reached prior to October 1937, from information by Oklahoma State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 230 ft^3/s May 10-12; minimum daily discharge, 0.63 ft^3/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.78	.88	1.3	36	35	3.2	15	17	10	6.8	5.6
2	.65	.78	.88	1.2	36	35	3.2	52	17	10	6.6	5.5
3	.67	.80	.91	1.3	36	34	3.2	88	17	9.9	6.4	5.2
4	.67	.80	.91	1.4	36	35	29	88	17	9.9	6.4	5.2
5	.69	.78	.94	1.2	36	90	65	88	16	10	6.4	5.1
6	.63	.77	.91	1.3	35	186	64	87	17	10	6.2	4.9
7	.66	.75	.90	1.3	35	185	64	40	17	10	6.1	5.0
8	.64	.76	.87	1.3	35	145	64	110	17	11	6.2	5.0
9	.71	.79	.86	1.4	35	124	63	220	16	10	6.0	5.2
10	.72	.81	.79	1.4	35	124	62	230	16	10	6.2	5.2
11	.75	.79	.84	1.3	35	42	27	230	16	9.7	6.2	5.4
12	.69	.77	.87	1.3	35	3.2	3.6	230	16	9.3	6.0	5.4
13	.70	.77	.79	1.4	34	3.2	3.4	229	15	8.8	6.0	5.2
14	.69	.78	.91	1.4	34	3.1	3.3	229	15	9.0	5.8	5.0
15	.71	.77	1.3	1.4	34	3.0	19	229	15	8.8	6.0	5.0
16	.71	.79	1.2	1.5	34	3.0	36	228	15	8.5	6.2	4.9
17	.68	.83	1.2	1.5	34	3.0	36	105	14	8.7	6.0	4.8
18	.73	.87	1.1	1.6	33	2.9	36	30	14	8.6	6.0	4.8
19	.75	.85	1.2	1.5	34	2.9	35	30	13	8.6	6.0	4.9
20	.77	.83	1.3	1.3	34	2.8	35	40	13	8.5	6.3	5.0
21	.72	.79	1.4	1.3	34	2.9	35	40	13	8.4	6.2	5.6
22	.72	.79	1.4	1.3	35	76	35	39	12	8.0	6.2	5.4
23	.70	.80	1.3	1.4	35	126	35	39	12	8.0	6.0	5.4
24	.74	.81	1.4	1.4	35	125	24	39	12	8.2	6.0	5.2
25	.82	.85	1.4	1.5	35	125	16	39	11	8.3	5.8	5.2
26	.78	.88	1.3	1.5	34	125	16	38	11	8.1	6.0	5.0
27	.76	.86	1.3	1.5	34	126	16	38	11	7.6	6.0	4.8
28	.81	.86	1.4	15	34	61	15	38	11	7.2	6.0	4.8
29	.80	.84	1.3	37	---	8.0	15	19	11	7.2	5.8	5.0
30	.77	.84	1.4	36	---	3.4	15	18	10	7.0	5.6	5.1
31	.80	---	1.3	36	---	3.3	---	18	---	6.8	5.7	---
TOTAL	22.29	24.19	34.46	161.2	972	1843.7	876.9	2963	427	274.1	189.1	153.8
MEAN	.72	.81	1.11	5.20	34.7	59.5	29.2	95.6	14.2	8.84	6.10	5.13
MAX	.82	.88	1.4	37	36	186	65	230	17	11	6.8	5.6
MIN	.63	.75	.79	1.2	33	2.8	3.2	15	10	6.8	5.6	4.8
AC-FT	44	48	68	320	1930	3660	1740	5880	847	544	375	305

CAL YR 1984 TOTAL 5659.76 MEAN 15.5 MAX 125 MIN .61 AC-FT 11230
WTR YR 1985 TOTAL 7941.74 MEAN 21.8 MAX 230 MIN .63 AC-FT 15750

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'18", long 99°16'40", SE 1/4 SE 1/4 sec.25, T.23 N., R.20 W., Woodward County, Hydrologic Unit 11100301, 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, 6.0 mi east of Woodward, 7.2 mi upstream from Indian Creek, 27.5 mi downstream from Wolf Creek, and at mile 460.2.

DRAINAGE AREA.--11,589 mi^2, of which 4,812 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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 1903-06. Gage-height records collected in this vicinity since 1919 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,830.43 ft, National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording 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 mi upstream at datum 37.01 ft higher than present datum.

REMARKS.--Estimated daily discharges: Jan. 2, 11-13, 20-22, Jan. 31 to Feb. 13. Records good. Some regulation since May 1942 by Fort Supply Lake on Wolf Creek 33 mi upstream (station 07236500).

AVERAGE DISCHARGE.--47 years, (water years 1939-85), 177 ft^3/s, 128,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft^3/s Oct. 10, 1946, gage height, 9.80 ft, site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1923, reached a stage of 11.0 ft, site and datum then in use; from reports of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 925 ft^3/s May 7, gage height, 7.33 ft; minimum daily discharge, 1.3 ft^3/s Oct 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	5.4	5.7	17	13	68	62	94	72	44	19	8.3
2	1.3	4.0	5.7	16	12	67	58	101	66	42	19	8.1
3	1.4	4.0	5.8	15	14	67	54	131	62	41	18	8.2
4	4.1	4.0	5.8	15	21	67	52	206	73	40	16	7.8
5	42	4.0	7.0	15	19	66	58	257	81	37	16	7.0
6	5.3	4.1	7.0	16	19	74	94	218	84	36	16	6.7
7	3.4	4.5	6.7	16	24	147	96	666	90	34	25	6.6
8	2.9	4.5	6.7	16	32	169	96	346	90	33	18	6.1
9	3.1	4.4	7.3	17	34	158	95	290	105	32	15	5.9
10	3.4	4.0	7.0	16	31	143	98	360	104	30	13	6.4
11	3.2	4.0	7.0	13	27	145	97	347	145	28	13	7.0
12	3.2	4.5	6.2	12	28	114	87	315	131	27	13	8.7
13	3.2	4.5	9.2	13	37	72	69	299	117	24	35	75
14	3.2	4.9	14	14	49	63	58	289	103	22	32	54
15	3.2	4.7	75	15	42	57	59	282	202	30	27	37
16	14	4.5	57	15	43	53	72	278	115	23	23	30
17	5.8	11	31	15	43	52	84	276	96	23	20	25
18	3.9	17	23	15	44	48	82	224	85	20	17	22
19	3.5	11	21	15	44	46	77	160	76	19	63	21
20	3.7	7.4	20	14	44	62	75	146	69	19	31	120
21	3.7	6.2	21	13	51	63	76	140	64	18	25	110
22	3.7	5.9	19	15	58	57	73	133	61	19	21	66
23	3.8	5.7	19	16	78	82	69	127	57	20	19	99
24	3.9	5.7	19	13	82	136	67	122	58	19	18	55
25	5.0	5.8	18	13	75	144	65	121	55	93	16	55
26	4.8	5.4	17	13	74	149	76	115	63	49	15	46
27	4.3	5.3	19	14	70	146	102	111	73	31	13	41
28	3.8	5.3	18	15	68	143	75	107	56	38	11	36
29	3.8	5.4	16	16	---	116	133	104	50	25	10	41
30	3.7	5.5	17	19	---	87	118	97	46	23	9.3	36
31	4.2	---	18	16	---	69	---	80	---	20	8.7	---
TOTAL	160.3	172.6	529.1	463	1176	2930	2377	6542	2549	959	615.0	1055.8
MEAN	5.17	5.75	17.1	14.9	42.0	94.5	79.2	211	85.0	30.9	19.8	35.2
MAX	42	17	75	19	82	169	133	666	202	93	63	120
MIN	1.3	4.0	5.7	12	12	46	52	80	46	18	8.7	5.9
AC-FT	318	342	1050	918	2330	5810	4710	12980	5060	1900	1220	2090

CAL YR 1984	TOTAL	12460.22	MEAN	34.0	MAX	176	MIN	.00	AC-FT	24710
WTR YR 1985	TOTAL	19528.8	MEAN	53.5	MAX	666	MIN	1.3	AC-FT	38740

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1958-59, 1961-63, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to Jan. 1982.
WATER TEMPERATURE: October 1974 to Jan. 1982.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT												
23...	1330	1028	80020	3.9	3530	8.70	12.0	14.5	6.5	722	19.7	207
DEC												
26...	1330	1028	80020	18	2930	7.80	8.5	6.0	5.3	714	12.1	105
MAR												
07...	1230	1028	80020	161	1460	8.40	14.0	9.5	22	710	9.8	93
MAY												
20...	1230	1028	80020	147	1610	8.30	23.0	22.0	350	708	10.1	125
JUL												
24...	1230	1028	80020	18	2460	8.50	27.5	27.5	7.1	707	12.9	178
SEP												
18...	1030	1028	80020	23	1550	8.30	26.0	22.5	17	710	8.2	102

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)
OCT											
23...	K55	330	960	720	280	63	410	48	6	8.6	232
DEC											
26...	2000	340	850	580	240	61	320	45	5	6.2	331
MAR											
07...	K40	92	360	140	90	32	160	49	4	5.0	257
MAY											
20...	4700	300	390	180	100	33	180	50	4	6.2	251
JUL											
24...	710	1000	660	500	180	50	280	48	5	6.4	170
SEP											
18...	550	300	430	250	120	32	170	46	4	7.4	223

DATE	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT											
23...	31	243	241	0.7	880	560	0.8	27	2420	2400	3.3
DEC											
26...	0	241	271	8.3	580	440	0.7	30	1860	1800	2.5
MAR											
07...	4.0	229	217	1.6	200	250	0.7	12	854	890	1.2
MAY											
20...	0	196	206	2.0	210	280	0.8	19	957	950	1.3
JUL											
24...	13	156	160	0.9	480	400	0.7	18	1550	1500	2.1
SEP											
18...	0	177	183	1.8	280	250	0.7	20	1020	990	1.4

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
OCT											
23...	25	3.40	2.90	3.7	5.5	0.79	--	0.48	0.33	1.0	30
DEC											
26...	91	0.87	3.50	4.5	5.5	1.40	--	1.20	1.10	3.4	--
MAR											
07...	371	0.21	0.23	0.3	2.0	0.26	--	0.01	0.03	0.09	<10
MAY											
20...	380	<0.10	0.08	0.1	1.3	0.22	0.67	0.01	<0.01	--	<10
JUL											
24...	75	0.31	0.07	0.09	1.3	0.15	0.46	0.02	0.01	0.03	--
SEP											
18...	63	1.10	0.12	0.15	1.0	0.33	1.0	0.18	0.13	0.4	20

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT											
23...	2	<100	<10	<1	3	<1	<1	140	<1	50	90
DEC											
26...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	1	120	2	<1	<1	<3	3	13	<1	45	5
MAY											
20...	2	190	<0.5	<1	<1	<3	2	6	3	56	<1
JUL											
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
18...	4	230	<0.5	<1	<1	<3	1	34	<1	41	4

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
23...	<0.1	3	<1	1	<1	1800	15	10	20	0.21	77
DEC											
26...	--	--	--	--	--	--	--	--	24	1.2	26
MAR											
07...	<0.1	<10	2	<1	<1	1000	<6	17	185	80	88
MAY											
20...	0.1	<10	1	<1	<1	1200	6	19	220	87	90
JUL											
24...	--	--	--	--	--	--	--	--	11	0.53	42
SEP											
18...	<0.1	<10	2	<1	<1	1000	6	30	42	2.6	92

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK

LOCATION.--Lat 36°11'06", long 98°55'15", in NW 1/4 sec.28, T.20 N., R.16 W., Major County, Hydrologic Unit 11100301, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2.0 mi upstream from Seiling Creek, 2.2 mi north of Seiling, 2.8 mi downstream from Deep Creek, and at mile 422.6.

DRAINAGE AREA.--12,261 mi^2, of which 4,847 mi is probably noncontributing.

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft, National Geodetic Vertical Datum of 1929. July 1, 1946 to Aug. 17, 1964, at site 60 ft downstream and prior to Oct. 1, 1954, at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 15 to Feb. 27. Records good. Some regulation by Fort Supply Lake on Wolf Creek 70.6 mi upstream (station 07236500).

AVERAGE DISCHARGE.--39 years, 198 ft^3/s, 143,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft^3/s 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft^3/s May 8, gage height 8.56 ft; minimum daily discharge, 0.05 ft^3/s Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	7.1	13	52	34	124	130	270	115	65	40	19
2	.05	6.6	13	55	30	118	117	205	105	63	41	17
3	.09	6.8	13	57	33	117	111	177	97	61	38	16
4	.12	6.8	14	65	40	110	107	197	106	57	35	14
5	.37	6.7	15	63	43	103	99	245	130	53	34	12
6	.16	6.2	16	54	39	100	96	312	145	50	32	11
7	.72	6.4	16	53	50	107	125	347	139	47	31	9.4
8	2.0	6.8	16	51	60	174	132	1080	133	44	29	8.6
9	1.2	10	17	51	70	189	133	744	122	40	26	8.3
10	.95	7.6	18	51	66	187	134	494	132	38	25	8.8
11	.60	7.7	17	50	60	176	137	520	155	35	23	15
12	.83	7.9	17	49	56	171	139	472	174	33	20	11
13	1.5	8.1	20	50	70	142	171	424	168	29	26	12
14	1.4	8.9	23	49	80	103	133	396	152	26	55	21
15	1.2	9.2	36	49	78	92	118	376	189	25	64	48
16	2.0	9.1	88	48	74	87	110	363	267	29	62	38
17	2.2	11	143	47	72	83	113	355	188	34	67	31
18	2.6	13	101	46	70	81	124	352	135	24	53	25
19	3.9	14	77	44	68	79	120	303	122	22	68	21
20	4.2	17	65	40	70	104	116	235	109	21	86	26
21	4.5	17	60	36	80	178	113	212	97	20	77	118
22	4.7	15	55	40	100	207	122	199	90	25	57	306
23	4.8	14	53	45	120	153	118	188	85	40	47	191
24	5.1	14	50	41	140	146	108	179	78	55	43	185
25	5.7	14	49	35	130	189	103	170	73	116	39	136
26	7.2	14	48	33	120	193	110	165	75	347	37	123
27	6.6	14	46	34	125	199	124	157	102	166	34	102
28	5.9	13	45	36	124	195	161	151	110	88	30	82
29	5.3	13	46	38	---	189	160	146	87	71	27	78
30	5.7	13	45	42	---	175	271	141	71	56	24	80
31	6.0	---	50	37	---	149	---	132	---	45	21	---
TOTAL	87.64	317.9	1285	1441	2102	4420	3855	9707	3751	1825	1291	1773.1
MEAN	2.83	10.6	41.5	46.5	75.1	143	129	313	125	58.9	41.6	59.1
MAX	7.2	17	143	65	140	207	271	1080	267	347	86	306
MIN	.05	6.2	13	33	30	79	96	132	71	20	20	8.3
AC-FT	174	631	2550	2860	4170	8770	7650	19250	7440	3620	2560	3520

CAL YR 1984	TOTAL	23514.68	MEAN	64.2	MAX	1170	MIN	.00	AC-FT	46640
WTR YR 1985	TOTAL	31855.64	MEAN	87.3	MAX	1080	MIN	.05	AC-FT	63190

07238500 CANTON LAKE NEAR CANTON, OK

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, Hydrologic Unit 11100301, near right end of Canton Dam on North Canadian River, 2.0 mi northwest of Canton, and at mile 394.3.

DRAINAGE AREA.--12,483 mi^2, of which 4,883 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1948 to current year. Prior to October 1970, published as Canton Reservoir near Canton.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. The outlet works consists of a concrete gravity, chute-type weir spillway controlled by 16 taintor gates with net length of 640 ft, three sluice gates and two 24-inch valved pipes. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 377,100 acre-ft at elevation 1,638.0 ft (flood-control pool), 109,700 acre-ft at elevation 1,615.2 ft. (Normal water-supply pool designated in 1965), 93,180 acre-ft at elevation 1,613.0 ft (crest of spillway), and 14,140 acre-ft at elevation 1,596.5 ft (conservation pool). Figures given herein represent total contents. Reservoir was designed for flood control, irrigation, and conservation, but owing to a lack of facilities, it is not being used for irrigation at this time. Revised capacity table, based on survey in 1980, used since Oct. 1, 1981.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 102,100 acre-ft June 26, elevation, 1614.21 ft; minimum, 56,780 acre-ft Dec. 6, elevation, 1,607.25 ft.

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

1,607	55,450	1,615	108,200
1,611	79,350	1,617	124,400
1,613	93,180	1,619	142,000

RESERVOIR STORAGE, (ACRE-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59270	58450	57360	60910	63000	68550	78050	85310	97650	101300	99990	84770
2	59160	58020	57090	60800	63000	68740	78380	85510	97720	101300	99770	84630
3	59220	58180	56980	60860	63060	69790	78510	85650	97720	101100	99550	84500
4	59000	58070	56980	60970	63170	69420	79030	85780	98380	101300	99690	84160
5	59160	57960	57200	60910	63170	69480	78900	86190	99260	101000	99620	83750
6	59110	57470	56920	61140	63170	69540	79030	86470	99260	100900	99990	83620
7	59050	57740	57030	61140	63290	69970	79090	87390	99620	100700	99400	83550
8	59050	57420	56980	61200	63400	70340	79220	88170	99620	100500	98740	83480
9	58890	58230	57030	61660	63460	70650	79090	89370	99840	100500	97720	83480
10	59000	57580	57090	61720	63520	70890	79690	89930	100100	100400	96030	83280
11	58780	57420	57030	61720	63640	71450	79820	90850	100600	100200	94570	83820
12	59000	57360	57140	61490	63690	71750	80370	91560	100500	99840	93550	83750
13	58940	57140	57740	61490	63870	72000	80910	92260	100400	99550	91910	84360
14	59270	57360	57960	61490	64160	72120	81110	92620	100500	99400	90990	84160
15	58780	57310	58290	61490	64100	72310	81450	93180	100800	99400	89510	83950
16	59000	56980	58560	61720	64510	72680	81580	93690	100800	99550	88030	83750
17	58670	57580	59000	61840	64620	72680	81720	94130	101100	99260	86760	83550
18	58730	57690	59000	61900	64800	72680	81580	94500	101300	99110	85440	83620
19	58560	57520	59220	62650	64910	72990	81650	94940	101300	98960	85780	83480
20	58670	57360	59220	61950	64970	74420	82330	95520	100800	98820	85780	84360
21	58510	57310	59440	61950	65780	74550	82530	95820	101000	98740	85780	84090
22	58510	57200	59490	61950	66130	75070	83070	96110	101300	99110	85850	84290
23	58400	57250	59710	62010	67080	75260	83010	96250	101300	99110	85850	84500
24	58510	57250	59820	62070	67140	75460	83070	96470	101300	99550	85920	84700
25	58510	57090	59650	62130	67390	75590	82940	96620	101300	99480	85780	84830
26	58400	57310	59600	62420	67880	76040	83410	96770	101900	99550	85580	84770
27	58560	57140	59710	62530	68120	76430	83890	96840	101500	99690	85510	84700
28	58400	57090	59980	62650	68310	77010	84020	97280	101400	99770	85310	85310
29	58230	57200	60420	62820	---	77790	84560	97280	101300	99840	85170	85780
30	58340	57140	60310	63290	---	77920	85040	97570	101300	99620	85040	85510
31	58230	---	61140	63000	---	77860	---	97570	---	99770	84970	---
MAX	59270	58450	61140	63290	68310	77920	85040	97570	101900	101300	99990	85780
MIN	58230	56980	56920	60800	63000	68550	78050	85310	97650	98740	84970	83280
(†)	1607.74	1607.31	1608.04	1608.36	1609.26	1610.77	1611.84	1613.60	1614.11	1613.90	1611.83	1611.93
(††)	-1,260	-1,090	+4,000	+1,860	+5,310	+9,550	+7,180	+12,530	+3,730	-1,530	-14,800	+540

CAL YR 1984 MAX 119100 MIN 56920 †† -43,760
WTR YR 1985 MAX 101900 MIN 56920 †† +26,020

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

360544098354701 CANTON LAKE CROSS SECTION NO. 1 SITE NO. 1

LOCATION.--Lat 36°05'44", long 98°35'47".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
NOV									
15...	1113	1028	80020	1.00	57300	1800	7.60	--	12.0
15...	1117	1028	1028	5.00	57300	1800	7.80	--	11.5
15...	1120	1028	80020	10.0	57300	1800	7.90	--	11.0
15...	1123	1028	1028	15.0	57300	1800	7.90	--	11.0
15...	1126	1028	80020	18.0	57300	1790	8.00	--	11.0
MAY									
16...	1030	1028	80020	1.00	93700	1760	8.20	19.0	19.5
16...	1108	1028	1028	5.00	93700	1760	8.20	19.0	19.5
16...	1110	1028	1028	10.0	93700	1760	8.20	19.0	19.5
16...	1115	1028	80020	15.0	93700	1770	8.20	19.0	19.5
16...	1117	1028	1028	20.0	93700	1770	8.20	19.0	19.0
16...	1120	1028	80020	25.0	93700	1770	8.20	19.0	19.5
SEP									
11...	1020	1028	80020	1.00	83800	1820	8.30	19.0	25.0
11...	1025	1028	1028	5.00	83800	1810	8.30	19.0	25.0
11...	1030	1028	80020	10.0	83800	1820	8.30	19.0	25.0
11...	1035	1028	1028	15.0	83800	1820	8.30	19.0	25.0
11...	1040	1028	1028	20.0	83800	1820	8.30	19.0	24.5
11...	1045	1028	80020	22.0	83800	1810	8.20	19.0	24.5
24...	1105	1028	80020	1.00	84700	1800	7.80	14.0	20.0
24...	1126	1028	1028	5.00	84700	1790	8.00	14.0	19.5
24...	1130	1028	80020	10.0	84700	1790	8.10	14.0	19.5
24...	1134	1028	1028	15.0	84700	1790	8.10	14.0	20.0
24...	1137	1028	1028	20.0	84700	1790	8.10	14.0	20.0
24...	1139	1028	80020	24.0	84700	1800	8.10	14.0	19.5

DATE	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV									
15...	28	720	10.2	101	460	--	100	51	200
15...	--	720	10.3	101	--	--	--	--	--
15...	30	720	10.3	100	460	310	100	51	210
15...	--	720	9.5	92	--	--	--	--	--
15...	54	720	9.2	89	--	--	--	--	--
MAY									
16...	9.6	730	7.4	85	470	320	110	47	180
16...	--	730	7.6	87	--	--	--	--	--
16...	--	730	7.7	88	--	--	--	--	--
16...	9.9	730	7.9	90	470	320	110	47	180
16...	--	730	7.8	89	--	--	--	--	--
16...	16	730	7.6	87	440	300	100	47	180
SEP									
11...	15	720	7.0	90	450	270	100	48	200
11...	--	720	6.6	85	--	--	--	--	--
11...	15	720	6.3	81	450	320	100	49	200
11...	--	720	6.2	80	--	--	--	--	--
11...	--	720	6.1	78	--	--	--	--	--
11...	150	720	5.8	74	450	320	100	48	190
24...	15	730	8.0	92	440	310	99	47	190
24...	--	730	7.7	88	--	--	--	--	--
24...	16	730	7.7	88	440	320	99	48	200
24...	--	730	7.5	87	--	--	--	--	--
24...	--	730	7.4	85	--	--	--	--	--
24...	54	730	7.1	82	450	320	100	48	200

360544098354701 CANTON LAKE CROSS SECTION NO. 1 SITE NO. 1--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV								
15...	48	4	8.5	--	--	370	290	1170
15...	--	--	--	--	--	--	--	--
15...	49	4	8.4	146	3.5	370	290	1170
15...	--	--	--	--	--	--	--	--
15...	--	--	--	161	3.1	370	290	1200
MAY								
16...	45	4	7.3	148	1.8	360	260	1100
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	45	4	7.7	148	1.8	360	270	1090
16...	--	--	--	--	--	--	--	--
16...	46	4	7.3	148	1.8	370	270	1100
SEP								
11...	49	4	8.1	178	1.7	340	270	1120
11...	--	--	--	--	--	--	--	--
11...	49	4	8.3	129	1.2	330	260	1130
11...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
11...	47	4	8.2	128	1.6	330	270	1130
24...	48	4	7.8	129	3.9	330	270	1130
24...	--	--	--	--	--	--	--	--
24...	49	4	7.5	129	2.0	330	270	1130
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
24...	49	4	7.8	129	2.0	330	270	1130

360558098351501 CANTON LAKE CROSS SECTION NO. 1 SITE NO. 2

LOCATION.--Lat 36°05'58", long 98°35'15".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
15...	1208	1028	1028	1.00	57300	1770	7.90	11.0	720	10.6	102
15...	1210	1028	1028	5.00	57300	1780	8.10	11.0	720	10.8	104
15...	1213	1028	1028	10.0	57300	1790	8.10	11.0	720	10.8	105
15...	1216	1028	1028	15.0	57300	1800	8.10	11.0	720	10.8	105
15...	1218	1028	1028	19.0	57300	1790	8.00	11.0	720	10.3	100
MAY											
16...	1136	1028	1028	1.00	93700	1750	8.30	20.0	730	7.7	89
16...	1138	1028	1028	5.00	93700	1760	8.30	20.0	730	7.6	88
16...	1140	1028	1028	10.0	93700	1760	8.30	20.0	730	7.5	86
16...	1141	1028	1028	15.0	93700	1770	8.30	19.5	730	7.7	88
16...	1142	1028	1028	20.0	93700	1760	8.30	19.5	730	7.6	87
16...	1144	1028	1028	24.0	93700	1770	8.30	19.5	730	7.5	86
SEP											
11...	1104	1028	1028	1.00	83800	1840	8.20	24.5	720	6.3	81
11...	1106	1028	1028	5.00	83800	1840	8.20	24.5	720	6.1	78
11...	1108	1028	1028	10.0	83800	1840	8.20	24.5	720	5.9	76
11...	1110	1028	1028	15.0	83800	1840	8.20	24.5	720	5.7	73
11...	1112	1028	1028	20.0	83800	1840	8.20	24.5	720	5.5	70
11...	1115	1028	1028	23.0	83800	1840	8.20	24.5	720	5.2	66
24...	1244	1028	1028	1.00	84700	1800	8.00	20,0	730	7.7	89
24...	1246	1028	1028	5.00	84700	1790	8.10	20.0	730	7.4	86
24...	1248	1028	1028	10.0	84700	1790	8.10	20.0	730	7.3	85
24...	1250	1028	1028	15.0	84700	1800	8.20	20.0	730	7.5	87
24...	1252	1028	1028	20.0	84700	1790	8.10	20.0	730	7.3	84
24...	1255	1028	1028	21.0	84700	1790	8.20	19.5	730	7.2	83

360612098344001 CANTON LAKE CROSS SECTION NO. 1 SITE NO. 3

LOCATION.--Lat 36°06'12", long 98°34'40".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
15...	1230	1028	1028	1.00	57300	1800	8.20	11.5	720	--	--
15...	1233	1028	1028	5.00	57300	1800	8.20	11.5	720	--	--
15...	1235	1028	1028	10.0	57300	1800	8.20	11.5	720	--	--
15...	1237	1028	1028	15.0	57300	1800	8.20	11.0	720	--	--
15...	1239	1028	1028	19.0	57300	1800	8.20	11.0	720	--	--
MAY											
16...	1153	1028	1028	1.00	93700	1770	8.30	20.0	730	7.8	90
16...	1154	1028	1028	5.00	93700	1770	8.30	19.5	730	7.7	88
16...	1156	1028	1028	10.0	93700	1770	8.30	19.5	730	7.7	88
16...	1158	1028	1028	15.0	93700	1780	8.30	19.5	730	7.7	88
16...	1200	1028	1028	20.0	93700	1780	8.30	19.5	730	7.6	87
16...	1202	1028	1028	25.0	93700	1770	8.30	19.5	730	7.7	88
SEP											
11...	1124	1028	1028	1.00	83800	1850	8.20	24.5	720	6.2	79
11...	1128	1028	1028	5.00	83800	1840	8.20	24.5	720	6.0	77
11...	1130	1028	1028	10.0	83800	1840	8.20	24.5	720	5.8	74
11...	1132	1028	1028	15.0	83800	1840	8.20	24.5	720	6.1	78
11...	1134	1028	1028	20.0	83800	1850	8.20	24.5	720	5.8	74
24...	1305	1028	1028	1.00	84700	1800	8.10	20.0	730	7.6	88
24...	1307	1028	1028	5.00	84700	1790	8.10	20.0	730	7.5	87
24...	1309	1028	1028	10.0	84700	1790	8.10	20.0	730	7.3	84
24...	1311	1028	1028	15.0	84700	1800	8.20	19.5	730	7.2	83
24...	1314	1028	1028	20.0	84700	1800	8.20	19.5	730	7.1	81
24...	1316	1028	1028	21.0	84700	1790	8.20	19.5	730	6.7	77

360744098364101 CANTON LAKE CROSS SECTION NO. 2 SITE NO. 1

LOCATION.--Lat 36°07'44", long 98°36'41".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
15...	1321	1028	1028	1.00	57300	1820	8.30	11.5	720	9.7	95
15...	1323	1028	1028	5.00	57300	1810	8.30	11.5	720	10.8	106
15...	1325	1028	1028	8.00	57300	1810	8.30	11.5	720	9.9	97
MAY											
16...	1257	1028	1028	1.00	93700	1560	8.40	20.0	730	8.2	95
16...	1300	1028	1028	5.00	93700	1710	8.40	20.0	730	8.0	93
16...	1301	1028	1028	10.0	93700	1710	8.30	20.0	730	8.1	93
16...	1303	1028	1028	12.0	93700	1710	8.30	19.5	730	7.9	91
SEP											
11...	1218	1028	1028	1.00	83800	1850	8.30	25.5	720	6.7	87
11...	1220	1028	1028	5.00	83800	1840	8.30	25.0	720	6.6	86
11...	1222	1028	1028	10.0	83800	1850	8.30	25.0	720	6.5	84
11...	1224	1028	1028	14.0	83800	1840	8.30	25.0	720	6.3	82
24...	1403	1028	1028	1.00	84700	1790	8.30	19.5	730	7.9	91
24...	1405	1028	1028	5.00	84700	1790	8.30	19.5	730	7.8	89
24...	1407	1028	1028	10.0	84700	1790	8.30	19.5	730	7.8	89
24...	1409	1028	1028	14.0	84700	1800	8.40	19.0	730	7.3	83

360808098362101 CANTON LAKE CROSS SECTION NO. 2 SITE NO. 2

LOCATION.--Lat 36°08'08", long 98°36'21".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COL-LECTING SAMPLE (CODE NUMBER)	ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	SOLVED (PER-CENT SATUR-ATION)
NOV											
15...	1316	1028	1028	1.00	57300	1820	8.20	11.5	720	10.4	101
15...	1318	1028	1028	6.00	57300	1810	8.20	11.5	720	10.2	99
MAY											
16...	1236	1028	1028	1.00	93700	1590	8.30	19.5	730	7.6	87
16...	1239	1028	1028	5.00	93700	1630	8.30	19.5	730	7.5	86
16...	1241	1028	1028	10.0	93700	1610	8.30	19.0	730	7.3	83
16...	1244	1028	1028	12.0	93700	1690	8.30	19.0	730	7.1	81
SEP											
11...	1206	1028	1028	1.00	83800	1850	8.30	25.0	720	6.7	87
11...	1208	1028	1028	5.00	83800	1840	8.30	25.0	720	6.7	87
11...	1210	1028	1028	10.0	83800	1840	8.30	25.0	720	6.6	85
11...	1212	1028	1028	13.0	83800	1850	8.30	25.0	720	6.6	85
24...	1347	1028	1028	1.00	84700	1790	8.20	19.5	730	7.5	86
24...	1349	1028	1028	5.00	84700	1790	8.20	19.5	730	7.4	85
24...	1351	1028	1028	10.0	84700	1790	8.30	19.5	730	7.3	84
24...	1353	1028	1028	14.0	84700	1790	8.30	19.5	730	7.8	89

360828098360501 CANTON LAKE CROSS SECTION NO. 2 SITE NO. 3

LOCATION.--Lat 36°08'28", long 98°36'05".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.-- Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
15...	1255	1028	1028	1.00	57300	1810	8.10	11.5	720	9.9	97
15...	1302	1028	1028	6.00	57300	1800	8.10	11.0	720	10.6	103
MAY											
16...	1226	1028	1028	1.00	93700	1720	8.40	20.0	730	8.6	100
16...	1228	1028	1028	5.00	93700	1730	8.40	20.0	730	8.2	95
16...	1230	1028	1028	8.00	93700	1750	8.40	19.5	730	8.0	92
SEP											
11...	1154	1028	1028	1.00	83800	1850	8.30	24.5	720	7.3	94
11...	1157	1028	1028	5.00	83800	1840	8.30	24.5	720	7.1	91
11...	1200	1028	1028	9.00	83800	1840	8.30	24.5	720	7.1	91
24...	1335	1028	1028	1.00	84700	1790	8.20	20.0	730	7.8	90
24...	1337	1028	1028	5.00	84700	1780	8.20	20.0	730	7.6	88
24...	1339	1028	1028	8.00	84700	1790	8.20	19.5	730	7.9	91

360809098391601 CANTON LAKE CROSS SECTION NO. 3 SITE NO. 1

LOCATION.--Lat 36°08'09", long 98°39'16".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
MAY											
16...	1356	1028	1028	1.00	93700	1520	8.20	21.0	730	9.5	112
16...	1357	1028	1028	5.00	93700	1510	8.20	20.5	730	9.3	108
SEP											
11...	1310	1028	1028	1.00	83800	1920	8.20	24.0	720	6.2	79
11...	1312	1028	1028	4.00	83800	1920	8.20	24.0	720	5.7	73
24...	1445	1028	1028	1.00	84700	1670	8.50	18.0	730	8.8	98
24...	1448	1028	1028	4.00	84700	1670	8.50	18.0	730	8.8	98

360828098390701 CANTON LAKE CROSS SECTION NO. 3 SITE NO. 2

LOCATION.--Lat 36°08'28", long 98°39'07".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
MAY											
16...	1350	1028	1028	1.00	93700	1480	8.10	20.0	730	8.0	93
16...	1351	1028	1028	5.00	93700	1460	8.10	20.0	730	8.0	93
SEP											
11...	1317	1028	1028	1.00	83800	1860	8.20	24.5	720	6.6	85
11...	1318	1028	1028	2.00	83800	1860	8.20	24.5	720	6.4	82
24...	1436	1028	1028	1.00	84700	1670	8.40	19.0	730	8.5	96
24...	1438	1028	1028	4.00	84700	1680	8.40	19.0	730	8.3	94

360844098390000 CANTON LAKE CROSS SECTION NO. 3 SITE NO. 3

LOCATION.--Lat 36°08'44", long 98°39'00".

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
MAY											
16...	1344	1028	1028	1.00	93700	1640	7.70	20.5	730	8.1	94
16...	1345	1028	1028	5.00	93700	1460	7.70	19.5	730	8.1	93
SEP											
11...	1326	1028	1028	1.00	83800	1860	8.20	25.0	720	6.9	89
11...	1328	1028	1028	2.00	83800	1860	8.20	25.0	720	6.4	82
24...	1428	1028	1028	1.00	84700	1750	8.20	19.0	730	8.7	99
24...	1430	1028	1028	2.00	84700	1730	8.30	19.0	730	8.4	95

07239000 NORTH CANADIAN RIVER AT CANTON, OK

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, Hydrologic Unit 11100301, on right bank 2,700 ft downstream from Canton Dam, 1.5 mi northwest of Canton, 4.8 mi upstream from Minnehaha Creek, and at mile 393.8.

DRAINAGE AREA.--12,484 mi^2, of which 4,883 mi^2 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 National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft, U.S. Army Corps of Engineers datum. Oct. 1, 1937 to Jan. 5, 1955, water-stage recorder at site 2.5 mi downstream at datum 1.91 ft lower prior to Oct. 1, 1950 and at datum 6.91 ft lower thereafter.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and completely regulated thereafter by Canton Lake (station 07238500).

AVERAGE DISCHARGE.--(Prior to regulation by Canton Dam) 11 years (water years 1938-48), 256 ft^3/s, 185,500 acre-ft/yr; (since regulation by Canton Dam) 37 years (water years 1949-85), 154 ft^3/s, 111,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft^3/s Oct. 12, 1946, gage height, 12.83 ft, site and datum then in use; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 708 ft^3/s Aug. 14; gage height, 7.96 ft; minimum daily discharge, 2.5 ft^3/s Jan. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	6.8	9.9	5.2	2.7	4.0	7.7	9.4	12	10	15	6.7
2	6.6	6.6	11	5.2	2.7	4.0	8.0	9.4	12	10	13	7.5
3	7.1	6.6	11	5.0	2.9	4.1	8.1	9.0	12	9.9	14	8.1
4	7.8	6.6	12	4.8	3.0	4.6	8.5	8.4	14	10	15	7.9
5	8.5	6.6	12	4.5	3.0	4.6	8.8	8.2	14	11	15	6.6
6	9.3	6.6	12	4.2	3.0	4.6	8.9	7.7	12	11	15	6.6
7	10	6.6	12	4.3	3.0	4.4	9.1	9.3	12	12	14	7.0
8	11	6.6	13	4.0	3.0	4.3	9.4	9.1	11	12	188	7.4
9	11	6.1	13	4.0	3.0	4.3	9.2	8.7	11	11	577	7.9
10	11	6.2	13	4.0	3.0	4.6	8.9	8.6	10	12	677	7.9
11	11	6.8	13	3.7	3.0	4.6	8.9	8.9	11	13	672	7.7
12	11	7.1	7.5	3.5	3.2	4.6	8.6	8.9	10	13	666	7.7
13	11	7.4	5.9	3.3	3.2	4.9	8.2	9.2	11	12	689	8.0
14	11	7.7	5.3	3.2	3.5	4.9	8.1	8.5	11	12	704	8.1
15	12	7.7	5.0	3.2	3.2	4.7	7.7	8.5	11	12	697	8.1
16	14	7.4	5.2	3.2	3.5	4.6	7.7	8.8	11	14	691	8.1
17	15	7.4	4.8	3.2	3.7	4.6	7.4	9.0	11	14	687	7.7
18	15	7.4	4.6	3.2	3.2	4.6	7.3	8.9	11	14	633	7.5
19	14	7.2	4.2	3.2	3.0	4.7	7.0	9.0	11	14	180	7.6
20	13	6.7	4.3	3.2	3.2	5.7	7.0	9.2	12	14	11	8.4
21	12	6.3	4.1	2.9	3.5	6.6	7.0	9.9	11	14	10	7.0
22	11	6.3	4.0	2.7	3.5	6.9	7.0	11	10	16	9.6	5.4
23	10	6.6	3.7	2.7	4.0	7.0	6.4	12	10	14	9.4	6.8
24	10	6.6	3.7	2.5	4.0	7.0	6.4	13	10	15	9.4	7.8
25	10	6.6	3.5	2.5	4.0	7.0	7.4	14	10	16	9.4	7.7
26	10	7.0	3.5	2.6	4.0	7.0	7.8	15	10	16	9.4	7.4
27	10	7.5	3.7	2.9	4.0	7.0	9.1	16	10	15	9.2	7.2
28	10	7.9	4.2	3.0	4.0	7.0	8.9	16	10	15	8.9	7.5
29	10	8.5	5.0	3.1	---	7.0	9.5	13	11	14	8.5	8.5
30	8.7	9.5	5.2	3.2	---	7.3	9.4	12	11	14	7.7	8.1
31	5.6	---	5.2	2.7	---	7.5	---	12	---	13	6.5	---
TOTAL	322.9	210.9	224.5	108.9	93.0	168.7	243.4	320.6	333	402.9	7271.0	225.9
MEAN	10.4	7.03	7.24	3.51	3.32	5.44	8.11	10.3	11.1	13.0	235	7.53
MAX	15	9.5	13	5.2	4.0	7.5	9.5	16	14	16	704	8.5
MIN	5.6	6.1	3.5	2.5	2.7	4.0	6.4	7.7	10	9.9	6.5	5.4
AC-FT	640	418	445	216	184	335	483	636	661	799	14420	448

CAL YR 1984	TOTAL	41114.5	MEAN	112	MAX	984	MIN	3.5	AC-FT	81550
WTR YR 1985	TOTAL	9925.7	MEAN	27.2	MAX	704	MIN	2.5	AC-FT	19690

07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK

LOCATION.--Lat 35°48'43", long 98°25'14", NE 1/4, NE 1/4, sec.1, T.15 N., R.12 W., Blaine County, Hydrologic Unit 11100301, on downstream pier on U.S. Highway 281 bridge, 2 mi south of intersection of U.S. Highway 281 and State Highway 33 and at mile 361.2.

DRAINAGE AREA.--12,736 mi^2, of which 4,899 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,453.60 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 4-5, 14, Feb. 6-7, 9-12. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft^3/s Apr. 13, 1984, gage height, 11.95; minimum daily discharge, 5.0 ft^3/s Sept. 26-27, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 692 ft^3/s Aug. 19, gage height, 11.55 ft; minimum daily discharge, 5.0 ft^3/s Sept. 26-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.8	9.5	10	11	18	24	18	6.7	9.4	9.3	15
2	12	9.7	9.4	12	9.7	17	22	15	7.1	9.8	9.3	13
3	11	9.6	9.2	14	8.7	18	22	14	7.0	9.7	10	11
4	11	9.6	9.7	10	8.7	18	22	13	7.0	9.4	9.3	9.7
5	11	9.6	11	12	8.7	16	21	12	62	8.9	9.5	8.6
6	11	9.4	10	16	9.4	17	21	11	75	8.5	11	7.6
7	10	9.2	11	14	9.4	16	20	12	35	8.1	9.8	6.9
8	9.8	9.3	11	13	8.7	17	21	14	27	7.9	8.9	6.2
9	9.5	9.2	10	13	12	17	20	14	24	7.8	52	5.9
10	9.5	8.7	10	13	8.1	18	21	13	22	7.6	502	5.8
11	9.4	8.5	9.9	10	9.7	18	21	11	39	7.5	528	5.8
12	9.4	8.5	9.8	9.2	11	17	22	11	30	7.4	543	5.5
13	9.4	9.1	11	10	14	17	35	10	17	7.3	567	5.7
14	9.8	9.6	13	9.0	12	17	29	10	16	7.3	620	5.6
15	10	9.5	18	10	11	18	23	10	15	7.4	653	5.7
16	11	9.1	32	14	11	17	21	10	14	9.5	660	5.8
17	11	12	28	13	10	17	20	9.4	13	14	666	5.6
18	11	16	20	12	9.0	17	20	8.6	13	9.1	667	5.3
19	9.0	14	17	11	8.7	18	19	8.5	13	7.9	603	5.1
20	9.0	12	15	9.7	13	51	20	8.5	12	7.5	306	5.5
21	9.5	11	15	8.7	14	97	20	9.1	11	7.3	120	9.9
22	9.6	9.9	14	8.7	19	46	23	11	11	17	93	8.9
23	9.5	9.8	13	6.8	43	30	36	9.3	11	12	74	6.6
24	9.3	9.9	13	8.1	34	25	41	8.3	11	13	58	5.5
25	11	9.7	9.9	9.7	25	23	23	7.8	10	17	45	5.2
26	11	9.6	13	11	20	21	18	7.5	10	17	37	5.0
27	11	9.2	13	16	17	27	45	7.2	15	14	32	5.0
28	9.8	9.1	12	14	17	22	31	7.5	11	12	27	10
29	9.2	9.2	12	13	---	21	25	7.7	9.6	11	22	65
30	9.2	9.2	12	13	---	30	19	7.5	9.2	10	19	18
31	9.3	---	14	11	---	29	---	6.9	---	9.4	17	---
TOTAL	315.2	299.0	415.4	354.9	392.8	750	725	322.8	563.6	311.7	6988.1	284.4
MEAN	10.2	9.97	13.4	11.4	14.0	24.2	24.2	10.4	18.8	10.1	225	9.48
MAX	13	16	32	16	43	97	45	18	75	17	667	65
MIN	9.0	8.5	9.2	6.8	8.1	16	18	6.9	6.7	7.3	8.9	5.0

CAL YR 1984	TOTAL	41860.0	MEAN	114	MAX	820	MIN	8.5
WTR YR 1985	TOTAL	11722.9	MEAN	32.1	MAX	667	MIN	5.0

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'44", long 97°57'32", on east line of sec.32, T.13 N., R.7 W., Canadian County, Hydrologic Unit 11100301, near left bank on downstream side of pier of bridge on old U.S. Highway 81, 2.0 mi north of courthouse in El Reno, 2.2 mi downstream from Target Creek, and at mile 307.4.

DRAINAGE AREA.--13,042 mi^2 of which 4,899 mi^2 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 1.0 mi upstream March 1914 to March 1934 and at present site thereafter are contained in reports of National Weather Service. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,299.02 ft, National Geodetic Vertical Datum of 1929. October 1902 to April 1908, nonrecording gage at site about 50 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 8 to Nov. 14, Nov. 24 to Dec. 11, 25, Jan. 3-15, 17-22, Feb. 27 to Mar. 2, Mar. 23 to Apr. 10, 27-30, June 21 to July 8, Aug. 13-15, Aug. 30 to Sept. 23, 25-28. Records poor. Some regulation by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and by Canton Lake (station 07238500) thereafter.

AVERAGE DISCHARGE.--(Prior to regulation by Canton Lake) 16 years (water years 1903-07, 1938-48), 264 ft^3/s, 191,300 acre-ft/yr; (since regulation by Canton Lake) 37 years (water years 1949-85), 188 ft^3/s, 136,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s Oct. 28, 1941, gage height, 15.98 ft; maximum gage height, 18.20 ft Sept. 21, 1965; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft above mean sea level at railroad bridge 1.0 mi above station, from reports of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,750 ft^3/s Mar. 4, gage height, 10.36 ft; minimum daily discharge, 6.0 ft^3/s on Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	11	12	105	13	18	123	145	27	12	9.1	18
2	17	11	11	15	12	35	94	104	27	11	8.5	17
3	16	11	11	24	11	159	76	85	28	12	7.8	15
4	15	11	12	22	11	966	68	73	52	13	7.6	14
5	15	11	13	23	12	105	70	65	651	14	9.0	13
6	15	10	12	25	12	61	62	59	504	13	8.8	12
7	14	10	12	23	12	50	58	57	367	13	13	11
8	13	10	12	16	13	45	56	57	176	14	10	10
9	12	10	12	15	14	41	54	54	92	15	8.0	9.6
10	11	10	12	14	13	39	56	52	70	14	7.8	9.4
11	11	9.5	13	13	11	37	58	50	118	13	67	8.8
12	11	9.3	13	12	14	34	57	46	149	12	418	8.0
13	11	9.8	15	11	18	33	130	46	97	11	523	9.0
14	11	10	17	10	17	31	148	44	70	8.6	568	8.8
15	12	9.2	22	13	16	30	110	42	55	9.0	586	8.0
16	12	9.4	48	24	14	31	84	40	42	10	565	7.8
17	13	14	30	26	13	31	69	38	28	9.4	559	7.6
18	12	17	25	28	12	29	60	36	23	9.0	563	7.4
19	10	18	26	23	11	29	55	35	19	9.5	576	11
20	9.6	17	25	18	16	500	52	34	16	12	568	17
21	11	16	24	14	25	366	49	37	15	9.9	338	25
22	10	15	22	11	20	281	65	41	15	9.2	192	40
23	10	14	20	10	902	168	112	42	14	8.8	115	52
24	11	14	20	12	425	119	77	36	14	8.6	83	39
25	12	13	16	14	127	98	61	33	13	15	62	12
26	13	13	18	16	35	88	57	31	14	14	47	8.0
27	12	13	19	18	29	246	150	30	18	14	35	6.6
28	12	13	20	21	25	99	100	29	14	14	27	6.0
29	11	12	20	19	---	82	80	29	13	14	23	514
30	10	12	20	16	---	304	430	27	12	13	20	351
31	11	---	72	15	---	197	---	26	---	11	19	---
TOTAL	381.6	363.2	624	626	1853	4352	2721	1523	2753	366.0	6043.6	1276.0
MEAN	12.3	12.1	20.1	20.2	66.2	140	90.7	49.1	91.8	11.8	195	42.5
MAX	18	18	72	105	902	966	430	145	651	15	586	514
MIN	9.6	9.2	11	10	11	18	49	26	12	8.6	7.6	6.0
AC-FT	757	720	1240	1240	3680	8630	5400	3020	5460	726	11990	2530

CAL YR 1984	TOTAL	41603.0	MEAN	114	MAX	1320	MIN	2.7	AC-FT	82520
WTR YR 1985	TOTAL	22882.4	MEAN	62.7	MAX	966	MIN	6.0	AC-FT	45390

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 98°57'11", in SW 1/4 SW 1/4 sec.34, T.13 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft upstream from Lake Hefner, 3.0 mi northeast of Bethany, and 7.6 mi northwest of the State Capitol in Oklahoma City.

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

REVISED RECORDS.--WDR OK-80-1: 1968-80 (Datum).

GAGE.--Water stage recorder and concrete control. Datum of gage is 1,196.06 ft, National Geodetic Vertical Datum of 1929 (revised). Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi upstream at different datum. Apr. 8, 1947 to Apr. 30, 1950, water-stage recorder at site 3.0 mi upstream at different datum. May 1, 1950 to May 19, 1954, Apr. 26, 1957 to Feb. 19, 1968 at present site and datum 4.90 ft higher. May 20, 1954 to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft downstream at datum 2.10 ft higher than present datum.

REMARKS.--Estimated daily discharges: July 5-10. Records good. Use of canal began in March 1944. Canal diverts water from North Canadian River just upstream from Lake Overholser (station 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,500 ft^3/s May 28, 1955; no flow at times in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.00	954	.06	2.1	.55	2.3	.00	.41	.00	.00
2	.00	.00	.00	476	.70	.68	27	1.1	.00	.57	.00	.00
3	.00	.00	.00	122	.45	4.7	51	.81	.00	.55	.00	.00
4	.00	.00	.00	8.8	.41	13	.74	.74	5.0	.40	.00	.00
5	.00	.00	.00	60	.41	1.1	.52	.69	513	.20	.00	.00
6	.00	.00	.00	60	.39	.68	.51	.60	762	.10	.00	.00
7	.00	.00	.00	31	.37	.73	.37	.81	142	.05	.00	.00
8	.00	.00	.00	.84	.42	.52	.39	.57	131	.01	.00	.00
9	.00	.00	.00	1.0	.65	.52	.49	.54	46	.00	.00	.00
10	.00	.00	.00	.54	.43	.58	.40	.53	55	.00	.00	.00
11	.00	.00	.00	.45	.34	.44	.40	.54	27	.00	.00	.00
12	.00	.00	.00	.45	.40	.41	.42	.53	25	.00	.00	.00
13	.00	.00	6.6	.66	.37	.42	.78	1.5	22	.14	.00	.00
14	.00	.00	2.0	.56	.37	.40	.48	1.6	20	.18	.00	.00
15	.00	.00	17	.55	.36	.38	.46	1.3	29	.16	.00	.00
16	.00	.00	492	.51	.32	.37	.39	.92	41	.22	.00	.00
17	.00	.00	537	.54	.31	.40	.39	1.1	5.8	.24	.00	.00
18	.00	.00	111	.55	.34	.38	.37	.70	1.3	.20	.00	.00
19	.00	.00	1.0	.41	.32	.33	.38	.65	.97	.17	.00	.00
20	.00	.00	1.4	.02	1.8	31	.37	.45	.74	.16	302	.00
21	.00	.00	1.4	.58	302	11	.36	.44	.57	.14	369	.00
22	.00	.00	.49	.51	561	1.5	12	.42	.48	.15	213	.01
23	.00	.00	.44	.48	639	.78	124	.37	.42	.14	1.2	380
24	.00	.00	.29	.47	46	.56	125	.30	.33	.05	.33	142
25	.00	.00	.35	.40	95	.53	.63	.21	.27	.51	.19	.74
26	.00	.00	.44	.40	99	1.5	.48	.18	2.6	.22	.16	.39
27	19	.00	.41	.78	98	4.0	4.7	.16	7.9	.16	.09	.25
28	.51	.00	.49	.49	86	.60	216	.11	.60	.28	.01	.08
29	.06	.00	.37	.45	---	.55	355	.06	.42	.18	.00	447
30	.01	.00	.24	.33	---	9.0	18	.00	.35	.13	.00	855
31	.00	---	476	.06	---	.95	---	.00	---	.01	.00	---
TOTAL	19.58	.01	1648.92	1723.83	1935.22	90.11	942.58	20.23	1840.75	5.73	885.98	1825.47
MEAN	.63	.00	53.2	55.6	69.1	2.91	31.4	.65	61.4	.18	28.6	60.8
MAX	19	.01	537	954	639	31	355	2.3	762	.57	369	855
MIN	.00	.00	.00	.02	.06	.33	.36	.00	.00	.00	.00	.00
AC-FT	39	.02	3270	3420	3840	179	1870	40	3650	11	1760	3620

CAL YR 1984	TOTAL	15118.35	MEAN	41.3	MAX	1040	MIN	.00	AC-FT	29990
WTR YR 1985	TOTAL	10938.41	MEAN	30.0	MAX	954	MIN	.00	AC-FT	21700

07240500 LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

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, Hydrologic Unit 11100301, at control tower at left end of dam on North Canadian River, 2.9 mi upstream from Mustang Creek, 9.0 mi west of State Capitol in Oklahoma City, and at mile 281.5.

DRAINAGE AREA.--13,221 mi^2, of which 4,899 mi^2 is probably noncontributing.

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

GAGE.--Nonrecording gage. Datum of gage is at National Geodetic Vertical Datum of 1929 (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.

REMARKS.--Reservoir is formed by Ambursen-type dam flanked by long earth-fill sections. Outlet facilities are twenty-three taintor gates and one uncontrolled spillway. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,900 acre-ft June 14, 1944, elevation, 1,242.67 ft, from from capacity table then in use; minimum observed, 1,870 acre-ft May 14, 1955, elevation, 1,230.62 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,930 acre-ft Jan. 19-22, elevation, 1,242.15 ft; minimum, 11,890 acre-ft Aug. 14, elevation, 1,238.85 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1239.90	13,490	-
Oct. 31	1240.50	14,400	+910
Nov. 30	1240.80	14,860	+460
Dec. 31	1241.80	16,390	+1,530
CAL YR 84	-	-	+3,130
Jan. 31	1242.00	16,700	+310
Feb. 28	1241.75	16,320	-380
Mar. 31	1241.80	16,390	+80
Apr. 30	1241.95	16,620	+230
May 31	1240.55	14,480	-2,140
June 30	1241.25	15,550	+1,070
July 31	1239.60	13,040	-2,510
Aug. 31	1241.35	15,700	+2,670
Sept. 30	1240.20	13,950	-1,760
WTR YR 85	-	-	+460

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER, NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'46", long 97°39'47", in SE 1/4 SW 1/4 sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, on left bank 200 ft upstream from bridge on State Highway 4, 0.5 mi downstream from Lake Overholser, 2.4 mi upstream from Mustang Creek, 9.1 mi southwest of State Capitol in Oklahoma City, and at mile 281.0.

DRAINAGE AREA.--13,222 mi^2, of which 4,899 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, at datum 10.00 ft higher and through Mar. 24, 1971, at site 200 ft downstream.

REMARKS.--Estimated daily discharges: Nov. 11-14, Feb. 1, Mar. 4, 5, 27, May 28-31. Records fair. Some regulation by Canton Lake (station 07238500) and Lake Overholser (station 07240500). Diversions above station into Lake Overholser and Lake Hefner Canal (station 07240000).

AVERAGE DISCHARGE.--31 years, 103 ft^3/s, 74,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft^3/s Nov. 3, 1974, gage height, 29.18 ft; no flow at times in 1952-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.9 ft, present datum, was reached in October 1923 from information by Oklahoma State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,380 ft^3/s Feb. 23, gage height, 23.62 ft from high-water mark; minimum daily discharge, 1.90 ft^3/s Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	22	2.3	334	34	213	290	1080	68	8.2	23	36
2	3.1	53	2.8	84	34	271	142	309	68	8.0	2.1	36
3	2.4	52	2.2	35	34	337	177	203	68	8.0	2.0	27
4	2.4	53	2.2	42	34	2200	187	203	104	8.0	2.2	18
5	2.3	19	2.4	22	34	1390	141	200	210	8.0	2.4	18
6	2.2	2.1	2.4	22	34	457	154	115	80	8.0	2.7	18
7	2.2	2.0	2.4	95	33	282	132	153	619	7.9	89	16
8	2.2	2.0	2.4	98	29	225	108	138	528	7.7	99	16
9	2.2	1.9	2.4	117	28	165	108	71	143	8.0	18	16
10	2.2	11	2.3	218	28	209	107	76	87	8.3	12	15
11	2.1	8.5	2.3	111	28	251	108	91	102	14	14	15
12	2.1	6.4	2.3	42	28	160	108	92	72	31	7.7	15
13	2.1	4.5	48	9.6	28	161	117	187	52	30	271	17
14	2.4	3.4	12	9.0	28	127	302	95	84	29	8.7	16
15	2.3	2.4	68	8.6	28	112	234	71	66	28	6.6	14
16	37	2.3	75	8.1	32	110	133	71	43	26	6.5	13
17	3.6	6.1	20	7.1	27	110	98	71	60	26	6.8	13
18	3.1	9.3	6.8	56	30	106	107	71	83	26	7.2	13
19	2.4	3.4	4.7	260	33	105	132	71	62	24	9.1	14
20	2.8	2.8	6.6	173	76	1530	131	71	30	18	31	14
21	2.8	2.7	11	88	162	2760	110	69	30	9.8	32	13
22	2.3	2.5	5.4	46	177	1010	371	68	30	8.9	76	15
23	2.3	2.4	4.3	35	2840	464	209	68	30	8.3	83	26
24	2.3	2.4	121	35	3390	356	119	68	29	11	32	11
25	3.4	2.4	6.7	35	479	290	118	69	29	33	28	10
26	2.3	2.4	6.3	35	338	325	43	63	34	39	63	10
27	133	5.9	53	35	137	356	130	43	123	33	78	10
28	5.2	2.3	78	36	189	430	259	35	10	33	52	11
29	2.5	2.3	116	35	---	189	846	34	9.1	66	52	63
30	2.2	2.3	94	177	---	678	2800	30	8.3	83	52	12
31	2.2	---	411	84	---	698	---	28	---	72	48	---
TOTAL	245.2	294.7	1176.2	2392.4	8372	16077	8021	4014	2961.4	729.1	1217.0	541
MEAN	7.91	9.82	37.9	77.2	299	519	267	129	98.7	23.5	39.3	18.0
MAX	133	53	411	334	3390	2760	2800	1080	619	83	271	63
MIN	2.1	1.9	2.2	7.1	27	105	43	28	8.3	7.7	2.0	10
AC-FT	486	585	2330	4750	16610	31890	15910	7960	5870	1450	2410	1070

CAL YR 1984	TOTAL	25045.0	MEAN	68.4	MAX	679	MIN	1.9	AC-FT	49680
WTR YR 1985	TOTAL	46041.0	MEAN	126	MAX	3390	MIN	1.9	AC-FT	91320

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'08", long 97°10'52", in SW 1/4 NE 1/4 sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, on upstream left end of bridge on access road to O.G.& E. power plant, 1.8 mi northwest of Harrah, 4.6 mi downstream from Choctaw Creek, and at mile 229.2.

DRAINAGE AREA.--13,501 mi^2, of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,055.69 ft National Geodetic Vertical Datum of 1929. Prior to June 19, 1981, gage 0.8 mi upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation by Canton Lake (station 07238500) and by Lake Overholser (station 07240500), where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained in part by sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--17 years, 312 ft^3/s, 226,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s Oct. 21, 1983, gage height, 18.94 ft; minimum, 23 ft^3/s Aug. 8, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,170 ft^3/s Feb. 23, gage height, 14.26 ft; minimum daily discharge, 100 ft^3/s Oct. 1, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	178	115	4840	244	471	1130	4770	225	206	207	148
2	104	182	110	1240	218	432	736	1990	237	154	198	142
3	102	182	107	597	231	537	545	910	245	191	165	143
4	101	178	110	417	224	3290	485	687	293	188	154	145
5	102	166	119	346	219	3620	536	618	3550	181	165	138
6	104	154	168	330	215	1910	430	585	4120	195	256	132
7	101	136	148	284	203	885	425	537	2650	190	287	129
8	100	123	126	271	217	689	393	583	1280	179	234	128
9	107	126	121	281	215	590	357	514	930	176	254	127
10	105	121	113	331	243	496	343	381	563	172	196	126
11	105	116	112	390	225	486	338	348	860	180	163	127
12	104	116	111	248	208	533	335	413	938	183	156	125
13	105	121	240	250	196	482	423	2020	431	174	157	133
14	128	119	1700	221	186	591	689	976	340	166	217	688
15	183	116	941	208	181	412	533	502	330	169	374	342
16	132	114	3050	203	183	373	485	370	317	225	226	171
17	290	124	995	203	178	366	363	331	287	221	164	146
18	163	581	383	202	178	354	295	307	275	190	147	139
19	125	301	281	197	176	334	290	293	291	177	137	133
20	122	175	245	241	177	1930	321	286	289	170	142	129
21	382	147	575	312	1230	4500	322	281	259	165	146	127
22	186	137	417	259	1980	3340	728	297	247	162	152	133
23	141	132	230	249	5770	1530	1780	289	237	168	151	223
24	127	126	189	223	5000	922	676	279	232	173	207	389
25	161	122	201	212	3820	739	399	270	237	179	193	174
26	254	119	191	215	1060	634	408	261	228	348	159	141
27	921	142	158	408	771	952	475	329	567	247	155	136
28	1470	136	154	331	486	912	774	251	785	217	184	127
29	314	123	219	255	---	758	983	240	299	413	173	238
30	220	119	349	246	---	2180	4190	233	232	223	162	854
31	194	---	2190	228	---	2140	---	224	---	218	154	---
TOTAL	6853	4732	14168	14238	24234	37388	20187	20375	21774	6200	5835	6033
MEAN	221	158	457	459	866	1206	673	657	726	200	188	201
MAX	1470	581	3050	4840	5770	4500	4190	4770	4120	413	374	854
MIN	100	114	107	197	176	334	290	224	225	154	137	125
AC-FT	13590	9390	28100	28240	48070	74160	40040	40410	43190	12300	11570	11970

CAL YR 1984	TOTAL	96495	MEAN	264	MAX	3200	MIN	100	AC-FT	191400
WTR YR 1985	TOTAL	182017	MEAN	499	MAX	5770	MIN	100	AC-FT	361000

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
WATER TEMPERATURE: October 1968 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made on those samples on or near the 5th, 15th, and 25th of each month. Additional samples were collected biweekly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,700 microsiemens Sept. 25, 1980; minimum daily, 262 microsiemens June 9,1974.
WATER TEMPERATURE: Maximum daily, 36.0 °C July 11, 1982; minimum daily, 0.0 °C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,050 microsiemens Oct. 1; minimum daily, 288 microsiemens Dec. 16.
WATER TEMPERATURE: Maximum daily, 34.0 °C July 10, Aug. 4, 6; minimum daily, 1.0 °C Jan. 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)
OCT											
05...	1800	1028	1028	105	1930	7.70	24.0	--	--	--	--
15...	1615	1028	80020	144	883	7.70	21.5	--	--	--	--
23...	1130	1028	80020	143	1020	6.80	13.0	7.0	69	45	--
25...	1900	1028	80020	165	1890	7.00	16.0	--	--	--	--
NOV											
05...	1730	1028	80020	163	1450	7.10	17.0	--	--	--	--
08...	1030	1028	80020	126	1350	7.40	14.0	9.4	96	59	--
15...	1745	1028	80020	115	1500	7.20	15.0	--	--	--	--
25...	1800	1028	80020	122	1500	7.00	18.0	--	--	--	--
28...	1030	1028	80020	144	1570	7.20	7.0	8.1	70	50	22
DEC											
05...	1715	1028	80020	123	1350	6.90	8.0	--	--	--	--
15...	1840	1028	80020	1000	620	7.20	6.5	--	--	--	--
27...	1700	1028	80020	159	1290	7.30	14.0	--	--	--	--
JAN											
05...	1745	1028	80020	330	1250	8.30	7.5	--	--	--	--
15...	1900	1028	80020	208	1580	7.90	7.0	--	--	--	--
18...	1000	1028	80020	205	1600	7.40	7.0	8.8	76	31	28
26...	1800	1028	80020	229	1560	8.20	6.0	--	--	--	--
30...	0830	1028	80020	248	1240	7.50	7.0	9.0	78	41	17
FEB											
05...	1800	1028	80020	223	1430	7.00	5.0	--	--	--	--
14...	1130	1028	80020	188	1500	7.50	7.5	8.9	77	45	--
15...	1830	1028	80020	182	1560	7.10	6.0	--	--	--	--
26...	1930	1028	80020	1000	849	7.40	10.0	--	--	--	--
27...	1230	1028	80020	829	693	7.40	8.5	8.8	78	57	29
MAR											
05...	1835	1028	80020	3460	476	7.50	13.5	--	--	--	--
15...	1530	1028	80020	400	1240	7.20	12.0	--	--	--	--
22...	1230	1028	80020	3430	435	7.60	10.5	8.6	81	51	11
25...	1930	1028	80020	732	895	7.50	16.0	--	--	--	--
29...	1030	1028	80020	758	998	7.60	17.5	6.5	72	27	22
APR											
05...	1830	1028	80020	476	1200	8.10	19.0	--	--	--	--
10...	1000	1028	80020	344	1480	7.70	14.5	7.6	77	62	--
15...	1815	1028	80020	593	1430	7.20	22.0	--	--	--	--
25...	1745	1028	80020	370	1200	7.10	22.5	--	--	--	--
29...	1000	1028	80020	852	911	7.40	20.0	5.7	66	80	--
MAY											
08...	1800	1028	80020	541	1040	7.90	25.0	--	--	--	--
16...	2100	1028	80020	344	1360	7.70	--	--	--	--	--
21...	1230	1028	80020	283	1640	7.80	20.0	6.1	70	41	--
23...	1915	1028	80020	272	1580	7.80	26.0	--	--	--	--
JUN											
05...	1830	1028	80020	4600	396	7.10	23.0	--	--	--	--
15...	1930	1028	80020	326	1240	7.00	27.0	--	--	--	--
18...	1100	1028	80020	276	1280	7.80	22.5	6.7	80	29	--
24...	1030	1028	80020	245	1380	8.20	25.0	8.7	111	39	--
25...	1700	1028	80020	239	1480	7.40	31.0	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)
JUL											
10...	1100	1028	80020	180	1480	7.90	26.0	5.5	71	35	--
15...	1912	1028	80020	193	1400	7.10	28.0	--	--	--	--
19...	1100	1028	80020	187	1450	7.60	29.5	3.2	44	41	21
25...	2000	1028	80020	176	1330	7.00	27.0	--	--	--	--
AUG											
05...	1914	1028	80020	159	1350	7.10	28.0	--	--	--	--
15...	1030	1028	80020	342	1600	7.60	25.0	5.3	67	86	--
15...	1720	1028	80020	412	1450	7.00	29.5	--	--	--	--
25...	2000	1028	80020	166	1470	7.20	27.0	--	--	--	--
30...	1345	1028	80020	163	1590	7.60	29.0	5.2	70	27	38
SEP											
05...	2026	1028	80020	128	1580	7.90	30.0	--	--	--	--
11...	1100	1028	80020	132	1650	7.60	26.5	5.6	72	36	--
15...	2115	1028	80020	205	843	8.20	24.0	--	--	--	--
25...	1100	1028	80020	182	910	7.40	20.5	6.0	70	51	22
25...	1840	1028	80020	153	1000	--	22.0	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT											
05...	--	--	--	310	150	76	29	250	62	6	15
15...	--	--	--	170	80	46	14	110	57	4	8.6
23...	27000	2300	340	--	--	--	--	--	--	--	--
25...	--	--	--	320	160	85	25	250	62	6	15
NOV											
05...	--	--	--	320	140	82	27	170	--	4	--
08...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	270	100	70	24	190	59	5	12
25...	--	--	--	300	120	79	24	180	56	5	9.9
28...	>80000	41000	2400	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	280	110	74	23	160	54	4	10
15...	--	--	--	160	53	45	11	62	45	2	5.5
27...	--	--	--	320	130	82	27	140	48	4	7.6
JAN											
05...	--	--	--	310	100	82	26	130	47	3	5.9
15...	--	--	--	370	130	96	31	170	49	4	8.4
18...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	370	130	96	31	170	50	4	7.1
30...	K19000	280	560	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	350	120	88	31	160	49	4	8.7
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	370	120	96	32	180	51	4	9.6
26...	--	--	--	240	52	62	20	79	41	2	5.5
27...	>80000	38000	30000	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	170	44	50	11	37	31	1	4.2
15...	--	--	--	340	99	85	32	130	45	3	6.5
22...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	270	78	68	24	88	41	2	6.2
29...	470000	K16000	5200	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	350	130	89	31	120	42	3	6.7
10...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	410	160	100	40	150	44	3	6.4
25...	--	--	--	310	110	79	27	130	47	3	7.5
29...	K50	26000	460000	--	--	--	--	--	--	--	--
MAY											
08...	--	--	--	270	80	68	24	110	46	3	6.8
16...	--	--	--	350	97	91	31	130	44	3	7.6
21...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	390	120	98	36	170	48	4	8.1
JUN											
05...	--	--	--	120	26	38	7.1	27	31	1	5.0
15...	--	--	--	310	83	81	27	120	45	3	8.5
18...	--	--	--	--	--	--	--	--	--	--	--
24...	K26500	2400	K90	--	--	--	--	--	--	--	--
25...	--	--	--	350	100	88	32	160	49	4	9.1
JUL											
10...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	390	170	79	46	150	45	3	8.2
19...	615000	K2000	K95	--	--	--	--	--	--	--	--
25...	--	--	--	340	150	67	41	150	48	4	10
AUG											
05...	--	--	--	270	86	68	24	160	55	4	9.5
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	350	200	87	32	160	49	4	9.8
25...	--	--	--	310	150	76	28	170	54	4	10
30...	>80000	24000	5100	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	320	150	80	30	190	55	5	11
11...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	200	83	54	15	86	48	3	7.7
25...	32000	2600	390	--	--	--	--	--	--	--	--
25...	--	--	--	200	71	53	17	120	55	4	9.1

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

DATE	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, DISSOLVED (MG/L)	PHENOLS TOTAL (UG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
05...	157	6.1	150	380	1070	--	--	--	--	--	--
15...	93	3.6	84	--	511	--	--	--	--	--	--
23...	--	--	--	--	576	384	--	--	121	47	88
25...	153	30	120	410	1100	--	--	--	--	--	--
NOV											
05...	174	27	150	240	823	--	--	--	--	--	--
08...	--	--	--	--	--	17	67	--	--	--	--
15...	169	21	120	270	852	--	--	--	--	--	--
25...	178	34	110	260	840	--	--	--	--	--	--
28...	--	--	--	--	868	--	--	3	--	--	--
DEC											
05...	172	42	120	240	783	--	--	--	--	--	--
15...	105	13	46	99	351	--	--	--	--	--	--
27...	190	18	120	210	733	--	--	--	--	--	--
JAN											
05...	212	2.0	110	210	720	--	--	--	--	--	--
15...	237	5.8	130	280	926	--	--	--	--	--	--
18...	--	--	--	290	955	27	132	--	--	--	--
26...	242	2.9	140	270	920	--	--	--	--	--	--
30...	--	--	--	190	700	40	232	--	--	--	--
FEB											
05...	225	44	140	240	844	--	--	--	--	--	--
14...	--	--	--	--	868	23	142	--	--	--	--
15...	254	39	150	260	899	--	--	--	--	--	--
26...	185	14	99	110	497	--	--	--	--	--	--
27...	--	--	--	--	408	482	--	--	568	1270	93
MAR											
05...	126	7.7	63	41	290	--	--	--	--	--	--
15...	245	30	160	170	745	--	--	--	--	--	--
22...	--	--	--	--	274	285	49	--	2000	18500	61
25...	191	12	120	100	529	--	--	--	--	--	--
29...	--	--	--	--	704	229	137	--	444	909	60
APR											
05...	224	3.4	150	170	729	--	--	--	--	--	--
10...	--	--	--	--	916	59	56	--	48	45	74
15...	256	31	210	190	897	--	--	--	--	--	--
25...	197	30	120	190	699	--	--	--	--	--	--
29...	--	--	--	--	543	298	42	--	456	1050	76
MAY											
08...	189	4.6	--	--	612	--	--	--	--	--	--
16...	258	9.9	140	210	814	--	--	--	--	--	--
21...	--	--	--	--	957	60	102	--	--	--	--
23...	271	8.3	--	--	947	--	--	--	--	--	--
JUN											
05...	98	15	28	37	227	--	--	--	--	--	--
15...	230	45	110	200	724	--	--	--	--	--	--
18...	--	--	--	--	755	69	79	--	95	71	70
24...	--	--	--	--	841	54	147	--	73	48	76
25...	250	19	140	250	875	--	--	--	--	--	--
JUL											
10...	--	--	--	--	870	54	125	--	35	17	27
15...	216	33	120	240	812	--	--	--	--	--	--
19...	--	--	--	--	802	--	127	5	61	31	30
25...	184	36	110	230	768	--	--	--	--	--	--
AUG											
05...	183	28	110	230	789	--	--	--	--	--	--
15...	--	--	--	--	969	542	62	--	703	649	86
15...	150	29	210	220	888	--	--	--	--	--	--
25...	160	20	150	260	892	--	--	--	--	--	--
30...	--	--	--	--	936	16	117	<1	15	6.6	78
SEP											
05...	173	4.2	170	270	936	--	--	--	--	--	--
11...	--	--	--	--	915	130	108	--	38	14	62
15...	114	1.4	82	140	474	--	--	--	--	--	--
25...	--	--	--	--	490	320	79	--	318	156	88
25...	131	--	98	160	573	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRATE TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT							
23...	0.82	--	--	0.28	0.92	1.10	6.60
NOV							
08...	0.65	--	--	0.35	1.2	1.00	6.90
28...	0.66	--	--	0.21	0.69	0.87	7.00
JAN							
18...	0.47	--	--	0.11	0.36	0.58	--
30...	0.60	--	--	0.09	0.3	0.69	4.80
FEB							
14...	0.50	--	--	0.10	0.33	0.60	7.10
27...	0.64	--	--	0.10	0.33	0.74	1.70
MAR							
22...	0.56	--	--	0.07	0.23	0.63	0.48
29...	0.80	--	--	0.11	0.36	0.91	1.30
APR							
10...	0.85	--	--	0.15	0.49	1.00	2.40
29...	1.03	--	--	0.17	0.56	1.20	1.90
MAY							
21...	1.01	--	--	0.49	1.6	1.50	2.00
JUN							
18...	3.53	--	--	0.27	0.89	3.80	0.29
24...	0.96	--	--	0.34	1.1	1.30	0.54
JUL							
10...	0.92	--	--	0.58	1.9	1.50	1.70
19...	0.47	2.1	2.1	0.36	1.2	0.83	1.60
AUG							
15...	1.05	--	--	0.65	2.1	1.70	2.00
30...	1.37	--	--	0.63	2.1	2.00	1.60
SEP							
11...	2.00	--	--	0.90	3.0	2.90	3.10
25...	1.95	8.9	8.9	0.35	1.2	2.30	1.40

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT						
23...	8.5	0.4	7.0	2.10	1.70	5.2
NOV						
08...	8.9	1.1	8.0	3.80	3.70	11
28...	9.0	2.0	9.0	3.00	2.70	8.3
JAN						
18...	--	--	0.7	2.40	2.20	6.7
30...	6.2	--	4.8	1.50	1.40	4.3
FEB						
14...	9.1	--	--	2.60	2.40	7.4
27...	2.2	1.6	3.3	0.49	0.44	1.3
MAR						
22...	0.62	0.62	1.1	0.23	0.16	0.49
29...	1.7	0.9	2.2	0.67	0.14	0.43
APR						
10...	3.1	1.2	3.6	1.80	1.30	4.0
29...	2.4	1.1	3.0	0.74	0.17	0.52
MAY						
21...	2.6	1.4	3.4	1.60	1.40	4.3
JUN						
18...	0.37	0.91	1.2	2.40	1.90	5.8
24...	0.7	1.1	1.6	2.20	1.80	5.5
JUL						
10...	2.2	1.9	3.6	<0.01	2.90	8.9
19...	2.1	5.0	6.6	3.30	2.90	8.9
AUG						
15...	2.6	0.9	2.9	1.30	1.10	3.4
30...	2.1	3.9	5.5	2.20	2.00	6.1
SEP						
11...	4.0	1.7	4.8	<3.80	3.50	11
25...	1.8	1.5	2.9	1.60	1.50	4.6

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
28...	3	<1	<10	4	48	2	45	<0.1	<1	30
JUL										
19...	5	<1	<10	3	21	1	170	0.2	1	14
AUG										
30...	4	3	<10	5	59	2	46	0.2	1	100

DATE	PHEOPHY-TIN A FLUORO-METRIC METHOD (UG/L)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L)	CARTER-IA	CHLAMY-DOMONAS	GLOEO-CYSTIS	BINU-CLEARIA	SCHROE-DERIA	ANKIS-TRODES-MUS	CHLOREL-LA	OOCYS-TIS	SELENA-STRUM	TETRAE-DRON
OCT												
23...	9.10	6.70	--	--	16	16	--	160	--	130	16	--
NOV												
28...	2.60	12.3	130	540	--	--	32	63	63	130	--	32

DATE	GLOEO-ACTI-NIUM	ACTINA-STRUM	CRUCI-GENIA	SCENE-DESMUS	GOLEN-KINIA	EUGLENA	LEPO-CINCLIS	CYCLO-TELLA	MELO-SIRA	STEP-HANO-DISCUS	THALAS-SIOSIRA	COCCO-NEIS
OCT												
23...	16	--	--	49	--	66	--	210	16	99	130	16
NOV												
28...	--	32	32	630	95	130	32	320	32	95	--	--

DATE	ENTO-MONEIS	NAVI-CULA	CYMBEL-LA	NITZ-SCHIA	SURI-RELLA	DACTYLO-COCCOP-SIS	ANA-CYSTIS	LYNGBYA	OSCIL-LATORIA	SPIRU-LINA	ANABAE-NA
OCT											
23..	--	250	16	770	--	49	33	66	49	16	16
NOV											
28...	32	290	--	950	32	130	220	63	7000	M63	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2050	1430	1360	320	1490	1110	743	449	1730	1300	1380	1620
2	2010	1650	1390	544	1230	1190	901	593	1860	1360	1400	1610
3	1880	1390	1420	884	1530	1130	1100	769	1700	1650	1330	1620
4	1940	1370	1370	1020	1400	410	1270	981	1510	1570	1410	1590
5	1930	1450	1350	1250	1430	476	1200	1060	396	1520	1350	1580
6	1810	1430	1420	1470	1470	---	1300	1170	350	1440	916	1690
7	1840	1340	1260	1410	1580	910	1310	1190	365	1440	1040	1630
8	1880	1400	1300	1520	1540	914	1410	1040	638	1470	1040	1560
9	1860	1550	1360	1370	1550	1000	1480	1210	656	1440	1170	1550
10	---	1580	1340	1360	1510	1150	1560	1410	866	1470	1200	1540
11	1780	1510	1430	1170	1590	1230	1550	1490	946	1460	1220	1560
12	1800	1560	404	1240	1460	1280	1560	1530	653	1420	1300	1530
13	1850	1460	394	1380	1440	1190	1440	462	925	1480	1230	1570
14	1750	1530	397	1350	1500	1020	909	832	1080	1510	1270	558
15	883	1500	620	1580	1560	1240	1430	1170	1240	1400	1450	843
16	1290	1480	288	1530	1530	1390	1350	1360	1230	1260	907	1040
17	614	1360	485	1620	1560	1420	1370	1440	1290	---	1190	1300
18	1270	431	804	1520	1570	1460	1460	1550	1340	1200	1420	1470
19	1280	600	970	1290	1520	1490	1450	1630	---	1390	1360	1540
20	1320	1160	1050	2020	1500	425	1450	1620	1340	1410	1390	1590
21	484	---	986	1400	598	476	1430	1590	1320	1440	1400	1500
22	812	1250	656	1330	289	499	1360	1600	1390	1390	1560	1540
23	1140	1340	972	---	290	652	683	1580	1440	1410	1450	974
24	1370	1420	1150	---	652	785	---	1630	1470	1460	1600	750
25	1890	1500	1300	---	599	895	1200	1640	1480	1330	1470	1000
26	828	1480	---	1560	849	1030	1150	1650	1490	783	1460	1250
27	1050	1570	1290	---	748	983	1110	1360	1440	980	1420	1390
28	400	1290	1400	900	993	873	643	1610	895	1070	1580	1480
29	734	1460	1190	1020	---	1040	648	1720	972	702	1590	1160
30	998	1460	1180	545	---	385	366	1760	1190	1010	1590	483
31	1260	---	---	782	---	825	---	1720	---	1320	1680	---
MEAN	1400	1380	1050	1240	1250	963	1200	1320	1140	1340	1350	1350

WTR YR 1985 MEAN 1250 MAX 2050 MIN 288

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	19.0	13.5	2.0	3.0	16.0	14.0	20.0	28.0	27.0	32.0	31.0
2	18.0	16.0	11.0	6.0	3.5	16.0	16.5	21.0	29.0	30.0	32.0	30.0
3	23.0	17.0	10.0	---	2.0	17.5	20.0	22.0	29.0	30.0	31.0	31.0
4	21.0	19.0	8.0	6.0	7.0	---	20.0	23.0	24.0	31.0	34.0	31.0
5	24.0	17.0	8.0	7.5	5.0	13.5	19.0	23.0	23.0	30.0	28.0	30.0
6	27.0	16.0	7.0	8.0	7.0	---	19.0	24.0	23.0	30.0	34.0	29.0
7	27.0	16.0	9.5	9.0	5.0	15.0	18.0	24.0	27.0	31.0	32.0	29.0
8	25.0	17.0	11.0	10.0	8.0	14.0	17.0	25.0	27.0	31.0	32.0	29.0
9	22.0	20.0	14.5	8.0	10.0	14.0	19.0	25.0	31.0	31.0	31.0	29.0
10	---	14.5	13.5	7.0	5.0	17.0	18.0	24.0	29.0	34.0	31.0	29.0
11	24.0	14.0	14.0	4.0	7.0	17.0	21.0	29.0	23.0	30.5	31.0	30.0
12	24.0	15.0	5.5	6.0	8.0	14.0	22.0	27.5	21.0	32.0	31.0	29.0
13	24.5	16.0	6.0	6.0	9.0	15.0	22.0	28.0	22.0	30.0	31.0	27.0
14	21.0	17.0	6.0	7.0	9.0	12.0	22.0	---	26.0	30.5	26.0	26.0
15	21.5	15.0	6.5	7.0	6.0	12.0	22.0	---	27.0	28.0	29.5	24.0
16	18.5	15.0	6.5	7.0	9.0	12.0	23.0	---	29.0	30.0	32.0	24.0
17	16.5	12.0	10.0	7.0	10.0	14.0	23.0	---	26.0	---	33.0	28.0
18	17.5	11.0	9.0	7.0	11.0	17.0	23.0	---	26.0	---	32.0	29.0
19	18.0	11.0	8.0	6.0	11.0	18.0	22.0	---	---	---	28.5	29.0
20	15.0	11.5	10.0	3.0	10.0	15.0	23.0	---	27.0	32.0	32.0	29.0
21	14.0	---	11.0	6.0	12.0	13.0	23.0	---	28.0	31.0	30.0	23.0
22	16.0	14.0	10.0	5.0	12.0	12.0	20.0	23.0	28.0	32.0	28.0	26.0
23	14.5	16.0	11.0	---	13.0	13.0	20.0	26.0	29.0	33.0	29.0	23.0
24	14.0	17.0	6.0	---	9.0	15.0	---	28.0	31.0	29.0	27.0	22.0
25	16.0	18.0	6.0	---	13.0	16.0	22.5	29.0	31.0	27.0	27.0	22.0
26	15.0	16.0	---	6.0	10.0	15.0	23.0	29.0	28.0	29.0	30.0	22.0
27	19.0	14.0	14.0	---	13.0	19.0	20.5	26.0	26.0	31.0	32.0	22.0
28	15.0	11.0	17.5	4.0	13.0	21.0	23.0	23.0	27.0	27.0	28.0	22.0
29	17.0	13.0	14.5	7.0	---	19.0	20.0	27.0	29.0	28.0	29.0	21.0
30	17.0	13.0	11.0	6.5	---	11.0	22.0	27.0	28.0	32.0	30.0	14.0
31	21.0	---	---	1.0	---	12.5	---	29.0	---	32.0	30.0	---
MEAN	19.5	15.0	10.0	6.0	8.5	14.5	20.5	25.5	27.0	30.5	30.5	26.5

WTR YR 1985 MEAN 19.5 MAX 34.0 MIN 1.0

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'54", long 96°12'25", in center of SW 1/4 sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, on left downstream side of bridge on U.S. Highway 75, 2.3 mi upstream from Wewoka Creek, 2.5 mi northeast of Wetumka, and at mile 84.4.

DRAINAGE AREA.--14,290 mi^2 of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORD

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

REVISED RECORDS.--WSP 977: 1942. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.28 ft, National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges: Records fair. Some regulation by Lake Overholser (station 07240500) and other dams upstream.

AVERAGE DISCHARGE.--48 years, 677 ft^3/s, 490,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,000 ft^3/s Apr. 15, 1945, gage height, 26.40 ft, no flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1923 reached a stage of 26.9 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,600 ft^3/s Jan. 1, gage height, 14.2 ft from graph of gage height readings; minimum daily discharge, 121 ft^3/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	744	225	15000	715	3510	4170	12600	610	1340	300	222
2	151	790	232	13200	488	2140	3480	8190	580	902	450	209
3	144	720	219	7020	434	1750	2450	6860	536	695	342	203
4	137	484	216	6300	458	4550	2060	5970	577	610	294	194
5	133	358	212	3030	465	4360	1750	4470	3950	522	275	175
6	130	311	209	1820	496	3430	1530	2360	7660	484	261	170
7	126	290	206	1350	488	3590	1320	1830	8980	477	258	159
8	126	278	206	1130	492	3170	1230	1600	6810	465	252	164
9	123	252	200	1020	518	1720	1120	1390	6340	430	242	159
10	121	245	206	952	894	1780	1040	1220	5890	411	370	156
11	123	228	228	876	823	1600	1000	1160	3340	387	330	153
12	126	216	209	790	700	1410	947	1060	2250	350	284	153
13	128	206	415	795	570	1590	905	951	1930	342	664	151
14	130	194	3320	744	513	2120	1000	1470	2150	326	315	172
15	139	183	6180	674	473	1750	965	3710	1540	311	258	189
16	170	192	7570	619	434	1480	1340	3480	1330	304	238	192
17	216	366	5620	590	419	1400	1350	2030	1140	300	245	196
18	173	4040	3420	550	404	1220	1010	1450	1080	294	272	535
19	197	2690	2940	541	374	1180	979	1150	1010	278	450	423
20	931	1480	1820	500	358	2360	870	975	937	319	350	301
21	1400	785	3520	477	1050	8090	774	880	874	334	268	253
22	550	654	2130	454	5720	6230	2060	1000	838	294	238	229
23	334	473	1900	450	12100	5120	4380	852	833	268	219	231
24	294	387	1790	481	13400	4880	3060	774	1050	284	209	225
25	522	346	1210	492	12200	4450	2670	739	828	272	200	240
26	705	300	926	480	12300	2740	1970	709	674	258	203	268
27	729	281	800	500	10700	2250	1570	931	484	248	212	320
28	1510	265	749	790	7060	2120	1460	1150	734	252	245	415
29	1240	245	739	705	---	3470	1330	789	1910	255	238	330
30	910	235	729	1040	---	10900	11000	820	1510	387	209	312
31	1010	---	3310	952	---	6010	---	720	---	358	200	---
TOTAL	12881	18238	51656	64322	85046	102370	60790	73290	68375	12757	8891	7099
MEAN	416	608	1666	2075	3037	3302	2026	2364	2279	412	287	237
MAX	1510	4040	7570	15000	13400	10900	11000	12600	8980	1340	664	535
MIN	121	183	200	450	358	1180	774	709	484	248	200	151
AC-FT	25550	36180	102500	127600	168700	203100	120600	145400	135600	25300	17640	14080

CAL YR 1984	TOTAL	239915	MEAN	656	MAX	9450	MIN	87	AC-FT	475900
WTR YR 1985	TOTAL	565715	MEAN	1550	MAX	15000	MIN	121	AC-FT	1122000

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1953 to current year.
WATER TEMPERATURE: October 1953 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Samples were collected periodically, and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 37,100 microsiemens Dec. 31, 1954; minimum daily, 98 microsiemens April 30, 1977.
WATER TEMPERATURE: Maximum daily, 39.0 °C July 5, 1971; minimum daily, 0.0 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,950 microsiemens Oct. 1; minimum daily, 210 microsiemens Jan. 2.
WATER TEMPERATURE: Maximum daily, 29.0 °C Aug. 8; minimum daily, 0 °C on several days in Jan. and Feb.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV												
06...	1630	1028	80020	304	886	7.60	--	14.0	86	740	9.8	98
MAR												
19...	1630	1028	80020	1080	981	7.40	16.0	17.5	180	750	8.9	95
JUN												
10...	1330	1028	80020	6390	348	6.20	--	27.0	320	750	6.0	77
SEP												
10...	1530	1028	80020	158	1480	8.90	33.5	32.0	23	750	9.3	130

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
NOV											
06...	620	K180	200	49	55	15	96	50	3	6.8	184
MAR											
19...	110	170	310	76	82	25	90	38	2	5.3	284
JUN											
10...	860	1900	120	2	35	7.1	21	27	0.9	5.0	140
SEP											
10...	--	--	290	140	56	36	190	58	5	9.3	--

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV											
06...	0	136	151	7.3	75	160	0.6	9.3	524	510	0.71
MAR											
19...	0	255	233	18	69	140	0.4	13	557	570	0.76
JUN											
10...	0	102	115	140	24	26	0.2	8.7	187	200	0.25
SEP											
10...	--	147	--	0.3	160	280	2.2	0.4	873	820	1.2

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
06...	430	2.60	0.15	0.19	1.9	1.50	--	1.10	0.99	3.0	50
MAR											
19...	1620	1.60	0.04	0.05	1.1	0.68	--	0.42	0.38	1.2	40
JUN											
10...	3230	0.53	0.08	0.1	1.8	0.74	2.3	0.15	0.10	0.31	300
SEP											
10...	372	<0.10	0.04	0.05	2.6	0.64	2.0	0.36	0.28	0.86	20

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
06...	6	180	1	<1	<1	<3	5	38	4	27	10
MAR											
19...	3	280	2	2	<1	<3	6	31	6	24	7
JUN											
10...	2	120	<0.5	<1	<1	<3	4	58	4	8	4
SEP											
10...	8	230	<0.5	<1	1	<3	1	<3	1	59	5

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
06...	<0.1	<10	7	<1	<1	640	7	35	245	201	88
MAR											
19...	<0.1	<10	4	<1	<1	800	8	15	453	1320	68
JUN											
10...	--	<10	1	<1	<1	250	7	3	4060	70000	43
SEP											
10...	1.0	<10	3	<1	<1	1100	13	10	68	29	56

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	475	1200	228	973	525	441	245	1130	720	1160	1380
2	1900	450	1270	210	890	574	588	266	1180	777	1000	1320
3	1780	457	1310	264	887	613	486	335	1320	710	1130	1350
4	1860	549	1370	302	995	622	656	373	1310	814	1130	1440
5	1700	678	1390	352	1120	548	706	445	1130	950	975	1420
6	1810	756	1250	441	1210	534	922	498	396	1040	1150	1710
7	1780	1100	1260	569	1300	520	984	593	312	1160	1140	1510
8	1800	1290	1280	706	1200	530	1020	862	315	1100	1140	1480
9	1810	1460	1330	840	1270	508	1140	925	314	1190	1160	1430
10	1730	1310	1320	926	1040	572	1130	997	347	1200	1310	1490
11	1650	1330	1290	983	945	641	1220	1070	390	1300	1180	1510
12	1520	1370	1310	1050	952	789	1200	1120	477	1270	956	1470
13	1610	1320	1360	1140	960	907	1230	1190	552	1190	983	1510
14	1590	1290	346	1220	998	880	1220	890	640	1170	955	1500
15	1550	1270	270	---	1120	863	1160	952	644	1220	954	1450
16	1530	1310	287	---	1210	888	1330	462	706	1240	1110	1380
17	1080	1400	265	1140	1250	930	1040	456	826	1290	1080	1360
18	1330	372	269	1170	1270	970	1250	516	950	1260	1120	1530
19	1620	318	346	1230	1290	---	963	782	1030	1290	1230	960
20	1520	356	339	1190	1290	997	1210	870	1140	1350	1470	763
21	664	337	321	1300	1200	523	1240	1040	1180	1300	1530	942
22	860	729	280	1370	546	354	969	1110	1180	1170	1140	1020
23	537	676	329	1380	311	426	694	1170	1160	1060	1020	1040
24	716	515	396	1360	216	416	424	1230	1110	1130	1100	1160
25	708	---	678	1380	219	456	420	1330	1060	1140	1200	1200
26	992	692	662	1470	232	482	602	1140	1050	1150	1230	1270
27	508	935	639	1480	272	546	544	1270	1040	1230	1290	1420
28	444	1000	734	1160	463	555	615	740	1060	1210	1320	1270
29	414	1070	895	1150	---	806	731	1180	1280	1200	1330	1230
30	943	1160	---	1240	---	340	373	1300	528	1240	1350	832
31	798	---	731	894	---	334	---	1230	---	1260	1440	---
MEAN	1310	896	824	971	915	622	884	858	859	1140	1170	1310

WTR YR 1985 MEAN 982 MAX 1950 MIN 210

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	20.0	7.0	6.0	.0	10.5	12.0	20.0	24.5	25.5	28.0	26.0
2	14.0	13.0	8.0	3.0	.0	10.5	13.0	19.0	25.5	25.0	28.0	27.0
3	16.0	13.0	5.0	4.0	.0	13.0	14.5	19.0	27.0	25.0	27.0	26.0
4	19.0	9.0	6.0	2.0	.0	12.5	16.0	19.0	26.0	25.5	27.5	27.0
5	20.0	12.0	4.0	3.0	.0	12.0	16.0	20.0	24.0	26.0	25.5	26.0
6	20.0	10.0	1.5	3.0	.0	10.5	14.5	21.0	22.0	25.0	28.0	26.5
7	20.0	12.0	2.0	5.0	.0	12.0	15.0	21.5	22.0	25.5	25.0	26.0
8	20.0	15.5	5.0	5.0	.0	13.0	13.5	21.0	24.0	27.0	29.0	26.0
9	19.0	18.0	8.0	6.0	1.0	12.0	14.0	21.0	15.5	27.5	28.0	27.0
10	19.0	12.5	6.5	6.5	5.0	13.5	15.0	22.5	26.0	28.0	28.0	26.0
11	19.0	9.0	9.0	4.0	.5	15.0	15.0	23.0	26.0	28.0	28.0	25.0
12	20.0	8.0	10.0	.0	.5	14.0	17.0	23.0	25.0	28.5	28.0	25.5
13	22.0	10.0	10.0	.5	2.5	12.0	18.5	24.0	23.0	28.0	28.0	25.0
14	21.0	12.0	8.0	1.0	4.0	11.0	17.0	23.0	23.0	27.0	28.0	21.0
15	15.0	14.0	9.0	---	4.0	11.0	18.0	19.0	25.0	27.0	26.0	26.0
16	20.5	10.0	10.0	---	5.0	13.0	18.0	20.0	25.0	28.0	26.0	22.0
17	14.0	10.0	10.0	3.0	5.5	12.0	19.5	20.0	27.0	27.0	27.0	22.0
18	18.0	8.0	9.0	4.5	8.0	11.5	20.5	20.0	25.0	27.0	27.5	24.0
19	14.0	7.5	8.0	5.0	8.0	---	21.0	21.0	23.0	27.5	28.5	23.0
20	15.0	7.0	8.0	1.5	9.0	15.0	21.0	22.0	24.0	27.0	27.0	23.0
21	13.0	5.0	10.0	1.5	11.0	13.5	21.0	20.5	24.0	24.0	27.0	23.0
22	12.5	8.5	9.0	1.0	12.0	11.0	19.5	19.5	25.0	27.0	27.5	22.0
23	17.5	5.0	8.0	1.0	14.0	12.0	18.5	21.0	25.0	27.5	26.0	21.0
24	12.5	5.0	10.0	2.5	12.0	12.0	17.0	21.0	27.0	27.0	26.5	16.0
25	13.0	---	4.5	3.5	11.0	13.5	19.0	23.0	27.0	28.0	23.0	17.0
26	14.0	10.0	6.0	3.5	11.0	15.0	20.0	23.0	27.0	25.5	23.0	16.5
27	17.0	9.0	9.0	3.0	9.0	15.5	21.0	24.0	25.5	25.0	24.0	10.5
28	17.5	8.0	12.0	3.0	14.0	18.5	21.0	24.0	23.0	26.0	25.0	17.0
29	15.0	8.0	12.0	3.0	---	20.0	22.0	23.0	24.0	26.0	25.0	18.0
30	16.5	6.0	---	5.0	---	15.0	19.0	24.0	25.0	27.0	25.0	13.0
31	18.5	---	10.0	.5	---	12.0	---	26.0	---	27.5	25.0	---
MEAN	17.0	10.0	8.0	3.0	5.5	13.0	17.5	21.5	24.0	26.5	26.5	22.5

WTR YR 1985 MEAN 16.5 MAX 29.0 MIN .0

07242350 DEEP FORK NEAR ARCADIA, OK

LOCATION.--Lat 35°38'58", long 97°21'12", on east line of NE 1/4 sec.36, T.14 N., R.2 W., Oklahoma County, Hydrologic Unit 11100303, on left bank at upstream side of county road bridge, 1.9 mi southwest of Arcadia, 2.0 mi upstream from Coffee Creek, and at mile 213.1.

DRAINAGE AREA.--105 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR OK-77-1: 1975 (M) (gage height only), WDR OK-84-1: 1983 (m).

GAGE.--Water-stage recorder. Datum of gage is 941.65 ft, National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974, at site 0.3 mi downstream at same datum. May 2, 1978, to May 14, 1979, the gage was temporarily moved 1.3 mi downstream to county road bridge, at a 5.00 ft lower datum.

REMARKS.--Estimated daily discharges: Oct. 29 to Nov. 4, Dec. 24-28, Jan. 4-9, 11-21, Jan. 31 to Feb. 18, June 17, 19-25. Records fair. Dam construction 0.5 mi upstream effects flow at times.

AVERAGE DISCHARGE.--16 years, 67.3 ft^3/s, 48,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft^3/s Nov. 2, 1974, gage height, 26.9 ft from floodmark; minimum daily, 2.2 ft^3/s Sept. 25, 26, 1984 (revised).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 27	1000	4,060	12.15	Feb. 23	1015	3,730	11.37
Dec. 13	2200	2,020	9.10	Mar. 4	0430	2,070	9.16
Dec. 16	0400	3,840	11.56	Mar. 20	1300	3,570	11.16
Dec. 31	2000	4,480	12.40	Apr. 30	0115	*11,900	*21.06

Minimum daily discharge 2.8 ft^3/s Oct 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	27	7.4	663	19	19	43	470	26	16	8.2	6.1
2	3.0	30	6.7	98	21	17	39	140	28	15	8.0	6.6
3	3.1	28	6.7	58	24	26	34	70	27	15	7.6	7.2
4	3.5	21	6.9	39	27	678	33	57	59	14	7.6	6.7
5	4.0	14	12	38	24	95	31	53	745	14	48	7.3
6	4.2	15	21	37	22	54	28	55	737	14	41	6.7
7	4.5	14	14	37	23	49	27	92	571	13	19	6.5
8	4.6	13	10	36	25	43	27	55	161	12	10	6.6
9	4.7	13	9.7	36	21	37	27	49	33	13	7.9	6.7
10	5.1	10	8.2	41	20	35	25	43	28	12	6.6	6.7
11	5.4	9.5	8.0	33	19	33	26	40	145	11	6.1	7.0
12	5.9	10	7.5	27	19	32	25	38	50	11	6.7	7.5
13	6.2	9.9	224	23	18	34	75	148	28	11	5.4	26
14	8.4	9.3	679	20	18	34	35	109	24	11	18	111
15	13	9.0	305	19	19	30	28	49	22	10	57	22
16	23	10	1260	19	18	29	26	41	20	25	12	13
17	29	34	149	18	19	33	25	36	18	14	8.6	12
18	14	83	58	19	19	29	24	33	20	11	6.5	9.5
19	14	18	50	18	17	28	23	32	16	9.6	6.5	8.9
20	28	12	60	18	38	1310	23	30	15	9.3	12	8.8
21	60	9.9	112	19	252	449	26	30	15	9.0	7.6	11
22	19	9.7	50	19	359	116	493	32	15	9.1	6.8	22
23	15	9.8	40	18	1880	58	228	29	14	9.1	6.5	264
24	15	9.6	40	18	247	42	36	28	14	9.5	7.2	182
25	41	9.6	39	17	44	36	30	28	15	10	6.8	21
26	30	9.4	38	16	29	35	28	26	15	44	6.3	17
27	1180	13	38	43	23	154	123	33	151	14	6.1	13
28	84	9.7	37	34	22	42	77	28	55	36	6.0	11
29	28	7.6	45	20	---	34	239	27	22	43	6.1	133
30	25	8.1	42	19	---	402	3320	26	19	12	6.0	177
31	21	---	1660	17	---	109	---	26	---	9.6	6.1	---
TOTAL	1704.4	486.1	5044.1	1537	3286	4122	5224	1953	3108	466.2	374.2	1143.8
MEAN	55.0	16.2	163	49.6	117	133	174	63.0	104	15.0	12.1	38.1
MAX	1180	83	1660	663	1880	1310	3320	470	745	44	57	264
MIN	2.8	7.6	6.7	16	17	17	23	26	14	9.0	5.4	6.1
AC-FT	3380	964	10000	3050	6520	8180	10360	3870	6160	925	742	2270

CAL YR 1984	TOTAL	13081.8	MEAN	35.7	MAX	1660	MIN	2.2	AC-FT	25950
WTR YR 1985	TOTAL	28448.8	MEAN	77.9	MAX	3320	MIN	2.8	AC-FT	56430

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to January 1980.
WATER TEMPERATURE: October 1969 to January 1980.

REMARKS.--A sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT												
23...	1530	1028	80020	15	444	7.40	13.5	740	10.8	107	22	14
NOV												
08...	1230	1028	80020	16	488	7.60	16.0	730	9.2	98	22	21
JAN												
18...	1330	1028	80020	18	1050	8.00	5.0	730	12.4	102	13	49
FEB												
14...	1400	1028	80020	19	1010	8.00	7.0	740	13.8	117	25	41
MAR												
28...	1130	1028	80020	54	587	7.70	17.5	730	9.2	101	84	25
APR												
09...	0930	1028	80020	27	1040	8.20	13.0	740	12.4	122	65	54
MAY												
21...	1530	1028	80020	30	953	8.20	20.5	740	9.0	103	43	44
JUN												
18...	1300	1028	80020	19	890	8.20	24.5	740	9.1	113	17	44
JUL												
10...	1330	1028	80020	12	902	8.50	30.0	740	10.3	141	26	48
AUG												
15...	1330	1028	80020	56	386	7.80	26.0	740	7.8	99	68	16
SEP												
11...	1400	1028	80020	7.1	813	8.20	28.5	740	12.2	163	12	41

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MERCURY DISSOLVED (UG/L AS HG)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
23...	36	0.53	0.13	0.17	0.22	70	<100	<0.1	86	3.5	83
NOV											
08...	36	0.80	0.18	0.23	0.14	30	<100	<0.1	108	4.7	94
JAN											
18...	110	1.40	0.47	0.61	0.15	10	100	<0.1	30	1.5	64
FEB											
14...	120	0.95	0.87	1.1	0.38	20	<100	<0.1	53	2.7	89
MAR											
28...	47	1.20	0.02	0.03	0.16	100	<100	<0.1	1600	233	98
APR											
09...	110	0.37	0.33	0.43	0.46	30	<100	--	26	1.9	77
MAY											
21...	76	0.53	0.03	0.04	0.10	50	<100	<0.1	--	--	--
JUN											
18...	74	0.17	--	--	0.10	30	<100	0.1	--	--	--
JUL											
10...	88	<0.10	0.04	0.05	0.04	20	<100	0.1	--	--	--
AUG											
15...	29	0.76	0.03	0.04	0.09	50	<100	0.2	--	--	--
SEP											
11...	65	0.14	0.08	0.1	--	20	<100	0.3	--	--	--

07242380 DEEP FORK NEAR WARWICK, OK

LOCATION.--Lat 35°40'05", long 90°00'33", NE 1/4 NW 1/4 sec. 20, T.14 N., R.3 E., Lincoln County, Hydrologic Unit 11100303, on left downstream abutment on U.S. Highway 66, 0.5 mi southwest of Warwick, and at mile 183.3.

DRAINAGE AREA.--532 mi^2.

PERIOD OF RECORD.--October 1, 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 823.053 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 19 to Dec. 9, 11, 12, Dec. 20 to Jan. 9, 11-27, Feb. 3-10, Apr. 4-24, June 2-3, July 3 to Aug. 20. Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s Oct. 21, 1983, gage height, 22.05 ft, from high-water mark; minimum daily discharge, 3.5 ft^3/s Oct. 9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 13,400 ft^3/s Apr. 30, gage height, 19.65 ft; minimum daily discharge, 3.5 ft^3/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	177	41	2000	471	485	518	2540	162	228	30	31
2	6.5	124	38	900	111	402	379	1240	140	181	27	28
3	5.4	108	36	621	100	359	230	965	130	140	24	27
4	4.7	99	34	400	169	2080	209	824	1400	120	23	29
5	4.7	56	68	211	129	981	200	717	9880	101	130	26
6	5.0	53	123	182	105	597	191	629	5840	85	101	24
7	4.6	63	62	170	119	446	180	678	3010	76	57	22
8	3.7	60	50	163	110	387	177	623	1240	65	38	22
9	3.5	44	42	155	101	301	169	535	757	70	32	21
10	3.6	33	38	219	98	280	172	451	633	60	27	20
11	4.0	8.9	31	150	95	270	165	397	940	55	22	21
12	4.0	31	27	133	72	244	158	352	589	51	24	26
13	4.4	20	858	120	77	270	370	921	359	49	20	31
14	6.0	16	934	112	69	235	210	596	313	48	63	257
15	13	12	2000	103	64	222	181	360	281	46	170	166
16	41	9.8	4450	97	63	211	169	298	259	130	60	66
17	103	58	685	90	56	216	158	312	220	60	36	44
18	60	400	367	84	59	211	140	280	191	54	20	37
19	26	150	300	81	57	200	132	237	175	50	18	31
20	37	94	289	78	82	4030	123	214	165	47	100	26
21	161	87	640	76	1120	2320	150	212	137	45	64	27
22	108	80	320	80	4280	1010	1600	224	505	43	48	63
23	57	70	270	78	11500	581	675	202	293	44	44	776
24	44	66	240	74	4010	393	337	173	212	47	43	375
25	110	62	229	72	1210	295	179	159	154	50	43	149
26	174	58	219	68	940	290	199	151	140	130	40	80
27	1500	97	200	350	748	934	1830	1290	2020	62	38	63
28	389	64	190	181	598	376	738	420	624	110	37	46
29	138	54	269	105	---	269	3940	291	363	140	35	315
30	126	45	228	89	---	3460	10700	228	290	62	34	354
31	132	---	6000	80	---	1040	---	191	---	35	33	---
TOTAL	3285.6	2299.7	19278	7322	26613	23395	24579	16710	31422	2484	1481	3203
MEAN	106	76.7	622	236	950	755	819	539	1047	80.1	47.8	107
MAX	1500	400	6000	2000	11500	4030	10700	2540	9880	228	170	776
MIN	3.5	8.9	27	68	56	200	123	151	130	35	18	20

CAL YR 1984	TOTAL	50780.7	MEAN	139	MAX	6000	MIN	3.5
WTR YR 1985	TOTAL	162072.3	MEAN	444	MAX	11500	MIN	3.5

07243000 DRY CREEK NEAR KENDRICK, OK

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, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi downstream from Beaver Creek and 4.5 mi west of Kendrick.

DRAINAGE AREA.--69.0 mi^2.

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

GAGE.--Water-stage recorder. Altitude of gage is 820 ft, from topographic map. Prior to Oct. 1, 1981, gage at same site and datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Feb. 1-5, 7-8, Aug. 1-3, 7-13, Aug. 16 to Sept. 10, 15-20. Records good.

AVERAGE DISCHARGE.--30 years, 22.7 ft^3/s, 16,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s Nov. 2, 1974, gage height, 24.20 ft present datum; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 16	0030	3,640	18.13	Apr. 22	0845	2,060	14.11
Dec. 31	1815	5,320	19.77	Apr. 27	0930	5,490	19.88
Feb. 23	0845	*6,570	*20.50	Apr. 30	0145	5,020	19.57
Mar. 4	0145	4,000	18.65	June 6	1645	2,410	15.03
Mar. 30	0630	2,960	16.37				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.0	.84	539	5.0	31	56	125	9.6	8.2	3.2	.18
2	.00	.70	.78	132	4.6	25	44	70	12	8.2	3.0	.20
3	.00	.14	.71	69	5.4	282	39	48	9.5	7.3	2.8	.18
4	.00	.20	1.1	47	6.4	1050	34	37	239	6.9	3.2	.17
5	.00	.21	1.7	36	8.0	65	38	31	645	9.7	3.8	.15
6	.00	.40	1.3	30	9.7	39	27	27	580	6.3	3.3	.14
7	.00	.38	1.1	24	8.8	32	23	30	186	5.9	2.7	.13
8	.00	.38	1.3	20	10	27	22	25	47	5.8	2.5	.14
9	.00	.39	1.3	23	17	23	22	21	27	5.5	2.3	.13
10	.00	1.1	1.2	26	18	23	22	19	22	5.2	2.1	.12
11	.00	.13	1.2	15	14	23	22	18	62	5.1	2.0	.12
12	.00	.63	1.2	9.4	14	16	20	16	23	4.9	1.9	.17
13	.00	.39	362	10	13	18	47	21	17	4.7	1.8	.58
14	.00	.44	30	11	12	16	37	24	15	4.5	2.5	1.1
15	.00	.45	568	11	12	14	22	17	13	9.4	3.5	.45
16	.00	.40	783	12	13	14	19	15	12	18	2.5	.35
17	.00	1.9	24	10	11	15	17	14	11	5.1	2.1	.25
18	.00	5.1	9.6	9.9	11	13	16	13	11	4.4	1.7	.18
19	.00	1.8	6.8	8.9	11	13	15	13	9.6	4.3	1.5	.15
20	.00	.88	17	5.1	28	721	15	13	9.1	4.1	1.4	.13
21	.00	.71	151	5.2	456	330	15	14	8.4	4.0	1.2	.86
22	.00	.70	11	5.8	2160	107	778	14	10	3.9	1.0	1.4
23	.00	.82	6.3	7.0	3280	53	101	13	8.4	4.0	.80	8.3
24	.00	.77	4.7	7.1	235	37	45	12	7.7	4.0	.70	1.9
25	3.0	.89	3.4	7.1	83	30	34	12	7.2	4.7	.60	16
26	.09	.91	3.5	7.0	52	34	28	11	9.9	5.4	.50	2.8
27	125	.90	3.5	10	37	165	1830	38	140	3.8	.40	1.6
28	2.5	.71	3.6	10	32	50	153	12	15	10	.35	1.4
29	.94	.83	3.7	10	---	39	1300	12	9.8	4.8	.30	21
30	.64	.84	5.3	10	---	752	1470	11	8.5	4.1	.25	4.3
31	.51	---	2460	5.9	---	105	---	9.6	---	3.6	.20	---
TOTAL	132.68	25.10	4470.13	1133.4	6566.9	4162	6311	755.6	2184.7	185.8	56.10	64.58
MEAN	4.28	.84	144	36.6	235	134	210	24.4	72.8	5.99	1.81	2.15
MAX	125	5.1	2460	539	3280	1050	1830	125	645	18	3.8	21
MIN	.00	.13	.71	5.1	4.6	13	15	9.6	7.2	3.6	.20	.12
AC-FT	263	50	8870	2250	13030	8260	12520	1500	4330	369	111	128

CAL YR 1984 TOTAL 9393.10 MEAN 25.7 MAX 2460 MIN .00 AC-FT 18630
WTR YR 1985 TOTAL 26047.99 MEAN 71.4 MAX 3280 MIN .00 AC-FT 51670

07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'31", long 96°03'55", NW 1/4 SW 1/4 sec.20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, on right bank 1,000 ft downstream from county road bridge, 2.8 mi upstream from Adams Creek, 4.0 mi south of Beggs, 8.2 mi downstream from Flat Rock (Checkerboard) Creek, and at mile 84.8.

DRAINAGE AREA.--2,018 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WSP 957: 1941. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 632.552 ft, National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1939, nonrecording gage at site 550 ft upstream at same datum. Aug. 29, 1939 to June 22, 1953, nonrecording gage at site 1,000 ft upstream and same datum. June 23, 1953 to July 15, 1981, recording gage at site 1,000 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 3-6. Records poor.

AVERAGE DISCHARGE.--47 years, 828 ft^3/s, 599,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft^3/s May 11, 1943, gage height, 34.55 ft; no flow at times in 1939, 1954, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 22	1000	9,840	22.50	Mar. 31	1400	9,030	21.99
Jan. 3	2400	13,100	24.28	Apr. 23	1700	3,220	14.01
Feb. 27	1500	*27,700	*29.65	May 5	1300	12,500	23.99
Mar. 9	2300	6,530	20.19	June 12	1200	10,000	22.61

Minimum daily discharge 6.7 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	1320	114	5350	751	17800	8090	7890	712	1840	232	44
2	11	1290	101	8990	563	12700	7010	9570	532	2210	199	42
3	11	928	93	12100	483	9490	6600	10800	439	2250	190	40
4	10	514	89	12600	552	8320	6570	11800	395	1220	165	37
5	8.1	321	85	11200	535	8080	6270	12400	2030	665	140	35
6	7.0	240	79	11000	490	7540	5560	11600	3780	530	120	33
7	6.7	198	79	10900	463	6320	4810	9690	4880	445	103	30
8	7.1	171	79	9040	440	5930	3860	7780	5820	414	92	29
9	7.4	150	81	7220	426	6330	2170	6270	6100	396	92	28
10	7.4	133	85	5830	620	6450	1330	5160	7040	339	114	26
11	7.4	118	92	4850	830	5900	1100	4290	9140	290	131	28
12	7.7	104	104	3830	717	5120	985	2860	9880	254	134	26
13	8.7	93	626	2010	605	4540	974	1640	8940	226	121	31
14	8.0	87	3300	1170	562	3890	1620	1270	7300	206	108	37
15	9.7	89	3960	991	515	3090	1630	1130	5960	187	101	35
16	19	79	4370	850	471	2360	1520	1320	4960	169	123	33
17	21	150	4850	766	441	1750	1460	1580	3970	155	114	39
18	13	1320	5370	713	416	1350	1230	1610	1940	162	106	39
19	10	2070	5840	659	388	1120	965	1430	1010	168	117	59
20	22	1520	6810	587	372	1530	808	992	768	166	152	98
21	228	902	8710	472	1160	3830	711	689	650	149	157	94
22	187	602	9640	415	2910	4250	1350	600	581	135	141	78
23	103	453	8290	353	4760	4780	3140	585	542	130	113	67
24	99	342	6670	433	10900	5420	3110	502	635	126	88	55
25	88	268	5500	438	17900	7000	2890	460	970	136	77	58
26	266	219	4750	417	24200	7620	2890	432	1050	462	72	58
27	505	185	4140	403	26700	7790	3340	582	747	313	67	326
28	1080	160	2710	439	23700	7160	3990	1320	613	228	64	472
29	1300	137	1170	572	---	6290	5030	874	1010	204	57	368
30	1240	123	1550	741	---	7600	6400	1020	1510	267	51	273
31	1330	---	2690	885	---	8850	---	1030	---	286	47	---
TOTAL	6641.2	14286	92027	116224	122870	190270	97413	119176	93904	14728	3588	2618
MEAN	214	476	2969	3749	4388	6138	3247	3844	3130	475	116	87.3
MAX	1330	2070	9640	12600	26700	17800	8090	12400	9880	2250	232	472
MIN	6.7	79	79	353	372	1120	711	432	395	126	47	26
AC-FT	13170	28340	182500	230500	243700	377400	193200	236400	186300	29210	7120	5190

CAL YR 1984	TOTAL	242900.7	MEAN	664	MAX	9640	MIN	6.4	AC-FT	481800
WTR YR 1985	TOTAL	873745.2	MEAN	2394	MAX	26700	MIN	6.7	AC-FT	1733000

07243500 DEEP FORK NEAR BEGGS, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1951 to current year.
WATER TEMPERATURE: November 1951 to current year.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 10,500 microsiemens Jan. 12, 1955; minimum daily, 74 microsiemens Oct. 21, 1983.
WATER TEMPERATURE: Maximum daily, 38.5 °C Aug. 8, 1970; minimum daily, 0.0 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,190 microsiemens Sept 30; minimum daily, 106 microsiemens Jan. 1.
WATER TEMPERATURE: Maximum daily, 36.0 °C many days in July; minimum daily, 2.0 °C Feb. 7-12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT												
03...	1455	1028	1028	12	470	7.70	28.0	18.0	--	746	8.6	93
23...	1425	1028	80020	100	721	7.10	18.0	13.5	330	752	8.3	81
DEC												
12...	1340	1028	1028	87	870	8.30	--	7.0	--	747	13.5	114
JAN												
21...	1545	1028	80020	455	825	7.70	--	1.5	56	757	13.6	98
FEB												
27...	2130	1028	1028	28600	137	7.00	--	11.5	--	755	7.8	72
MAY												
22...	1600	1028	80020	565	*714	7.00	--	23.0	150	745	7.8	93
SEP												
18...	1315	1028	80020	39	1250	7.50	28.0	26.0	32	747	7.0	88

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	150	51	34	15	82	54	3	4.5	118
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
21...	110	300	250	65	54	29	67	36	2	2.7	232
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	120	90	240	46	53	27	52	31	1	3.3	242
SEP											
18...	54	87	320	55	55	43	130	47	3	4.0	--

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
23...	0	89	96	15	22	160	0.2	5.0	374	380	0.51
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
21...	0	185	190	7.4	30	120	0.2	11	420	430	0.57
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	0	187	198	38	27	94	0.3	10	385	390	0.52
SEP											
18...	--	260	--	16	39	210	0.4	4.7	656	640	0.89

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
23...	101	0.57	0.14	0.18	1.8	0.24	--	0.04	0.03	0.09	90
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
21...	516	0.39	0.21	0.27	1.5	0.13	--	0.04	<0.01	--	20
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	587	0.42	0.12	0.15	1.5	0.22	0.67	0.06	0.05	0.15	10
SEP											
18...	69	<0.10	0.04	0.05	0.8	0.10	0.31	0.07	0.02	0.06	10

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
23...	<1	120	2	1	<1	<3	12	72	7	12	8
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
21...	<1	170	<0.5	<1	<0.5	<3	4	36	2	7	270
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	<1	170	<0.5	2	<1	<3	7	8	6	8	3
SEP											
18...	1	210	<0.5	<1	<1	<3	2	<3	<1	9	7

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
03...	--	--	--	--	--	--	--	--	84	2.6	95
23...	0.2	<10	2	<1	<1	450	<6	5	297	80	97
DEC											
12...	--	--	--	--	--	--	--	--	27	6.3	89
JAN											
21...	<0.1	<10	5	<1	<1	520	<6	8	91	112	98
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	<0.1	<10	1	<1	<1	440	<6	6	--	--	--
SEP											
18...	0.1	<10	4	<1	<1	680	<6	15	50	5.3	100

07243500 DEEP FORK NEAR BEGGS, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	264	544	106	857	160	290	220	243	545	1030	785
2	546	263	692	107	696	147	286	218	241	536	1040	787
3	544	275	688	108	574	146	291	206	242	556	1030	810
4	544	276	696	107	768	145	285	210	325	544	1020	796
5	546	292	693	108	764	209	666	206	389	535	806	786
6	545	278	692	107	763	206	661	207	390	1060	857	786
7	546	263	864	107	776	220	663	463	388	904	808	799
8	544	512	841	108	779	147	650	460	386	1050	806	613
9	545	292	858	108	777	150	659	466	389	1070	809	1040
10	548	511	856	309	780	207	659	468	390	1070	810	1050
11	547	512	148	308	766	205	652	436	392	1060	808	1050
12	549	291	167	311	764	206	648	615	620	1070	810	1040
13	545	521	169	308	781	207	656	632	623	1050	1040	1060
14	560	515	167	310	765	206	644	616	622	480	988	1040
15	562	---	168	591	779	208	644	620	625	480	812	1050
16	560	158	146	586	783	574	646	471	633	476	807	1180
17	561	158	147	586	782	581	723	466	630	484	810	1180
18	560	165	170	589	770	591	730	461	636	793	805	1180
19	310	164	174	596	763	578	728	456	634	478	822	1180
20	308	314	176	584	157	585	723	592	730	483	826	1180
21	309	312	177	583	162	590	730	587	780	770	823	1180
22	309	316	182	585	158	586	730	602	790	1060	833	507
23	972	321	148	580	150	592	728	363	784	1060	736	504
24	973	316	147	584	144	169	725	221	803	1060	735	505
25	975	550	148	886	145	163	291	468	796	1050	740	503
26	973	543	150	884	143	180	504	476	802	1070	736	504
27	305	541	162	883	143	208	233	246	795	1060	789	507
28	303	548	148	885	143	581	262	231	547	1070	797	504
29	309	542	154	878	---	589	267	245	544	1070	790	1170
30	247	542	108	876	---	596	223	238	542	1060	788	1190
31	262	---	107	879	---	282	---	230	---	1060	787	---
MEAN	528	364	345	469	565	329	553	400	557	842	842	882

WTR YR 1985 MEAN 557 MAX 1190 MIN 106

07243500 DEEP FORK NEAR BEGGS, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	23.0	14.0	5.0	5.0	6.0	14.0	16.0	28.0	35.0	33.0	34.0
2	20.0	21.0	11.0	5.0	5.0	6.0	14.0	16.0	28.0	35.0	32.0	34.0
3	20.0	19.0	9.0	6.0	5.0	6.0	14.0	16.0	28.0	35.0	32.0	34.0
4	20.0	19.0	8.0	6.0	5.0	7.0	14.0	16.0	27.0	35.0	32.0	34.0
5	20.0	17.0	8.0	6.0	3.0	7.0	14.0	16.0	28.0	35.0	32.0	34.0
6	20.0	17.0	8.0	6.0	3.0	7.0	14.0	16.0	28.0	35.0	32.0	34.0
7	20.0	17.0	8.0	6.0	2.0	7.0	14.0	16.0	28.0	35.0	32.0	34.0
8	20.0	19.0	8.0	6.0	2.0	10.0	14.0	18.0	28.0	35.0	32.0	34.0
9	20.0	15.0	9.0	6.0	2.0	10.0	14.0	18.0	28.0	36.0	32.0	34.0
10	20.0	19.0	9.0	6.0	2.0	10.0	14.0	18.0	28.0	36.0	32.0	34.0
11	20.0	16.0	9.0	6.0	2.0	10.0	14.0	18.0	28.0	35.0	32.0	35.0
12	20.0	18.0	9.0	6.0	2.0	10.0	14.0	20.0	27.0	36.0	32.0	34.0
13	20.0	15.0	9.0	6.0	4.0	10.0	15.0	21.0	27.0	36.0	32.0	34.0
14	23.0	15.0	9.0	6.0	4.0	10.0	15.0	22.0	27.0	36.0	32.0	34.0
15	23.0	---	9.0	6.0	4.0	11.0	15.0	22.0	27.0	36.0	32.0	34.0
16	23.0	14.0	9.0	5.0	4.0	10.0	15.0	22.0	27.0	35.0	32.0	28.0
17	23.0	12.0	9.0	5.0	5.0	10.0	15.0	22.0	27.0	36.0	32.0	28.0
18	23.0	13.0	11.0	5.0	5.0	11.0	15.0	22.0	27.0	36.0	32.0	28.0
19	23.0	14.0	8.0	5.0	5.0	11.0	15.0	22.0	27.0	36.0	32.0	28.0
20	23.0	13.0	8.0	4.0	5.0	11.0	15.0	22.0	27.0	36.0	32.0	29.0
21	23.0	14.0	8.0	5.0	5.0	12.0	15.0	22.0	27.0	36.0	32.0	29.0
22	23.0	14.0	8.0	5.0	5.0	12.0	15.0	22.0	27.0	36.0	32.0	20.0
23	23.0	14.0	8.0	5.0	5.0	12.0	16.0	23.0	27.0	36.0	32.0	20.0
24	23.0	14.0	8.0	5.0	5.0	12.0	15.0	23.0	27.0	36.0	32.0	22.0
25	23.0	14.0	7.0	5.0	5.0	12.0	15.0	23.0	27.0	36.0	32.0	22.0
26	23.0	14.0	7.0	5.0	6.0	13.0	15.0	23.0	27.0	36.0	32.0	21.0
27	23.0	14.0	7.0	5.0	6.0	14.0	16.0	27.0	27.0	36.0	32.0	21.0
28	23.0	13.0	7.0	5.0	6.0	14.0	16.0	27.0	34.0	36.0	32.0	20.0
29	23.0	14.0	7.0	5.0	---	14.0	16.0	27.0	34.0	36.0	32.0	21.0
30	23.0	14.0	6.0	5.0	---	14.0	16.0	27.0	34.0	32.0	32.0	21.0
31	23.0	---	5.0	5.0	---	14.0	---	27.0	---	32.0	34.0	---
MEAN	21.5	15.5	8.5	5.5	4.0	10.5	15.0	21.0	28.0	35.5	32.0	29.0

WTR YR 1985 MEAN 19.0 MAX 36.0 MIN 2.0

07244800 EUFAULA LAKE NEAR BROOKEN, OK

LOCATION.--Lat 35°18'25", long 95°21'45", in SW 1/4 sec.25, T.10 N., R.18 E., McIntosh County, Hydrologic Unit 11090204, in intake structure near left end of dam on Canadian River, 4.0 mi northeast of Brooken, and at mile 27.0.

DRAINAGE AREA.--47,522 mi^2, of which 9,700 mi^2 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthen dam having a gated, concrete, ogee-type spillway weir controlled by eleven 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, 3,825,400 acre-ft at elevation 597.0 ft,top of flood-control pool; 2,314,600 acre-ft at elevation 585.0 ft, top of power pool, and 851,600 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. Revised capacity table, based on survey 1977, used since Oct. 1, 1983.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,791,000 acre-ft Apr. 25, 1973, elevation, 596.95 ft; minimum since power pool first filled, 1,182,000 acre-ft Nov. 4, 1964, elevation, 570.23 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,255,200 acre-ft Mar. 7, elevation, 592.94 ft; minimum, 1,881,700 acre-ft Oct. 4, elevation, 580.53 ft.

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

579	1,750,000	589	2,764,200
583	2,110,700	593	3,263,100
587	2,532,800	595	3,536,800

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1889600	2321000	2354300	2951000	2382200	3046600	3188700	2740700	2329600	2495100	2214900	2197800
2	1887000	2348900	2351100	3032700	2381100	3073200	3158600	2789300	2330700	2495100	2207800	2191800
3	1886100	2369300	2341400	3028900	2381100	3116100	3116100	2792800	2323200	2499500	2209800	2193800
4	1881700	2380000	2344600	3003700	2377900	3169100	3076900	2772500	2307300	2506200	2210800	2194800
5	1886100	2376800	2343500	2969400	2365000	3237000	3023900	2750100	2323200	2506200	2207800	2184800
6	1894000	2370400	2338200	2937600	2358600	3255200	2978000	2716100	2390800	2508400	2210800	2177800
7	1895800	2365000	2336000	2894700	2344600	3247400	2936300	2679800	2475100	2510600	2212800	2178800
8	1896700	2365000	2337100	2849000	2330700	3221300	2886100	2639000	2515000	2509500	2207800	2176800
9	1897500	2362900	2338200	2808400	2331700	3184800	2838200	2603600	2538500	2507300	2204800	2171800
10	1892300	2356400	2336000	2766500	2358600	3141700	2786900	2576200	2547600	2508400	2206800	2170800
11	1898400	2356400	2339200	2718500	2367100	3088300	2729000	2547600	2547600	2497300	2203800	2170800
12	1897500	2348900	2333900	2674000	2368200	3047900	2678700	2516100	2538500	2484000	2202800	2172800
13	1902800	2344600	2373600	2623000	2369300	3027700	2643600	2492900	2522800	2472900	2204800	2174800
14	1908100	2347800	2404700	2577300	2365000	3003700	2605900	2455100	2531700	2460700	2212800	2171800
15	1906400	2340300	2485100	2532800	2362900	2954700	2572800	2424100	2522800	2444100	2211800	2170800
16	1927700	2336000	2543100	2514000	2361800	2898400	2543100	2402600	2528300	2429600	2210800	2167800
17	1925900	2363900	2597900	2497300	2358600	2834700	2511700	2386500	2527200	2409000	2206800	2165800
18	1938700	2425200	2607100	2479500	2351100	2763000	2485100	2367100	2527200	2389700	2205800	2163800
19	1934200	2464000	2589900	2456300	2343500	2702100	2462900	2344600	2521700	2371400	2209800	2162800
20	2004900	2474000	2593300	2454000	2332800	2729000	2436300	2328500	2507300	2348900	2206800	2162800
21	2065700	2465100	2627600	2433000	2336000	2845400	2410100	2327400	2495100	2331700	2206800	2162800
22	2126700	2449600	2649400	2423000	2372500	2882500	2462900	2318900	2503900	2312500	2208800	2159800
23	2144700	2435200	2656400	2419700	2599100	2870500	2533900	2324200	2500600	2291700	2207800	2164800
24	2155700	2427400	2668100	2406900	2784500	2831100	2560200	2305200	2492900	2275100	2216000	2159800
25	2188800	2419700	2688000	2397200	2882500	2783300	2554500	2305200	2484000	2261600	2214900	2170800
26	2216000	2409000	2709100	2400400	2932700	2757100	2536200	2317800	2477300	2247100	2212800	2169800
27	2249200	2397200	2715000	2411100	2975600	2731400	2529400	2316700	2470700	2247100	2208800	2161800
28	2269900	2377900	2700900	2402600	3008700	2703300	2515000	2314600	2471800	2247100	2210800	2166800
29	2285500	2365000	2679800	2400400	---	2753600	2500600	2328500	2480700	2237800	2206800	2179800
30	2296900	2351100	2654100	2394000	---	3045400	2615100	2336000	2487300	2230500	2203800	2169800
31	2306300	---	2761800	2391800	---	3173000	---	2331700	---	2219100	2200800	---
MAX	2306300	2474000	2761800	3032700	3008700	3255200	3188700	2792800	2547600	2510600	2216000	2197800
MIN	1881700	2321000	2333900	2391800	2330700	2702100	2410100	2305200	2307300	2219100	2200800	2159800
(†)	584.92	585.34	588.98	585.72	591.02	592.31	587.72	585.16	586.59	584.08	583.90	583.59
(††)	+413,300	+44,800	+410,700	-370,000	+616,900	+164,300	-557,900	-283,400	+155,600	-268,200	-18,300	-31,000

CAL YR 1984 MAX 2761800 MIN 1873000 (††) +890,800
WTR YR 1985 MAX 3255200 MIN 1881700 (††) +276,800

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'50", long 95°14'21", in SE 1/4 SE 1/4 sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, on left downstream bank at end of bridge on State Highway 2, 0.8 mi north of Whitefield, 5.5 mi upstream from Taloka (Snake) Creek, 8.2 mi downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 mi^2, of which 9,700 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 473.16 ft, National Geodetic Vertical Datum of 1929. Prior to Jan. 11, 1939, nonrecording gage and Jan. 11, 1939 to Dec. 10, 1941, June 12, 1947 to Sept. 30, 1948, water-stage recorder, all at site 2.1 mi downstream at datum 2.20 ft higher. Dec. 11, 1941 to June 1, 1947, and Oct. 1, 1948 to Sept. 30, 1978, water-stage recorder at site 400 ft upstream and at datum 5.00 ft higher. Oct. 1, 1978 to July 26, 1983, water-stage recorder at site 400 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi^2 of intervening area, completely regulated thereafter by Eufaula Lake (station 07244800).

COOPERATION.--Gage-height record and 12 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Eufaula Dam) 25 years (water years 1939-63), 6,005 ft^3/s, 4,347,000 acre-ft/yr; (since regulation by Eufaula Dam) 18 years (water years 1968-85), 5,335 ft^3/s, 3,865,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 281,000 ft^3/s May 10, 1943, gage height, 25.5 ft datum then in use; minimum daily discharge, 0.4 ft^3/s Oct. 8, 1956.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Maximum known stage since 1898, May 10, 1943, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,900 ft^3/s Mar. 27, gage height, 15.98 ft: minimum daily discharge, 51 ft^3/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	722	1760	2060	7810	21800	29700	17600	3150	1160	2640	841
2	1210	257	982	15100	4350	21600	37100	22600	3390	2750	1850	554
3	386	128	5310	33600	4270	21500	39200	27900	7780	2190	628	1010
4	87	105	4530	36800	7590	18600	38700	30700	8460	688	628	743
5	78	1870	2220	36700	8160	11100	37100	30500	8780	918	2080	1430
6	109	3980	2750	36400	8100	15700	33700	32800	8420	667	821	2860
7	103	3220	1750	37800	9060	23500	33700	35100	8660	87	137	876
8	72	3390	1390	38900	9370	29900	33400	34900	9760	983	1720	113
9	65	3270	243	37300	8060	35700	33500	32400	9460	1840	1910	2070
10	64	1090	891	37200	7830	35300	32900	27600	9250	1520	555	1040
11	62	289	2270	36700	7890	34800	33300	25500	13600	4350	153	385
12	539	2360	1990	34100	7920	34900	30900	25400	14600	6320	129	333
13	200	3370	3580	34400	6990	31400	25300	25200	14500	5670	119	386
14	80	2180	5520	32800	6600	28400	25100	25000	14500	5910	115	335
15	83	1550	5110	25500	6950	37800	23300	22800	14500	9130	407	82
16	339	1550	4400	18300	4660	39300	20700	18800	10300	10100	538	71
17	144	1090	8460	14800	4670	38700	20600	15100	11200	10200	90	534
18	86	1910	15700	14300	7790	38600	19000	15000	10500	10200	71	150
19	98	4740	21900	10600	7790	36500	17100	14900	10600	10100	67	96
20	1190	7680	20400	9980	8670	32600	16900	14800	12200	10300	68	63
21	433	10900	15000	10900	5720	28000	16800	8750	7600	10300	63	58
22	179	11300	14200	9460	3990	27200	16900	8280	6390	10100	262	51
23	144	10300	14000	7840	6630	32500	16700	8080	5090	9020	383	67
24	124	6520	10200	7930	1420	37200	16700	8050	6690	9610	90	339
25	583	6350	3260	7950	2260	39100	16600	5240	7190	7710	66	563
26	239	9230	4570	2710	7820	39400	19000	4720	7070	6510	62	79
27	165	11200	6660	3370	15900	39800	21500	4740	5100	2720	445	833
28	175	11300	16700	7440	21100	37900	21500	4520	4770	168	455	609
29	114	11200	21600	8220	---	33300	21600	4340	1450	3370	1490	89
30	97	7510	21600	7840	---	21600	20700	4260	158	4220	1840	71
31	190	---	19500	7350	---	16900	---	4500	---	5060	1570	---
TOTAL	7992	140561	258446	624350	209370	940600	769200	560080	255118	163871	21452	16731
MEAN	258	4685	8337	20140	7478	30340	25640	18070	8504	5286	692	558
MAX	1210	11300	21900	38900	21100	39800	39200	35100	14600	10300	2640	2860
MIN	62	105	243	2060	1420	11100	16600	4260	158	87	62	51
AC-FT	15850	278800	512600	1238000	415300	1866000	1526000	1111000	506000	325000	42550	33190

CAL YR 1984 TOTAL 1308791 MEAN 3576 MAX 21900 MIN 38 AC-FT 2596000
WTR YR 1985 TOTAL 3967771 MEAN 10870 MAX 39800 MIN 51 AC-FT 7870000

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-64, 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.
WATER TEMPERATURE.--September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected bi-monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 22,900 microsiemens Nov. 11, 1956; minimum daily, 36 microsiemens May 19, 1980.
WATER TEMPERATURE: Maximum daily, 39.0 °C, July 16, 1981; minimum daily, 0.0 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 759 microsiemens Nov. 10; minimum daily, 253 microsiemens Jan. 31.
WATER TEMPERATURE: Maximum daily, 35.0 °C Sept. 3; minimum daily, 0.0 °C Jan. 31 to Feb. 1, 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	METRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	DISSOLVED (PERCENT SATURATION)
OCT												
30...	1130	1028	80020	97	400	7.00	27.5	20.5	20	705	11.2	134
JAN												
29...	1500	1028	1028	12600	360	8.00	0.0	4.0	--	704	12.2	101
MAR												
05...	1430	1028	80020	11100	322	7.40	--	7.5	66	760	12.2	102
APR												
02...	1545	1028	80020	38700	312	7.80	28.0	15.5	69	750	11.6	118
30...	1700	1028	80020	16400	284	7.60	24.0	19.0	70	740	8.0	89
JUL												
09...	1730	1028	80020	332	*398	--	39.0	29.0	29	740	7.3	--
SEP												
24...	1630	1028	80020	6.4	440	8.40	29.0	22.5	0.7	750	7.9	93

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
OCT											
30...	K13	K17	140	38	38	11	31	32	1	3.3	126
JAN											
29...	--	--	--	--	--	--	--	--	--	--	212
MAR											
05...	K75	--	98	28	25	8.5	27	37	1	3.1	86
APR											
02...	K1600	860	100	27	27	8.9	26	34	1	3.1	94
30...	K40	K47	96	26	25	8.2	23	33	1	3.0	86
JUL											
09...	370	300	130	26	34	10	27	31	1	3.4	--
SEP											
24...	--	--	160	14	45	12	28	27	1	3.3	172

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT											
30...	0	103	103	20	35	42	0.2	7.5	239	230	0.33
JAN											
29...	0	--	174	3.4	--	--	--	--	--	--	--
MAR											
05...	0	65	70	5.4	24	39	0.2	6.1	185	180	0.25
APR											
02...	0	70	77	2.4	27	38	0.2	6.9	193	180	0.26
30...	0	65	70	3.4	27	31	0.2	7.6	187	170	0.25
JUL											
09...	--	100	--	--	27	40	0.2	7.7	223	210	0.3
SEP											
24...	4.0	140	148	1.1	23	41	0.2	7.6	259	250	0.35

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)
OCT											
30...	63	<0.10	0.05	0.06	0.7	0.06	--	0.01	0.01	0.03	80
JAN											
29...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	5540	0.37	0.10	0.13	0.7	0.11	--	<0.01	<0.01	--	70
APR											
02...	20200	0.41	0.11	0.14	1.5	0.22	--	0.15	0.09	0.28	--
30...	8280	0.44	0.08	0.1	0.5	0.04	--	0.09	<0.01	--	100
JUL											
09...	200	0.29	0.03	0.04	0.7	0.07	0.21	0.02	<0.01	--	--
SEP											
24...	4.4	<0.10	0.04	0.05	0.6	0.07	0.21	0.04	0.03	0.09	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
30...	1	160	<0	<1	<1	<3	6	65	3	8	130
JAN											
29...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	<1	82	<0.5	<1	<1	<3	8	180	<1	5	9
APR											
02...	--	--	--	--	--	--	--	--	--	--	--
30...	<1	81	<0.5	2	<1	<3	12	150	<1	4	9
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
SEP											
24...	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
30...	<0.1	<10	2	<1	<1	310	<6	7	32	8.4	92
JAN											
29...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	<0.1	<10	5	<1	<1	210	<6	11	30	899	54
APR											
02...	--	--	--	--	--	--	--	--	112	11700	30
30...	<0.1	<10	3	<1	<1	190	<6	13	49	2170	97
JUL											
09...	--	--	--	--	--	--	--	--	26	23	88
SEP											
24...	--	--	--	--	--	--	--	--	4	0.07	42

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565	299	571	308	529	544	303	297	348	350	386	405
2	570	300	578	304	530	646	307	304	350	344	387	409
3	566	301	570	306	426	566	293	296	357	375	528	411
4	568	292	570	362	410	327	691	295	352	365	637	561
5	603	610	555	360	422	326	621	296	363	355	595	558
6	613	613	558	358	427	325	686	291	359	360	558	613
7	527	592	548	359	428	324	590	298	348	366	554	596
8	528	582	545	358	509	324	695	330	332	379	534	517
9	472	748	546	357	510	322	642	326	332	372	432	427
10	444	759	586	358	511	325	573	329	336	390	534	412
11	422	755	624	359	507	473	327	326	333	377	576	419
12	---	643	632	461	509	363	326	325	338	382	434	411
13	---	586	643	458	669	351	325	331	331	532	420	410
14	---	571	648	455	657	352	321	678	341	585	434	412
15	---	579	644	466	649	365	320	332	331	546	421	412
16	---	596	640	478	---	624	514	677	662	377	432	411
17	---	606	608	476	---	590	583	339	664	378	523	413
18	---	596	508	496	---	617	377	639	652	535	572	411
19	562	587	507	488	---	606	660	653	668	582	534	412
20	570	594	475	482	---	635	---	610	675	598	660	412
21	569	575	472	478	---	615	304	672	677	557	663	411
22	568	579	462	486	426	664	312	678	678	595	605	413
23	---	570	503	508	430	670	306	677	677	630	643	412
24	---	540	504	510	433	645	312	683	356	683	582	424
25	---	536	505	508	441	658	314	682	349	685	635	626
26	347	544	503	518	423	314	312	606	348	384	623	610
27	350	597	504	514	605	307	313	685	347	385	407	413
28	296	578	505	265	686	306	315	686	347	370	405	669
29	290	544	507	261	---	306	300	684	348	376	415	601
30	286	546	469	265	---	305	295	683	480	373	421	692
31	288	---	505	253	---	308	---	358	---	370	420	---
MEAN	323000	561	548	407	215000	455	422	486	436	450	515	476

WTR YR 1985 MEAN 464 MAX 759 MIN 253

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	16.0	13.0	8.0	.0	4.0	6.0	16.0	24.0	29.0	32.0	34.0
2	17.0	16.0	14.0	7.0	2.0	7.0	7.0	16.0	27.0	31.0	33.0	33.0
3	21.0	19.0	12.0	6.0	2.0	4.0	8.0	18.0	26.0	30.0	33.0	35.0
4	18.0	15.0	15.0	10.0	1.0	6.0	7.0	17.0	28.0	32.0	31.0	33.0
5	18.0	15.0	12.0	12.0	.0	7.0	7.0	17.0	26.0	31.0	31.0	32.0
6	15.0	16.0	11.0	11.0	2.0	4.0	6.0	18.0	27.0	30.0	30.0	33.0
7	24.0	18.0	13.0	9.0	3.0	3.0	8.0	18.0	24.0	29.0	32.0	32.0
8	25.0	17.0	12.0	5.0	1.0	6.0	5.0	20.0	28.0	31.0	33.0	34.0
9	26.0	18.0	16.0	8.0	2.0	4.0	7.0	21.0	27.0	30.0	32.0	33.0
10	24.0	16.0	13.0	7.0	3.0	5.0	7.0	20.0	26.0	32.0	33.0	33.0
11	22.0	15.0	12.0	4.0	4.0	6.0	7.0	19.0	27.0	31.0	33.0	34.0
12	---	16.0	12.0	4.0	2.0	6.0	7.0	21.0	29.0	30.0	32.0	30.0
13	---	16.0	13.0	8.0	2.0	5.0	7.0	21.0	29.0	32.0	33.0	29.0
14	---	15.0	11.0	7.0	4.0	7.0	8.0	20.0	28.0	31.0	32.0	28.0
15	---	17.0	13.0	---	2.0	6.0	9.0	22.0	29.0	30.0	34.0	30.0
16	---	16.0	12.0	---	---	5.0	11.0	22.0	30.0	33.0	33.0	29.0
17	---	14.0	11.0	---	---	7.0	9.0	20.0	28.0	32.0	34.0	28.0
18	---	13.0	10.0	4.0	---	8.0	10.0	20.0	29.0	31.0	33.0	30.0
19	18.0	13.0	10.0	3.0	---	6.0	13.0	21.0	30.0	32.0	32.0	30.0
20	15.0	12.0	11.0	6.0	---	6.0	---	21.0	28.0	31.0	34.0	30.0
21	15.0	13.0	12.0	5.0	---	5.0	16.0	20.0	29.0	33.0	33.0	29.0
22	16.0	17.0	13.0	3.0	5.0	6.0	17.0	22.0	30.0	32.0	31.0	31.0
23	---	16.0	10.0	4.0	6.0	6.0	16.0	23.0	30.0	33.0	33.0	28.0
24	---	18.0	9.0	3.0	4.0	8.0	15.0	23.0	30.0	31.0	32.0	27.0
25	---	16.0	11.0	2.0	7.0	8.0	17.0	21.0	29.0	31.0	31.0	28.0
26	16.0	13.0	8.0	5.0	3.0	6.0	16.0	26.0	28.0	33.0	29.0	27.0
27	18.0	14.0	12.0	6.0	6.0	5.0	18.0	22.0	30.0	32.0	34.0	25.0
28	16.0	12.0	14.0	5.0	8.0	6.0	17.0	22.0	31.0	33.0	33.0	25.0
29	19.0	14.0	13.0	2.0	---	5.0	16.0	23.0	28.0	34.0	34.0	24.0
30	19.0	13.0	12.0	3.0	---	5.0	17.0	24.0	30.0	31.0	32.0	25.0
31	18.0	---	9.0	.0	---	6.0	---	26.0	---	32.0	33.0	---
MEAN	13.0	15.5	12.0	5.5	2.5	5.5	11.0	20.5	28.0	31.5	32.5	30.0

WTR YR 1985 MEAN 18.5 MAX 35.0 MIN .0

07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK

LOCATION.--Lat 35°20'57", long 94°46'43", in SW 1/4 SW 1/4, sec. 9, T.10 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, from lock wall at dam, 0.5 mi upstream from gage on bridge on U.S. Highway 59, 3.5 mi downstream from Sans Bois Creek, 7.5 mi south of Sallisaw, and at mile 395.4.

DRAINAGE AREA.--147,756 mi^2 of which 22,241 mi^2 is probably noncontributing.

PERIOD OF RECORD.--Water years 1970 to current year.

REVISED RECORDS.--WDR OK-77-1: Drainage area.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)
OCT												
31...	0945	1028	80020	627	7.10	22.0	17.5	710	7.9	89	41	150
NOV												
29...	1100	1028	80020	320	7.00	11.5	10.0	700	10.4	100	--	100
MAR												
07...	1530	1028	80020	383	7.30	--	8.5	750	11.6	101	--	100
APR												
04...	1315	1028	80020	322	7.60	28.5	15.5	740	9.8	101	59	100
MAY												
03...	0850	1028	80020	335	7.60	19.0	20.5	750	7.7	87	59	86
JUL												
09...	1340	1028	80020	*647	--	40.5	28.0	740	9.4	--	--	140
SEP												
25...	1650	1028	80020	*489	8.10	21.5	23.0	750	8.4	--	--	140

DATE	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT												
31...	53	42	9.9	71	51	3	3.8	93	14	51	110	363
NOV												
29...	27	31	6.6	24	32	1	3.1	78	15	31	36	191
MAR												
07...	36	30	6.9	40	45	2	2.8	67	6.5	33	50	203
APR												
04...	33	27	7.8	30	38	1	3.9	67	3.3	30	41	197
MAY												
03...	28	24	6.3	35	46	2	2.8	58	2.8	28	48	197
JUL												
09...	48	44	8.5	70	51	3	3.5	97	--	43	110	346
SEP												
25...	37	42	7.9	39	37	2	3.6	100	1.5	38	57	269

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'45", long 95°09'20", in NW 1/4 NW 1/4 sec.13, T.5 N., R.20 E., Latimer County, Hydrologic Unit 11110105, on downstream side of left abutment of county road bridge, 0.1 mi downstream from Little Fourche Maline, 5.0 mi southwest of Red Oak, and at mile 41.2.

DRAINAGE AREA.--122 mi^2.

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

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1631: 1940.

GAGE.--Water-stage recorder. Datum of gage is 540.80 ft, National Geodetic Vertical Datum of 1929. Prior to April 25, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 19-23, Jan. 30 to Feb. 8, Apr. 6. Records fair. Some regulation by several flood-retarding structures.

AVERAGE DISCHARGE.--47 years, 127 ft^3/s, 14.14 in/yr, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 41,500 ft^3/s May 19, 1960, gage height, 24.79 ft, from floodmarks, from rating curve extended above 25,000 ft^3/s; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,550 ft^3/s Oct. 20, gage height, 17.42 ft, no other peaks above base of 3,000 ft^3/s; minimum daily discharge, 0.02 ft^3/s July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	877	125	1200	76	260	856	1590	9.6	1.2	1.6	1.1
2	11	1210	104	785	70	264	752	922	7.6	1.1	1.4	1.1
3	9.7	716	88	457	66	192	673	777	6.4	.87	.94	1.2
4	8.3	494	78	260	66	504	548	574	5.7	.43	.69	1.3
5	7.3	244	88	179	69	522	414	296	6.5	.42	.65	1.1
6	39	160	105	141	64	289	232	129	35	.22	.66	.86
7	336	113	88	118	64	204	113	102	13	.15	.61	.95
8	129	91	78	101	80	157	94	97	14	.11	.52	.98
9	54	82	78	91	155	132	84	78	11	.11	.52	1.1
10	51	74	74	118	544	113	76	66	8.4	.07	.55	2.0
11	36	66	67	118	570	101	69	80	12	.43	.69	5.6
12	29	58	63	91	313	89	64	68	11	.06	.79	6.9
13	36	52	189	76	205	94	59	59	6.9	.15	.82	6.4
14	98	46	609	71	149	171	61	85	5.5	.02	.82	5.6
15	237	56	408	65	129	139	57	68	4.9	.07	.92	10
16	244	69	527	61	114	111	49	51	4.4	45	.83	9.1
17	355	82	469	60	97	96	42	41	3.7	34	.82	7.4
18	162	1580	478	54	87	80	38	34	7.4	40	.82	5.6
19	214	1210	351	48	93	71	33	28	14	25	.77	4.7
20	2550	764	369	34	88	799	30	24	20	18	.76	4.1
21	3310	546	796	29	82	1140	27	22	17	14	.70	3.7
22	1440	345	753	25	78	742	333	23	13	10	.66	3.2
23	1050	169	470	28	1670	588	1030	21	9.9	7.7	.65	2.9
24	965	128	297	28	1570	381	617	18	6.9	5.9	1.8	2.4
25	1610	109	208	28	900	222	355	14	5.2	4.6	1.9	2.3
26	1990	126	159	26	629	163	162	12	4.0	3.8	2.1	3.4
27	1180	516	136	93	472	144	334	15	3.1	3.2	2.4	1.3
28	913	360	130	237	338	122	483	22	2.4	2.7	2.1	1.9
29	715	234	117	156	---	143	387	25	2.0	2.4	1.8	3.7
30	597	166	161	118	---	1650	1880	17	1.6	2.2	1.6	5.0
31	469	---	450	87	---	1610	---	12	---	1.8	1.3	---
TOTAL	18859.3	10743	8113	4983	8838	11293	9952	5370	272.1	225.71	33.19	106.89
MEAN	608	358	262	161	316	364	332	173	9.07	7.28	1.07	3.56
MAX	3310	1580	796	1200	1670	1650	1880	1590	35	45	2.4	10
MIN	7.3	46	63	25	64	71	27	12	1.6	.02	.52	.86
AC-FT	37410	21310	16090	9880	17530	22400	19740	10650	540	448	66	212

CAL YR 1984	TOTAL	70839.66	MEAN	194	MAX	3310	MIN	.04	AC-FT	140500
WTR YR 1985	TOTAL	78789.19	MEAN	216	MAX	3310	MIN	.02	AC-FT	156300

07248000 WISTER LAKE NEAR WISTER, OK

LOCATION.--Lat 34°56'10", long 94°43'10", in SE 1/4 NE 1/4 sec.1, T.5 N., R.24 E., Le Flore County, Hydrologic Unit 11110105, in control tower near right end of Wister Dam on Poteau River, 2.0 mi south of Wister, 2.7 mi upstream from Caston Creek, and at mile 60.9.

DRAINAGE AREA.--993 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam with outlets of an uncontrolled, concrete, chute-type spillway and six 7- by 12-foot vertical liftgates. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 427,900 acre-ft at elevation 502.5 ft crest of spillway and 27,060 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, 1973.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 486,400 acre-ft Nov. 3, elevation, 504.94 ft; minimum, 41,220 acre-ft Apr. 19, elevation, 474.62 ft.

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

471	24,720	485	128,100
475	43,240	495	274,700
479	69,990	505	487,900

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64570	470000	358800	325300	48620	175500	153300	158200	42600	54090	52190	48790
2	64650	486200	354400	331300	46480	172900	150600	163200	42710	54090	52060	48670
3	64650	485000	355700	328200	44050	170600	142100	160500	42710	54090	51940	48560
4	64500	479800	353200	319000	42920	172500	132600	153600	42920	53900	51940	48500
5	64950	473000	345600	308000	42920	177300	122700	145100	43300	53900	51870	48440
6	76480	463600	334900	296500	42920	179100	112200	135800	46250	53840	51870	48100
7	91280	453600	324300	285300	42870	177300	101100	125800	47050	53780	51750	48040
8	96580	442800	313000	273500	42600	174200	89490	115800	47460	53710	51560	47920
9	96980	430700	301400	262700	43470	170500	77720	105500	47690	53580	51430	48330
10	93460	418000	289800	252500	49530	166400	68770	96200	47980	53520	51300	48270
11	88160	405000	277600	241900	54030	161800	61030	88160	48210	53460	51180	48330
12	82440	392200	265400	230600	54730	156900	55500	79970	48210	53270	50990	48150
13	76890	379400	257800	218900	53780	155100	51110	73770	48380	53330	50860	48790
14	74590	366000	256900	207300	52060	154500	46420	67090	48850	53010	50860	48900
15	84030	353800	257100	194900	49970	151900	44110	60050	48900	52820	50860	48790
16	86150	342000	258700	182800	47750	147600	43410	54220	48960	53140	50800	48730
17	88450	335100	261000	171200	45030	143100	42500	50220	48960	53080	50860	48670
18	98880	374900	275200	159500	43130	138400	41540	47290	49590	53010	50610	48560
19	113200	395900	284900	147500	42600	134800	41490	44160	50410	53010	50540	48440
20	187000	403900	298400	135800	43640	139800	41380	42660	50800	53080	50480	48380
21	263800	402100	322500	123700	44050	151800	41430	42500	51050	53330	50290	48330
22	297400	394500	338200	112000	45210	161400	56900	42120	51620	53270	50160	48270
23	311800	384800	341800	99990	110300	161900	95530	41860	53010	53330	49970	48150
24	325400	373800	339800	88070	152500	159500	105200	41810	53650	53270	49970	47920
25	379000	363000	334700	77880	168000	152300	102600	41810	53900	53330	49910	48560
26	416200	361800	329000	70070	175800	143300	96680	41860	54090	53200	49720	48440
27	430700	380700	322900	64880	177900	132800	102400	42070	54220	53080	49590	48440
28	437000	385700	311800	63660	177000	121800	110600	42180	54160	52950	49530	48730
29	435100	379600	301600	59980	---	112600	120600	42280	54160	52820	49340	48790
30	428400	369600	299900	55170	---	127800	143600	42280	54090	52700	49150	48620
31	431000	---	309300	51300	---	146000	---	42500	---	52510	49020	---
MAX	437000	486200	358800	331300	177900	179100	153300	163200	54220	54090	52190	48900
MIN	64500	335100	256900	51300	42600	112600	41380	41810	42600	52510	49020	47920
(†)	502.63	499.86	496.87	476.36	488.85	486.49	486.30	474.86	476.80	476.55	476.00	475.93
(††)	+366,560	-61,400	-60,300	-258,000	+125,700	-31,000	-2,400	-101,100	+11,590	-1,580	-3,490	-400

CAL YR 1984 MAX 486200 MIN 40210 (††) +268,510
WTR YR 1985 MAX 486200 MIN 41380 (††) -15,820

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07249080 BRAZIL CREEK NEAR WALLS, OK

LOCATION.--Lat 35°01'21", long 94°56'39", in SW 1/4 NW 1/4 sec.1, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at county road bridge, 2.2 mi southwest of Walls, and at mile 32.2.

DRAINAGE AREA.--69.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1981, February 1984 to current year.

REVISED RECORDS.--WDR OK-84-1: Datum.

GAGE.--Water-stage recorder. Datum of gage is 508.01 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 4-5, Jan. 31 to Feb. 4, 7, July 6-9, 12-15, July 25 to Aug. 23, Sept. 20-25. Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,220 ft^3/s Oct. 20, 1984, gage height, 18.14 ft: no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 20	1815	*4,220	*18.14	Dec. 31	2400	1,560	13.06
Oct. 26	0900	2,630	16.10	Feb. 24	--	2,650	16.12
Nov. 1	2215	1,570	13.12	Mar. 21	--	2,580	16.02
Nov. 18	0930	2,640	16.11	Mar. 30	--	2,550	15.96
Dec. 21	1600	2,010	14.82	Apr. 30	1245	2,480	15.82

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	731	52	671	22	149	159	306	5.3	1.6	.21	.00
2	1.7	546	42	191	23	131	102	139	4.4	1.4	.18	.00
3	1.6	155	33	120	27	178	81	84	3.6	1.3	.15	.00
4	1.1	94	27	93	49	359	67	62	3.5	1.1	.13	.00
5	.75	67	42	77	66	177	57	47	3.8	.87	.11	.00
6	150	50	60	67	70	109	48	38	50	.69	.09	.00
7	224	40	40	59	70	83	41	31	33	.53	.07	.00
8	34	33	35	51	74	73	35	29	17	.41	.04	.00
9	13	28	34	53	121	70	31	23	9.6	.29	.03	.00
10	5.9	21	32	99	288	62	26	18	5.9	.82	.00	.00
11	3.3	14	26	73	253	53	23	20	11	.78	.00	2.0
12	2.4	15	24	51	133	43	20	48	10	.59	.00	1.3
13	4.3	12	82	41	88	39	26	29	6.0	.45	.00	14
14	77	11	186	43	78	100	49	40	3.8	.34	.00	27
15	222	20	100	43	83	93	34	32	4.3	.20	.00	4.8
16	79	31	218	43	111	69	24	21	3.1	.77	.00	2.1
17	70	29	366	43	103	54	18	14	2.2	7.5	.00	1.2
18	60	1940	555	40	79	49	15	10	14	8.6	.45	.98
19	96	402	293	35	73	61	13	6.8	18	3.2	.29	.80
20	2130	164	370	27	87	764	10	5.6	5.5	2.0	.00	.29
21	1220	99	1360	42	78	1130	9.0	5.9	3.6	1.3	.00	.29
22	190	73	459	32	70	275	313	7.7	369	1.0	.00	.41
23	127	58	234	16	310	161	422	6.1	66	.99	.00	.59
24	122	49	165	19	1150	116	103	5.9	24	.73	23	.75
25	1420	46	111	17	228	87	63	4.6	9.9	.59	2.5	7.9
26	1570	138	87	12	150	66	46	3.2	6.4	.54	1.0	5.8
27	341	397	76	167	111	60	106	8.9	3.8	.45	.64	3.3
28	196	137	74	307	99	64	121	10	2.7	.41	.48	1.7
29	103	88	68	87	---	90	92	9.2	2.6	.37	.32	6.7
30	73	68	142	34	---	1450	1540	8.0	2.1	.34	.16	9.3
31	71	---	547	23	---	364	---	6.6	---	.25	.00	---
TOTAL	8611.25	5556	5940	2676	4094	6579	3694.0	1079.5	704.1	40.41	29.85	91.21
MEAN	278	185	192	86.3	146	212	123	34.8	23.5	1.30	.96	3.04
MAX	2130	1940	1360	671	1150	1450	1540	306	369	8.6	23	27
MIN	.75	11	24	12	22	39	9.0	3.2	2.1	.20	.00	.00
AC-FT	17080	11020	11780	5310	8120	13050	7330	2140	1400	80	59	181

WTR YR 1985 TOTAL 39095.32 MEAN 107 MAX 2130 MIN .00 AC-FT 77550

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-81, 1985.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
OCT											
31...	1705	1028	80020	56	190	6.90	26.5	19.0	7.6	88	39
MAR											
06...	1630	1028	80020	101	72	7.00	10.5	11.0	10.6	98	20
APR											
03...	1415	1028	80020	71	103	6.90	29.0	17.5	9.4	101	25
MAY											
02...	1500	1028	80020	139	67	6.80	23.5	20.5	8.5	96	20
JUL											
10...	1615	1028	80020	0.8	*334	--	42.5	29.5	6.4	--	73
SEP											
26...	1445	1028	80020	5.4	610	8.60	21.0	17.0	6.9	72	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT											
31...	7.8	4.7	25	57	2	1.3	38	4.6	<0.1	9.9	136
MAR											
06...	4.0	2.4	6.2	39	0.6	1.2	15	3.4	<0.1	9.1	57
APR											
03...	4.9	3.1	11	48	1	1.0	20	3.3	<0.1	9.6	73
MAY											
02...	3.9	2.4	5.5	36	0.6	1.4	19	3.0	<0.1	11	72
JUL											
10...	14	9.2	41	54	2	2.8	49	7.9	0.2	6.0	191
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)
OCT											
31...	0.18	21	1500	1400	60	1	--	2	<100	--	35
MAR											
06...	0.08	16	2400	2300	120	<1	--	<1	200	150	26
APR											
03...	0.1	14	2400	2000	370	<1	--	<1	100	70	25
MAY											
02...	0.1	27	1600	800	800	--	--	<1	300	250	25
JUL											
10...	0.26	0.41	580	550	30	1	--	<1	200	100	56
SEP											
26...	--	--	8600	8400	210	2	1	1	100	40	61

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
OCT											
31...	<10	<0	60	3	1	<10	20	13	7	6	2500
MAR											
06...	<10	<0.5	20	<5	<1	70	<10	15	14	1	2900
APR											
03...	<10	<0.5	30	2	2	60	<10	7	5	2	2300
MAY											
02...	--	<0.5	20	--	1	--	<10	--	--	13	2700
JUL											
10...	<10	<0.5	90	2	<1	<10	<10	3	1	2	1200
SEP											
26...	<10	0.8	--	2	<1	<10	<10	8	3	5	--

DATE	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)
OCT											
31...	2300	170	3	0	5	100	10	85	0.2	--	<0.1
MAR											
06...	2700	140	8	3	5	80	30	54	0.5	--	<0.1
APR											
03...	200	280	9	5	4	120	40	75	0.1	0	0.1
MAY											
02...	2400	260	--	--	<1	110	40	66	--	--	<0.1
JUL											
10...	1100	77	3	2	1	470	100	370	0.1	0	0.1
SEP											
26...	--	--	19	15	4	--	--	--	0.2	--	--

DATE	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
OCT							
31...	<1	--	2	<1	--	<1	2
MAR							
06...	9	5	4	<1	--	<1	<5
APR							
03...	7	4	3	<1	--	<1	<1
MAY							
02...	--	--	4	--	--	<1	<1
JUL							
10...	11	10	1	1	--	<1	<1
SEP							
26...	17	16	1	1	0	1	<1

DATE	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
31...	<1	30	1	29	26	3.9	91
MAR							
06...	<4	40	0	41	43	12	80
APR							
03...	<1	70	60	13	26	5.0	95
MAY							
02...	<1	--	--	13	--	--	--
JUL							
10...	<1	20	--	<3	20	0.04	79
SEP							
26...	<1	60	50	12	151	2.2	93

07300500 SALT FORK RED RIVER AT MANGUM, OK

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, Hydrologic Unit 11120202, near left bank on downstream side of pier of bridge on State Highway 34, 0.5 mi south of Mangum, 13.0 mi downstream from Fish Creek, and at mile 35.5.

DRAINAGE AREA.--1,566 mi^2 of which 209 mi^2 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.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Apr. 11, 1905, to June 30, 1906, nonrecording gage at site 0.2 mi upstream at different datum. Oct. 1, 1937 to Nov. 8, 1938, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 25, Jan. 1, 11-13, Jan. 31 to Feb. 8. Records poor.

AVERAGE DISCHARGE.--48 years, (water years 1938-85), 84.0 ft^3/s, 60,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft^3/s May 16, 1957, gage height, 14.55 ft; maximum gage height 14.7 ft June 16, 1938; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,420 ft^3/s July 25, gage height, 8.95 ft from high-water mark, no peaks above base of 6,000 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	31	30	61	159	302	5.6	32	2.0	.00
2	.00	.00	.00	23	23	49	147	204	5.3	23	1.2	.00
3	.00	.00	.00	25	17	45	125	127	5.3	16	.92	.00
4	.00	.00	.00	26	19	31	108	83	6.3	13	.82	.00
5	.00	.00	.00	27	22	27	95	59	1820	10	.72	.00
6	.00	.00	.00	20	20	25	87	43	1800	8.0	.72	.00
7	.00	.00	.00	21	28	24	79	32	955	6.0	.06	.00
8	.00	.00	.00	20	40	24	74	28	395	4.4	.00	.00
9	.00	.00	.00	18	55	24	70	25	140	3.2	.00	.00
10	.00	.00	.00	15	79	25	70	23	95	2.6	.00	.00
11	.00	.00	.02	10	66	24	67	22	91	2.4	.00	.00
12	.00	.00	.04	9.4	47	21	62	17	116	2.2	.00	.00
13	.00	.00	.72	10	35	20	116	15	109	2.2	155	.00
14	.00	.00	3.2	12	26	20	98	14	70	2.0	63	.00
15	.00	.00	77	20	24	18	91	11	149	.00	65	.00
16	.00	.00	415	22	23	18	91	8.3	207	.00	5.0	.00
17	.00	.00	227	16	20	19	69	7.3	63	.00	1.3	.00
18	.00	.00	136	15	19	19	53	6.8	191	.00	1.3	.00
19	.00	.00	70	13	19	22	41	6.5	257	.00	5.6	.00
20	.00	.00	33	9.4	20	277	34	7.9	29	.00	1.2	.00
21	.00	.00	35	11	31	773	30	512	30	.00	.72	7.2
22	.00	.00	33	12	93	358	33	314	27	.00	.35	51
23	.00	.00	33	13	366	313	31	155	76	.00	.03	8.0
24	.00	.00	26	16	298	262	30	58	156	.00	.03	2.0
25	.00	.00	23	20	243	229	27	34	93	915	.00	.19
26	.00	.00	19	16	163	199	57	22	49	343	.00	.00
27	.00	.00	21	23	112	252	527	15	234	171	.00	.00
28	.00	.00	20	33	79	184	406	11	414	47	.00	.00
29	.00	.00	22	44	---	183	311	8.9	150	17	.00	24
30	.00	.00	20	46	---	169	1080	7.5	49	7.5	.00	82
31	.00	---	35	40	---	155	---	7.0	---	3.4	.00	---
TOTAL	.00	.00	1248.98	636.8	2017	3870	4268	2186.2	7787.5	1630.90	304.97	174.39
MEAN	.00	.00	40.3	20.5	72.0	125	142	70.5	260	52.6	9.84	5.81
MAX	.00	.00	415	46	366	773	1080	512	1820	915	155	82
MIN	.00	.00	.00	9.4	17	18	27	6.5	5.3	.00	.00	.00
AC-FT	.00	.00	2480	1260	4000	7680	8470	4340	15450	3230	605	346

CAL YR 1984	TOTAL	7726.50	MEAN	21.1	MAX	801	MIN	.00	AC-FT	15330
WTR YR 1985	TOTAL	24124.74	MEAN	66.1	MAX	1820	MIN	.00	AC-FT	47850

07301110 SALT FORK RED RIVER NEAR ELMER, OK

LOCATION.--Lat 34°28'44", long 99°22'55", in NW 1/4 NE 1/4 sec.15, T.1 S., R.21 W., Jackson County, Hydrologic Unit 11120202, on right bank at bridge on State Highway 5, 1.7 mi west of Elmer, and at mile 3.5.

DRAINAGE AREA.--1,878 mi^2, of which 209 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1, 1979, to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,258.55 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 20-22, Feb. 1-8, Apr. 7-10, 12, 18-21, 24-26, May 8-19, July 10, Aug. 14. Records poor.

AVERAGE DISCHARGE.--6 years, 152 ft^3/s, 110,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,900 ft^3/s October 20, 1983, gage height, 15.35 ft from high-water mark; minimum daily discharge, 0.08 ft^3/s Sept. 4, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,910 ft^3/s June 6, gage height, 8.64 ft: no peaks above base of 6,000 ft^3/s; minimum daily discharge, 1.6 ft^3/s Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.3	4.5	1050	40	105	216	486	44	129	91	13
2	3.7	5.0	4.1	267	35	91	147	290	37	91	71	20
3	3.0	4.2	4.2	97	30	92	153	181	31	71	62	13
4	3.8	2.9	4.1	72	25	99	145	145	108	51	56	7.6
5	4.3	2.5	4.8	69	26	76	108	108	3420	43	54	2.9
6	3.7	3.3	5.3	66	28	64	98	87	3810	37	47	4.0
7	3.3	3.5	5.6	55	31	61	93	80	1970	23	37	4.0
8	3.2	3.1	5.3	37	34	57	89	71	548	9.5	29	2.5
9	4.0	3.1	5.2	50	37	53	83	66	210	11	18	2.0
10	3.8	2.4	5.2	41	44	51	81	61	175	11	20	2.0
11	3.4	2.9	5.5	38	68	46	71	57	164	10	21	78
12	3.8	3.0	5.1	32	73	39	104	54	169	9.5	22	106
13	4.0	3.5	5.7	26	68	37	129	50	150	6.9	19	102
14	3.9	2.9	6.7	30	55	37	117	46	122	6.2	29	168
15	3.4	2.0	14	30	48	37	108	44	102	9.0	46	104
16	3.5	1.6	50	35	42	34	98	35	81	91	56	26
17	2.9	4.4	320	40	39	31	89	30	77	124	53	11
18	2.5	10	161	36	35	31	76	25	81	62	46	8.5
19	2.7	11	62	31	33	36	64	20	464	54	39	8.0
20	3.1	8.8	46	26	36	255	54	147	489	47	24	7.2
21	3.3	8.4	41	25	56	1560	48	614	214	30	40	9.5
22	3.3	6.6	34	29	76	977	866	1510	124	23	35	12
23	3.3	6.0	33	33	174	423	1100	493	93	19	24	16
24	3.7	5.8	33	33	533	308	550	271	91	16	56	18
25	4.5	6.4	28	31	307	253	490	184	95	53	50	12
26	4.8	5.1	20	34	216	242	430	147	113	753	23	7.2
27	5.2	4.1	23	41	157	210	2440	122	297	1040	19	6.5
28	7.6	4.7	23	47	122	253	3690	108	361	329	16	5.6
29	4.2	4.6	23	47	---	219	1020	75	278	227	27	372
30	3.6	4.4	20	46	---	348	875	50	178	137	23	1170
31	4.0	---	461	44	---	488	---	46	---	102	18	---
TOTAL	117.5	141.5	1463.3	2538	2468	6613	13632	5703	14096	3625.1	1171	2318.5
MEAN	3.79	4.72	47.2	81.9	88.1	213	454	184	470	117	37.8	77.3
MAX	7.6	11	461	1050	533	1560	3690	1510	3810	1040	91	1170
MIN	2.5	1.6	4.1	25	25	31	48	20	31	6.2	16	2.0

CAL YR 1984	TOTAL	19605.6	MEAN	53.6	MAX	2770	MIN	1.6
WTR YR 1985	TOTAL	53886.9	MEAN	148	MAX	3810	MIN	1.6

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1978 to Jan. 1982.
WATER TEMPERATURE: October 1978 to Jan. 1982.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV												
07...	1200	1028	80020	3.0	4380	8.40	15.5	15.0	14	720	10.9	116
JAN												
15...	1700	1028	80020	36	5100	8.10	7.5	6.0	20	730	11.2	96
MAR												
19...	1600	1028	80020	36	4640	7.90	17.0	17.0	17	720	9.1	101
MAY												
07...	1100	1028	80020	72	3800	8.00	28.0	22.0	86	720	8.4	103
JUL												
16...	1700	1028	80020	66	4150	8.40	33.0	35.0	28	730	12.2	186
SEP												
10...	1000	1028	80020	2.2	5000	7.70	27.0	25.0	13	730	6.8	87

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)
NOV											
07...	86	130	1600	1400	340	170	500	41	6	8.1	180
JAN											
15...	110	160	1700	1500	430	160	510	39	6	7.0	270
MAR											
19...	180	97	2000	1800	520	170	500	35	5	6.6	215
MAY											
07...	350	460	1200	1100	330	100	310	35	4	7.0	180
JUL											
16...	K730	430	1200	1200	250	140	380	40	5	12	58
SEP											
10...	95	39	1500	1400	350	160	470	40	5	8.6	150

DATE	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV											
07...	9.8	150	164	1.1	1200	820	0.6	1.3	3400	3200	4.6
JAN											
15...	0	203	221	3.4	1500	860	0.6	13	3620	3600	4.9
MAR											
19...	0	163	176	4.3	1600	770	0.6	7.3	3670	3700	5.0
MAY											
07...	0	134	148	2.9	1200	510	0.6	15	2720	2600	3.7
JUL											
16...	0	64	48	0.4	1000	710	0.5	1.9	2900	2500	3.9
SEP											
10...	0	125	123	4.8	1300	890	0.2	21	3280	3300	4.5

RED RIVER BASIN

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
07...	28	0.23	0.15	0.19	1.6	0.08	--	0.01	<0.01	--	10
JAN											
15...	352	2.70	1.10	1.4	2.0	0.44	--	0.37	0.34	1.0	<10
MAR											
19...	357	<0.10	0.10	0.13	1.0	0.18	--	0.14	0.04	0.12	--
MAY											
07...	529	0.71	0.17	0.22	1.4	0.18	--	0.01	<0.01	--	20
JUL											
16...	517	0.33	0.23	0.3	3.0	0.36	1.1	<0.01	<0.01	--	--
SEP											
10...	19	0.14	0.35	0.45	1.6	0.06	0.18	0.03	0.02	0.06	<10

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
07...	1	<100	<10	<1	<1	<1	1	30	4	100	30
JAN											
15...	2	<100	<10	<10	2	<10	30	60	30	90	110
MAR											
19...	--	--	--	--	--	--	--	--	--	--	--
MAY											
07...	2	400	<10	13	<1	<1	18	50	<1	80	30
JUL											
16...	--	--	--	--	--	--	--	--	--	--	--
SEP											
10...	3	100	<10	1	1	1	1	30	2	90	290

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
07...	0.1	4	<1	5	<1	5000	20	10	18	0.15	76
JAN											
15...	<0.1	4	<10	10	<10	5100	22	90	33	3.2	93
MAR											
19...	--	--	--	--	--	--	--	--	43	4.2	95
MAY											
07...	<0.1	2	2	5	<1	3600	16	30	18	3.5	96
JUL											
16...	--	--	--	--	--	--	--	--	133	24	58
SEP											
10...	0.1	5	1	4	<1	3700	21	20	14	0.08	59

07301500 NORTH FORK RED RIVER NEAR CARTER, OK

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, Hydrologic Unit 11120302, near left bank on downstream side of pier of bridge on State Highway 34, 3.0 mi south of Carter, 10.8 mi downstream from Timber Creek, and at mile 110.5.

DRAINAGE AREA.--2,337 mi^2, of which 399 mi^2 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.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,673.71 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 1-5, 10-16, 19-20, 23-25, Jan. 31 to Feb. 1, 10-11, Apr. 29 to May 2, June 5, July 10-12, 27-30. Records fair.

AVERAGE DISCHARGE.--39 years, (1945-62, 1965-85) 114 ft^3/s, 82,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,400 ft^3/s May 26, 1959, maximum gage height, 14.98 ft May 17, 1977; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,200 ft^3/s, June 5, gage height, 6.05 ft (estimated from graph), no peak above base of 3,200 ft^3/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	25	60	130	129	205	8.0	7.3	.00	.05
2	.00	.00	.00	20	55	118	129	200	8.1	4.8	.00	.00
3	.00	.00	.00	15	51	115	118	188	8.8	3.7	.00	.00
4	.00	.00	.00	10	51	109	109	149	33	2.9	.00	.00
5	.00	.00	.78	15	52	97	92	115	890	2.2	.00	.00
6	.00	.00	1.1	18	55	88	79	94	364	1.9	.00	.00
7	.00	.00	.93	22	57	77	67	108	405	1.3	.00	.00
8	.00	.00	.96	32	65	72	57	135	296	.78	.00	.00
9	.00	.00	1.2	28	82	68	49	176	232	.38	.00	.00
10	.00	.00	1.3	18	100	66	47	142	121	.20	.00	.00
11	.00	.00	1.1	15	110	73	45	105	102	.10	.00	.00
12	.00	.00	1.4	10	101	72	46	80	86	.10	.00	.00
13	.00	.00	1.7	15	102	73	89	89	65	.05	136	.00
14	.00	.00	1.8	16	79	70	175	68	56	.00	155	.00
15	.00	.00	5.5	10	65	61	130	50	41	.00	42	.00
16	.00	.00	32	15	58	59	123	40	55	.00	13	.00
17	.00	.91	58	17	47	57	100	35	51	.00	6.6	.00
18	.00	1.1	84	17	41	58	82	31	31	.00	15	.00
19	.00	.50	57	25	37	63	69	27	22	.00	67	.00
20	.00	.10	40	15	38	144	60	27	17	.00	12	.00
21	.00	.00	35	20	47	491	55	43	12	.00	8.2	414
22	.00	.00	33	24	84	368	55	31	9.3	.00	6.4	269
23	.00	.00	39	18	551	265	70	28	7.9	.00	5.3	147
24	.00	.00	32	14	482	222	62	24	6.7	.30	4.4	94
25	.00	.00	11	20	377	168	49	19	5.7	12	3.6	56
26	.00	.00	16	19	236	141	46	16	7.7	7.4	3.0	38
27	.00	.00	14	34	199	134	160	16	11	2.9	2.4	23
28	.00	.00	15	61	155	132	190	14	9.3	1.2	1.6	16
29	.00	.00	19	69	---	126	200	12	15	.10	.79	33
30	.00	.00	26	80	---	122	210	9.6	17	.01	.17	131
31	.00	---	30	80	---	121	---	8.5	---	.00	.10	---
TOTAL	.00	2.61	558.77	797	3437	3960	2892	2285.1	2993.5	49.62	482.56	1221.05
MEAN	.00	.09	18.0	25.7	123	128	96.4	73.7	99.8	1.60	15.6	40.7
MAX	.00	1.1	84	80	551	491	210	205	890	12	155	414
MIN	.00	.00	.00	10	37	57	45	8.5	5.7	.00	.00	.00
AC-FT	.00	5.2	1110	1580	6820	7850	5740	4530	5940	98	957	2420

CAL YR 1984	TOTAL	12543.95	MEAN	34.3	MAX	933	MIN	.00	AC-FT	24880
WTR YR 1985	TOTAL	18679.21	MEAN	51.2	MAX	890	MIN	.00	AC-FT	37050

07302500 LAKE ALTUS AT LUGERT, OK

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, Hydrologic Unit 11120302, on upstream face of Altus Dam on North Fork Red River, 1.0 mi west of Lugert, 2.6 mi upstream from Elm Fork of North Fork, and at mile 73.5.

DRAINAGE AREA.--2,515 mi^2, of which 399 mi^2 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 National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 19, 1948, nonrecording or float gage at same site and datum.

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. From 1927 to 1943, a dam to form reservoir for municipal water supply was at same site. Elevation of crest was 1,514.31 ft.

COOPERATION.--Data on diversions furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 170,600 ft^3/s May 19, 1951, elevation 1,562.10 ft; minimum after initial storage, 4,690 acre-ft Aug. 25, 1944, elevation, 1,520.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents 39,420 acre-ft June 18, elevation 1,537.68 ft; minimum 6,320 acre-ft Sept. 20, elevation, 1,522.03 ft.

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

1525	10,750	1540	46,560
1529	18,160	1548	76,680
1534	29,420	1559	134,500

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11170	10920	10920	11720	12750	18700	26200	31580	34000	39210	24110	6790
2	11170	10920	10900	11900	12750	19000	26380	32130	33970	39210	23120	6700
3	11150	10920	10880	11950	12750	19120	26470	32420	33940	39150	22220	6660
4	11170	10900	10900	12000	12750	19210	26730	32680	34160	39090	21400	6620
5	11170	10880	10930	12030	12750	19290	26800	32840	35090	39040	20610	6600
6	11170	10880	10950	12080	12750	19380	26870	33030	35860	39010	19670	6570
7	11170	10830	10950	12120	12750	19460	26960	33160	36590	38950	19060	6550
8	11170	10830	10950	12150	12750	19550	27030	33300	37220	38830	18370	6540
9	11150	10800	10930	12190	12750	19800	26980	33430	37930	38770	17710	6490
10	11120	10780	10920	12220	12750	20060	27130	33640	38310	38740	16970	6490
11	11120	10780	10900	12240	13160	20260	27270	33830	38830	38660	16210	6490
12	11100	10780	10900	12270	13230	20480	27410	33910	39010	38160	15440	6460
13	11080	10750	10930	12290	13370	20480	27700	34000	39040	37360	14830	6460
14	11080	10750	10980	12310	13540	20520	27840	34050	39090	36450	14450	6460
15	11050	10750	11050	12340	13610	20630	28040	34080	39180	35450	14300	6450
16	11030	10750	11080	12340	13640	20730	28180	34100	39180	34290	14230	6420
17	11020	10950	11130	12340	13660	20790	28260	34160	39180	33030	13740	6380
18	10970	11050	11150	12340	13810	20810	28280	34160	39390	31820	13340	6530
19	10920	11000	11170	12340	13900	20970	28330	34160	39390	30680	12820	6340
20	10920	11000	11230	12340	13990	21620	28380	34180	39300	29790	12220	6460
21	10920	11000	11250	12340	14190	22040	28550	34240	39300	29120	11690	6450
22	10900	11000	11270	12340	14720	23200	28720	34290	39300	28580	11180	6550
23	10880	10980	11300	12340	15280	23700	28750	34320	39270	28140	10750	6790
24	10920	10970	11320	12340	15960	24140	28670	34320	39210	27800	10510	7030
25	10920	10970	11320	12340	16510	24190	28620	34290	39180	27700	10200	7120
26	10920	10950	11320	12340	16950	24690	28770	34240	39300	27480	9800	7130
27	10950	10950	11330	12340	17960	24990	29540	34240	39390	27390	9160	7120
28	10920	10930	11380	12620	18450	25150	29920	34270	39390	27120	8510	7240
29	10920	10920	11470	12700	---	25710	30270	34240	39300	26630	8000	7530
30	10920	10920	11550	12730	---	25800	30810	34160	39240	25900	7470	7790
31	10920	---	11660	12750	---	26030	---	34080	---	25080	7060	---
MAX	11170	11050	11660	12750	18450	26030	30810	34320	39390	39210	24110	7790
MIN	10880	10750	10880	11720	12750	18700	26200	31580	33940	25080	7060	6340
(†)	1,525.10	1,525.10	1,525.54	1,526.17	1,529.14	1,532.59	1,534.55	1,535.79	1,537.62	1,532.18	1,522.57	1,523.08
(††)	-260	0	+740	+1,090	+5,700	+7,580	+4,780	+3,270	+5,160	-14,160	-18,020	+730

CAL YR 1984 MAX 69390 MIN 10750 (††) -45,350
WTR YR 1985 MAX 39390 MIN 6340 (††) -3,390

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07303000 NORTH FORK RED RIVER BELOW ALTUS DAM, NEAR LUGERT, OK

LOCATION.--Lat 34°53'26", long 99°18'22", in SW 1/4 sec.22, T.5 N., R.20 W., Greer County, Hydrologic Unit 11120303, on right bank at State Highway 44A bridge, 3,500 ft downstream from Altus Dam, 1.9 mi upstream from Elm Fork of North Fork, 2.0 mi west of Lugert, and at mile 72.8.

DRAINAGE AREA.--2,515 mi^2, of which 399 mi^2 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.

REVISED RECORDS.--WSP 1311: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,471.81 ft, National Geodetic Vertical Datum of 1929. Mar. 19, 1930 to Dec. 21, 1932, nonrecording gage at former Lugert Dam, 0.7 mi upstream at datum 1,504.31 ft National Geodetic Vertical Datum of 1929, unadjusted.

REMARKS.--No estimated daily discharges. 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 (station 07302500). Diversions at Lake Altus bypass most of streamflow. Seepage from Altus Dam not included for period February 1953 to September 1977.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s May 18, 1951, gage height, 12.70 ft, maximum gage height, 16.37 ft May 21, 1977 (backwater from Elm Fork of the North Fork Red River); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 16, 1928, reached a stage of 14.5 ft, site and datum in use 1930-32, discharge, 14,300 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1.1 ft^3/s Dec. 31, gage height, 5.37 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.69	.20	.14	.33	.00	.00	.00	.00	.00
2	.00	.00	.00	.45	.18	.16	.24	.00	.00	.00	.00	.00
3	.00	.00	.00	.35	.18	.18	.18	.00	.00	.00	.00	.00
4	.00	.00	.00	.29	.17	.16	.14	.00	.00	.00	.00	.00
5	.00	.00	.00	.24	.18	.10	.01	.00	.00	.00	.00	.00
6	.00	.00	.00	.23	.18	.05	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.20	.18	.05	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.21	.18	.08	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.18	.19	.09	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.17	.21	.13	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.16	.20	.13	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.14	.23	.03	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.14	.25	.02	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.14	.18	.01	.00	.00	.00	.00	.00	.00
15	.00	.00	.06	.14	.17	.01	.00	.00	.00	.00	.00	.00
16	.00	.00	.23	.14	.14	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.23	.14	.12	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.18	.14	.13	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.15	.14	.06	.03	.00	.00	.00	.00	.00	.00
20	.00	.00	.20	.01	.11	.64	.00	.00	.00	.00	.00	.00
21	.00	.00	.23	.02	.44	.60	.00	.00	.00	.00	.00	.00
22	.00	.00	.21	.06	.61	.44	.00	.00	.00	.00	.00	.00
23	.00	.00	.18	.09	.77	.32	.00	.00	.00	.00	.00	.00
24	.00	.00	.18	.05	.55	.27	.00	.00	.00	.00	.00	.00
25	.00	.00	.14	.00	.40	.20	.00	.00	.00	.00	.00	.00
26	.00	.00	.15	.00	.30	.10	.00	.00	.00	.00	.00	.00
27	.00	.00	.21	.10	.19	.26	.00	.00	.00	.00	.00	.00
28	.00	.00	.27	.24	.12	.19	.01	.00	.00	.00	.00	.00
29	.00	.00	.31	.34	---	.29	.05	.00	.00	.00	.00	.00
30	.00	.00	.27	.28	---	.69	.03	.00	.00	.00	.00	.00
31	.00	---	.75	.26	---	.47	---	.00	---	.00	.00	---
TOTAL	.00	.00	3.95	5.74	6.82	5.84	.99	.00	.00	.00	.00	.00
MEAN	.00	.00	.13	.19	.24	.19	.03	.00	.00	.00	.00	.00
MAX	.00	.00	.75	.69	.77	.69	.33	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	7.8	11	14	12	2.0	.00	.00	.00	.00	.00

CAL YR 1984	TOTAL	34.35	MEAN	.09	MAX	.79	MIN	.00	AC-FT	68
WTR YR 1985	TOTAL	23.34	MEAN	.06	MAX	.77	MIN	.00	AC-FT	46

07304500 ELK CREEK NEAR HOBART, OK

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, Hydrologic Unit 11120303, near right bank on downstream side of pier of county road bridge, 7.0 mi downstream from Little Elk Creek, 7.5 mi south of Hobart, and at mile 10.9.

DRAINAGE AREA.--549 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to March 1908, October 1949 to current year.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905.

GAGE.--Water-stage recorder. Datum of gage is 1,429.4 ft, National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to Apr. 28, 1954.

REMARKS.--Estimated daily discharges: Nov. 9 to Jan. 15, Jan. 28 to Feb. 12, Mar. 1-14, 16-20, 25, Apr. 2-8, June 3 to July 29, Sept. 12-30. Records poor. Part of high flows are diverted into West Otter Creek above station.

AVERAGE DISCHARGE.--39 years, (water years 1905-07, 1950-85), 72.8 ft^3/s, 52,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s Oct. 20, 1983, gage height, 30.94 ft, from rating curve extended above 7,530 ft^3/s on basis of field estimate of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft^3/s Apr. 27, gage height, 15.08 ft; minimum daily discharge, 0.41 ft^3/s Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.2	9.8	270	11	26	50	30	6.7	10	3.7	1.2
2	1.3	2.0	9.4	120	10	24	40	25	6.1	9.4	2.7	1.1
3	1.2	1.6	9.2	48	9.6	22	35	22	7.4	8.4	1.8	1.0
4	1.2	2.2	9.1	20	8.8	20	32	20	80	7.6	.91	.93
5	1.6	2.3	13	13	8.3	19	31	19	350	7.0	.86	.85
6	1.3	3.8	11	11	8.0	18	29	18	210	6.4	1.1	.77
7	1.3	5.0	10	10	7.8	16	29	72	80	5.9	27	.69
8	.87	4.2	9.8	9.4	7.6	15	33	209	35	5.4	56	.61
9	.75	3.7	9.7	12	7.2	14	40	38	22	5.2	10	.56
10	1.0	3.0	9.4	11	7.1	14	38	32	43	4.8	5.1	.51
11	.83	2.6	9.4	10	7.0	13	37	21	80	4.7	2.9	.47
12	1.1	2.3	9.5	9.6	8.4	13	37	17	35	4.5	2.3	.43
13	1.3	2.1	24	9.4	16	12	39	15	20	4.2	1.6	.41
14	1.3	1.9	15	9.0	12	12	41	14	17	4.1	4.3	5.0
15	1.3	1.8	17	8.9	12	11	46	34	14	3.9	9.3	1.0
16	1.1	1.7	15	8.8	12	11	45	36	13	3.7	26	.50
17	2.8	20	13	8.6	11	11	33	19	11	3.6	24	.45
18	3.8	300	12	8.5	10	10	28	15	12	3.5	11	1.6
19	2.0	110	11	8.5	9.9	10	24	13	20	3.3	7.5	9.0
20	1.6	37	20	8.3	15	123	22	13	15	3.2	5.5	40
21	4.6	29	16	8.1	24	281	20	13	13	3.1	3.8	150
22	3.3	18	18	7.9	25	150	22	14	12	3.0	3.1	60
23	2.4	16	14	7.7	55	75	18	35	11	2.9	3.9	20
24	2.1	14	13	7.6	75	41	17	23	10	2.8	3.3	5.2
25	2.1	13	12	7.4	139	20	16	15	9.8	14	2.2	1.7
26	1.9	12	11	7.4	56	30	19	13	26	5.0	1.7	3.0
27	1.9	11	11	12	33	165	827	11	64	4.0	1.5	9.0
28	2.4	11	10	15	29	76	382	9.7	26	7.0	1.3	30
29	1.7	10	10	20	---	39	99	9.2	15	10	1.2	110
30	2.0	10	9.8	17	---	773	46	8.7	12	6.7	1.1	300
31	2.1	---	500	13	---	204	---	7.4	---	4.8	.98	---
TOTAL	55.25	653.4	871.1	737.1	634.7	2268	2175	841.0	1276.0	172.1	227.65	755.98
MEAN	1.78	21.8	28.1	23.8	22.7	73.2	72.5	27.1	42.5	5.55	7.34	25.2
MAX	4.6	300	500	270	139	773	827	209	350	14	56	300
MIN	.75	1.6	9.1	7.4	7.0	10	16	7.4	6.1	2.8	.86	.41
AC-FT	110	1300	1730	1460	1260	4500	4310	1670	2530	341	452	1500

CAL YR 1984	TOTAL	7798.25	MEAN	21.3	MAX	500	MIN	.75	AC-FT	15470
WTR YR 1985	TOTAL	10667.28	MEAN	29.2	MAX	827	MIN	.41	AC-FT	21160

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-52, 1954-63, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1949 to September 1951, October 1958 to September 1963, November 1969 to current year.
WATER TEMPERATURE: October 1949 to September 1951, October 1958 to September 1963, November 1969 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,030 microsiemens May 8, 1985; minimum daily, 108 microsiemens Oct. 19, 1983.
WATER TEMPERATURE: Maximum daily, 35.0 °C July 8, 1951; minimum daily, -0.5 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,030 microsiemens May 8; minimum daily, 237 microsiemens Sept. 30.
WATER TEMPERATURE: Maximum daily, 28.0 °C on July 29 and Aug. 3; minimum daily, 0.0 °C on several days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
NOV												
08...	1000	1028	80020	4.2	2000	8.00	16.0	13.0	720	6.5	66	--
JAN												
16...	1300	1028	80020	8.6	1900	8.10	8.0	4.0	720	9.9	80	--
MAR												
15...	1200	1028	80020	11	2000	8.20	14.0	11.5	730	9.8	95	860
MAY												
21...	1400	1028	80020	13	1530	7.80	26.0	21.0	720	7.0	84	620
JUL												
30...	1300	1028	80020	7.8	930	8.00	35.0	29.0	720	7.2	100	310
SEP												
11...	1100	1028	80020	0.46	1750	8.10	27.0	26.0	720	5.5	72	580

DATE	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)
NOV											
08...	--	--	--	--	--	--	--	380	0	--	311
JAN											
16...	--	--	--	--	--	--	--	415	0	--	340
MAR											
15...	490	190	93	140	26	2	5.6	450	0	349	369
MAY											
21...	370	140	65	100	26	2	6.4	300	0	231	246
JUL											
30...	52	68	34	49	25	1	9.3	315	0	145	258
SEP											
11...	380	120	67	140	34	3	7.6	240	0	241	196

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS C02)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV											
08...	6.0	--	--	--	--	--	--	--	--	<100	7
JAN											
16...	5.2	--	--	--	--	--	--	--	--	<100	5
MAR											
15...	4.5	550	140	0.5	14	1440	1400	2.0	43	--	--
MAY											
21...	7.6	430	110	0.4	11	1020	1000	1.4	36	<100	4
JUL											
30...	5.0	220	51	0.3	10	556	600	0.76	12	--	--
SEP											
11...	3.0	430	150	0.2	1.4	1120	1000	1.5	1.4	--	7

DATE	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
08...	540	3	20	2	8	3	200	<0.1	<100	2	14
JAN											
16...	330	2	10	50	3	60	150	<0.1	<100	4	27
MAR											
15...	--	--	--	--	--	--	--	--	--	--	--
MAY											
21...	310	3	<10	3	6	3	42	<0.1	<100	2	19
JUL											
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
11...	540	<1	--	1	4	1	10	<0.1	<100	3	13

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	---	1730	707	1920	909	688	1150	1550	1590	921	1320
2	1460	---	1760	466	1950	1090	1080	1270	1650	1700	1000	1380
3	1450	2620	1770	662	1930	1230	1470	1480	1730	1720	1070	1430
4	1470	2500	1740	1390	1870	1370	1540	1610	1840	1720	1140	1480
5	1500	2460	1750	1420	1830	1510	1620	1690	1400	1670	1170	1510
6	1520	2410	1710	1600	1800	1610	1630	1720	974	1700	1220	1520
7	1510	2300	1700	1700	1840	1670	1690	1690	431	1700	1200	1510
8	1500	2120	1660	1590	1880	1720	1430	4030	541	1810	712	1550
9	1510	2090	1660	1620	1790	1800	1330	926	716	1780	557	1560
10	1500	1960	1680	1690	1700	1830	1360	820	876	1830	833	1580
11	1490	1930	1730	1780	1770	1840	1330	1110	946	1860	920	1600
12	1510	1900	1740	1700	1840	1860	1340	1450	716	1880	1030	1780
13	1500	1910	1780	1790	1830	1900	1340	1400	627	1940	1110	533
14	1560	1930	1810	---	1790	1930	1370	1570	---	1950	970	520
15	1580	2060	1780	---	1840	1880	1380	1690	---	1970	600	479
16	1580	2020	1320	---	1750	1930	1530	1810	---	1940	1100	586
17	1600	1970	1700	---	1760	1920	1410	1090	---	1930	2130	702
18	1670	1990	1610	---	1770	1910	1320	1110	---	1930	1560	774
19	1790	---	694	1910	1750	1950	1260	1100	1480	1920	963	828
20	1740	---	598	1950	1770	1750	1310	1170	1530	1920	790	855
21	1720	---	703	1980	1680	965	1400	1310	1680	1900	782	876
22	1780	---	927	2030	1550	1040	1020	1470	1630	1900	848	1380
23	1760	1960	857	1960	1440	1160	1450	1620	1680	1950	975	785
24	1940	1790	1020	1970	1150	865	1600	1820	1670	1970	1050	972
25	2030	1760	---	1850	1140	975	---	1340	1700	1880	1060	1910
26	2570	1730	---	1900	613	1200	---	1010	1680	1830	1090	1850
27	2650	1770	---	1940	635	1200	530	1070	1320	876	1040	1640
28	2600	1710	---	1870	766	784	505	1430	1160	715	1190	1610
29	2460	1750	1410	1780	---	1010	711	1490	1660	731	1220	240
30	2480	1740	1510	1950	---	1060	963	1500	1770	740	1250	237
31	---	---	1300	2050	---	427	---	1490	---	866	1280	---
MEAN	1760	2020	1470	1660	1620	1430	1270	1470	1320	1670	1060	1170

WTR YR 1985 MEAN 1480 MAX 4030 MIN 237

07304500 ELK CREEK NEAR HOBART, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	---	6.5	1.5	.5	10.5	9.0	18.0	22.5	16.0	27.0	25.0
2	13.0	---	4.5	.0	.0	9.0	10.5	18.5	23.0	16.0	26.0	25.0
3	16.0	11.0	3.0	1.0	.0	13.5	13.0	18.0	24.5	15.5	28.0	25.0
4	18.0	11.0	4.0	1.0	.0	9.0	15.0	19.0	25.0	16.5	27.5	25.5
5	18.0	8.5	2.5	2.0	.5	8.0	14.0	19.5	20.5	---	27.0	25.0
6	18.5	9.5	2.0	2.5	.0	8.5	14.0	20.0	20.5	---	26.0	25.0
7	19.0	11.0	2.5	3.0	.5	11.0	13.0	21.0	22.0	---	26.0	25.5
8	16.0	12.0	4.0	4.0	.5	13.0	12.0	18.5	23.0	---	27.0	25.5
9	17.5	13.0	6.5	5.0	1.5	12.5	12.5	20.0	21.0	---	26.5	25.5
10	17.5	10.0	6.0	2.0	1.0	13.0	14.0	20.5	20.5	---	26.5	25.5
11	18.0	7.0	7.0	.0	.0	16.0	15.0	21.0	20.0	---	26.0	25.0
12	19.0	7.0	11.0	.0	.5	11.0	17.0	20.0	17.0	---	26.0	25.5
13	18.5	9.0	7.0	.0	3.0	10.5	17.5	22.0	16.0	---	26.5	25.0
14	18.5	12.5	4.5	---	4.5	9.5	17.0	17.0	---	21.5	26.0	23.5
15	14.5	11.5	4.5	---	4.0	9.0	17.5	16.5	---	21.0	24.5	23.5
16	14.5	7.5	4.0	---	5.0	11.0	17.5	19.0	---	21.0	25.5	23.0
17	11.0	9.0	5.5	---	4.5	9.0	18.0	19.0	---	21.5	26.5	23.0
18	13.0	7.5	4.0	---	6.0	10.5	19.0	19.0	---	21.5	27.5	23.0
19	11.5	---	4.0	4.5	8.0	11.0	19.0	19.0	17.5	22.0	26.5	24.0
20	13.0	---	5.5	.5	10.5	12.5	20.0	20.0	18.0	22.0	26.0	24.0
21	12.0	---	7.5	.5	13.0	10.5	19.0	20.0	18.0	21.5	27.5	21.0
22	11.5	---	4.5	.0	19.0	9.0	16.5	19.0	19.5	21.0	26.0	20.0
23	10.0	---	4.5	.5	14.0	9.5	17.0	17.5	19.0	21.5	26.5	18.0
24	10.5	7.5	5.0	.5	9.5	11.0	16.5	19.0	18.5	21.5	26.0	17.5
25	11.0	7.5	---	3.0	8.5	12.5	---	20.5	19.0	22.0	24.5	18.0
26	13.0	10.0	---	.5	8.5	15.0	---	21.0	18.0	22.0	25.0	16.0
27	15.0	5.5	---	3.0	7.5	15.0	15.5	23.0	13.5	25.5	24.0	16.5
28	13.0	4.5	---	2.0	9.0	15.0	15.0	24.5	14.0	26.0	25.0	19.0
29	10.5	5.5	14.5	2.0	---	17.0	18.0	25.5	15.5	28.0	25.0	12.0
30	15.0	6.0	8.0	4.0	---	9.5	17.5	25.0	15.5	27.5	24.0	10.0
31	---	---	7.0	.5	---	5.0	---	23.0	---	27.0	24.0	---
MEAN	14.5	9.0	5.5	1.5	5.0	11.0	15.5	20.0	19.5	21.5	26.0	22.0

WTR YR 1985 MEAN 14.5 MAX 28.0 MIN .0

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK

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, Hydrologic Unit 11120303, near left bank on downstream side of pier of bridge on old U.S. Highway 62, 2.5 mi east of Headrick, 12.9 mi upstream from Otter Creek, and at mile 33.0.

DRAINAGE AREA.--4,244 mi^2, of which 399 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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".

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905-07.

GAGE.--Water-stage recorder. Datum of gage is 1,294.83 ft, National Geodetic Vertical Datum of 1929. Prior to July 18, 1905, nonrecording gage at site 0.2 mi downstream at different datum. July 18, 1905 to Mar. 30, 1908, nonrecording gage at Navajo damsite 10.4 mi upstream at different datum. Oct. 1, 1937 to Jan. 29, 1969, water-stage recorder at present site at datum 5.0 ft higher.

REMARKS.--Estimated daily discharges: Jan. 20-21, Jan. 30 to Feb. 7, Sept. 11-12. Records fair. Flow regulated since December 1943 by storage and diversion at Lake Altus, 39.5 mi above station (station 07302500). Diversions for irrigation of about 48,000 acres above station; some return flow may re-enter at Stinking Creek, 16 mi below station.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Altus) 8 years (1906-07, 1938-43), 455 ft^3/s, 329,600 acre-ft/yr; (since regulation by Lake Altus) 41 years (water years 1945-85), 256 ft^3/s, 185,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft^3/s May 28, 1977, gage height, 17.26 ft present datum; maximum gage height, 17.27 ft, October 21, 1983; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 21.1 ft present datum occurred sometime prior to 1927, from information by Oklahoma State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft^3/s June 6, gage height, 9.37 ft; minimum daily discharge, 2.9 ft^3/s Sept 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	12	20	474	18	68	288	152	25	70	31	9.6
2	7.3	11	18	651	17	57	176	151	25	59	27	9.2
3	7.3	11	18	495	18	166	143	143	17	52	24	5.6
4	8.3	11	18	88	19	236	122	117	26	47	23	4.5
5	8.8	10	21	61	20	66	106	101	390	43	23	4.5
6	8.4	11	21	54	19	57	100	90	1160	40	22	4.5
7	7.9	11	21	31	18	53	94	82	1140	37	19	4.5
8	7.5	10	21	31	20	50	101	68	691	35	18	3.7
9	7.3	11	22	31	30	45	101	148	375	33	37	3.7
10	6.8	10	23	30	26	45	97	97	217	30	28	3.7
11	6.8	10	22	25	20	43	97	77	196	29	22	3.0
12	7.1	10	21	16	21	39	93	65	228	28	22	2.9
13	7.2	11	26	16	21	38	103	60	194	27	22	4.9
14	7.1	11	27	27	20	38	100	45	151	24	23	28
15	6.9	10	33	25	20	36	114	42	120	23	22	21
16	6.6	10	41	20	17	36	141	43	72	24	103	10
17	5.9	21	104	19	17	36	125	60	119	22	93	5.9
18	6.3	28	264	19	17	35	103	61	291	19	63	2.5
19	5.9	27	172	19	16	37	90	41	146	19	44	2.6
20	6.6	28	92	18	23	78	85	41	118	18	34	3.3
21	11	44	71	20	30	274	77	41	83	17	30	6.9
22	10	46	51	23	47	569	112	42	58	17	29	19
23	11	37	41	22	65	357	149	41	52	19	19	348
24	11	32	34	19	136	228	91	42	41	24	16	153
25	13	30	30	17	203	166	75	55	48	24	18	75
26	13	26	31	16	209	147	71	44	80	26	12	49
27	15	21	31	19	130	141	192	43	202	163	10	33
28	12	21	30	20	88	200	1130	33	113	159	9.6	27
29	12	20	27	22	---	194	527	33	89	80	6.6	233
30	11	20	23	21	---	183	224	24	66	53	6.9	901
31	12	---	86	20	---	797	---	25	---	39	10	---
TOTAL	273.7	571	1460	2369	1305	4515	5027	2107	6533	1300	867.1	1982.5
MEAN	8.83	19.0	47.1	76.4	46.6	146	168	68.0	218	41.9	28.0	66.1
MAX	15	46	264	651	209	797	1130	152	1160	163	103	901
MIN	5.9	10	18	16	16	35	71	24	17	17	6.6	2.5
AC-FT	543	1130	2900	4700	2590	8960	9970	4180	12960	2580	1720	3930

CAL YR 1984	TOTAL	19682.9	MEAN	53.8	MAX	475	MIN	4.9	AC-FT	39040
WTR YR 1985	TOTAL	28310.3	MEAN	77.6	MAX	1160	MIN	2.5	AC-FT	56150

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-52, 1954-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1959 to September 1963, July 1968 to current year.
WATER TEMPERATURE: November 1959 to September 1963, July 1968 to current year.

INSTRUMENTATION.--Water-quality monitor from August 1959 to September 1981.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 23,300 microsiemens June 8, 1974; minimum daily, 302 microsiemens Oct. 20, 1983.
WATER TEMPERATURE: Maximum daily, 38.0 °C July 19, 1969, Aug. 4, 1977; minimum daily, 0.0 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 19,300 microsiemens Nov. 23; minimum daily, 700 microsiemens Sept. 30.
WATER TEMPERATURE: Maximum daily, 35.0 °C Aug. 23; minimum daily, 0.0 °C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV												
01...	1500	1028	80020	12	6300	7.80	7.0	16.0	18	730	9.7	105
JAN												
14...	1600	1028	80020	30	*12500	8.10	7.5	4.0	5.0	740	11.5	--
MAR												
19...	1200	1028	80020	37	11900	8.10	17.0	15.0	17	720	9.4	103
MAY												
06...	1500	1028	80020	83	6000	8.10	30.0	24.0	27	720	7.6	98
JUL												
16...	1200	1028	80020	23	*10100	7.50	34.0	27.0	4.8	730	11.3	--

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
NOV											
01...	24	32	890	700	210	87	1300	76	20	8.3	225
JAN											
14...	130	87	1200	1000	310	110	2400	81	31	9.2	244
MAR											
19...	21	K14	510	280	120	50	2600	92	52	12	280
MAY											
06...	160	200	950	790	260	72	1100	71	16	8.9	195
JUL											
16...	210	130	1100	940	280	100	1500	74	20	12	215

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV											
01...	0	164	184	5.7	760	1800	0.4	2.8	4130	4300	5.6
JAN											
14...	0	208	200	3.1	860	3900	0.4	7.4	7890	7700	10.7
MAR											
19...	0	203	230	3.5	930	3600	0.4	1.7	7530	7500	10.2
MAY											
06...	0	141	160	2.5	860	1700	0.4	7.0	4170	4100	5.7
JUL											
16...	0	143	176	11	650	2200	0.4	3.4	6190	4900	8.4

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
01...	134	<0.10	0.07	0.09	0.9	0.08	--	0.03	<0.01	--	20
JAN											
14...	639	--	--	--	--	--	--	--	--	--	10
MAR											
19...	752	4.60	0.13	0.17	0.8	0.19	--	0.17	0.06	0.18	<10
MAY											
06...	934	<0.10	0.13	0.17	1.2	0.13	--	0.01	0.01	0.03	<10
JUL											
16...	384	<0.10	0.13	0.17	0.7	0.06	0.18	<0.01	<0.01	--	<10

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
01...	<1	<100	<10	1	<1	<1	1	100	3	50	50
JAN											
14...	2	<100	<10	1	<0.5	<1	2	40	1	60	40
MAR											
19...	2	400	<10	1	<1	<1	4	40	2	70	60
MAY											
06...	2	400	<10	3	<1	<1	8	30	2	50	30
JUL											
16...	3	300	<10	3	<1	1	4	60	3	80	60

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
01...	0.2	3	<1	1	<1	2600	32	10	32	1.0	72
JAN											
14...	1.4	3	<1	3	<1	3400	59	20	8	0.65	92
MAR											
19...	0.4	2	3	1	<1	3500	51	20	32	3.2	82
MAY											
06...	<0.1	1	3	2	<1	2600	32	20	68	15	88
JUL											
16...	0.5	5	4	1	<1	2900	40	30	62	3.9	22

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6160	6650	10400	4060	13400	8170	1150	3590	9960	7350	7360	8790
2	6290	6800	11100	2960	14000	7830	3350	6370	10100	9170	8220	8630
3	6410	7020	12000	3390	14500	7330	5520	13700	9870	13000	8530	8530
4	6350	7080	12200	5800	14600	2100	7300	7530	9780	9150	8830	8630
5	6440	7250	12000	5950	12700	7120	8400	6140	4900	8250	9170	8680
6	6590	7280	12200	8450	14200	8810	8730	6300	2110	8660	8700	8680
7	6560	7400	12200	10100	14000	9550	9240	7200	3030	8550	8800	8660
8	6670	7550	12300	11400	13800	10200	9820	7650	1300	9360	9190	8610
9	6590	7690	12400	12400	12200	10800	8630	4290	1920	9470	10600	8470
10	6500	8350	12500	11700	11500	10700	8280	3810	2840	9920	4130	8420
11	---	8620	12700	11900	12700	11100	8260	5750	2900	10100	4880	8230
12	6550	8190	12900	13000	12400	---	8140	6960	2970	10100	6160	8180
13	6440	8600	11300	13400	12700	11700	7780	7360	2770	10200	6980	8010
14	6430	8400	11900	12500	13300	11900	7800	8300	4700	10100	7000	3050
15	6400	8070	10800	13400	15000	12100	8820	8910	7980	10100	7130	3030
16	6360	8030	11000	9030	15400	11500	10600	9390	6440	9960	10300	3450
17	6430	7350	11600	9420	15000	12200	10800	11500	6940	9850	4370	4700
18	6370	7070	3900	8770	14600	12000	6910	10800	7130	10000	5080	5360
19	6540	7480	10700	8530	14400	12300	7400	10500	4390	10000	4630	5850
20	6630	8390	3900	7350	14100	10100	7770	8010	4270	10200	5240	6130
21	6650	8710	9240	13800	11600	9020	7870	7860	5670	10000	5830	6250
22	6610	11500	5900	12500	11300	6500	7500	6710	6730	10100	6860	6220
23	6760	19300	---	13200	7720	3200	4590	7960	7470	10000	9430	8500
24	6700	13400	7790	12900	7860	4660	6740	9470	8260	8860	9200	4550
25	6630	10200	8500	11900	6660	5320	5920	9060	8660	8480	9440	4530
26	6230	8720	---	14000	8650	6240	7630	11300	8640	8960	9670	5120
27	6210	9460	9940	13200	4600	6160	6620	8430	9810	9210	9530	6520
28	6140	9980	10600	8190	6030	7320	2710	10600	2670	3370	9600	7990
29	6410	10300	11400	7440	---	4160	898	11200	5840	4720	9460	4860
30	6140	10600	12300	7850	---	5300	1710	10400	7930	5800	9330	700
31	6470	---	6720	7980	---	1880	---	9860	---	6400	9010	---
MEAN	6460	8850	10400	9890	12100	8240	6900	8290	5930	9010	7830	6580

WTR YR 1985 MEAN 8350 MAX 19300 MIN 700

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	16.0	6.0	.0	.0	10.0	10.0	20.0	23.0	23.0	29.0	30.0
2	17.0	16.0	6.0	1.0	.0	10.0	12.0	21.0	25.0	24.0	27.0	30.0
3	18.0	12.0	4.0	---	.0	13.0	18.0	20.0	24.0	25.0	25.0	31.0
4	16.0	15.0	6.0	.0	.0	8.0	20.0	20.0	24.0	26.0	27.0	32.0
5	20.0	16.0	6.0	2.0	.0	7.0	12.0	21.0	22.0	26.0	32.0	30.0
6	22.0	14.0	3.0	6.0	.0	10.0	17.0	21.0	22.0	27.0	30.0	25.0
7	19.0	12.0	3.0	5.0	2.0	11.0	18.0	22.0	26.0	---	30.0	27.0
8	20.0	15.0	8.0	5.0	3.0	15.0	12.0	22.0	23.0	23.0	30.0	26.0
9	20.0	15.0	12.0	6.0	5.0	15.0	12.0	22.0	23.0	26.0	30.0	27.0
10	21.0	12.0	4.0	3.0	2.0	15.0	15.0	23.0	22.0	27.0	29.0	28.0
11	---	13.0	10.0	.0	2.0	11.0	17.0	24.0	25.0	23.0	30.0	26.0
12	24.0	14.0	10.0	.0	3.0	---	18.0	20.0	22.0	23.0	29.0	26.0
13	21.0	12.0	6.0	.0	5.0	11.0	18.0	19.0	22.0	26.0	28.0	26.0
14	19.0	13.0	5.0	2.0	3.0	10.0	16.0	20.0	21.0	24.0	25.0	27.0
15	17.0	14.0	5.0	.0	4.0	10.0	24.0	19.0	23.0	24.0	27.0	25.0
16	17.0	8.0	6.0	4.0	5.0	10.0	20.0	21.0	25.0	28.0	26.0	25.0
17	16.0	7.0	5.0	5.0	5.0	10.0	19.0	21.0	22.0	29.0	27.0	24.0
18	16.0	7.0	6.0	5.0	6.0	14.0	21.0	27.0	22.0	27.0	26.0	22.0
19	17.0	7.0	5.0	5.0	10.0	13.0	22.0	21.0	23.0	25.0	26.0	22.0
20	16.0	8.0	7.0	2.0	10.0	13.0	21.0	20.0	22.0	25.0	27.0	23.0
21	12.0	6.0	.0	.0	13.0	12.0	19.0	19.0	24.0	30.0	26.0	22.0
22	11.0	9.0	6.0	.0	13.0	10.0	19.0	20.0	23.0	28.0	26.0	21.0
23	11.0	7.0	---	.0	15.0	10.0	17.0	20.0	22.0	29.0	35.0	18.0
24	11.0	9.0	7.0	3.0	13.0	15.0	17.0	21.0	25.0	26.0	27.0	16.0
25	12.0	7.0	5.0	4.0	10.0	14.0	18.0	21.0	25.0	26.0	26.0	16.0
26	15.0	8.0	---	2.0	9.0	16.0	17.0	22.0	24.0	28.0	27.0	13.0
27	18.0	4.0	7.0	4.0	10.0	16.0	16.0	24.0	22.0	27.0	27.0	16.0
28	16.0	4.0	15.0	1.0	9.0	17.0	17.0	24.0	22.0	30.0	27.0	16.0
29	18.0	7.0	16.0	4.0	---	18.0	18.0	25.0	23.0	30.0	30.0	14.0
30	17.0	10.5	15.0	5.0	---	9.0	19.0	25.0	23.0	27.0	26.0	13.0
31	17.0	---	5.0	.0	---	7.0	---	24.0	---	29.0	28.0	---
MEAN	17.0	10.5	7.0	2.5	5.5	12.0	17.5	21.5	23.0	26.5	28.0	23.0

WTR YR 1985 MEAN 16.5 MAX 35.0 MIN .0

07305500 WEST OTTER CREEK AT SNYDER LAKE, NEAR MOUNTAIN PARK, OK

LOCATION.--Lat 34°44'02", long 98°59'10", in SE 1/4 NE 1/4 sec.16, T.3 N., R.17 W., Kiowa County, Hydrologic Unit 11120303, near east end of Snyder Dam, 0.8 mi upstream from small tributary, 3 mi northwest of Mountain Park, and at mile 26.0.

DRAINAGE AREA.--132 mi^2.

PERIOD OF RECORD.--April 1903 to March 1908, October 1951 to September 1971, July 1972 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.

REVISED RECORDS.--WSP 1731: 1960 (M). WSP 1920: 1959-60. WDR OK-78-2: 1977.

GAGE.--Water-stage recorder and broad-crested masonry spillway. Datum of gage is 1,361.06 ft, National Geodetic Vertical Datum of 1929. April 1903 to March 1908, nonrecording gage at site 1.8 mi downstream at different datum. October 1951 to September 1971 at intake tower at same site and datum. July 1972 to August 1976, 700 ft downstream at datum 1,344.00 ft.

REMARKS.--Estimated daily discharges: Sept. 12-30. Records poor. The city of Snyder diverted about 130 acre-ft annually prior to October 1958 and none thereafter. Flow completely regulated since June 1975 by Tom Steed Reservoir.

AVERAGE DISCHARGE.--(Prior to regulation by Tom Steed Reservoir) 27 years (water years 1904-7, 1952-71, 1973-75) 23.0 ft^3/s, 16,660 acre-ft/yr; (since regulation by Tom Steed Reservoir) 10 years (water years 1976-85) 3.93 ft^3/s, 2,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s June 6, 1953, gage height, 19.50 ft, from floodmarks, from rating curve extended above 1,600 ft^3/s on basis of contracted-opening and flow-over-dam measurements of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35.0 ft^3/s Mar. 3, gage height, 12.24 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.19	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00
2	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	1.1	.00	.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00
4	1.1	.00	.00	.00	.00	.86	.00	.00	.00	.00	.00	.00
5	1.1	.00	.00	.00	.00	.51	.00	.00	1.9	.00	.00	.00
6	1.1	.00	.00	.08	.00	.45	.00	.00	5.4	.00	.00	.00
7	1.1	.11	.00	.10	.00	.30	.00	.00	1.1	.00	.00	.00
8	1.1	.39	.00	.11	.00	.34	.00	.00	1.1	.00	.00	.00
9	1.1	.48	.00	.17	.00	.00	.00	.00	.65	.00	.00	.00
10	1.1	.02	.00	.00	.00	.11	.00	.00	.44	.00	.00	.00
11	1.1	.00	.00	.00	.00	.14	.00	.00	.18	.00	.00	.00
12	1.1	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	1.1	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	1.1	.36	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.54	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.96	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.93	.78	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.92	.19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.87	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	1.1	.00	.00	.00	.00	.77	.00	.00	.00	.00	.00	.00
21	.50	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.47	.00	.00	.00	.48	.26	.00	.00	.00	.00	.00	.00
23	.19	.12	.05	.00	1.6	.05	.00	.00	.00	.00	.00	.00
24	.34	.20	.04	.00	.04	.16	.00	.00	.00	.00	.00	.00
25	.50	.29	.00	.00	.45	.21	.00	.00	.00	.00	.00	.00
26	.50	.22	.00	.00	.15	.21	.00	.00	.00	.00	.00	.00
27	.50	.01	.00	.00	.00	.47	.14	.00	.00	.00	.00	.00
28	.15	.00	.00	.00	.00	.17	.13	.00	.00	.00	.00	.00
29	.09	.00	.00	.00	---	.22	2.5	.00	.00	.00	.00	.00
30	.37	.00	.00	.00	---	.00	.51	.00	.00	.00	.00	.00
31	.50	---	.52	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	24.83	3.63	.65	.46	2.72	10.63	3.28	.06	10.77	.00	.00	.00
MEAN	.80	.12	.02	.01	.10	.34	.11	.00	.36	.00	.00	.00
MAX	1.1	.78	.52	.17	1.6	5.4	2.5	.06	5.4	.00	.00	.00
MIN	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	49	7.2	1.3	.9	5.4	21	6.5	.1	21	.00	.00	.00

CAL YR 1984	TOTAL	348.60	MEAN	.95	MAX	13	MIN	.00	AC-FT	691
WTR YR 1985	TOTAL	57.03	MEAN	.16	MAX	5.4	MIN	.00	AC-FT	113

07307028 NORTH FORK RED RIVER NEAR TIPTON, OK

LOCATION.--Lat 34°30'25", long 99°12'28", in NW 1/4 NE 1/4 sec.5. T.1 S, R.19 W., Tillman County, Hydrologic Unit 11120303, near left bank on downstream side of bridge pier on State Highway 5, 3.8 mi west of intersection of State Highways 5 and 5C in Tipton, 4.8 mi downstream from Otter Creek, and at mile 15.3.

DRAINAGE AREA.--4,691 mi^2 of which 399 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 28, 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,234.45 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 7-24, Nov. 1-7, Jan. 20, Jan. 31 to Feb. 6, 10-11, Apr. 8-10, Apr. 27 to May 5, May 15-16, May 23 to June 3, 11-26, June 29 to July 16, 18-29. Records fair. Flow regulated since December 1943 by storage and diversion at Lake Altus 54.2 mi upstream (station 07302500). Diversions for irrigation of about 48,000 acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s Oct. 20, 1983, gage height, 18.80 ft; minimum daily discharge, 3.7 ft^3/s Sept. 7, 1985.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 6,020 ft^3/s June 5, gage height, 13.90 ft; minimum daily discharge, 3.7 ft^3/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	32	849	27	130	529	350	38	120	47	7.0
2	14	23	29	739	25	120	224	250	35	100	42	4.3
3	15	22	29	240	27	187	176	210	33	90	36	6.1
4	15	21	29	143	29	740	155	180	350	80	30	6.5
5	17	20	33	103	30	785	145	160	4440	70	34	5.0
6	17	19	36	84	32	316	142	120	3700	62	234	4.0
7	15	18	34	69	42	123	125	109	3200	56	168	3.7
8	14	17	34	61	47	99	119	96	1420	52	48	5.0
9	13	17	32	57	54	85	118	124	779	50	17	5.0
10	12	16	33	50	48	79	117	143	485	48	30	6.8
11	13	17	36	46	43	71	117	103	350	47	44	4.3
12	12	17	36	42	38	63	112	85	400	46	23	4.0
13	13	18	40	40	37	59	147	88	300	45	20	5.4
14	12	19	48	43	37	57	143	83	250	44	38	53
15	11	17	63	46	36	55	130	73	180	43	34	32
16	10	17	108	43	33	54	135	65	160	50	27	17
17	11	39	102	39	31	53	141	70	230	45	34	10
18	10	68	205	39	30	52	125	85	500	43	39	9.3
19	9.7	59	242	38	30	52	111	76	350	40	42	8.8
20	10	47	162	36	36	364	101	157	220	38	48	8.8
21	9.7	41	134	35	69	532	94	1040	150	35	38	13
22	11	50	103	35	154	589	220	155	110	32	30	11
23	12	54	94	39	295	492	201	122	92	30	15	229
24	14	48	73	40	548	269	157	95	85	33	24	177
25	17	45	62	37	380	183	118	80	120	40	28	88
26	18	41	60	34	278	145	103	70	180	100	20	67
27	25	36	60	36	229	195	700	60	299	210	12	50
28	28	33	61	41	159	153	2000	56	282	350	5.8	37
29	27	32	58	40	---	219	1000	50	150	170	4.0	1290
30	26	31	53	38	---	300	600	45	100	68	4.0	2300
31	24	---	587	30	---	637	---	41	---	59	10	---
TOTAL	467.4	925	2708	3212	2824	7258	8305	4441	18988	2296	1225.8	4468.0
MEAN	15.1	30.8	87.4	104	101	234	277	143	633	74.1	39.5	149
MAX	28	68	587	849	548	785	2000	1040	4440	350	234	2300
MIN	9.7	16	29	30	25	52	94	41	33	30	4.0	3.7

CAL YR 1984	TOTAL	29290.1	MEAN	80.0	MAX	587	MIN	6.1
WTR YR 1985	TOTAL	57118.2	MEAN	156	MAX	4440	MIN	3.7

07308500 RED RIVER NEAR BURKBURNETT, TX

LOCATION.--Lat 34°06'36", long 98°31'53", Cotton County, OK, Hydrologic Unit 11130102, on left bank at downstream side of bridge on U.S. Highways 277 and 281, 2.5 mi northeast of Burkburnett, and at mile 933.

DRAINAGE AREA.--20,570 mi^2, of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to August 1925 (monthly discharge only), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 952.57 ft, National Geodetic Vertical Datum of 1929. July 11, 1924 to Aug. 31, 1925, nonrecording gage at site 1,000 ft downstream at same datum. December 16, 1959 to Jan. 11, 1960, non-recording gage at present site and datum.

REMARKS.--Estimated daily discharges: Jan. 1-9 and Aug. 30 to Sept 4. Records fair. There are many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 868 ft^3/s (628,900 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 166,000 ft^3/s Oct. 21, 1983 (gage height, 16.90 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 3, 1957, reached a stage of 13.54 ft, from levels to floodmarks. According to local residents, higher stages occurred in 1891 and June 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 1	0700	15,000	6.48	Mar. 4	1800	12,900	6.23
Feb. 23	1115	14,000	6.39	June 7	0915	*42,000	*10.50

Minimum discharge, 3.0 ft^3/s Oct. 8-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	96	78	13800	391	439	3320	5980	465	629	512	75
2	5.3	236	69	4710	507	379	5060	2270	418	424	363	70
3	4.5	335	56	1210	891	370	2380	1790	395	331	284	67
4	4.3	114	59	828	927	5450	949	1170	394	288	235	60
5	4.7	42	81	631	964	4510	678	922	2840	251	195	60
6	4.2	19	81	465	1530	897	564	778	30400	218	171	59
7	3.7	16	73	306	1670	814	488	672	38100	200	151	54
8	3.4	14	67	241	1760	646	452	550	17500	185	135	51
9	3.3	12	70	277	422	536	402	494	8640	167	118	46
10	4.3	8.0	69	338	380	471	370	450	5660	146	101	42
11	5.0	6.6	69	306	319	428	364	415	3450	134	91	40
12	8.5	6.0	69	274	248	394	357	441	2420	124	85	39
13	7.1	6.3	103	262	219	412	373	412	1910	117	84	38
14	65	6.3	143	220	214	594	384	318	1560	105	99	43
15	746	5.6	180	230	205	668	422	316	1220	99	88	39
16	283	5.1	1010	297	190	457	484	316	926	96	90	115
17	47	45	1520	297	185	439	404	273	681	92	111	265
18	16	647	1600	287	184	432	344	233	608	91	89	180
19	6.5	1420	962	273	181	423	345	214	609	101	152	118
20	47	587	695	208	223	2720	329	304	1230	98	242	93
21	532	306	553	185	420	3050	292	331	2160	94	174	85
22	739	233	332	228	632	4500	390	1220	826	93	128	81
23	233	182	282	282	10800	3450	464	3000	650	95	97	197
24	72	122	243	267	3200	3850	742	1440	547	89	117	578
25	79	140	208	262	772	1880	1160	881	489	92	151	466
26	73	133	194	251	729	1090	738	692	407	83	180	444
27	90	100	192	255	565	824	491	582	379	87	162	301
28	151	96	199	275	486	748	2220	509	377	985	163	225
29	115	84	200	303	---	836	7280	783	578	2880	117	876
30	52	73	179	310	---	952	4570	720	1060	1430	90	7500
31	31	---	4770	275	---	5140	---	539	---	809	81	---
TOTAL	3442.3	5095.9	14406	28353	29214	47799	36816	29015	126899	10633	4856	12307
MEAN	111	170	465	915	1043	1542	1227	936	4230	343	157	410
MAX	746	1420	4770	13800	10800	5450	7280	5980	38100	2880	512	7500
MIN	3.3	5.1	56	185	181	370	292	214	377	83	81	38
AC-FT	6830	10110	28570	56240	57950	94810	73020	57550	251700	21090	9630	24410

CAL YR 1984 TOTAL 104775.21 MEAN 286 MAX 4770 MIN .81 AC-FT 207800
WTR YR 1985 TOTAL 348836.20 MEAN 956 MAX 38100 MIN 3.3 AC-FT 691900

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1968 to September 1974. Chemical and biochemical: October 1974 to current year. Pesticide analyses: October 1974 to September 1982.

PERIOD OF DAILY RECORD.--
SECIFIC CONDUCTANCE: July 1968 to September 1981.
WATER TEMPERATURES: July 1968 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 17,400 microsiemens July 30, 1972; minimum daily, 889 microsiemens Sept. 24, 1970.
WATER TEMPERATURES: Maximum daily, 35.5 °C June 29, 1980; minimum daily, 0.0 °C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
NOV											
28...	1430	9560	8.2	11.0	29	13.1	128	3.2	K71	K50	1400
JAN											
22...	1115	11000	7.8	2.0	23	.7	5	.7	K40	K75	1500
MAR											
12...	0915	7170	8.1	12.0	59	13.6	135	3.7	K70	K50	1400
MAY											
22...	1400	8080	8.0	23.5	1000	9.4	119	3.5	K6700	14000	1300
JUL											
23...	1345	8960	8.0	31.0	39	8.1	118	3.9	120	K100	1500
AUG											
21...	0845	9400	7.9	25.0	110	8.5	111	3.4	K670	K1110	1200

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
28...	1300	390	110	1600	19	9.3	180	1100	2600	.40	6.7
JAN											
22...	1300	420	110	1900	22	9.2	240	1200	3000	.30	12
MAR											
12...	1200	380	110	1100	13	8.7	170	880	1900	.40	8.9
MAY											
22...	1200	350	100	1300	16	7.5	130	1100	2200	.50	7.5
JUL											
23...	1400	400	130	1500	17	12	121	1200	2400	.50	7.1
AUG											
21...	1100	350	84	1600	21	12	92	1100	2500	.50	8.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
28...	6020	5900	.34	.130	.90	.140	.040	.040	49	79
JAN										
22...	7040	6800	1.0	.380	1.1	.140	.080	.080	214	75
MAR										
12...	4600	4500	<.10	.140	1.7	.230	.010	<.010	406	34
MAY										
22...	5100	5100	.28	.170	1.0	2.20	.010	<.010	3410	99
JUL										
23...	6060	5700	<.10	.210	.90	.110	<.010	<.010	--	--
AUG										
21...	5900	5700	.45	.130	1.1	.540	<.010	<.010	--	--

07308500 RED RIVER NEAR BURKBURNETT, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
NOV										
28...	1430	2	<100	<10	1	<1	2	1	50	<1
MAR										
12...	0915	4	600	<10	--	--	--	--	110	--
MAY										
22...	1400	2	400	<10	1	<1	2	1	50	<1
AUG										
21...	0845	2	400	<10	<1	<1	1	3	50	1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
28...	70	30	1.4	4	3	2	1	5600	58	20
MAR										
12...	60	20	<.1	3	--	--	--	3800	34	20
MAY										
22...	70	10	.2	3	3	2	<1	4200	39	20
AUG										
21...	70	10	<.1	4	2	2	<1	4700	50	20

07311000 EAST CACHE CREEK NEAR WALTERS, OK

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, Hydrologic Unit 11130202, at right bank on downstream side of bridge on State Highway 53, 1.8 mi east of Walters, 12.2 mi upstream from West Cache Creek, and at mile 19.7.

DRAINAGE AREA.--675 mi^2.

WATER-DISCHARGE RECORDS

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, Oklahoma State Highway Department datum. Prior to Jan. 8, 1939, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 1-2. Records good. Flow partly regulated by Lake Lawtonka, capacity 42,300 acre-ft on Medicine Creek prior to late 1953, and 63,000 acre-ft thereafter, 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.

AVERAGE DISCHARGE.--41 years, 171 ft^3/s, 123,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,900 ft^3/s Oct. 21, 1983, gage height, 30.66 ft; no flow at times in 1939-40.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1906 reached an approximate stage of 29.7 ft, information from local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,840 ft^3/s Jan. 1, gage height, 27.80 ft; minimum daily discharge, 14 ft^3/s Nov. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	61	27	5490	63	492	1600	2010	107	103	60	46
2	30	215	26	2520	70	424	872	867	97	97	62	45
3	32	78	27	366	101	468	935	782	93	95	63	45
4	32	35	28	214	79	1540	978	719	94	95	62	45
5	21	29	30	160	80	2630	566	382	1450	91	59	32
6	19	26	31	135	79	2540	780	293	3670	87	58	29
7	21	25	30	121	78	1160	812	256	4110	83	52	29
8	22	24	25	111	77	954	795	243	2640	82	54	27
9	22	24	22	103	83	881	761	329	503	76	61	38
10	22	30	19	122	90	819	670	315	343	69	47	41
11	22	31	18	136	105	775	297	215	549	68	44	40
12	22	25	25	114	95	750	227	182	971	66	43	40
13	22	24	48	100	79	754	221	170	648	65	42	41
14	24	16	373	98	58	1280	434	170	341	62	50	47
15	25	14	302	99	55	921	599	164	273	60	131	110
16	38	14	1690	97	54	749	392	170	242	59	88	54
17	42	20	1300	85	51	716	212	167	222	60	60	45
18	42	696	185	79	48	702	259	162	314	61	54	29
19	43	319	82	72	46	655	211	154	1710	60	53	26
20	49	87	51	76	71	2440	170	154	597	58	51	27
21	100	56	51	75	1420	4140	158	1030	242	57	51	27
22	89	39	92	86	2040	3340	212	1370	191	55	51	30
23	48	26	60	63	5220	2130	1430	287	173	55	52	47
24	41	32	43	79	5210	1020	1870	196	163	83	52	62
25	46	31	33	75	1540	730	761	161	164	149	94	49
26	123	27	26	59	618	670	664	146	163	101	61	46
27	657	28	32	57	909	895	667	137	401	84	55	41
28	292	30	33	62	832	1420	985	130	325	71	54	40
29	72	29	37	95	---	1210	1620	128	150	67	49	59
30	44	26	25	82	---	1290	1830	125	115	65	47	856
31	32	---	2280	76	---	2670	---	118	---	62	47	---
TOTAL	2122	2117	7051	11107	19251	41165	21988	11732	21061	2346	1807	2093
MEAN	68.5	70.6	227	358	688	1328	733	378	702	75.7	58.3	69.8
MAX	657	696	2280	5490	5220	4140	1870	2010	4110	149	131	856
MIN	19	14	18	57	46	424	158	118	93	55	42	26
AC-FT	4210	4200	13990	22030	38180	81650	43610	23270	41770	4650	3580	4150

CAL YR 1984	TOTAL	41554	MEAN	114	MAX	2460	MIN	14	AC-FT	82420
WTR YR 1985	TOTAL	143840	MEAN	394	MAX	5490	MIN	14	AC-FT	285300

07311000 EAST CACHE CREEK NEAR WALTERS, OK

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1948, 1951-55, 1958-63, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1953, October 1969 to March 1977.
WATER TEMPERATURE: October 1951 to September 1953, October 1969 to March 1977.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)
NOV										
20...	1100	1028	80020	85	274	7.70	5.0	10.0	94	750
DEC										
17...	1000	1028	80020	1080	196	7.50	12.0	8.0	340	740
JAN										
17...	1100	1028	80020	82	780	7.70	7.5	5.0	12	740
MAR										
05...	1800	1028	80020	2860	388	7.60	15.0	10.0	280	740
MAY										
09...	1100	1028	80020	336	*620	7.50	27.0	21.5	47	740
JUL										
31...	1200	1028	80020	62	812	7.70	35.0	28.0	54	740
SEP										
12...	1100	1028	80020	40	684	7.30	26.0	24.5	59	740

DATE	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
NOV									
20...	10.5	95	84	--	26	4.6	19	31	0.9
DEC									
17...	10.4	90	72	--	22	4.1	16	31	0.9
JAN									
17...	12.3	99	210	20	64	13	65	39	2
MAR									
05...	11.3	103	150	4	45	8.5	21	23	0.8
MAY									
09...	8.8	--	230	36	70	13	42	28	1
JUL									
31...	5.7	75	220	30	66	14	67	39	2
SEP									
12...	6.1	76	200	33	59	12	58	38	2

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV									
20...	5.1	110	0	82	90	3.5	25	15	181
DEC									
17...	4.1	92	0	82	75	4.6	20	8.1	130
JAN									
17...	5.1	235	0	183	193	7.5	82	66	443
MAR									
05...	4.1	175	0	150	143	7.0	58	15	225
MAY									
09...	3.8	235	0	190	192	12	66	40	367
JUL									
31...	5.7	235	0	188	192	7.5	76	65	446
SEP									
12...	6.2	200	0	159	164	16	68	62	387

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07311200 BLUE BEAVER CREEK NEAR CACHE, OK
(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, Hydrologic Unit 11130203, on downstream side of right bank pier on old U.S. Highway 62, 3,000 ft upstream from St. Louis-San Francisco Railway Co. bridge, 4.0 mi east of Cache, and at mile 12.0.

DRAINAGE AREA.--24.6 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,215.26 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Minor regulation by Lake Rush, Lake Jed Johnson, and Lake Ketch, combined surface-area 132 acres.

AVERAGE DISCHARGE.--21 years, 10.5 ft^3/s, 7,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s, Aug. 28, 1977, gage height, 18.02 ft from floodmark, from rating curve extended above 250 ft^3/s on basis of contracted-opening measurement; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1907, that of Aug. 28, 1977, according to local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 31	1445	1,190	10.79	Mar. 20	0330	1,440	11.14
Feb. 23	0415	*2,260	*12.10	Apr. 29	1430	566	9.77
Mar. 3	2330	1,890	11.69	June 6	0845	819	10.33

No flow at times during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	240	2.0	35	49	53	1.2	.77	.00	.00
2	.00	.00	.00	67	2.0	31	40	37	1.1	.71	.00	.00
3	.00	.00	.00	48	2.0	183	34	29	.92	.71	.00	.00
4	.00	.00	.00	39	2.0	385	30	22	3.6	.58	.00	.00
5	.00	.00	.00	34	2.0	90	26	18	173	.48	.00	.00
6	.00	.00	.00	30	2.0	55	21	15	356	.40	.00	.00
7	.00	.00	.00	26	1.9	46	18	13	112	.30	.00	.00
8	.00	.00	.00	22	1.8	41	16	12	50	.23	.00	.00
9	.00	.00	.00	29	1.9	35	13	9.2	33	.20	.00	.00
10	.00	.00	.00	33	1.8	31	13	6.9	25	.14	.00	.00
11	.00	.00	.00	25	1.6	28	10	5.4	33	.08	.00	.00
12	.00	.00	.00	20	1.5	26	9.0	3.8	21	.07	.00	.00
13	.00	.00	.00	18	1.5	45	17	3.7	17	.05	.00	.00
14	.00	.00	.07	16	1.4	38	16	2.9	13	.03	.00	.00
15	.00	.00	60	15	1.3	30	13	2.4	9.0	.07	.00	.00
16	.00	.00	92	14	1.4	27	9.5	2.0	6.4	.17	.00	.00
17	.00	.00	33	13	1.3	27	7.0	1.7	4.8	.25	.00	.00
18	.00	.00	22	11	1.3	23	5.4	1.5	37	.09	.00	.00
19	.00	.00	17	8.9	1.3	29	4.2	1.4	19	.05	.00	.00
20	.00	.00	14	7.1	3.2	620	3.7	13	10	.03	.00	.00
21	.00	.00	35	6.1	107	260	3.0	69	5.7	.03	.00	.00
22	.00	.00	32	4.0	199	110	42	22	4.0	.01	.00	.00
23	.00	.00	24	3.9	833	68	36	15	3.0	.02	.00	.00
24	.00	.00	20	3.3	164	50	24	8.9	2.5	.06	.00	.00
25	.00	.00	16	2.7	76	42	17	5.2	2.0	.48	.00	.00
26	.00	.00	11	2.3	53	53	14	3.2	1.7	.09	.00	.00
27	.00	.00	12	2.6	41	122	18	2.5	1.7	.06	.00	.00
28	.00	.00	15	2.6	35	53	23	2.1	1.4	.04	.00	.22
29	.00	.00	16	2.5	---	46	222	1.9	1.2	.01	.00	145
30	.00	.00	16	2.2	---	119	119	1.5	.92	.00	.00	19
31	.00	---	633	2.0	---	67	---	1.2	---	.00	.00	---
TOTAL	.00	.00	1068.07	750.2	1543.2	2815	872.8	385.4	950.14	6.21	.00	164.22
MEAN	.00	.00	34.5	24.2	55.1	90.8	29.1	12.4	31.7	.20	.00	5.47
MAX	.00	.00	633	240	833	620	222	69	356	.77	.00	145
MIN	.00	.00	.00	2.0	1.3	23	3.0	1.2	.92	.00	.00	.00
AC-FT	.00	.00	2120	1490	3060	5580	1730	764	1880	12	.00	326

CAL YR 1984	TOTAL	1842.62	MEAN	5.03	MAX	633	MIN	.00	AC-FT	3650
WTR YR 1985	TOTAL	8555.24	MEAN	23.4	MAX	833	MIN	.00	AC-FT	16970

07311200 BLUE BEAVER CREEK NEAR CACHE, OK--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)
DEC											
18...	1000	1028	80020	23	135	7.00	8.5	7.0	6.5	740	11.0
MAR											
18...	1500	1028	80020	22	*121	7.20	16.0	15.0	5.4	730	10.1
MAY											
08...	1100	1028	80020	12	150	6.90	26.0	20.0	7.0	730	8.3

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
DEC											
18...	93	210	560	46	22	13	3.2	7.9	27	0.5	1.2
MAR											
18...	--	K15	24	48	3	13	3.7	--	--	--	1.7
MAY											
08...	95	240	720	52	7	15	3.6	9.3	27	0.6	1.5

DATE	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY LAB (MG/L AS CACO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC											
18...	29	0	21	24	4.6	18	4.4	0.2	14	74	77
MAR											
18...	55	0	32	45	5.5	14	3.7	0.3	12	79	--
MAY											
08...	55	0	48	45	11	9.8	4.4	0.4	15	87	86

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
DEC										
18...	0.1	4.6	3.80	0.03	0.04	0.5	0.03	0.01	<0.01	150
MAR										
18...	--	--	1.10	0.03	0.04	0.3	0.01	0.01	<0.01	--
MAY										
08...	0.12	2.8	0.16	0.06	0.08	0.5	0.02	<0.01	<0.01	70

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CORALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
DEC										
18...	<1	49	0.8	<1	20	<3	2	46	<1	<4
MAR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	<1	53	2	<1	<1	<3	2	85	<1	<4

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07311200 BLUE BEAVER CREEK NEAR CACHE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)
DEC										
18...	4	<0.1	<10	1	<1	<1	50	<6	11	<1.6
MAR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	23	0.3	<10	1	<1	<1	67	<6	<3	--

DATE	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM DISSOLVED, EXTRACTION (UG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC										
18...	<0.4	1.8	<0.4	1.5	<0.4	0.06	<0.01	9	0.56	86
MAR										
18...	--	--	--	--	--	--	--	12	0.71	77
MAY										
08...	--	--	--	--	--	--	--	19	0.62	80

07311500 DEEP RED RUN NEAR RANDLETT, OK

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, Hydrologic Unit 11130203, near right bank on downstream side of pier of bridge on U.S. Highway 277, 2.8 mi north of Randlett, and at mile 4.8.

DRAINAGE AREA.--617 mi^2.

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

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1631: 1956. WSP 1920: 1951.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 924.49 ft Oklahoma State Highway Department datum. Prior to Nov. 10, 1949, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 3-12, Feb. 1-2, 11-14, May 7-20. Records good.

AVERAGE DISCHARGE.--36 years, 124 ft^3/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,300 ft^3/s Oct. 20, 1983, gage height, 28.89 ft from rating curve extended above 13,000 ft^3/s on basis of contracted-opening measurement at 27.51 ft in 1969, no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage somewhat exceeding 27 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 1	2315	7,820	23.63	Apr. 1	0930	2,400	18.97
Feb. 23	1245	9,340	23.99	June 8	0015	*13,300	*24.58
Mar. 5	2245	5,260	22.82	June 12	2400	2,060	17.56
Mar. 21	0445	5,050	22.68	June 20	1545	2,750	20.05

No flow Oct. 1-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	101	1.4	6770	7.4	224	2120	954	7.0	56	8.2	7.3
2	.00	94	1.1	6070	7.2	173	543	395	6.2	44	7.0	4.7
3	.00	37	1.0	3240	7.0	163	263	190	5.8	36	6.1	3.7
4	.00	17	.94	531	7.2	1540	190	134	6.0	37	4.9	2.5
5	.00	11	.85	196	6.8	3300	147	103	1040	28	4.4	2.3
6	.00	5.5	.80	133	6.7	3710	120	86	4350	24	4.5	2.0
7	.00	2.1	.76	94	6.9	833	101	70	7070	22	4.3	1.8
8	.00	1.4	.72	61	7.2	341	88	56	9160	20	4.1	1.6
9	.00	1.0	.70	47	7.2	229	78	45	3890	17	3.9	1.4
10	.00	.88	.68	38	7.2	172	71	40	997	19	4.2	1.4
11	.00	.71	.66	32	8.0	131	56	35	745	23	4.1	1.4
12	.00	.65	.64	28	10	114	62	30	1720	14	3.8	1.4
13	.00	.60	48	20	12	99	64	45	1630	13	3.3	1.3
14	.00	.52	80	16	11	808	68	56	382	12	3.2	1.6
15	103	.27	156	16	9.9	953	81	45	200	11	3.3	2.9
16	69	.01	1250	14	8.3	190	100	40	132	9.8	50	7.4
17	19	6.2	1490	13	8.0	107	88	35	99	12	50	3.5
18	8.0	379	538	11	7.3	86	69	32	114	26	25	2.1
19	3.5	653	95	11	6.7	78	61	30	1460	16	16	1.7
20	9.6	204	56	9.4	37	1860	59	57	2560	14	11	1.5
21	16	65	33	7.9	481	4570	59	37	1240	18	96	1.8
22	18	31	22	6.9	695	3140	65	71	440	8.4	50	2.1
23	8.1	17	17	6.7	6760	1220	78	58	286	17	44	2.5
24	6.5	10	14	6.7	5280	1010	160	34	157	18	23	1.9
25	35	6.4	9.3	7.2	4520	389	120	25	106	21	23	2.2
26	14	4.2	6.8	7.4	1900	216	86	19	85	36	45	2.1
27	64	2.6	5.3	11	581	161	73	15	75	42	46	2.2
28	42	2.0	4.2	9.8	323	595	65	12	83	24	23	2.3
29	74	1.8	3.6	8.8	---	535	484	9.9	102	16	14	59
30	27	1.6	3.1	8.1	---	387	740	8.9	77	12	9.3	1220
31	11	---	2430	7.5	---	1640	---	7.8	---	9.9	10	---
TOTAL	527.70	1657.44	6271.55	17438.4	20729.0	28974	6359	2775.6	38225.0	676.1	604.6	1349.6
MEAN	17.0	55.2	202	563	740	935	212	89.5	1274	21.8	19.5	45.0
MAX	103	653	2430	6770	6760	4570	2120	954	9160	56	96	1220
MIN	.00	.01	.64	6.7	6.7	78	56	7.8	5.8	8.4	3.2	1.3
AC-FT	1050	3290	12440	34590	41120	57470	12610	5510	75820	1340	1200	2680

CAL YR 1984 TOTAL 11962.83 MEAN 32.7 MAX 2430 MIN .00 AC-FT 23730
WTR YR 1985 TOTAL 125587.99 MEAN 344 MAX 9160 MIN .00 AC-FT 249100

07313400 WAURIKA LAKE NEAR WAURIKA, OK

LOCATION.--Lat 34°13'57", long 98°02'51", in SW 1/4 SW 1/4 sec.4, T.4 S., R.8 W., Jefferson County, Hydrologic Unit 11130208, 3,050 ft east of outlet works on Beaver Creek, 5.5 mi north of Waurika and at mile 27.0.

DRAINAGE AREA.--562 mi^2.

PERIOD OF RECORD.--August 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Aug. 26, 1977, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam with a concrete outlet structure and emergency spillway. Storage began Aug. 1, 1977. Capacity 469,300 acre-ft at elevation 970.0 ft, crest of uncontrolled spillway and 203,100 acre-ft at elevation 951.4 ft, top of conservation pool. Dead storage, 3,400 acre-ft below elevation 910.0 ft. Reservoir is used for flood control, irrigation, water supply, water quality, fish and wildlife, and recreation.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 331,900 acre-ft Oct. 23, 1983, elevation, 961.72 ft; minimum since first major filling, 59,170 acre-ft Dec. 4-5, 1978, elevation, 931.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 270,300 acre-ft Feb. 25, elevation, 957.20 ft; minimum, 185,700 acre-ft Sept. 28, elevation, 949.71 ft.

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

949	178,800	956	255,300
951	198,900	959	293,800
953	220,400	962	335,900

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179200	196200	198300	241400	204400	259200	236900	235700	203600	203100	198200	192700
2	179000	196600	198300	246300	203800	255500	233100	235400	203400	203100	197800	192200
3	179000	197800	197900	245800	203200	254300	229700	232700	203200	203000	197300	191900
4	178800	197200	198100	242900	203300	255700	227100	228500	204700	202700	197100	191500
5	178800	196700	199000	239700	203300	256500	222500	225400	214100	202700	197900	190900
6	179700	196200	198100	236400	203400	252900	218800	222100	229600	202700	196700	190900
7	178800	196200	198000	232700	203700	249800	214400	218700	235800	202600	197100	190600
8	178800	196300	197900	228800	203800	246600	210400	215200	238000	202200	196700	190600
9	178400	196600	198200	225400	204000	242800	207200	211600	237300	202000	196400	190200
10	178100	196100	198300	222400	204100	239500	205300	209100	235600	201900	196300	190100
11	177900	195700	198300	218800	204600	236800	204100	207600	234400	201700	195900	189600
12	177800	195600	198900	213900	204100	232100	203700	206200	230500	201300	195400	189500
13	178000	195200	201600	211000	204100	229900	205000	207200	227000	200900	194900	189500
14	177800	195400	202000	207200	204100	225600	204900	205100	223200	200800	195600	189300
15	178000	195800	203800	204000	204300	222000	205200	204300	219800	201000	196000	188800
16	179000	195200	208400	203300	204100	218300	205200	204300	215800	200400	195900	188500
17	177200	196800	211300	203300	204500	214900	205300	204400	213600	200400	195800	188400
18	177800	198800	209700	203600	204800	210900	205000	204200	212900	200100	195800	188100
19	177200	198700	207700	208200	205000	209300	204700	203500	215000	199900	195400	187900
20	179800	198500	206100	204500	205300	228800	204700	204900	215400	199900	195100	187900
21	179300	198400	205100	203600	211300	249200	206800	207400	215600	200000	194700	187700
22	180400	198300	204000	203800	219300	253200	210700	207900	215700	199900	194500	187100
23	179600	198300	203300	203800	247000	252400	214100	207000	215800	199600	195900	188000
24	179800	198100	203200	203800	268100	250200	214200	206300	214900	199500	195100	187400
25	180500	198300	203100	203800	270200	246700	213300	205700	212900	199800	194400	187700
26	181100	198400	203100	203800	269100	243300	214000	205100	212200	200400	193200	186600
27	190800	198800	203300	203800	265500	241000	215100	204700	212200	199600	193500	186200
28	194600	198100	203400	203800	262200	239600	216500	204500	209100	199100	193200	188500
29	194500	198300	203300	205300	---	238200	222000	203800	206100	199100	193200	188700
30	194700	198200	203300	207000	---	238600	232200	203900	204200	198600	193100	189300
31	194900	---	217600	206200	---	238700	---	203600	---	198300	192900	---
MAX	194900	198800	217600	246300	270200	259200	236900	235700	238000	203100	198200	192700
MIN	177200	195200	197900	203300	203200	209300	203700	203500	203200	198300	192900	186200
(†)	950.62	950.93	952.75	951.70	956.55	954.60	954.05	951.45	951.51	950.94	950.42	950.08
(††)	+15,500	+3,300	+19,400	-11,400	+56,000	-23,500	-6,500	-28,600	+600	-5,900	-5,400	-3,600

CAL YR 1984 MAX 217600 MIN 177200 (††) +14,000
WTR YR 1985 MAX 270200 MIN 177200 (††) +9,900

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07313500 BEAVER CREEK NEAR WAURIKA, OK

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, Hydrologic Unit 11130208, on left bank on downstream side of bridge on State Highway 5, 4.5 mi northwest of Waurika, 6.2 mi upstream from Cow Creek, and at mile 25.8.

DRAINAGE AREA.--563 mi^2.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WSP 1731: 1954 (M).

GAGE.--Water-stage recorder. Datum of gage is 874.17 ft, Oklahoma State Highway Department datum. Prior to Apr. 5, 1966, water-stage recorder at same site at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 10-22. Records good. Flow regulated by Waurika Lake (07313400) 1.2 mi upstream beginning August 1977.

AVERAGE DISCHARGE.--(Prior to regulation by Waurika Lake) 23 years, (water years 1954-76) 107 ft^3/s, 77,520 acre-ft/yr; (Since regulation by Waurika Lake) 8 years, (water years 1978-85) 103 ft^3/s, 74,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft^3/s May 20, 1955, gage height, 27.42 ft, present datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1951, reached a stage of 27.7 ft, present datum, from floodmark, discharge 65,300 ft^3/s by contracted-opening measurement of peak flow. A similar stage was reached prior to 1889, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,170 ft^3/s Apr. 2, gage height 21.27 ft; no flow Oct. 1-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.23	1.1	20	242	1910	1520	157	51	575	8.2	5.9
2	.00	.25	1.1	102	243	1960	2150	527	50	44	8.1	6.0
3	.00	.25	1.1	695	244	1950	2100	1310	37	42	7.9	5.9
4	.00	.28	1.5	1550	131	1670	2130	2020	19	42	7.9	5.8
5	.00	.30	2.1	1900	.13	1300	2120	2010	62	30	7.9	6.0
6	.00	.30	2.1	1820	.10	1960	2140	2000	75	13	8.0	6.0
7	.00	.30	2.1	1790	.06	1960	2140	1970	25	13	8.2	6.0
8	.00	.30	2.0	1860	.07	1930	2130	1980	18	12	7.5	5.9
9	.00	.30	2.0	1890	.11	1920	1880	1890	404	12	7.3	5.9
10	.00	.30	2.0	1880	.06	1940	1180	1300	1050	12	8.2	5.9
11	.00	.30	2.0	1870	.03	1930	837	895	1540	11	7.8	5.8
12	.00	.30	2.1	1900	.04	1930	450	896	1930	11	7.1	6.0
13	.00	.78	17	1870	.05	1930	56	816	2000	11	7.1	6.3
14	.00	.94	2.3	1870	.02	1890	108	602	2040	11	8.8	6.1
15	.00	.87	4.7	1490	.02	1920	107	495	2000	11	7.2	5.8
16	.00	.87	30	419	.05	1920	107	17	2030	11	7.0	5.7
17	.00	1.5	222	.71	.05	1920	106	17	1650	11	6.9	5.7
18	.00	.92	811	.58	.05	1910	106	15	655	9.9	6.8	5.7
19	.00	.34	1030	.51	.05	1920	106	15	171	9.6	6.7	5.7
20	.00	.25	1030	.45	.13	992	106	17	55	10	6.6	5.7
21	.00	.25	772	.45	.30	58	109	13	54	9.5	6.6	5.9
22	.00	.25	322	.45	.30	383	197	257	53	9.3	6.5	5.8
23	.00	.29	321	.45	.30	1430	104	720	53	9.0	6.5	5.9
24	.03	.30	176	.43	.24	1800	247	539	334	9.1	6.5	5.8
25	.30	.54	.51	.40	223	1930	429	268	808	9.0	6.4	5.8
26	.25	.67	.45	.40	988	2070	334	267	1020	8.8	6.5	5.7
27	.29	.74	.45	.46	1780	2050	79	267	1040	8.7	6.6	5.7
28	.29	.80	.45	.41	1970	2060	68	267	1030	8.6	6.3	6.1
29	.19	.96	.45	.40	---	2080	69	267	1020	8.5	5.9	8.2
30	.15	1.1	.63	128	---	598	66	162	1020	8.3	6.0	6.4
31	.19	---	282	241	---	762	---	51	---	8.3	5.9	---
TOTAL	1.69	15.78	5044.14	23301.10	5823.16	51983	23281	22027	22294	998.6	220.9	179.1
MEAN	.05	.53	163	752	208	1677	776	711	743	32.2	7.13	5.97
MAX	.30	1.5	1030	1900	1970	2080	2150	2020	2040	575	8.8	8.2
MIN	.00	.23	.45	.40	.02	58	56	13	18	8.3	5.9	5.7
AC-FT	3.4	31	10010	46220	11550	103100	46180	43690	44220	1980	438	355

CAL YR 1984 TOTAL 11374.71 MEAN 31.1 MAX 1030 MIN .00 AC-FT 22560
WTR YR 1985 TOTAL 155169.47 MEAN 425 MAX 2150 MIN .00 AC-FT 307800

07315500 RED RIVER NEAR TERRAL, OK

LOCATION.--Lat 33°52'43", long 97°56'03", Jefferson County, Hydrologic Unit 11130201, on left bank at downstream side of bridge abutment on U.S. Highway 81, 0.5 mi downstream from Chicago, Rock Island, and Railroad Co. bridge, 1.2 mi south of Terral, 3.6 mi downstream from Little Wichita River, and at mile 872.

DRAINAGE AREA.--28,723 mi^2, of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 770.31 ft, National Geodetic Vertical Datum of 1929. Prior to Jan. 12, 1939, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. There are many small diversions upstream for irrigation, oil field, and municipal uses.

AVERAGE DISCHARGE.--47 years (water years 1939-85), 2,161 ft^3/s (1,566,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s Oct. 22, 1983 (gage height, 33.60 ft) minimum, 43 ft^3/s Mar. 15, 1939. Maximum stage since at least 1891, that of Oct. 22, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1935, reached a stage of 27.2 ft, although floods in 1891 and on May 1, 1908, are reported to have reached about the same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base discharge of 21,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 2	0500	36,400	18.35	Mar. 21	2300	28,400	17.14
Feb. 24	1600	43,800	18.62	June 8	0800	*62,600	*20.94

Minimum discharge, 159 ft^3/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	685	322	27600	782	6020	16600	13500	948	3430	1890	399
2	200	1140	322	31900	1840	5350	12300	12600	742	2890	1490	346
3	190	1150	303	18600	1810	4910	8010	8690	637	1770	1120	321
4	185	970	298	11400	1470	7410	6410	7440	593	1410	900	308
5	183	719	276	7210	1140	17100	5740	6980	3900	1190	758	294
6	189	494	277	5170	703	11900	5190	6020	19000	1050	683	306
7	189	370	275	4540	620	11800	4490	5060	42500	921	654	317
8	174	308	277	4280	675	7290	4500	4270	59500	808	574	314
9	164	266	258	4120	769	5630	4260	3760	32600	749	497	307
10	189	232	246	4020	921	5020	3720	3340	22300	694	459	313
11	311	222	237	4030	834	4660	2930	2730	19700	647	422	301
12	402	221	228	3940	756	4280	2280	2320	18100	595	406	299
13	443	209	706	3950	686	4120	1510	2140	15700	556	382	319
14	491	204	3430	3950	627	4220	1030	2190	13900	529	418	359
15	487	201	3430	3790	595	5640	1200	2130	11000	506	875	367
16	535	188	6000	3090	577	6610	1390	1530	9500	496	546	402
17	769	196	10400	1740	546	4540	1550	927	8260	499	554	338
18	712	389	9240	1080	523	3860	1370	802	5680	477	597	352
19	517	1500	5360	930	509	3650	1060	719	3590	477	544	501
20	669	2720	3240	717	526	12200	986	827	7700	463	463	479
21	1050	2040	2770	609	2950	26300	930	1490	7150	492	430	375
22	1220	1130	2260	651	8550	23600	2290	1800	6110	459	634	334
23	1170	743	1740	595	19200	18100	6010	3380	3300	454	610	328
24	1250	567	1690	639	41300	11100	7890	4470	2480	447	529	295
25	1460	478	1370	656	28800	7850	6820	3250	2370	458	450	418
26	1610	428	1000	599	16800	6540	5270	2070	2740	478	440	1030
27	5030	420	905	619	10600	5580	4170	1670	3200	595	514	968
28	11400	377	849	606	7920	5390	3720	1430	3530	539	628	908
29	6380	377	795	587	---	6880	6570	1180	3730	582	679	826
30	2710	335	776	595	---	13400	16300	1040	3100	2780	586	1040
31	849	---	3480	547	---	12600	---	1160	---	2500	486	---
TOTAL	41354	19279	62760	152760	153029	273550	146496	110915	333560	29941	20218	13464
MEAN	1334	643	2025	4928	5465	8824	4883	3578	11120	966	652	449
MAX	11400	2720	10400	31900	41300	26300	16600	13500	59500	3430	1890	1040
MIN	164	188	228	547	509	3650	930	719	593	447	382	294
AC-FT	82030	38240	124500	303000	303500	542600	290600	220000	661600	59390	40100	26710

CAL YR 1984 TOTAL 289023 MEAN 790 MAX 11400 MIN 119 AC-FT 573300
WTR YR 1985 TOTAL 1357326 MEAN 3719 MAX 59500 MIN 164 AC-FT 2692000

07315500 RED RIVER NEAR TERRAL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURES: October 1967 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the U.S. Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,000 microsiemens June 15, 1984; minimum daily, 255 microsiemens Jan. 1, 1985.
WATER TEMPERATURES: Maximum daily, 35.0 °C Aug. 13, 16, 17, 1983; minimum daily, 0.0 °C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 9,320 microsiemens Sept. 26; minimum daily, 255 microsiemens Jan. 1.
WATER TEMPERATURES: Maximum daily, 34.0 °C on several days during July and August; minimum daily, 0.0 °C Jan. 20, Feb. 2, 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 29...	1445	5790	403	18.0	110	32	35	6.6	40
NOV 30...	1705	348	5040	11.0	860	700	230	70	790
FEB 25...	1500	25800	640	13.0	150	53	47	9.0	68
MAR 25...	1215	7900	1790	14.0	340	220	92	26	230
APR 23...	1120	7540	1260	--	230	130	59	19	170
MAY 28...	1020	1450	2700	25.0	540	400	150	40	360

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 29...	2	4.2	83	29	65	.20	6.8	240
NOV 30...	12	7.5	160	560	1300	.30	9.4	3100
FEB 25...	2	4.7	102	51	110	.20	9.2	360
MAR 25...	6	5.2	121	190	390	.40	7.6	1000
APR 23...	5	7.1	96	130	260	.20	6.3	710
MAY 28...	7	7.4	145	300	600	.40	6.5	1600

07315500 RED RIVER NEAR TERRAL, OK--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (US/CM)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1984	41354	2110	1280	143000	490	54300	270	30400	410
NOV.	1984	19279	2320	1390	72300	510	26500	300	15700	470
DEC.	1984	62760	2150	1300	220000	490	82400	280	47100	420
JAN.	1985	152760	718	425	175000	150	61300	95	39300	150
FEB.	1985	153029	1240	745	308000	270	112500	160	67100	250
MAR.	1985	273550	1270	752	555000	270	195800	170	124200	270
APR.	1985	146496	1940	1160	458000	420	164700	260	100900	400
MAY	1985	110915	2280	1360	408000	490	148000	300	89400	460
JUNE	1985	333560	1900	1130	1020000	410	368900	250	224100	390
JULY	1985	29941	5250	3220	260000	1300	101800	670	53900	970
AUG.	1985	20218	5240	3210	175000	1300	68500	660	36300	960
SEPT.	1985	13464	6070	3760	137000	1500	54900	760	27600	1100
TOTAL		1357326	**	**	3932000	**	1440000	**	856000	**
WTD.AVG.		3719	1790	1070	**	390	**	230	**	360

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5550	1580	5260	255	2550	1330	1700	1420	5620	4680	6100	5040
2	4600	1140	5300	558	1420	1580	1060	2360	7000	4500	5840	4560
3	4650	2390	5330	617	1940	1820	1550	2860	6740	5360	5550	4420
4	4930	1880	5520	705	3110	1540	1820	2450	5990	5250	5500	4800
5	5350	1780	5370	811	3570	1380	1400	2090	3270	4960	5440	5190
6	5530	2350	5480	939	5010	975	1450	1890	1120	5080	5220	5320
7	5600	3280	5610	1070	5100	904	1730	1920	1500	5210	5160	5440
8	5780	3040	5540	898	5680	1200	1650	1930	1930	5220	5250	5240
9	5920	3000	5680	700	5520	1030	1640	2040	1150	5340	5340	4640
10	6100	3300	5810	395	6020	1010	1850	2360	1200	5660	5420	4510
11	6530	3670	5510	559	5940	1200	2110	2400	1420	5630	5580	4370
12	6760	4010	5390	570	5710	1380	2300	2510	1400	5290	5500	4440
13	6790	4280	4420	610	6210	1480	2770	2500	1420	5390	5550	4390
14	6710	4490	1070	670	6410	1480	3720	2650	1470	5350	5230	4140
15	6390	4330	1000	580	6360	1420	3860	2820	1720	5230	2620	4050
16	6510	4590	767	728	6790	1190	3700	3530	1950	5010	3940	4150
17	6920	4690	664	910	7280	1160	3370	3770	2140	4910	4230	4280
18	4230	3930	713	1030	7160	1310	3820	4470	2750	5050	4620	4080
19	5520	2840	928	1520	6870	1430	3960	4590	3840	4920	4310	3880
20	5390	1440	2270	2370	6130	847	4150	4160	2240	4940	4820	7490
21	3610	1310	3610	3930	2040	798	3970	3650	2670	4530	4620	6920
22	3670	1170	3460	3500	1160	619	1520	3370	4230	5090	5760	6590
23	4610	1470	3830	2230	1040	1170	1590	2150	4940	5180	5820	6530
24	2820	2080	4060	2560	548	1340	1620	1270	4410	5320	5860	6330
25	2070	2670	4600	2860	634	2140	1520	1360	4120	5290	5330	6480
26	2410	3370	4830	3060	834	2810	2920	2130	3960	5160	5210	9320
27	1750	3870	5130	3220	1140	2600	2370	2200	3580	4550	5520	8330
28	558	4100	5490	3440	1330	2330	2000	2750	3720	4390	4980	7540
29	402	4850	6030	3630	---	1700	1790	2920	3140	4360	4770	7470
30	630	5060	6170	3490	---	1010	2570	3060	3360	5700	5400	6300
31	1550	---	4200	3700	---	1590	---	4200	---	7290	6020	---
MEAN	4510	3070	4160	1680	4050	1410	2380	2700	3130	5160	5180	5540

07315500 RED RIVER NEAR TERRAL, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	17.0	11.0	4.0	---	12.0	14.0	22.0	30.0	28.0	32.0	32.0
2	22.0	16.0	11.0	2.0	.0	11.0	15.0	23.0	30.0	27.0	33.0	32.0
3	22.0	17.0	9.0	3.0	1.0	15.0	18.0	24.0	30.0	29.0	33.0	32.0
4	20.0	18.0	6.0	2.0	.0	16.0	19.0	23.0	28.0	30.0	32.0	32.0
5	25.0	17.0	5.0	4.0	1.0	13.0	18.0	23.0	22.0	31.0	32.0	26.0
6	27.0	---	6.0	6.0	1.0	11.0	18.0	24.0	22.0	31.0	33.0	25.0
7	27.0	18.0	8.0	7.0	4.0	12.0	17.0	25.0	23.0	31.0	32.0	26.0
8	26.0	20.0	11.0	8.0	5.0	14.0	17.0	25.0	22.0	31.0	---	26.0
9	25.0	21.0	13.0	8.0	10.0	13.0	17.0	25.0	29.0	32.0	34.0	27.0
10	24.0	15.0	13.0	5.0	7.0	15.0	16.0	24.0	28.0	34.0	34.0	27.0
11	22.0	15.0	---	3.0	6.0	17.0	20.0	26.0	28.0	34.0	33.0	27.0
12	24.0	15.0	15.0	2.0	8.0	13.0	21.0	27.0	25.0	33.0	31.0	28.0
13	24.0	16.0	12.0	3.0	9.0	12.0	21.0	25.0	25.0	31.0	31.0	26.0
14	22.0	19.0	8.0	4.0	9.0	13.0	23.0	23.0	26.0	32.0	27.0	24.0
15	21.0	17.0	11.0	5.0	10.0	13.0	24.0	25.0	27.0	32.0	30.0	23.0
16	19.0	---	9.0	6.0	10.0	12.0	24.0	26.0	29.0	30.0	33.0	22.0
17	17.0	11.0	9.0	7.0	10.0	14.0	24.0	27.0	29.0	31.0	---	28.0
18	22.0	9.0	7.0	9.0	---	14.0	24.0	25.0	27.0	33.0	34.0	24.0
19	19.0	8.0	7.0	10.0	---	14.0	23.0	---	28.0	33.0	34.0	25.0
20	17.0	8.0	9.0	.0	12.0	13.0	24.0	25.0	26.0	32.0	34.0	24.0
21	15.0	9.0	10.0	2.0	14.0	13.0	24.0	23.0	27.0	30.0	32.0	23.0
22	13.0	9.0	9.0	3.0	15.0	12.0	---	25.0	27.0	32.0	32.0	26.0
23	15.0	10.0	10.0	5.0	15.0	15.0	21.0	24.0	28.0	30.0	31.0	20.0
24	13.0	9.0	8.0	6.0	13.0	16.0	22.0	26.0	29.0	30.0	32.0	19.0
25	15.0	13.0	5.0	8.0	14.0	17.0	22.0	27.0	29.0	31.0	30.0	19.0
26	15.0	12.0	6.0	5.0	12.0	16.0	22.0	28.0	29.0	32.0	30.0	17.0
27	17.0	9.0	11.0	5.0	11.0	19.0	23.0	27.0	25.0	---	30.0	17.0
28	17.0	10.0	17.0	6.0	11.0	19.0	23.0	29.0	27.0	34.0	30.0	18.0
29	17.0	11.0	18.0	9.0	---	18.0	23.0	31.0	28.0	33.0	31.0	18.0
30	18.0	11.0	11.0	5.0	---	14.0	21.0	30.0	28.0	31.0	32.0	18.0
31	21.0	---	8.0	---	---	11.0	---	27.0	---	30.0	33.0	---
MEAN	20.0	13.5	10.0	5.0	8.5	14.0	20.5	25.5	27.0	31.5	32.0	24.5

07315700 MUD CREEK NEAR COURTNEY, OK

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, Hydrologic Unit, 11130201, on downstream side of bridge on State Highway 89, 4.0 mi downstream from North Mud Creek, 6.0 mi northwest of Courtney, and at mile 11.5.

DRAINAGE AREA.--572 mi^2.

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

REVISED RECORDS.--WDR OK-78-2: Maximum gage height.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 727.72 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, auxiliary water-stage recorder 2.0 mi downstream from base gage.

REMARKS.--Estimated daily discharges: Oct. 1-22, Dec. 10-12, Feb. 1-6, May 27 to June 4, 24, July 16-18, 27-31, Aug. 11-14. Records good.

AVERAGE DISCHARGE.--25 years, 140 ft^3/s, 101,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft^3/s May 1, 1974, gage height, 31.37 ft: no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1957, reached a stage of 30.6 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 21	(HWM)	1,420	21.81	Mar. 6	1500	1,530	22.31
Oct. 26	1300	3,680	24.35	Mar. 21	1945	12,700	27.61
Dec. 16	1915	6,100	25.71	Mar. 31	1600	8,510	26.50
Jan. 2	0145	*13,900	*27.81	Apr. 23	0645	4,960	25.53
Feb. 25	0030	7,750	26.28	June 6	1500	8,930	27.11

No flow Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	653	8.5	8580	56	182	5280	411	24	37	2.7	.64
2	.00	1170	8.0	10600	52	200	2600	429	23	28	2.6	.58
3	.00	741	7.3	4690	49	191	396	174	23	23	2.1	.48
4	.00	128	6.9	1920	47	734	220	113	29	21	2.0	.95
5	.10	55	6.9	273	46	1350	172	90	482	19	1.6	1.1
6	.10	34	6.6	171	50	1450	136	77	6490	18	1.4	.99
7	.10	23	6.4	124	66	474	105	67	4140	16	1.4	1.0
8	.10	16	6.4	99	77	151	92	59	4370	14	1.3	.91
9	.12	13	5.9	87	196	119	83	62	3330	13	1.2	.79
10	.18	10	5.1	83	296	100	79	55	1690	11	1.1	.68
11	.20	8.6	4.9	83	226	89	77	50	300	11	1.0	.63
12	.25	7.6	4.7	78	110	84	76	45	261	9.6	.95	.49
13	.50	6.4	260	70	71	83	83	44	323	9.2	.90	1.1
14	1.0	5.7	2030	64	61	83	86	43	159	8.2	.85	1.5
15	1.1	4.8	4280	64	54	184	107	50	98	7.2	45	17
16	1.5	4.1	5820	64	49	118	86	63	77	6.5	8.2	7.6
17	3.0	6.1	5100	62	44	83	73	46	63	6.2	2.8	3.3
18	5.0	443	4410	61	42	80	68	37	63	6.0	1.6	2.0
19	20	1040	2030	59	40	77	64	33	107	11	1.2	1.5
20	200	672	181	54	43	936	62	34	321	8.2	1.0	1.3
21	800	95	103	48	718	8720	62	263	172	6.3	1.0	1.0
22	350	53	90	40	1480	7370	1170	222	80	5.4	.98	.87
23	58	36	86	37	4100	4210	4710	148	56	5.0	.98	.76
24	67	27	73	42	6750	2130	4110	63	45	6.2	1.0	.62
25	662	20	62	46	6140	614	3320	39	36	4.5	.94	.56
26	1970	16	53	46	3260	258	662	35	31	3.8	.87	.48
27	1570	15	44	48	739	179	197	32	31	3.6	.82	.37
28	2240	12	41	52	216	140	148	30	80	3.4	.73	.36
29	2420	10	41	58	---	349	183	28	134	3.2	.69	5.9
30	1700	8.8	42	62	---	2790	321	26	65	3.0	.64	.88
31	106	---	726	61	---	6300	---	25	---	2.9	.62	---
TOTAL	12176.25	5334.1	25549.6	27826	25078	39828	24828	2893	23103	330.4	90.17	56.34
MEAN	393	178	824	898	896	1285	828	93.3	770	10.7	2.91	1.88
MAX	2420	1170	5820	10600	6750	8720	5280	429	6490	37	45	17
MIN	.00	4.1	4.7	37	40	77	62	25	23	2.9	.62	.36
AC-FT	24150	10580	50680	55190	49740	79000	49250	5740	45820	655	179	112

CAL YR 1984	TOTAL	50056.20	MEAN	137	MAX	5820	MIN	.00	AC-FT	99290
WTR YR 1985	TOTAL	187092.86	MEAN	513	MAX	10600	MIN	.00	AC-FT	371100

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW 1/4 sec.36, T.9 S., R.1 E., Love County, OK, Hydrologic Unit 11130201, on downstream right bank near end of bridge on Interstate 35, 0.2 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 5.0 mi downstream from Fish Creek, 4.5 mi southwest of Thackerville, OK, 7.0 mi north of Gainesville, and at mile 791.5.

DRAINAGE AREA.--30,782 mi^2 of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft, National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-2, 24-25, Nov. 7 to Dec. 17, Dec. 21 to Jan. 2, 9-17, 27, Feb. 1-6, June 13-16, June 18 to July 10. Records poor. Flow slightly regulated by Lake Kemp (station 07312000 in Texas), since 1943 by Lake Altus (station 07302500 in Oklahoma), since 1946 by Lake Kickapoo (station 07314000 in Texas), since 1967 by Lake Arrowhead (station 07314800 in Texas) and Moss Lake (station 07315950 in Texas).

COOPERATION.--Gage-height record and 6 discharge measurements furnished by U.S. Army Corps of Engineers, records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--49 years, 2,786 ft^3/s, 2,018,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 168,000 ft^3/s June 9, 1941, gage height, 24.15 ft, maximum gage height, 37.14 ft Oct. 24, 1983; minimum discharge, 48 ft^3/s Jan. 27, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 24,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 3	1100	52,300	20.15	Mar. 31	0330	45,800	19.46
Feb. 25	1800	54,300	20.44	June 7	1930	*77,400	*24.56
Mar. 22	1030	54,600	20.47				

Minimum daily discharge, 205 ft^3/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	3890	1310	17200	2000	8410	18700	20100	2780	3200	1510	1250
2	350	3050	1290	46200	3600	7580	16300	16300	2780	3100	1980	1280
3	325	4150	1260	47900	3500	7130	11800	15200	2630	3000	1680	1280
4	307	3690	1240	20200	3480	6960	10000	11200	2450	2500	1440	1230
5	268	2740	1260	10100	2560	10600	9310	8800	3100	2000	1220	1220
6	246	2260	1290	7180	2030	16500	8450	8380	48700	1600	1090	1220
7	242	2000	1260	6170	2020	13000	7880	7520	73700	1300	1030	1230
8	226	1740	1230	5000	1800	12300	7150	6620	72200	1100	1020	1240
9	220	1550	1200	4600	1670	9260	6880	5800	69700	970	997	1250
10	218	1410	1170	4400	1850	7770	6680	5200	46000	980	973	1280
11	208	1260	1130	4200	2100	6900	6160	4880	21300	970	923	1290
12	205	1210	1120	4100	2080	6340	5370	4560	16800	898	889	1290
13	206	1100	1180	3900	1930	6120	4870	4390	15400	849	876	1360
14	313	1110	1910	3800	1730	6170	4580	4260	13400	816	868	1550
15	407	1060	7830	3800	1610	5970	3880	3810	11800	810	891	1560
16	466	932	9360	3700	1540	6070	3500	3790	9380	778	943	1500
17	538	1030	13000	3500	1500	7630	3430	3870	7300	791	1200	1520
18	575	1160	18000	3160	1470	6820	3410	3230	7190	794	1140	1540
19	594	1630	13800	2440	1450	5600	3420	2880	5990	747	1060	1560
20	838	2540	8800	2010	1450	8840	3270	2790	4240	739	1060	1530
21	1710	3340	7000	1890	1450	37200	3050	4120	4800	723	1060	1550
22	2960	3680	5400	1730	2600	51700	5050	4360	5950	729	1040	1690
23	2030	3130	4500	1600	7580	31700	12600	4420	5250	729	1040	1760
24	1760	2290	4000	1600	28600	18600	17100	3910	3970	746	1060	1690
25	1650	1870	3500	1560	48900	11500	14500	4920	3060	770	1140	1650
26	5470	1660	3000	1520	27700	9090	12600	5230	2600	729	1170	1630
27	5560	1520	2500	1600	13500	8050	8880	4210	2550	702	1160	1590
28	7520	1440	2200	1690	9850	7570	6500	3560	2810	688	1160	1860
29	18200	1410	2000	1670	---	8110	5700	3290	3040	686	1170	2350
30	11800	1360	1900	1660	---	30600	8850	3090	3210	695	1200	2380
31	7010	---	4000	1620	---	36500	---	2890	---	700	1230	---
TOTAL	72812	61212	128640	221700	181550	416590	239870	187580	474080	35839	35220	45330
MEAN	2349	2040	4150	7152	6484	13440	7996	6051	15800	1156	1136	1511
MAX	18200	4150	18000	47900	48900	51700	18700	20100	73700	3200	1980	2380
MIN	205	932	1120	1520	1450	5600	3050	2790	2450	686	868	1220
AC-FT	144400	121400	255200	439700	360100	826300	475800	372100	940300	71090	69860	89910

CAL YR 1984 TOTAL 507811 MEAN 1387 MAX 18200 MIN 130 AC-FT 1007000
WTR YR 1985 TOTAL 2100423 MEAN 5755 MAX 73700 MIN 205 AC-FT 4166000

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1944 to April 1946, October 1952 to September 1964, October 1966 to current year. Pesticide analyses: April 1978 to September 1982.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to April 1946, October 1952 to September 1964, October 1966 to current year.
WATER TEMPERATURES: October 1952 to September 1963, October 1966 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the U.S. Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,100 microsiemens July 16, 1972, and June 19, 1984; minimum daily, 176 microsiemens Nov. 4, 1958.
WATER TEMPERATURES: Maximum daily, 35.0 °C on several days during summer months; minimum daily, 0.0 °C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,830 microsiemens Sept. 27; minimum daily, 330 microsiemens June 7.
WATER TEMPERATURES: Maximum daily, 35.0 °C Aug. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT												
23...	0910	2270	1500	8.0	13.5	460	9.7	94	2.2	2900	15000	250
DEC												
04...	0915	1250	4200	8.5	7.0	60	11.6	98	2.7	60	80	710
FEB												
26...	1030	31900	510	7.8	12.5	730	7.9	75	2.7	4500	2000	120
APR												
02...	1000	17100	800	8.0	14.0	500	8.8	87	2.5	4200	5900	180
JUN												
26...	1400	2710	3800	8.1	29.5	220	7.2	98	1.8	785	82	640
AUG												
06...	1215	1110	5700	7.8	30.0	220	6.7	92	.7	131	92	1000

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
23...	200	69	19	220	6	5.2	48	180	340	.30	4.5
DEC											
04...	540	190	58	570	10	7.4	176	420	990	.30	9.7
FEB											
26...	46	34	8.5	54	2	3.5	74	38	83	.20	9.5
APR											
02...	95	49	13	110	4	4.2	82	87	180	.10	7.6
JUN											
26...	440	180	46	570	10	8.2	200	420	950	.40	11
AUG											
06...	880	300	61	840	12	11	125	690	1500	.60	9.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
23...	870	870	.55	.060	1.5	.330	.080	<.010	394	2410	99
DEC											
04...	2420	2400	.63	.080	2.4	.320	.260	.250	46	155	97
FEB											
26...	281	280	.37	.120	3.9	.790	.080	.080	3630	313000	57
APR											
02...	499	500	.30	.080	2.4	.640	.060	.050	--	--	--
JUN											
26...	2360	2300	.47	.090	.70	.230	.100	.110	--	--	--
AUG											
06...	3690	3500	--	--	--	--	--	--	--	--	--

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985--Continued

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT 23...	0910	1	110	<.0	<1	<1	<3	1	22	4
FEB 26...	1030	1	88	<.5	<1	<1	<3	4	190	4
APR 02...	1000	<1	120	<.5	<1	<1	<3	6	49	5
AUG 06...	1215	6	400	<10	1	<1	<1	2	30	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 23...	18	8	<.1	<10	3	<1	<1	930	<6	10
FEB 26...	7	9	<.1	<10	5	<1	<1	310	<6	3
APR 02...	12	5	<.1	<10	2	<1	<1	480	<6	8
AUG 06...	40	10	<.1	4	2	2	<1	3000	38	20

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (US/CM)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1984	72812	1490	879	173000	360	70300	180	35300	290
NOV.	1984	61212	1630	949	157000	380	63100	200	32300	330
DEC.	1984	128640	1680	988	343000	400	139000	200	70300	330
JAN.	1985	221700	1170	682	408000	270	164200	140	84100	240
FEB.	1985	181550	1590	936	459000	380	186200	190	93900	310
MAR.	1985	416590	932	536	603000	210	240800	110	125300	200
APR.	1985	239870	1330	767	497000	310	199200	160	102900	270
MAY	1985	187580	2050	1190	604000	480	243300	250	124400	420
JUNE	1985	474080	1230	715	915000	290	367600	150	188900	250
JULY	1985	35839	4080	2440	236000	1000	96800	490	47900	770
AUG.	1985	35220	5050	3060	291000	1300	120000	620	58500	920
SEPT.	1985	45330	4850	2930	359000	1200	147900	590	72300	890
TOTAL		2100423	**	**	5044000	**	2038000	**	1036000	**
WTD.AVG.		5755	1520	889	**	360	**	180	**	300

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5960	436	3070	1500	4160	985	752	2440	2600	2960	4440	5240
2	5820	633	3440	654	3760	1080	830	1940	2800	2690	5520	4970
3	5690	779	3720	539	3980	1180	918	1730	3100	2980	6690	4530
4	5930	711	4160	441	4120	1410	1000	2010	4810	3690	6720	5230
5	5190	762	4380	463	4320	1250	1350	2750	3300	4030	6110	5640
6	5030	1540	4610	758	4430	875	1450	2290	1600	4720	5620	5570
7	4970	1730	4550	886	4210	933	1470	1960	330	5380	5370	5160
8	5180	1700	4570	1050	4050	949	1450	1790	507	4500	5090	4610
9	4710	1680	4610	1330	3830	972	1590	1780	794	4370	5070	4440
10	4810	1840	4630	1500	3420	1000	1690	1870	1280	4380	4980	4460
11	4960	2090	4750	1540	3220	1030	1680	1930	1160	4430	4920	4780
12	5110	2530	4780	1760	3450	1050	1690	2080	1270	4550	4830	5100
13	5030	2960	4270	1870	3700	1090	1600	1880	1440	4660	4810	5000
14	5260	2920	3910	1950	4110	1270	1830	2020	1400	4710	4830	4320
15	5910	2940	1070	1500	4320	1430	1950	2280	1430	4900	4780	4170
16	6220	3140	660	1490	4390	1470	2170	2230	1440	4850	5030	3990
17	6530	3270	642	1670	4570	1640	2750	2320	1690	4710	5230	3790
18	6360	3330	567	1850	4850	1500	3100	2390	1820	4620	4420	4150
19	5990	2860	562	2060	4820	1220	3180	2790	1880	4710	3750	3920
20	5860	2680	616	2280	4920	727	3030	2940	1970	4690	3170	4010
21	5050	2250	763	2810	4980	607	2880	2120	3160	4610	3800	3980
22	1680	1370	1170	3610	3400	547	1350	2060	2350	4550	4540	4070
23	2000	1350	2150	3970	2290	512	1070	2020	3050	4440	4350	4230
24	3020	1290	2850	4180	905	690	954	2480	3180	4490	4330	3630
25	3130	1260	2970	4200	558	914	927	953	3790	4330	4470	5470
26	1120	1280	3270	4430	556	1250	880	540	4000	4160	4580	6530
27	902	1550	3310	4390	669	1890	961	1820	4300	4140	5010	6830
28	790	1820	3480	4080	885	2410	1340	1900	3610	4560	5640	6030
29	760	2250	3520	4500	---	2250	1800	1950	3580	4860	5730	5510
30	485	2770	3740	4650	---	945	1310	2020	3410	4900	5360	5610
31	368	---	2840	4530	---	578	---	2580	---	4830	5160	---
MEAN	4190	1920	3020	2340	3460	1150	1630	2060	2370	4400	4980	4830

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	18.0	11.0		---	14.0	15.0	24.0	28.0	29.0	32.0	28.0
2	21.0	19.0	10.0		---	13.0	16.0	24.0	26.0	29.0	35.0	31.0
3	22.0	15.0	10.0		---	14.0	17.0	23.0	30.0	29.0	29.0	32.0
4	---	10.0	7.0		---	15.0	19.0	23.0	29.0	26.0	29.0	30.0
5	24.0	17.0	7.0		3.0	---	17.0	22.0	22.0	31.0	31.0	30.0
6	23.0	16.0	6.0		2.0	---	18.0	22.0	23.0	28.0	31.0	28.0
7	21.5	17.0	8.0		---	---	16.0	25.0	24.0	28.0	31.0	26.0
8	24.0	20.0	7.0		---	---	20.0	26.0	26.0	31.0	33.0	28.0
9	26.0	20.0	9.0		7.0	---	18.0	26.0	27.0	31.0	32.0	31.0
10	26.0	16.0	13.0		9.0	---	16.0	26.0	28.0	33.0	---	31.0
11	23.0	13.0	13.0		6.0	---	19.0	23.0	27.0	33.0	29.0	29.0
12	24.0	12.0	15.0		7.0	15.0	20.0	23.0	27.0	33.0	31.0	29.0
13	23.0	15.0	16.0		8.0	13.0	19.0	24.0	28.0	32.0	31.0	28.0
14	21.0	18.0	11.0		9.0	14.0	20.0	23.0	26.0	29.0	29.0	24.0
15	22.0	17.0	12.0		9.0	15.0	24.0	24.0	25.0	31.0	30.0	24.0
16	21.0	16.0	11.0		7.0	12.0	24.0	28.0	27.0	32.0	31.0	26.0
17	20.0	12.0	11.0		8.0	---	24.0	---	30.0	32.0	30.0	26.0
18	23.0	10.0	9.0		9.0	13.0	24.0	23.0	28.0	32.0	31.0	26.0
19	21.0	9.0	9.0		---	14.0	22.0	21.0	30.0	30.0	---	27.0
20	18.0	8.0	10.0		13.0	14.0	21.0	22.0	28.0	29.0	32.0	28.0
21	16.0	8.0	15.0		14.0	12.0	23.0	21.0	26.0	29.0	32.0	24.0
22	14.0	8.0	9.0		17.0	13.0	18.0	22.0	26.0	---	32.0	24.0
23	15.0	7.0	9.0		16.0	14.0	21.0	24.0	26.0	29.0	32.0	23.0
24	14.0	8.0	9.0		14.0	14.0	20.0	26.0	29.0	28.0	28.0	22.0
25	14.0	10.0	6.0		14.0	17.0	20.0	27.0	30.0	30.0	26.0	21.0
26	15.0	12.0	---		12.0	17.0	21.0	25.0	30.0	31.0	30.0	20.0
27	17.0	10.0	16.0		13.0	19.0	22.0	23.0	27.0	32.0	29.0	20.0
28	18.0	10.0	16.0		14.0	21.0	22.0	27.0	28.0	29.0	30.0	20.0
29	18.0	11.0	---		---	---	23.0	30.0	26.0	34.0	30.0	18.0
30	19.0	12.0	---		---	---	23.0	31.0	26.0	33.0	31.0	17.0
31	20.0	---	---		---	12.0	---	---	---	---	21.0	---
MEAN	20.0	13.0	10.5		10.0	14.5	20.0	24.5	27.0	30.5	30.5	25.5

07316500 WASHITA RIVER NEAR CHEYENNE, OK

LOCATION.--Lat 35°37'35", long 99°40'05", in SE 1/4 sec.5, T.13 N., R.23 W., Roger Mills County, Hydrologic Unit 11130301, on left bank on downstream side of bridge on U.S. Highway 283, 0.5 mi downstream from Sergeant Major Creek, 1.0 mi north of Cheyenne, 5.2 mi upstream from Dead Indian Creek, and at mile 543.9.

DRAINAGE AREA.--794 mi^2.

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,900.98 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). May 1, 1938 to Nov. 16, 1946, and Oct. 1, 1947 to Jan. 11, 1948, nonrecording gage at site 50 ft upstream and datum 5.00 ft higher. Jan. 12, 1948 to Dec. 31, 1976, at site 50 ft upstream and datum 5.00 ft higher. Jan. 1, 1976 to Dec. 20, 1979 at site 50 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 15-26. Records poor. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--48 years, 28.3 ft^3/s, 20,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft^3/s Apr. 29, 1954, gage height, 15.24 ft (datum then in use); from rating curve extended above 27,000 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 (at old bridge site).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 101 ft^3/s Feb. 23; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.78	3.0	3.9	36	31	71	1.9	.42	.00	.00
2	.00	.00	.70	2.8	3.8	32	31	52	2.2	.26	.00	.00
3	.00	.00	.56	3.1	4.4	31	31	42	3.0	.37	.00	.00
4	.00	.00	.59	4.6	4.4	30	28	37	3.7	.42	.01	.00
5	.00	.00	.61	4.4	4.1	29	24	30	19	.12	.13	.00
6	.00	.00	.56	4.0	4.8	28	22	26	27	.10	.00	.00
7	.00	.00	.59	3.4	11	24	20	28	17	.11	4.3	.00
8	.00	.00	.65	3.0	11	24	20	26	11	.02	13	.00
9	.00	.00	.69	3.1	12	24	20	22	8.2	.04	4.0	.00
10	.00	.00	.59	2.9	13	24	20	20	7.2	.05	1.8	.00
11	.00	.00	.78	3.5	17	24	21	17	13	.00	1.1	.00
12	.00	.00	.78	2.9	13	23	21	15	11	.00	.40	.00
13	.00	.00	.86	6.4	9.8	23	28	14	8.9	.00	.11	.00
14	.00	.00	1.0	4.3	7.2	23	27	13	7.6	.00	1.2	.00
15	.00	.00	19	5.3	9.6	21	26	13	6.7	.00	.83	.00
16	.00	.00	21	5.0	12	20	24	12	5.4	.00	1.1	.00
17	.00	.28	20	4.3	12	20	25	8.9	4.1	.00	1.0	.00
18	.00	.72	18	4.1	10	20	24	7.2	3.1	.00	.60	.00
19	.00	.30	7.7	3.8	11	20	22	5.4	2.6	.00	.37	.00
20	.00	.30	6.1	5.1	6.9	49	21	5.2	2.4	.00	.31	32
21	.00	.41	6.4	2.5	11	68	21	4.6	2.2	.00	.10	59
22	.00	.44	6.3	2.7	84	65	21	4.3	1.8	.00	.00	23
23	.00	.55	5.3	5.4	101	56	19	4.0	1.5	.00	.00	15
24	.00	.61	5.3	15	81	47	18	3.5	1.2	.00	.00	7.9
25	.00	.67	3.8	9.0	72	41	17	2.7	.96	.02	.00	6.1
26	.00	.67	4.7	3.8	61	42	19	2.5	1.5	.00	.00	5.0
27	.00	.74	4.1	6.0	47	40	24	2.5	1.5	.00	.00	4.2
28	.00	.59	4.1	6.0	40	37	26	2.6	.80	.00	.00	3.5
29	.00	.76	3.8	5.4	---	35	29	2.6	.57	.00	.00	6.5
30	.00	.78	3.7	6.1	---	39	60	2.2	.68	.00	.00	8.2
31	.00	---	3.4	8.4	---	35	---	2.0	---	.00	.00	---
TOTAL	.00	7.82	152.44	149.3	677.9	1030	740	498.2	177.71	1.93	30.36	170.40
MEAN	.00	.26	4.92	4.82	24.2	33.2	24.7	16.1	5.92	.06	.98	5.68
MAX	.00	.78	21	15	101	68	60	71	27	.42	13	59
MIN	.00	.00	.56	2.5	3.8	20	17	2.0	.57	.00	.00	.00
AC-FT	.00	16	302	296	1340	2040	1470	988	352	3.8	60	338

CAL YR 1984	TOTAL	3354.13	MEAN	9.16	MAX	61	MIN	.00	AC-FT	6650
WTR YR 1985	TOTAL	3636.06	MEAN	9.96	MAX	101	MIN	.00	AC-FT	7210

07324200 WASHITA RIVER NEAR HAMMON, OK

LOCATION.--Lat 35°39'23", long 99°18'21", on west line of sec.26, T.14 N., R.20 W., Custer County, Hydrologic Unit 11130301, on right bank near county road bridge, 2.2 mi downstream from Quartermaster Creek, 4.7 mi northeast of Hammon, and at mile 494.5.

DRAINAGE AREA.--1,387 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,643.22 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 5, Nov. 7 to Jan. 8, Feb. 9-13, 25-26. Records poor. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--16 years, 32.5 ft^3/s, 23,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,000 ft^3/s May 17, 1982, gage height, 23.44 ft, from rating curve extended above 2,500 ft^3/s on basis of slope-area measurement; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 220 ft^3/s Feb. 23, gage height, 8.80 ft, no peak above base of 1,500 ft^3/s; minimum daily discharge, 0.25 ft^3/s Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.30	1.4	4.5	7.2	42	51	34	5.9	3.8	1.1	.83
2	.85	.28	1.2	4.0	8.1	39	46	46	6.4	3.4	1.1	.83
3	.82	.27	1.0	6.0	8.8	37	44	45	6.5	3.3	1.1	.83
4	.80	.26	1.1	10	9.8	34	43	37	7.5	3.0	1.1	.83
5	.80	.25	1.0	8.0	11	32	34	33	49	3.0	1.3	.83
6	.75	.27	.98	6.0	11	30	36	30	30	2.7	1.3	.62
7	.80	.30	.98	4.0	11	29	33	29	19	2.4	1.5	.62
8	.78	.31	1.1	3.0	12	28	31	30	18	2.4	1.3	.62
9	.72	.32	1.4	2.8	9.9	29	29	28	14	2.2	.94	.62
10	.70	.34	1.2	2.6	8.0	29	29	25	13	1.9	1.2	.62
11	.68	.33	1.1	3.5	7.5	28	28	24	12	1.9	1.1	.62
12	.66	.35	1.3	3.5	8.0	27	27	21	13	1.6	.92	.62
13	.64	.34	1.5	2.7	9.0	27	35	20	12	1.5	1.3	.83
14	.66	.36	1.7	3.0	9.5	26	39	19	11	1.5	22	.83
15	.64	.34	65	5.1	9.1	24	38	18	9.4	1.3	4.5	.83
16	.60	.55	70	3.2	9.2	23	33	16	7.9	1.4	3.1	.83
17	.58	1.2	75	3.8	8.8	23	30	15	6.9	1.4	1.7	.83
18	.56	1.0	65	2.9	8.8	23	29	15	6.5	1.2	1.2	.83
19	.54	.94	50	3.0	8.9	23	27	14	6.2	1.3	1.1	.83
20	.52	.92	30	3.5	9.7	48	26	13	5.9	1.3	1.1	1.1
21	.51	.94	20	4.2	11	84	24	12	5.2	1.1	1.1	5.8
22	.50	.96	10	3.4	28	83	23	12	5.1	1.1	1.1	8.6
23	.48	.98	8.2	3.8	170	83	23	12	4.4	1.3	1.1	2.4
24	.46	.99	8.0	6.6	115	75	22	11	4.2	.97	1.1	1.9
25	.44	1.1	7.5	5.8	73	66	21	9.9	3.9	6.6	1.1	1.3
26	.42	1.2	7.0	7.9	63	62	20	8.7	4.0	6.4	1.1	.83
27	.40	1.3	6.5	5.5	55	57	21	7.7	6.4	1.7	1.1	.83
28	.38	1.4	5.6	6.1	46	55	21	7.0	8.8	1.4	1.1	.83
29	.36	1.5	5.4	6.2	---	52	23	6.9	5.9	1.3	.83	1.1
30	.32	1.6	5.2	6.1	---	50	33	6.6	4.1	1.2	.83	1.1
31	.32	---	5.0	6.7	---	53	---	6.2	---	1.2	.83	---
TOTAL	18.57	21.20	460.36	147.4	746.3	1321	919	612.0	312.1	66.77	61.25	40.09
MEAN	.60	.71	14.9	4.75	26.7	42.6	30.6	19.7	10.4	2.15	1.98	1.34
MAX	.88	1.6	75	10	170	84	51	46	49	6.6	22	8.6
MIN	.32	.25	.98	2.6	7.2	23	20	6.2	3.9	.97	.83	.62
AC-FT	37	42	913	292	1480	2620	1820	1210	619	132	121	80

CAL YR 1984	TOTAL	7675.99	MEAN	21.0	MAX	431	MIN	.12	AC-FT	15230
WTR YR 1985	TOTAL	4726.04	MEAN	12.9	MAX	170	MIN	.25	AC-FT	9370

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to September 1979.
WATER TEMPERATURE: October 1969 to September 1979.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bimonthly on one of these samples. Additional samples were collected semiannually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	METRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	DISSOLVED (PERCENT SATURATION)
NOV											
06...	1600	1028	80020	0.3	2290	7.50	20.0	12.0	720	11.2	111
JAN											
29...	1025	1028	80020	6.2	2440	7.50	--	4.0	--	--	--
MAR											
04...	1600	1028	80020	34	1640	7.90	--	12.0	--	--	--
APR											
11...	1600	1028	80020	27	1960	7.70	--	23.0	--	--	--
JUN											
04...	1030	1028	80020	6.0	2330	7.80	22.0	20.0	720	8.7	102
18...	1635	1028	80020	6.2	2030	7.80	--	26.0	--	--	--
AUG											
13...	1530	1028	80020	1.1	2050	7.50	--	27.0	--	--	--

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
NOV											
06...	1200	920	230	140	61	10	0.8	5.0	234	14	1100
JAN											
29...	--	--	--	--	--	--	--	--	--	--	1400
MAR											
04...	--	--	--	--	--	--	--	--	--	--	600
APR											
11...	--	--	--	--	--	--	--	--	--	--	940
JUN											
04...	1400	1200	320	150	100	13	1	5.8	195	6.0	1200
18...	--	--	--	--	--	--	--	--	--	--	920
AUG											
13...	--	--	--	--	--	--	--	--	--	--	1100

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)
NOV										
06...	52	0.4	20	1960	1700	2.7	1.6	0.38	<100	2
JAN										
29...	46	--	--	--	--	--	--	--	--	--
MAR										
04...	74	--	--	1260	--	--	--	--	--	--
APR										
11...	75	--	--	1560	--	--	--	--	--	--
JUN										
04...	57	0.4	14	1460	2000	2.0	24	<0.10	<100	3
18...	68	--	--	1740	--	--	--	--	--	--
AUG										
13...	56	--	--	1880	--	--	--	--	--	--

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
06...	400	1	<10	1	40	3	180	<0.1	<1	10
JAN										
29...	--	--	--	--	--	--	--	--	--	--
MAR										
04...	--	--	--	--	--	--	--	--	--	--
APR										
11...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	520	1	10	3	30	<1	140	--	<1	20
18...	--	--	--	--	--	--	--	--	--	--
AUG										
13...	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	---	---	---	---	---		---	
2				---	---	---	---	---	---		---	
3				---	---	---	---	---	2350		---	
4				---	---	1640	---	---	---		---	
5				---	---	---	---	---	---		---	
6				---	---	---	---	---	---		---	
7				---	---	---	---	---	---		---	
8				---	---	---	---	1700	---		---	
9				---	---	---	---	---	---		---	
10				---	---	---	---	---	---		---	
11				---	---	---	1960	---	---		---	
12				---	---	---	---	---	---		---	
13				---	---	---	---	---	---		2050	
14				---	---	---	---	---	---		---	
15				---	---	---	---	---	---		---	
16				---	---	---	---	---	---		---	
17				---	---	---	---	---	---		---	
18				---	---	1870	---	---	2030		---	
19				---	2220	---	---	---	---		---	
20				---	---	---	---	2000	---		---	
21				---	---	---	1920	---	---		---	
22				---	2030	---	---	---	---		---	
23				---	983	---	---	---	---		---	
24				---	---	---	---	---	---		---	
25				---	---	---	---	---	---		---	
26				---	---	---	1970	---	---		---	
27				---	---	---	---	---	---		---	
28				---	---	---	2170	---	---		---	
29				2440	---	1700	---	---	---		---	
30				---	---	---	---	---	---		---	
31				---	---	---	---	---	---		---	
MEAN				2440	1740	1740	2010	1850	2190		2050	

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	---	---	---	---	---		---	
2				---	---	---	---	---	---		---	
3				---	---	---	---	---	27.0		---	
4				---	---	12.0	---	---	---		---	
5				---	---	---	---	---	---		---	
6				---	---	---	---	---	---		---	
7				---	---	---	---	---	---		---	
8				---	---	---	---	---	---		---	
9				---	---	---	---	---	---		---	
10				---	---	---	---	---	---		---	
11				---	---	---	23.0	---	---		---	
12				---	---	---	---	---	---		---	
13				---	---	---	---	---	---		27.0	
14				---	---	---	---	---	---		---	
15				---	---	---	---	---	---		---	
16				---	---	---	---	---	---		---	
17				---	---	---	---	---	---		---	
18				---	---	16.0	---	---	26.0		---	
19				---	13.0	---	---	---	---		---	
20				---	---	---	---	23.5	---		---	
21				---	---	---	25.0	---	---		---	
22				---	15.0	---	---	---	---		---	
23				---	15.0	---	---	---	---		---	
24				---	---	---	---	---	---		---	
25				---	---	---	---	---	---		---	
26				---	---	---	20.5	---	---		---	
27				---	---	---	---	---	---		---	
28				---	---	---	---	---	---		---	
29				4.0	---	16.0	---	---	---		---	
30				---	---	---	---	---	---		---	
31				---	---	---	---	---	---		---	
MEAN				4.0	14.5	14.5	23.0	23.5	26.5		27.0	

07324300 FOSS RESERVOIR NEAR FOSS, OK

LOCATION.--Lat 35°32'18", long 99°10'40", in S 1/2 sec.2, T.12 N., R.19 W., Custer County, Hydrologic Unit 11130301, near right end of dam on Washita River, 0.5 mi upstream from Oak Creek, 3.5 mi west of Stafford, 6.0 6.0 mi north of Foss, and at mile 474.4.

DRAINAGE AREA.--1,496 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October, 1961, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam. Outlet consists of four 6- by 7-foot, 6-inch high pressure gates and one uncontrolled spillway. 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. Water-quality samples were collected at 3 profile sites in the Reservoir.

COOPERATION.--Elevations and data on diversions furnished by Foss Reservoir Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 195,800 acre-ft June 29, 1977, elevation, 1,644.53 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 147,000 acre-ft Apr. 30, elevation, 1,637.11 ft; minimum, 135,000 acre-ft Sept. 30, elevation 1,635.04 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)*	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1636.40	142,800	-	-
Oct. 31	1636.20	141,700	-1,100	134
Nov. 30	1635.90	139,900	-1,800	179
Dec. 31	1636.00	140,500	+600	126
CAL YR 84	-	-	-8,200	2,038
Jan. 31	1636.10	141,100	+600	129
Feb. 28	1636.30	142,200	+1,100	139
Mar. 31	1636.90	145,700	+3,500	165
Apr. 30	1637.10	146,900	+1,200	135
May 31	1637.10	146,900	-0-	161
June 30	1637.00	146,300	-600	177
July 31	1636.00	140,500	-5,800	233
Aug. 31	1635.70	138,800	-1,700	192
Sept. 30	1635.00	134,800	-4,000	188
WTR YR 85	-	-	-8,000	1,958

* Elevation at 0800 on the following day.

353325099111000 FOSS RESERVOIR AT SITE NO. 1 NEAR FOSS, OK

LOCATION.--Lat 35°33'25", long 99°11'10", in SW 1/4 sec.35, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 600 ft from left edge of water on a bearing of 250° from concrete structure at north end of dam.

PERIOD OF RECORD.--Water year 1980 to current year.

REMARKS.--Samples were collected in a Kemmerer sampler near bottom, mid-depth, and surface. Specific conductance, water temperature, pH, and dissolved oxygen were determined in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)
NOV									
16...	1023	1028	80020	1.00	140000	1760	8.00	--	12.0
16...	1043	1028	1028	5.00	140000	1740	7.90	--	12.5
16...	1046	1028	1028	10.0	140000	1750	8.00	--	12.0
16...	1049	1028	1028	15.0	140000	1750	7.90	--	12.0
16...	1052	1028	1028	20.0	140000	1750	7.90	--	12.0
16...	1056	1028	1028	25.0	140000	1750	7.90	--	12.0
16...	1058	1028	80020	30.0	140000	1740	7.90	--	12.0
16...	1059	1028	1028	35.0	140000	1750	7.90	--	12.0
16...	1103	1028	1028	40.0	140000	1750	7.90	--	12.0
16...	1105	1028	1028	45.0	140000	1760	7.90	--	12.0
16...	1107	1028	1028	50.0	140000	1750	7.90	--	12.0
16...	1109	1028	80020	53.0	140000	1760	8.00	--	12.0
MAY									
15...	1310	1028	80020	1.00	147000	1740	8.00	20.0	20.5
15...	1347	1028	1028	5.00	147000	1730	8.10	20.0	21.5
15...	1350	1028	1028	10.0	147000	1740	8.10	20.0	20.5
15...	1354	1028	80020	15.0	147000	1730	8.10	20.0	20.5
15...	1358	1028	1028	20.0	147000	1730	8.10	20.0	20.0
15...	1400	1028	1028	25.0	147000	1740	8.10	20.0	20.0
15...	1402	1028	1028	30.0	147000	1740	8.20	20.0	20.0
15...	1404	1028	80020	33.0	147000	1740	8.20	20.0	20.0
SEP									
10...	1056	1028	80020	1.00	136000	1920	7.90	25.5	26.0
10...	1058	1028	1028	5.00	136000	1930	8.20	25.5	25.5
10...	1100	1028	1028	10.0	136000	1920	8.30	25.5	25.5
10...	1102	1028	1028	15.0	136000	1940	8.20	25.5	25.5
10...	1106	1028	1028	20.0	136000	1930	8.20	25.5	25.0
10...	1109	1028	80020	25.0	136000	1940	8.20	25.5	25.0
10...	1112	1028	1028	30.0	136000	1940	8.20	25.5	25.0
10...	1116	1028	1028	35.0	136000	1940	8.20	25.5	25.5
10...	1119	1028	1028	40.0	136000	1940	8.20	25.5	25.5
10...	1122	1028	1028	45.0	136000	1930	8.20	25.5	25.0
10...	1132	1028	1028	50.0	136000	1930	8.20	25.5	25.0
10...	1135	1028	80020	53.0	136000	1930	8.20	25.5	25.0
25...	0930	1028	80020	1.00	136000	1950	8.00	16.5	21.0
25...	0932	1028	1028	5.00	136000	1930	8.10	16.5	21.0
25...	0934	1028	1028	10.0	136000	1940	8.20	16.5	21.0
25...	0936	1028	1028	15.0	136000	1930	8.20	16.5	21.0
25...	0938	1028	1028	20.0	136000	1950	8.20	16.5	21.0
25...	0940	1028	80020	25.0	136000	1930	8.20	16.5	21.0
25...	0943	1028	1028	30.0	136000	1960	8.20	16.5	21.0
25...	0946	1028	1028	35.0	136000	1950	8.30	16.5	21.0
25...	0949	1028	1028	40.0	136000	1950	8.20	16.5	21.0
25...	0952	1028	1028	45.0	136000	1950	8.20	16.5	21.0
25...	0955	1028	80020	48.0	136000	1950	8.30	16.5	20.5

353325099111000 FOSS RESERVOIR AT SITE NO. 1 NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV									
16...	5.9	730	9.2	90	940	820	180	120	93
16...	--	730	9.2	90	--	--	--	--	--
16...	--	730	8.8	86	--	--	--	--	--
16...	--	730	8.7	85	--	--	--	--	--
16...	--	730	8.6	83	--	--	--	--	--
16...	--	730	8.6	84	--	--	--	--	--
16...	5.0	730	8.6	84	940	820	180	120	91
16...	--	730	8.5	83	--	--	--	--	--
16...	--	730	8.5	83	--	--	--	--	--
16...	--	730	8.6	84	--	--	--	--	--
16...	--	730	8.5	83	--	--	--	--	--
16...	1.4	730	8.4	82	920	800	170	120	91
MAY									
15...	5.1	730	7.9	92	890	760	160	120	91
15...	--	730	7.9	94	--	--	--	--	--
15...	--	730	7.9	92	--	--	--	--	--
15...	--	730	7.9	92	940	810	180	120	91
15...	--	730	7.9	92	--	--	--	--	--
15...	--	730	7.9	91	--	--	--	--	--
15...	--	730	7.8	90	--	--	--	--	--
15...	76	730	8.0	93	920	780	170	120	91
SEP									
10...	2.7	720	7.2	94	920	800	170	120	93
10...	--	720	6.9	90	--	--	--	--	--
10...	--	720	6.8	88	--	--	--	--	--
10...	--	720	6.5	84	--	--	--	--	--
10...	--	720	6.2	80	--	--	--	--	--
10...	3.3	720	6.1	79	920	800	170	120	93
10...	--	720	6.1	79	--	--	--	--	--
10...	--	720	6.1	79	--	--	--	--	--
10...	--	720	6.3	82	--	--	--	--	--
10...	--	720	6.0	78	--	--	--	--	--
10...	--	720	6.4	83	--	--	--	--	--
10...	16	720	5.4	70	920	800	170	120	95
25...	8.0	720	6.2	74	920	800	170	120	96
25...	--	720	6.0	72	--	--	--	--	--
25...	--	720	6.0	72	--	--	--	--	--
25...	--	720	5.9	71	--	--	--	--	--
25...	--	720	5.7	68	--	--	--	--	--
25...	8.0	720	5.9	70	960	840	170	130	98
25...	--	720	5.7	68	--	--	--	--	--
25...	--	720	5.8	69	--	--	--	--	--
25...	--	720	6.0	72	--	--	--	--	--
25...	--	720	5.9	70	--	--	--	--	--
25...	8.0	720	5.9	70	920	800	170	120	98

353325099111000 FOSS RESERVOIR AT SITE NO. 1 NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV								
16...	17	1	11	126	2.4	870	54	1530
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	17	1	12	122	3.0	890	53	1520
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
16...	18	1	12	123	2.4	860	53	1520
MAY								
15...	18	1	13	136	2.6	--	55	1510
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	17	1	13	137	2.1	--	56	1520
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--
15...	17	1	13	135	1.6	--	53	1520
SEP								
10...	18	1	13	120	2.9	880	56	1580
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	18	1	12	121	1.5	880	54	1580
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	18	1	12	122	1.5	900	54	1580
25...	18	1	11	121	2.3	860	53	1590
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	18	1	11	121	1.5	900	55	1580
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	19	1	11	121	1.2	870	54	1600

353405099132500 FOSS RESERVOIR AT SITE NO. 2 NEAR FOSS OK

LOCATION.--Lat 35°34'05", long 99°13'25", in SE 1/4 sec.28, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 900 ft from left edge of water on a bearing 155° from campgrounds on north shore.

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
16...	1128	1028	1028	1.00	140000	1760	7.90	12.0	730	9.6	94
16...	1134	1028	1028	5.00	140000	1760	7.90	12.0	730	9.2	90
16...	1136	1028	1028	10.0	140000	1760	7.90	12.0	730	9.2	90
16...	1137	1028	1028	15.0	140000	1760	8.00	12.0	730	9.1	89
16...	1139	1028	1028	20.0	140000	1760	8.00	12.0	730	9.1	89
16...	1140	1028	1028	24.0	140000	1760	8.00	12.0	730	8.8	86
MAY											
15...	1456	1028	1028	1.00	147000	1740	8.20	20.5	730	7.9	92
15...	1500	1028	1028	5.00	147000	1750	8.30	20.5	730	8.0	93
15...	1502	1028	1028	10.0	147000	1740	8.30	20.5	730	7.9	92
15...	1504	1028	1028	15.0	147000	1750	8.30	20.0	730	7.7	89
SEP											
10...	1245	1028	1028	1.00	136000	1950	8.20	27.0	720	7.8	105
10...	1250	1028	1028	5.00	136000	1940	8.10	26.5	720	7.7	102
10...	1254	1028	1028	10.0	136000	1970	8.20	25.5	720	7.3	96
10...	1256	1028	1028	15.0	136000	1970	8.20	25.5	720	6.8	89
10...	1258	1028	1028	20.0	136000	1980	8.20	25.0	720	6.1	79
10...	1300	1028	1028	25.0	136000	1960	8.20	25.5	720	6.2	81
10...	1303	1028	1028	30.0	136000	1950	8.20	25.5	720	6.2	81
25...	1041	1028	1028	1.00	136000	1960	8.10	20.5	720	6.2	73
25...	1044	1028	1028	5.00	136000	1950	8.20	20.5	720	5.9	70
25...	1046	1028	1028	10.0	136000	1960	8.30	20.0	720	6.2	73
25...	1049	1028	1028	12.0	136000	1970	8.30	20.5	720	5.8	68

353615099135000 FOSS RESERVOIR AT SITE NO. 3 NEAR FOSS, OK

LOCATION.--Lat 35°36'15", long 99°13'50", in SE 1/4 sec.17, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 600 ft from left edge of water on a bearing 240° from small tributary on north shore.

PERIOD OF RECORD.--Water years 1980 to current year.

REMARKS.--Specific conductance, pH, water temperature and dissolved oxygen were measured in the field at 5-foot intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SAM-PLING DEPTH (FEET)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
16...	1153	1028	1028	1.00	140000	1780	8.10	11.5	730	9.8	94
16...	1156	1028	1028	5.00	140000	1770	8.10	11.5	730	9.5	92
16...	1158	1028	1028	10.0	140000	1770	8.10	11.5	730	9.4	91
16...	1159	1028	1028	15.0	140000	1780	8.10	11.5	730	9.4	91
16...	1200	1028	1028	20.0	140000	1780	8.10	11.5	730	9.1	87
MAY											
15...	1518	1028	1028	1.00	147000	1750	8.40	21.0	730	8.1	95
15...	1521	1028	1028	5.00	147000	1760	8.40	21.0	730	8.1	96
15...	1524	1028	1028	10.0	147000	1750	8.40	21.0	730	8.1	95
15...	1526	1028	1028	15.0	147000	1740	8.40	21.0	730	8.1	95
15...	1528	1028	1028	20.0	147000	1750	8.30	20.5	730	8.1	94
SEP											
10...	1318	1028	1028	1.00	136000	1960	8.30	27.0	720	7.5	101
10...	1324	1028	1028	5.00	136000	1960	8.30	26.5	720	7.3	97
10...	1326	1028	1028	10.0	136000	1970	8.20	22.0	720	6.4	78
10...	1328	1028	1028	15.0	136000	1980	8.20	25.5	720	5.8	76
10...	1330	1028	1028	17.0	136000	1970	8.10	25.5	720	5.1	67
25...	1100	1028	1028	1.00	136000	1980	8.20	19.0	720	6.3	73
25...	1102	1028	1028	5.00	136000	1980	8.30	19.0	720	5.8	67
25...	1104	1028	1028	10.0	136000	1970	8.30	19.0	720	5.8	67
25...	1106	1028	1028	15.0	136000	1970	8.30	19.0	720	5.8	67
25...	1108	1028	1028	21.0	136000	1980	8.30	19.0	720	5.9	68

07324400 WASHITA RIVER NEAR FOSS, OK

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, Hydrologic Unit 11130302, on left bank on downstream side of pile bent of county road bridge, 0.4 mi downstream from Oak Creek, 0.9 mi downstream from Foss Dam, 2.5 mi west of Stafford, 6.0 mi north of Foss , and at mile 473.5.

DRAINAGE AREA.--1,551 mi^2.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Estimated daily discharges: June 14 to July 31. Records fair. Except for 55 mi^2 intervening area, flow completely regulated since 1961 by Foss Reservoir (station 07324300).

AVERAGE DISCHARGE.--24 years, (water years 1962-85), 24.1 ft^3/s, 17,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 14,000 ft^3/s Apr. 9, 1957, gage height, 20.40 ft, from rating curve extended above 3,600 ft^3/s on basis of velocity-area study; no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1959 reached a stage of 23.4 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278 ft^3/s, June 4, gage height, 10.74 ft; minimum daily discharge, 6.0 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	9.4	12	11	10	7.7	11	13	9.4	9.7	8.9	8.9
2	6.4	9.1	12	11	10	9.8	11	11	9.4	9.7	12	9.0
3	6.0	9.1	12	11	9.8	11	11	11	8.2	9.7	11	8.9
4	6.2	11	12	11	10	11	11	11	56	9.6	11	8.9
5	6.2	14	12	11	10	10	11	11	85	9.6	12	8.9
6	6.4	8.9	12	11	11	11	11	11	19	9.6	11	8.9
7	6.9	9.7	12	11	11	11	11	14	14	9.6	11	8.8
8	6.9	11	11	11	10	11	11	12	11	9.6	11	8.6
9	6.9	11	11	11	11	11	12	10	11	9.6	11	8.5
10	6.7	12	10	11	11	11	12	10	11	9.5	11	8.3
11	6.4	11	13	11	10	11	12	10	10	9.5	11	8.6
12	7.1	10	20	11	10	11	12	9.7	10	9.5	11	8.1
13	7.1	11	10	11	10	11	19	11	9.8	9.5	11	7.1
14	7.1	11	11	11	11	11	14	11	10	9.5	12	6.8
15	7.4	11	17	11	11	11	13	11	10	9.4	11	6.8
16	8.6	11	15	11	11	11	11	11	10	9.4	10	6.8
17	8.3	13	10	11	11	9.9	13	11	10	9.4	9.2	6.9
18	8.6	13	9.1	11	11	9.7	13	11	10	9.4	9.2	7.3
19	8.3	13	9.1	11	11	11	13	11	10	9.3	9.7	7.8
20	8.6	13	9.1	11	11	17	13	14	10	9.3	9.8	7.4
21	8.3	13	9.7	11	11	15	13	27	10	9.3	10	6.7
22	8.1	13	9.4	12	11	12	13	13	10	9.2	10	6.9
23	7.8	13	9.1	11	17	12	14	12	10	9.2	9.7	6.7
24	7.6	13	9.1	12	12	11	13	11	10	9.2	8.9	6.7
25	8.3	13	9.7	11	11	11	10	11	10	9.2	8.3	7.1
26	8.6	13	10	12	11	11	13	8.7	10	9.1	8.1	7.1
27	8.6	13	11	13	10	13	20	9.8	13	9.1	8.0	7.2
28	8.6	13	11	11	10	11	13	9.4	9.7	9.1	7.8	7.5
29	8.3	12	10	12	---	11	11	9.4	9.7	9.1	8.2	7.7
30	8.3	12	10	11	---	12	13	9.4	9.7	9.1	8.4	7.2
31	8.6	---	10	10	---	12	---	9.4	---	9.0	9.0	---
TOTAL	233.4	350.2	348.3	346	303.8	349.1	378	354.8	435.9	291.0	310.2	232.1
MEAN	7.53	11.7	11.2	11.2	10.8	11.3	12.6	11.4	14.5	9.39	10.0	7.74
MAX	8.6	14	20	13	17	17	20	27	85	9.7	12	9.0
MIN	6.0	8.9	9.1	10	9.8	7.7	10	8.7	8.2	9.0	7.8	6.7
AC-FT	463	695	691	686	603	692	750	704	865	577	615	460

CAL YR 1984	TOTAL	2708.1	MEAN	7.40	MAX	20	MIN	3.9	AC-FT	5370
WTR YR 1985	TOTAL	3932.8	MEAN	10.8	MAX	85	MIN	6.0	AC-FT	7800

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-48, 1950-51, 1956, 1958, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1946 to September 1948, October 1969 to September 1976.
WATER TEMPERATURE: October 1946 to September 1948, October 1969 to September 1976.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bimonthly on one of these samples. Additional samples were collected semiannually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV											
06...	1200	1028	80020	8.3	2170	8.10	19.5	13.0	720	10.2	103
19...	0900	1028	80020	13	2040	7.60	--	12.0	--	--	--
JAN											
14...	1000	1028	80020	11	1780	8.00	--	4.0	--	--	--
MAR											
11...	0900	1028	80020	11	2040	7.90	--	11.0	--	--	--
MAY											
06...	0900	1028	80020	11	1920	7.60	--	19.0	--	--	--
JUN											
03...	1330	1028	80020	9.6	1990	7.60	27.0	22.0	720	8.3	101
10...	0900	1028	80020	11	1840	7.90	--	23.0	--	--	--
SEP											
30...	0900	1028	80020	7.1	2110	7.60	--	15.0	--	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
06...	1200	970	230	140	98	15	1	14	181	2.8	1200
19...	--	--	--	--	--	--	--	--	--	--	970
JAN											
14...	--	--	--	--	--	--	--	--	--	--	1100
MAR											
11...	--	--	--	--	--	--	--	--	--	--	1000
MAY											
06...	--	--	--	--	--	--	--	--	--	--	990
JUN											
03...	1100	990	220	140	91	15	1	12	137	6.7	990
10...	--	--	--	--	--	--	--	--	--	--	830
SEP											
30...	--	--	--	--	--	--	--	--	--	--	1000

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)
NOV										
06...	65	0.5	9.1	1890	1900	2.6	42	<0.10	<100	3
19...	56	--	--	1740	--	--	--	--	--	--
JAN										
14...	57	--	--	1770	--	--	--	--	--	--
MAR										
11...	56	--	--	1700	--	--	--	--	--	--
MAY										
06...	55	--	--	1610	--	--	--	--	--	--
JUN										
03...	58	0.3	6.8	1850	1600	2.5	48	0.11	<100	2
10...	53	--	--	1540	--	--	--	--	--	--
SEP										
30...	64	--	--	1830	--	--	--	--	--	--

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV										
06...	410	<1	<10	1	20	4	80	<0.1	<1	30
19...	--	--	--	--	--	--	--	--	--	--
JAN										
14...	--	--	--	--	--	--	--	--	--	--
MAR										
11...	--	--	--	--	--	--	--	--	--	--
MAY										
06...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	370	1	<10	<1	20	3	100	--	<1	20
10...	--	--	--	--	--	--	--	--	--	--
SEP										
30...	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	---	---	---	---	---	1920	---	---	2160	---	---
2	---	---	---	---	---	---	---	---	---	---	---	2240
3	---	---	1960	---	---	---	---	---	2020	---	---	---
4	---	---	---	---	2120	1990	---	---	---	---	---	---
5	---	2010	---	---	---	---	---	---	---	---	1880	---
6	---	---	---	---	---	---	---	1920	---	---	---	---
7	---	---	---	1440	---	---	---	---	---	---	---	---
8	2070	---	---	---	---	---	1910	---	---	2250	---	---
9	---	---	---	---	---	---	---	---	---	---	---	2310
10	---	---	1980	---	---	---	---	---	1840	---	---	---
11	---	---	---	---	2110	2040	---	---	---	---	---	---
12	---	2140	---	---	---	---	---	---	---	---	2160	---
13	---	---	---	---	---	---	---	1890	---	---	---	---
14	---	---	---	1780	---	---	---	---	---	---	---	---
15	2000	---	---	---	---	---	1820	---	---	2230	---	---
16	---	---	---	---	---	---	---	---	---	---	---	2050
17	---	---	1850	---	---	---	---	---	1930	---	---	---
18	---	---	---	---	2150	1830	---	---	---	---	---	---
19	---	2040	---	---	---	---	---	---	---	---	2050	---
20	---	---	---	---	---	---	---	2080	---	---	---	---
21	---	---	---	1980	---	---	---	---	---	---	---	---
22	2030	---	---	---	---	---	1900	---	---	2260	---	---
23	---	---	---	---	---	---	---	---	---	---	---	2070
24	---	---	2090	---	---	---	---	---	2170	---	---	---
25	---	---	---	---	1980	1970	---	---	---	---	---	---
26	---	2130	---	---	---	---	---	---	---	---	2050	---
27	---	---	---	---	---	---	---	2040	---	---	---	---
28	---	---	---	1940	---	---	---	---	---	---	---	---
29	2010	---	---	---	---	---	1890	---	---	2190	---	---
30	---	---	1270	---	---	---	---	---	---	---	---	2110
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	2030	2080	1830	1790	2090	1960	1890	1980	1990	2220	2040	2160

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	---	---	---	---	---	11.0	---	---	22.0	---	---
2	---	---	---	---	---	---	---	---	---	---	---	24.0
3	---	---	7.0	---	---	---	---	---	21.0	---	---	---
4	---	---	---	---	2.0	5.0	---	---	---	---	---	---
5	---	22.0	---	---	---	---	---	---	---	---	24.0	---
6	---	---	---	---	---	---	---	19.0	---	---	---	---
7	---	---	---	5.0	---	---	---	---	---	---	---	---
8	17.0	---	---	---	---	---	12.0	---	---	23.0	---	---
9	---	---	---	---	---	---	---	---	---	---	---	24.0
10	---	---	8.0	---	---	---	---	---	23.0	---	---	---
11	---	---	---	---	1.0	11.0	---	---	---	---	---	---
12	---	11.0	---	---	---	---	---	---	---	---	24.0	---
13	---	---	---	---	---	---	---	24.0	---	---	---	---
14	---	---	---	4.0	---	---	---	---	---	---	---	---
15	15.0	---	---	---	---	---	14.0	---	---	24.0	---	---
16	---	---	---	---	---	---	---	---	---	---	---	23.0
17	---	---	6.0	---	---	---	---	---	22.0	---	---	---
18	---	---	---	---	4.0	10.0	---	---	---	---	---	---
19	---	12.0	.0	---	---	---	---	---	---	---	24.0	---
20	---	---	---	---	---	---	---	17.0	---	---	---	---
21	---	---	---	2.0	---	---	---	---	---	---	---	---
22	24.0	---	---	---	---	---	16.0	---	---	24.0	---	---
23	---	---	---	---	---	---	---	---	---	---	---	18.0
24	---	---	6.0	---	---	---	---	---	23.0	---	---	---
25	---	---	---	---	6.0	10.0	---	---	---	---	---	---
26	---	20.0	.0	---	---	---	---	---	---	---	24.0	---
27	---	---	---	---	---	---	---	20.0	---	---	---	---
28	---	---	---	3.0	---	---	---	---	---	---	---	---
29	12.0	---	---	---	---	---	20.0	---	---	25.0	---	---
30	---	---	6.0	---	---	---	---	---	---	---	---	15.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	16.5	16.5	4.5	3.5	3.5	9.0	14.5	20.0	22.5	23.5	24.0	21.0

07325000 WASHITA RIVER NEAR CLINTON, OK

LOCATION.--Lat 34°31'52", long 98°57'57", in SW 1/4 NE 1/4 sec.11, T.12 N., R.17 W., Custer County, Hydrologic Unit 11130302, on downstream side of pier of bridge on U.S. Highway 183, 0.5 mi north of Clinton, 0.8 mi upstream from Beaver Creek, 4.8 mi downstream from Barnitz Creek, and at mile 447.4.

DRAINAGE AREA.--1,977 mi^2.

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

REVISED RECORDS.--WSP 1221: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,467.60 ft, National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to Mar. 19, 1941.

REMARKS.--Estimated daily discharges: Jan. 1-5, 20-25, 27, Jan. 31 to Feb. 8. Records good. Flow regulated since February 1961 by Foss Reservoir (station 07324300) and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 25 years (water years 1936-60), 146 ft^3/s, 105,700 acre-ft/yr; (since regulation by Foss Reservoir) 25 years (water years 1961-85), 62.4 ft^3/s, 45,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft^3/s May 16, 1951, gage height, 31.09 ft, from rating curve extended above 7,900 ft^3/s by contracted-opening measurement of peak flow; no flow at times in 1952-56, 1964, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3-4, 1934, reached a stage of 33.9 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 334 ft^3/s Apr. 27, gage height, 8.93 ft; minimum daily discharge, 9.5 ft^3/s, Sept. 11-12, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	26	23	18	30	36	27	16	15	10	10
2	15	12	27	20	17	30	34	25	16	15	11	10
3	14	11	27	21	17	30	32	24	18	15	11	10
4	16	10	28	22	16	29	31	22	27	15	11	10
5	17	11	30	23	17	27	28	22	182	14	12	10
6	15	20	29	22	19	26	27	21	172	14	13	9.9
7	14	28	28	21	20	26	26	25	68	13	16	9.9
8	15	31	28	21	21	26	25	28	43	13	15	14
9	16	30	28	22	25	25	25	27	32	13	12	40
10	18	26	28	22	24	26	26	23	28	12	12	11
11	19	22	28	20	24	26	27	22	38	12	12	9.5
12	19	22	28	18	25	25	27	21	41	12	12	9.5
13	19	24	31	18	24	25	39	22	26	11	11	10
14	18	26	28	19	20	25	78	21	23	11	16	20
15	17	27	38	20	20	25	45	24	22	11	42	10
16	17	28	54	21	20	25	37	21	20	11	28	10
17	16	33	46	20	19	25	32	18	21	11	18	10
18	14	35	36	20	18	25	30	18	19	12	15	10
19	12	35	30	20	18	25	29	18	18	11	14	9.6
20	13	34	27	17	18	40	28	21	17	11	14	11
21	13	34	26	16	20	93	27	108	16	11	14	15
22	12	32	24	16	22	60	28	56	15	11	13	12
23	12	20	24	15	34	45	28	29	15	11	12	10
24	13	22	23	16	70	39	38	25	15	12	11	10
25	14	20	22	18	45	34	31	23	14	16	12	9.8
26	15	20	22	20	34	33	29	23	18	19	12	9.8
27	18	21	23	22	30	34	87	19	44	16	13	9.5
28	18	23	23	25	28	33	33	19	31	12	12	14
29	15	25	23	24	---	31	27	20	19	11	11	31
30	15	25	21	23	---	32	27	19	16	10	11	26
31	14	---	25	20	---	35	---	17	---	10	10	---
TOTAL	479	724	881	625	683	1010	1017	808	1050	391	436	391.5
MEAN	15.5	24.1	28.4	20.2	24.4	32.6	33.9	26.1	35.0	12.6	14.1	13.1
MAX	19	35	54	25	70	93	87	108	182	19	42	40
MIN	12	10	21	15	16	25	25	17	14	10	10	9.5
AC-FT	950	1440	1750	1240	1350	2000	2020	1600	2080	776	865	777

CAL YR 1984	TOTAL	11098.8	MEAN	30.3	MAX	260	MIN	7.3	AC-FT	22010
WTR YR 1985	TOTAL	8495.5	MEAN	23.3	MAX	182	MIN	9.5	AC-FT	16850

07325500 WASHITA RIVER AT CARNEGIE, OK

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, Hydrologic Unit 11130302, on downstream side of right pier of bridge on State Highway 9, 1,300 ft upstream from Running Creek, 2.7 mi east of Carnegie, and at mile 353.9. Records include flow of Running Creek.

DRAINAGE AREA.--3,129 mi^2, includes that of Running Creek.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1087: 1938. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,244.23 ft, National Geodetic Vertical Datum of 1929. Prior to October 1942, water-stage recorder at site 8.0 mi upstream at datum 24.57 ft higher. Prior to August 7, 1985, datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 31 to Feb. 7, June 2-4, July 26 to Aug. 6. Records good. Some diversion above station for irrigation. October 1942 to May 1949, occasional fluctuation caused by powerplant at Carnegie, 7.5 mi above station. Some regulation by Foss Reservoir since February 1961 (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 23 years (water years 1938-60), 314 ft^3/s, 277,500 acre-ft/yr; (since regulation by Foss Reservoir) 24 years (water years 1962-85, 243 ft^3/s, 176,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s May 18, 1949, gage height, 26.21 ft, from rating curve extended above 35,500 ft^3/s on basis of contracted-opening measurement of peak flow, maximum gage height 26.70 ft^3/s Oct. 20, 1983; no flow at times in 1956 and 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft^3/s Mar. 4, gage height 12.27 ft, no peaks above base of 3,000 ft^3/s; minimum daily discharge, 20 ft^3/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	42	56	683	74	165	409	294	108	134	65	30
2	30	40	56	765	64	148	296	227	120	113	60	28
3	28	42	56	341	74	489	246	194	320	101	57	30
4	32	40	57	253	70	2070	219	176	190	95	60	28
5	34	39	60	219	80	1730	197	161	754	90	56	24
6	34	48	60	175	90	807	179	150	1530	81	80	23
7	33	44	61	156	96	509	166	355	1840	75	69	22
8	30	42	62	148	111	418	154	371	1270	71	170	21
9	33	43	62	144	120	342	148	304	575	65	135	20
10	33	40	62	139	128	308	145	236	388	62	83	21
11	33	41	62	136	138	285	143	198	806	56	63	27
12	30	42	62	121	119	263	141	177	752	48	52	64
13	30	41	68	93	117	214	183	161	480	45	47	40
14	31	42	75	113	115	187	226	144	330	44	73	26
15	31	40	94	123	119	175	200	117	254	42	91	23
16	31	42	136	133	116	168	185	161	210	42	164	41
17	29	55	137	133	113	164	177	148	182	64	136	42
18	32	70	158	123	111	160	155	144	162	48	107	36
19	31	74	133	121	110	156	142	150	180	40	90	33
20	36	81	117	117	114	268	133	144	152	33	73	33
21	39	81	104	72	133	517	132	153	137	25	67	41
22	39	71	96	89	167	661	267	144	127	24	59	46
23	39	64	91	100	416	512	633	163	121	56	53	47
24	37	61	84	116	896	422	357	234	115	96	50	48
25	39	60	79	122	624	352	228	192	109	138	46	46
26	44	58	76	125	420	295	188	160	104	242	45	41
27	49	58	74	126	297	266	208	146	323	109	43	38
28	47	57	74	127	220	295	380	146	311	90	43	40
29	46	56	76	133	---	279	506	136	187	80	40	786
30	44	56	78	125	---	300	394	119	161	73	36	1620
31	44	---	152	90	---	478	---	107	---	70	32	---
TOTAL	1101	1570	2618	5461	5252	13403	7137	5712	12298	2352	2245	3365
MEAN	35.5	52.3	84.5	176	188	432	238	184	410	75.9	72.4	112
MAX	49	81	158	765	896	2070	633	371	1840	242	170	1620
MIN	28	39	56	72	64	148	132	107	104	24	32	20
AC-FT	2180	3110	5190	10830	10420	26580	14160	11330	24390	4670	4450	6670

CAL YR 1984	TOTAL	35691.5	MEAN	97.5	MAX	637	MIN	7.1	AC-FT	70790
WTR YR 1985	TOTAL	62514	MEAN	171	MAX	2070	MIN	20	AC-FT	124000

07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1953 to September 1976.
WATER TEMPERATURE: October 1953 to September 1976.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bimonthly on one of these samples. An additional sample was collected and specific conductance, pH, water temperature, and dissolved oxygen was determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)
NOV											
09...	1100	1028	80020	44	2500	7.70	16.0	--	--	--	--
JAN											
13...	1500	1028	80020	91	2060	8.30	3.0	--	--	--	--
FEB											
28...	1500	1028	80020	210	1360	7.70	11.0	725	10.0	96	710
MAR											
14...	1700	1028	80020	184	1770	7.90	15.0	--	--	--	--
APR											
04...	1700	1028	80020	214	1770	7.40	20.0	--	--	--	--
JUN											
26...	0900	1028	80020	1400	1760	7.50	22.0	--	--	--	--
AUG											
01...	1800	1028	80020	65	2110	8.00	31.0	--	--	--	--

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
NOV										
09...	--	--	--	--	--	--	--	--	--	1100
JAN										
13...	--	--	--	--	--	--	--	--	--	930
FEB										
28...	713	180	64	57	15	1	4.0	151	5.8	620
MAR										
14...	--	--	--	--	--	--	--	--	--	780
APR										
04...	--	--	--	--	--	--	--	--	--	790
JUN										
26...	--	--	--	--	--	--	--	--	--	680
AUG										
01...	--	--	--	--	--	--	--	--	--	900

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ALUMINUM, DISSOLVED (UG/L AS AL)	BORON, DISSOLVED (UG/L AS B)
NOV											
09...	160	--	--	2170	--	--	--	--	--	--	--
JAN											
13...	110	--	--	1770	--	--	--	--	--	--	--
FEB											
28...	52	0.3	13	1120	1100	1.5	635	0.04	1.10	<100	210
MAR											
14...	92	--	--	1400	--	--	--	--	--	--	--
APR											
04...	110	--	--	1390	--	--	--	--	--	--	--
JUN											
26...	96	--	--	1380	--	--	--	--	--	--	--
AUG											
01...	140	--	--	1780	--	--	--	--	--	--	--

07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2380	---	---	---	---	---	---	---	---	2110	---
2	---	---	---	---	---	---	---	1320	---	---	---	---
3	2600	---	---	1020	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	1770	---	---	1620	---	---
5	---	---	---	---	---	732	---	---	---	---	---	---
6	---	---	---	---	2550	---	---	---	815	---	---	---
7	---	---	2380	---	---	---	---	---	---	---	---	2400
8	---	---	---	---	---	---	---	---	---	---	1890	---
9	---	2500	---	---	---	---	---	1410	---	---	---	---
10	2480	---	---	---	---	---	2090	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	2200	---	2440
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	2060	---	---	---	---	---	---	---	---
14	---	2590	2230	---	2250	1770	---	---	1150	---	---	---
15	---	---	---	---	---	---	---	---	---	---	1970	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	2310	---	---	---	1970	---	---	---	---
18	---	---	---	---	---	---	1960	---	---	2430	---	1700
19	2490	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	2330	1300	---	---	1680	---	---	---
21	---	---	1830	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	1770	---
23	---	---	---	---	---	---	---	2120	---	---	---	---
24	---	2380	---	2420	---	---	---	---	---	2090	---	---
25	2500	---	---	---	---	---	1540	---	---	---	---	2360
26	---	---	2130	---	---	---	---	---	1760	---	---	---
27	---	---	---	---	1400	1540	---	---	---	---	---	---
28	---	2530	---	---	---	---	---	---	---	---	2280	---
29	---	---	---	---	---	---	---	1960	---	---	---	---
30	---	---	---	2260	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	2520	2480	2140	2010	2130	1340	1840	1760	1350	2090	2000	2230

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.0	---	---	---	---	---	---	---	---	31.0	---
2	---	---	---	---	---	---	---	20.0	---	---	---	---
3	21.0	---	---	3.0	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	20.0	---	---	25.0	---	---
5	---	---	---	---	---	12.0	---	---	---	---	---	---
6	---	---	---	---	.0	---	---	---	21.0	---	---	---
7	---	---	12.0	---	---	---	---	---	---	---	---	31.0
8	---	---	---	---	---	---	---	---	---	---	32.0	---
9	---	16.0	---	---	---	---	---	22.0	---	---	---	---
10	23.0	---	---	---	---	---	20.0	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	31.0	---	29.0
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	3.0	---	---	---	---	---	---	---	---
14	---	18.0	8.0	---	.5	15.0	---	---	24.0	---	---	---
15	---	---	---	---	---	---	---	---	---	---	29.0	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	6.0	---	---	---	24.0	---	---	---	---
18	---	---	---	---	---	---	22.0	---	---	32.0	---	24.0
19	14.0	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	12.0	12.0	---	---	26.0	---	---	---
21	---	---	8.0	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	27.0	---
23	---	---	---	---	---	---	---	26.0	---	---	---	---
24	---	9.0	---	4.0	---	---	---	---	---	27.0	---	---
25	15.0	---	---	---	---	---	22.0	---	---	---	---	21.0
26	---	---	6.0	---	---	---	---	---	22.0	---	---	---
27	---	---	---	---	12.0	20.0	---	---	---	---	---	---
28	---	8.0	---	---	---	---	---	---	---	---	30.0	---
29	---	---	---	---	---	---	---	30.0	---	---	---	---
30	---	---	---	4.0	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	18.5	13.0	8.5	4.0	6.0	15.0	21.0	24.5	23.5	29.0	30.0	26.5

07325800 COBB CREEK NEAR EAKLY, OK

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, Hydrologic Unit 11130302, near left downstream abutment of bridge, on State Highway 152, 0.5 mi downstream from Fivemile Creek, 2.4 mi southwest of Eakly, 3.0 mi upstream from Fort Cobb Reservoir, and at mile 22.9.

DRAINAGE AREA.--132 mi^2.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,369.70 ft, National Geodetic Vertical Datum of 1929. Oct. 29, 1980 to Aug. 11, 1982 gage at site 0.5 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 23 to Jan. 8, Jan. 18-22, Jan. 30 to Feb. 7, Aug. 29 to Sept. 20. Records fair. Some regulation by three small reservoirs having combined surface-area of 262 acres and capacity of 3,100 acre-ft.

AVERAGE DISCHARGE.--17 years, 20.2 ft^3/s, 14,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 8,680 ft^3/s May 17, 1982, gage height 21.08 ft from floodmark, no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 391 ft^3/s Sept. 29, gage height, 9.24 ft; minimum daily 3.2 ft^3/s Aug. 1, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	5.6	9.1	25	12	16	11	14	6.9	5.6	3.2	3.7
2	3.6	5.8	10	20	11	16	11	12	7.2	6.5	3.3	3.7
3	3.6	6.0	9.9	19	12	16	11	12	7.2	6.0	3.4	3.7
4	3.7	6.1	10	19	13	15	11	13	10	5.6	3.2	3.7
5	4.1	6.0	10	20	13	15	10	13	115	5.3	5.5	3.7
6	3.9	6.2	11	20	15	15	11	12	82	4.9	4.9	3.7
7	3.7	6.3	11	19	16	15	10	13	36	4.9	4.3	3.7
8	3.5	6.6	11	20	16	15	11	14	24	4.9	4.3	3.7
9	3.7	6.9	11	21	17	15	11	13	18	4.7	3.7	3.7
10	4.0	6.4	11	21	17	15	11	12	19	4.2	3.4	3.7
11	4.0	7.4	12	19	16	15	10	11	40	4.1	3.5	3.8
12	4.0	7.2	12	18	15	15	10	10	16	4.1	3.3	3.8
13	4.5	7.7	16	19	16	15	27	10	12	3.7	3.3	3.8
14	4.1	7.7	16	19	15	15	15	9.9	10	3.5	7.2	3.8
15	4.5	7.7	18	19	15	15	11	10	9.2	4.0	3.6	3.8
16	4.2	7.8	26	19	15	15	11	8.9	8.8	5.7	3.6	3.8
17	4.1	9.8	16	18	15	16	10	8.0	8.0	4.3	3.5	3.8
18	4.4	12	15	17	15	16	9.7	9.2	7.7	4.2	3.5	3.8
19	4.4	9.5	15	16	15	16	9.8	11	7.5	4.1	3.7	3.8
20	4.4	8.7	15	14	17	28	9.7	11	7.4	3.8	4.5	4.0
21	4.6	8.7	17	15	25	16	9.7	13	6.9	3.7	4.0	7.4
22	4.8	8.8	16	16	21	12	11	13	6.7	4.1	3.8	5.6
23	4.9	9.0	16	18	37	12	14	11	6.7	4.3	3.8	6.3
24	4.7	9.3	16	18	24	11	10	8.8	6.6	5.0	3.7	4.6
25	5.1	9.4	16	18	18	11	9.9	7.9	6.1	5.3	3.7	4.4
26	5.6	9.4	15	17	16	10	9.7	8.4	7.2	5.2	3.9	4.0
27	6.1	9.0	16	20	15	14	13	9.2	10	4.8	3.8	4.5
28	5.5	8.7	16	21	16	12	13	9.6	6.6	4.6	3.8	5.2
29	5.4	8.8	15	19	---	11	13	11	6.1	4.1	3.8	131
30	5.7	9.0	16	15	---	23	15	8.5	5.7	3.9	3.8	15
31	5.9	---	17	13	---	14	---	7.9	---	3.6	3.8	---
TOTAL	138.3	237.5	441.0	572	468	465	349.5	335.3	520.5	142.7	120.8	263.2
MEAN	4.46	7.92	14.2	18.5	16.7	15.0	11.7	10.8	17.3	4.60	3.90	8.77
MAX	6.1	12	26	25	37	28	27	14	115	6.5	7.2	131
MIN	3.5	5.6	9.1	13	11	10	9.7	7.9	5.7	3.5	3.2	3.7
AC-FT	274	471	875	1130	928	922	693	665	1030	283	240	522

CAL YR 1984	TOTAL	3404.9	MEAN	9.30	MAX	29	MIN	1.5	AC-FT	6750
WTR YR 1985	TOTAL	4053.8	MEAN	11.1	MAX	131	MIN	3.2	AC-FT	8040

07325900 FORT COBB RESERVOIR NEAR FORT COBB, OK

LOCATION.--Lat 35°09'30", long 98°27'40", in SE 1/4 sec.21, T.8 N., R.12 W., Caddo County, Hydrologic Unit 11130382, in control house at right center of dam on Cobb Creek, 4.0 mi northwest of Fort Cobb, and at mile 7.5.

DRAINAGE AREA.--304 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October, 1961, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by earth dam. Outlet consists of two sets of controlled 5- by 5-foot steel gates and an uncontrolled concrete spillway. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 114,200 acre-ft June 4, 1982, elevation, 1,349.44 ft; minimum since conservation pool was first filled, 54,650 acre-ft Oct. 19, 1972, elevation 1,335.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 73,470 acre-ft June 12 elevation, 1,340.36 ft: minimum, 62,520 acre-ft Dec. 1, elevation 1,337.40 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)*	Contents (acre-feet)	Charge in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1338.04	64,790	-	-
Oct. 31	1337.73	63,690	-1,100	868
Nov. 30	1337.45	62,690	-1,000	1,034
Dec. 31	1337.77	63,830	+1,140	1,011
CAL YR 84	-	-	-15,770	11,318
Jan. 31	1337.90	64,290	+460	633
Feb. 28	1338.50	66,460	+2,170	646
Mar. 31	1339.72	71,010	+4,550	546
Apr. 30	1339.96	71,930	+920	589
May 31	1339.61	70,590	-1,340	563
June 30	1339.97	71,970	+1,380	831
July 31	1339.20	69,050	-2,920	994
Aug. 31	1338.36	65,950	-3,100	912
Sept. 30	1338.09	64,970	-980	804
WTR YR 85	-	-	+180	9,431

*Elevation at 0800 on following day.

07326000 COBB CREEK NEAR FORT COBB, OK

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, Hydrologic Unit 11130302, on left bank 10 ft upstream from county road bridge, 0.3 mi upstream from Punjo Creek, 1.2 mi downstream from Fort Cobb Dam, 3.0 mi north of Fort Cobb, and at mile 5.8.

DRAINAGE AREA.--313 mi^2. Area at site used prior to Oct. 1, 1969, 319 mi^2.

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.

REVISED RECORDS.--WSP 1087: 1938. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,254.49 ft, U.S. Bureau of Reclamation datum. Oct. 1, 1969 to Sept. 30, 1982 gage at same site and datum 5.00 ft higher. Oct. 1, 1939 to Aug. 29, 1940, nonrecording gage and Aug. 30, 1940 to Sept. 30, 1969, water-stage recorder at site 0.8 mi downstream at datum 1.92 ft lower.

REMARKS.--Estimated daily discharges: Oct. 1-23, Mar. 4 to Apr. 9. Records fair. Flow regulated since March 1959 by Fort Cobb Reservoir (station 07325900).

AVERAGE DISCHARGE.--(Prior to regulation by Fort Cobb Reservoir) 19 years (water years 1940-58), 50.2 ft^3/s, 36,340 acre-ft/yr; (since regulation by Fort Cobb Reservoir) 27 years (water years 1959-85), 17.3 ft^3/s, 12,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft^3/s 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 ft^3/s on basis of contracted-opening measurements at gage heights 16.62 ft, 17.58 ft and 18.72 ft, at former site and datum; minimum daily, 0.2 ft^3/s Sept. 20, 24-28, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1937, reached a stage of 19.3 ft, site and datum used in 1939, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 292 ft^3/s, Mar. 3, gage height, 10.87 ft; minimum daily discharge, 0.34 ft^3/s July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.5	2.2	2.6	2.2	2.4	1.9	1.5	1.3	1.1	.81	29
2	1.2	1.5	2.2	2.1	2.2	2.4	.95	1.5	3.1	1.4	1.1	29
3	1.4	1.5	2.2	2.1	2.2	20	.91	1.5	2.8	1.3	.64	30
4	1.4	1.5	2.5	2.1	2.2	13	1.7	1.5	15	1.3	.41	29
5	1.3	1.5	2.8	2.2	2.2	10	2.0	1.5	20	1.2	.68	27
6	1.2	1.6	2.2	2.2	2.2	8.0	2.0	1.6	14	1.2	.50	29
7	1.2	1.6	2.2	2.2	2.2	3.5	1.6	2.2	2.3	1.2	.74	30
8	1.1	1.8	2.2	2.2	2.2	2.5	1.8	1.6	2.0	1.1	.59	31
9	1.4	1.7	2.2	2.2	2.1	1.8	2.0	1.5	1.6	1.1	.48	30
10	1.3	1.7	2.2	2.3	2.1	2.0	2.0	1.5	1.6	1.1	.44	30
11	1.2	2.0	2.2	2.2	2.1	1.3	2.0	1.5	2.3	.83	.60	31
12	1.4	2.2	2.2	2.2	2.1	2.1	1.9	1.4	1.5	.85	.49	31
13	1.4	2.2	3.2	2.2	2.1	1.9	3.3	1.5	2.2	.72	.46	20
14	1.4	2.4	2.4	2.2	2.1	1.7	2.1	1.5	1.5	.74	.90	3.6
15	1.4	2.6	2.9	2.2	2.1	2.3	1.8	1.5	1.2	.64	1.0	3.0
16	1.9	2.4	2.8	2.2	2.1	1.9	1.8	1.5	1.1	.64	.86	2.6
17	1.1	3.8	2.2	2.2	2.1	1.7	1.7	1.5	1.1	.57	.81	2.6
18	1.6	3.2	2.2	2.2	2.1	1.7	1.7	1.5	1.1	.55	.81	2.3
19	1.3	2.6	2.2	2.2	2.1	2.8	1.6	1.5	1.1	.44	.61	2.1
20	1.6	2.4	2.3	2.0	2.7	4.6	1.6	1.5	1.1	.36	.51	2.4
21	1.6	2.3	2.3	2.2	3.2	2.6	1.6	1.5	1.1	.34	.46	3.2
22	1.6	2.3	2.3	2.2	2.8	2.0	4.3	1.5	.92	.35	.45	2.1
23	1.5	2.3	2.3	2.2	3.8	1.8	1.7	1.5	1.2	.52	8.2	2.0
24	1.8	2.2	2.3	2.2	2.9	1.8	1.5	1.5	1.2	.63	28	2.3
25	1.6	2.3	2.2	2.2	2.3	2.0	1.5	1.5	1.2	.69	29	2.1
26	1.5	2.6	2.2	2.2	2.3	2.0	1.5	1.4	1.1	.53	30	1.9
27	1.6	2.4	2.2	2.5	2.3	1.9	5.5	1.4	1.4	.54	30	1.8
28	1.3	2.2	2.2	2.3	2.3	1.9	1.9	1.4	1.2	.65	29	2.2
29	1.4	2.2	2.2	2.3	---	2.0	2.4	1.4	1.2	.70	29	8.1
30	1.4	2.2	2.2	2.3	---	5.2	1.9	1.4	1.2	.43	29	2.1
31	1.3	---	5.6	2.2	---	3.8	---	1.2	---	.56	29	---
TOTAL	43.7	64.7	75.5	68.8	65.3	114.6	60.16	46.5	89.62	24.28	255.55	422.4
MEAN	1.41	2.16	2.44	2.22	2.33	3.70	2.01	1.50	2.99	.78	8.24	14.1
MAX	1.9	3.8	5.6	2.6	3.8	20	5.5	2.2	20	1.4	30	31
MIN	1.1	1.5	2.2	2.0	2.1	1.3	.91	1.2	.92	.34	.41	1.8
AC-FT	87	128	150	136	130	227	119	92	178	48	507	838

CAL YR 1984	TOTAL	3308.0	MEAN	9.04	MAX	127	MIN	1.1	AC-FT	6560
WTR YR 1985	TOTAL	1331.11	MEAN	3.65	MAX	31	MIN	.34	AC-FT	2640

07326500 WASHITA RIVER AT ANADARKO, OK

LOCATION.--Lat 35°05'06", long 98°14'35", in NW 1/4 sec.15, T.7 N., R.10 W., Caddo County, Hydrologic Unit 11130302 at left bank 100 ft upstream from bridge on U.S. Highway 281 at north edge of Anadarko, 8.1 mi upstream from Sugar Creek, and at mile 305.2.

DRAINAGE AREA.--3,656 mi^2.

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.

REVISED RECORDS.--WSP 1311: 1903, 1907-08, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,150.00 ft, National Geodetic Vertical Datum of 1929. October 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 mi downstream at different datum. Jan. 10, 1936 to Mar. 7, 1938, non-recording gage on upstream side of bridge on U.S. Highway 281 at datum 1.88 ft higher.

REMARKS.--Estimated daily discharges: Jan. 20-22, Jan. 31 to Feb. 3, 5-8, June 5-9, 12-13, July 1-25, July 28 to Aug. 8, 11-12. Records good. Some regulation by low-water dams upstream and since March 1959, by Fort Cobb Reservoir (station 07325900), since February 1961, by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--30 years (water years 1903-08, 1936-37, 1964-85), 369 ft^3/s, 267,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,700 ft^3/s Oct. 21, 1983, gage height, 25.20 ft HWM; no flow Aug. 1, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,720 ft^3/s Mar. 5, gage height, 13.04 ft, no peak above base of 3,000 ft^3/s; minimum daily discharge, 49 ft^3/s Sept. 10-11, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	66	74	210	80	268	458	420	130	189	100	59
2	58	64	73	652	80	227	410	320	130	160	90	58
3	58	63	77	525	85	217	323	265	168	140	88	57
4	58	64	70	269	86	1340	278	238	290	120	86	55
5	58	64	65	199	94	2540	254	219	308	110	95	56
6	58	63	73	168	90	1810	237	205	2000	100	98	54
7	58	62	78	139	95	730	221	233	1600	92	100	52
8	58	67	79	127	95	470	208	345	1800	85	110	50
9	58	66	80	120	104	399	200	369	1000	80	111	50
10	58	63	80	117	100	338	194	304	460	74	159	49
11	58	65	80	111	100	307	191	266	368	72	84	49
12	58	64	78	105	101	284	189	235	700	70	76	50
13	59	65	91	101	103	265	205	218	600	68	69	60
14	62	66	91	97	97	234	246	204	387	65	67	77
15	60	66	96	90	96	207	275	187	286	70	71	61
16	61	65	114	96	97	199	251	173	233	75	86	52
17	59	76	123	101	97	192	234	160	202	80	125	49
18	58	87	121	105	97	187	226	172	195	78	136	55
19	58	86	123	101	95	185	209	160	181	65	111	57
20	61	84	133	85	100	245	195	163	184	58	98	54
21	62	85	125	70	114	371	175	158	171	50	85	54
22	62	90	113	80	127	472	320	156	164	55	74	60
23	62	88	102	88	219	567	529	154	158	84	70	71
24	62	83	98	94	432	475	539	153	155	110	65	64
25	66	80	100	91	647	405	379	208	148	120	63	62
26	64	79	97	97	514	350	256	181	148	147	65	63
27	70	76	92	105	389	333	239	159	148	246	65	60
28	69	74	92	107	315	308	268	147	242	140	64	60
29	69	73	92	104	---	310	364	144	308	120	62	139
30	66	74	92	106	---	343	639	142	215	110	61	807
31	68	---	124	95	---	408	---	133	---	105	60	---
TOTAL	1894	2168	2926	4555	4649	14986	8712	6591	13079	3138	2694	2544
MEAN	61.1	72.3	94.4	147	166	483	290	213	436	101	86.9	84.8
MAX	70	90	133	652	647	2540	639	420	2000	246	159	807
MIN	58	62	65	70	80	185	175	133	130	50	60	49
AC-FT	3760	4300	5800	9030	9220	29720	17280	13070	25940	6220	5340	5050

CAL YR 1984	TOTAL	51722	MEAN	141	MAX	667	MIN	29	AC-FT	102600	
WTR YR 1985	TOTAL	67936	MEAN	186	MAX	2540	MIN	49	AC-FT	134800	

07327490 LITTLE WASHITA RIVER NEAR NINNEKAH, OK

LOCATION.--Lat 34°56'41", long 97°57'08", in SE 1/4 SE 1/4 sec.32, T.6 N., R.7 W., Grady County, Hydrologic Unit 11130302, at left bank on downstream side of bridge on U.S. Highway 81, 1.0 mi upstream from Rock Creek, 1.5 mi west of Ninnekah, 5.5 mi south of Chickasha, and at mile 8.4.

DRAINAGE AREA.--208 mi^2.

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

REVISED RECORDS.--WDR OK-64(M), OK-65(M), OK-71.

GAGE.--Water-stage recorder. Datum of gage is 1,065.94 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Small diversions above station for irrigation.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--22 years, 34.8 ft^3/s, 25,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,380 ft^3/s Oct. 20, 1983, gage height, 25.00 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 27	0400	2,820	17.07	Mar. 20	0800	*4,060	*21.08
Dec. 31	1518	2,540	17.64	Apr. 22	0712	2,300	16.03
Feb. 22	2136	3,560	19.32	June 18	1112	1,520	13.91

Minimum daily discharge, 4.9 ft^3/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	49	20	467	50	104	190	194	43	55	21	15
2	5.2	67	18	214	48	97	149	153	47	59	20	14
3	5.6	40	18	169	46	213	130	102	45	58	19	13
4	6.0	30	22	149	46	852	122	86	75	56	17	13
5	6.4	22	41	124	46	273	113	77	820	51	18	13
6	6.0	20	29	108	46	142	104	71	657	50	19	13
7	5.6	19	22	94	46	113	94	115	271	49	29	13
8	5.6	19	22	85	45	111	90	94	123	48	25	13
9	5.2	17	19	90	49	101	89	77	77	47	20	12
10	4.9	15	18	84	59	99	89	69	62	44	17	12
11	5.2	15	18	71	52	97	89	67	377	43	15	11
12	6.4	15	18	59	49	82	87	72	168	41	14	13
13	7.2	14	127	60	49	198	166	299	82	39	14	15
14	12	14	133	58	43	158	195	135	67	37	22	18
15	15	13	142	57	38	106	115	84	58	36	23	17
16	9.9	9.9	451	57	37	101	93	67	53	37	21	14
17	8.5	119	169	55	39	104	82	62	46	37	20	13
18	6.8	146	87	55	40	89	79	59	797	37	20	13
19	5.6	70	66	52	41	86	74	55	374	36	20	13
20	25	44	62	42	60	1940	70	64	197	34	19	13
21	24	29	59	42	213	692	67	98	110	33	19	15
22	15	25	50	42	822	369	1190	77	74	33	19	30
23	11	24	48	42	1200	265	416	86	67	33	19	92
24	9.9	22	48	44	357	189	165	57	60	45	30	52
25	18	22	48	45	235	159	115	55	54	38	26	29
26	28	26	48	44	166	165	94	51	91	37	23	22
27	867	22	48	59	119	580	158	48	505	35	21	19
28	129	25	48	66	99	228	118	48	138	34	19	18
29	44	22	74	59	---	163	316	47	79	32	18	497
30	22	20	62	56	---	759	421	43	63	29	17	277
31	11	---	1370	54	---	352	---	41	---	24	16	---
TOTAL	1336.6	994.9	3405	2703	4140	8987	5280	2653	5680	1267	620	1322
MEAN	43.1	33.2	110	87.2	148	290	176	85.6	189	40.9	20.0	44.1
MAX	867	146	1370	467	1200	1940	1190	299	820	59	30	497
MIN	4.9	9.9	18	42	37	82	67	41	43	24	14	11
AC-FT	2650	1970	6750	5360	8210	17830	10470	5260	11270	2510	1230	2620

CAL YR 1984	TOTAL	12705.20	MEAN	34.7	MAX	1370	MIN	.30	AC-FT	25200
WTR YR 1985	TOTAL	38388.5	MEAN	105	MAX	1940	MIN	4.9	AC-FT	76140

07328070 WINTER CREEK NEAR ALEX, OK

LOCATION.--Lat 34°59'35", long 97°45'40", in NE 1/4 sec.18, T.6 N., R.5 W., Grady County, Hydrologic Unit 11130303, at left bank 1,000 ft downstream from county road bridge, 0.7 mi downstream from East Winter Creek, 3.2 mi upstream from mouth, and 5.5 mi north of Alex.

DRAINAGE AREA.--33 mi^2.

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

GAGE.--Water-stage recorder and broad crest V-notch weir. Datum of gage is 1,040.00 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 8.20 ft higher.

REMARKS.--Estimated daily discharges: Oct. 27 to Jan. 9, 11-28, Jan. 30 to Feb. 19, 22-28, Mar. 2 to Apr. 10, 12-17, 22, May 12-15, 18, June 5-26, June 28 to Aug. 7, Aug. 9 to Sept. 26, Sept. 28-30. Records poor. Flow regulated by 16 flood-retarding structures, combined capacity, 1,050 acre-ft. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--21 years, 10.3 ft^3/s, 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,080 ft^3/s May 27, 1978, gage height, 17.35 ft: no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 31	--	*1,110	*13.94 from HWM	Mar. 20	--	506	13.04 from HWM
Feb. 23	--	536	13.10 from HWM				

Minimum daily discharge, 1.4 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	8.0	7.4	470	10	89	110	32	10	13	6.5	2.7
2	1.7	7.6	7.4	200	9.7	74	90	23	10	15	6.0	2.5
3	1.7	7.4	9.0	96	9.7	70	80	18	9.7	14	5.5	2.8
4	1.7	7.4	11	62	9.6	200	70	14	46	13	5.0	2.8
5	2.1	7.4	13	50	9.6	140	60	12	101	11	6.3	1.9
6	1.6	7.2	10	43	9.5	90	54	11	55	10	5.7	2.3
7	1.4	7.0	8.0	39	9.5	60	46	20	36	9.7	7.0	2.0
8	1.5	7.0	7.4	33	9.5	51	40	13	31	9.1	6.6	1.9
9	1.5	7.0	7.0	31	9.4	44	35	11	24	8.7	5.7	2.2
10	1.7	7.0	7.0	28	9.4	45	32	11	26	8.3	5.2	2.7
11	1.7	6.8	7.0	26	9.4	41	29	9.9	56	7.8	4.8	2.8
12	1.8	6.8	7.0	22	9.4	36	23	18	31	9.5	4.2	2.7
13	1.9	6.8	7.0	21	9.3	52	20	38	22	8.6	3.7	11
14	2.3	6.8	8.0	20	9.3	47	18	28	25	7.2	6.1	7.6
15	2.2	6.8	33	19	9.2	42	17	27	24	6.9	8.0	5.4
16	2.8	6.8	120	18	9.2	40	16	27	21	7.6	6.4	4.9
17	2.7	7.8	12	17	9.2	40	16	24	18	7.3	5.5	3.8
18	2.5	130	9.8	16	9.1	40	15	20	27	6.6	4.6	3.3
19	2.0	70	9.4	15	9.0	40	14	19	25	6.3	4.3	3.1
20	6.6	30	20	14	50	580	13	19	22	6.2	4.2	2.8
21	3.9	20	15	13	170	250	13	18	19	6.5	3.9	2.7
22	2.5	15	10	12	120	150	32	16	17	7.0	3.7	4.0
23	2.4	13	9.4	11	470	110	16	15	13	6.8	3.2	23
24	2.4	12	9.0	11	250	90	19	14	13	6.3	3.7	8.3
25	10	11	9.0	10	170	80	15	13	11	10	3.3	5.8
26	2.9	10	9.0	9.6	140	66	13	13	12	9.4	3.4	5.0
27	180	9.5	9.3	9.5	110	90	18	12	24	9.0	3.3	5.8
28	50	9.0	9.3	30	97	76	14	12	17	8.8	3.8	4.7
29	15	8.6	11	20	---	65	43	13	17	8.2	2.8	43
30	10	8.0	45	12	---	200	49	11	15	7.6	2.6	37
31	9.0	---	710	11	---	130	---	10	---	7.1	2.7	---
TOTAL	331.5	467.7	1166.4	1389.1	1756.0	3128	1030	541.9	777.7	272.5	147.7	210.5
MEAN	10.7	15.6	37.6	44.8	62.7	101	34.3	17.5	25.9	8.79	4.76	7.02
MAX	180	130	710	470	470	580	110	38	101	15	8.0	43
MIN	1.4	6.8	7.0	9.5	9.0	36	13	9.9	9.7	6.2	2.6	1.9
AC-FT	658	928	2310	2760	3480	6200	2040	1070	1540	541	293	418

CAL YR 1984	TOTAL	3811.2	MEAN	10.4	MAX	710	MIN	1.3	AC-FT	7560
WTR YR 1985	TOTAL	11219.0	MEAN	30.7	MAX	710	MIN	1.4	AC-FT	22250

07328100 WASHITA RIVER AT ALEX, OK

LOCATION.--Lat 34°55'35", long 97°46'30", in NW 1/4 sec.7, T.5 N., R.5 W., Grady County, Hydrologic Unit 11130303, near left bank on downstream side of county road bridge, 1.0 mi north of Alex, 3.8 mi downstream from Winter Creek, and at mile 226.5.

DRAINAGE AREA.--4,787 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft above mean sea level.

REMARKS.--Estimated daily discharges: Jan. 23 to Feb. 5, 8, 10, 17-18, July 4-6, 14. Records poor. Some regulation by Fort Cobb Reservoir (station 07325900), by Foss Reservoir (07324300), and by numerous flood-retarding structures.

COOPERATION.--Records furnished by Agricultural Research Service prior to January 1978.

AVERAGE DISCHARGE.--21 years, 433 ft^3/s, 313,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft^3/s Oct. 21, 1983, gage height, 23.78 ft; no flow Aug. 13-18, 1970, Aug. 30 to Sept. 1, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 27	2100	5,510	11.64	Mar. 20	Unknown	9,880	16.00 (HWM)
Dec. 16	1745	4,070	9.91	Apr. 30	Unknown	6,310	12.51 (HWM)
Jan. 1	0315	*10,800	*16.85	June 6	Unknown	10,000	16.11 (HWM)
Mar. 4	1230	7,620	13.83				

Minimum daily discharge, 47 ft^3/s Oct. 1, 3-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	234	77	8440	105	936	1660	2620	178	515	183	140
2	49	378	75	4610	102	829	1390	1720	174	433	172	137
3	47	194	75	2420	100	758	1150	1180	174	406	159	132
4	47	129	77	1680	110	5930	950	950	216	368	160	128
5	50	106	87	1270	120	3400	765	829	2020	321	278	125
6	51	98	100	811	130	2970	624	751	3890	282	341	120
7	49	97	88	569	185	2700	528	972	3300	268	420	118
8	52	94	82	458	204	2340	439	929	2760	255	533	118
9	50	92	84	383	164	1460	378	773	2230	233	289	120
10	53	88	84	360	142	1150	329	829	1960	218	238	113
11	53	82	86	294	154	976	299	729	1980	206	227	118
12	56	80	86	246	147	888	284	829	1670	197	273	118
13	56	80	369	229	134	860	362	1010	1200	187	230	118
14	65	82	1550	214	119	900	404	715	1200	176	237	202
15	84	82	879	204	115	747	383	525	1010	169	233	148
16	99	77	2920	185	112	684	362	412	769	161	231	158
17	108	199	2010	167	112	617	329	347	642	201	233	157
18	104	718	821	158	108	555	287	321	712	175	222	140
19	97	400	575	158	101	677	261	296	921	160	233	132
20	118	187	473	142	94	8100	235	306	712	150	250	125
21	179	131	745	115	667	7800	264	375	565	147	231	120
22	152	119	738	105	765	5250	2630	425	490	144	216	118
23	119	108	433	112	784	2620	3360	329	450	137	180	393
24	115	102	297	120	1200	1920	1630	296	414	135	197	296
25	123	106	215	115	2260	1720	1470	273	380	231	202	227
26	131	106	201	105	1880	1650	1170	264	372	328	178	200
27	3200	105	197	98	1600	2590	984	259	1590	266	169	183
28	2680	99	198	110	1260	1800	984	252	1060	247	169	174
29	636	92	202	120	---	1350	1050	222	613	313	162	548
30	362	80	336	116	---	1720	4580	218	561	251	152	1300
31	273	---	5280	110	---	1890	---	193	---	196	144	---
TOTAL	9305	4545	19440	24224	12974	67787	29541	20149	34213	7476	7142	6226
MEAN	300	152	627	781	463	2187	985	650	1140	241	230	208
MAX	3200	718	5280	8440	2260	8100	4580	2620	3890	515	533	1300
MIN	47	77	75	98	94	555	235	193	174	135	144	113
AC-FT	18460	9020	38560	48050	25730	134500	58590	39970	67860	14830	14170	12350

CAL YR 1984	TOTAL	110430	MEAN	302	MAX	5280	MIN	44	AC-FT	219000
WTR YR 1985	TOTAL	243022	MEAN	666	MAX	8440	MIN	47	AC-FT	482000

07328500 WASHITA RIVER NEAR PAULS VALLEY, OK

LOCATION.--Lat 34°45'17", long 97°15'04", in SE 1/4 sec.1. T.3 N., R.1 W., Garvin County, Hydrologic Unit 11130303, on downstream side of left pier of bridge on U.S. Highway 77, 2 mi northwest of Pauls Valley, 6 mi downstream from Owl Creek, 7 mi upstream from Washington Creek, and at mile 146.5.

DRAINAGE AREA.--5,330 mi^2.

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, National Geodetic Vertical Datum of 1929. During 1899, nonrecording gage at site 9 mi 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 mi upstream at datum 1.53 ft higher. Mar. 11, 1975 to Jan. 26, 1981, water-stage recorder at site 200 ft upstream and at same datum.

REMARKS.--Estimated daily discharges: Nov. 10, Jan. 31, May 9, July 18. Records poor. Some diversion for irrigation above station. Some regulation since March 1959, by Fort Cobb Reservoir (station 07325900), since February 1961, by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--48 years, 706 ft^3/s, 511,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,800 ft^3/s May 18, 1957, gage height, 27.34 ft; maximum gage height, 29.88 ft May 11, 1950; no flow in 1956, 1964, 1966-67, 1970-72.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stream is reported to have receded to no flow in 1882 and in 1897 (from information by local resident).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 16	0745	6,310	9.86	Mar. 27	0800	5,390	9.08
Dec. 31	2400	15,900	16.01	Mar. 30	0600	6,030	9.63
Feb. 23	1700	*18,200	*17.30	Apr. 23	1730	5,830	9.46
Mar. 5	0945	8,190	11.32	Apr. 30	2100	12,300	14.05
Mar. 22	0045	16,400	16.30	June 5	2045	10,500	12.93

Minimum daily discharge 66 ft^3/s Oct. 9-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	622	205	15200	431	3220	4250	8830	479	909	315	164
2	72	578	193	10300	297	2790	3030	5030	472	915	262	162
3	70	440	184	5420	297	2400	2880	3650	449	804	243	164
4	70	534	186	3830	338	3350	2560	2840	571	730	1320	158
5	70	357	215	3320	374	7440	2320	2320	5160	681	1860	150
6	68	315	218	2660	483	5020	1890	1990	8300	593	951	144
7	68	274	230	2160	476	4130	1620	1840	6550	539	508	139
8	67	257	227	1740	468	3730	1490	1800	4660	504	420	134
9	66	240	208	1390	508	2790	1350	1680	3950	476	406	128
10	66	232	196	1090	521	2270	1320	1520	3890	442	442	121
11	67	225	189	980	508	1920	1320	1370	3740	431	344	124
12	67	210	179	915	479	1700	1350	1220	2920	416	291	121
13	68	193	1060	821	453	1680	1350	1150	2430	392	274	116
14	75	220	2860	741	431	1650	1350	1850	1900	357	285	478
15	79	208	3060	703	413	1510	1460	1300	1680	344	760	213
16	80	177	5060	665	371	1370	1290	1050	1390	354	508	213
17	89	270	4790	660	361	1280	1210	950	1170	378	357	198
18	97	755	3030	623	354	1210	1190	892	1050	378	303	177
19	108	933	1830	584	341	1580	1100	857	1530	371	274	182
20	140	718	1280	526	334	8850	1030	863	1270	351	262	162
21	213	409	1140	483	1970	15500	992	927	968	322	288	148
22	186	378	1180	453	4620	11600	1780	869	1220	306	276	168
23	174	315	1200	431	16300	5720	4790	915	2100	322	243	594
24	184	282	827	441	14200	4590	3760	875	1300	312	243	613
25	566	265	758	449	7950	3930	2740	781	974	297	232	431
26	311	254	634	442	5290	3310	2110	681	713	288	220	309
27	751	246	521	453	4160	4620	1800	618	1070	507	203	246
28	2060	238	526	521	3740	4900	1640	618	1840	460	196	210
29	1580	232	539	521	---	3340	3230	634	1660	378	189	401
30	1200	222	543	513	---	11500	11500	608	1010	378	175	1190
31	827	---	7330	476	---	6400	---	543	---	381	168	---
TOTAL	9611	10599	40598	59511	66468	135300	69702	51071	66416	14316	12818	7758
MEAN	310	353	1310	1920	2374	4365	2323	1647	2214	462	413	259
MAX	2060	933	7330	15200	16300	15500	11500	8830	8300	915	1860	1190
MIN	66	177	179	431	297	1210	992	543	449	288	168	116
AC-FT	19060	21020	80530	118000	131800	268400	138300	101300	131700	28400	25420	15390

CAL YR 1984	TOTAL	160991	MEAN	440	MAX	7330	MIN	45	AC-FT	319300
WTR YR 1985	TOTAL	544168	MEAN	1491	MAX	16300	MIN	66	AC-FT	1079000

07329000 RUSH CREEK AT PURDY, OK

LOCATION.--Lat 34°41'42", long 97°35'54", in SE 1/4 SE 1/4 sec.27, T.3 N., R.4 W., on left downstream bank near end of bridge on State Highway 76, 0.8 mi south of Purdy, 8.5 mi south of Lindsay, and at mile 27.3.

DRAINAGE AREA.--145 mi^2.

PERIOD OF RECORD.--October 1939 to December 1953, February 1982 to current year. Prior to May 1940 monthly discharges only, published in WSP 1311.

REVISED RECORD.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1004.12 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1942, nonrecording gage at site 1.2 mi downstream at datum 9.42 ft lower. Oct. 1, 1942 to Aug. 22, 1943 and May 11, 1950 to Sept. 18, 1952 nonrecording gage 1.2 mi downstream at datum 14.42 ft lower, Aug. 23, 1943 to May 10, 1950 and Sept. 19, 1952 to Dec. 31, 1953 water-stage recorder at site 1.2 mi downstream at datum 14.42 ft lower.

REMARKS.--Estimated daily discharges: Oct. 1-25, Dec. 13 to Jan. 9, Jan. 11 to Feb. 15, Mar. 30 to Apr. 10, 25-26, May 7-16, May 18 to July 2, July 19 to Aug. 12. Records poor.

AVERAGE DISCHARGE.--17 yrs (water years 1940-53, 1983-85), 73.3 ft^3/s, 53,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s May 10, 1950, gage height, 27.00 ft, from floodmark and from rating extended above 5,000 ft^3/s on the basis of a slope-area measurement at 27.00 ft. No flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,020 ft^3/s Apr. 29, gage height, 21.24 ft from high-water mark; no other peaks above base of 5,000 ft^3/s, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	231	11	2200	83	291	340	1200	45	30	6.4	6.6
2	.00	119	9.8	1300	81	222	270	800	42	28	6.2	6.4
3	.00	56	9.6	600	79	222	220	567	44	26	6.0	6.5
4	.00	34	9.3	370	90	456	182	421	42	24	5.8	6.4
5	.50	22	13	270	120	290	155	342	420	22	5.6	6.8
6	.00	17	15	180	110	184	134	270	1900	21	16	6.7
7	.00	14	15	110	105	145	116	570	740	20	43	7.3
8	.00	13	16	80	100	174	102	350	560	19	19	7.2
9	.00	11	15	60	97	146	93	260	450	17	13	6.8
10	.00	8.6	15	72	93	127	82	200	360	16	10	6.5
11	.00	7.3	14	90	90	115	71	160	600	15	8.0	7.1
12	.00	6.2	17	88	88	68	87	134	320	15	6.8	7.7
13	.00	5.3	30	85	85	84	127	280	220	14	6.1	8.9
14	3.0	5.3	60	82	83	78	121	120	170	13	27	17
15	2.0	5.1	110	80	80	66	101	81	132	12	65	10
16	2.0	4.6	195	78	86	65	86	60	110	12	23	8.7
17	1.0	19	33	77	102	68	79	45	90	11	16	8.2
18	.50	48	23	75	90	69	74	40	225	10	12	8.1
19	1.0	31	18	74	87	72	70	35	150	9.5	10	8.0
20	5.0	25	14	73	118	2400	70	34	114	9.0	9.2	7.7
21	10	20	29	72	644	767	71	315	90	8.5	8.3	7.9
22	8.0	15	22	70	1090	690	516	190	73	8.3	7.8	16
23	7.0	14	18	69	2400	1010	374	130	60	8.0	7.2	148
24	5.0	13	15	68	1050	731	195	100	50	7.6	7.0	22
25	10	12	13	68	792	547	130	80	44	8.9	7.3	13
26	6.5	13	12	67	594	413	94	63	38	8.4	7.4	12
27	306	14	17	110	405	591	168	69	60	8.0	7.9	11
28	71	13	16	100	411	460	155	60	40	7.6	9.2	10
29	42	12	17	94	---	753	2170	51	37	7.3	7.3	113
30	35	11	16	88	---	620	1850	45	33	7.0	7.1	46
31	51	---	210	85	---	450	---	40	---	6.7	6.9	---
TOTAL	566.50	819.4	1027.7	6935	9253	12374	8303	7112	7259	429.8	397.5	557.5
MEAN	18.3	27.3	33.2	224	330	399	277	229	242	13.9	12.8	18.6
MAX	306	231	210	2200	2400	2400	2170	1200	1900	30	65	148
MIN	.00	4.6	9.3	60	79	65	70	34	33	6.7	5.6	6.4

CAL YR 1984	TOTAL 6242.07	MEAN 17.1	MAX 306	MIN .00			
WTR YR 1985	TOTAL 55034.40	MEAN 151	MAX 2400	MIN .00			

07329700 WILDHORSE CREEK NEAR HOOVER, OK

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, Hydrologic Unit 11130303, on downstream left bank at bridge on State Highway 19A, 1.5 mi north of Hoover, 1.8 mi downstream from Sandy Creek, and at mile 7.9.

DRAINAGE AREA.--604 mi^2.

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, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-29, Jan. 20-23, Feb. 1-5, July 31 to Aug. 14, Aug. 16 to Sept. 9. Records poor. 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.

AVERAGE DISCHARGE.--16 years, 202 ft^3/s, 146,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s May 20, 1977, gage height, 24.70 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 13	1815	6,680	15.15	Mar. 30	0730	8,540	16.95
Dec. 16	0315	8,800	17.18	Apr. 22	1200	9,760	18.02
Dec. 31	1945	*17,600	*23.69	June 5	1315	14,900	21.90
Feb. 23	1115	11,400	19.34	June 18	1215	5,600	14.08
Mar. 20	1215	8,190	16.63				

Minimum daily discharge, 1.5 ft^3/s on Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	790	122	7510	151	1090	1250	1370	94	137	29	11
2	1.6	656	118	3070	150	1010	964	901	85	153	28	9.9
3	1.6	340	114	1660	149	963	742	720	77	165	28	9.0
4	1.5	236	112	1250	148	2050	607	628	74	130	27	8.2
5	5.0	193	114	983	147	1300	514	569	8010	110	27	7.7
6	4.7	171	116	836	159	1010	446	453	6970	101	25	7.0
7	4.5	157	116	740	151	859	383	456	3750	95	29	6.6
8	4.3	145	113	664	152	721	345	444	1890	87	28	6.5
9	4.1	137	112	528	204	616	315	341	1350	80	27	6.4
10	3.8	128	111	562	247	553	294	293	1140	73	26	5.9
11	3.6	121	111	454	188	501	283	263	1210	66	25	5.5
12	64	116	109	393	171	453	287	237	1150	62	24	6.4
13	61	113	2410	333	165	462	326	229	947	56	23	8.5
14	62	110	2360	294	156	544	368	259	846	51	22	24
15	62	107	1470	272	141	416	279	209	749	50	27	49
16	61	104	5040	250	133	372	246	173	659	52	43	20
17	61	190	1540	244	140	368	214	151	563	53	27	13
18	62	1300	901	228	138	341	195	150	3000	46	24	10
19	66	459	675	216	135	317	181	137	1880	43	22	9.8
20	120	293	561	195	156	4020	168	350	1050	41	21	8.7
21	101	227	518	180	2870	4140	161	985	732	49	19	7.9
22	80	194	406	172	1840	2310	4590	533	529	43	17	8.3
23	88	158	352	169	7580	1640	2700	361	415	58	16	121
24	95	154	305	168	5020	1280	1210	265	333	47	16	102
25	348	156	262	165	2420	1050	797	216	272	39	15	29
26	250	149	240	157	1640	936	577	182	228	35	15	18
27	900	139	224	170	1320	856	642	134	791	23	19	14
28	500	135	224	192	1130	777	578	138	378	32	17	12
29	271	129	219	177	---	1120	545	126	239	34	15	39
30	274	126	205	169	---	4760	1920	114	187	30	14	213
31	216	---	7800	162	---	2200	---	98	---	31	12	---
TOTAL	3778.3	7433	27080	22563	27001	39035	22127	11485	39598	2072	707	797.3
MEAN	122	248	874	728	964	1259	738	370	1320	66.8	22.8	26.6
MAX	900	1300	7800	7510	7580	4760	4590	1370	8010	165	43	213
MIN	1.5	104	109	157	133	317	161	98	74	23	12	5.5
AC-FT	7490	14740	53710	44750	53560	77430	43890	22780	78540	4110	1400	1580

CAL YR 1984	TOTAL	58200.6	MEAN	159	MAX	7800	MIN	1.1	AC-FT	115400
WTR YR 1985	TOTAL	203676.6	MEAN	558	MAX	8010	MIN	1.5	AC-FT	404000

07331000 WASHITA RIVER NEAR DICKSON, OK

LOCATION.--Lat 34°13'59", long 96°58'38", in SE 1/4 SW 1/4 sec.3, T.4 S., R.3 E., Carter County, Hydrologic Unit 11130303, on right bank 500 ft upstream from bridge on U.S. Highway 177, 1.2 mi downstream from Caddo Creek, 3.2 mi north of Dickson, 12.0 mi northeast of Ardmore, and at mile 63.5.

DRAINAGE AREA.--7,202 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to Oct. 1, 1979, published as Washita River near Durwood.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1281: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 650.57 ft, National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 16, 1939, nonrecording gage at site 500 ft downstream at same datum. Dec. 15, 1950 to Feb. 19, 1952, nonrecording gage at same site and datum. Feb. 20, 1952 to Apr. 23, 1975, water-stage recorder at site 500 ft downstream at same datum.

REMARKS.--Estimated daily discharges: May 13-20, June 23-26, July 3-15. Records fair. Some diversions above station for irrigation. Some regulation since March 1959 by Fort Cobb Reservoir (station 07325900), since February 1961 by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--57 years, 1,402 ft^3/s, 1,016,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,000 ft^3/s 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 16	1715	16,500	20.82	Mar. 21	0700	21,200	23.17
Jan. 1	1800	30,000	27.73	Mar. 30	1715	24,000	24.70
Feb. 24	0730	26,600	25.81	Apr. 30	1700	24,200	24.69
Apr. 23	0015	16,500	20.54	June 6	1900	*34,500	*28.93

Minimum daily discharge, 80 ft^3/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	1690	444	26800	1610	5990	10300	15300	1370	1240	445	300
2	104	3460	414	22300	1730	4880	8060	11200	1320	1200	448	292
3	94	2140	389	12300	1720	4260	6890	8230	1290	1150	404	292
4	88	1410	373	8840	1670	6330	6130	6610	1250	1500	374	278
5	86	1080	371	7190	1880	8040	5450	5650	4930	1400	356	276
6	94	822	380	6010	1870	7680	4650	4870	32100	1320	344	270
7	102	656	395	5210	1470	5780	4170	4270	23800	1260	362	276
8	90	571	378	4250	1260	5420	3480	3910	13600	1130	387	276
9	85	502	377	3800	1440	4620	3240	3370	10000	1040	482	270
10	83	452	372	3460	1640	4190	2770	3220	8380	980	473	267
11	80	412	355	2880	1570	4190	2410	2820	7330	920	567	284
12	81	380	343	2040	1300	3160	2250	2650	7310	860	459	278
13	82	360	852	1750	1180	3010	2250	2800	5830	800	367	290
14	83	339	7560	1540	1100	2950	2340	2700	4550	740	331	539
15	85	324	6050	1370	1050	2790	2300	2600	3620	650	343	751
16	154	308	12800	1300	981	2470	2110	2500	3240	720	471	672
17	148	322	9970	1230	941	2310	1920	2450	2780	620	662	487
18	116	3010	6980	1190	943	2240	1760	2450	4060	590	502	463
19	105	3190	4650	1110	924	1930	1640	2400	6040	538	415	428
20	1250	2010	3460	976	915	7530	1560	2900	4120	510	371	404
21	1690	1670	2830	868	4180	20200	1490	3060	3180	537	342	419
22	743	1390	2490	965	6130	18000	7930	3070	2200	507	335	415
23	512	1160	2170	954	14500	11800	13100	2300	1700	495	339	402
24	378	1000	2010	954	25000	8580	9580	2080	1400	487	346	1110
25	2400	886	1630	938	16200	6820	6470	1880	1100	500	332	912
26	3160	802	1350	961	10700	5990	5070	1710	1000	459	321	781
27	2390	700	1220	973	8230	3430	4320	1620	2000	440	317	686
28	5120	561	1140	1040	7000	6400	4080	1540	3400	444	309	582
29	4110	513	1110	1100	---	6890	4020	1490	2520	566	312	598
30	2660	484	1120	1120	---	21000	19500	1460	2190	516	305	641
31	1620	---	5860	1090	---	15200	---	1440	---	463	302	---
TOTAL	27909	32604	79843	126509	119134	214080	151240	114550	167610	24582	12123	13939
MEAN	900	1087	2576	4081	4255	6906	5041	3695	5587	793	391	465
MAX	5120	3460	12800	26800	25000	21000	19500	15300	32100	1500	662	1110
MIN	80	308	343	868	915	1930	1490	1440	1000	440	302	267
AC-FT	55360	64670	158400	250900	236300	424600	300000	227200	332500	48760	24050	27650

CAL YR 1984 TOTAL 340632 MEAN 931 MAX 12800 MIN 62 AC-FT 675600
WTR YR 1985 TOTAL 1084123 MEAN 2970 MAX 32100 MIN 80 AC-FT 2150000

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to Jan. 1982, Feb. 1984 to current year.
WATER TEMPERATURE: April 1947 to Jan. 1982, Feb. 1984 to current year.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,120 microsiemens Nov. 15, 1963; minimum daily, 95 microsiemens Nov. 2, 1951.
WATER TEMPERATURE: Maximum daily, 37.0 °C July 18, 1964, July 24, 1981; minimum daily, 0.0 °C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,480 microsiemens Aug. 31; minimum daily, 283 microsiemens Jan. 1.
WATER TEMPERATURE: Maximum daily, 38.0 °C on July 16; minimum daily, 2.0 °C on Feb. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)
OCT											
23...	1300	1028	80020	522	847	8.0	16.5	15.5	88	750	6.2
DEC											
19...	1330	1028	80020	4510	*439	7.8	9.5	12.0	400	730	10.5
MAR											
26...	1220	1028	80020	5710	752	8.0	7.5	7.0	390	740	7.2
MAY											
21...	1240	1028	80020	3030	*1150	7.9	20.5	15.0	170	740	7.9
JUL											
23...	1200	1028	80020	496	*1240	8.0	29.5	29.0	16	760	11.4
SEP											
24...	1145	1028	80020	1290	*846	8.2	21.5	24.0	110	760	6.4

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT											
23...	63	1400	1800	310	190	72	32	55	27	1	5.0
DEC											
19...	--	6300	4800	180	47	49	14	19	18	0.6	3.2
MAR											
26...	61	4000	3500	310	130	76	28	31	18	0.8	3.4
MAY											
21...	--	5400	1200	520	300	120	52	67	22	1	4.0
JUL											
23...	150	51	19	480	330	86	65	90	28	2	10
SEP											
24...	--	9100	8100	300	38	60	36	57	29	1	3.4

*SPECIFIC CONDUCTANCE, LAB (US/CM)

07331000 WASHITA RIVER NR DICKSON,OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BICARBONATE IT-FLD (MG/L AS HCO3)	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT												
23...	--	--	122	--	2.4	200	70	0.4	6.9	510	520	0.69
DEC												
19...	163	0	152	134	4.1	59	24	0.2	7.2	237	260	0.32
MAR												
26...	220	0	197	180	3.5	140	38	0.3	7.9	447	430	0.61
MAY												
21...	269	0	216	220	5.4	270	82	0.3	5.6	746	730	1.0
JUL												
23...	194	0	163	159	3.1	310	120	0.3	9.1	850	790	1.2
SEP												
24...	318	0	149	261	3.2	170	76	0.3	8.6	516	570	0.7

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)
OCT												
23...	719	0.34	0.10	0.13	1.8	0.32	--	0.07	0.04	0.12	420	1
DEC												
19...	2890	0.33	0.19	0.24	5.0	1.00	--	0.08	0.06	0.18	180	<1
MAR												
26...	6890	0.46	0.12	0.15	1.3	0.51	--	0.03	0.03	0.09	40	1
MAY												
21...	6100	0.10	0.13	0.17	1.8	0.58	1.8	0.03	0.02	0.06	<10	<1
JUL												
23...	1140	--	--	--	3.1	0.15	--	<0.01	--	--	10	1
SEP												
24...	1800	0.30	0.14	0.18	3.4	0.19	0.58	0.03	0.03	0.09	230	1

DATE	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
23...	180	2	--	1	2	<3	8	290	3	19	24
DEC											
19...	110	<0.5	--	2	2	<3	4	150	1	7	10
MAR											
26...	180	<0.5	--	1	6	<3	6	140	9	17	14
MAY											
21...	240	<0.5	--	<1	<1	<3	3	26	6	21	13
JUL											
23...	200	<0.5	10	<1	<1	<3	4	7	3	98	5
SEP											
24...	180	<0.5	--	2	<1	<3	6	160	2	14	18

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
23...	0.2	<10	5	<1	<1	880	<6	21	442	623	97
DEC											
19...	0.2	<10	8	<1	1	380	<6	8	1800	21900	79
MAR											
26...	--	<10	5	2	<1	620	<6	28	4780	73700	68
MAY											
21...	--	<10	1	<1	<1	1200	<6	21	2190	17900	56
JUL											
23...	0.2	<10	2	<1	<1	1400	<6	19	280	375	17
SEP											
24...	0.1	<10	8	<1	<1	820	<6	38	3730	13000	72

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	440	1210	283	---	623	---	434	1220	806	1220	1340
2	1080	359	1220	384	---	677	---	438	1230	810	1280	1290
3	964	458	1270	374	---	638	---	542	1270	930	1270	1280
4	1150	487	1190	400	---	550	681	630	1280	982	1300	1300
5	1140	555	1190	463	1120	520	760	674	799	1150	1320	1320
6	1120	667	1230	514	1090	563	785	681	311	1230	1230	1330
7	1020	725	1270	614	1200	630	846	705	434	1210	1300	1350
8	1120	886	1220	596	1100	876	824	762	498	1070	1160	1370
9	1220	972	---	---	1110	642	868	840	520	1130	1260	1400
10	1180	910	1340	---	1110	662	925	925	580	1200	1060	1390
11	1220	890	1370	---	1020	696	923	896	615	1160	1050	1360
12	1240	851	1260	---	1030	742	1090	898	607	1220	1110	1340
13	1280	884	585	---	1040	768	1080	957	583	1230	966	1310
14	1270	1030	421	---	1140	808	1060	1030	641	1230	1020	1230
15	1300	---	402	---	1170	880	1090	1100	655	---	1000	947
16	1060	1160	335	---	1150	932	1080	898	691	1200	1120	776
17	1170	1140	333	970	1190	---	1120	929	754	1150	1390	794
18	1260	683	488	1030	1230	989	1130	988	748	1140	1100	889
19	1370	453	437	1060	1180	993	1160	1120	508	1190	770	1090
20	368	526	501	1070	1170	613	1150	1100	594	1160	1040	1230
21	562	727	464	1100	1020	409	1190	870	762	1220	1300	1180
22	580	624	576	1180	551	430	574	860	830	1250	1400	1080
23	979	655	644	1160	448	475	433	870	889	1150	1270	1210
24	1040	684	716	1160	336	564	601	965	784	1180	1260	666
25	583	772	786	1120	466	637	608	986	957	1220	1230	725
26	452	808	710	1140	462	702	678	1090	987	1160	1270	808
27	323	814	710	1170	524	731	775	1020	1020	1210	1300	900
28	325	963	753	1200	572	609	831	1060	558	1260	1380	1050
29	601	1100	840	1190	---	702	671	1130	744	1290	1400	776
30	496	1180	876	1210	---	435	373	1160	927	1260	1400	987
31	415	---	360	---	---	395	---	1190	---	877	1480	---
MEAN	943	773	824	881	935	663	863	895	767	1140	1210	1120

WTR YR 1985 MEAN 921 MAX 1480 MIN 283

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	21.0	12.0	5.0	---	13.0	---	21.0	31.0	27.0	33.0	35.0
2	22.0	16.0	11.0	---	---	14.0	---	23.0	32.0	29.0	35.0	32.0
3	24.0	16.0	10.0	---	---	11.0	---	24.0	32.0	30.0	34.0	33.0
4	23.0	19.0	9.0	---	---	15.0	24.0	25.0	32.0	29.0	34.0	32.0
5	25.0	19.0	7.0	---	2.0	---	17.0	23.0	24.0	28.0	34.0	32.0
6	26.0	17.0	6.0	9.0	3.0	14.0	17.0	25.0	23.0	30.0	35.0	31.0
7	24.0	18.0	8.0	---	4.0	14.0	16.0	25.0	26.0	31.0	34.0	31.0
8	26.0	21.0	10.0	---	5.0	16.0	18.0	25.0	29.0	32.0	34.0	33.0
9	27.0	21.0	---	---	8.0	17.0	23.0	27.0	28.0	33.0	34.0	34.0
10	26.0	23.0	11.0	6.0	9.0	18.0	17.0	27.0	28.0	35.0	36.0	31.0
11	21.0	22.0	13.0	---	6.0	19.0	21.0	26.0	27.0	34.0	34.0	30.0
12	25.0	16.0	13.0	---	8.0	16.0	19.0	24.0	25.0	35.0	34.0	30.0
13	23.0	17.0	13.0	---	8.0	14.0	20.0	25.0	24.0	32.0	33.0	29.0
14	21.0	19.0	12.0	---	10.0	14.0	24.0	22.0	27.0	32.0	30.0	28.0
15	24.0	---	11.0	---	10.0	14.0	24.0	26.0	27.0	---	30.0	31.0
16	23.0	16.0	13.0	---	10.0	13.0	24.0	27.0	29.0	38.0	32.0	26.0
17	21.0	14.0	13.0	---	10.0	---	25.0	25.0	30.0	35.0	33.0	23.0
18	25.0	10.0	13.0	---	11.0	17.0	25.0	27.0	26.0	35.0	34.0	29.0
19	21.0	9.0	13.0	---	12.0	14.0	23.0	27.0	27.0	35.0	34.0	30.0
20	20.0	10.0	16.0	---	12.0	16.0	25.0	23.0	28.0	36.0	34.0	29.0
21	21.0	10.0	19.0	---	14.0	13.0	23.0	23.0	28.0	32.0	32.0	27.0
22	18.0	10.0	15.0	---	15.0	13.0	20.0	25.0	---	32.0	32.0	29.0
23	16.0	12.0	12.0	---	18.0	---	22.0	25.0	29.0	30.0	31.0	24.0
24	15.0	14.0	10.0	---	15.0	---	22.0	28.0	28.0	32.0	32.0	22.0
25	15.0	16.0	10.0	---	16.0	20.0	23.0	29.0	31.0	32.0	30.0	22.0
26	16.0	17.0	11.0	---	13.0	19.0	23.0	22.0	30.0	33.0	33.0	20.0
27	21.0	12.0	13.0	---	13.0	22.0	23.0	26.0	27.0	32.0	31.0	23.0
28	20.0	11.0	17.0	---	12.0	20.0	24.0	30.0	28.0	33.0	30.0	22.0
29	20.0	12.0	17.0	---	---	20.0	22.0	32.0	28.0	35.0	31.0	19.0
30	22.0	11.0	13.0	---	---	---	22.0	31.0	29.0	34.0	33.0	19.0
31	---	---	13.0	---	---	13.0	---	28.0	---	35.0	34.0	---
MEAN	21.5	15.5	12.0	6.5	10.0	15.5	21.5	25.5	28.0	32.5	33.0	28.0

WTR YR 1985 MEAN 22.5 MAX 38.0 MIN 2.0

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE 1/4 sec.33, T.8 S., R.7 E., Bryan County, OK, Hydrologic Unit 11130210, in control tower of Denison Dam on Red River, 1.2 mi upstream from Shawnee Creek, 1.8 mi upstream from Sand Creek, 4.0 mi northwest of Denison, 6.0 mi southwest of Colbert, and at mile 725.9.

DRAINAGE AREA.--39,719 mi^2 of which 5,936 mi^2 is probably noncontributing.

PERIOD OF RECORD.--July 1942 to current year. Month-end contents only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1944, nonrecording gage at same site and datum. Prior to Oct. 1, 1948, supplementary nonrecording gage in Cumberland pool at the same datum.

REMARKS.--Reservoir is formed by a rolled earthfill dam. The controlled outlet consists of eight 20-foot diameter conduits and the uncontrolled outlet is a concrete, ogee-type weir spillway. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power pool was first filled March 15, 1945. Capacity, based on 1969 survey, 5,312,000 acre-ft at elevation 640.0 ft, crest of spillway, 2,643,000 acre-ft at elevation 617.0 ft maximum power pool; 1,031,000 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 2,105,000 acre-ft, the reservoir is divided into two pools by protective levees around the Cumberland oil field on the Washita River arm with bottom 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 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 1969, used since Oct. 1, 1977.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,429,000 acre-ft June 11, elevation, 625.00 ft. Minimum, 2,146,000 acre-ft Oct. 2-3, elevation, 610.58 ft.

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

610	2,105,300	622	3,116,900
614	2,398,800	627	3,649,100
617	2,643,000	632	4,239,700

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2147000	2418000	2477000	2717000	2558000	2868000	3137000	2893000	2644000	2741000	2519000	2368000
2	2146000	2428000	2477000	2771000	2548000	2844000	3190000	2920000	2641000	2726000	2514000	2364000
3	2146000	2443000	2482000	2838000	2545000	2822000	3200000	2953000	2644000	2726000	2513000	2363000
4	2147000	2453000	2475000	2871000	2542000	2806000	3166000	2954000	2649000	2716000	2513000	2360000
5	2147000	2456000	2475000	2879000	2540000	2787000	3124000	2944000	2684000	2704000	2509000	2356000
6	2153000	2456000	2475000	2886000	2542000	2787000	3070000	2931000	2908000	2696000	2503000	2354000
7	2156000	2458000	2468000	2847000	2541000	2784000	3014000	2911000	3058000	2688000	2497000	2351000
8	2157000	2460000	2470000	2800000	2540000	2780000	2953000	2890000	3220000	2678000	2492000	2348000
9	2157000	2464000	2472000	2764000	2548000	2771000	2889000	2861000	3343000	2669000	2485000	2343000
10	2157000	2460000	2472000	2721000	2563000	2754000	2827000	2839000	3414000	2657000	2481000	2341000
11	2160000	2457000	2474000	2708000	2550000	2740000	2783000	2819000	3409000	2645000	2475000	2338000
12	2161000	2454000	2477000	2700000	2550000	2721000	2757000	2796000	3367000	2630000	2467000	2335000
13	2164000	2449000	2490000	2691000	2554000	2721000	2756000	2787000	3316000	2622000	2461000	2339000
14	2164000	2448000	2511000	2683000	2561000	2718000	2752000	2773000	3266000	2613000	2456000	2338000
15	2162000	2443000	2558000	2670000	2542000	2711000	2742000	2761000	3223000	2603000	2452000	2338000
16	2169000	2439000	2602000	2665000	2543000	2708000	2731000	2751000	3168000	2590000	2445000	2337000
17	2165000	2447000	2636000	2651000	2546000	2704000	2719000	2742000	3115000	2583000	2439000	2335000
18	2167000	2454000	2667000	2637000	2543000	2701000	2706000	2728000	3053000	2575000	2434000	2334000
19	2160000	2456000	2687000	2640000	2547000	2694000	2690000	2706000	2994000	2567000	2429000	2332000
20	2184000	2463000	2695000	2623000	2546000	2747000	2679000	2706000	2937000	2565000	2423000	2330000
21	2191000	2465000	2697000	2608000	2547000	2833000	2660000	2719000	2901000	2570000	2416000	2330000
22	2201000	2469000	2688000	2594000	2557000	2916000	2749000	2708000	2876000	2565000	2410000	2327000
23	2206000	2472000	2679000	2580000	2643000	2981000	2776000	2701000	2847000	2561000	2403000	2329000
24	2219000	2477000	2673000	2577000	2698000	3012000	2810000	2698000	2825000	2557000	2400000	2326000
25	2229000	2477000	2661000	2574000	2790000	3014000	2834000	2691000	2810000	2554000	2394000	2321000
26	2245000	2482000	2657000	2577000	2863000	2992000	2842000	2686000	2798000	2548000	2386000	2321000
27	2270000	2489000	2652000	2589000	2880000	2967000	2830000	2681000	2787000	2545000	2380000	2320000
28	2293000	2485000	2648000	2586000	2879000	2937000	2828000	2674000	2774000	2542000	2378000	2319000
29	2328000	2477000	2652000	2583000	---	2917000	2830000	2665000	2764000	2536000	2375000	2332000
30	2358000	2480000	2658000	2588000	---	3002000	2854000	2657000	2753000	2529000	2372000	2329000
31	2384000	---	2694000	2575000	---	3076000	---	2650000	---	2525000	2370000	---
MAX	2384000	2489000	2697000	2886000	2880000	3076000	3200000	2954000	3414000	2741000	2519000	2368000
MIN	2146000	2418000	2468000	2574000	2540000	2694000	2660000	2650000	2641000	2525000	2370000	2319000
(†)	613.81	615.04	617.57	616.21	619.57	621.59	619.30	617.08	618.21	615.60	613.62	613.09
(††)	+234,100	+95,900	+213,900	-119,200	+304,500	+196,700	-222,200	-203,400	+102,200	-227,900	-155,000	-40,200

CAL YR 1984 MAX 2697000 MIN 2146000 (††) +108,900
WTR YR 1985 MAX 3414000 MIN 2146000 (††) +179,400

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, Hydrologic Unit 11140101, on right bank 1,800 ft downstream from Denison Dam powerhouse, 0.4 mi upstream from Shawnee Creek (spillway flow return), 4.5 mi north of Denison, and at mile 725.5.

DRAINAGE AREA.--39,720 mi^2, of which 5,936 mi^2 is probably noncontributing. At site used prior to October 1961, drainage area was 39,777 mi^2, of which 5,936 mi^2 probably was noncontributing.

WATER-DISCHARGE RECORDS

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, TX", and October 1934 to September 1961, published as "near Colbert, OK". Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. October 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 mi downstream. Prior to Oct. 1, 1931, at datum 6.85 ft higher; Oct. 1, 1931 to Sept 24, 1934, at datum 7.07 ft higher; and July 29, 1942 to Sept. 30, 1961, at datum 2.64 ft lower; Sept. 25, 1934 to July 28, 1942, water-stage recorder at railway bridge 1.9 mi downstream at datum 7.36 ft higher.

REMARKS.--Estimated daily discharges: Oct. 20-21, 25, Oct. 31 to Nov. 2, June 10-13, July 6, 15, Aug. 16-17, Sept. 10-11, 25. Records good. Flow regulated since October 1943 by Lake Texoma (station 07331500).

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Denison Dam) 20 years (water years 1924-43), 5,684 ft^3/s, 4,118,000 acre-ft/yr; (since regulation by Denison Dam) 41 years (water years 1945-85), 4,450 ft^3/s, 3,224,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft^3/s 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 ft^3/s Jan. 10, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 record of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,200 ft^3/s June 11, gage height, 17.55 ft; minimum daily discharge, 71 ft^3/s Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	90	234	12000	9490	25900	18800	12700	5610	10600	3170	1170
2	79	100	95	20500	7440	26000	15300	12600	3620	10600	3180	1180
3	79	114	2290	28500	2840	26100	23500	16600	83	10700	2000	1170
4	79	108	2080	32900	5550	26100	35400	20900	72	9550	1980	1180
5	79	1260	2250	30100	3610	26000	38400	20900	2520	9490	3150	1180
6	83	1040	2420	13900	3170	26100	38500	20800	9010	5820	3510	1160
7	82	1270	1120	33000	3200	26100	38400	20800	7520	5570	2860	1160
8	79	1160	113	33200	2800	24400	38400	20800	18700	7140	2870	1180
9	79	1220	101	33300	143	20400	38600	20800	29900	7140	3590	1190
10	79	2250	599	27800	476	20500	35100	19000	35400	7110	2360	775
11	79	1400	475	14500	6240	18900	28600	17100	42700	7130	2290	853
12	79	1820	481	10500	3270	15500	17100	17100	45900	7140	3290	801
13	79	1860	1140	10500	2820	14700	10600	17100	45600	5210	3320	794
14	78	1860	1140	10500	3590	13000	10600	13000	43000	4910	3300	795
15	77	3210	880	10500	5650	11800	10600	10600	39700	901	3280	104
16	73	1870	1540	10600	2250	10600	10600	10600	39700	5940	3620	777
17	71	2640	6750	10600	1240	10600	10600	8990	39700	4760	2880	787
18	1590	1370	10500	10600	3570	10600	10600	9560	39600	4770	2900	789
19	106	2290	10400	7240	870	10700	10700	12900	39700	4790	3270	787
20	106	712	10400	7000	2800	11200	10700	8920	37000	2110	3590	784
21	98	2030	10400	9440	2770	15300	10700	10100	27500	2030	3320	104
22	90	2020	10400	9490	4330	21400	11100	12600	22200	3170	3310	80
23	87	1990	10500	9500	7580	26600	10600	9030	22200	3180	3300	97
24	80	180	10500	4700	9540	26500	10600	7830	18300	3180	2380	87
25	85	101	7790	3030	10200	26400	14000	7740	12500	3180	1970	1620
26	97	1100	7420	1160	14900	29300	17200	7730	10700	3190	3580	80
27	89	2960	5890	112	22600	31700	18000	7760	10600	1980	1870	72
28	94	2960	5870	2500	26000	31800	18000	7750	10700	1980	1810	74
29	86	1240	5870	3400	---	31800	14500	7770	10700	3160	1860	85
30	86	1750	1330	3400	---	27100	13100	7750	10600	3170	1810	84
31	86	---	6170	5880	---	21500	---	5400	---	3170	1170	---
TOTAL	4116	43975	137148	420352	168939	664600	588900	403230	681035	162771	86790	20999
MEAN	133	1466	4424	13560	6034	21440	19630	13010	22700	5251	2800	700
MAX	1590	3210	10500	33300	26000	31800	38600	20900	45900	10700	3620	1620
MIN	71	90	95	112	143	10600	10600	5400	72	901	1170	72
AC-FT	8160	87220	272000	833800	335100	1318000	1168000	799800	1351000	322900	172100	41650

CAL YR 1984	TOTAL	852318	MEAN	2329	MAX	10500	MIN	59	AC-FT 1691000
WTR YR 1985	TOTAL	3382855	MEAN	9268	MAX	45900	MIN	71	AC-FT 6710000

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: May 1944 to current year. Chemical and biochemical analyses: October 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to current year.
WATER TEMPERATURES: October 1945 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the U.S. Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,520 microsiemens Aug. 14, 1944; minimum daily, 656 microsiemens Oct. 16, 1945.
WATER TEMPERATURES (1945-69): Maximum daily, 31.0 °C July 17, 1969; minimum daily, 3.0 °C Feb. 2-4, 7, 1966.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,070 microsiemens Oct. 15; minimum daily, 910 microsiemens June 26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT												
22...	1435	93	2000	8.3	19.0	2.5	7.5	82	.8	K18	160	400
DEC												
03...	1200	2170	1950	8.5	13.0	3.0	11.0	105	.8	150	31	440
FEB												
25...	1615	11300	1540	8.0	6.0	2.4	12.3	100	.5	38	45	320
APR												
01...	1415	19900	1200	8.2	14.0	5.1	9.6	94	.5	K10	K17	270
JUN												
26...	0955	11100	910	7.8	25.0	4.4	3.9	48	1.5	73	K6	230
AUG												
06...	0930	3490	1080	7.0	24.0	13	2.9	35	1.0	46	43	260

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
22...	290	100	37	260	6	5.7	110	280	410	.30	6.3
DEC											
03...	330	110	40	270	6	5.7	110	270	430	.30	3.0
FEB											
25...	220	81	28	190	5	4.7	97	200	300	.30	5.0
APR											
01...	180	71	23	130	4	4.3	95	160	220	.20	6.1
JUN											
26...	110	59	19	100	3	4.4	113	110	170	.20	4.4
AUG											
06...	130	72	19	130	4	4.8	125	110	210	.30	5.4

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
22...	1150	1200	.19	.040	.40	.040	.020	<.010	10	2.5	87
DEC											
03...	1190	1200	<.10	.060	.60	.030	.040	.010	3	18	83
FEB											
25...	892	870	.23	.120	.60	.030	.030	.040	47	1430	21
APR											
01...	704	670	.33	.120	1.0	.070	.040	.040	--	--	--
JUN											
26...	559	530	.18	.070	.60	.040	.020	.020	--	--	--
AUG											
06...	631	630	--	--	--	--	--	--	--	--	--

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
OCT										
22...	1435	<1	180	.0	<1	1	2	1	9	2
FEB										
25...	1615	<1	150	2.6	<1	6	<3	3	56	13
APR										
01...	1415	<1	140	<.5	<1	<1	<3	2	12	2
AUG										
06...	0930	4	130	<.5	<1	<1	<3	1	7	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
22...	25	11	<.1	2	3	<1	<1	1400	6	23
FEB										
25...	15	5	.2	<10	15	<1	<1	980	<6	23
APR										
01...	18	5	<.1	<10	3	<1	<1	800	<6	29
AUG										
06...	11	550	<.1	<10	3	<1	<1	700	<6	18

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (US/CM)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1984	4116	2030	1190	13200	410	4520	280	3100	410
NOV.	1984	43975	2050	1200	143000	410	48900	280	33500	420
DEC.	1984	137148	2030	1190	442000	410	151300	280	103600	410
JAN.	1985	420352	1880	1100	1248000	370	425500	260	291700	400
FEB.	1985	168939	1570	900	410000	300	139000	210	95500	350
MAR.	1985	664600	1370	778	1396000	260	470500	180	323600	320
APR.	1985	588900	1100	618	982000	210	329100	140	226700	270
MAY	1985	403230	954	531	579000	180	193200	120	133200	240
JUNE	1985	681035	916	510	937000	170	312700	120	215600	230
JULY	1985	162771	1010	564	248000	190	82900	130	57100	250
AUG.	1985	86790	1110	625	146000	210	49100	140	33800	270
SEPT.	1985	20999	1180	664	37600	220	12600	150	8700	290
TOTAL		3382855	**	**	6582000	**	2219000	**	1526000	**
WTD.AVG.		9268	1270	721	**	240	**	170	**	300

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2020	2030	2050	2010	1660	1520	1190	993	937	940	1060	1170
2	2020	2020	2050	2000	1640	1500	1180	971	938	955	1060	1170
3	2010	2020	2040	2000	1640	1500	1190	973	940	965	1060	1170
4	2010	2020	2040	1980	1630	1490	1190	975	943	975	1040	1170
5	2020	2040	2040	1980	1610	1490	1190	977	935	985	985	1170
6	2020	2040	2040	1980	1600	1470	1150	979	927	995	964	1170
7	2020	2040	2040	1950	1600	1470	1130	975	928	1000	1080	1170
8	2010	2040	2040	1950	1600	1470	1100	973	924	1010	1090	1170
9	2010	2040	2040	1940	1600	1460	1090	970	920	1030	1090	1170
10	2010	2040	2040	1910	1600	1460	1090	965	917	1020	1100	1180
11	2010	2040	2040	1860	1600	1450	1100	956	917	1020	1100	1180
12	2010	2040	2040	1860	1600	1450	1090	953	916	1040	1110	1180
13	2040	2040	2040	1840	1590	1440	1080	945	916	1040	1120	1180
14	2040	2040	2050	1800	1580	1390	1080	935	915	1040	1150	1180
15	2070	2050	2050	1760	1590	1360	1070	930	916	1040	1130	1190
16	2060	2050	2050	1740	1580	1330	1060	923	916	1040	1130	1190
17	2030	2050	2040	1730	1580	1300	1050	913	916	1050	1130	1190
18	2030	2050	2040	1730	1550	1280	1070	915	914	1040	1130	1190
19	2030	2040	2040	1750	1550	1310	1080	918	915	1030	1140	1190
20	2030	2040	2040	1750	1530	1370	1070	922	913	1030	1140	1190
21	2030	2050	2030	1750	1570	1320	1060	925	913	1030	1140	1200
22	2030	2050	2030	1700	1540	1290	1050	928	912	1030	1170	1200
23	2030	2060	2030	1670	1530	1270	1040	930	912	1040	1170	1200
24	2040	2060	2030	1660	1530	1260	1020	938	911	1040	1170	1200
25	2030	2060	2040	1650	1520	1250	1020	945	911	1040	1170	1190
26	2030	2060	2040	1650	1550	1260	1010	947	910	1040	1150	1190
27	2030	2050	2030	1650	1560	1300	1010	947	915	1040	1160	1190
28	2030	2060	2030	1610	1520	1280	1010	948	918	1040	1160	1190
29	2030	2060	2030	1580	---	1240	1000	932	925	1050	1160	1200
30	2030	2060	2030	1610	---	1220	1000	940	930	1050	1160	1200
31	2030	---	2010	1640	---	1200	---	938	---	1050	1170	---
MEAN	2030	2040	2040	1800	1580	1370	1080	948	921	1020	1120	1180

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	---	---	5.0	7.0	14.0	18.0		---	27.0	
2	22.0	18.0	---	10.0	---	---	14.0	20.0		---	---	
3	22.0	---	12.0	10.0	---	---	14.0	19.0		---	27.0	
4	21.0	---	13.0	10.0	5.0	8.0	15.0	---		---	---	
5	22.0	---	12.0	---	4.0	8.0	15.0	---		27.0	---	
6	---	18.0	12.0	---	4.0	8.0	---	19.0		---	27.0	
7	---	18.0	12.0	10.0	4.0	8.0	---	---		---	27.0	
8	---	---	---	---	4.0	8.0	15.0	---		25.0	27.0	
9	21.0	---	---	10.0	---	---	16.0	---		25.0	27.0	
10	21.0	---	12.0	10.0	---	---	16.0	---		26.0	---	
11	21.0	---	12.0	---	4.0	10.0	16.0	---		26.0	---	
12	21.0	---	12.0	---	4.0	10.0	16.0	---		26.0	26.0	
13	---	17.0	12.0	---	4.0	10.0	---	---		---	25.0	
14	---	17.0	---	---	4.0	11.0	---	---		---	26.0	
15	21.0	---	---	8.0	---	10.0	16.0	---		26.0	25.0	
16	21.0	17.0	---	8.0	---	---	16.0	20.0		26.0	---	
17	20.0	---	12.0	8.0	---	---	16.0	21.0		26.0	---	
18	20.0	---	12.0	---	---	12.0	---	---		24.0	---	
19	20.0	15.0	12.0	---	---	12.0	17.0	---		23.0	25.0	
20	---	15.0	10.0	---	5.0	12.0	---	---		---	25.0	
21	19.0	15.0	11.0	8.0	5.0	12.0	---	---		---	25.0	
22	20.0	---	---	6.0	6.0	12.0	16.0	21.0		27.0	25.0	
23	20.0	15.0	---	6.0	---	---	16.0	---		---	25.0	
24	19.0	---	11.0	6.0	---	---	17.0	---		26.0	---	
25	19.0	---	---	---	6.0	13.0	18.0	---		---	---	
26	---	15.0	12.0	---	6.0	13.0	17.0	---		24.0	25.0	
27	---	15.0	11.0	---	6.0	13.0	---	---		---	25.0	
28	---	14.0	11.0	6.0	6.0	14.0	---	21.0		---	25.0	
29	---	15.0	---	6.0	---	13.0	11.0	22.0		---	25.0	
30	19.0	14.0	---	8.0	---	---	18.0	20.0		---	25.0	
31	19.0	---	11.0	---	---	---	---	22.0		---	---	
MEAN	20.5	16.0	11.5	8.0	5.0	10.5	15.5	20.5		25.5	25.5	

07332400 BLUE RIVER AT MILBURN, OK

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, Hydrologic Unit 11140102, on downstream side of left pier of bridge on State Highway 48A, 0.5 mi north of Milburn, and at mile 84.9.

DRAINAGE AREA.--203 mi^2.

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements made in water years 1956-61. Prior to October 1975 published as Blue Creek near Milburn.

GAGE.--Water-stage recorder. Datum of gage is 649.65 ft, Oklahoma State Highway Department datum.

REMARKS.--Estimated daily discharges: Apr. 9-10, 16-17, May 8, 10-11, 18-20, 25-27, 29, June 13-14, 22, 24, July 11-12. Records fair.

AVERAGE DISCHARGE.--20 years, 140 ft^3/s, 9.37 in/yr, 101,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft^3/s Oct. 8, 1970, gage height, 27.87 ft; minimum daily discharge 15 ft^3/s Aug. 22, 24, 25, Sept. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 20	1615	2,790	15.88	Mar. 30	0600	*11,400	*24.81
Nov. 1	1400	2,570	15.29	Apr. 22	1700	5,590	21.11
Dec. 31	1930	3,250	17.05	Apr. 30	1130	2,420	14.86
Feb. 23	0730	2,240	14.30	June 6	0615	3,970	18.54
Mar. 20	1215	3,180	16.87				

Minimum daily discharge, 20 ft^3/s Oct. 1-2, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	902	71	1710	99	222	587	435	137	118	60	40
2	20	303	69	389	100	207	477	316	130	118	60	42
3	21	160	66	265	100	183	421	268	126	279	58	40
4	21	128	67	223	100	786	385	251	123	195	56	42
5	25	106	76	199	99	378	351	240	175	169	58	40
6	28	96	72	179	97	225	314	240	2240	115	55	40
7	43	90	68	163	94	194	276	236	969	104	56	40
8	25	88	68	152	96	185	252	222	357	101	60	38
9	21	85	67	146	205	175	242	208	265	95	55	39
10	20	78	66	144	296	168	237	204	265	86	48	36
11	21	73	65	133	165	163	228	200	249	86	46	36
12	25	72	66	122	120	151	226	198	193	85	45	35
13	24	71	143	118	110	191	232	375	188	85	46	36
14	23	71	144	120	102	274	244	394	181	82	46	36
15	23	69	1000	118	97	184	226	249	174	82	45	38
16	40	66	932	118	94	159	217	207	163	82	48	36
17	35	72	361	117	92	156	204	183	153	66	48	37
18	41	403	192	114	97	148	193	163	214	55	50	38
19	60	188	159	109	103	146	187	145	268	53	46	38
20	1450	119	152	99	96	1690	178	126	146	55	45	37
21	517	98	173	95	133	910	190	329	140	84	43	38
22	158	87	161	95	186	447	3690	263	137	91	35	38
23	128	84	139	95	1220	508	1270	180	133	81	33	36
24	111	81	128	97	527	343	454	160	130	70	40	38
25	491	80	117	97	245	279	350	155	127	70	43	38
26	246	89	113	93	199	247	311	153	127	70	42	38
27	237	85	111	107	170	237	313	155	124	68	40	38
28	161	74	114	114	155	226	256	152	124	67	43	38
29	112	73	118	106	---	1010	446	149	121	64	53	39
30	98	73	411	102	---	7430	1120	147	120	60	42	37
31	91	---	1260	100	---	1150	---	140	---	58	40	---
TOTAL	4336	4064	6749	5839	5197	18772	14077	6843	7999	2894	1485	1142
MEAN	140	135	218	188	186	606	469	221	267	93.4	47.9	38.1
MAX	1450	902	1260	1710	1220	7430	3690	435	2240	279	60	42
MIN	20	66	65	93	92	146	178	126	120	53	33	35
CFSM	.69	.67	1.07	.93	.92	2.99	2.31	1.09	1.32	.46	.24	.19
IN.	.79	.74	1.24	1.07	.95	3.44	2.58	1.25	1.47	.53	.27	.21
AC-FT	8600	8060	13390	11580	10310	37230	27920	13570	15870	5740	2950	2270

CAL YR 1984	TOTAL	32935	MEAN	90.0	MAX	1450	MIN	20	CFSM	.44	IN.	6.04	AC-FT	65330
WTR YR 1985	TOTAL	79397	MEAN	218	MAX	7430	MIN	20	CFSM	1.07	IN.	14.55	AC-FT	157500

07332500 BLUE RIVER NEAR BLUE, OK

LOCATION.--Lat 33°59'49", long 96°14'27", on line between sec.27 and 34, T.6 S., R.10 E., Bryan County, Hydrologic Unit 11140102, near left bank on downstream side of pier of bridge on U.S. Highway 70, 1.0 mi west of Blue, 7.0 mi east of Durant, 7.7 mi upstream from Caddo Creek, and at mile 38.8.

DRAINAGE AREA.--476 mi^2.

PERIOD OF RECORD.--June 1936 to current year. Monthly discharge only for some periods, published in WSP 1311, 1731.

REVISED RECORDS.--WSP 957: 1938. WSP 1241: 1936, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 503.36 ft, National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage and Mar. 13, 1945 to Feb. 2, 1960, water-stage recorder at site 1.2 mi downstream at datum 5.00 ft lower.

REMARKS.--Estimated daily discharges: Jan. 3-7, Feb. 1-7. Records poor. Some regulation at low flow by a State fish hatchery, 16.0 mi above station. Small diversion above station for municipal water supply of city of Durant.

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--49 years, 299 ft^3/s, 8.53 in/yr, 216,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,200 ft^3/s Oct. 14, 1981, gage height, 44.20 ft, from high-water mark; no flow (estimated) Aug. 3, 4, 1936, result of regulation at fish hatchery, and no flow Sept. 19 to Oct. 16, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 1	2100	4,160	19.15	Apr. 23	0430	*11,400	*28.06
Feb. 24	0130	5,800	22.38	Apr. 30	0130	7,960	25.26
Mar. 21	2030	5,040	21.17	June 6	2030	6,720	23.70
Mar. 31	1030	9,090	26.29				

Minimum daily discharge, 19 ft^3/s Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	2170	131	3410	169	382	4020	2140	164	130	66	25
2	24	3340	124	2790	143	483	804	695	155	120	65	37
3	23	825	117	800	127	407	603	504	152	352	62	33
4	22	312	114	400	129	1130	523	422	148	411	60	27
5	27	235	203	285	134	1320	465	375	145	198	59	21
6	35	191	218	265	139	574	417	342	5310	165	58	19
7	32	170	165	260	144	391	374	323	5680	146	58	20
8	35	155	140	250	216	343	347	325	2700	130	60	29
9	45	146	130	243	585	322	325	304	573	123	64	29
10	34	141	124	236	933	303	313	279	388	118	66	28
11	28	130	120	228	569	292	305	267	495	115	53	28
12	32	121	117	210	366	275	296	282	426	110	50	30
13	44	116	680	198	248	263	319	565	294	106	53	31
14	53	114	1070	193	220	651	406	764	242	102	53	31
15	43	114	690	191	211	487	348	523	223	98	52	31
16	36	111	2080	199	149	337	293	298	209	95	54	34
17	40	118	1620	214	181	292	265	250	198	92	69	32
18	58	1950	796	202	174	271	248	230	188	90	59	31
19	84	859	417	189	181	253	239	216	230	87	51	31
20	553	348	438	174	208	2590	233	208	300	86	36	29
21	2040	232	394	159	196	4880	239	249	204	90	30	28
22	807	186	406	158	216	3100	3910	403	182	119	32	27
23	218	165	304	158	4030	1040	9260	325	174	134	41	27
24	169	151	247	161	5510	926	4450	244	167	96	42	32
25	1600	145	218	165	1700	545	825	215	160	90	46	31
26	1070	175	196	163	542	429	548	200	153	86	48	32
27	625	266	185	167	421	381	480	188	146	81	46	30
28	672	213	183	225	357	354	505	184	149	79	38	29
29	296	158	192	233	---	338	3260	180	143	75	41	32
30	191	139	952	200	---	2600	5910	179	135	75	39	49
31	332	---	1790	189	---	7640	---	172	---	70	35	---
TOTAL	9293	13496	14561	12915	18198	33599	40530	11851	19833	3869	1586	893
MEAN	300	450	470	417	650	1084	1351	382	661	125	51.2	29.8
MAX	2040	3340	2080	3410	5510	7640	9260	2140	5680	411	69	49
MIN	22	111	114	158	127	253	233	172	135	70	30	19
CFSM	.63	.95	.99	.88	1.37	2.28	2.84	.80	1.39	.26	.11	.06
IN.	.73	1.05	1.14	1.01	1.42	2.63	3.17	.93	1.55	.30	.12	.07
AC-FT	18430	26770	28880	25620	36100	66640	80390	23510	39340	7670	3150	1770

CAL YR 1984	TOTAL	63891	MEAN	175	MAX	3340	MIN	11	CFSM	.37	IN.	4.99	AC-FT	126700
WTR YR 1985	TOTAL	180624	MEAN	495	MAX	9260	MIN	19	CFSM	1.04	IN.	14.12	AC-FT	358300

07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK

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, Hydrologic Unit 11140103, on downstream side of left bank pier of main span of bridge on State Highway 3, 1.3 mi downstream from McGee Creek, 2.8 mi northwest of Farris, and at mile 57.7.

DRAINAGE AREA.--1,087 mi^2.

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 444.58 ft, National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage, and Mar. 13, 1945 to Sept. 30, 1961, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: July 12-13. Records fair. Some regulation since June 1959 by Atoka Reservoir, capacity, 125,000 acre-ft, on North Boggy Creek, drainage area, 176 mi^2; pipeline diversions to Oklahoma City since November 1963, normal capacity, 60 mgd. McGee Creek Reservoir construction above station.

COOPERATION.--Gage-height records and 5 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--48 years, 881 ft^3/s, 638,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,900 ft^3/s June 17, 1945, gage height, 44.94 ft, datum then in use, from rating curve extended above 37,000 ft^3/s; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 21	0415	16,400	36.49	Apr. 1	1600	15,800	35.96
Jan. 1	0930	12,000	31.38	Apr. 23	0300	*18,800	*38.30
Feb. 24	0400	17,700	37.52	Apr. 30	Unknown	13,800	33.72 (Est. from graph)
Mar. 21	0930	10,500	29.32	June 6	1700	15,600	35.75

Minimum daily discharge, 3.2 ft^3/s, Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	3730	371	11200	348	989	15600	8270	298	32	14	8.0
2	55	8010	302	9190	297	1190	14600	6020	254	27	12	7.1
3	40	3340	255	7900	270	1140	6410	3450	300	486	12	6.4
4	33	1010	207	4190	270	2660	2140	1300	148	271	11	6.0
5	28	607	247	1280	278	4890	1490	803	267	106	10	5.6
6	129	430	367	893	306	3690	1120	639	10900	67	15	5.3
7	127	311	332	706	362	1310	853	544	9590	46	14	4.8
8	74	240	272	586	446	852	698	521	4560	34	11	4.6
9	53	197	237	495	774	697	597	428	2730	31	10	4.3
10	58	161	198	445	3620	602	499	343	1140	27	9.8	4.2
11	52	137	154	419	3530	508	422	296	603	28	9.1	4.6
12	39	121	158	399	1510	468	373	298	522	26	8.7	16
13	31	110	1780	309	763	398	353	473	415	25	8.7	12
14	28	246	4830	243	569	1040	452	1690	284	20	8.3	9.6
15	34	165	4020	217	467	1550	428	2100	216	18	8.1	8.0
16	99	87	4980	219	388	908	406	840	176	16	8.0	7.3
17	374	77	5340	236	324	628	336	460	150	16	7.9	6.7
18	973	6060	3930	238	285	514	273	339	221	15	30	6.0
19	530	5470	1490	222	323	431	227	252	218	14	39	5.3
20	7490	3470	1050	281	578	4610	196	348	224	13	27	5.2
21	14900	1010	1420	212	515	10300	177	4820	182	41	18	5.1
22	8930	572	2030	146	447	9010	11700	2610	138	114	14	4.5
23	7070	428	1410	133	9810	7810	17600	1270	106	91	11	3.8
24	3440	336	812	127	16000	3960	13600	765	87	41	15	3.7
25	7320	284	596	123	11700	1680	10800	536	71	49	15	3.4
26	7060	546	467	120	5450	1050	6190	395	60	67	15	3.4
27	4310	1450	372	179	1880	796	3190	842	50	39	14	3.4
28	3120	825	323	364	1080	674	4020	2390	45	27	11	3.2
29	1940	541	329	435	---	756	6190	1360	45	25	10	3.2
30	860	432	1160	472	---	8950	13000	806	41	20	9.8	3.2
31	637	---	4450	388	---	15000	---	501	---	16	8.8	---
TOTAL	69910	40403	43889	42367	62590	89061	133940	45709	34041	1848	415.2	173.9
MEAN	2255	1347	1416	1367	2235	2873	4465	1474	1135	59.6	13.4	5.80
MAX	14900	8010	5340	11200	16000	15000	17600	8270	10900	486	39	16
MIN	28	77	154	120	270	398	177	252	41	13	7.9	3.2
AC-FT	138700	80140	87050	84030	124100	176700	265700	90660	67520	3670	824	345

CAL YR 1984	TOTAL	243773.3	MEAN	666	MAX	14900	MIN	1.2	AC-FT 483500
WTR YR 1985	TOTAL	564347.1	MEAN	1546	MAX	17600	MIN	3.2	AC-FT 1119000

07334200 BYRD'S MILL SPRING NEAR FITTSTOWN, OK

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, Hydrologic Unit 11140104, upstream from weir outlet of spring, 0.5 mi upstream from Big Spring Creek, 2.0 mi west of Fittstown, and 12.0 mi south of Ada.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 1,021.17 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Records do not include diversion of about 6 to 10 ft^3/s by city of Ada for municipal water supply, a part of which is discharged as effluent to Sandy Creek, tributary to Canadian River. Records of zero flow do not include seepage of up to 0.10 ft^3/s.

AVERAGE DISCHARGE.--26 years, 7.35 ft^3/s, 5,325 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30 ft^3/s May 30, 1960, gage height, 3.22 ft; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft^3/s Apr. 2 to May 22, gage height, 3.17 ft; minimum daily discharge, 1.6 ft^3/s Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	4.9	7.5	13	13	14	24	25	22	19	11	10
2	1.8	5.1	7.7	13	13	14	25	25	22	19	11	9.1
3	1.9	5.4	8.1	13	13	14	25	25	21	19	11	7.8
4	1.9	5.5	7.7	14	13	14	25	25	21	19	11	7.5
5	1.8	5.5	7.7	14	13	15	25	25	21	19	11	7.3
6	1.8	5.5	7.5	14	13	16	25	25	22	18	11	7.3
7	1.8	5.5	7.3	14	13	17	25	25	22	18	10	7.3
8	1.8	5.8	7.4	14	13	17	25	25	22	18	10	7.4
9	2.4	5.8	7.7	15	13	17	25	25	22	18	10	7.3
10	2.9	5.8	7.7	15	13	17	25	25	22	17	10	7.3
11	1.7	5.8	7.7	15	13	17	25	25	22	16	10	7.3
12	2.1	5.8	7.7	15	13	17	25	25	21	13	10	7.3
13	1.7	6.0	7.7	15	13	17	25	25	21	13	10	10
14	1.7	6.8	7.4	15	13	18	25	25	21	13	10	12
15	1.7	6.6	8.0	16	13	18	25	25	21	13	10	12
16	1.7	6.6	8.5	16	13	18	25	25	21	13	10	11
17	1.6	6.6	9.0	16	13	18	25	25	21	13	9.7	9.8
18	1.8	6.9	9.0	16	13	18	25	25	21	13	9.5	9.5
19	1.9	6.9	9.5	16	13	18	25	25	21	13	9.5	9.5
20	3.1	6.9	9.5	16	13	19	25	25	21	13	9.5	9.5
21	2.8	6.9	9.5	16	13	20	25	25	21	13	9.5	9.5
22	2.8	6.9	9.7	16	12	20	25	25	21	13	9.5	9.5
23	2.8	6.9	10	15	13	20	25	24	21	12	9.0	9.5
24	3.0	7.1	10	15	13	20	25	23	21	12	9.0	9.5
25	3.3	7.3	10	15	13	20	25	23	20	12	9.0	9.5
26	3.6	7.3	10	15	13	20	25	23	20	12	9.8	12
27	4.0	7.3	11	15	13	20	25	23	20	12	11	11
28	4.5	7.3	11	14	13	20	25	22	20	12	11	9.4
29	4.6	7.3	11	14	---	21	25	22	19	12	11	9.0
30	4.9	7.3	11	15	---	24	25	22	19	11	11	9.0
31	4.9	---	12	14	---	24	---	22	---	11	10	---
TOTAL	80.1	191.3	275.5	459	363	562	749	754	630	449	314.0	274.1
MEAN	2.58	6.38	8.89	14.8	13.0	18.1	25.0	24.3	21.0	14.5	10.1	9.14
MAX	4.9	7.3	12	16	13	24	25	25	22	19	11	12
MIN	1.6	4.9	7.3	13	12	14	24	22	19	11	9.0	7.3
AC-FT	159	379	546	910	720	1110	1490	1500	1250	891	623	544

CAL YR 1984	TOTAL	1402.99	MEAN	3.83	MAX	12	MIN	.75	AC-FT	2780
WTR YR 1985	TOTAL	5101.0	MEAN	14.0	MAX	25	MIN	1.6	AC-FT	10120

07335000 CLEAR BOGGY CREEK NEAR CANEY, OK

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, Hydrologic Unit 11140104, on downstream side of left pier of bridge on old U.S. Highways 69 and 75, 0.5 mi downstream from Caney Creek, 1.5 mi north of Caney, and at mile 24.1.

DRAINAGE AREA.--720 mi^2.

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 485.05 ft, National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 21-25, Jan. 30 to Feb. 4, Mar. 25, Sept. 12-30. Records fair.

COOPERATION.--Gage-height record and 7 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--43 years, 495 ft^3/s, 9.34 in/yr, 358,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,500 ft^3/s Oct. 14, 1981, gage height, 26.60 ft, maximum gage height 26.77 Dec. 11, 1946; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 26.9 ft occurred in February 1938, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 22	1230	6,230	21.03	Mar. 31	0530	15,000	23.22
Nov. 1	2300	5,500	20.34	Apr. 22	0800	*17,300	*23.55
Jan. 2	1500	6,650	23.07	Apr. 29	2400	12,300	22.75
Feb. 23	1630	14,100	23.20	June 6	0900	12,500	22.78
Mar. 22	0130	14,900	23.20				

Minimum daily discharge, 2.8 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	1940	221	5170	190	1200	12500	4660	207	85	29	38
2	12	4750	204	6380	210	1290	7700	3560	179	78	28	42
3	8.1	2480	187	4700	240	1140	3310	1890	159	916	27	44
4	5.5	1180	172	1970	290	2260	2430	1450	149	717	26	46
5	4.8	823	197	1500	324	3850	2040	1160	179	246	24	50
6	4.3	631	227	1200	361	2030	1740	957	8160	222	26	47
7	3.7	516	194	961	405	1390	1550	838	5290	142	27	48
8	2.8	439	182	829	444	1170	1300	778	4010	108	27	46
9	4.8	383	172	752	760	1040	1100	714	1810	91	28	44
10	4.0	332	163	702	2200	948	959	622	1280	78	31	44
11	5.1	284	155	644	1720	879	830	551	984	68	33	44
12	5.5	250	149	581	1000	806	714	570	819	59	34	44
13	6.7	224	475	532	766	774	653	589	633	54	38	44
14	9.4	206	1600	494	641	1280	666	1610	490	48	43	54
15	5.6	197	1300	469	551	1360	616	1120	404	43	40	47
16	4.7	183	3270	451	494	973	534	681	334	38	35	45
17	444	176	3420	444	455	855	465	525	288	34	32	45
18	266	1850	1690	408	420	782	416	435	296	32	74	45
19	466	2720	1170	379	424	729	380	385	764	33	58	45
20	2570	1310	983	336	433	4550	354	353	611	31	48	45
21	4950	845	906	280	424	11400	758	650	414	34	42	45
22	6020	648	1020	250	509	13700	14000	1030	325	50	38	45
23	3430	530	854	200	8560	6020	13800	830	280	55	36	64
24	1480	435	680	230	10700	3160	12100	577	236	109	36	50
25	2870	367	592	250	6880	2100	9170	461	199	74	45	47
26	3500	337	518	274	2240	1330	3690	386	166	51	45	45
27	2150	427	464	281	1650	1110	2720	327	141	40	45	45
28	2030	337	432	376	1280	930	2310	388	121	35	43	45
29	1320	280	418	377	---	974	3990	430	109	32	42	100
30	869	245	1270	330	---	8600	7900	289	102	31	37	75
31	662	---	2290	250	---	14000	---	248	---	30	36	---
TOTAL	33129.0	25325	25575	32000	44571	92630	110695	29064	29139	3664	1153	1468
MEAN	1069	844	825	1032	1592	2988	3690	938	971	118	37.2	48.9
MAX	6020	4750	3420	6380	10700	14000	14000	4660	8160	916	74	100
MIN	2.8	176	149	200	190	729	354	248	102	30	24	38
CFSM	1.48	1.17	1.15	1.43	2.21	4.15	5.12	1.30	1.35	.16	.05	.07
IN.	1.71	1.31	1.32	1.65	2.30	4.79	5.72	1.50	1.51	.19	.06	.08
AC-FT	65710	50230	50730	63470	88410	183700	219600	57650	57800	7270	2290	2910

CAL YR 1984	TOTAL	123438.70	MEAN	337	MAX	6020	MIN	.00	CFSM	.47	IN.	6.38	AC-FT	244800
WTR YR 1985	TOTAL	428413.0	MEAN	1174	MAX	14000	MIN	2.8	CFSM	1.63	IN.	22.13	AC-FT	849800

07335300 MUDDY BOGGY CREEK NEAR UNGER, OK

LOCATION.--Lat 34°01'36", long 95°45'00", in SE 1/4 SE 1/4 sec.17, T.6 S., R.15 E., Choctaw County, Hydrologic Unit 11140103, at bridge on U.S. Highway 70, 3.5 mi west of Soper, 1.8 mi east of Unger and at mile 18.6.

DRAINAGE AREA.--2,273 mi^2.

PERIOD OF RECORD.--August 25, 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 392.72 ft, National Geodetic Vertical Datum of 1929. Auxiliary gage 7.4 mi downstream. Prior to Sept. 19, 1985, gage 500 ft downstream at same datum.

REMARKS.--Estimated daily discharges: June 30 to July 16, July 18 to Sept. 14, Sept. 6-18. Records good except July to Sept., which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft^3/s Apr. 26, 1985, gage height, 44.05 ft; minimum daily discharge, 1.8 ft^3/s Sept. 8, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,000 ft^3/s Apr. 26, gage height, 44.05 ft; minimum daily discharge, 25 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	7490	777	6400	833	10500	9980	19200	767	238	54	33
2	108	8420	657	8030	731	7530	19000	21900	559	227	52	33
3	88	9470	548	10400	676	4610	26000	19500	482	500	50	33
4	75	9970	469	12400	689	3700	25100	15500	495	1000	48	33
5	101	8950	701	12800	731	5160	19200	11100	410	1500	47	33
6	86	6700	984	10800	826	6530	13100	7870	5170	1200	46	33
7	108	2190	904	8270	974	6970	9390	3790	8030	600	45	36
8	166	941	713	4490	1100	5570	6440	1920	12200	300	44	34
9	109	708	580	1980	1440	2840	3290	1420	15100	200	42	34
10	83	570	503	1680	2860	1920	2240	1160	13300	170	44	33
11	70	469	447	1470	5320	1580	1880	1000	10500	150	43	32
12	73	390	387	1150	6000	1350	1530	870	7880	125	42	31
13	67	335	1210	991	4300	1170	1270	1450	3890	110	41	31
14	68	297	4930	874	2030	1530	1110	3130	1920	105	40	30
15	78	309	6700	783	1330	2520	1140	3560	1540	96	39	30
16	104	378	7270	771	1070	2890	1030	3400	1270	94	38	30
17	123	270	7670	822	930	2070	925	1780	1220	92	45	30
18	592	2350	8830	812	827	1440	806	966	1170	86	80	29
19	1570	6160	9470	750	861	1160	704	727	1260	83	150	29
20	2200	7260	9070	664	935	3850	631	636	1320	80	120	28
21	5950	7580	7510	614	1100	7370	587	2730	1390	77	80	28
22	8270	5570	5220	566	1060	9150	2990	5040	1030	74	67	29
23	11000	1890	4040	504	5170	12400	7800	4050	731	90	45	28
24	11600	1050	2870	489	7580	15300	17600	2240	631	130	40	27
25	12300	829	1860	493	13600	15100	26700	1360	560	180	37	26
26	12000	806	1350	472	21100	11900	27700	948	418	140	35	26
27	12100	1850	1070	618	20200	9140	25400	1760	346	100	35	26
28	11500	2510	917	983	15200	6200	20500	2640	310	75	35	25
29	9830	1590	843	1060	---	2840	15900	2680	274	65	34	29
30	8450	1010	1640	988	---	3910	13800	1780	255	62	34	34
31	6090	---	3770	957	---	6610	---	1110	---	58	34	---
TOTAL	115103	98312	93910	94081	119473	174810	303743	147217	94428	8007	1586	913
MEAN	3713	3277	3029	3035	4267	5639	10120	4749	3148	258	51.2	30.4
MAX	12300	9970	9470	12800	21100	15300	27700	21900	15100	1500	150	36
MIN	67	270	387	472	676	1160	587	636	255	58	34	25

CAL YR 1984	TOTAL	481696.4	MEAN	1316	MAX	12300	MIN	1.8
WTR YR 1985	TOTAL	1251583	MEAN	3429	MAX	27700	MIN	25

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW 1/4 sec.11, T.8 S., R.17 E., Choctaw County, OK, Hydrologic Unit 11140101, on right downstream bank of bridge on U.S. Highway 271 at Arthur City, 10.6 mi downstream from Muddy Boggy River, 26.0 mi upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,531 mi^2, of which 5,936 mi^2 probably is 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 the National Weather Service.

REVISED RECORDS.--WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft, National Geodetic Vertical Datum of 1929. From 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.

REMARKS.--Estimated daily discharges: Feb. 8-12, May 16-27. Records good. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 mi above station.

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S. Army Corps of Engineers: records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Denison Dam), 13 years (water years 1906-11, 1937-43), 9,266 ft^3/s 6,713,000 acre-ft/yr; (since regulation by Denison Dam), 41 years (water years 1945-85), 7,954 ft^3/s 5,763,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft^3/s May 28, 1908, gage height, 43.2 ft from rating curve extended above 41,000 ft^3/s on basis of records for later years; minimum, 130 ft^3/s Dec. 11-12, 1956, gage height, 4.49 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,400 ft^3/s May 1, gage height, 19.19 ft; minimum daily discharge, 346 ft^3/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602	24700	3760	18600	6150	33200	35400	52300	8310	10500	3740	2210
2	475	30800	3420	24400	9790	30000	39900	40400	6400	10400	3750	1970
3	399	23300	2930	27800	10500	27300	35900	34400	6180	11200	3720	1770
4	346	18200	1960	31800	7170	27000	39900	31400	4840	11900	3710	1730
5	395	13400	2600	34200	5870	29300	51000	34000	2950	12000	3100	1700
6	443	10400	4690	29900	8060	29800	51900	31900	17800	10500	2770	1670
7	444	6980	5050	22600	7400	29200	47200	27000	44500	8570	3340	1660
8	424	3960	4590	30300	6850	28600	43200	23600	33300	7460	3620	1680
9	504	3300	3750	29200	6250	26200	40100	22500	30900	6890	3620	1650
10	532	2690	2400	29000	5600	22600	39000	21900	39000	7520	3620	1650
11	641	2670	1790	25600	9500	22100	37300	21300	44700	7480	3840	1640
12	450	3050	1630	18700	12100	21500	31800	18400	48600	7450	3250	1590
13	398	3060	2450	14100	12400	18400	26000	18500	48600	7400	2840	1340
14	404	2580	7190	13200	8460	19300	15500	24200	44400	7100	3240	1290
15	406	2870	13000	12900	6320	22100	13000	24900	42400	5850	3600	1270
16	409	2930	13800	12900	6150	19600	12200	22800	38900	5630	3590	1290
17	490	3610	16300	13400	7160	15300	11800	22000	39500	6200	3590	1270
18	521	5470	24200	13400	5470	13200	11500	20000	39500	6140	3560	723
19	2180	11400	25400	13000	4030	12500	11300	19300	40100	5400	3380	1050
20	3210	12900	23600	11100	5570	18700	11300	22900	39600	5340	3230	1190
21	7060	11300	20500	9500	4540	35100	11200	22200	38900	5370	3380	1200
22	9720	9180	18800	10500	5340	35900	12800	21800	32200	3860	3690	1190
23	11700	6200	17100	11000	11700	33700	31000	23100	24900	3390	3600	1180
24	12000	4420	15500	11000	32600	35200	43300	20900	23300	4140	3500	653
25	16200	3930	14000	9440	33900	35300	43600	17000	21800	4340	3500	807
26	20100	3190	11700	6050	29100	35200	39200	14600	16000	4170	3020	1130
27	17700	4090	10200	5570	27900	35300	41000	12700	11800	4050	2540	1320
28	14600	5430	8950	4570	32500	36500	40400	11600	11000	3990	3170	1460
29	12700	6120	8280	4320	---	34400	37500	10700	10700	3270	2870	767
30	10900	5410	9070	5960	---	34600	46000	9860	10600	2960	2320	590
31	8870	---	14100	6090	---	37500	---	9030	---	3510	2250	---
TOTAL	155223	247540	312710	510100	328380	854600	951200	707190	821680	203980	102950	40640
MEAN	5007	8251	10090	16450	11730	27570	31710	22810	27390	6580	3321	1355
MAX	20100	30800	25400	34200	33900	37500	51900	52300	48600	12000	3840	2210
MIN	346	2580	1630	4320	4030	12500	11200	9030	2950	2960	2250	590
AC-FT	307900	491000	620300	1012000	651300	1695000	1887000	1403000	1630000	404600	204200	80610

CAL YR 1984 TOTAL 1851799 MEAN 5060 MAX 30800 MIN 260 AC-FT 3673000
WTR YR 1985 TOTAL 5236193 MEAN 14350 MAX 52300 MIN 346 AC-FT 10386000

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK
(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., Le Flore County, Hydrologic Unit 11140105, in Ouachita National Forest, on downstream side of right bank pier of bridge on State Highway 63, 0.2 mi upstream from Rattlesnake Creek, 1.1 mi upstream from Big Branch, 2.1 mi east of Big Cedar, and at mile 157.6.

DRAINAGE AREA.--40.1 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 886.97 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 10 to Mar. 5. Records fair.

AVERAGE DISCHARGE.--20 years, 79.2 ft^3/s, 26.82 in/yr, 57,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft^3/s Dec. 10, 1971, gage height, 17.08 ft; from rating curve extended above 9,000 ft^3/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 6	2045	2,260	9.15	Nov. 1	0800	2,630	9.63
Oct. 14	2100	6,840	12.62	Feb. 23	Unknown	4,160	10.94
Oct. 20	0930	*12,200	*14.99	Apr. 22	1715	4,660	11.30
Oct. 25	1045	2,500	9.47	June 18	0515	2,780	9.78

Minimum daily discharge 0.03 ft^3/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	917	104	445	240	310	166	515	19	11	1.1	.21
2	25	592	87	244	200	262	128	255	15	9.8	1.0	.16
3	18	275	73	170	158	220	107	156	12	9.6	.90	.12
4	14	177	64	132	135	190	90	115	9.7	8.4	1.1	.11
5	181	125	85	109	113	160	83	89	8.4	6.8	1.8	.07
6	784	99	70	93	158	145	69	70	25	6.1	3.0	.05
7	697	83	61	81	155	120	58	58	22	5.3	3.2	.04
8	232	72	60	71	130	103	50	48	15	4.6	2.1	.03
9	131	64	58	67	108	88	45	38	12	4.0	1.5	.08
10	166	54	55	100	94	78	40	32	13	5.5	1.3	.18
11	140	46	53	130	82	70	42	28	19	9.8	1.2	.15
12	161	40	53	200	69	60	39	26	15	5.5	1.1	.12
13	440	35	385	300	60	58	43	47	13	4.1	.95	.13
14	1480	33	442	230	52	71	46	49	12	3.4	.83	.15
15	969	42	305	178	70	56	37	32	9.7	2.9	1.3	.30
16	731	36	350	141	106	52	33	25	8.4	12	1.8	.48
17	469	33	323	190	91	49	31	20	7.1	19	1.1	.40
18	281	871	570	148	78	46	28	17	618	8.8	.81	.40
19	228	356	385	123	66	44	26	14	133	6.3	.57	.84
20	4050	207	512	105	200	388	23	13	74	5.0	.37	.96
21	797	144	913	90	170	535	22	18	52	4.4	.27	1.0
22	359	114	477	79	143	365	1660	34	88	4.2	.21	1.0
23	268	96	265	64	1250	234	689	25	97	3.6	.16	.90
24	357	82	183	57	1000	163	256	20	71	3.1	1.0	.86
25	1560	83	130	50	740	126	151	17	53	2.7	1.2	1.1
26	540	294	107	44	600	104	137	14	39	2.7	1.2	1.4
27	287	592	92	42	465	92	370	37	31	2.6	.87	1.4
28	189	271	86	580	390	82	267	36	24	2.2	.59	1.2
29	134	180	76	370	---	78	171	33	18	1.9	.42	2.0
30	107	130	182	450	---	254	516	30	14	1.6	.30	4.0
31	91	---	364	320	---	241	---	25	---	1.3	.25	---
TOTAL	15920	6143	6970	5403	7123	4844	5423	1936	1547.3	178.2	33.50	19.84
MEAN	514	205	225	174	254	156	181	62.5	51.6	5.75	1.08	.66
MAX	4050	917	913	580	1250	535	1660	515	618	19	3.2	4.0
MIN	14	33	53	42	52	44	22	13	7.1	1.3	.16	.03
CFSM	12.8	5.11	5.61	4.34	6.33	3.89	4.51	1.56	1.29	.14	.03	.02
IN.	14.77	5.70	6.47	5.01	6.61	4.49	5.03	1.80	1.44	.17	.03	.02
AC-FT	31580	12180	13820	10720	14130	9610	10760	3840	3070	353	66	39

CAL YR 1984	TOTAL	50028.12	MEAN	137	MAX	4050	MIN	.00	CFSM	3.42	IN.	46.41	AC-FT	99230
WTR YR 1985	TOTAL	55540.84	MEAN	152	MAX	4050	MIN	.03	CFSM	3.79	IN.	51.52	AC-FT	110200

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV												
27...	1300	1028	1028	525	20	5.70	10.5	12.0	--	750	12.5	118
MAR												
06...	1115	1028	80020	145	22	7.30	12.0	8.0	5.3	750	11.8	101
APR												
03...	0930	1028	80020	110	19	7.00	17.0	13.5	5.4	740	10.2	101
MAY												
01...	1300	1028	80020	509	20	6.50	23.0	17.0	7.8	740	9.8	104
JUL												
10...	1145	1028	80020	3.4	30	--	33.0	28.5	2.9	730	6.4	86
SEP												
25...	1030	1028	80020	1.0	40	6.80	19.0	18.5	7.0	740	6.6	73

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)
NOV											
27...	64	K240	--	--	--	--	--	--	--	--	4.0
MAR											
06...	60	K200	5	1	0.8	0.7	1.7	39	0.3	0.7	5.0
APR											
03...	K6	K8	5	1	0.9	0.6	1.6	39	0.3	0.6	5.0
MAY											
01...	K5	K1	5	1	0.9	0.7	1.5	34	0.3	0.9	5.0
JUL											
10...	23	K20	8	1	1.2	1.3	1.9	30	0.3	1.2	--
SEP											
25...	--	--	12	--	2.3	1.5	2.2	26	0.3	1.4	17

DATE	CARBONATE IT-FLD (MG/L AS CO3)	ALKALINITY LAB (MG/L AS CACO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
NOV											
27...	0	--	3.3	13	--	--	--	--	--	--	--
MAR											
06...	0	2.0	4.0	0.4	4.0	1.7	<0.1	7.7	22	20	0.03
APR											
03...	0	4.0	4.0	0.8	4.4	1.5	<0.1	8.0	28	20	0.04
MAY											
01...	0	3.0	4.0	2.5	5.4	1.8	<0.1	8.6	34	22	0.05
JUL											
10...	--	7.0	--	--	3.2	1.7	<0.1	8.1	22	23	0.03
SEP											
25...	0	13	14	4.3	3.6	2.2	<0.1	1.7	30	23	0.04

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	8.6	<0.10	0.04	0.05	0.4	0.01	--	<0.01	<0.01	--	30
APR 03...	8.3	<0.10	0.02	0.03	<0.2	<0.01	--	<0.01	<0.01	--	--
MAY 01...	47	<0.10	0.02	0.03	0.4	0.01	--	<0.01	<0.01	--	50
JUL 10...	0.2	<0.10	0.02	0.03	0.2	0.02	0.06	<0.01	<0.01	--	--
SEP 25...	0.08	<0.10	0.05	0.06	0.7	0.03	0.09	<0.01	0.01	0.03	--

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<1	13	<0.5	<1	<1	<3	2	34	18	<4	<1
APR 03...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	<1	12	<0.5	<1	1	<3	3	48	2	<4	5
JUL 10...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 27...	--	--	--	--	--	--	--	--	7	9.9	68
MAR 06...	--	<10	4	<1	<1	9	<6	9	5	2.0	52
APR 03...	--	--	--	--	--	--	--	--	10	3.0	42
MAY 01...	<0.1	<10	<1	<1	1	8	<6	9	5	6.9	68
JUL 10...	--	--	--	--	--	--	--	--	6	0.05	62
SEP 25...	--	--	--	--	--	--	--	--	35	0.1	48

07335775 SARDIS LAKE NEAR CLAYTON, OK

LOCATION.--Lat 34°37'45", long 95°21'03", in NE 1/4 SW 1/4 sec.19. T.2 N, R.19 E., Pushmataha County, Hydrologic Unit 11140105, on the northeast end of parking area on top of dam, 2.5 mi north of Clayton, and at mile 2.8.

DRAINAGE AREA.--275 mi^2.

PERIOD OF RECORD.--December 27, 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam. The controlled outlet consists of two sluice gates and the uncontrolled outlet is a concrete spillway. Flow was diverted through control structure May 4, 1981; regulated storage began Dec. 27, 1982; conservation pool first filled Oct. 20, 1984. Capacity, 735,800 acre-ft at elevation 624.0 ft, maximum pool; 468,100 acre-ft, at elevation 611.0 ft, spillway crest; 396,900 acre-ft at elevation 607.0 ft, top of flood pool; 274,300 acre-ft at elevation 599.0 ft, top of conservation pool. Figures given herein represent total contents. Reservoir is designed for flood control, water supply, water-quality control and conservation. Capacity table used since Dec. 27, 1982.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 345,400 acre-ft Oct. 28, 1984, elevation, 603.84 ft; minimum since conservation pool was first filled, 220,900 acre-ft Sept. 28, 1985, elevation, 594.79 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 345,400 acre-ft Oct. 28, elevation, 603.84 ft; minimum contents 220,900 acre-ft Sept. 28, elevation, 594.79 ft.

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

592	189,100	598	260,900
594	211,600	601	302,500
596	235,500	604	347,900

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228100	339700	239000	251600	236900	243800	240000	277500	235500	235400	232200	226000
2	228100	343200	237000	250000	236600	240600	240000	278000	235300	235500	232000	225900
3	228200	343300	235600	246000	236100	237800	239800	274300	235100	235600	231600	225200
4	228200	338300	235500	243300	235900	238600	238000	269300	235900	235500	230900	224600
5	228300	329300	236000	240100	235900	237700	238000	264500	235300	235400	230900	224500
6	232000	320400	236500	237700	235900	234800	236900	259900	240100	235400	230900	224200
7	233000	311700	236700	236000	235600	234400	235900	255700	240800	235100	230900	224600
8	233200	302500	236800	235600	234800	235300	235000	250700	240900	234600	230700	224600
9	233400	293900	237600	235600	234600	235300	234500	245400	241100	234400	230500	224400
10	233000	284300	238000	236100	238300	236000	234400	241600	241200	234300	230400	224400
11	233000	275700	236700	236900	239000	237100	234300	239200	241900	234300	229900	224400
12	233300	266500	236600	236900	238700	236700	234300	236700	241400	234000	229600	224600
13	233900	257600	240300	236900	238300	237100	234800	235600	241100	233300	229500	224200
14	235400	248800	241900	237100	236700	237800	234600	235300	240600	233200	229300	224200
15	236000	243200	244300	237700	236000	237800	234600	234800	240600	232900	229200	224000
16	239000	240400	245200	237600	235900	236600	234800	234800	240600	234000	228800	224000
17	238600	242700	246800	236500	235500	235000	234900	234800	240200	234200	228800	223200
18	243900	257800	251600	235700	235400	233900	234800	234800	240100	234200	228700	222900
19	245300	258200	251000	236600	235700	234200	234600	234600	239100	233200	228300	222800
20	312800	253900	247400	235700	236200	244100	234600	234600	237700	234000	228200	222800
21	321600	248100	249800	235600	236000	247600	234600	234600	237100	234000	228100	222400
22	328400	241800	248500	235600	237100	248000	245200	234800	237100	234000	227500	222200
23	326700	238600	245100	235600	258300	246000	250500	234800	237100	233700	227400	222000
24	322900	238300	241700	235600	261900	243600	251400	234800	237600	233700	228100	221200
25	330600	238500	237800	235600	261700	240300	251800	234900	236900	232900	228700	222100
26	340800	239000	235500	235600	258800	236900	251800	234800	236700	232900	227100	221700
27	344900	241300	235200	236600	253100	234600	253800	236600	236500	232900	226600	221100
28	344300	241300	235600	236900	247500	234400	254000	237100	236000	232800	226600	220900
29	339000	242100	238000	236900	---	235300	258800	236700	235600	232700	226500	221700
30	331700	242100	239800	237000	---	238500	274300	235500	235600	232700	226400	222000
31	327700	---	249600	237000	---	239100	---	235600	---	232300	226300	---
MAX	344900	343300	251600	251600	261900	248000	274300	278000	241900	235600	232200	226000
MIN	228100	238300	235200	235600	234600	233900	234300	234600	235100	232300	226300	220900
(†)	602.70	596.53	597.13	596.12	596.96	596.29	599.00	596.01	596.01	595.74	595.24	594.88
(††)	+99,500	-85,600	+7,500	-12,600	+10,500	-8,400	+35,200	-38,700	0	-3,300	-6,000	-4,300

CAL YR 1984 MAX 344900 MIN 183200 (††) +66,400
WTR YR 1985 MAX 344900 MIN 220900 (††) -6,200

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07335790 KIAMICHI RIVER NEAR CLAYTON, OK

LOCATION.--Lat 34°34'30", long 95°20'26", in NE 1/4 SE 1/4 sec.7, T.1 N., R.19 E., Pushmataha County, Hydrologic Unit 11140105, on left bank near downstream bridge abutment on U.S. Highway 271, approximately 1 mi southeast of Clayton, and at mile 101.6.

DRAINAGE AREA.--708 mi^2.

PERIOD OF RECORD.--November 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 520.00 ft.

REMARKS.--Estimated daily discharges: Oct. 29, Jan. 23-26, July 25-26, Aug. 15-18. Records fair. Some regulation since December 1982 by Sardis Lake (station 07335775) on Jack Fork Creek 4.5 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft^3/s June 7, 1981, gage height 20.21 ft; no flow Oct. 3-18, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 21,500 ft^3/s Oct. 20, gage height 19.31 ft; minimum daily discharge 1.8 ft^3/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	14500	2140	8440	766	3480	2110	6560	112	51	9.6	6.8
2	113	13300	1980	4560	720	2580	1430	2730	97	47	7.4	6.1
3	86	6330	1400	4150	641	2400	1150	3090	83	44	6.2	5.2
4	66	4850	422	3300	614	3290	1280	3320	71	38	5.3	4.6
5	57	6030	484	2460	727	3840	1410	3040	64	31	5.5	4.1
6	3730	5750	833	2300	884	2420	1110	2880	3940	26	5.9	3.5
7	8510	5530	566	1770	839	1290	1020	2770	1570	24	5.6	3.6
8	3550	5360	428	840	794	945	833	2710	525	20	5.9	4.3
9	994	5160	390	457	1070	600	444	2650	333	18	5.8	4.1
10	617	5050	431	579	1790	504	238	2060	243	16	4.9	3.1
11	488	4910	788	644	1910	437	216	1410	254	13	3.9	2.7
12	462	4800	777	480	1700	384	205	1380	318	12	3.5	2.7
13	381	4740	880	395	1650	580	213	888	247	12	2.8	2.7
14	800	4660	2830	364	1450	1140	209	974	180	13	2.5	3.6
15	4400	3670	2770	340	1210	1210	217	481	139	10	2.2	4.5
16	3480	1690	3160	510	868	1310	199	271	112	9.9	2.1	8.7
17	3150	899	4210	977	797	1240	163	201	273	19	1.9	38
18	1670	8000	7620	828	770	944	144	165	661	29	1.8	27
19	2970	7890	6660	286	1390	261	127	140	1160	14	26	18
20	14200	4800	6750	241	1390	1880	119	121	940	8.9	28	13
21	19800	4800	7510	201	1430	4240	109	114	551	7.3	19	10
22	16700	4300	7870	172	1430	3310	2720	113	192	7.5	13	8.0
23	3610	3010	4790	160	12800	3460	9400	118	151	8.2	9.8	6.1
24	4530	1410	3810	150	14600	3030	5330	137	144	10	8.6	4.5
25	10600	1360	3330	140	7090	2630	1250	121	184	9.9	8.9	4.4
26	12600	1250	2490	130	4370	2440	1340	99	146	9.6	8.8	5.0
27	6400	5200	901	239	4470	1850	3010	187	113	9.2	7.7	4.4
28	3630	2930	609	1170	4150	1030	3660	205	89	8.9	6.9	3.9
29	3300	1450	567	1090	---	741	3260	495	72	8.6	6.5	4.5
30	5200	1470	2410	909	---	4200	10300	682	61	13	6.6	5.5
31	7210	---	3290	834	---	5660	---	401	---	15	6.8	---
TOTAL	143457	145099	83096	39116	72320	63326	53216	40513	13025	563.0	239.4	222.6
MEAN	4628	4837	2681	1262	2583	2043	1774	1307	434	18.2	7.72	7.42
MAX	19800	14500	7870	8440	14600	5660	10300	6560	3940	51	28	38
MIN	57	899	390	130	614	261	109	99	61	7.3	1.8	2.7
AC-FT	284500	287800	164800	77590	143400	125600	105600	80360	25840	1120	475	442

CAL YR 1984 TOTAL 557648.42 MEAN 1524 MAX 19800 MIN .36 AC-FT 1106000
WTR YR 1985 TOTAL 654193.0 MEAN 1792 MAX 19800 MIN 1.8 AC-FT 1298000

07336200 KIAMICHI RIVER NEAR ANTLERS, OK

LOCATION.--Lat 34°14'55", long 95°36'18", in SW 1/4 sec.35, T.3 S., R.16 E., Pushmataha County, Hydrologic Unit 11140105, on right bank, 50 ft downstream from bridge on U.S. Highway 271 and State Highway 2, 2.0 mi northeast of Antlers, 7.7 mi downstream from Tenmile Creek, 5.4 mi upstream from Cedar Creek and at mile 59.6.

DRAINAGE AREA.--1,138 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 419.82 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimate daily discharges: Oct. 1-2, 4-8, 10-11, July 18-28, July 30 to Aug. 5, 7-12, 14-20, Aug. 23 to Sept. 8, 25-30. Records fair. Small diversion above station for municipal water supply of city of Antlers.

COOPERATION.--Gage-height record, 8 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--13 years, 1,527 ft^3/s, 18.21 in/yr, 1,106,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s Mar. 28, 1977, gage height, 38.33 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 21	1500	*42,200	*34.58	Feb. 24	0100	24,500	25.32
Oct. 25	2200	22,000	23.76	Apr. 23	0500	18,100	21.36
Nov. 2	0100	30,800	28.63	Apr. 30	1800	24,900	25.55

Minimum daily discharge, 1.2 ft^3/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	25600	2340	12700	1170	5290	4780	18100	636	95	35	9.6
2	250	26900	2470	8680	1080	4230	2640	5830	305	86	24	9.1
3	161	15000	2250	5790	1020	3550	1930	3810	228	3420	20	8.3
4	135	5750	1220	4980	963	4840	1550	4140	189	468	16	7.8
5	108	6270	844	3690	1010	6340	1880	3830	168	200	12	6.7
6	3000	6320	1190	3170	1260	4490	1630	3510	11300	125	11	6.2
7	5000	5970	1200	2900	1310	2620	1340	3340	9400	91	9.6	5.6
8	10000	5750	878	1760	1300	1740	1200	3270	2080	72	8.2	5.2
9	2050	5560	734	1100	1630	1320	932	3150	965	57	7.0	4.9
10	1000	5380	657	958	3780	1000	612	3030	608	50	6.2	5.1
11	600	5250	717	1050	3970	873	414	1920	488	42	5.4	5.5
12	544	5140	970	932	2870	760	369	1570	458	36	4.8	13
13	568	5050	3080	738	2500	672	353	1840	442	31	4.4	35
14	911	4980	7240	656	2160	1600	359	1660	361	28	3.8	29
15	4550	4900	6890	623	1900	1900	338	1350	280	25	3.5	21
16	6500	3030	6710	605	1460	1740	344	675	229	23	3.3	15
17	4080	1450	7250	918	1170	1670	312	418	192	19	3.1	10
18	3370	9330	13200	1290	1060	1540	268	313	205	31	2.9	5.6
19	2760	13800	10800	965	1460	1000	238	259	675	26	2.7	3.4
20	17300	7240	8470	503	2200	5850	216	733	1170	19	2.6	2.6
21	40400	5850	9640	418	2120	11200	199	3810	872	15	2.3	1.8
22	33100	5280	10300	369	2090	6280	8900	2130	592	15	2.3	1.2
23	18800	4770	7530	335	17300	5610	17000	670	272	16	25	5.7
24	6120	2550	5320	325	22000	4890	11500	412	205	21	27	35
25	16900	1730	4480	324	15300	3900	3370	314	174	25	18	20
26	21100	1800	3950	318	5950	3370	1640	264	165	45	16	15
27	16100	4990	2190	572	5640	3090	3760	6190	177	35	15	12
28	6440	5970	1210	1400	5200	1840	6860	5340	153	32	15	9.4
29	5390	2760	1060	1910	---	1280	6150	1520	129	31	13	9.0
30	5680	1800	4280	1500	---	4270	22100	980	108	40	12	11
31	7390	---	5770	1310	---	9540	---	936	---	44	10	---
TOTAL	240667	206170	134840	62789	110873	108295	103184	85314	33226	5263	341.1	328.7
MEAN	7763	6872	4350	2025	3960	3493	3439	2752	1108	170	11.0	11.0
MAX	40400	26900	13200	12700	22000	11200	22100	18100	11300	3420	35	35
MIN	108	1450	657	318	963	672	199	259	108	15	2.3	1.2
CFSM	6.82	6.04	3.82	1.78	3.48	3.07	3.02	2.42	.97	.15	.01	.01
IN.	7.87	6.74	4.41	2.05	3.62	3.54	3.37	2.79	1.09	.17	.01	.01
AC-FT	477400	408900	267500	124500	219900	214800	204700	169200	65900	10440	677	652

CAL YR 1984	TOTAL	849084.07	MEAN	2320	MAX	40400	MIN	.50	CFSM	2.04	IN.	27.76	AC-FT 1684000
WTR YR 1985	TOTAL	1091290.8	MEAN	2990	MAX	40400	MIN	1.2	CFSM	2.63	IN.	35.67	AC-FT 2165000

07336600 HUGO LAKE NEAR HUGO, OK

LOCATION.--Lat 34°00'42", long 95°22'49", in NW 1/4 SW 1/4 sec.25, T.6 S., R.18 E., Choctaw County, Hydrologic Unit 11140105, on upstream face of Hugo Dam on Kiamichi River, 700 ft to left of spillway, 7.0 mi east of Hugo, and at mile 17.6.

DRAINAGE AREA.--1,709 mi^2.

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rolled earth dam. The outlet works consists of a gate-controlled concrete gravity ogee-type weir with six 40- by 50-foot gates. Regulated storage began Jan. 18, 1974; conservation pool was first filled Mar. 12, 1974. Total capacity, 1,561,500 acre-ft at elevation 452.5 ft, top of dam, 966,700 acre-ft at elevation 437.5 ft, top of flood control pool. Dead storage 21,080 acre-ft at elevation 387.5 ft, crest of gated spillway. Figures given herein represent total contents. Reservoir is used for flood control, water supply, recreation and conservation.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 577,800 acre-ft June 17, 1982, elevation, 425.00 ft; minimum since conservation pool was first filled, 88,860 acre-ft Nov. 15, 1978, elevation, 398.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 453,100 acre-ft Nov. 3, elevation, 420.24 ft; minimum 120,000 acre-ft Sept. 29, elevation, 401.45 ft.

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

401	115,000	415	334,000
407	192,700	420	447,100
410	239,900	425	577,800

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123100	404200	163600	194900	160700	250900	224300	383100	180900	158900	154300	132700
2	123300	447100	162500	197200	159800	238300	222900	390300	175600	160200	153200	131500
3	123400	451600	160500	184900	159300	226100	219400	381300	171000	179800	152800	130700
4	123400	431600	160000	175600	159600	221000	210300	362600	171000	179200	152000	130000
5	125300	411300	165000	169200	160000	215700	200700	342300	173800	176100	151500	129500
6	126100	391600	165900	160900	161200	205700	195500	326800	221600	171900	150800	128800
7	151100	372000	167800	157600	162500	193100	193700	304700	255100	166900	150400	128600
8	171500	352100	169200	158500	163400	182800	189600	282600	261300	164700	149900	128100
9	174200	333000	170100	160700	164300	175200	181600	260900	264100	163400	149200	127200
10	170600	312900	169300	162300	170400	167400	174500	237800	265300	162700	148700	126800
11	166500	294300	166100	162900	172300	162700	166600	216300	268000	162300	147600	126200
12	163200	274100	164800	161600	168400	159300	162900	192700	268000	162000	147100	126500
13	162700	256200	168000	160700	164300	159600	162000	179800	268000	161200	146300	126600
14	165700	237500	179100	159400	158900	162000	162300	171500	267600	160800	145800	126500
15	169500	221100	190500	158500	158200	163800	162000	162900	265800	160100	145500	126100
16	177900	205700	200900	160900	159400	164300	161200	158500	263700	159600	144700	125500
17	180900	195700	211600	161200	158900	164700	160700	156900	254800	159200	143700	125000
18	185900	208700	227300	163400	158900	164700	159300	156200	239900	158500	143200	124700
19	181600	221100	229000	163600	159800	163100	158600	156300	225800	158100	142600	124200
20	200900	212900	218900	163600	160200	183800	158600	157600	212900	158500	141700	123900
21	271100	199100	213200	162900	158000	214000	159700	169300	199900	159000	140900	123500
22	327800	184900	207500	162300	157400	223400	192700	167700	187500	158800	140000	123000
23	351100	178300	195800	161600	200200	231800	246900	160800	174200	158600	139100	123000
24	337700	173400	182000	160900	252100	235000	276900	159000	164600	158100	138900	122000
25	359000	167700	167000	160500	280000	232300	287000	158900	160800	157800	138000	122300
26	384000	167200	159800	159200	280200	222900	284700	159200	160700	157600	137400	121800
27	392900	169300	159400	162100	268500	216100	279800	188700	160800	156900	136400	120800
28	380900	173300	159700	164800	258300	208700	287800	207800	159300	156600	135900	120600
29	361000	170700	162000	166200	---	198400	293700	204200	159700	155900	135300	122800
30	341500	166600	171400	166600	---	202200	337500	194200	159200	155400	134600	122000
31	343800	---	180100	176500	---	218500	---	186500	---	154800	133700	---
MAX	392900	451600	229000	197200	280200	250900	337500	390300	268000	179800	154300	132700
MIN	123100	166600	159400	157600	157400	159300	158600	156200	159200	154800	133700	120600
(†)	415.47	405.17	406.15	405.90	411.05	408.68	415.17	406.58	404.62	404.30	402.62	401.63
(††)	+219,000	-177,200	+13,500	-3,600	+81,800	-39,800	+119,000	-151,000	-27,300	-4,400	-21,100	-11,700

CAL YR 1984 MAX 451600 MIN 117000 (††) +18,200
WTR YR 1985 MAX 451600 MIN 120600 (††) -2,800

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07336820 RED RIVER NEAR DE KALB, TX

LOCATION.--Lat 33°41'15", long 94°41'39", Bowie County, TX-McCurtain County, OK line, Hydrologic Unit 11140106, near left bank at downstream side of bridge on U.S. Highway 259, 4.8 mi upstream from North Mill Creek, 13 mi north of De Kalb, and at mile 556.9.

DRAINAGE AREA.--47,348 mi^2, of which 5,936 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. At times, flood peaks may be affected by storage in Lake Texoma (station 07331500) located approximately 169 mi upstream, and low flows may be affected by releases for generation of electric power. Gage-height telemeter located at station.

AVERAGE DISCHARGE.--17 years (water years 1969-85), 11,950 ft^3/s (8,658,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft^3/s Dec. 11, 1971 (gage height, 31.55 ft), from graph based on gage readings minimum, 213 ft^3/s Nov. 30, 1979, from graph based on gage readings.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1957, 205,000 ft^3/s June 1957 (gage height, 32.2 ft), from rating curve extended above 186,500 ft^3/s. The greatest flood since 1936 occurred in February 1938, stage unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,100 ft^3/s Apr. 6 at 2200 hours (gage height, 24.04 ft) minimum daily, 816 ft^3/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	33000	16300	23600	10200	48500	50800	54400	17400	13000	4000	3050
2	1390	58000	13200	33800	9690	49100	48100	58900	14500	12800	4430	2970
3	1030	63700	11600	44900	11300	45100	49900	50400	12400	13200	4500	2880
4	842	52600	10800	52300	12200	42700	45500	48200	10600	14300	4460	2620
5	816	43400	9030	55400	11300	42500	51200	47700	8110	16400	4450	2410
6	896	37300	7520	54900	9580	45100	62800	49200	9000	16900	4300	2290
7	1250	33900	8790	44500	11300	46100	63200	49000	30300	15300	3770	2220
8	1410	29700	9810	35200	12300	44500	56300	45800	52100	13400	3660	2150
9	1150	26100	9550	41000	12700	40500	52400	41800	41900	11100	4160	2130
10	1190	24700	8700	40000	13300	35500	49300	40000	37700	9190	4310	2130
11	3640	23900	7570	38600	13200	32300	48200	39100	45200	9330	4290	2110
12	4540	23300	7410	31800	13900	29300	45900	38200	51600	9180	4330	2110
13	4790	23000	7420	24100	16500	26800	37500	35200	55700	9080	4390	2260
14	3280	23200	10500	19800	18900	27200	29700	32500	55400	9010	3790	2540
15	3580	22500	12500	18600	16400	28400	20800	34500	51900	8860	3610	2020
16	3690	22200	13600	17800	11100	30400	16900	33900	49400	7960	4070	1820
17	5730	20000	18900	17200	8700	28100	15600	24400	45800	7280	4240	1750
18	6610	16900	40200	17800	8640	22200	14900	18600	51000	7530	4240	1730
19	6590	19000	54800	17600	8300	18600	14500	15400	54000	7740	4250	1630
20	8230	26700	57300	17400	6300	19600	14000	13000	53900	7040	4190	1340
21	12900	32200	53300	14900	7460	38000	13400	14400	53200	6730	3960	1460
22	19600	31500	46900	12300	8950	57100	14000	20600	52700	6700	3930	1550
23	26800	29000	42700	12100	12200	59500	19600	28000	45700	5920	4230	1570
24	30800	22300	40500	12800	29000	55500	35500	29800	37700	5000	4430	1550
25	40700	16200	37900	12800	46800	53300	45800	23300	32600	4880	4180	1520
26	44300	14600	32800	11900	46200	52600	46200	16300	27400	5420	4120	1240
27	45000	16400	25600	9120	42100	52800	49900	14200	20800	5330	4030	1250
28	41100	16500	19400	8430	42400	51500	55900	18700	16000	5110	3530	1420
29	37100	16900	16000	7910	---	51200	49700	20200	13900	4990	3250	1690
30	34600	17600	14300	7750	---	50200	46200	20500	13300	4690	3790	1920
31	32700	---	15900	8690	---	50100	---	20000	---	4080	3360	---
TOTAL	428024	836300	680800	765000	470920	1274300	1163700	996200	1061210	277450	126250	59330
MEAN	13810	27880	21960	24680	16820	41110	38790	32140	35370	8950	4073	1978
MAX	45000	63700	57300	55400	46800	59500	63200	58900	55700	16900	4500	3050
MIN	816	14600	7410	7750	6300	18600	13400	13000	8110	4080	3250	1240
AC-FT	849000	1659000	1350000	1517000	934100	2528000	2308000	1976000	2105000	550300	250400	117700

CAL YR 1984 TOTAL 4084568 MEAN 11160 MAX 63700 MIN 721 AC-FT 8102000
WTR YR 1985 TOTAL 8139484 MEAN 22300 MAX 63700 MIN 816 AC-FT 16140000

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: January 1968 to current year. Pesticide analyses: October 1970 to September 1981.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1968 to current year.
WATER TEMPERATURES: January 1968 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationship between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,140 microsiemens July 13, 1980; minimum daily, 114 microsiemens Oct. 31, 1984.
WATER TEMPERATURES: Maximum daily, 34.0 °C on several days during July and August 1969-70; minimum daily, 0.0 °C Jan. 11, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,490 microsiemens Jan. 23; minimum daily, 114 microsiemens Oct. 31.
WATER TEMPERATURES: Maximum daily, 29.0 °C on several days during July and August; minimum daily, 1.0 °C on several days during February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
NOV											
06...	1720	36700	111	8.0	16.0	350	78	7.7	78	1.5	49
JAN											
29...	1615	7890	1020	7.8	5.0	80	34	12.6	100	1.2	240
MAR											
12...	1600	29000	1060	7.9	13.5	350	75	9.8	95	.6	250
APR											
23...	1650	19200	798	7.7	20.0	100	64	8.6	96	1.6	200
MAY											
02...	1900	58900	357	7.9	21.5	230	99	6.8	77	1.6	120
SEP											
03...	1435	2940	1030	8.3	26.5	40	6.7	7.9	100	2.6	240

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
06...	6	16	2.1	4.1	.3	2.4	43	12	4.3	<.10	6.8
JAN											
29...	130	63	19	110	3	3.5	110	120	180	.20	6.7
MAR											
12...	160	65	21	130	4	4.1	87	150	220	.20	5.7
APR											
23...	97	53	16	82	3	3.7	102	89	140	.20	6.3
MAY											
02...	54	35	7.4	23	1	3.3	64	41	45	.20	8.7
SEP											
03...	81	64	19	110	3	4.6	157	100	170	.30	3.4

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV											
06...	73	210	7	.08	.020	.10	.080	.72	.80	.150	9.7
JAN											
29...	570	73	10	--	<.010	.30	.060	.84	.90	.110	5.7
MAR											
12...	650	220	13	.29	.010	.30	.050	.75	.80	.210	6.0
APR											
23...	450	243	15	.46	.040	.50	.090	.81	.90	.260	4.3
MAY											
02...	200	668	40	.24	.060	.30	.170	1.2	1.4	.130	8.9
SEP											
03...	570	20	6	--	<.010	<.10	.030	.67	.70	.050	9.2

07336820 RED RIVER NEAR DE KALB, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 29...	1615	<1	130	<10	<10	<1	43
SEP 03...	1435	2	150	<1	<10	2	13

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 29...	<1	25	<.1	<1	<1	10
SEP 03...	<1	13	<.1	<1	<1	18

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1984 TO SEPTEMBER 1985

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT-ANCE (US/CM)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (TONS)	DIS-SOLVED CHLORIDE (MG/L)	DIS-SOLVED CHLORIDE (TONS)	DIS-SOLVED SULFATE (MG/L)	DIS-SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1984	428024	176	96	111000	23	26900	17	19700	51
NOV.	1984	836300	255	141	317000	34	77500	25	56800	74
DEC.	1984	680800	648	372	685000	99	182600	71	131400	170
JAN.	1985	765000	1000	593	1224000	170	344700	120	245400	250
FEB.	1985	470920	629	361	459000	96	121800	69	87700	170
MAR.	1985	1274300	823	479	1648000	130	448600	93	321500	210
APR.	1985	1163700	696	401	1259000	110	336000	77	241700	190
MAY	1985	996200	539	304	819000	78	210700	57	152700	150
JUNE	1985	1061210	721	416	1192000	110	319700	80	229800	190
JULY	1985	277450	879	513	384000	140	105000	100	75200	230
AUG.	1985	126250	1030	607	207000	170	58000	120	41300	260
SEPT.	1985	59330	1020	605	96900	170	27100	120	19300	260
TOTAL		8139484	**	**	8402000	**	2259000	**	1622000	**
WTD.AVG.		22300	662	382	**	100	**	74	**	170

07336820 RED RIVER NEAR DE KALB, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	129	356	1060	678	684	877	564	495	928	928	1080
2	665	167	500	548	718	828	728	411	629	945	973	1060
3	619	193	646	531	1220	865	656	371	600	933	985	1050
4	544	171	455	1160	1270	905	536	394	575	875	1000	998
5	623	182	480	960	1220	930	600	385	734	804	989	968
6	690	155	514	930	928	950	690	456	761	770	1000	1000
7	693	128	630	889	856	902	809	516	408	750	1020	1030
8	686	127	756	800	930	899	864	519	309	747	1030	1060
9	620	129	800	910	775	928	890	558	285	748	1020	1050
10	726	136	934	925	650	1020	907	576	277	820	1050	1060
11	747	157	863	940	601	1050	934	579	533	886	1040	1070
12	324	203	861	1000	600	1070	940	578	708	974	1030	1060
13	286	270	552	1060	320	1180	845	576	771	980	1020	1050
14	327	282	364	1110	265	1090	825	638	804	990	1030	925
15	319	257	350	1010	415	1020	803	671	906	964	1040	930
16	323	295	371	1210	561	1010	588	590	890	964	1060	924
17	233	351	340	1250	710	920	463	610	863	879	1050	1000
18	225	390	287	1220	868	805	639	595	810	860	1030	963
19	302	380	496	1270	1050	875	916	746	811	835	1040	1000
20	233	335	453	1310	1100	921	910	781	816	875	1030	1010
21	200	320	551	1400	703	650	920	790	848	902	1040	1030
22	190	375	625	1460	650	509	899	801	853	992	1090	1020
23	178	422	690	1490	600	437	850	617	820	995	980	1010
24	164	469	760	1440	540	550	804	500	776	914	1020	1020
25	139	495	800	1430	486	671	451	532	778	879	1030	1060
26	132	508	820	1350	450	715	386	550	841	901	1020	1030
27	121	480	878	1280	506	750	342	580	903	928	1080	1040
28	123	461	1070	1100	538	790	388	567	895	905	1110	1090
29	124	344	1260	750	---	840	462	583	892	917	997	1060
30	135	275	1350	596	---	870	519	505	910	913	1050	1040
31	114	---	1190	559	---	900	---	464	---	945	1100	---
MEAN	382	286	677	1060	722	856	715	568	717	894	1030	1020

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	18.0	9.0	18.0	1.0	10.0	13.0	20.0	25.0	25.0	29.0	---
2	15.0	17.0	---	9.0	1.0	10.0	14.0	20.0	26.0	26.0	29.0	---
3	16.0	15.0	9.0	7.0	1.0	10.0	15.0	20.0	---	25.0	29.0	27.0
4	18.0	16.0	7.0	7.0	1.0	11.0	16.0	20.0	26.0	---	29.0	26.0
5	21.0	15.0	---	7.0	1.0	---	---	21.0	27.0	25.0	29.0	27.0
6	22.0	---	5.0	---	1.0	10.0	16.0	20.0	25.0	---	28.0	28.0
7	20.0	14.0	5.0	7.0	2.0	10.0	15.0	21.0	24.0	---	28.0	28.0
8	21.0	16.0	6.0	---	2.0	12.0	15.0	20.0	23.0	27.0	28.0	28.0
9	21.0	17.0	---	---	3.0	12.0	14.0	21.0	---	28.0	29.0	28.0
10	22.0	16.0	8.0	---	5.0	12.0	15.0	21.0	26.0	---	29.0	26.0
11	21.0	14.0	10.0	---	4.0	---	15.0	---	25.0	28.0	---	27.0
12	21.0	14.0	11.0	---	4.0	12.0	15.0	---	24.0	29.0	29.0	26.0
13	20.0	13.0	12.0	---	4.0	13.0	16.0	22.0	23.0	---	29.0	25.0
14	20.0	13.0	13.0	4.0	4.0	13.0	---	22.0	23.0	---	29.0	25.0
15	19.0	13.0	---	4.0	4.0	12.0	17.0	20.0	24.0	28.0	29.0	---
16	19.0	13.0	13.0	5.0	5.0	13.0	18.0	21.0	---	28.0	28.0	21.0
17	19.0	11.0	---	---	---	---	18.0	21.0	25.0	28.0	---	22.0
18	19.0	---	13.0	---	8.0	13.0	19.0	21.0	25.0	---	---	24.0
19	19.0	---	11.0	---	9.0	---	20.0	22.0	25.0	---	29.0	27.0
20	19.0	---	11.0	---	---	13.0	---	22.0	24.0	---	29.0	26.0
21	---	---	11.0	---	10.0	---	---	---	25.0	28.0	28.0	26.0
22	18.0	---	---	---	---	12.0	20.0	20.0	25.0	28.0	28.0	---
23	17.0	---	---	---	---	13.0	---	21.0	---	28.0	28.0	24.0
24	15.0	---	---	---	---	---	18.0	---	25.0	28.0	27.0	21.0
25	15.0	---	---	5.0	12.0	13.0	18.0	21.0	26.0	28.0	---	20.0
26	15.0	11.0	10.0	4.0	12.0	13.0	19.0	---	26.0	28.0	26.0	19.0
27	15.0	---	10.0	5.0	11.0	---	20.0	---	26.0	29.0	26.0	18.0
28	---	9.0	11.0	5.0	10.0	---	20.0	22.0	25.0	29.0	26.0	18.0
29	16.0	10.0	12.0	5.0	---	---	20.0	22.0	25.0	28.0	26.0	---
30	16.0	9.0	---	5.0	---	---	20.0	23.0	---	29.0	27.0	15.0
31	17.0	---	14.0	4.0	---	13.0	---	25.0	---	29.0	27.0	---
MEAN	18.5	13.5	10.0	6.5	5.0	12.0	17.0	21.0	25.0	27.5	28.0	24.0

07337300 PINE CREEK LAKE NEAR WRIGHT CITY, OK

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, Hydrologic Unit 11140107, at left of outlet works of dam on Little River, 4.7 mi upstream from bridge on State Highway 98, 5.0 mi northwest of Wright City, and at mile 145.3.

DRAINAGE AREA.--635 mi^2.

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 National Geodetic Vertical Datum of 1929.

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 U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 348,410 acre-ft Dec. 16, 1971, elevation, 474.57 ft; minimum since conservation pool was first filled, 28,220 acre-ft Oct. 21, 1972, elevation, 429.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 356,500 acre-ft Nov. 4, elevation, 473.13 ft; minimum 52,870 acre-ft Feb. 19, elevation, 437.76 ft.

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

436	46,650	448	102,600
439	57,610	462	217,470
442	70,490	474	369,400

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57030	324800	113200	70490	55370	96650	82410	131100	73290	72290	67600	58790
2	56300	352800	102900	72860	55290	87800	83040	128400	73290	72910	66960	58590
3	55490	356200	92350	69990	54910	79070	78970	121600	73240	73330	66330	58380
4	54720	353600	82100	67100	54870	72770	73570	111300	73050	73620	65670	58180
5	55530	344600	73190	64770	54870	67690	68640	100800	73860	73710	65110	58020
6	57490	332700	66690	61980	55140	60740	64430	89990	91490	73620	64600	57810
7	80740	320300	63310	58950	55330	54950	59890	81470	96480	73520	64040	57730
8	84810	307700	60870	56530	55560	53380	56450	76680	94820	73430	63700	57610
9	84920	295400	58300	55370	55640	54480	54830	73950	91780	73290	63270	57340
10	80120	282300	55530	54680	57300	55290	54250	72910	86700	73100	62840	57150
11	74140	269100	54170	54440	60130	55410	54440	72860	80590	72950	62450	57030
12	68550	256600	54370	54640	60260	54830	54720	72860	74950	72810	62110	56570
13	63780	243300	55800	54750	58710	54410	55020	73670	73240	72620	61810	57110
14	60340	230700	58060	54950	56450	55220	55180	76230	73480	72390	61440	56920
15	65630	218000	60460	54790	55330	55290	55220	76130	74090	72240	61440	56760
16	68320	205400	64340	55290	54720	55140	55290	74990	73950	72010	61350	56100
17	71300	193600	74090	55330	53940	54600	55290	74280	74090	71910	61110	55560
18	73570	199700	91210	55410	53020	54170	55260	73950	74900	71680	60990	55410
19	78570	196700	101400	55220	53380	54210	55140	73430	74900	71390	60830	55220
20	122300	188000	107500	54640	54790	65110	54990	73480	73860	71110	60620	55100
21	160300	178800	113500	54250	55560	77080	54910	77380	73430	70820	60460	54900
22	168700	168100	116300	53940	55760	82460	81530	77130	73430	70680	60090	54750
23	173200	157500	113800	54210	94640	88130	108900	75090	73430	70490	60090	54480
24	176100	146500	109400	54600	115200	91660	114400	74050	73480	70310	60170	54250
25	225900	136400	99650	55020	121700	92010	113000	74280	73480	69900	59930	54250
26	246500	129400	90920	55100	121600	88730	107900	74520	73480	69720	59650	54060
27	256200	138600	83510	57110	114800	84920	105400	77530	73330	69360	59440	53680
28	262500	138000	73810	59320	105500	81160	107400	79120	73100	68950	59360	53790
29	263600	132700	65330	59930	---	75780	110900	76830	73000	68590	59200	54170
30	258400	123100	59850	59030	---	74570	118900	74330	72910	68280	59030	53980
31	266900	---	60050	56450	---	78720	---	73240	---	68000	58950	---
MAX	266900	356200	116300	72860	121700	96650	118900	131100	96480	73710	67600	58790
MIN	54720	123100	54170	53940	53020	53380	54250	72860	72910	68000	58950	53680
(†)	466.39	451.11	439.60	438.70	448.45	437.70	450.51	442.58	442.51	441.45	439.33	438.06
(††)	+212,010	-143,800	-63,050	-3,600	+49,050	-26,780	+40,180	-45,660	-330	-4,910	-9,050	-4,970

CAL YR 1984 MAX 356200 MIN 53640 +5,160
WTR YR 1985 MAX 356200 MIN 53020 -3,390

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07337500 LITTLE RIVER NEAR WRIGHT CITY, OK

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, Hydrologic Unit 11140107, on left bank on downstream side of bridge on State Highway 98, 1.8 mi upstream from White Oak Creek, 2.0 mi west of Wright City, 4.7 mi downstream from Pine Creek Lake, and at mile 140.6.

DRAINAGE AREA.--645 mi^2.

PERIOD OF RECORD.--October 1929 to September 1931, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 346.76 ft, National Geodetic Vertical Datum of 1929. Oct. 12, 1929 to Sept. 30, 1931, nonrecording gage at railroad bridge 1.0 mi downstream at datum 4.15 ft higher. Dec. 6, 1944 to July 30, 1951, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 21, 25-27, Nov. 1-2, Dec. 17-19, Feb. 22-24, Mar. 21-22, Apr. 23-25. Records fair. Except for 10 mi^2 intervening area, flow completely regulated since June 1969 by Pine Creek Lake (station 07337300).

COOPERATION.--Gage-height record and 5 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Pine Creek Lake) 27 years (water years 1930-31, 1945-69), 917 ft^3/s, 664,400 acre-ft/yr; (since regulation by Pine Creek Lake) 15 years (water years 1971-85) 901 ft^3/s, 652,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,200 ft^3/s 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,770 ft^3/s Nov. 7, gage height, 22.63 ft; minimum daily discharge, 8.3 ft^3/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	1000	5930	2980	1610	5720	318	2970	453	16	128	13
2	144	80	5840	2980	1040	5660	359	3770	304	17	158	11
3	256	1410	5740	3670	900	5540	2130	4370	236	28	179	10
4	323	2910	5640	3190	833	5510	3260	5700	191	33	190	11
5	370	5200	5660	2290	807	5480	2940	5710	161	30	205	11
6	299	6650	4860	2240	794	5360	2420	5620	205	27	213	9.0
7	222	6770	2840	2200	779	4720	2380	5060	388	29	223	8.9
8	175	6740	2010	2040	772	2410	2140	2910	2210	27	224	8.3
9	306	6710	1920	1470	845	669	1290	1830	2180	27	196	8.5
10	2630	6680	1860	1300	898	527	704	1100	2610	29	167	9.2
11	3490	6610	1560	1180	936	495	314	506	3440	28	157	8.9
12	3380	6540	686	860	1220	613	229	324	3130	27	146	9.2
13	2960	6480	582	706	1700	678	202	264	1490	29	95	17
14	2960	6420	595	634	1860	778	194	320	289	28	60	26
15	3640	6380	717	589	1770	790	188	677	152	27	47	28
16	3430	6340	809	575	1230	772	181	836	101	28	38	42
17	3630	6280	450	569	1060	754	174	841	71	30	29	132
18	3130	6450	250	556	985	727	169	601	58	30	26	111
19	1910	6700	140	546	910	595	163	486	80	36	24	72
20	1540	6560	713	530	664	617	156	441	290	49	21	56
21	1200	6390	3160	523	582	1100	150	468	400	56	20	47
22	561	6270	4290	493	1020	800	226	1390	198	62	19	42
23	418	6180	4130	422	600	706	400	2050	82	69	18	36
24	2600	6100	4540	330	365	577	700	1240	45	84	17	26
25	700	6060	5360	277	920	899	1790	425	29	89	17	26
26	250	5740	5320	231	1690	2590	3780	281	21	105	14	24
27	220	4400	5240	220	4280	2630	4830	263	20	113	13	24
28	221	3780	5150	309	5620	2590	3400	351	17	113	13	23
29	510	4240	5040	705	---	2940	422	1380	15	115	14	29
30	3000	5880	5210	988	---	3800	856	2000	15	121	14	41
31	4820	---	4440	1620	---	2280	---	1200	---	123	14	---
TOTAL	49332	163950	100682	37223	36690	69327	36465	55384	18881	1625	2699	920.0
MEAN	1591	5465	3248	1201	1310	2236	1216	1787	629	52.4	87.1	30.7
MAX	4820	6770	5930	3670	5620	5720	4830	5710	3440	123	224	132
MIN	37	80	140	220	365	495	150	263	15	16	13	8.3
AC-FT	97850	325200	199700	73830	72770	137500	72330	109900	37450	3220	5350	1820

CAL YR 1984 TOTAL 502495.3 MEAN 1373 MAX 6770 MIN 3.0 AC-FT 996700
WTR YR 1985 TOTAL 573178.0 MEAN 1570 MAX 6770 MIN 8.3 AC-FT 1137000

07337900 GLOVER CREEK NEAR GLOVER, OK

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, Hydrologic Unit 11140107, near right bank on downstream side of pier of bridge on State Highways 3 and 7, 2.0 mi north of Glover, 11.0 mi northwest of Broken Bow, and at mile 9.2.

DRAINAGE AREA.--315 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 378.70 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 11-13. Records fair.

COOPERATION.--Gage-height record and 7 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--24 years, 458 ft^3/s, 19.74 in/yr, 331,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,600 ft^3/s Dec. 10, 1971, gage height, 29.72 ft; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1961 reached a stage of 28.84 ft, from floodmark. Flood in 1908 was higher than in May 1961, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 7	0500	14,400	11.83	Nov. 27	0600	9,010	9.32
Oct. 15	0600	11,300	10.43	Dec. 18	0400	9,330	10.00
Oct. 20	2100	19,300	13.76	Feb. 23	1900	22,500	14.92
Oct. 25	1800	16,400	12.65	Mar. 20	2000	8,720	9.18
Nov. 1	2400	*25,500	*15.96	Apr. 23	0200	15,600	12.36

Minimum daily discharge, 0.79 ft^3/s on Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	12900	463	4310	372	470	375	1350	123	21	4.0	2.3
2	73	8450	370	1370	336	475	318	496	105	19	3.9	2.1
3	60	1900	304	795	309	420	279	317	90	55	7.2	1.8
4	50	929	262	605	291	513	250	247	79	63	9.6	1.8
5	86	641	281	481	322	856	227	196	75	35	8.4	1.8
6	1460	481	469	391	380	582	202	164	1070	24	7.5	1.6
7	5790	387	391	326	386	473	186	140	669	19	6.8	1.6
8	1100	316	345	288	419	414	171	126	312	17	6.8	1.5
9	535	278	310	261	445	375	155	115	208	15	7.7	1.2
10	356	259	278	272	552	330	144	102	155	14	8.4	.89
11	288	240	247	309	813	291	138	91	127	11	7.7	.79
12	250	210	229	282	586	253	134	85	131	10	6.4	1.4
13	323	191	1130	260	479	228	135	83	115	8.7	5.6	9.9
14	1270	176	2990	251	405	606	136	213	94	7.5	5.3	8.1
15	6420	166	1510	237	351	519	131	209	80	6.9	4.7	5.6
16	3800	157	1610	228	320	400	128	144	70	6.2	4.1	4.8
17	4980	168	1890	294	297	334	116	116	60	6.0	3.8	4.1
18	2020	2740	6630	296	265	284	109	96	67	5.2	3.4	3.3
19	4320	2720	3600	268	291	252	104	83	200	4.5	3.1	3.0
20	6700	1010	2370	244	409	3290	97	78	143	3.7	3.7	2.6
21	7580	644	2950	206	371	4630	94	364	98	3.6	6.1	2.5
22	2870	486	2800	200	468	2210	2380	637	78	4.1	6.0	2.4
23	1960	388	1130	200	10300	1340	6900	333	65	6.1	5.3	2.3
24	1970	317	738	199	5510	860	941	222	56	4.9	5.2	2.2
25	11600	297	541	193	1550	537	402	161	51	4.2	5.1	2.2
26	4550	537	414	183	797	434	297	129	44	4.5	4.6	2.3
27	1850	5540	338	227	595	376	1110	135	36	4.5	4.2	2.3
28	1090	1830	309	615	478	335	804	255	31	4.7	3.3	2.2
29	690	843	293	540	---	299	403	224	27	4.5	3.0	3.4
30	521	600	859	465	---	304	644	176	23	4.1	3.0	5.9
31	578	---	1640	422	---	433	---	147	---	3.9	2.6	---
TOTAL	75234	45801	37691	15218	28097	23123	17510	7234	4482	400.8	166.5	87.88
MEAN	2427	1527	1216	491	1003	746	584	233	149	12.9	5.37	2.93
MAX	11600	12900	6630	4310	10300	4630	6900	1350	1070	63	9.6	9.9
MIN	50	157	229	183	265	228	94	78	23	3.6	2.6	.79
CFSM	7.70	4.85	3.86	1.56	3.18	2.37	1.85	.74	.47	.04	.02	.01
IN.	8.88	5.41	4.45	1.80	3.32	2.73	2.07	.85	.53	.05	.02	.01
AC-FT	149200	90850	74760	30180	55730	45860	34730	14350	8890	795	330	174

CAL YR 1984	TOTAL 275826.80	MEAN 754	MAX 12900	MIN .60	CFSM 2.39	IN. 32.57	AC-FT 547100
WTR YR 1985	TOTAL 255045.18	MEAN 699	MAX 12900	MIN .79	CFSM 2.22	IN. 30.12	AC-FT 505900

07338500 LITTLE RIVER BELOW LUKFATA CREEK NEAR IDABEL, OK

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, Hydrologic Unit 11140107, on left bank at downstream side of bridge on U.S. Highway 70 just downstream from Lukfata Creek, 5.0 mi northeast of Idabel, and at mile 103.4.

DRAINAGE AREA.--1,226 mi^2.

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 312.08 ft, National Geodetic Vertical Datum of 1929. Oct. 1, 1946 to Oct. 26, 1950, and for stages below 9.0 ft Oct. 26, 1950 to Oct. 10, 1951, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: May 22-27. Records fair. Flow regulated since June 1969 by Pine Creek Lake (station 07337300) 41.9 mi upstream.

COOPERATION.--Gage-height record and 7 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Pine Creek Lake) 22 years, (water years 1947-68), 1,622 ft^3/s, 1,174,000 acre-ft/yr; (since regulation by Pine Creek Lake) 15 years (water years 1971-85), 1,734 ft^3/s, 1,256,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft^3/s Dec. 10, 1971, gage height, 39.39 ft; minimum discharge, 0.4 ft^3/s Sept. 15-16, Sept. 21 to Oct. 1, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1938 reached a stage of 39.7 ft, from information by local resident, discharge, 86,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,800 ft^3/s Oct. 26, gage height, 26.78 ft; minimum daily discharge, 16 ft^3/s several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	5980	6420	7020	3150	6250	3840	4270	1220	96	142	19
2	316	9320	6430	6810	2360	6490	1380	5440	581	91	151	20
3	655	9960	6280	5690	1860	6480	2170	5130	490	121	220	20
4	657	7910	6090	5150	1800	6350	3440	5210	436	198	246	18
5	663	5840	6030	4430	1950	6470	3810	5730	401	280	253	17
6	1340	5900	6300	3560	2300	6670	3460	5830	2340	199	256	16
7	2970	6520	5870	3290	2490	6490	3060	5750	4580	140	259	16
8	4050	6800	4170	3150	2420	5730	2950	5100	3370	114	260	16
9	1860	6860	2960	2590	2460	3270	2420	3360	3060	98	243	17
10	2060	6830	2700	2140	2600	1530	1570	1950	2750	89	167	17
11	3310	6750	2590	2180	2900	1380	938	1090	3130	83	140	16
12	3840	6660	1820	1870	3160	1500	668	584	3470	81	140	17
13	3960	6570	1660	1480	3290	1620	655	536	3040	74	134	38
14	3780	6480	4330	1440	3320	3300	668	667	1320	66	91	89
15	5860	6410	4180	1420	3160	3790	669	1540	393	64	50	90
16	7070	6330	3490	1420	2500	2590	634	1650	250	64	36	62
17	7060	6260	3800	1650	2050	2080	595	1520	197	59	33	70
18	7050	6330	6170	1720	1940	1850	559	1060	244	57	31	327
19	6320	7260	8100	1600	1870	1530	523	761	346	57	27	130
20	5680	7980	6300	1490	1690	2660	489	738	776	65	25	50
21	7160	7840	4590	1390	1600	6870	471	1040	1030	97	22	32
22	7980	7390	6070	1330	1970	7890	954	1450	782	107	19	27
23	5080	6960	6750	1150	4880	6220	5680	2500	358	111	17	25
24	3640	6650	6230	859	9710	4180	6950	2330	222	117	16	23
25	9200	6450	5880	842	10200	2700	4000	2000	176	149	18	20
26	10800	6440	6010	808	7440	2990	3740	1630	150	155	22	20
27	9800	7500	5950	1040	4980	4230	5370	1270	136	163	24	21
28	6410	8200	5870	1890	5120	4100	7880	1500	124	160	22	24
29	2740	7300	5680	2560	---	3680	6630	1800	111	150	19	27
30	2400	6340	5790	2540	---	5360	2730	2550	102	144	19	33
31	4040	---	6510	2960	---	6540	---	2120	---	141	19	---
TOTAL	138044	210020	161020	77469	95170	132790	78903	78106	35585	3590	3121	1317
MEAN	4453	7001	5194	2499	3399	4284	2630	2520	1186	116	101	43.9
MAX	10800	9960	8100	7020	10200	7890	7880	5830	4580	280	260	327
MIN	293	5840	1660	808	1600	1380	471	536	102	57	16	16
AC-FT	273800	416600	319400	153700	188800	263400	156500	154900	70580	7120	6190	2610

CAL YR 1984	TOTAL	921012	MEAN	2516	MAX	11300	MIN	16	AC-FT	1827000
WTR YR 1985	TOTAL	1015135	MEAN	2781	MAX	10800	MIN	16	AC-FT	2014000

07338900 BROKEN BOW LAKE NEAR BROKEN BOW, OK

LOCATION.--Lat 34°08'35", long 94°41'00", in SW 1/4 sec.3, T.5 S., R.25 E., McCurtain County, Hydrologic Unit 11140108, at intake structure on upstream side of dam on Mountain Fork, 9.0 mi northeast of Broken Bow, and at mile 20.3.

DRAINAGE AREA.--754 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by a rolled earth and gravel structure. Outlet works consists of power-generated turbines and a concrete ogee-type weir controlled by eight 40- by 40-foot taintor gates. 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 gages, 918,100 acre-ft at elevation 599.5 ft, top of power pool, and 448,200 acre-ft at elevation 559.0 ft, bottom of power pool. Figures given herein represent total contents. Reservoir is used for flood control, power development and water supply.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,244,400 acre-ft Nov. 3, 4, 1984, elevation, 620.40 ft; minimum since conservation pool was first filled, 672,000 acre-ft Oct. 21, 1972, elevation 580.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,244,400 acre-ft Nov. 3-4, elevation 620.40 ft; minimum 830,300 acre-ft Oct. 1, elevation, 593.12 ft.

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

590	789,300	607	1,028,500
594	842,100	615	1,154,600
598	897,000	621	1,254,600

RESERVOIR STORAGE, (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
2400-HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	831000	1223600	1005500	940900	911600	1004600	962600	976100	912700	906100	897400	876600
2	832600	1241500	994100	945700	912000	999800	954300	967000	911900	909200	896100	876300
3	831100	1244400	984600	942000	914100	994400	942800	958400	906800	908900	895800	874800
4	831400	1241800	973600	935600	910400	988900	929600	951200	903300	908800	895300	873100
5	836700	1233200	966300	933800	911700	977800	917000	943300	905500	908000	894600	870200
6	851000	1221800	961000	931300	913800	965800	917700	935500	910600	907500	893900	865300
7	874100	1209500	956300	927300	916000	953400	918800	926600	911400	907200	893200	864700
8	881100	1197700	951200	922600	916800	942300	918800	920600	910600	905900	893200	864700
9	886000	1186400	945900	919800	919100	939500	918800	916100	910600	905800	892100	863200
10	889300	1173700	940100	918700	923300	935900	918700	914400	909700	904700	891800	863100
11	893300	1160800	933900	917800	926800	932900	919500	914500	908800	903700	891700	861700
12	898400	1148300	927600	918200	925000	927000	919200	914800	908600	902300	890300	861600
13	905100	1135400	928600	920100	921500	923200	920100	912600	908500	902000	890000	860900
14	925900	1123000	933500	920900	916700	925200	920800	910300	907500	901900	888500	860500
15	964400	1110500	933800	920500	915000	923300	920600	909500	907100	901600	887900	860200
16	982000	1098000	937200	922800	916400	921600	920800	909200	907100	902300	887200	858900
17	994200	1085500	939800	922100	918400	918800	920500	908800	902100	901400	886900	858600
18	998900	1090900	948500	921100	918400	916200	920600	908500	903800	900900	886500	856700
19	1010600	1090600	958500	922200	918800	916000	920100	908300	905500	900200	885500	855600
20	1049100	1083800	969200	922500	920100	932200	919900	909000	905800	900600	885100	854200
21	1088700	1074900	977600	919600	919600	943800	920500	910700	905500	902000	883400	854200
22	1096400	1064000	973200	919200	923300	956500	943400	911700	906400	901400	883400	853400
23	1098000	1053300	971400	918800	980900	965700	968900	911900	911100	902400	882300	852600
24	1108300	1042000	961300	918900	1007300	971800	973900	911900	910900	901600	882100	851700
25	1175100	1031400	950200	918700	1015400	966600	965400	911900	911100	900500	881900	851700
26	1197400	1024600	938200	918500	1016200	954600	955900	912000	911000	900000	880300	851300
27	1207900	1032500	927500	921600	1012600	942800	961700	913400	911900	899800	880100	849600
28	1211500	1030200	917200	922600	1008400	933800	969900	913000	909900	899800	878900	849500
29	1207700	1024100	919200	923500	---	932100	974700	913700	910000	898900	878600	850300
30	1199200	1015600	927300	920200	---	948600	977900	913600	909600	898900	877400	848700
31	1193200	---	933300	916700	---	959800	---	912400	---	897500	876600	---
MAX	1211500	1244400	1005500	945700	1016200	1004600	977900	976100	912700	909200	897400	876600
MIN	831000	1015600	917200	916700	910400	916000	917000	908300	902100	897500	876600	848700
(†)	617.35	606.15	600.57	599.40	605.67	602.40	603.63	599.10	598.90	598.04	596.53	594.49
(††)	+362,800	-117,600	-82,300	-16,600	+91,700	-48,600	+18,100	-65,500	-2,800	-12,100	-20,900	-27,900

CAL YR 1984 MAX 1244400 MIN 759400 (††) +153,500
WTR YR 1985 MAX 1244400 MIN 831000 (††) +18,300

(†) ELEVATION, IN FEET, AT END OF MONTH
(††) CHANGE IN CONTENTS, IN ACRE-FEET

07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK

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, Hydrologic Unit 11140108, near center of span on downstream side of pier of bridge on U.S. Highway 70, 2.0 mi west of Eagletown, 10.7 mi downstream from Broken Bow Dam, and at mile 8.9.

DRAINAGE AREA.--787 mi^2.

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.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1924-26, 1930 (M), 1936-37 (M), 1938, 1939 (M) 1942 (M).

GAGE.--Water-stage recorder. Datum of gage is 333.87 ft, National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to July 23, 1950.

REMARKS.--No estimated daily discharges. Records good. Except for 33 mi^2 intervening area, flow completely regulated since October 1968 by Broken Bow Lake (station 07338900).

COOPERATION.--Gage-height record and 4 discharge measurements furnished by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

AVERAGE DISCHARGE.--Prior to regulation by Broken Bow Dam, 40 years (water years 1925, 1930-68), 1,291 ft^3/s, 934,600 acre-ft/yr; since regulation by Broken Bow Dam, 16 years (water years 1970-85), 1,438 ft^3/s), 1,042,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft^3/s May 20, 1960, gage height, 26.73 ft; from rating curve extended above 65,000 ft^3/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18-19, 1915, reached a stage of 26.4 ft, from information by local resident, discharge, 92,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft^3/s Dec. 18, gage height, 8.69 ft: minimum daily discharge 97 ft^3/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	7240	6800	2760	3730	3910	697	6570	647	137	350	165
2	109	4270	6760	3400	1780	3890	5400	7730	167	199	198	152
3	194	3940	6540	4620	195	3890	7110	6710	1910	184	306	139
4	358	4350	6490	5110	1710	4470	7800	4510	2420	279	156	335
5	172	6360	6200	3230	1490	7970	7820	4690	708	167	168	850
6	545	7520	4290	2590	238	8000	2220	4910	258	310	225	1790
7	362	7480	4150	2940	178	8030	203	5120	388	259	185	1690
8	255	7450	4140	3500	486	7620	383	3820	648	164	287	343
9	256	7420	4140	2790	669	2680	271	2120	526	468	224	356
10	248	7400	4140	2330	175	2790	162	1880	303	182	321	415
11	290	7370	4130	1610	692	2620	445	956	635	404	157	263
12	331	7330	4140	893	2650	3430	472	354	497	519	156	386
13	435	7300	4320	257	3900	3200	252	731	153	513	270	243
14	472	7270	4290	331	3760	3730	126	1710	151	155	253	312
15	977	7230	4730	933	2870	3610	256	1170	220	139	379	174
16	905	7200	3720	278	981	2950	227	866	146	143	203	171
17	3580	7180	5000	723	161	2630	148	317	1570	156	311	220
18	4150	7260	9310	1580	303	3090	440	335	1120	242	158	290
19	2670	7230	5610	700	1180	1180	138	144	213	152	155	530
20	4160	7180	672	145	639	1450	415	149	215	309	222	625
21	4010	7140	4190	1390	1710	4280	258	307	244	156	208	422
22	1320	7100	8040	994	1480	2830	2400	205	317	167	388	184
23	3590	7060	7980	813	3430	434	6060	512	151	328	170	188
24	4990	7010	7960	487	1840	212	1360	199	434	208	334	244
25	4660	6990	7960	637	364	2700	6220	293	663	506	161	180
26	702	7120	7980	251	2930	7670	7930	149	307	437	167	182
27	262	7510	7070	191	3740	7990	5590	147	378	421	222	188
28	1080	7120	7870	871	3840	6840	3120	131	186	156	203	264
29	3720	6990	1380	1220	---	2570	839	238	289	178	273	184
30	5930	6890	247	2250	---	2960	1530	201	145	296	196	196
31	8020	---	1030	3460	---	770	---	477	---	340	382	---
TOTAL	58850	206910	161279	53284	47121	120396	70292	57651	16009	8274	7388	11681
MEAN	1898	6897	5203	1719	1683	3884	2343	1860	534	267	238	389
MAX	8020	7520	9310	5110	3900	8030	7930	7730	2420	519	388	1790
MIN	97	3940	247	145	161	212	126	131	145	137	155	139
AC-FT	116700	410400	319900	105700	93460	238800	139400	114400	31750	16410	14650	23170

CAL YR 1984 TOTAL 833880 MEAN 2278 MAX 9310 MIN 89 AC-FT 1654000
WTR YR 1985 TOTAL 819135 MEAN 2244 MAX 9310 MIN 97 AC-FT 1625000

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 collected at these partial-record stations 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.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-station 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 during water year 1985

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN					
07150870	Salt Fork Arkansas River tributary near Eddy, OK	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 mi southeast of Eddy.	2.35	1964-85	07-25-85	12.38	212
07154650	Tesquite Creek near Kenton, OK	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 mi east of Kenton.	25.4	1964-85	---	<12.36	<212
07157550	West Fork Creek near Knowles, OK	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 mi east of Knowles.	4.22	1964-85	04-29-85	13.11	103
07160550	West Beaver Creek near Orlando, OK	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 mi west of Orlando.	13.9	1964-85	---	<4.80	<675
07171120	Clear Creek tributary near Hollow, OK	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 mi southeast of Hollow.	2.19	1966-75, 1980-85	02-23-85	7.26	536
07174720	Hogshooter Creek tributary near Bartlesville, OK	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 mi east of junction with U.S. Highway 75 southeast of Bartlesville.	.94	1965-85	06-10-85	10.02	654
07188140	Flint Branch near Peoria, OK	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 mi southwest of Peoria.	4.90	1964-85	02-23-85	13.64	309
07189700	Horse Creek at Afton, OK	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	1966-85	02-23-85	13.12	2,460
07228290	Rough Creek near Thomas, OK	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 mi northwest of Thomas.	10.4	1964-85	06-05-85	6.95	370
07228930	Worley Creek near Tuttle, OK	Lat 35°17'28", long 97°45'10", in SE 1/4 SW 1/4 sec.32, T.10N., R.5 W., Grady County, at multi-barrel culvert on State Highway 37, 3.3 mi east of Tuttle.	11.2	1965-72, 1978-85	02-23-85	14.26	2,210
07231320	Leader Creek tributary near Atwood, OK	Lat 34°57'10", long 96°20'21", 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 mi southwest of Atwood.	.72	1964-85	03-30-85	10.61	342
07231950	Pine Creek near Higgins, OK	Lat 34°47'40", long 95°20'50", in NW 1/4 NE 1/4 sec.30, T.4 N., R.19 E., Latimer County, at bridge on State Highway 63, 5.4 mi east of Higgins.	9.99	1964-85	10-20-84	16.52	9,960

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations during water year 1985--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum: Date	Annual maximum: Gage height (ft)	Annual maximum: Discharge (ft^3/s)
		ARKANSAS RIVER BASIN--Continued					
07232550	South Fork tributary near Guymon, OK	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 mi southwest of junction of U.S. Highways 54 and 64 at Guymon.	.26	1964-85	---	<6.60	<4.0
07234050	North Fork Clear Creek tributary near Balko, OK	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 mi southeast of Balko.	4.22	1964-85	04-29-85	10.98	36
07234290	Clear Creek tributary near Catesby, OK	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 mi east of Catesby.	8.51	1966-85	---	<3.00	<77
07241880	Sand Creek near Cromwell, OK	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 mi west of Cromwell.	9.48	1964-85	04-30-85	15.73	3,840
07242160	Alabama Creek near Weleetka, OK	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 mi north of Weleetka.	16.5	1965-74 1976-85	10-18-84	6.96	301
07242370	Wildhorse Creek tributary near Luther, OK	Lat 35°38'15", long 97°09'36", in NE 1/4 NE 1/4 sec.2, T.13 N., R.1 E., Oklahoma County, at county road bridge, 1.5 mi south and 1.9 mi east of Luther.	2.07	1985	06-04-85	3.52	327
		RED RIVER BASIN					
07300150	Bear Creek near Vinson, OK	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 mi west of Vinson.	7.24	1964-85	---	<5.00	<28
07301455	Turkey Creek near Erick, OK	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 multi-barrel culvert on county road, 3.8 mi southeast of Erick.	19.8	1964-72 1978-85	09-29-85	5.55	1,490
07301480	Short Creek near Sayre, OK	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 multi-barrel culvert on county road, 0.9 mi northwest of Sayre.	9.12	1964-85	02-23-85	12.38	176
07312850	Nine Mile Beaver Creek near Elgin, OK	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 mi east of Elgin.	6.29	1964-85	03-20-85	4.37	306
07313600	Cow Creek at Waurika, OK	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† 1971-85	06-05-85	23.58	8,220
07315680	Cottonwood Creek tributary near Loco, OK	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 mi southeast of Loco.	1.74	1964-85	06-06-85	11.66	1,420
07316140	Brier Creek near Powell, OK	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 mi northeast of Powell.	12.0	1965-85	04-22-85	18.23	10,414
07329500	Rush Creek near Maysville, OK	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.	206	1953-76† 1977-85	01-01-85	17.15	15,950
07329870	Honey Creek near Davis, OK	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 mi south of Davis.	18.7	1964-85	02-23-85	13.54	3,540
07335310	Rock Creek near Boswell, OK	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 mi south of Boswell.	.94	1965-85	06-06-85	5.91	365

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations during water year 1985--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		RED RIVER BASIN--Continued					
07336520	Frazier Creek near Oleta, OK	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 mi west of Oleta.	19.4	1965-85	11-01-84	18.33	7,400
07338520	Yanubbee Creek near Broken Bow, OK	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 mi north of Broken Bow.	9.10	1964-85	10-25-84	10.13	1,210

† Operated as a continuous-record station.
* Revised.

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 potentially 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 1985

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN				
07148360	Greenwood Creek near Winchester, OK	Lat 36°55'23", long 98°47'27", in SW 1/4 NW 1/4 sec.11, T.28 N., R.14 N., Woods County, at county road bridge 2.4 mi south of Winchester and at mile 1.9.	41.2	1972-85	11-28-84 07-02-85	0.91 .54
07165507	Rock Creek at Sapulpa, OK	Lat 35°59'07", long 96°06'48", in NE 1/4 NW 1/4 sec.2, T.17 N., R.11 E., Creek County, at bridge on U.S. Highway Alt. 75, 0.2 mi south of junction with State Highway 117, 0.3 mi downstream from Biren Creek, and at 2.3 mi.	67.3	1979-85	12-12-84 01-17-85 02-20-85	0.43 13.0 4.8
07178500	Dog Creek near Claremore, OK	Lat 36°17'40", long 95°36'05", in SW 1/4 SE 1/4 sec.16, T.21 N., R.16 E., Rogers County, at bridge on State Highway 88, 0.8 mi upstream from Cat Creek, 1.5 mi southeast of junction with U.S. Highway 66 in Claremore, 3.0 mi downstream from Lake Claremore, 5.9 mi upstream from Panther Creek.	63.6	1979-85	10-02-84 11-20-84	0.0 1.6

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
215 Dean A. McGee, Room 621
Oklahoma City, OK 73102

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

SPECIAL 4TH CLASS BOOK RATE

P[illegible]
U.S. DEPARTMENT OF THE INTERIOR
INT 413