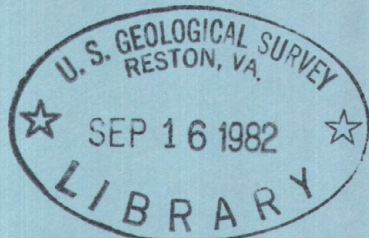


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Water Resources Data for Oklahoma



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-80-1
WATER YEAR 1980

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

CALENDAR FOR WATER YEAR 1980

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Water Resources Data for Oklahoma

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-80-1
WATER YEAR 1980
Prepared in cooperation with the State of Oklahoma
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR
JAMES G. WATT, Secretary

GEOLOGICAL SURVEY
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PREFACE

This report was prepared by personnel of the Oklahoma District of the Water Resources Division of the U.S. Geological Survey under the supervision of J. H. Irwin, District Chief, and A. Clebsch, Regional Hydrologist, Central Region. It was done in cooperation with the State of Oklahoma and with other agencies.

This report is one of a series issued by state. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and R. J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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

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

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

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MISSISSIPPI RIVER BASIN

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WATER RESOURCES DATA FOR OKLAHOMA, 1980

INTRODUCTION

Water resources data for Oklahoma for the 1980 water year are presented in one volume. Data consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels of ground water. This report contains discharge records for 138 gaging stations; stage and contents for 25 lakes and reservoirs; water quality for 77 gaging stations and 3 lakes; and water levels for 43 observation wells. Also included are data for 44 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma. Records are published for the water year, which begins on October 1 and ends on September 30.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a state-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality and ground water are published as an official Survey report on a state-boundary basis. These official Survey reports carry 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 report is identified as "U.S. Geological Survey Water-Data Report OK-80-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA, 22161.

COOPERATION

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

Oklahoma Water Resources Board, Gerald E. Borelli, chairman.
James R. Barnett, executive director.

Oklahoma Department of Transportation, Richard A. Ward, chief engineer.

Oklahoma City Water Department, Patrick M. Brian, director of water services.

Oklahoma Geological Survey, Charles J. Mankin, director.

Oklahoma State Department of Health, Environmental Health Services, Mark S. Coleman, deputy commissioner.

Oklahoma Pollution Control Coordinating Board, June Benson, chairperson;
Lawrence R. Edmison, director, Department of Pollution Control.

Assistance in the form of funds or services was given by the following Federal Agencies: Bureau of Land Management, U.S. Department of the Interior; Corps of Engineers, U.S. Army; Federal Emergency Management Agency; and Bureau of Reclamation, U.S. Department of the Interior.

Assistance in the form of funds or services was rendered by 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; the cities of Ada, Altus, Claremore, Edmond, Guthrie, Lawton, Sapulpa, and Tulsa.

Organizations that supplied data are acknowledged in station descriptions.

Some records have been collected and computed by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control.

HYDROLOGIC CONDITIONS

Runoff was below median for the year except for November, May, and June. Discharge at the index station, Washita River near Dickson, was in the lower 25 percent quartile for 3 months of the year. Heavy rains in May and June caused high runoff in streams over most of the state, resulting in peaks for the year at many stations. Heavy rains in the southeast part of the state produced several peaks during September 26-28. Most reservoirs were near or above average for the first three quarters of the year and below average for the last quarter.

Water quality, when related to specific conductance at the index station, was only slightly below average during periods of normal flow from November through January, May, and June. During the remainder of the year the monthly mean specific conductance was substantially higher than the long-term average (see fig. 3).

General ground-water conditions are indicated in figure 8 which shows the depth to water in selected representative wells.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) 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 equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, 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 the organisms which produce colonies within 24 hours when incubated at 35°C \pm 0.5°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 intestines 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 which produce blue colonies within 24 hours when incubated at 44.5°C \pm 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 intestines 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 \pm 0.5°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material 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 or 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 60°C for zooplankton and 105°C for 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 ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass 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 cells per sample volume, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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 pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate 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 or to prevent the intrusion of salt water.

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

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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 is 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.

Diversity index is the numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the samples are different.

Drainage area of a stream at a specific 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 river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by 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 attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or 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 8-digit number.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) 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 represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L , and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) 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 of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. 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 milliliters (mL) or liters (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.

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 suspended sediment or bed material 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 recommendations 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-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material 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.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity 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 known 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/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/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.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

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 released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ 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 [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ 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 only 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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.

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

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).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying ft^3/s (daily mean discharge) times mg/L times 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

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 weight or volume, that passes a section during a given time.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks 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 micromhos 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 micromhos). 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 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 emerged 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 multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest USGS 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 that 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 the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that 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 μ m 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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 μ m membrane filter. This term is used only when the analytical procedure assures measurement of the expected form 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".

Determination of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determination 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 hierarchical 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 the taxonomy of a particular mayfly, Hexagenia limbata is the following:

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Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata
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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 sum 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 in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

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 in bottom material is the total amount of a given constituent in a representative sample of bottom material. 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 judge when the results should be reported as "total in bottom material."

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying ft^3/s (sum of daily mean discharges) times the mg/L of the constituent, times the factor 0.0027.

Total, recoverable. 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 soluble 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year is the 12-month period ending September 30 each year. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months.

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 concentrations 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.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

DOWNSTREAM ORDER AND STATION NUMBER

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 main-stream station are listed before that station. A station on a tributary that enters between two main-stream 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 on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and 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 8-digit number for each station such as 07304500, which appears just to the left of the station name, includes the 2-digit part number "07" plus the 6-digit downstream order number "304500".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude; the next 7 digits denote degrees, minutes, and seconds of longitude; and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 1 below.

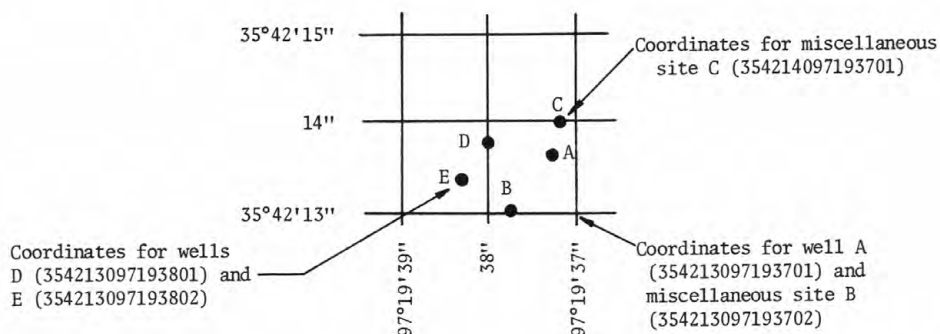


Figure 1.--System for numbering wells and miscellaneous sites (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

WATER RESOURCES DATA FOR OKLAHOMA, 1980

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and the U.S. Geological Survey Techniques of Water-Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. 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 computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists, technicians, and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

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

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

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

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

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

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD".

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges are revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 4.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents) it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging station gives the 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 may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

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

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

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 discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage 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. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

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

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

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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 adjustment or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations. A continuing record station is a specific site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, bimonthly, or quarterly.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

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.

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 district office.

Water temperatures

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 daily 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.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

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 section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or in some instances hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, 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 in predicting long-term sediment-discharge characteristics of the stream.

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 1.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum of 1929 is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above National Geodetic Vertical Datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on 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, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering 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 measurements, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D-1, 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-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-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-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. Ehlike, 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-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.
- 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-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.

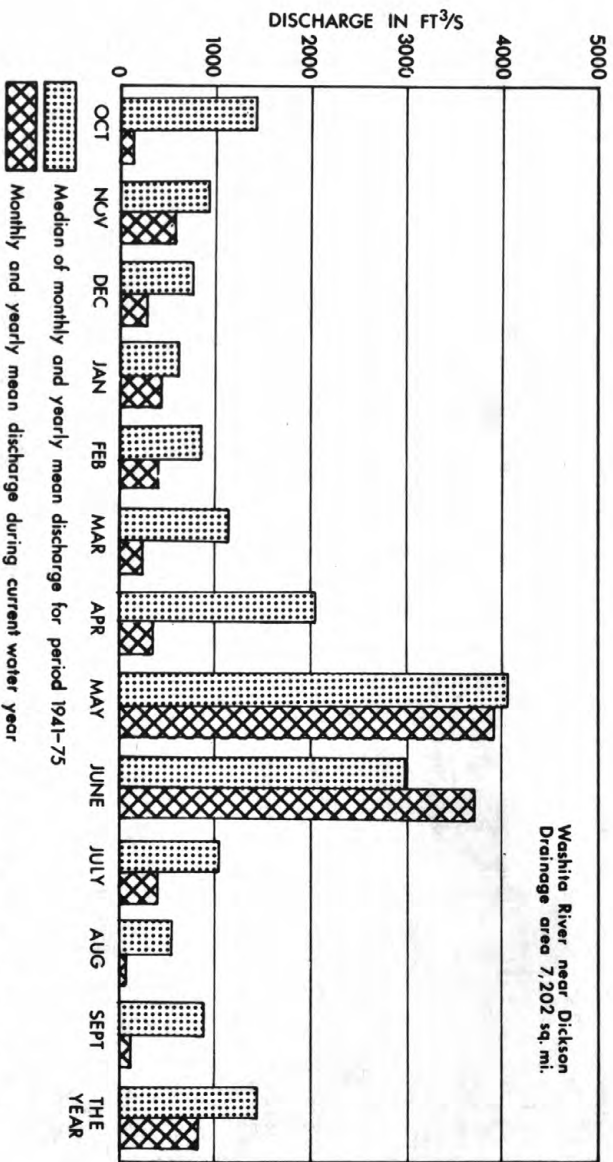


FIGURE 2--Discharge during 1980 water year compared with median discharge for period 1941-75 for one representative gaging station.

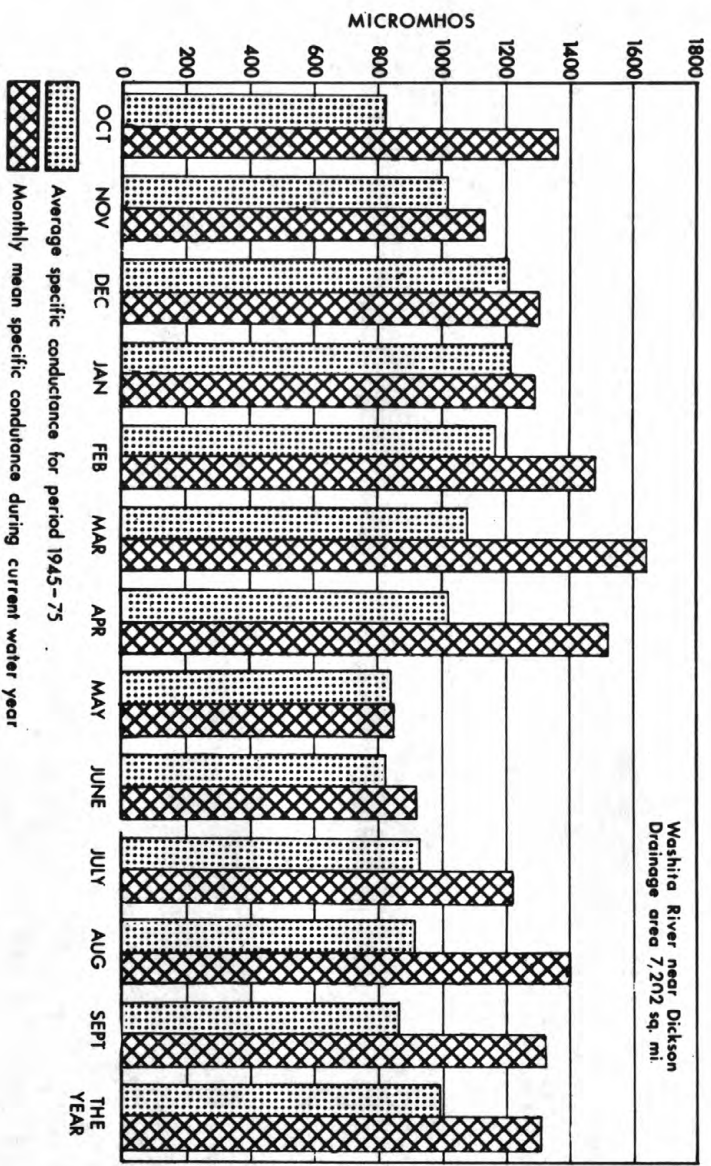


FIGURE 3--Specific conductance during 1980 water year compared with average specific conductance for period 1945-75 at one site.

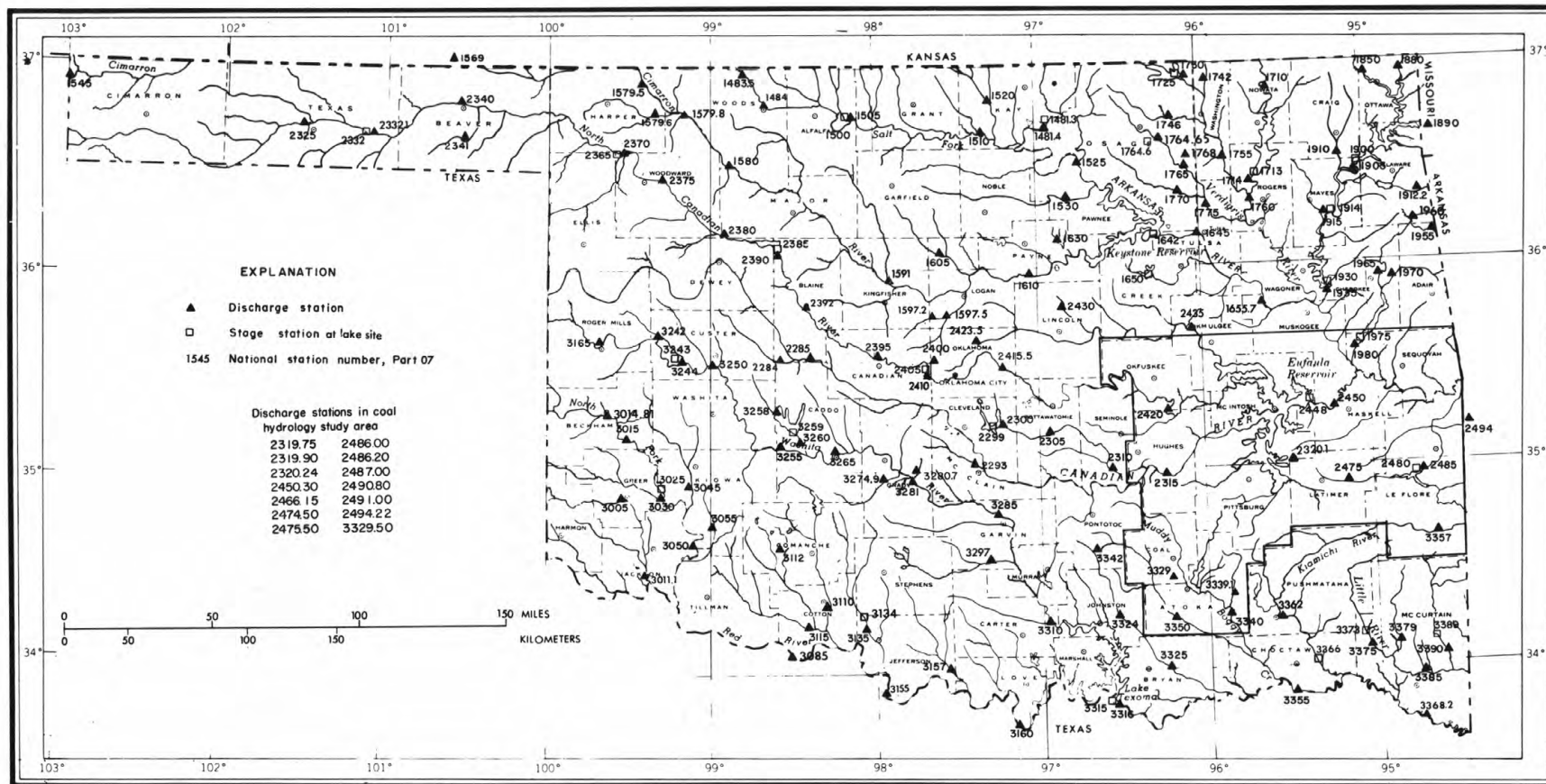


Figure 4.--Locations of continuous-record surface-water stations, water year 1980.

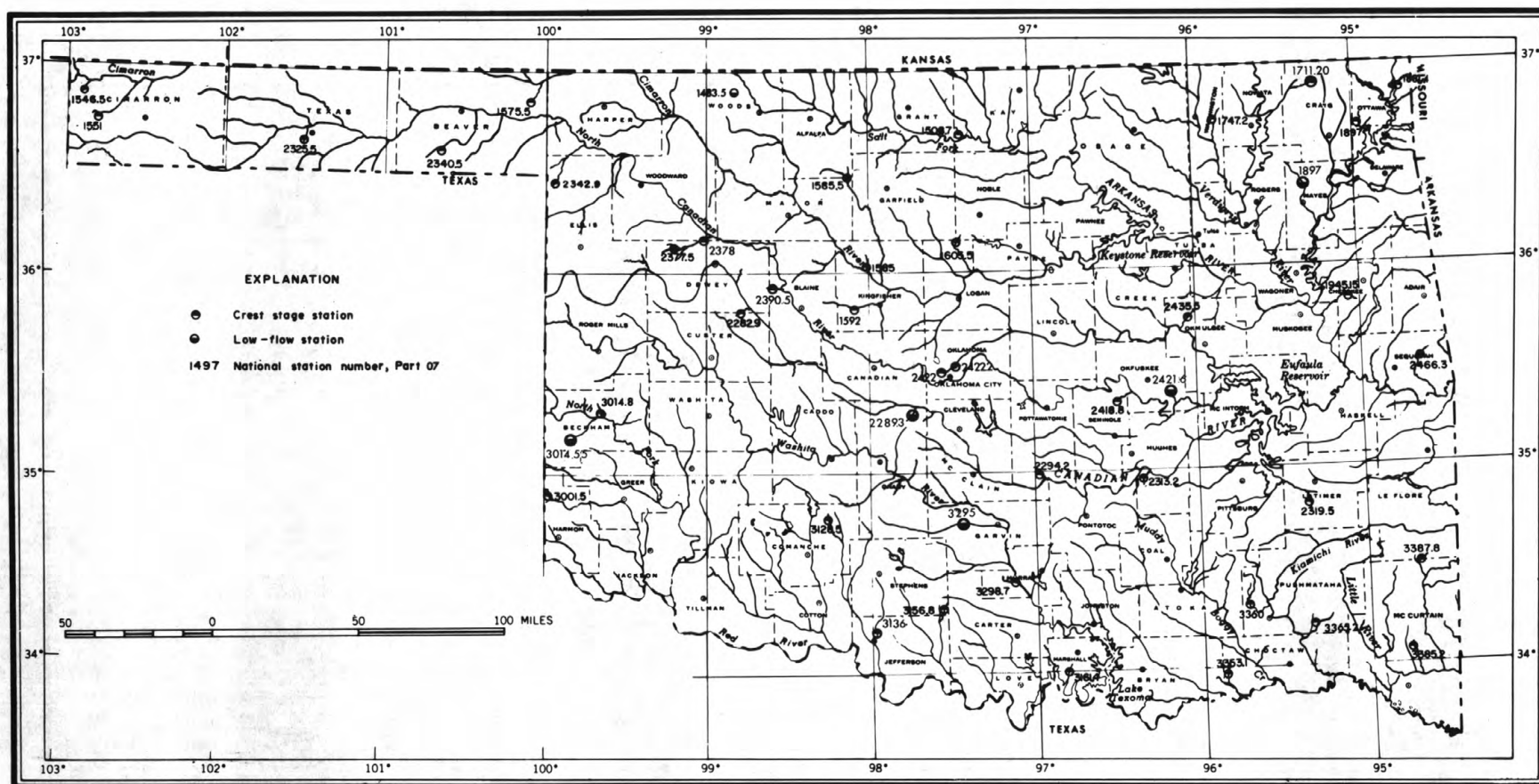


Figure 5.--Locations of partial record stations, water year 1980.

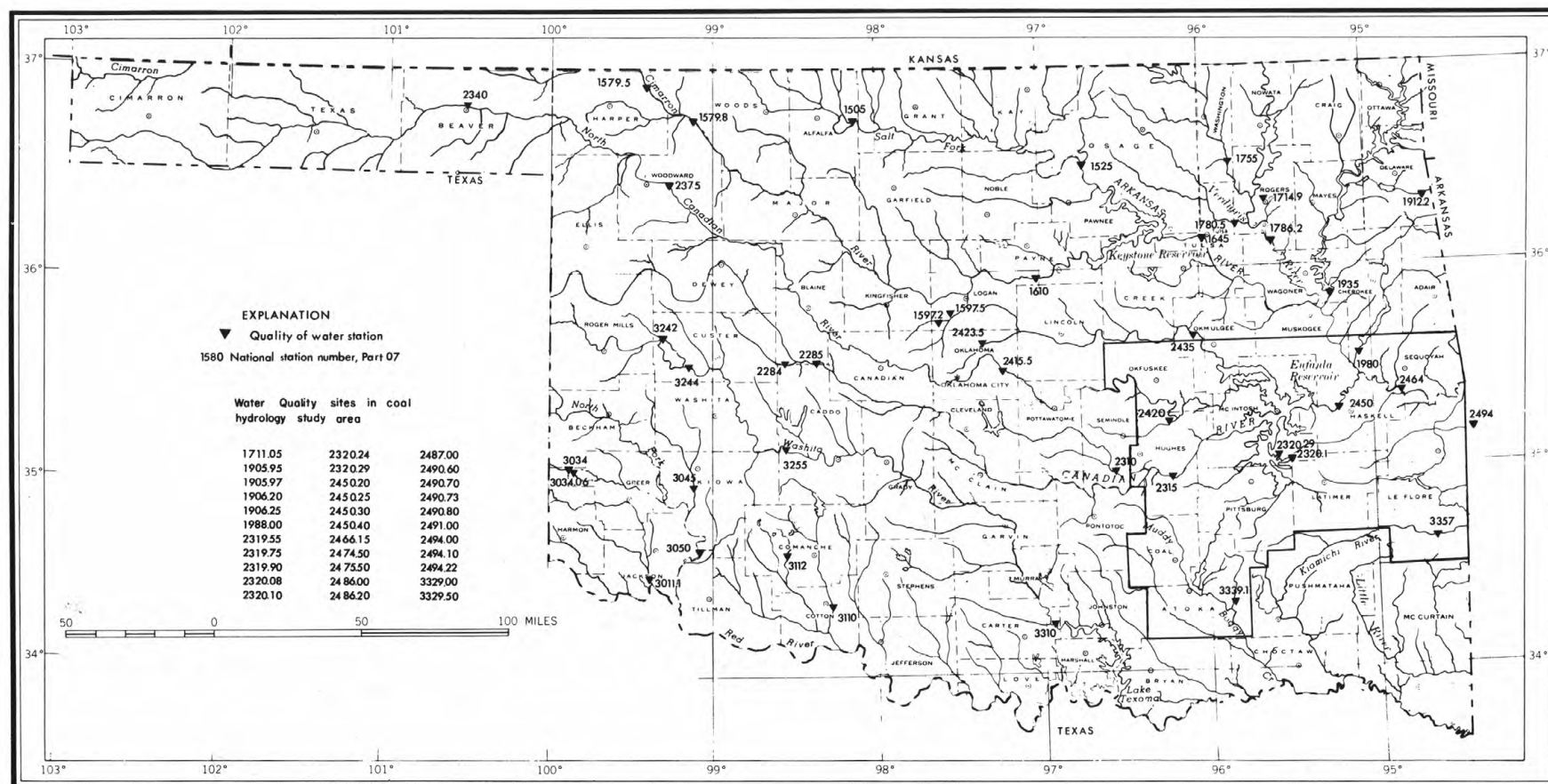


Figure 6.--Locations of water-quality stations, water year 1980.

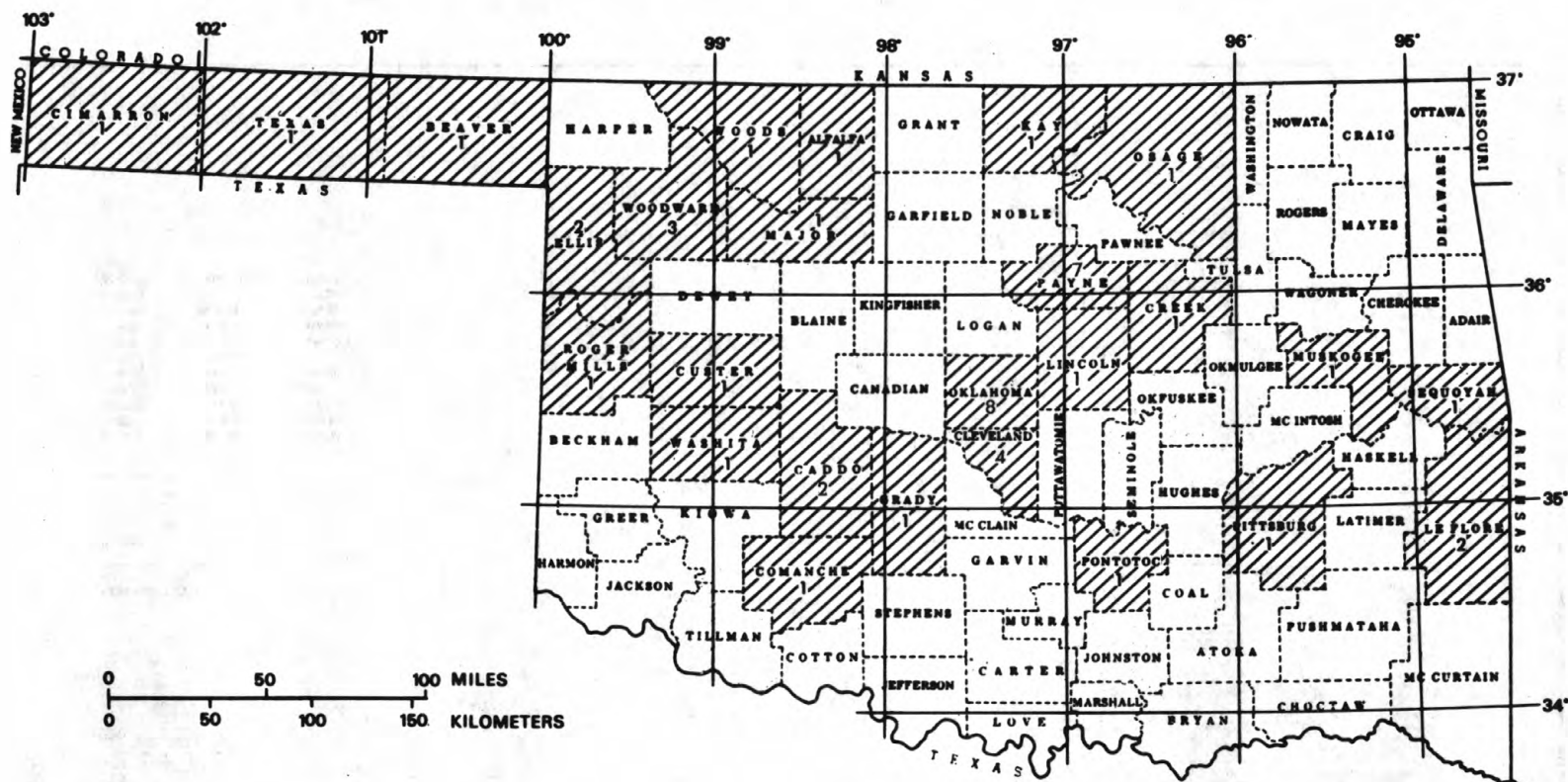


Figure 7.--Counties (hatched) containing observation wells measured more than once a year, and number of wells in each county, water year 1980.

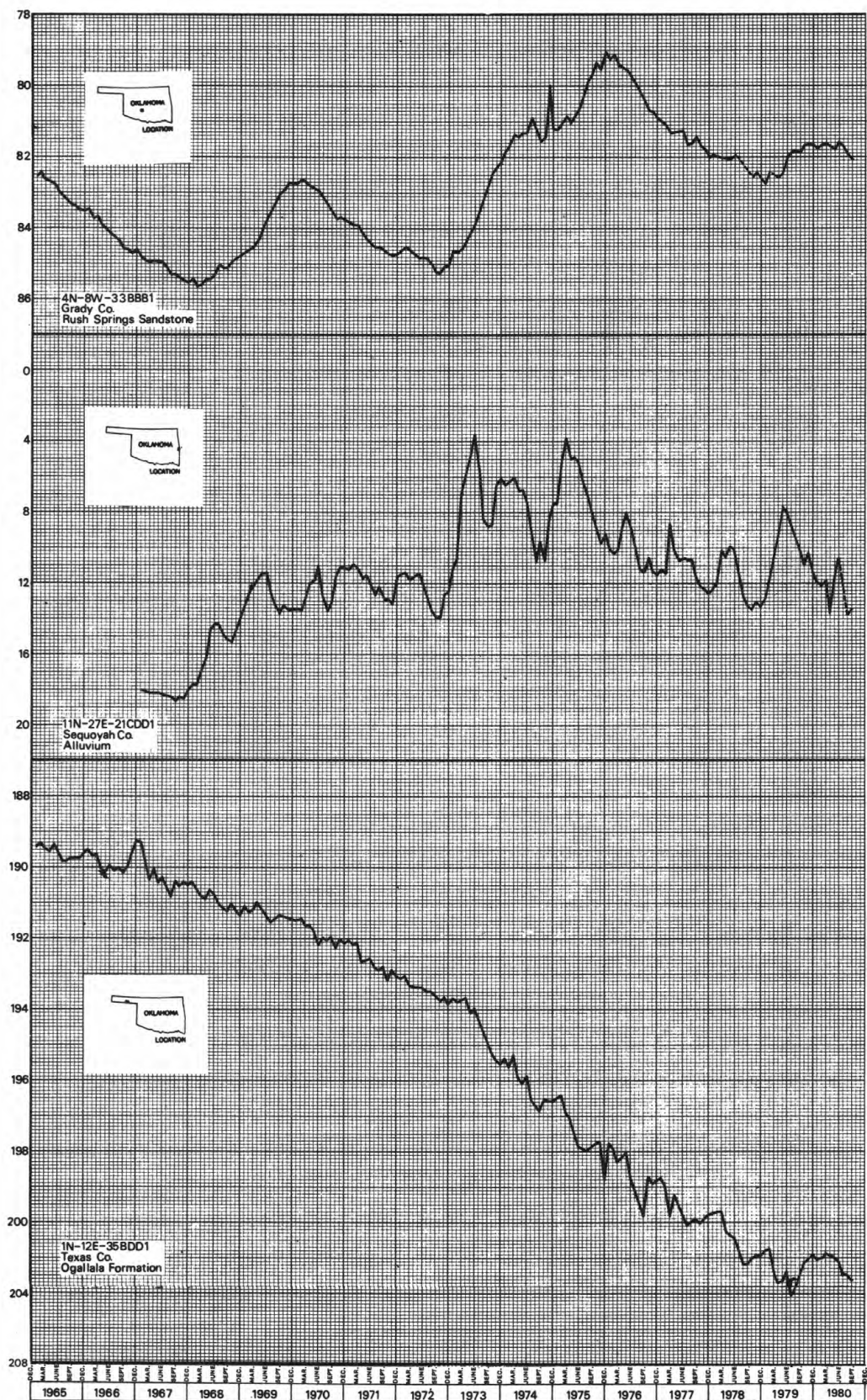


Figure 8.--Depth to water in selected wells in Oklahoma.

ARKANSAS RIVER BASIN

07148130 KAW LAKE NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'58", long 96°55'18", in NW¼SW¼ sec.30, T.26 N., R.4 E., Osage County, Hydrologic Unit 11060001, 1,700 ft (518 m) east of centerline of spillway on dam on Arkansas River, about 8 mi (13 km) east of Ponca City, and at mile 653.7 (1,051.8 km).

DRAINAGE AREA.--46,530 mi² (120,513 km²), of which 7,607 mi² (19,702 km²) 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 8 50-foot (15.2 m) 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 (1.66 km³), at elevation 1,044.5 ft (318.36 m), top of flood control pool, 428,600 acre-ft (528 hm³), at elevation 1,010.0 ft (307.85 m), top of conservation pool, and 250,700 acre-ft (309 hm³), at elevation 997.5 ft (304.04 m), crest of controlled spillway. Dead storage 85,100 acre-ft (105 hm³) below elevation 978.0 ft (298.09 m). Figures given herein represent total contents. Reservoir is designed for flood control, water-quality control, recreation, fish and wildlife, and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 693,400 acre-ft (855 hm³) June 26, 1977, elevation, 1,023.03 ft (311.820 m), minimum since conservation pool first filled, 223,100 acre-ft (275 hm³) March 25, 1977, elevation, 995.06 ft (303.294 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 630,400 acre-ft (777 hm³) Apr. 5, elevation, 1,020.29 ft (310.984 m); minimum, 411,000 acre-ft (507 hm³) Oct. 21, elevation, 1,008.95 ft (307.528 m).

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

1,006	364,300	1,015	520,000
1,009	411,800	1,018	580,900
1,012	463,700	1,021	646,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419300	459700	492800	434000	431000	435000	563000	464000	433000	444000	425000	427000
2	418600	519000	482000	434000	432000	432000	588000	459000	433000	443000	425000	427000
3	418100	547700	473700	434000	433000	429000	604000	456000	432000	442000	424000	427000
4	417500	552900	463900	433000	434000	428000	622000	453000	430000	441000	423000	427000
5	417100	554600	455500	433000	435000	423000	630000	450000	430000	440000	424000	428000
6	416900	547300	445400	433000	436000	422000	628000	446000	431000	439000	423000	427000
7	416800	536600	439400	432000	437000	424000	619000	443000	430000	438000	423000	427000
8	416800	524700	435500	433000	437000	425000	609000	437000	432000	437000	423000	427000
9	415100	516300	432400	434000	433000	426000	594000	435000	432000	436000	423000	428000
10	414800	509000	429400	433000	429000	428000	579000	435000	433000	434000	424000	427000
11	414600	502300	431700	432500	427000	429000	567000	434000	433000	433000	427000	427000
12	414600	494900	430500	431300	426000	429000	559000	433000	434000	433000	428000	426000
13	413600	486800	429800	431000	425000	429000	551000	433000	434000	433000	429000	427000
14	413000	478300	430000	429300	427000	430000	541000	431000	434000	432000	430000	427000
15	413000	470000	430000	429000	428000	432000	532000	432000	434000	431000	430000	427000
16	413100	462400	432000	429000	428000	435000	522000	432000	439000	431000	432000	427000
17	413100	457200	430000	428000	428000	432000	512000	434000	442000	431000	435000	425000
18	412300	452100	430000	427000	428000	429000	500000	434000	443000	431000	445000	426000
19	412000	447100	431000	430000	428000	427000	489000	435000	442000	430000	448000	425000
20	412100	510500	431000	431000	428000	427000	477000	435000	442000	431000	449000	425000
21	415100	528100	431000	437000	430000	428000	468000	435000	442000	430000	449000	425000
22	418600	545200	431000	445000	432000	428000	462000	435000	443000	429000	448000	425000
23	421100	560700	432000	447000	438000	434000	457000	436000	443000	429000	448000	424000
24	423200	560300	431000	448000	447000	440000	472000	436000	444000	428000	447000	426000
25	426000	558500	431000	448000	450000	442000	480000	436000	444000	428000	443000	425000
26	428300	550100	431000	447000	447000	443000	487000	435000	447000	428000	437000	424000
27	430000	531800	432000	445000	443000	445000	485000	436000	446000	428000	432000	424000
28	431000	518600	432000	442000	440000	446000	480000	435000	447000	428000	428000	424000
29	431000	510100	433000	439000	437000	451000	475000	434000	446000	427000	428000	424000
30	432500	500700	434000	437000	---	477000	470000	434000	444000	427000	428000	424000
31	431200	---	434000	433000	---	519000	---	433000	---	426000	427000	---
MAX	432500	560700	492800	448000	450000	519000	630000	464000	447000	444000	449000	428000
MIN	412000	447100	429400	427000	425000	422000	457000	431000	430000	426000	423000	424000
†	1010.15	1014.00	1010.30	1010.24	1010.49	1014.97	1012.34	1010.28	1010.91	1009.86	1009.91	1009.75
‡	+11,500	+69,500	-66,700	-1,000	+4,000	+82,000	-49,000	-37,000	+11,000	-18,000	+1,000	-3,000
CAL YR 1979	MAX 560700	MIN 344800	† +8,180									
WTR YR 1980	MAX 630000	MIN 412000	† +4,300									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07148140 ARKANSAS RIVER NEAR PONCA CITY. OK

LOCATION.--Lat 36°41'55", long 96°55'40", in SW¼SE¼ sec.25, T.26 N., R.3 E., Kay County, Hydrologic Unit 11060001, at spillway of Kaw Dam, about 8 mi (13 km) east of Ponca City, and at mile 653.7 (1,051.8 km).

DRAINAGE AREA.--46,530 mi² (120,513 km²), of which 7,607 mi² (19,702 km²) is probably noncontributing.

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

GAGE.--Gate position recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Daily discharge computed from releases.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,800 ft³/s (589 m³/s) June 27-29, 1977; no flow May 13, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft³/s (453 m³/s) Apr. 4-8, minimum daily, 150 ft³/s (4.25 m³/s) June 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	6360	8200	1660	1890	3700	7890	5800	2080	860	180	340
2	290	10300	8200	1660	1060	3700	11800	5000	2080	860	180	264
3	290	11300	8200	1660	1060	3700	14500	4100	1910	860	180	170
4	290	11300	8200	1660	1060	3700	16000	4100	2080	860	180	170
5	290	11400	7780	1660	1340	3700	16000	4100	1340	860	180	170
6	290	11400	7200	1660	1660	2100	16000	4100	860	860	180	170
7	290	11300	5800	1660	1660	1060	16000	4100	860	860	180	170
8	290	11300	4000	1040	2090	1060	16000	4100	860	860	180	170
9	290	9590	4000	1180	2600	1060	15800	3170	860	860	180	170
10	290	8010	3160	1660	2600	1060	15600	2080	860	860	180	170
11	290	8000	1920	1660	2080	1060	12200	2080	609	522	180	170
12	290	8000	1920	1660	1660	1630	9000	2080	150	280	180	170
13	290	8000	1920	1660	1660	2080	9000	2080	526	280	180	170
14	290	8000	1440	1660	1660	2080	9000	2080	798	280	180	170
15	290	8000	1120	1660	1660	2080	9000	2080	860	280	180	170
16	290	7360	1120	1660	1660	2080	9000	2080	860	234	180	170
17	290	6200	1120	1660	1660	2690	9000	2080	860	180	180	170
18	290	6200	1120	1280	1660	3160	9000	2080	860	180	516	170
19	290	6200	1120	830	1660	3160	9000	2080	860	180	800	170
20	290	3560	1120	830	1660	2010	9000	2080	860	180	800	170
21	290	300	1120	830	1660	1320	7850	2080	860	180	800	170
22	290	300	1120	1840	1660	1320	5800	2080	860	180	800	170
23	290	3170	1120	2600	1660	1320	5800	2080	860	180	800	170
24	290	8200	1120	2600	1660	3200	5800	2080	860	180	800	170
25	290	8200	1120	2600	4100	4040	5800	2080	860	180	2120	170
26	290	10300	1120	2600	6000	5000	5800	2080	860	180	3140	170
27	290	13600	1120	2600	6000	5000	5800	2080	860	180	3140	170
28	290	10500	1120	2600	6000	5000	5800	2080	860	180	1620	170
29	290	8200	1120	2600	4660	5000	5800	2080	860	180	340	170
30	290	8200	1120	2600	---	5000	5800	2080	860	180	340	170
31	1880	---	1400	2600	---	5000	---	2080	---	180	340	---
TOTAL	10580	242750	91260	56130	67440	88070	298840	84330	29633	13176	19416	5364
MEAN	341	8092	2944	1811	2326	2841	9961	2720	988	425	626	179
MAX	1880	13600	8200	2600	6000	5000	16000	5800	2080	860	3140	340
MIN	290	300	1120	830	1060	1060	5800	2080	150	180	180	170
AC=FT	20990	481500	181000	111300	133800	174700	592700	167300	58780	26130	38510	106400
CAL YR 1979	TOTAL	1166272.00	MEAN	3195	MAX	20400	MIN	.00	AC=FT	2313000		
WTR YR 1980	TOTAL	1006989.00	MEAN	2751	MAX	16000	MIN	150	AC=FT	1997000		

ARKANSAS RIVER BASIN

25

07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK

LOCATION.--Lat 36°S7'45", long 98°46'55", in NE¼SE¼ 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 (2 km) northeast of Winchester, 2.5 mi (4.0 km) upstream from Greenwood Creek, 4.9 mi (7.9 km) downstream from Yellowstone Creek, 5 mi (8 km) downstream from State line, 19 mi (31 km) northwest of Alva, and at mile 156.2 (251 km).

DRAINAGE AREA.--856 mi² (2,220 km²).

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 (429.783 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--21 years, 85.0 ft³/s (2.407 m³/s), 61,580 acre-ft/yr (75.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft³/s (1,470 m³/s) Aug. 19, 1961, gage height, 13.95 ft (4.252 m), from rating curve extended above 17,400 ft³/s (493 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957 reached a stage of 15.4 ft (4.69 m), from information by county engineer, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 30	0530	5,870 166	10.74 3.274	June 20	0630	*8,580 243	*11.91 3.630

Minimum daily discharge, 0.03 ft³/s (0.001 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	78.8	1.8	23	79	36	17.4	14.4	108	46	.94	.26
2	.32	38.4	36	22	7.4	30	166	13.4	100	40	1.3	.26
3	.34	24.3	38	22	7.6	40	22.5	12.4	9.4	3.4	1.1	.22
4	.35	17.8	4.4	28	6.4	6.9	18.6	11.8	9.2	3.2	.80	.18
5	.36	12.7	3.4	30	5.8	5.5	15.8	1.4.4	8.6	2.6	.80	.22
6	.35	8.9	30	30	6.4	5.5	13.7	12.4	8.1	2.3	.80	.26
7	.35	7.4	30	20	6.4	5.8	12.7	11.4	7.4	1.6	.69	.22
8	.32	60	2.8	1.4	6.7	5.3	11.1	11.1	8.9	1.2	.50	.22
9	.35	6.9	2.8	1.8	5.3	4.8	9.7	10.8	6.9	10	.58	.26
10	.35	7.9	2.6	2.8	60	4.6	100	100	6.9	8.4	.50	.26
11	.35	6.9	2.3	4.4	5.8	4.4	9.7	9.2	6.7	7.0	.58	.30
12	.30	60	1.8	2.8	50	6.2	9.4	8.6	6.2	5.3	.58	.22
13	.35	5.1	1.3	2.6	6.4	7.9	9.4	8.4	60	3.6	.50	.26
14	.35	4.8	1.5	2.3	8.9	7.6	9.2	8.1	5.3	3.3	2.2	.22
15	.35	4.6	2.6	2.3	7.6	6.9	8.9	11.1	4.4	2.7	2.4	.22
16	.42	4.2	1.5	2.3	70	6.2	8.4	32.2	21.6	2.4	.9.4	.15
17	.58	40	1.3	2.2	6.2	5.5	7.6	25.2	38.4	2.2	.9.4	.22
18	.50	40	1.6	2.2	70	5.1	7.4	18.6	22.9	1.9	1.7	.22
19	.35	3.4	1.6	9.7	7.6	4.6	6.9	16.6	33.2	1.7	.6.9	.18
20	.26	40	3.4	10.6	8.4	4.2	6.4	1.4.4	42.40	1.5	.50	.10
21	.50	5.1	4.4	10.6	7.9	4.4	6.4	20.3	55.8	2.4	.4.2	.10
22	.42	3.8	3.2	9.2	7.6	4.4	60	15.1	28.6	2.7	.50	.03
23	.42	3.2	2.6	8.4	6.2	5.5	6.4	13.4	220	1.7	.6.9	.14
24	.42	3.2	2.5	7.4	5.8	8.6	22.5	12.1	17.8	1.7	.4.2	.22
25	.42	2.8	2.3	6.4	60	10.8	30.6	10.6	12.7	1.5	.35	.18
26	.35	2.6	2.2	5.1	6.2	10.8	6.20	9.4	10.3	1.5	.35	.18
27	.42	3.2	2.2	10.3	5.8	10.6	33.2	11.1	8.4	1.7	.35	.50
28	.42	3.2	2.6	8.4	5.1	11.1	20.3	13.4	7.6	1.5	.4.2	.9.4
29	20	20	2.6	7.1	4.2	11.8	16.6	13.4	6.4	1.7	.35	.50
30	4180	1.2	2.6	7.6	---	21.1	15.5	12.4	5.3	.6.9	.26	.42
31	1440	---	2.3	7.9	---	21.1	---	11.4	---	1.3	.26	---
TOTAL	5650.62	286.4	79.6	153.3	190.6	227.8	450.9	417.1	827.8	297.39	23.41	7.66
MEAN	182	95.5	25.7	49.5	65.7	73.5	150	135	276	9.59	.76	.26
MAX	4180	78.8	4.4	10.6	8.9	21.1	6.20	32.2	42.40	4.6	2.4	.9.4
MIN	.26	1.2	1.3	1.4	4.2	30	60	8.1	4.4	.6.9	.26	.03
AC=FT	11210	5680	1580	3040	3780	4520	8940	8270	16420	590	4.6	15

CAL YR 1979	TOTAL	46129.84	MEAN	126	MAX	10700	MIN	.26	AC=FT	91500
WTR YR 1980	TOTAL	32314.08	MEAN	88.3	MAX	4240	MIN	.03	AC=FT	64090

ARKANSAS RIVER BASIN

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

LOCATION.--Lat 36°48'45", long 98°38'50", in SW¼SW¼ sec.18, T.27 N., R.13 W., Woods County, Hydrologic Unit 11060002, at bridge on U.S. Highway 281, 1.0 mi (1.6 km) northeast of Alva, 19 mi (31 km) upstream from Medicine Lodge River, and at mile 126.0 (202.7 km).

DRAINAGE AREA.--1,009 mi² (2,613 km²).

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 (393.814 m) National Geodetic Vertical Datum of 1929. April 1904 to December 1905, chain gage at site 0.8 mi (1.3 km) upstream at different datum, and February 1938 to September 1951, water-stage recorder at present site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years (water years 1938-51, 1980), 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Oct. 23, 1941, from rating curve extended above 13,000 ft³/s (368 m³/s). Maximum gage height, 15.04 ft (4.584 m) Oct. 30, 1979; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,230 ft³/s (261 m³/s) Oct. 30, gage height, 15.04 ft (4.584 m), no other peak above base of 8,000 ft³/s (227 m³/s); minimum daily discharge, 0.57 ft³/s (0.016 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	1020	31	36	88	64	160	214	156	99	5.3	.90
2	.86	488	34	36	84	58	162	201	142	93	5.0	.86
3	.86	374	43	39	84	55	219	188	132	90	4.8	.84
4	.86	310	47	39	76	62	181	178	123	86	4.8	.80
5	.79	289	45	47	72	72	108	212	119	82	4.5	.78
6	.79	245	37	45	78	70	128	209	114	75	3.6	.84
7	.79	200	34	39	79	65	110	174	108	70	2.8	.88
8	.86	170	33	35	82	62	102	159	98	69	2.4	.88
9	.03	160	32	40	76	54	94	147	90	69	2.1	.92
10	1.3	155	29	48	82	47	89	140	85	65	2.0	.97
11	.86	170	27	60	80	47	91	134	82	62	1.9	1.0
12	.86	145	25	61	71	58	88	125	80	59	1.9	.86
13	.93	111	24	51	90	71	85	120	76	53	1.7	.83
14	.93	98	28	49	96	87	83	115	72	32	2.3	.86
15	1.0	95	33	47	94	72	85	168	66	26	2.9	.79
16	.93	88	29	46	90	69	86	715	172	21	3.2	.69
17	.86	72	26	42	81	61	82	384	385	17	2.9	.69
18	.93	64	30	41	86	51	79	278	355	14	3.1	.78
19	1.0	54	39	71	90	45	80	237	282	11	3.4	.76
20	1.0	52	48	140	99	50	80	231	3520	6.2	2.8	.62
21	.92	56	53	144	97	57	77	348	1190	6.5	2.4	.59
22	1.0	60	47	113	92	74	68	231	515	7.1	1.8	.57
23	1.0	51	39	92	84	90	61	204	323	6.2	2.0	.61
24	1.0	44	34	74	72	103	585	184	234	5.8	2.3	.69
25	.93	37	32	72	74	100	408	174	190	5.6	1.9	1.6
26	1.0	35	32	78	75	103	1190	163	158	5.4	1.6	.82
27	1.0	35	30	115	74	106	546	154	137	5.7	1.5	1.2
28	1.0	34	33	140	70	110	320	164	124	5.3	1.5	2.2
29	15	33	37	90	68	119	252	161	113	5.0	1.6	1.6
30	6400	32	39	85	---	149	234	178	105	4.8	1.4	1.8
31	3200	---	40	86	---	177	---	168	---	5.1	1.1	---
TOTAL	9641.12	4779	1092	2103	2384	2428	5973	6460	9346	1161.7	82.5	28.23
MEAN	311	159	35.2	67.8	82.2	78.3	199	208	312	37.5	2.66	.94
MAX	6400	1020	53	144	99	177	1190	715	3520	99	5.3	2.2
MIN	.79	32	24	35	68	45	61	115	66	4.8	1.1	.57
AC-FT	19120	9480	2170	4170	4730	4820	11850	12810	18540	2300	164	56
WTR YR 1980	TOTAL	45478.55	MEAN	124	MAX	6400	MIN	.57	AC-FT	90210		

ARKANSAS RIVER BASIN

27

07150000 GREAT SALT PLAINS LAKE NEAR JET, OK

LOCATION.--Lat 36°44'40", long 98°08'08", in NW¼SE¼ 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 (7.2 km) upstream from Wagon Creek, 5.5 mi (8.8 km) northeast of Jet, and at mile 103.3 (166.2 km).

DRAINAGE AREA.--3,200 mi² (8,288 km²), of which 8 mi² (20.7 km²) 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 310 ft (94.5 m) 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 (318 hm³) at elevation 1,138.5 ft (347.01 m), crest of upper weir, and 31,420 acre-ft (38.7 hm³) at elevation 1,125.0 ft (342.90 m), 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 (234 hm³) July 2, 1951, elevation, 1,134.38 ft (345.759 m); minimum, 17,180 acre-ft (21.2 hm³) Sept. 6, 1973, elevation, 1,123.16 ft (342.339 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,120 acre-ft (74.1 hm³) June 24, elevation 1,127.77 ft (343.744 m); minimum, 20,590 acre-ft (25.4 hm³) Sept. 24, elevation, 1,123.64 ft (342.485 m).

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

1123	16,080	1126	40,700
1124	23,280	1127	51,180
1125	31,420	1128	62,940

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27870	51960	35450	35270	35270	34990	39720	44640	37030	41990	28620	25210
2	28280	58920	35450	34990	35180	35270	40010	43510	36660	40300	28280	24820
3	27460	57370	35450	34990	35180	35270	41790	42390	36010	38940	28040	24670
4	27460	53770	35450	35080	35180	35450	41790	41290	35910	37980	27870	24430
5	27220	51520	35080	35180	35180	35180	42690	40400	35640	37030	27540	24280
6	27050	48440	34810	34990	35080	35270	42190	39420	35270	36290	26970	24120
7	26890	46310	34720	34900	34350	35180	42190	38460	34540	35730	26810	24050
8	25140	44850	34720	34900	35270	35180	42090	38080	34080	35180	26410	23810
9	26570	43510	34810	34720	35540	35080	40700	37890	34080	34720	26170	23430
10	26650	42490	34990	34900	35540	34540	39620	37030	34080	34080	26090	23130
11	26410	41190	34540	34540	35450	34350	38650	36850	33900	33720	25690	23740
12	25450	40400	35540	34350	35360	34990	38170	36850	33900	33270	25610	23660
13	25770	39720	35450	34260	35270	35450	37890	36010	33810	32920	25210	23050
14	25450	39040	35540	34260	35450	35450	37890	35640	33630	32740	24590	22450
15	25450	38460	34630	34450	35450	35360	37410	35450	33360	32470	24510	22520
16	25450	37790	33900	34630	35360	34990	37130	40400	33270	32120	25060	22370
17	25610	37410	34260	34260	35270	34990	36940	41190	35360	31950	25140	22070
18	26010	37220	34080	34260	35270	35180	36570	41890	37510	31770	25610	22000
19	25770	36470	34080	35180	35270	34990	36470	42090	41990	31510	25850	22000
20	25930	39520	34080	36290	35540	34350	36290	41690	41690	31160	26170	22150
21	24820	42700	34260	37030	35910	34260	36100	41690	47370	30730	25450	22000
22	24740	41290	34720	37030	35540	34350	35820	41690	53430	30390	25210	21480
23	24590	39910	35450	37220	35730	35730	35450	41190	58800	30300	25370	20810
24	24280	38560	35540	37030	36010	36660	35450	40400	59880	30220	25370	20590
25	24280	37220	34080	36380	35910	36660	44230	40010	58680	30130	25370	20810
26	24050	37320	34080	36380	36100	36850	44230	39330	55730	29880	25290	20890
27	23810	37410	33780	36380	36100	36850	46520	38460	52520	29710	25140	21030
28	24050	37600	34810	36100	35360	37790	47690	37980	49200	29450	25140	21250
29	23280	36470	35450	36010	34540	38840	47160	38080	45990	29370	25450	21400
30	35910	36100	35540	35640	---	39230	45780	37510	44020	29370	25850	21400
31	36570	---	35450	35450	---	38170	---	37320	---	28870	25610	---
MAX	36570	58920	35540	37220	36100	39230	47690	44640	59880	41990	28620	25210
MIN	23280	36100	33780	34260	34350	34260	35450	35450	33270	28870	24510	20590
†	1125.57	1125.52	1125.45	1125.45	1125.35	1125.74	1126.50	1125.65	1126.33	1124.70	1124.30	1123.75
‡	+8,120	-470	-650	0	-910	+3,630	+9,200	-10,020	+6,700	-15,150	-3,260	-4,210

CAL YR 1979 MAX 61710 MIN 23280 † +11,940
WTR YR 1980 MAX 59880 MIN 20590 ‡ -7,050

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

LOCATION.--Lat 36°45'11", long 98°07'44", in NE¼NE¼ 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 (0.97 km) downstream from Great Salt Plains Dam, 4 mi (6.4 km) upstream from Wagon Creek, 6 mi (9.7 km) northeast of Jet, and at mile 102.7 (165.2 km).

DRAINAGE AREA.--3,202 mi² (8,293 km²), of which 8 mi² (20.7 km²) 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 (332.903 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 17, 1938, nonrecording gage at site 2.5 miles (4.0 km) upstream at datum 13.46 ft (4.103 m) higher. Mar. 17, 1938, to Apr. 26, 1953, water-stage recorder at site 200 ft (61.0 m) upstream, datum 5.00 ft (1.524 m) higher prior to Oct. 1, 1950.

REMARKS.--Records good. Flow regulated since June 1941 by Great Salt Plains Lake (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 39 years (water years 1942-80), 366 ft³/s (10.37 m³/s), 265,200 acre-ft/yr (327 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,900 ft³/s (733 m³/s) May 19, 1938, gage height, 13.80 ft (4.206 m), present datum; no flow at times in 1939-41, 1944, 1955-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,830 ft³/s (108 m³/s) June 24, gage height, 7.18 ft (2.188 m); minimum daily discharge, 7.9 ft³/s (0.22 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	1580	325	281	262	266	855	1430	507	1010	20	20
2	27	3430	301	252	252	276	766	1320	468	800	20	21
3	28	3470	304	266	257	276	1060	1100	371	645	20	20
4	27	2970	298	271	262	302	1040	1050	368	557	19	20
5	27	2540	268	271	271	238	1110	937	336	424	20	21
6	27	2010	293	271	262	262	1130	817	296	358	20	21
7	27	1680	243	229	179	252	1090	691	233	320	19	21
8	27	1460	222	212	328	252	1100	606	171	251	20	21
9	30	1350	241	208	368	243	848	584	184	200	20	21
10	27	1210	259	328	312	216	730	557	181	157	20	21
11	26	1050	247	203	296	179	639	480	159	134	20	20
12	29	929	206	187	281	262	575	461	153	108	20	19
13	27	838	203	191	281	302	527	385	145	91	20	21
14	24	737	214	183	296	302	545	328	132	80	21	21
15	24	671	222	216	302	262	493	328	112	63	20	20
16	24	595	153	216	296	238	447	914	139	37	20	20
17	24	546	175	195	286	238	470	1030	598	35	21	20
18	25	536	172	175	271	271	409	1110	1030	40	20	19
19	25	434	179	317	281	221	395	1130	1220	44	19	19
20	24	640	183	380	302	168	371	1060	1670	32	20	18
21	25	1190	195	475	345	168	362	1080	1950	33	21	18
22	25	985	238	468	296	175	347	1060	2920	30	21	19
23	24	807	216	505	323	262	316	996	3700	27	20	18
24	24	717	212	475	345	419	366	878	3640	21	20	18
25	17	655	179	406	334	356	663	853	3280	21	20	19
26	8.4	565	179	368	345	368	1310	757	2690	22	20	18
27	7.9	515	157	386	339	374	1430	630	2230	21	21	18
28	8.1	546	266	374	291	535	1820	613	1790	21	21	18
29	8.3	412	317	426	195	650	1760	623	1440	21	20	17
30	20	366	307	317	---	711	1580	559	1250	20	20	17
31	285	---	291	312	---	517	---	523	---	20	20	---
TOTAL	979.7	35434	7265	9364	8458	9561	24754	24980	33363	5643	623	584
MEAN	31.6	1181	234	302	292	308	825	806	1112	182	20.1	19.5
MAX	285	3470	325	505	368	711	1820	1430	3700	1010	21	21
MIN	7.9	366	153	175	179	168	316	328	112	20	19	17
AC=FT	1940	70280	14410	18570	16780	18960	49100	49550	66180	11190	1240	1160
CAL YR 1979	TOTAL	129111.6	MEAN	354	MAX	3700	MIN	1.0	AC=FT	256100		
WTR YR 1980	TOTAL	161008.7	MEAN	440	MAX	3700	MIN	7.9	AC=FT	319400		

ARKANSAS RIVER BASIN

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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.

INSTRUMENTATION.--Water quality monitor since July 1968.

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 57,000 micromhos Jan. 28, 1977; minimum daily, 1,280 micromhos Nov. 4, 1980.

WATER TEMPERATURE: Maximum daily, 36.0°C, Aug. 11, 1980; minimum daily, 0.0° on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 14,800 micromhos Oct. 27, 28; minimum daily, 1,280 micromhos Nov. 4.

WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 11; minimum daily, 0.5°C Jan. 28, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS, NONCAR- BONATE AS (MG/L CACO3)	HARD- NESS, NONCAR- BONATE MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT									
05...	1810	27	10000	7.7	22.0	560	460	150	46
14...	1715	24	10900	7.0	18.0	--	--	160	--
25...	1815	11	11500	7.4	17.0	680	570	180	55
NOV									
05...	1700	2410	5220	7.9	10.0	350	260	100	25
15...	1745	625	5270	7.8	10.0	420	300	120	30
25...	1710	651	5420	7.6	8.0	470	330	130	35
DEC									
05...	1710	248	5080	8.0	5.0	470	330	130	36
15...	1220	262	5490	7.5	5.0	480	340	130	37
25...	1730	176	4610	7.8	6.0	510	340	140	40
JAN									
05...	1715	271	4780	7.8	5.0	520	360	140	42
16...	1720	183	5640	8.1	7.5	530	370	140	43
25...	1715	387	4990	8.0	6.0	530	360	140	44
FEB									
05...	1710	253	6790	8.1	5.5	570	410	150	47
15...	1730	253	6080	7.7	3.5	560	400	150	46
24...	1640	313	6210	7.8	7.0	540	390	140	47
MAR									
05...	1720	187	6800	7.6	3.5	550	390	140	48
15...	1815	221	5890	8.1	12.0	560	390	150	46
25...	1715	276	8500	7.4	8.0	550	400	140	49
APR									
05...	1210	1130	5540	8.2	12.0	510	350	130	45
15...	1720	484	6180	7.8	15.5	550	380	140	48
25...	1715	859	5810	7.5	16.0	550	400	140	48
MAY									
05...	2045	900	5040	7.5	25.0	560	430	150	46
15...	1715	208	4830	7.4	17.0	450	330	120	36
25...	2035	820	5620	7.5	27.0	500	370	130	43
JUN									
05...	1840	352	5650	7.6	27.5	660	500	180	52
15...	1930	67	6460	7.4	25.0	680	530	180	56
25...	2010	3120	2470	7.5	29.5	350	240	100	25
JUL									
04...	1025	583	3960	7.5	29.0	470	340	130	36
15...	1610	77	5040	7.3	30.0	550	440	150	42
25...	2115	21	6240	7.3	27.0	580	450	160	45
AUG									
05...	1830	20	6510	7.2	30.5	590	470	160	47
15...	2005	19	7200	7.1	27.0	--	--	--	51
25...	1915	20	8030	7.1	28.5	630	520	170	51
SEP									
05...	1810	20	9950	7.2	29.0	--	--	--	--
15...	1815	20	10500	7.1	26.0	720	610	190	60
25...	1815	20	11500	6.9	20.0	740	640	190	65

ARKANSAS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED DIS- (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT									
05...	2000	88	37	12	100	450	3100	5950	8.0
14...	2200	--	--	12	110	510	3500	6540	8.8
25...	2400	92	40	13	110	530	3700	7010	9.5
NOV									
05...	880	84	20	10	93	270	1400	3020	4.1
15...	1000	83	21	9.7	120	310	1600	3040	4.1
25...	1000	87	20	8.5	140	330	1500	3130	4.2
DEC									
05...	990	82	20	8.7	140	340	1500	3250	4.4
15...	1100	83	22	8.6	140	350	1800	3510	4.7
25...	880	79	17	7.2	170	370	1400	3000	4.0
JAN									
05...	900	79	17	7.1	160	380	1500	3060	4.1
16...	1100	82	21	7.4	160	390	1700	3680	5.0
25...	950	79	18	7.0	170	380	1500	3190	4.3
FEB									
05...	1400	84	26	7.8	160	380	2200	4340	5.9
15...	1300	83	24	7.4	160	410	2000	3980	5.4
24...	1300	84	24	6.9	150	410	2100	4050	5.5
MAR									
05...	1300	84	24	6.5	160	400	2000	4080	5.5
15...	1100	81	20	5.8	170	420	1700	3540	4.8
25...	1600	86	30	6.5	150	420	2300	5010	6.8
APR									
05...	970	80	19	6.7	160	410	1500	3180	4.3
15...	1000	80	19	6.9	170	--	1700	3540	4.8
25...	1000	80	19	6.7	150	440	1600	3440	4.6
MAY									
05...	960	78	18	7.2	130	430	1500	3200	4.3
15...	860	80	18	6.4	120	360	1300	2710	3.6
25...	850	78	17	6.7	130	390	1400	2830	3.8
JUN									
05...	950	75	16	7.6	160	520	1400	3300	4.4
15...	1100	78	18	7.5	150	--	--	3600	4.9
25...	360	68	8.3	15	110	270	570	1440	1.9
JUL									
04...	640	74	13	13	130	390	1000	2250	3.0
15...	800	76	15	13	110	460	1300	2780	3.7
25...	1100	80	20	13	130	490	1800	3520	4.7
AUG									
05...	1100	80	20	17	120	490	1700	3710	5.0
15...	1200	--	--	19	110	530	2000	4190	--
25...	1500	83	26	20	110	540	2300	4550	6.1
SEP									
05...	2000	--	--	13	170	610	2800	5980	8.1
15...	2100	86	34	12	110	570	3500	6220	8.4
25...	2400	87	38	13	100	650	3700	6880	9.3

ARKANSAS RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10300	7500	5390	5550	7020	6530	6060	---	5390	3340	---	---
2	10500	---	5370	5330	6920	6850	4690	---	5610	3810	---	---
3	10200	---	5380	5350	6900	6950	5520	---	5900	3930	---	---
4	10300	---	5250	5460	6950	6760	6130	---	6100	3900	---	---
5	10200	5250	5090	4790	6710	6780	5360	---	5880	4350	---	10200
6	10200	5190	5150	4840	6210	6850	3870	---	5720	4300	---	10700
7	10300	5090	5280	4910	6410	6880	4530	---	5480	4530	---	9680
8	10300	5650	5490	5680	6120	6620	5770	5410	6120	4690	---	9570
9	10600	5880	5530	5760	6110	6710	5710	5300	6140	4660	---	10100
10	10700	5920	5560	4960	6200	7020	4860	5210	6170	4640	---	10400
11	10700	5610	5430	5060	6210	---	5410	4730	6160	4660	---	10400
12	10800	5430	5470	5470	6260	---	6050	4970	6240	4800	---	10200
13	10600	4980	5540	5650	6250	6720	6590	5020	6240	5090	---	10400
14	11000	5290	5460	5560	6230	6400	6650	5630	5950	5000	---	9900
15	10700	5250	5490	5620	6120	6160	6290	4660	6490	5160	---	11900
16	11000	4850	5480	5630	6110	6990	6370	5620	6260	5280	---	12100
17	11200	4870	5010	5320	6410	6650	6190	5170	6060	5250	---	11000
18	11200	5630	5570	5670	6570	5700	6340	4700	6310	5270	---	11200
19	11100	5620	5550	5730	6680	6510	6370	5340	7160	5200	---	11900
20	11000	5550	5560	5860	6780	7610	6360	4240	7220	6030	---	12300
21	11500	5360	5550	5860	6700	7440	6240	4520	6730	5740	---	13400
22	11600	4780	5430	5650	5960	6450	---	5230	5880	5870	---	13800
23	11600	4770	5240	5970	6110	7620	---	5380	3010	6000	---	11800
24	11700	5200	4740	4890	5260	6750	---	5600	2660	6220	---	12300
25	11700	5440	4650	4970	6270	8280	---	5690	3020	---	---	12000
26	13400	5290	4930	6050	5860	8410	---	5390	2370	---	---	10700
27	14800	6110	5070	6210	6090	7730	---	5430	2630	---	---	9900
28	14800	5370	5260	6820	6130	7350	---	5160	3320	---	---	11100
29	14400	6060	5390	6800	7660	6060	---	5050	3530	---	---	11100
30	8390	6100	5410	6950	---	5820	---	5320	3800	---	---	12300
31	10400	---	5490	6940	---	8290	---	5850	---	---	---	---
MEAN	11200	5480	5330	5660	6390	6930	5780	5180	5320	4910	---	11200

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10300	6550	5380	5540	7010	6400	4650	6470	5440	3720	6340	8910
2	10500	2280	5370	5320	6950	6930	4980	6330	5380	3940	6380	9850
3	10200	2550	5370	5340	6910	6940	5070	6340	6060	3940	6240	10200
4	10200	1280	5250	5450	6920	6710	6160	4420	6070	3960	6580	9880
5	10000	5220	5080	4780	6790	6800	5540	5040	5650	4460	6510	9950
6	10200	5260	5130	4780	6210	6800	3470	4410	5740	4470	6760	9900
7	10100	4950	---	4940	6210	6810	4420	4840	5480	4540	7010	10100
8	10100	5600	5520	5730	6080	6590	5770	5540	6070	4790	6960	10000
9	10500	5960	5530	5780	6150	6700	5860	5350	6180	4720	6800	10200
10	10700	5890	5560	4980	6210	6820	4770	5420	6190	4660	6710	10000
11	10500	5440	5420	4990	6210	6360	5460	4750	6140	4730	6710	10400
12	10800	5440	5480	5440	6240	6670	6020	4760	6220	4680	7400	10200
13	10600	4710	5490	5670	6250	6670	6440	5140	6220	4960	7340	10300
14	10900	5290	5460	5590	6240	6360	6580	5710	5930	4970	7230	10600
15	10700	5270	5490	---	6080	5890	6180	4830	6460	5040	7200	10500
16	10900	4850	5510	5640	6030	6350	6320	5710	6130	5230	7050	10600
17	11100	4820	4990	5310	6500	6220	6140	5170	6020	5350	7050	10500
18	11100	5600	5560	5690	6520	5450	6340	4910	6490	5240	7500	10700
19	11100	5630	5540	5730	6710	6480	6350	4900	6870	5230	7390	10600
20	11000	5520	5540	5850	6710	6480	6320	4040	6990	5940	7350	10400
21	11500	5380	5530	5860	6690	6690	6210	4870	6740	5750	7500	11200
22	11500	4700	5420	5620	6560	6570	5600	5360	6300	5870	7710	11500
23	11500	4700	5230	5850	6600	6580	5020	5380	2760	5940	7510	11700
24	11500	5210	4730	4840	6210	6730	5550	5640	2630	6310	8020	11600
25	11500	5420	4610	4990	6210	8500	5810	5620	2470	6240	8030	11500
26	13500	5260	4910	6040	6260	8260	5890	5340	2460	6130	8250	11500
27	14800	6080	5090	6350	6040	7610	6440	5400	2490	6070	8440	10200
28	14500	5380	5280	6950	5670	7270	5620	5140	3220	6270	8440	11400
29	14300	6060	5410	6900	5760	5780	4250	4760	3700	6220	8440	11100
30	6370	6090	5430	6960	---	5780	6110	5190	3550	6420	8310	12000
31	10700	---	5490	6970	---	8380	---	5710	---	6280	9220	---
MEAN	11100	5080	5330	5660	6380	6730	5660	5240	5270	5230	7370	10600

ARKANSAS RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	11.0	3.0	---	1.5	3.0	9.5	16.5	26.5	30.5	---	---
2	20.0	10.0	3.0	---	2.5	1.5	10.5	17.0	26.5	31.5	---	---
3	18.5	10.0	3.0	---	3.0	1.5	9.5	18.5	27.5	32.0	---	---
4	17.5	10.0	4.0	---	3.5	3.0	11.0	20.5	28.0	31.0	---	---
5	17.0	9.5	5.0	---	4.0	2.5	12.5	22.5	28.0	30.0	---	29.0
6	18.0	9.0	5.0	---	4.0	3.5	14.0	24.0	28.5	30.0	---	26.5
7	18.5	8.5	5.5	---	2.5	5.0	15.5	23.5	28.5	30.0	---	27.0
8	18.5	9.5	5.5	---	1.0	6.0	14.0	21.0	27.5	29.5	---	28.5
9	14.5	9.5	6.0	---	1.0	8.0	13.5	20.0	26.5	29.5	---	26.5
10	15.0	8.5	7.0	---	1.5	9.0	14.5	21.5	26.5	30.0	---	28.0
11	17.0	8.0	8.5	---	2.5	9.5	15.0	21.5	28.0	29.5	---	26.5
12	16.0	8.0	6.0	---	3.0	8.0	13.5	22.5	27.0	28.0	---	26.0
13	15.0	8.5	---	---	4.0	8.0	12.5	22.5	26.0	28.5	---	27.0
14	15.0	8.5	---	---	4.5	9.0	12.0	21.0	27.0	28.0	---	27.0
15	16.0	9.5	---	---	4.0	10.5	13.5	19.5	27.5	27.5	---	26.5
16	17.5	10.0	---	---	1.5	13.5	14.0	18.5	25.0	28.0	---	25.0
17	18.0	10.5	---	---	1.5	12.0	14.0	19.0	24.0	29.0	---	23.5
18	19.0	12.5	---	---	2.0	10.5	14.0	20.0	23.5	28.5	---	25.0
19	19.5	13.0	---	---	2.5	10.5	16.0	21.0	25.0	29.0	---	25.0
20	19.5	13.0	---	---	3.5	11.5	17.5	21.5	25.5	28.0	---	25.0
21	20.0	12.5	---	---	6.0	11.0	19.5	21.5	25.5	28.0	---	25.5
22	16.5	9.5	---	---	7.0	11.5	20.0	22.5	26.5	29.5	---	23.0
23	16.0	8.0	---	5.0	6.0	11.5	21.0	23.0	28.5	29.5	---	21.5
24	15.5	8.0	---	5.0	6.5	8.5	19.5	23.5	29.5	26.5	---	22.5
25	15.5	7.5	---	6.0	6.5	7.0	17.5	26.0	30.5	---	---	21.0
26	15.5	7.0	---	4.5	6.0	7.0	15.5	27.5	31.5	---	---	19.0
27	16.0	7.0	---	2.0	7.0	8.0	15.0	26.0	31.5	---	---	19.0
28	15.0	6.0	---	1.0	9.0	9.5	16.0	25.5	31.5	---	---	18.5
29	15.5	4.0	---	.5	7.0	10.5	18.0	25.5	31.0	---	---	18.5
30	16.0	3.0	---	.5	---	8.5	17.0	25.5	31.5	---	---	21.0
31	13.5	---	---	1.0	---	8.0	---	26.5	---	---	---	---
MEAN	17.0	9.0	5.0	3.0	4.0	8.0	15.0	22.0	27.5	29.0	---	24.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	12.5	4.0	6.0	2.5	3.0	11.0	17.0	26.0	30.0	30.0	29.0
2	22.5	12.0	5.0	5.0	4.0	2.5	10.5	17.5	26.0	32.0	25.0	29.5
3	30.0	12.5	3.0	4.0	3.5	3.0	---	19.0	27.5	30.5	29.0	29.0
4	20.0	12.0	4.0	3.0	3.5	4.0	---	22.0	27.0	29.0	29.0	29.0
5	22.0	10.0	5.0	5.0	5.5	3.5	12.0	25.0	27.5	---	30.5	29.0
6	27.0	10.0	5.0	3.5	5.5	4.5	15.5	25.5	28.0	29.0	30.0	30.5
7	23.5	8.5	---	2.0	2.0	6.5	16.0	23.0	24.0	29.0	30.0	29.0
8	23.0	9.0	6.0	2.0	1.0	10.0	16.0	20.5	28.0	29.0	31.0	29.5
9	---	9.0	8.0	1.5	1.0	12.0	14.0	20.0	26.5	29.0	27.0	27.5
10	---	8.0	8.0	3.0	---	13.0	15.0	20.0	29.0	29.5	30.0	26.5
11	22.0	8.0	8.0	5.0	3.0	9.0	15.0	21.5	26.0	29.0	36.0	27.5
12	23.0	8.0	5.0	5.0	4.0	9.0	13.0	23.0	27.0	30.0	29.0	28.0
13	15.5	9.0	4.0	5.5	5.0	13.0	12.0	23.0	25.0	28.5	28.0	28.0
14	18.0	8.0	4.0	5.5	5.0	12.0	13.0	22.0	25.0	28.0	27.0	27.0
15	19.0	10.0	5.0	---	3.5	12.0	15.5	17.0	25.0	30.0	27.0	26.0
16	22.0	11.0	2.0	7.5	1.5	16.0	14.0	19.5	24.0	31.0	28.0	25.5
17	22.0	11.0	5.0	8.0	2.0	12.0	14.0	18.5	23.0	31.0	29.0	26.5
18	21.0	12.0	3.0	8.0	3.0	11.0	14.0	20.0	25.0	30.0	30.0	27.0
19	22.0	13.0	4.0	8.0	3.0	11.5	15.0	22.5	26.5	29.0	30.0	27.5
20	20.0	13.0	4.0	7.0	5.0	11.0	18.5	22.0	26.0	31.0	30.0	25.0
21	21.0	12.0	4.0	6.0	7.0	12.0	20.0	22.5	24.5	29.5	29.0	27.0
22	18.5	11.0	5.0	5.0	7.0	9.0	20.5	22.5	24.5	31.5	28.0	22.5
23	18.5	8.0	5.0	5.5	7.0	10.5	22.0	23.0	25.0	31.0	31.0	23.0
24	17.0	8.0	6.0	6.0	7.0	8.0	19.0	26.0	29.5	30.0	29.0	25.0
25	17.0	8.0	6.0	6.0	7.0	8.0	16.0	27.0	29.5	27.0	28.5	20.0
26	18.0	7.0	7.0	3.5	7.0	8.0	15.0	27.5	30.0	29.0	31.0	19.5
27	16.0	7.0	6.0	2.0	9.0	8.0	15.0	24.5	29.5	27.5	28.5	17.0
28	16.0	7.0	6.0	.5	10.0	11.0	17.0	26.0	30.0	32.0	27.0	18.5
29	17.0	3.0	6.0	.5	6.0	10.0	20.0	25.0	29.5	31.0	30.0	18.0
30	15.5	4.0	5.0	1.0	---	8.0	18.5	26.0	31.0	30.0	26.0	24.0
31	12.5	---	5.0	1.0	---	9.0	---	25.0	---	31.0	30.0	---
MEAN	20.0	9.5	5.0	4.5	4.5	9.0	15.5	22.5	27.0	30.0	29.0	26.0

ARKANSAS RIVER BASIN

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

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	460	390	400	440	430	410	---	390	330	---	---
2	550	---	390	390	440	440	370	---	400	340	---	---
3	540	---	390	390	440	440	400	---	410	350	---	---
4	550	---	390	390	440	440	420	---	410	350	---	---
5	540	390	380	370	430	440	390	---	410	360	---	540
6	540	390	390	380	420	440	350	---	400	360	---	560
7	550	380	390	380	420	440	370	---	400	370	---	530
8	550	400	400	400	420	430	400	390	420	370	---	520
9	550	410	400	400	420	430	400	390	420	370	---	540
10	560	410	400	380	420	440	380	390	420	370	---	550
11	560	400	390	380	420	---	390	370	420	370	---	550
12	560	390	400	400	420	---	410	380	420	370	---	540
13	550	380	400	400	420	---	430	380	420	380	---	550
14	570	390	390	400	420	---	430	400	410	380	---	530
15	560	390	400	400	420	---	420	370	430	390	---	590
16	570	380	400	400	420	440	420	400	420	390	---	600
17	570	380	380	390	420	430	420	390	410	390	---	570
18	570	400	400	400	430	400	420	370	420	390	---	570
19	570	400	400	400	430	430	420	390	450	390	---	590
20	570	400	400	410	440	460	420	360	450	410	---	610
21	580	390	400	410	430	460	420	370	430	400	---	640
22	590	370	390	400	410	430	---	390	410	410	---	650
23	590	370	390	410	420	460	---	390	320	410	---	590
24	590	390	370	380	390	430	---	400	310	420	---	610
25	590	390	370	380	420	460	---	400	320	---	---	600
26	600	390	380	410	410	490	---	390	300	---	---	560
27	680	420	380	420	410	470	---	390	310	---	---	530
28	680	390	390	440	420	450	---	390	330	---	---	570
29	670	410	390	440	460	410	---	380	340	---	---	570
30	490	410	390	440	---	410	---	390	340	---	---	610
31	550	---	400	440	---	480	---	410	---	---	---	---
MEAN	570	400	390	400	420	440	400	390	390	380	---	570

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.6	1960	342	303	311	309	946	---	534	900	---	---
2	40.1	---	317	265	299	328	765	---	505	734	---	---
3	40.8	---	320	280	305	328	1140	---	411	610	---	---
4	40.1	---	314	285	311	359	1180	---	407	526	---	---
5	39.4	2670	275	271	315	283	1170	---	372	412	---	30.6
6	39.4	2120	309	278	297	311	1070	---	320	348	---	31.8
7	40.1	1720	256	235	203	299	1090	709	252	334	---	30.1
8	40.1	1580	240	229	372	293	1190	638	194	251	---	29.5
9	44.5	1490	260	225	417	282	916	615	209	200	---	30.6
10	40.8	1340	280	337	354	257	749	587	205	157	---	31.2
11	39.3	1130	260	208	336	---	673	480	180	134	---	29.7
12	43.8	978	222	202	319	---	637	473	174	108	---	27.7
13	40.1	860	219	206	319	351	612	395	164	93.4	---	31.2
14	36.9	776	225	198	336	342	633	354	146	82.1	---	30.1
15	36.3	707	240	233	342	297	559	328	130	66.3	---	31.9
16	36.9	610	165	233	336	283	507	987	158	39.0	---	32.4
17	36.9	560	180	205	324	276	533	1080	662	36.9	---	30.8
18	38.5	579	186	189	315	293	464	1110	1170	42.1	---	29.2
19	38.5	469	193	342	326	257	448	1190	1480	46.3	---	30.3
20	36.9	691	198	421	359	209	421	1030	2030	35.4	---	29.6
21	39.1	1250	211	526	401	209	411	1080	2260	35.6	---	31.1
22	39.8	984	251	505	328	203	---	1120	3230	33.2	---	33.3
23	38.2	806	227	559	366	325	---	1050	3200	29.9	---	28.7
24	38.2	755	212	487	363	486	---	948	3050	23.8	---	29.6
25	27.1	690	179	417	379	461	---	921	2830	---	---	30.8
26	14.5	595	184	407	382	487	---	797	2180	---	---	27.2
27	14.5	584	161	438	375	475	---	663	1870	---	---	25.8
28	14.9	575	280	444	330	650	---	645	1590	---	---	27.7
29	15.0	456	334	506	242	720	---	639	1320	---	---	26.2
30	26.5	405	323	377	---	787	---	589	1150	---	---	28.0
31	423	---	314	371	---	670	---	579	---	---	---	---
MEAN	47.8	1010	248	328	333	373	767	760	1080	219	---	29.8

ARKANSAS RIVER BASIN

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued
 CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	2300	1500	1600	2100	1900	1800	---	1500	840	---	---
2	3300	---	1500	1500	2100	2000	1300	---	1600	1000	---	---
3	3200	---	1500	1500	2000	2100	1600	---	1700	1000	---	---
4	3200	---	1500	1600	2100	2000	1800	---	1800	1000	---	---
5	3200	1500	1400	1300	2000	2000	1500	---	1700	1200	---	3200
6	3200	1500	1500	1400	1800	2000	1000	---	1600	1200	---	3300
7	3200	1400	1500	1400	1900	2000	1200	1400	1600	1200	---	3000
8	3200	1600	1600	1600	1800	2000	1700	1500	1800	1300	---	3000
9	3300	1700	1600	1700	1800	2000	1600	1500	1800	1300	---	3100
10	3300	1700	1600	1400	1800	2100	1400	1500	1800	1300	---	3200
11	3300	1600	1600	1400	1800	---	1500	1300	1800	1300	---	3200
12	3400	1600	1600	1600	1800	---	1800	1400	1800	1300	---	3200
13	3300	1400	1600	1600	1800	2000	1900	1400	1800	1400	---	3200
14	3400	1500	1600	1600	1800	1900	2000	1600	1700	1400	---	3100
15	3300	1500	1600	1600	1800	1800	1800	1300	1900	1500	---	3700
16	3400	1400	1600	1600	1800	2100	1900	1600	1800	1500	---	3800
17	3500	1400	1400	1500	1900	2000	1800	1500	1800	1500	---	3400
18	3500	1600	1600	1600	1900	1600	1900	1300	1800	1500	---	3500
19	3500	1600	1600	1700	2000	1900	1900	1500	2100	1500	---	3700
20	3400	1600	1600	1700	2000	2300	1900	1100	2200	1800	---	3900
21	3600	1500	1600	1700	2000	2200	1800	1200	2000	1700	---	4300
22	3600	1300	1600	1600	1700	1900	---	1500	1700	1700	---	4400
23	3600	1300	1500	1700	1800	2300	---	1500	730	1700	---	3700
24	3700	1500	1300	1400	1500	2000	---	1600	610	1800	---	3900
25	3700	1600	1300	1400	1800	2500	---	1600	730	---	---	3800
26	4300	1500	1400	1800	1700	2600	---	1500	510	---	---	3300
27	4700	1800	1400	1800	1800	2300	---	1600	600	---	---	3100
28	4700	1500	1500	2000	1800	2200	---	1500	840	---	---	3500
29	4600	1800	1500	2000	2300	1800	---	1400	910	---	---	3500
30	2600	1800	1500	2100	---	1700	---	1500	1000	---	---	3900
31	3200	---	1600	2100	---	2500	---	1700	---	---	---	---
MEAN	3500	1600	1500	1600	1900	2100	1700	1500	1500	1400	---	3500

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	9810	1320	1210	1490	1360	4160	---	2050	2290	---	---
2	241	---	1220	1020	1430	1490	2690	---	2020	2160	---	---
3	242	---	1230	1080	1390	1560	4580	---	1700	1740	---	---
4	233	---	1210	1170	1490	1630	5050	---	1790	1500	---	---
5	233	10300	1010	951	1460	1290	4500	---	1540	1370	---	181
6	233	8140	1190	1020	1270	1410	3050	---	1280	1160	---	187
7	233	6350	984	866	918	1360	3530	2610	1010	1040	---	170
8	233	6310	959	916	1590	1360	5050	2450	831	881	---	170
9	267	6200	1040	955	1790	1310	3660	2370	894	702	---	176
10	241	5550	1120	1240	1520	1220	2760	2260	880	551	---	181
11	232	4540	1070	767	1440	---	2590	1680	773	470	---	173
12	266	4010	890	808	1370	---	2790	1740	744	379	---	164
13	241	3170	877	825	1370	1630	2700	1460	705	344	---	181
14	220	2980	924	791	1440	1550	2940	1420	606	302	---	176
15	214	2720	959	933	1470	1270	2400	1150	575	255	---	200
16	220	2250	661	933	1440	1350	2290	3950	676	150	---	205
17	227	2060	661	790	1470	1290	2280	4170	2910	142	---	184
18	236	2320	743	756	1390	1170	2100	3900	5010	162	---	180
19	236	1870	773	1460	1520	1130	2030	4580	6920	178	---	190
20	220	2760	791	1740	1630	1040	1900	3150	9920	156	---	190
21	243	4820	842	2180	1860	998	1760	3500	10500	151	---	209
22	243	3460	1030	2020	1360	898	---	4290	13400	138	---	226
23	233	2830	875	2320	1570	1630	---	4030	7290	124	---	180
24	240	2900	744	1800	1400	2260	---	3790	6000	102	---	190
25	170	2830	628	1530	1620	2400	---	3680	6460	---	---	195
26	97.5	2290	677	1790	1580	2580	---	3070	3700	---	---	160
27	100.0	2500	593	1880	1650	2320	---	2720	3610	---	---	151
28	103	2210	1080	2020	1410	3180	---	2480	4060	---	---	170
29	103	2000	1280	2300	1210	3160	---	2350	3540	---	---	161
30	140	1780	1240	1800	---	3260	---	2260	3380	---	---	179
31	2460	---	1260	1770	---	3490	---	2400	---	---	---	---
MEAN	285	4040	964	1340	1470	1740	3690	2860	3490	685	---	182

ARKANSAS RIVER BASIN

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

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6150	4480	3220	3310	4190	3900	3620	---	3220	1990	---	---
2	6270	---	3210	3180	4130	4090	2800	---	3350	2270	---	---
3	6090	---	3210	3190	4120	4150	3300	---	3520	2350	---	---
4	6150	---	3130	3260	4150	4040	3660	---	3640	2330	---	---
5	6090	3130	3040	2860	4010	4050	3200	---	3510	2600	---	6090
6	6090	3100	3070	2890	3710	4090	2310	---	3420	2570	---	6390
7	6150	3040	3150	2930	3830	4110	2700	2890	3270	2700	---	5780
8	6150	3370	3280	3390	3650	3950	3440	3230	3650	2800	---	5720
9	6330	3510	3300	3440	3650	4010	3410	3160	3670	2780	---	6030
10	6390	3530	3320	2960	3700	4190	2900	3110	3680	2770	---	6210
11	6390	3350	3240	3020	3710	---	3230	2820	3680	2780	---	6210
12	6450	3240	3270	3270	3740	---	3610	2970	3730	2870	---	6090
13	6330	2970	3310	3370	3730	4010	3930	3000	3730	3040	---	6210
14	6570	3160	3260	3320	3720	3820	3970	3360	3550	2980	---	5910
15	6390	3130	3280	3360	3650	3680	3760	2780	3880	3080	---	7110
16	6570	2900	3270	3360	3650	4170	3800	3360	3740	3150	---	7230
17	6690	2910	2990	3180	3830	3970	3700	3090	3620	3130	---	6570
18	6690	3360	3330	3390	3920	3400	3790	2810	3770	3150	---	6690
19	6630	3360	3310	3420	3990	3890	3800	3190	4280	3100	---	7110
20	6570	3310	3320	3500	4050	4540	3800	2530	4310	3600	---	7350
21	6870	3200	3310	3500	4000	4440	3730	2700	4020	3430	---	8000
22	6930	2850	3240	3370	3560	3850	---	3120	3510	3500	---	8240
23	6930	2850	3130	3560	3650	4550	---	3210	1800	3580	---	7050
24	6990	3100	2830	2920	3140	4030	---	3340	1590	3710	---	7350
25	6990	3250	2780	2970	3740	4940	---	3400	1800	---	---	7170
26	8000	3160	2940	3610	3500	5020	---	3220	1410	---	---	6390
27	8840	3650	3030	3710	3640	4620	---	3240	1570	---	---	5910
28	8840	3210	3140	4070	3660	4390	---	3080	1980	---	---	6630
29	8600	3620	3220	4060	4570	3620	---	3010	2110	---	---	6630
30	5010	3640	3230	4150	---	3470	---	3180	2270	---	---	7350
31	6210	---	3280	4140	---	4950	---	3490	---	---	---	---
MEAN	6690	3270	3180	3380	3810	4140	3450	3090	3180	2930	---	6670

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	19100	2830	2510	2960	2800	8360	---	4410	5430	---	---
2	457	---	2610	2160	2810	3050	5790	---	4230	4900	---	---
3	460	---	2630	2290	2860	3090	9440	---	3530	4090	---	---
4	448	---	2520	2390	2940	3290	10300	---	3620	3500	---	---
5	444	21500	2200	2090	2930	2600	9490	---	3180	2980	---	345
6	444	16800	2430	2110	2620	2890	7050	---	2730	2480	---	362
7	448	13800	2070	1810	1850	2800	7950	5390	2060	2330	---	328
8	448	13300	1970	1940	3230	2690	10200	5280	1690	1900	---	324
9	513	12800	2150	1930	3630	2630	7810	4980	1820	1500	---	342
10	466	11500	2320	2620	3120	2440	5720	4680	1800	1170	---	352
11	449	9500	2160	1660	2970	---	5570	3650	1580	1010	---	335
12	505	8130	1820	1650	2840	---	5600	3700	1540	837	---	312
13	461	6720	1810	1740	2830	3270	5590	3120	1460	747	---	352
14	426	6290	1880	1640	2970	3110	5440	2980	1270	644	---	335
15	414	5670	1970	1960	2980	2600	5000	2460	1170	524	---	384
16	426	4660	1350	1960	2920	2680	4590	8290	1400	315	---	390
17	434	4290	1410	1670	2960	2550	4700	8590	5840	296	---	355
18	452	4860	1550	1600	2870	2490	4190	8420	10500	340	---	343
19	448	3940	1600	2930	3030	2320	4050	9730	14100	368	---	365
20	426	5720	1640	3590	3300	2060	3810	7240	19400	311	---	357
21	464	10300	1740	4490	3730	2010	3650	7870	21200	306	---	389
22	468	7580	2080	4260	2850	1820	---	8930	27700	283	---	423
23	449	6210	1830	4850	3180	3220	---	8630	18000	261	---	343
24	453	6000	1620	3740	2920	4560	---	7920	15600	210	---	357
25	321	5750	1340	3260	3370	4750	---	7830	15900	---	---	368
26	181	4820	1420	3590	3260	4990	---	6580	10200	---	---	311
27	189	5080	1280	3870	3330	4670	---	5510	9450	---	---	287
28	193	4730	2260	4110	2880	6340	---	5100	9570	---	---	322
29	193	4030	2760	4670	2410	6350	---	5060	8200	---	---	304
30	271	3600	2690	3550	---	6660	---	4800	7660	---	---	337
31	4780	---	2580	3490	---	6910	---	4930	---	---	---	---
MEAN	548	8400	2020	2780	2980	3500	6420	6070	7690	1530	---	347

ARKANSAS RIVER BASIN

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

LOCATION.--Lat 36°40'13", long 97°18'33", in NW¼SE¼ 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 (6 km) downstream from Thompson Creek, 7.8 mi (12.6 km) upstream from Chikaskia River, and at mile 33.8 (54.4 km).

DRAINAGE AREA.--4,528 mi² (11,728 km²) of which 8 mi² (20.7 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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 (283.531 m) 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 (30.5 m) upstream at same datum.

REMARKS.--Records good. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 miles (111.8 km) upstream (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 39 years (water years 1942-80), 727 ft³/s (20.59 m³/s), 526,700 acre-ft/yr (649 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,300 ft³/s (2,760 m³/s) Oct. 11, 1973, gage height, 28.98 ft (8.833 m); 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 (8.17 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,700 ft³/s (473 m³/s) Nov. 21, gage height, 19.89 ft (6.062 m), no other peak above base of 11,000 ft³/s (312 m³/s); minimum daily discharge, 37 ft³/s (1.05 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	1790	560	395	770	383	1570	1910	740	1500	81	61
2	65	2400	519	381	922	278	1060	1700	675	1310	78	57
3	60	2180	478	359	944	407	1790	1540	623	1090	81	53
4	59	2740	446	333	822	424	2060	1400	562	939	85	51
5	60	2740	435	334	464	382	1920	1250	482	793	78	49
6	40	2460	420	335	383	388	1510	1130	448	702	75	50
7	60	2190	390	332	386	345	1320	1020	418	595	71	50
8	58	1820	394	327	392	350	1180	908	369	521	68	51
9	53	1600	360	304	340	345	1170	791	325	465	67	49
10	55	1430	342	297	458	336	1050	741	274	409	67	51
11	55	1270	338	276	464	324	873	704	261	359	65	62
12	55	1150	346	339	441	317	784	664	256	315	66	60
13	53	1020	338	284	413	292	711	593	239	279	68	49
14	53	924	314	261	401	331	668	565	221	247	73	46
15	54	835	305	253	422	368	616	584	214	223	73	49
16	56	760	298	246	452	364	604	2410	243	209	74	44
17	57	705	316	252	462	338	559	4750	2640	195	83	43
18	59	648	277	258	489	317	536	2710	7260	180	96	40
19	57	610	332	263	457	299	519	1750	7340	165	240	46
20	54	3840	292	310	447	318	472	1460	5930	155	191	46
21	51	15000	273	608	490	295	452	1300	8220	145	255	43
22	53	10500	271	826	597	253	429	1220	8100	135	163	38
23	53	5700	268	736	706	262	414	1210	3850	123	115	37
24	53	2410	282	643	587	527	506	1130	3490	120	95	39
25	51	1290	283	578	506	1220	1880	1040	3450	114	81	41
26	51	959	286	522	481	1450	2760	968	3250	110	76	41
27	48	835	263	459	454	1020	9230	2470	2910	106	68	36
28	46	714	280	453	464	804	5260	4210	2680	106	66	61
29	42	666	290	514	442	963	3140	1680	2070	100	63	60
30	44	648	316	470	---	2120	2300	1030	1740	93	61	57
31	102	---	386	757	---	2060	---	914	---	87	59	---
TOTAL	1743	71834	10696	12705	15056	17880	53743	45752	69080	11890	2880	1484
MEAN	56.2	2394	345	410	519	577	1791	1476	2303	384	92.6	49.5
MAX	102	15000	560	826	944	2120	9230	4750	8220	1500	255	62
MIN	42	610	263	246	340	253	414	565	214	87	59	37
AC-FT	3460	142500	21220	25200	29860	35460	106800	90750	137000	23580	5710	2940

CAL YR 1979 TOTAL 289089 MEAN 792 MAX 15000 MIN 12 AC-FT 573400
WTR YR 1980 TOTAL 314743 MEAN 860 MAX 15000 MIN 37 AC-FT 624300

ARKANSAS RIVER BASIN

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07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952-63, 1968 to December 1980 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1959 to September 1963, July 1968 to December 1980.

WATER TEMPERATURE: November 1959 to September 1963, July 1968 to December 1980.

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

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	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)
OCT									
05...	1700	61	5320	8.0	20.0	450	210	110	43
15...	1730	57	5720	7.9	17.0	480	240	120	43
25...	1755	50	5930	7.9	18.0	450	220	110	43
NOV									
05...	1730	2700	2160	7.5	11.0	250	160	72	16
15...	1730	821	5320	7.6	10.0	390	280	110	29
25...	1045	1280	3120	7.7	8.0	270	160	72	21

DATE	SODIUM, DIS- SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CaCO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT									
05...	950	88	19	7.5	240	270	1500	3070	4.1
15...	1000	88	20	7.6	240	270	1600	3330	4.5
25...	1100	84	23	7.7	230	280	1700	3450	4.6
NOV									
05...	350	80	9.7	9.2	87	170	540	1240	1.6
15...	970	84	21	9.9	110	280	1500	3050	4.1
25...	510	80	14	7.9	110	210	750	1690	2.3

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

[illegible]

ARKANSAS RIVER BASIN

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07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

CATION.--Lat 36°48'31", long 97°16'39", in NE¼NW¼ sec.23, T.27 N., R.1 W., Kay County, Hydrologic Unit 11060005, near right bank on downstream side of pier of St. Louis-San Francisco Railway Co. bridge at northeast edge of Blackwell, 0.2 mi (0.3 km) downstream from Bitter Creek, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--1,859 mi² (4,815 km²).

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 (29.487 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to April, 1952.

REMARKS.--Records good. Some regulation at low flow by Lake Blackwell, capacity, 3,600 acre-ft (4.44 hm³) 12.6 mi (20.3 km) above station. Small diversion made from reservoir for municipal supply of city of Blackwell.

AVERAGE DISCHARGE.--45 years, 480 ft³/s (13.59 m³/s), 347,800 acre-ft/yr (429 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft³/s (2,410 m³/s), June 22, 1942, gage height, 33.3 ft (10.15 m), 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 (10.4 m), present site and datum, from information by local residents, discharge 100,000 ft³/s (2,830 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 1	1630	*12,200 346	*26.73 8.147	Aug. 17	2030	8,100 229	22.33 6.806
Nov. 21	1700	8,770 248	23.31 7.105				

Minimum, 2.7 ft³/s (0.076 m³/s) Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	10900	203	215	142	259	1670	407	196	124	9.8	60
2	5.9	5780	191	191	137	163	1060	370	177	106	5.9	52
3	4.9	1440	182	179	161	173	3970	345	167	89	6.1	48
4	2.9	826	175	173	196	280	4070	322	179	81	6.8	44
5	3.4	603	170	170	208	268	1310	302	151	75	7.6	43
6	4.8	473	167	165	194	229	892	285	143	67	14	40
7	5.3	392	160	156	184	212	741	270	133	59	19	40
8	5.7	360	154	137	125	205	639	250	126	53	31	38
9	5.6	486	150	118	104	204	958	234	116	49	33	38
10	5.8	1020	144	130	117	206	459	224	111	45	31	38
11	5.3	621	145	168	142	192	433	216	109	40	31	36
12	4.7	413	142	157	161	211	405	212	105	36	30	36
13	4.4	324	140	149	167	259	384	202	100	34	29	37
14	4.4	283	139	143	203	343	338	193	98	29	33	38
15	6.4	256	138	141	259	304	323	230	95	24	35	59
16	31	232	137	141	184	259	304	797	551	19	628	49
17	18	219	117	138	198	224	280	1150	3260	22	5140	38
18	10	205	90	137	147	203	276	792	1180	20	3540	35
19	7.6	197	99	157	214	191	272	513	2340	12	683	31
20	7.7	2350	151	1170	305	181	259	377	1620	9.7	398	29
21	8.0	8040	172	960	917	163	243	316	1380	9.6	244	26
22	11	4430	154	652	1170	158	227	352	1740	9.1	187	28
23	9.0	1700	146	429	707	192	216	315	3420	7.6	153	25
24	8.0	595	142	334	459	3350	2770	284	1350	4.8	130	21
25	18	380	138	290	725	3640	3600	257	645	4.2	109	21
26	25	340	136	257	806	1110	5250	228	467	12	87	321
27	31	280	135	208	482	738	3330	637	330	19	75	87
28	36	250	152	143	365	1000	939	740	261	20	74	61
29	36	230	170	115	316	3070	984	354	220	34	84	109
30	37	210	210	127	---	5910	468	265	168	34	88	86
31	4940	---	232	134	---	3910	---	221	---	17	76	---
TOTAL	5309.2	43835	4785	7784	9495	27807	36270	11660	20938	1165.0	12018.2	1614
MEAN	171	1461	154	251	327	897	1209	376	698	37.6	388	53.8
MAX	4940	10900	232	1170	1170	5910	5250	1150	3420	124	5140	321
MIN	2.9	197	90	115	104	158	216	193	95	4.2	5.9	21
AC=FT	10530	86950	9490	15440	18830	55160	71940	23130	41530	2310	23840	3200

CAL YR 1979	TOTAL	189714.1	MEAN 520	MAX 10900	MIN 2.9	AC=FT 376300
WTR YR 1980	TOTAL	182680.4	MEAN 499	MAX 10900	MIN 2.9	AC=FT 362300

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK

LOCATION.--Lat 36°30'09", long 96°43'22", in NW¼ 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 (3.2 km) downstream from Salt Creek, 2 mi (3.2 km) upstream from Grayhorse Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--54,465 mi² (141,064 km²), of which 7,615 mi² (19,723 km²) 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 U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft (236.738 m) National Geodetic Vertical Datum of 1929.

Oct. 1, 1925, to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft (366 m) downstream at same datum. Nov. 14, 1935, to Feb. 23, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi (96.1 km) 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 ft³/s (136.7 m³/s), 3,496,000 acre-ft/yr (4.31 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 211,000 ft³/s (5,980 m³/s) Oct. 13, 1973, gage height, 22.98 ft (7.004 m); minimum, 14 ft³/s (0.40 m³/s) Oct. 12, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1923, reached a stage of 23.8 ft (7.25 m), referred to outside gage on basis of stages observed in 1923 and 1944 at site 1,200 ft (366 m) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73,600 ft³/s (2,080 m³/s) Nov. 21, gage height, 15.35 ft (4.679 m); minimum daily discharge, 118 ft³/s (3.34 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499	383	8890	1880	3810	7010	14300	11000	4790	3450	567	737
2	477	9110	8740	2380	3520	5500	12600	9870	4110	3090	434	786
3	466	20600	8590	2460	2290	5440	16300	8790	3710	2750	403	681
4	455	16400	8470	2370	2160	5200	19900	7480	3400	2540	393	486
5	455	15300	8400	2290	2250	5250	23800	7090	3270	2310	375	333
6	444	15100	8180	2250	2220	5330	20200	6590	2880	2190	355	279
7	444	14800	7770	2200	2470	4660	18500	6250	1980	2040	332	227
8	444	14600	7030	2190	2650	2800	17800	6060	1770	1960	312	244
9	413	14300	5020	2090	2800	2420	17100	5900	1670	1880	296	258
10	424	11800	4850	1560	3630	2260	16800	5300	1590	1860	281	421
11	413	9770	4500	1980	3370	2130	16400	3920	1500	1800	267	340
12	413	9450	3170	2040	3160	2160	12900	3880	1410	1700	314	237
13	393	9380	2900	2040	2500	2170	10500	3550	1010	1300	185	217
14	393	9080	2770	2100	2670	2510	10400	3360	823	1250	141	178
15	403	8850	2590	2080	3260	2580	10200	3470	1150	1170	137	198
16	424	8660	2390	1960	3030	2680	10000	4910	1270	1120	128	153
17	424	8210	2290	1860	2870	2670	9910	6290	4430	1080	167	182
18	434	6890	2280	1920	2750	2710	9780	10500	12100	1050	406	145
19	455	6790	2050	2120	2690	3520	9610	9510	20600	1030	4030	200
20	444	10900	1970	2150	2700	3600	9550	6580	20100	862	3820	146
21	424	56000	1950	1960	2530	3340	9450	5400	15900	808	2570	179
22	444	42300	1930	2410	2510	2120	8770	4800	14400	716	2050	174
23	434	25900	1900	3230	2930	2100	6860	4470	14600	677	1850	118
24	393	16200	1880	4500	3460	4900	10600	4280	10700	690	1650	155
25	335	13600	1840	4350	3210	3430	13800	4080	8290	627	1500	219
26	316	11500	1820	4150	4270	8930	30600	3880	6540	690	1510	210
27	307	12600	1810	4010	8250	10400	28700	3770	5750	627	3670	244
28	307	15400	1910	3950	8240	9740	27500	5040	5070	567	3970	251
29	307	11800	1940	3980	8020	8780	19800	9780	4450	544	3710	431
30	354	9000	1860	3870	---	10300	13200	8250	3950	455	1380	433
31	424	---	1840	3850	---	13000	---	6320	---	477	865	---
TOTAL	12762	435073	123530	82180	100220	149640	455430	190370	183213	43310	38068	8862
MEAN	412	14500	3985	2651	3456	4827	15190	6141	6107	1397	1228	295
MAX	499	56000	8890	4500	8250	13000	30600	11000	20600	3480	4030	786
MIN	307	383	1810	1560	2160	2100	6860	3360	823	455	128	118
AC-FT	25310	863000	245000	163000	198800	296800	904100	377600	363400	85910	75510	17580
CAL YR 1979 TOTAL	1805619			MEAN 4947	MAX 56000	MIN 307	AC-FT 3581000					
WTR YR 1980 TOTAL	1823058			MEAN 4981	MAX 56000	MIN 118	AC-FT 3616000					

ARKANSAS RIVER BASIN

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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 (discontinued).

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis.

Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 7,510 micromhos Sept. 14, 1955; minimum daily, 157 micromhos Nov. 21, 1979.

WATER TEMPERATURE: Maximum daily, 37.0°C July 28, 1956; minimum, -0.5°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,550 micromhos June 26; minimum daily, 157 micromhos Nov. 21.

WATER TEMPERATURE: Maximum, 32.5°C July 2; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT												
04...	1015	455	1200	7.6	13.5	4.8	--	--	--	--	260	100
05...	0730	444	1700	7.9	13.0	--	--	--	--	--	270	96
15...	0730	393	1700	7.8	13.0	--	--	--	--	--	280	120
25...	0730	344	1740	7.8	13.0	--	--	--	--	--	270	110
NOV												
05...	0730	15300	935	8.2	13.0	--	--	--	--	--	200	67
15...	0730	8920	803	8.0	9.0	--	--	--	--	--	160	50
19...	1500	6780	950	7.5	17.0	55	11.2	142	150	90	150	49
25...	1100	13600	585	7.9	9.0	--	--	--	--	--	140	39
DEC												
05...	0730	8400	758	7.9	7.0	--	--	--	--	--	150	35
12...	1230	3090	1100	--	4.0	28	13.0	153	--	56	200	73
15...	0730	2700	1290	8.0	4.0	--	--	--	--	--	200	63
25...	0730	1840	1520	7.9	5.0	--	--	--	--	--	270	41
JAN												
05...	0730	2320	1330	8.2	3.0	--	--	--	--	--	240	100
15...	0730	2080	1380	8.1	9.0	--	--	--	--	--	240	97
16...	1045	2040	1300	--	10.0	34	11.8	102	49	44	240	110
25...	0730	4390	1000	7.8	6.0	--	--	--	--	--	200	78
FEB												
05...	0730	2230	2240	7.9	3.0	--	--	--	--	--	310	150
14...	0945	2630	1650	7.6	4.5	16	13.0	104	44	27	270	120
15...	0730	3260	1310	7.8	3.0	--	--	--	--	--	320	130
25...	0730	3260	1530	8.0	4.0	--	--	--	--	--	260	110
MAR												
05...	0730	5260	1200	7.7	3.0	--	--	--	--	--	240	90
07...	1100	5140	1350	8.2	8.0	22	13.7	121	46	K17	250	110
15...	0730	2540	1550	8.0	9.0	--	--	--	--	--	270	110
25...	1230	3000	1080	7.8	7.5	--	--	--	--	--	220	79
APR												
05...	0730	24000	1140	8.2	10.0	--	--	--	--	--	230	87
10...	1300	16900	950	7.8	14.0	44	11.4	114	51	66	200	67
15...	0730	10200	875	8.0	10.0	--	--	--	--	--	190	37
25...	0730	12900	411	7.3	15.0	--	--	--	--	--	150	21
MAY												
05...	1200	7130	1480	7.9	19.5	--	--	--	--	--	220	91
06...	1300	6580	1400	7.2	22.0	19	9.4	109	40	92	240	110
15...	1830	3560	1520	7.9	17.0	--	--	--	--	--	240	100
25...	0730	4120	1700	7.6	24.0	--	--	--	--	--	280	130
JUN												
05...	0730	3290	1650	7.6	24.0	--	--	--	--	--	280	120
15...	0930	1190	2370	7.6	23.5	--	--	--	--	--	360	200
19...	1030	23600	350	7.9	22.0	430	5.6	65	>1200	11950	79	8
25...	0730	8660	1850	7.5	28.5	--	--	--	--	--	220	110
JUL												
05...	0830	2340	2300	7.9	27.0	--	--	--	--	--	320	180
15...	0730	1170	2050	8.0	26.0	--	--	--	--	--	310	150
15...	1130	1170	1894	8.2	26.0	7.2	7.7	97	K19	K19	320	140
25...	0800	627	1890	7.7	25.5	--	--	--	--	--	290	130

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	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)
AUG												
05...	0730	375	1850	7.6	25.0	--	--	--	--	--	270	110
15...	1200	133	1930	7.6	27.5	--	--	--	--	--	290	110
19...	1330	5020	860	8.2	30.0	360	7.2	97	>6000	1980	220	65
25...	0730	1520	1250	7.7	25.5	--	--	--	--	--	220	71
SEP												
05...	0730	344	1510	7.6	25.5	--	--	--	--	--	260	100
15...	0730	208	1840	7.8	24.0	--	--	--	--	--	280	100
23...	1400	99	1886	8.3	22.4	.50	6.8	79	K7	K79	320	140
25...	0730	239	1870	7.6	20.0	--	--	--	--	--	300	130
OCT												
04...	74	19	240	65	6.4	10	160	120	380	.4	4.0	952
05...	75	19	230	72	6.1	7.1	170	100	380	--	--	949
15...	78	21	230	63	6.0	7.2	160	100	380	--	--	950
25...	77	19	240	72	6.4	7.2	160	110	390	--	--	901
NOV												
05...	59	12	120	63	3.7	7.1	130	73	170	--	--	520
15...	48	9.8	100	63	3.4	6.4	110	58	150	--	--	437
19...	44	9.1	120	69	4.3	6.4	98	52	170	.3	5.3	459
25...	41	8.4	74	59	2.8	5.8	98	44	110	--	--	374
DEC												
05...	44	8.6	90	56	3.3	5.8	110	48	140	--	--	418
12...	60	13	160	69	4.9	6.3	130	81	250	.3	6.9	656
15...	60	13	170	64	5.2	5.8	140	75	260	--	--	715
25...	77	19	220	63	5.8	5.8	230	92	310	--	--	853
JAN												
05...	69	17	210	65	5.9	5.5	140	100	320	--	--	811
15...	67	17	220	66	6.2	5.8	140	100	340	--	--	841
16...	67	18	210	65	5.9	6.0	130	100	330	.3	7.9	837
25...	56	14	150	62	4.6	5.2	120	83	230	--	--	596
FEB												
05...	85	23	350	71	8.7	6.3	160	140	550	--	--	1270
14...	78	19	290	69	7.6	5.6	150	130	460	.3	7.9	1100
15...	100	17	150	50	3.7	3.1	190	60	280	--	--	711
25...	74	19	220	64	5.9	5.0	150	120	330	--	--	878
MAR												
05...	68	17	160	58	4.5	5.8	150	78	240	--	--	681
07...	71	17	210	64	5.8	6.4	140	110	340	.3	7.8	867
15...	77	20	220	63	5.8	5.6	160	110	340	--	--	887
25...	63	15	130	56	3.8	4.3	140	72	210	--	--	606
APR												
05...	66	15	140	57	4.0	5.5	140	85	220	--	--	636
10...	59	12	100	52	3.1	5.6	130	68	160	.3	8.6	528
15...	55	12	99	53	3.2	5.0	150	61	150	--	--	478
25...	51	5.7	24	25	.9	3.6	130	16	36	--	--	239
MAY												
05...	62	16	200	66	5.9	6.1	130	91	330	--	--	833
06...	67	17	240	68	6.8	6.9	130	100	350	.3	8.5	877
15...	68	18	200	63	5.6	5.5	140	110	330	--	--	862
25...	76	21	220	63	5.8	6.3	150	150	360	--	--	973
JUN												
05...	79	21	230	63	5.9	6.4	160	130	340	--	--	935
15...	93	31	350	67	8.0	6.4	160	170	560	--	--	1340
19...	22	5.8	33	45	1.6	8.1	71	33	42	1.2	.1	187
25...	60	17	290	73	8.5	8.7	110	120	430	--	--	1020
JUL												
05...	89	23	360	70	8.8	12	140	190	560	--	--	1160
15...	85	24	280	65	6.9	11	160	150	470	--	--	1130
15...	86	25	300	67	7.3	8.1	180	150	480	.5	3.7	1200
25...	77	24	260	65	6.6	10	110	120	440	--	--	1270
AUG												
05...	72	22	280	68	7.4	9.5	160	130	400	--	--	1010
15...	79	23	280	67	7.1	9.1	180	140	420	--	--	1060
19...	58	17	100	49	3.0	8.6	150	85	150	.4	6.8	524
25...	62	16	170	62	5.0	7.8	150	95	250	--	--	695
SEP												
05...	72	20	210	63	5.6	6.3	160	110	340	--	--	842
15...	76	22	270	67	7.0	9.0	180	110	430	--	--	1030
23...	87	25	260	63	6.3	7.4	180	120	440	.4	6.2	118
25...	83	23	270	66	6.8	5.9	170	130	430	--	--	10

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DISSOLV (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)	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)
OCT												
04...	.51	.33	.86	3.8	.35	.120	.37	.070	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
19...	.00	13	2.8	12	14	.240	.74	.160	2	0	2	400
25...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	.31	.63	3.0	13	1.8	.200	.61	.180	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	.09	.57	1.4	6.2	1.4	.320	.98	.180	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.03	.71	1.6	7.2	1.6	.240	.74	.210	2	1	1	300
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
07...	.00	1.1	2.3	10	2.3	.280	.86	.210	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
10...	.40	1.5	3.3	15	3.1	.300	.92	.200	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	.70	1.3	2.8	13	2.1	.260	.80	.110	3	1	2	200
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
19...	1.9	1.2	3.9	17	3.2	.600	1.8	.160	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	.96	.24	1.2	5.3	.25	.120	.37	.060	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
19...	1.5	2.7	5.4	24	3.9	.820	2.5	.160	--	--	5	500
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
23...	.00	1.4	1.2	5.3	1.4	.150	.46	.130	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	SILVER, DIS- SOLVED (UG/L	ZINC, TOTAL RECOV- ERABLE (UG/L	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L	ZINC, DIS- SOLVED (UG/L	CARBON, ORGANIC TOTAL (MG/L	CARBON, ORGANIC DIS- SOLVED (MG/L	CARBON, ORGANIC SUS- PENDE D TOTAL (MG/L	PHYTO- PLANK- TON, TOTAL (CELLS	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DATE	AS AG)	AS ZN)	AS ZN)	AS ZN)	AS C)	AS C)	AS C)	PER ML)			
OCT											
04...	--	--	--	--	6.4	--	--	--	122	150	96
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	0	210	180	30	12	--	--	2400	121	2220	93
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	4.0	--	--	--	104	868	99
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	9.9	--	--	--	196	1080	94
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	0	140	140	3	--	3.8	.2	--	167	1190	93
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	6.6	--	--	12000	117	1620	72
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	11	--	--	--	13	593	86
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	0	100	30	70	--	11	1.2	11000	1220	21700	6
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	26	--	--	2600	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	6.4	--	--	73000	427	1350	69
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	0	190	180	10	--	5.5	--	--	1110	15000	99

ARKANSAS RIVER BASIN

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07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	1690	735	1300	1370	972	1020	891	1230	1990	1940	---
2	1770	1020	769	1270	1320	1040	1160	1110	1450	1710	1910	---
3	1490	799	776	1300	1550	1010	1090	1100	1510	2070	1880	---
4	1720	868	757	1380	1810	1250	1100	1360	1490	2240	1870	1460
5	1780	866	760	1340	2280	1260	1150	1570	1630	2250	1860	1530
6	1670	851	761	1340	2400	1280	1150	1630	1630	2020	1860	1610
7	1670	854	786	1310	2030	1380	1110	1640	1850	2080	1870	1660
8	1670	813	810	1320	1760	1650	1060	1520	1940	2070	1880	1680
9	1630	959	1010	1660	1780	1900	1010	1470	1910	2040	1860	1670
10	1710	821	1040	1400	1770	1900	794	1400	1980	1950	1860	1540
11	1660	870	1020	1630	1460	1880	989	1490	1970	1900	1870	1690
12	1600	821	1110	1350	1400	1890	1010	1820	1860	1870	1870	1710
13	1690	771	1600	1340	1600	1870	1010	1570	1780	1870	1880	1790
14	1770	847	1230	1310	1630	1650	936	1610	2030	2040	1910	1840
15	1700	748	1270	1320	1310	1550	881	1600	2110	2190	1930	1850
16	1680	717	1540	1340	1720	1560	817	1270	1790	2040	1970	1880
17	1680	726	1590	1400	1280	1600	839	1180	860	2000	1850	1960
18	1630	873	1600	1320	1780	1540	857	1170	875	1970	1810	2000
19	1810	833	1400	1120	1420	1420	862	919	534	1970	1940	2040
20	1470	837	1450	1160	1870	1280	858	1100	517	1960	---	2040
21	2100	210	1350	1200	1720	1380	857	1320	648	1920	---	2000
22	1750	237	1730	1470	1750	1670	839	1580	920	1950	---	1910
23	1690	385	1580	1320	1720	800	890	1910	1240	1950	---	1970
24	1660	605	1540	1040	1530	347	920	1840	1540	1940	---	1940
25	1750	585	1520	1040	1560	935	504	1800	1590	1890	---	1980
26	1650	599	1510	1140	1540	1340	271	1970	2470	1880	---	1970
27	1750	618	1530	1130	1190	1060	629	1950	2250	1890	---	1950
28	1770	639	1560	1440	953	976	623	1900	2370	1880	---	2000
29	1760	664	1500	1370	980	1040	782	1770	2450	1890	---	2280
30	1810	760	1490	865	---	961	894	944	1960	1890	---	2220
31	1660	---	1440	1250	---	1060	---	969	---	1880	---	---
MEAN	1700	763	1250	1300	1600	1340	897	1460	1610	1970	1890	1860

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700	1730	730	1290	1250	1000	1000	891	1210	1950	1920	---
2	1700	1290	760	1270	1330	1200	1130	1080	1450	1670	1920	1400
3	1700	767	762	1280	1550	1190	1080	1060	1470	2040	1880	1390
4	1720	859	760	1370	1740	1230	1120	1300	1450	2230	1870	1480
5	1700	935	758	1330	2240	1200	1140	1480	1650	2300	1850	1510
6	1660	879	764	1330	2420	1280	1160	1560	1640	2050	1850	1580
7	1670	850	784	1320	2190	1300	1160	1550	1720	2010	1860	1630
8	1660	813	805	1330	1750	1590	1060	1520	1930	2090	1880	1660
9	1680	830	1010	1660	1740	1870	956	1470	1910	2050	1860	1700
10	1700	841	1040	1660	1520	1890	950	1420	1970	1970	1850	1410
11	1690	880	1030	2080	1380	1910	980	1560	1970	1890	1850	1670
12	1690	841	1090	1420	1390	1880	1020	1530	1880	1860	1860	1720
13	1700	827	1240	1390	1660	1850	1010	1590	1780	1830	1880	1750
14	1690	846	1250	1680	1830	1640	924	1660	1920	2030	1900	1810
15	1700	803	1290	1930	1310	1550	875	1520	2370	2050	1930	1840
16	1670	770	1360	1620	1100	1540	823	1020	1810	2030	1950	1870
17	1660	722	1540	1440	1540	1560	829	1090	872	2000	1940	1930
18	1620	866	1510	1370	1540	1600	852	1170	696	1990	1530	1990
19	1680	817	1450	1400	1530	1440	850	872	447	1930	2450	1980
20	1660	772	1440	1490	1520	---	840	1070	517	1960	434	2080
21	1780	157	1380	1580	1690	1320	849	1250	571	1950	927	1990
22	1740	220	1510	1500	1750	1720	833	1530	1050	1950	1330	1920
23	1710	394	1580	1440	1720	---	954	1840	1050	1940	1150	1940
24	1700	584	1540	1510	1520	480	925	1850	1530	1930	1220	1910
25	1740	585	1520	1000	1530	1080	411	1700	1850	1890	1250	1870
26	1710	589	1510	1150	1490	1350	294	1820	2550	1860	1180	1960
27	1730	620	1520	1160	972	1070	592	1960	2140	1860	1180	1980
28	1760	644	1520	1230	966	978	582	1910	2230	1860	1160	1900
29	1770	654	1500	1230	982	1040	741	1990	2520	1870	1180	1960
30	1770	746	1500	1070	---	969	864	936	1910	1870	1240	2260
31	1660	---	1440	1080	---	1120	---	954	---	1870	1410	---
MEAN	1700	771	1220	1410	1560	1370	893	1420	1600	1960	1600	1790

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	11.5	6.5	6.0	.0	.5	11.0	17.5	26.5	31.5	27.5	---
2	20.0	13.5	6.0	5.5	2.0	1.0	9.5	17.5	26.0	32.5	26.5	---
3	19.5	15.0	6.0	3.5	4.0	3.0	10.0	19.0	27.5	31.0	27.5	---
4	17.0	14.5	7.0	3.0	3.5	5.5	10.5	20.5	27.0	31.0	28.0	30.5
5	16.5	14.0	8.0	3.0	4.5	4.0	11.5	20.5	27.5	31.5	28.0	29.5
6	18.5	13.0	7.5	4.5	4.5	6.0	12.0	23.5	28.0	31.5	29.0	29.5
7	19.5	12.5	7.5	2.5	1.5	9.0	12.0	20.0	29.5	31.5	29.0	29.0
8	21.5	12.0	7.0	1.5	1.0	9.5	12.0	17.5	25.0	31.0	29.5	29.0
9	20.0	11.5	7.0	2.0	1.0	10.5	12.5	17.5	25.0	31.0	29.5	28.5
10	14.0	11.0	9.0	5.0	.5	11.5	13.0	20.0	26.5	31.5	29.5	26.5
11	17.5	10.0	11.0	6.0	1.5	7.0	12.0	23.0	27.5	31.5	29.0	26.5
12	19.0	11.0	5.0	4.5	2.0	6.5	11.0	22.0	27.0	31.5	29.5	27.0
13	15.5	11.0	3.5	5.0	4.5	9.0	10.5	22.5	26.5	31.5	28.5	28.5
14	14.0	11.0	5.0	6.0	5.0	10.5	12.0	21.5	26.5	30.0	28.5	28.5
15	15.0	11.5	5.5	10.5	3.0	12.5	14.0	18.0	27.0	31.5	28.0	27.0
16	17.5	11.0	2.5	10.0	.5	14.0	13.5	16.0	24.5	29.5	28.5	25.5
17	20.0	11.5	.0	9.5	.0	11.0	12.5	18.5	18.5	31.0	26.5	21.0
18	21.0	12.0	1.0	9.0	1.5	10.5	14.5	19.5	21.0	30.5	---	23.5
19	21.5	12.5	3.5	8.5	5.0	12.0	16.0	20.5	24.5	31.0	---	26.0
20	22.0	12.0	5.5	6.5	7.5	10.0	17.0	20.5	25.5	31.0	---	25.5
21	22.0	14.5	7.0	5.5	9.0	11.0	17.5	21.0	25.0	31.0	---	25.5
22	15.5	13.0	9.0	4.5	8.0	13.0	18.0	21.5	25.5	29.5	---	25.0
23	14.5	11.0	8.5	4.0	8.0	10.0	17.5	22.5	27.5	28.0	---	20.5
24	15.5	10.0	7.0	5.5	7.0	8.0	14.5	24.5	30.5	28.5	---	21.0
25	16.5	9.5	6.5	6.5	5.5	7.0	11.0	27.0	31.5	29.0	---	22.0
26	16.5	9.5	7.0	4.0	5.0	9.0	13.5	28.5	32.0	29.5	---	18.0
27	17.5	9.0	8.0	.5	6.5	9.5	14.5	26.5	32.0	30.0	---	17.0
28	17.0	8.0	7.0	.0	8.0	11.0	16.5	26.0	31.5	30.5	---	16.0
29	16.0	6.0	6.0	.0	3.5	9.0	17.0	25.0	31.5	31.0	---	17.0
30	17.0	5.5	5.5	.0	---	7.5	17.0	25.5	31.5	28.5	---	20.5
31	12.5	---	5.5	.0	---	10.0	---	27.0	---	28.5	---	---
MEAN	18.0	11.5	6.0	4.5	4.0	8.5	13.5	21.5	27.0	30.5	28.5	24.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	8.5	5.0	5.0	.0	.0	9.0	15.0	25.0	28.0	25.0	---
2	16.0	11.0	5.0	5.0	2.0	.0	10.0	16.5	24.0	29.0	24.0	24.5
3	17.0	14.5	4.0	5.0	3.0	.0	8.5	15.5	24.5	29.0	24.0	23.0
4	13.5	14.0	5.0	1.0	4.0	4.5	9.0	17.0	25.0	28.0	25.0	24.5
5	13.0	13.0	7.0	3.0	3.0	3.0	10.0	19.5	24.0	27.0	25.0	25.5
6	18.0	11.5	6.0	4.0	3.5	3.0	11.0	23.5	25.0	28.0	26.0	26.0
7	16.0	11.5	6.0	2.0	3.5	7.0	11.0	20.0	26.0	28.0	25.5	26.0
8	19.5	12.0	6.0	1.0	.0	7.0	11.0	15.5	22.5	27.0	26.0	25.5
9	16.0	12.0	5.0	1.5	.0	8.5	10.5	15.0	21.5	27.0	26.0	26.0
10	10.5	10.5	7.0	3.0	.0	9.0	11.0	17.0	22.5	27.0	26.5	22.0
11	13.0	9.0	12.0	5.5	.0	8.0	12.5	21.5	24.0	28.0	25.5	23.0
12	17.0	9.5	5.0	4.5	.0	6.5	10.5	22.0	24.0	28.0	26.0	29.0
13	13.0	9.0	2.0	4.0	2.5	6.0	10.0	20.0	23.0	26.5	29.5	24.0
14	12.0	9.0	4.0	4.5	5.0	7.5	8.5	19.0	23.0	26.5	26.0	24.5
15	13.0	9.0	4.0	9.0	3.0	9.0	10.0	17.0	23.5	26.0	27.0	24.0
16	15.5	9.0	2.0	9.0	.0	13.0	12.0	16.0	25.0	26.5	25.0	24.0
17	17.5	9.0	.5	8.0	.0	10.0	12.0	17.0	24.0	27.5	25.0	17.0
18	19.0	12.0	.0	7.5	.5	8.5	11.5	18.0	21.0	27.0	23.0	18.5
19	19.5	12.0	2.0	9.0	3.5	9.0	13.0	18.5	23.0	27.5	25.5	23.0
20	20.0	13.0	4.0	7.0	5.5	---	14.5	20.0	24.5	27.0	25.5	22.5
21	20.5	14.0	6.0	6.0	8.0	11.0	15.0	19.0	23.5	28.0	25.5	23.0
22	12.5	11.0	8.0	5.0	7.0	12.0	15.5	19.5	24.0	26.5	24.0	24.0
23	10.5	10.0	8.0	4.0	7.0	---	16.0	20.0	25.0	24.0	23.0	18.0
24	11.5	9.0	7.0	4.0	5.5	9.0	17.0	21.5	26.0	24.0	25.0	18.0
25	13.0	9.0	5.0	6.0	4.0	7.5	15.0	24.0	25.5	25.5	25.5	20.0
26	13.5	8.0	7.0	4.0	3.0	6.0	10.0	26.0	28.0	27.0	26.0	17.0
27	15.0	8.0	7.0	.5	4.0	9.5	13.0	24.0	29.0	26.0	26.0	17.0
28	14.0	7.0	7.0	.0	6.0	9.0	13.0	24.0	29.5	26.0	26.5	16.0
29	13.0	5.0	5.5	.0	5.5	10.0	15.0	24.0	28.5	27.0	25.0	16.5
30	17.0	4.0	6.0	.5	---	8.0	16.0	23.0	28.5	25.5	25.0	17.5
31	12.0	---	6.0	.0	---	7.0	---	25.0	---	25.0	25.5	---
MEAN	15.0	10.0	5.5	4.0	3.0	7.0	12.0	20.0	25.0	27.0	25.5	22.0

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	120	54	93	97	70	73	64	88	140	140	---
2	120	73	56	91	94	75	83	80	100	120	130	---
3	110	58	57	93	110	73	78	79	110	150	130	---
4	120	63	55	98	130	89	79	97	110	160	130	100
5	120	63	55	95	160	90	82	110	120	160	130	110
6	120	62	56	95	170	91	82	120	120	140	130	110
7	120	62	57	93	140	98	80	120	130	150	130	120
8	120	59	59	90	120	120	76	110	140	150	130	120
9	120	69	73	120	130	130	73	100	130	140	130	120
10	120	60	75	99	120	130	58	99	140	140	130	110
11	120	63	73	120	100	130	71	110	140	130	130	120
12	110	60	80	96	99	130	73	130	130	130	130	120
13	120	56	110	95	110	130	73	110	130	130	130	130
14	120	61	88	93	120	120	68	110	140	140	130	130
15	120	55	91	94	93	110	64	110	150	150	140	130
16	120	53	110	95	120	110	59	91	130	140	140	130
17	120	53	110	99	91	110	61	84	62	140	130	140
18	120	63	110	94	130	110	62	84	63	140	130	140
19	120	60	90	80	100	100	62	66	40	140	140	140
20	100	61	100	83	130	91	62	79	39	140	---	140
21	150	18	96	86	120	98	62	94	48	140	---	140
22	120	20	120	100	120	120	61	110	66	140	---	130
23	120	30	110	94	120	58	64	130	88	140	---	140
24	120	45	110	75	110	27	66	130	110	140	---	140
25	120	43	110	75	110	67	38	130	110	130	---	140
26	120	44	110	82	110	95	22	140	170	130	---	140
27	120	46	110	81	85	76	46	140	160	130	---	140
28	120	47	110	100	69	70	46	130	170	130	---	140
29	120	49	110	97	71	75	57	120	170	130	---	160
30	130	55	110	63	---	69	65	68	140	130	---	160
31	120	---	100	80	---	76	---	70	---	130	---	---
MEAN	120	56	89	92	110	95	65	100	110	140	130	130

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	124	1300	472	998	1320	2820	1900	1140	1300	214	---
2	155	1800	1320	585	893	1110	2820	2130	1110	1000	152	---
3	138	3230	1320	618	680	1070	3430	1870	1100	1110	141	---
4	107	2700	1260	627	758	1250	4200	1960	1010	1100	138	131
5	160	2600	1250	587	972	1280	5270	2110	1060	998	132	98.0
6	104	2530	1200	577	1020	1310	4070	2140	933	828	125	82.9
7	104	2080	1200	552	934	1230	4000	2030	895	826	117	73.5
8	104	2330	1120	556	859	907	3650	1800	669	794	110	79.1
9	134	2660	989	677	983	849	3370	1590	586	711	104	83.6
10	137	1910	982	617	1180	793	2630	1420	601	703	98.6	125
11	134	1660	887	642	910	748	3100	1160	567	632	93.7	110
12	123	1600	885	529	845	758	2580	1360	495	597	110	76.8
13	127	1420	861	523	742	762	2070	1050	355	456	84.9	76.2
14	127	1500	658	527	865	813	1910	998	311	472	49.5	62.5
15	131	1310	636	528	819	766	1780	1030	466	474	51.8	69.5
16	137	1200	710	503	982	796	1590	1210	446	423	88.0	53.7
17	137	1170	680	497	705	793	1630	1430	702	408	58.6	68.8
18	141	1170	677	487	965	805	1600	2380	2060	397	143	54.8
19	160	1100	548	458	726	950	1610	1690	2220	389	1520	75.6
20	120	1800	532	482	908	845	1600	1400	2120	328	---	55.2
21	172	2720	505	455	820	884	1580	1370	2060	305	---	67.7
22	104	2280	625	651	813	687	1000	1430	2570	271	---	61.1
23	141	2100	564	820	909	329	1190	1570	3470	256	---	40.6
24	127	1970	558	911	1030	357	1890	1500	3180	261	---	58.6
25	109	1580	546	881	953	620	1020	1430	2460	220	---	62.8
26	102	1370	541	919	1270	2290	1820	1470	3000	242	---	70.4
27	99.5	1560	538	877	1890	2130	3560	1430	2480	220	---	92.2
28	99.5	1950	567	1070	1500	1800	3020	1770	2330	199	---	94.9
29	99.5	1560	576	1040	1540	1780	3050	3170	2040	191	---	186
30	124	1340	552	658	---	1920	2320	1510	1090	160	---	187
31	137	---	497	925	---	2670	---	1190	---	167	---	---
MEAN	134	1830	804	647	986	1120	2600	1630	1460	530	183	86.3

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	390	140	280	300	200	210	180	270	470	450	---
2	410	210	140	280	290	220	250	230	320	390	450	---
3	340	150	150	280	350	210	230	230	340	490	440	---
4	400	170	140	310	420	270	230	300	340	530	440	330
5	410	170	140	300	540	270	250	360	370	540	430	350
6	380	170	140	300	580	280	250	370	370	480	430	370
7	380	170	150	290	480	310	230	370	430	490	440	380
8	380	160	160	290	410	380	220	340	450	490	440	390
9	370	190	210	380	410	440	210	330	450	480	430	380
10	390	160	220	310	410	440	150	310	460	460	430	350
11	380	170	210	370	330	440	200	340	460	440	440	390
12	360	160	230	300	310	440	210	420	430	440	440	390
13	390	150	360	300	360	440	210	360	410	440	440	410
14	410	170	270	290	370	380	190	370	480	480	450	430
15	390	140	280	290	290	350	170	360	500	520	450	430
16	390	130	350	300	400	350	160	280	410	480	460	440
17	390	130	360	310	280	360	160	250	170	470	430	460
18	370	170	360	290	410	350	170	250	170	460	420	470
19	420	160	310	240	320	320	170	180	82	460	450	480
20	330	160	320	250	440	280	170	230	78	460	---	480
21	500	25	300	260	400	310	170	290	110	450	---	470
22	400	28	400	330	400	380	160	360	180	460	---	450
23	390	45	360	290	400	150	180	450	270	460	---	460
24	380	100	350	220	350	41	180	430	350	450	---	450
25	400	96	340	220	350	190	74	420	360	440	---	460
26	380	100	340	240	350	300	32	460	590	440	---	460
27	400	100	350	240	260	220	110	460	540	440	---	460
28	410	110	350	320	190	200	110	440	570	440	---	470
29	410	120	340	300	200	220	150	410	590	440	---	540
30	420	140	340	170	---	200	180	190	460	440	---	530
31	380	---	320	270	---	220	---	200	---	440	---	---
MEAN	390	140	270	280	370	300	180	330	370	460	440	430

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	403	3360	1420	3090	3790	8110	5350	3090	4380	689	---
2	528	5170	3300	1800	2760	3270	8500	6130	3550	3250	527	---
3	428	8340	3480	1860	2160	3080	10100	5460	3410	3640	479	---
4	491	7530	3200	1980	2450	3790	12400	6060	3120	3630	467	433
5	504	7020	3180	1850	3280	3830	18100	6890	3270	3370	435	315
6	456	6930	3090	1820	3480	4030	13600	6580	2880	2840	412	279
7	456	6790	3150	1720	3200	3900	11500	6240	2300	2700	394	233
8	456	6310	3040	1710	2930	2870	10600	5560	2150	2590	371	257
9	413	7340	2850	2140	3100	2870	9700	5260	2030	2440	344	265
10	406	5100	2880	1310	4020	2680	6900	4440	1970	2310	326	308
11	424	4880	2550	1980	3000	2530	8880	3600	1860	2140	317	358
12	401	4260	1970	1650	2640	2570	7310	4400	1640	2020	373	250
13	414	3800	2820	1650	2430	2580	5050	3450	1120	1540	220	240
14	435	4170	2020	1640	2670	2580	5340	3360	1070	1620	171	207
15	424	3350	1960	1630	2550	2440	4680	3370	1550	1640	166	230
16	406	3040	2260	1590	3270	2530	4320	3710	1410	1450	159	182
17	406	2880	2230	1560	2170	2600	4280	4250	2030	1370	194	226
18	434	3160	2220	1500	3040	2560	4090	7090	5550	1300	460	184
19	416	2930	1720	1370	2320	3040	4010	4620	4560	1280	4900	259
20	306	4710	1700	1450	3210	2720	4380	4090	4230	1070	---	189
21	572	3780	1580	1380	2730	2800	4340	4230	4720	982	---	227
22	480	3200	2080	2150	2710	2180	3790	4670	7000	889	---	211
23	457	3150	1850	2530	3160	850	3330	5430	10600	841	---	147
24	403	4370	1780	2670	3270	542	5150	4970	10100	838	---	188
25	362	3530	1690	2580	3030	1760	2760	4630	8060	745	---	272
26	324	3110	1670	2690	4040	7230	2440	4820	10400	820	---	261
27	332	3400	1710	2600	4790	6180	8520	4680	8380	745	---	303
28	340	4570	1800	3410	4230	5260	8170	5990	7800	674	---	319
29	340	3820	1780	3220	4330	5220	8020	10800	7090	646	---	628
30	401	3400	1710	1780	---	5560	6020	4230	4910	541	---	620
31	435	---	1590	2810	---	7720	---	3410	---	567	---	---
MEAN	434	4470	2330	1980	3140	3410	7150	5090	4410	1770	600	284

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	922	972	437	753	793	570	597	524	714	1140	1110	---
2	1020	597	456	737	765	608	675	647	838	983	1100	---
3	860	473	460	753	894	591	636	641	871	1190	1080	---
4	989	511	449	798	1040	725	641	787	860	1280	1070	843
5	1020	510	451	776	1300	731	669	905	938	1290	1070	882
6	961	502	451	776	1370	742	669	938	938	1160	1070	927
7	961	504	465	759	1160	798	647	944	1060	1190	1070	955
8	961	481	479	765	1010	950	619	877	1110	1190	1080	966
9	938	562	591	955	1020	1090	591	849	1100	1170	1070	961
10	983	485	608	810	1020	1090	470	810	1130	1120	1070	888
11	955	512	597	938	843	1080	579	860	1130	1090	1070	972
12	922	485	647	782	810	1080	591	1040	1070	1070	1070	983
13	972	457	922	776	922	1070	591	905	1020	1070	1080	1030
14	1020	500	714	759	938	950	549	927	1160	1170	1100	1060
15	978	444	737	765	759	894	519	922	1210	1250	1110	1060
16	966	427	888	776	989	899	483	737	1030	1170	1130	1080
17	966	432	916	810	742	922	495	686	507	1150	1060	1120
18	938	514	922	765	1020	888	505	681	515	1130	1040	1150
19	1040	492	810	653	821	821	508	540	324	1130	1110	1170
20	849	494	838	675	1070	742	506	641	315	1120	---	1170
21	1200	143	782	697	989	798	505	765	388	1100	---	1150
22	1010	158	994	849	1010	961	495	910	541	1120	---	1100
23	972	241	910	765	989	473	524	1100	720	1120	---	1130
24	955	364	888	608	882	219	541	1060	888	1110	---	1110
25	1010	353	877	608	899	549	307	1030	916	1080	---	1130
26	950	361	871	664	888	776	177	1130	1410	1080	---	1130
27	1010	371	882	658	692	619	377	1120	1290	1080	---	1120
28	1020	383	899	832	559	572	374	1090	1350	1080	---	1150
29	1010	397	866	793	574	608	463	1020	1400	1080	---	1300
30	1040	451	860	510	---	563	526	554	1120	1080	---	1270
31	955	---	832	725	---	619	---	568	---	1080	---	---
MEAN	979	453	726	751	923	774	528	845	929	1130	1080	1070

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1240	1010	10500	3820	8160	10800	23100	15600	9230	10600	1700	---
2	1310	14700	10800	4740	7270	9030	23000	17200	9300	8200	1290	---
3	1090	26300	10700	5000	5530	8680	28000	15200	8720	8840	1180	---
4	1210	22600	10300	5110	4070	10200	38000	15900	7890	8780	1140	1110
5	1250	21100	10200	4800	7900	10400	43000	17300	8280	8050	1080	793
6	1150	20500	9960	4710	8210	10700	38500	16700	7290	6860	1030	698
7	1150	20100	9760	4510	7740	10000	32300	15900	5670	6550	950	585
8	1150	19000	9090	4520	7230	7180	29700	14300	5300	6300	910	636
9	1050	21700	8010	5390	7710	7120	27300	13500	4940	5940	855	669
10	1130	15500	7960	3410	10000	6650	21300	11600	4850	5620	812	1010
11	1060	13500	7250	5010	7670	6210	25600	9100	4580	5300	771	892
12	1030	12900	5540	4310	6910	6300	20600	10900	4070	4910	907	629
13	1030	11600	7220	4270	6220	6270	16800	8670	2780	3760	539	603
14	1080	12300	5340	4300	6760	6440	15000	8410	2580	3950	419	509
15	1060	10600	5150	4300	6680	6230	10300	8640	3760	3950	411	567
16	1110	9980	5730	4110	8090	6510	13000	9770	3530	3540	391	446
17	1110	9580	5660	4070	5750	6650	13200	11700	6040	3350	478	550
18	1100	9560	5680	3970	7570	6500	13300	19300	16800	3200	1140	450
19	1280	9020	4480	3740	5960	7800	13200	13900	18000	3140	12100	632
20	1020	14500	4480	3920	7800	7210	13000	11400	17100	2410	---	461
21	1370	21600	4120	3690	6760	7200	12900	11200	16700	2400	---	556
22	1210	18000	5180	5520	6840	5500	11700	11800	21000	2170	---	517
23	1100	16900	4670	6670	7820	2680	9710	13300	28400	2050	---	360
24	1010	15900	4510	7390	8240	2900	15500	12200	25700	2070	---	465
25	914	13000	4360	7140	7790	5080	11400	11300	20500	1830	---	668
26	811	11200	4280	7440	10200	18700	10800	11800	24900	2010	---	641
27	837	12600	4310	7120	15400	17400	20200	11400	20000	1830	---	738
28	845	15900	4640	8870	12400	15000	27800	14800	18500	1650	---	779
29	837	12600	4540	8520	12400	14400	20800	26900	16800	1590	---	1510
30	904	11000	4320	5330	---	15700	18700	12300	11900	1330	---	1480
31	1090	---	4130	7540	---	21700	---	9690	---	1390	---	---
MEAN	1090	14800	6540	5270	8040	9130	21100	13300	11800	4320	1480	702

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 19,79 1500	MAR 7,80 1100	MAY 6,80 1300	JUN 19,80 1030	JUL 15,80 1100	SEP 23,80 1400				
TOTAL CELLS/ML	2400	12000	11000	2600	73000	170000				
DIVERSITY: DIVISION	1.3	1.0	1.5	1.5	1.3	0.7				
..CLASS	1.3	1.0	1.5	1.5	1.3	0.7				
..ORDER	2.3	1.2	2.2	1.8	1.9	1.5				
...FAMILY	2.5	1.9	2.5	2.4	2.6	1.7				
....GENUS	3.0	2.7	2.9	2.4	3.1	2.7				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
...SCHROEDERIA	* 0	--	--	--	--	--	--	--	--	--
...COELASTRACEAE										
...COELASTRUM	--	--	--	--	--	5300	7	--	--	--
...MICRACTINIACEAE										
...MICRACTINIUM	--	--	--	--	290	11	560	1	*	0
...OOCYSTACEAE										
...ANKISTRODESMUS	50	2	1200	10	--	--	--	--	930	1
...CHLORELLA	92	4	910	8	--	--	--	--	--	--
...CHODATELLA	--	--	--	--	--	--	*	0	--	--
...DICTYOSPHAERIUM	--	--	2800#	24	--	--	1100	2	1500	1
...KIRCHNERIELLA	17	1	170	1	220	2	--	--	1100	1
...OOCYSTIS	--	--	--	--	440	4	2600	4	3700	2
...SELENASTRUM	--	--	--	--	610	6	--	--	420	1
...WESTELLA	--	--	--	--	--	--	560	1	1900	1
...SCENEDESMACEAE									--	--
...ACTINASTRUM	--	--	--	--	170	2	2200	3	--	--
...CRUCIGENIA	--	--	--	--	--	--	2200	3	--	--
...SCENEDESMUS	100	4	--	--	--	--	4700	6	1500	1
...TETRASTRUM	--	--	330	3	170	2	--	--	*	0
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	420#	17	--	--	390	4	--	--	*	0
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...CHAETOCERACEAE										
...CHAETOCEROS	--	--	2200#	18	--	--	--	--	--	--
...COSCINODISCACEAE										
...CYCLOTELLA	120	5	3700#	31	1500	14	5100	7	4800	3
...MELOSIRA	--	--	--	--	--	--	430#	17	1100	1
...SKELETONEMA	--	--	170	1	--	--	--	--	--	--
...RHIZOSOLENACEAE										
...RHIZOSOLENIA	--	--	--	--	440	4	--	--	--	--
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	33	1	--	--	--	--	140	6	--	--
...COCCONEIS	--	--	--	--	--	--	--	--	*	0
...FRAGILARIACEAE										
...SYNEDRA	--	--	83	1	--	--	--	--	--	--
...NAVICULACEAE										
...NAVICULA	17	1	250	2	130	1	--	--	*	0
...NITZSCHACEAE										
...NITZSCHIA	59	2	--	--	390	4	140	6	690	1
...SURIRELLACEAE										
...SURIRELLA	--	--	83	1	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	--	--	--	--	--	--	--	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	540#	22	--	--	--	--	8900	12	47000#	28
...ANACYSTIS	67	3	--	--	4800#	45	6700	9	53000#	31
...HORMOGONALES										
...NOSTOCACEAE										
...ANABAENOPSIS	--	--	--	--	--	--	3300	5	2200	1
...OSCILLATORIACEAE										
...LYNGBYA	--	--	--	--	1200#	44	--	--	19000	11
...OSCILLATORIA	550#	23	--	--	570	5	28000#	38	28000#	17
...PHORMIDIUM	--	--	--	--	350	3	--	--	--	--
...SCHIZOTHRIX	300	13	--	--	--	--	--	--	--	--

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 19,79 1500		MAR 7,80 1100		MAY 6,80 1300		JUN 19,80 1030		JUL 15,80 1100		SEP 23,80 1400	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	87	1	--	-	*	0	--	-
....EUTREPTIA	25	1	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	83	1	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07153000 BLACK BEAR CREEK AT PAWNEE, OK

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE¼NE¼ 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 (91.4 m) downstream from Skedee Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--576 mi² (1,492 km²).

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 (244.672 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1944, nonrecording gage at present site and datum except for Aug. 27, 1953, to Apr. 29, 1954, nonrecording gage at site 500 ft (152 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--36 years, 174 ft³/s (4.928 m³/s), 126,100 acre-ft/yr (155 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,200 ft³/s (855 m³/s) Oct. 3, 1959, gage height, 31.43 ft (9.580 m); no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1943, reached a stage of 28.19 ft (8.592 m), from floodmark, discharge, 17,800 ft³/s (504 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 26	0700	4,070 115	11.95 3.642	June 19	1000	*5,870 166	*15.18 4.627

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	23	56	28	4.4	6.1	94	586	702	283	3.7	32
2	1.5	42	39	18	4.9	5.6	64	438	548	223	3.0	21
3	1.0	26	27	14	5.1	5.2	460	331	386	171	3.1	14
4	.91	17	22	11	4.2	4.9	495	248	217	135	3.4	11
5	.91	12	20	10	4.6	3.8	217	177	169	106	3.3	8.6
6	.69	11	19	9.8	5.5	4.0	123	133	128	79	3.0	6.6
7	.59	7.6	18	9.2	7.8	6.4	83	103	97	58	2.9	5.0
8	.71	7.3	16	8.0	11	6.5	61	77	69	41	2.7	3.9
9	.75	11	15	7.1	8.8	5.2	44	58	54	31	2.4	3.1
10	.67	7.7	14	7.1	7.5	4.9	36	44	41	25	2.3	2.4
11	1.3	5.2	13	6.5	7.7	4.7	24	39	37	23	2.2	256
12	2.3	9.1	12	5.4	8.0	8.0	22	910	33	26	2.0	83
13	1.6	12	12	5.7	9.9	6.1	14	267	26	18	2.2	53
14	1.6	9.1	9.2	6.5	28	5.5	15	117	22	12	2.2	35
15	2.0	6.4	10	7.9	7.9	9.8	13	158	19	13	2.2	25
16	3.4	4.3	10	7.4	66	11	12	1830	31	15	2.1	17
17	17	2.8	8.9	7.0	35	7.3	12	2000	1510	13	47	11
18	19	2.2	9.0	6.7	27	5.5	10	1470	3560	10	688	8.4
19	21	2.7	8.4	19	22	4.9	4.6	1440	5230	10	344	6.6
20	16	31	7.5	100	26	4.9	10	760	5360	8.4	68	4.9
21	11	1060	6.8	106	26	4.3	9.8	566	5040	7.6	74	4.0
22	12	1950	8.0	76	19	4.2	8.4	404	5590	6.5	31	3.7
23	10	776	9.0	41	14	68	8.4	288	4290	5.2	12	3.0
24	9.3	517	8.4	30	12	367	151	212	2140	5.2	24	3.5
25	7.3	397	7.7	24	11	191	1260	158	1570	5.4	25	4.2
26	11	315	7.1	19	9.9	85	3820	118	1230	5.9	12	2.5
27	14	240	6.4	14	8.9	54	3440	516	882	6.3	8.7	2.8
28	9.2	149	17	12	7.9	50	3090	2270	616	5.5	8.0	3.6
29	7.5	100	40	8.8	6.9	93	1280	2390	461	4.7	22	3.0
30	14	73	40	7.1	---	97	829	1330	359	4.3	153	2.8
31	16	---	35	4.9	---	134	---	913	---	4.1	63	---
TOTAL	216.23	5826.4	531.4	637.1	488.0	1267.8	15731.2	20351	40417	1361.1	1622.4	640.6
MEAN	6.98	194	17.1	20.6	16.8	40.9	524	656	1347	43.9	52.3	21.4
MAX	21	1950	56	106	79	367	3820	2390	5590	283	688	256
MIN	.59	2.2	6.4	4.9	4.2	3.8	8.4	39	19	4.1	2.0	2.4
AC-FT	429	11560	1050	1260	968	2510	31200	40370	80170	2700	3220	1270

CAL YR 1979 TOTAL 43032.33 MEAN 123 MAX 2490 MIN .02 AC-FT 89320
WTR YR 1980 TOTAL 89090.23 MEAN 243 MAX 5590 MIN .59 AC-FT 176700

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LOCATION.--Lat 36°55'36", long 102°57'31", in SE¼ 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 (2.4 km) upstream from North Carrizo Creek, 1.7 mi (2.7 km) northeast of Kenton, 2.2 mi (3.5 km) downstream from Carrizozo Creek, and at mile 594.0 (955.7 km).

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

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 43,400 ft³/s (1,230 m³/s) Oct. 17, 1965, gage height, 22.32 ft (6.803 m), present datum, from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207 ft³/s (5.86 m³/s) July 27, gage height, 7.50 ft (2.286 m) from high-water mark, no peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	2.0	1.5	1.5	4.9	6.3	.09	.00	.00	.00
2	.00	.00	.02	2.2	1.9	1.7	4.8	9.1	.06	.00	.00	.00
3	.00	.00	.53	1.9	2.1	1.8	4.7	6.5	.04	.00	.00	.00
4	.00	.00	.44	2.0	1.9	1.5	4.4	5.5	.00	.00	.00	.00
5	.00	.00	.38	1.6	1.3	1.3	3.7	4.7	.00	.00	.00	.00
6	.00	.00	.21	1.6	1.2	1.4	2.9	4.0	.00	.00	.00	.00
7	.00	.00	.27	1.0	1.9	1.3	2.3	3.5	.00	.00	.00	.00
8	.00	.00	.42	1.0	1.0	1.2	1.8	3.2	.00	.00	.00	.00
9	.00	.00	.37	1.2	1.4	1.1	1.7	2.8	.00	.00	.00	.00
10	.00	.00	.32	2.2	2.0	1.1	1.7	2.3	.11	.00	.00	.00
11	.00	.06	.61	1.5	1.8	1.2	1.8	2.0	.06	.00	.00	.00
12	.00	.13	.23	1.2	1.6	1.5	1.9	1.8	.00	.00	.00	.00
13	.00	.13	.46	1.3	1.5	.50	1.9	1.6	.00	.00	.00	.00
14	.00	.16	.58	1.1	1.2	.08	2.1	1.5	.00	.00	.00	.00
15	.00	.21	.40	1.3	1.4	.00	2.1	3.0	.00	.00	.00	.00
16	.00	.29	.47	1.9	1.3	.03	2.1	7.1	.00	.00	.00	.00
17	.00	.28	.53	1.2	1.7	.10	1.9	11	.00	.00	.00	.00
18	.00	.52	.53	1.1	2.0	.52	1.6	40	.00	.00	.00	.00
19	.00	1.4	.63	2.1	1.4	.72	1.4	16	.00	.00	.00	.00
20	.00	.43	.53	1.5	1.1	.94	1.4	9.0	.00	.00	.00	.00
21	.00	.39	.64	1.5	.95	.94	1.2	6.0	.00	.00	.00	.00
22	.00	.31	.59	1.0	.91	.31	.63	3.5	.00	.00	.00	.00
23	.00	.82	.81	.99	1.1	3.0	.45	2.2	.00	.00	.00	.00
24	.00	1.0	2.0	1.2	1.4	3.7	4.0	2.0	.00	.00	.00	.00
25	.00	.70	2.6	1.1	1.2	2.6	13	2.0	.00	.00	.00	.00
26	.00	.19	2.6	.63	1.2	1.8	12	1.8	.00	.00	.00	.00
27	.00	.09	3.1	.66	1.2	3.5	5.8	1.8	.00	40	38	.00
28	.00	.06	3.9	.78	1.3	3.8	4.9	1.5	.00	1.0	.27	.00
29	.00	.02	2.3	.80	1.3	2.0	4.2	.31	.00	.00	.00	.00
30	.00	.06	1.6	1.0	---	1.8	3.9	.16	.00	.00	.00	.00
31	.00	---	1.4	.97	---	2.2	---	.16	---	.00	.00	---
TOTAL	.00	7.25	29.50	41.73	41.76	45.14	101.18	162.33	.36	41.00	38.27	.00
MEAN	.000	.24	.95	1.35	1.44	1.46	3.37	5.24	.012	1.32	1.23	.000
MAX	.00	1.4	3.9	2.2	2.1	3.8	13	40	.11	40	38	.00
MIN	.00	.00	.02	.63	.91	.00	.45	.16	.00	.00	.00	.00
AC-FT	.00	14	59	83	83	90	201	322	.7	81	76	.00

CAL YR 1979	TOTAL	3798.89	MEAN	10.4	MAX	1740	MIN	.00	AC-FT	7540
WTR YR 1980	TOTAL	508.52	MEAN	1.39	MAX	40	MIN	.00	AC-FT	1010

ARKANSAS RIVER BASIN

07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'45", long 100°29'39", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.35 S., R.24 E., Mead County, Kans., Hydrologic Unit 11040006, near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mi (1.3 km) north of Oklahoma-Kansas State line, 7.8 mi (12.5 km) north of Forgan, and at mile 375.7 (604.5 km).

DRAINAGE AREA.--8,536 mi² (22,108 km²), of which 4,316 mi² (11,178 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,325 ft (708.7 m) (from topographic map).

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

AVERAGE DISCHARGE.--15 years, 81.7 ft³/s (2.314 m³/s), 59,190 acre-ft/yr (73.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s (600 m³/s) Oct. 20, 1965, gage height, 8.10 ft (2.469 m); minimum, 18 ft³/s (0.51 m³/s) Jan. 4, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 132 ft³/s (3.74 m³/s) Mar. 28, gage height, 3.52 ft (1.073 m), no peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily discharge, 19 ft³/s (0.54 m³/s) July 16, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	43	51	65	54	45	91	62	43	23	21	31
2	27	44	53	69	57	52	91	73	43	24	20	27
3	27	44	56	75	62	65	85	65	41	25	20	24
4	27	40	61	75	64	71	72	61	39	28	19	25
5	28	39	59	73	62	69	67	60	36	28	22	27
6	28	38	61	73	61	79	76	59	40	28	28	29
7	29	38	61	69	64	81	77	59	39	26	22	25
8	31	41	59	71	58	77	72	58	39	24	21	25
9	32	43	59	73	54	77	65	57	40	25	20	25
10	33	42	58	71	52	81	65	57	40	24	21	28
11	34	43	58	67	56	81	61	55	39	24	32	30
12	35	44	62	61	62	96	63	54	40	23	29	29
13	36	31	59	65	59	89	60	52	38	23	27	30
14	37	45	67	59	65	83	58	51	36	21	30	32
15	35	43	65	62	65	77	60	53	35	20	45	31
16	37	42	58	64	62	77	58	65	35	19	39	31
17	37	38	50	62	59	77	60	58	40	23	36	31
18	36	41	54	58	62	73	58	59	40	22	34	32
19	35	41	56	77	64	67	57	53	39	21	33	31
20	37	48	59	64	64	75	60	51	41	20	32	29
21	38	49	65	69	61	69	55	47	37	30	30	30
22	43	48	62	59	62	77	53	49	36	28	33	30
23	43	46	59	59	69	103	56	47	36	23	34	31
24	42	49	58	59	65	94	64	47	35	23	32	32
25	40	49	62	58	65	69	68	45	31	23	30	31
26	40	48	62	62	65	82	71	46	24	22	30	32
27	41	51	64	79	62	94	62	48	24	22	33	33
28	43	49	75	50	61	117	55	60	26	23	34	34
29	44	48	71	54	58	98	49	57	27	22	32	34
30	68	48	73	52	---	96	55	49	24	20	32	32
31	55	---	69	45	---	86	---	43	---	21	32	---
TOTAL	1145	1313	1888	1999	1774	2477	1944	1700	1083	728	903	891
MEAN	36.9	43.8	60.9	64.5	61.2	79.9	64.8	54.8	36.1	23.5	29.1	29.7
MAX	68	51	75	79	69	117	91	73	43	30	45	34
MIN	27	31	50	45	52	45	49	43	24	19	19	24
AC-FT	2270	2600	3740	3970	3520	4910	3860	3370	2150	1440	1790	1770
CAL YR 1979	TOTAL	21204	MEAN 58.1	MAX 1510	MIN 23	AC-FT 42060						
WTR YR 1980	TOTAL	17845	MEAN 48.8	MAX 117	MIN 19	AC-FT 35400						

ARKANSAS RIVER BASIN

59

07157950 CIMARRON RIVER NEAR BUFFALO, OK

LOCATION.--Lat 36°51'07", long 99°18'54", in SE¼NE¼ 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 (0.8 km) downstream from Keno Creek, 17.0 mi (27.4 km) northeast of Buffalo, and at mile 289.1 (465.2 km).

DRAINAGE AREA.--12,004 mi² (31,090 km²), of which 4,813 mi² (12,466 km²) 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 (487.579 m), National Geodetic Vertical Datum of 1929 Prior to Oct. 1, 1979, at site 6.9 mi (11.1 km) upstream at an altitude of 1,650 ft (502.9 m).

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

AVERAGE DISCHARGE.--20 years, 151 ft³/s (4.276 m³/s), 109,400 acre-ft/yr (135 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Sept. 26, 1973, gage height, 5.57 ft (1.698 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s (51.0 m³/s), Oct. 31, gage height, 6.67 ft (2.033 m), no peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	417	22	77	37	60	366	224	215	7.7	.00	.00
2	.21	256	18	88	53	41	497	276	184	4.0	.00	.00
3	.15	120	24	72	90	46	441	283	154	5.4	.00	.00
4	.10	85	47	114	108	102	384	253	150	3.0	.00	.00
5	.16	67	105	127	159	107	333	228	143	1.6	.00	.00
6	.10	24	85	96	184	80	293	190	120	.90	.00	.00
7	.15	39	74	77	120	80	259	182	95	.55	.00	.00
8	.10	35	62	53	62	74	229	197	76	.40	.00	.00
9	.14	53	60	43	33	71	207	254	67	.30	.00	.00
10	.10	62	41	30	30	70	184	220	63	.07	.00	.00
11	.30	53	53	64	27	72	173	170	53	.00	.00	.00
12	.10	37	45	111	28	138	154	139	47	.00	.00	.00
13	.10	55	40	80	176	212	151	125	40	.00	.00	.00
14	.14	27	37	77	295	195	137	116	30	.00	.00	.00
15	.23	25	41	65	228	143	129	170	19	.00	.41	.00
16	.17	32	28	53	111	118	121	273	15	.00	20	.00
17	.11	33	10	65	54	98	110	427	133	.00	5.0	.00
18	.16	27	67	72	89	94	109	403	106	.00	1.2	.00
19	.10	25	77	148	212	95	110	369	93	.00	.20	.00
20	.05	33	120	167	169	88	103	324	74	.00	.07	.00
21	.14	41	167	203	131	76	95	414	75	2.3	.00	.00
22	.13	47	130	199	100	78	88	517	123	.42	.02	.00
23	.15	41	114	183	91	126	83	361	120	.00	.00	.00
24	.04	25	80	179	104	202	293	267	99	.00	.00	.00
25	.04	18	80	148	106	372	402	213	71	.00	.00	.00
26	.03	33	85	120	100	314	586	172	48	.00	.00	.00
27	.05	39	90	41	94	319	470	160	33	.00	.00	.00
28	.02	35	70	39	86	530	362	231	24	.00	.00	.00
29	.23	35	74	37	73	743	282	449	12	.00	.00	.00
30	1120	29	111	35	---	551	238	331	8.4	.00	.00	.00
31	837	---	105	33	---	334	---	263	---	.00	.00	---
TOTAL	1960.52	1848	2162	2896	3150	5629	7389	8201	2490.4	26.64	67.49	.00
MEAN	63.2	61.6	69.7	93.4	109	182	246	265	83.0	.86	2.18	.000
MAX	1120	417	167	203	295	743	586	517	215	7.7	41	.00
MIN	.00	18	10	30	27	41	83	116	8.4	.00	.00	.00
AC=FT	3890	3670	4290	5740	6250	11170	14660	16270	4940	53	134	.00
CAL YR 1979	TOTAL	54528.75	MEAN	149	MAX	6420	MIN	.00	AC=FT	108200		
WTR YR 1980	TOTAL	35820.05	MEAN	97.9	MAX	1120	MIN	.00	AC=FT	71050		

ARKANSAS RIVER BASIN

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

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U. S. Highway 64, 7.0 mi (11.3 km) downstream from discharge station.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1968 to current year.

WATER TEMPERATURE: July 1968 to current year.

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

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected 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, 109,000 micromhos July 20, 21, 1980; minimum daily, 1,020 micromhos July 2, 1975.

WATER TEMPERATURE: Maximum daily, 38.0°C Aug. 14, 1974; minimum daily, -0.5°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 109,000 micromhos July 20, 21; minimum daily, 2,670 micromhos Mar. 25.

WATER TEMPERATURE: Maximum daily, 33.0°C July 21; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS AS CACO3
OCT												
02...	1315	.21	41000	7.9	23.5	2.1	6.8	84	--	32	270	1600
05...	1830	.16	27100	7.9	17.0	--	--	--	--	--	--	1400
15...	1715	.23	26300	7.9	20.0	--	--	--	--	--	--	1300
25...	1315	.04	25000	7.7	14.5	--	--	--	--	--	--	1400
NOV												
05...	1500	67	--	8.0	12.5	--	--	--	--	--	--	800
06...	1330	24	13900	8.2	9.0	170	13.2	118	--	1000	4000	770
15...	0800	25	19200	8.2	10.0	--	--	--	--	--	--	830
25...	1510	18	16900	8.1	7.0	--	--	--	--	--	--	790
DEC												
05...	1030	105	11000	8.2	6.0	600	15.3	131	--	320	6600	640
JAN												
08...	1400	53	13800	8.1	1.5	110	19.2	145	--	310	115	750
FEB												
06...	1630	184	5900	8.2	5.0	--	16.8	139	66	--	--	110
11...	1410	27	23000	7.5	4.0	83	16.2	128	--	200	260	880
MAR												
04...	1500	102	13000	8.4	7.0	25	10.2	94	--	190	360	710
APR												
02...	1040	497	6750	8.2	7.0	250	10.8	100	--	--	367	560
MAY												
06...	1700	190	8500	8.2	29.0	94	6.8	103	--	137	97	650
JUN												
10...	1415	63	8700	8.4	28.5	33	7.5	106	--	40	62	710
JUL												
01...	1230	7.7	10500	8.4	31.0	3.0	7.4	110	--	30	69	830

ARKANSAS RIVER BASIN

61

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

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)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (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												
02...	1400	440	110	7000	91	77	13	160	1200	11000	.4	21
05...	1200	410	86	6000	90	70	11	190	1100	9600	--	--
15...	1200	390	87	5700	90	68	11	180	1100	9300	--	--
25...	1200	400	86	5800	90	69	11	200	980	9200	--	--
NOV												
05...	600	190	79	4700	95	72	15	200	520	7300	--	--
06...	580	190	71	3100	93	49	18	190	470	4800	.7	18
15...	610	200	81	3900	91	59	13	220	1300	5500	--	--
25...	580	190	77	3500	94	54	11	210	510	5700	--	--
DEC												
05...	400	150	64	2100	88	36	9.4	240	65	3400	.8	19
JAN												
08...	510	180	72	2700	89	43	9.0	240	7.1	4300	.9	21
FEB												
06...	0	16	18	1400	96	57	5.4	180	270	1800	.7	21
11...	670	210	87	4700	92	69	10	210	550	7100	.5	24
MAR												
04...	500	170	69	2200	87	36	9.3	210	420	3700	.6	18
APR												
02...	360	130	56	1000	79	18	9.3	200	300	1500	.9	17
MAY												
06...	460	150	68	1600	84	27	7.8	190	380	2500	1.0	18
JUN												
10...	550	170	69	1600	83	26	10	160	460	2500	.8	18
JUL												
01...	700	210	73	2100	84	32	14	130	580	3500	.8	14
DATE	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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
02...	23100	19900	31.4	--	--	.04	.04	.140	.100	.17	.13	.81
05...	17500	--	23.8	--	--	--	--	--	--	--	--	--
15...	16900	--	23.0	--	--	--	--	--	--	--	--	--
25...	16200	--	22.0	--	--	--	--	--	--	--	--	--
NOV												
05...	13100	--	17.8	--	--	--	--	--	--	--	--	--
06...	8370	8780	11.4	--	--	.40	.37	.230	.170	.28	.22	--
15...	11200	--	15.2	--	--	--	--	--	--	--	--	--
25...	10500	--	14.3	--	--	--	--	--	--	--	--	--
DEC												
05...	6450	5960	8.7	--	--	.95	.92	.190	.090	.23	.12	1.5
JAN												
08...	8550	7440	11.6	--	--	.69	.69	.130	.250	.16	.32	.87
FEB												
06...	--	3640	4.9	1810	1000	.91	--	.080	--	.10	--	1.8
11...	13300	12800	18.1	--	--	.64	.64	.480	.300	.58	.39	1.9
MAR												
04...	6560	6720	8.9	--	--	.34	.37	.180	.100	.22	.13	.74
APR												
02...	3430	3140	4.6	--	--	.65	.60	.230	.120	.28	.15	1.8
MAY												
06...	5060	4840	6.8	--	--	.03	.07	.080	.230	.10	.30	.72
JUN												
10...	4940	4920	6.7	--	--	.02	.02	.110	.060	.13	.08	.99
JUL												
01...	6880	6570	9.3	--	--	.05	.00	.160	.100	.19	.13	.78

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DISSOLV (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P(4))	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)
OCT												
02...	.36	.95	.49	.46	.99	4.4	.50	.030	.09	.010	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	.53	--	--	.70	--	--	1.1	.340	1.0	.040	7	3
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	.60	1.70	1.0	.69	2.7	12	1.6	.430	1.3	.010	--	--
JAN												
08...	1.3	1.00	.00	1.5	1.7	7.5	2.2	.170	.52	.030	--	--
FEB												
06...	--	1.90	--	--	2.8	12	--	.520	1.6	--	4	2
11...	1.1	2.40	1.0	1.4	3.0	13	2.0	.150	.46	.040	3	1
MAR												
04...	.60	.92	.22	.70	1.3	5.6	1.1	.110	.34	.030	--	--
APR												
02...	.75	2.00	1.1	.87	2.7	12	1.5	.340	1.0	.050	--	--
MAY												
06...	.25	.80	.32	.48	.83	3.7	.55	.150	.46	.010	5	0
JUN												
10...	.41	1.10	.63	.47	1.1	5.0	.49	.100	.31	.010	--	--
JUL												
01...	.77	.94	.07	.87	.99	4.4	.87	.010	.03	.030	--	--
DATE	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)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDED RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	4	800	300	500	--	--	--	--	2	0	8	20
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
06...	2	--	--	--	0	0	0	140	1	1	0	30
11...	2	600	200	400	--	--	--	--	5	1	4	20

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT											
02...	--	--	--	--	--	--	--	--	38	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	0	1	0	0	0	110	80	30	--	10	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	19	--	--
JAN											
08...	--	--	--	--	--	--	--	--	4.5	--	--
FEB											
06...	0	3	--	--	--	110	60	50	--	--	--
11...	0	2	1	1	0	80	10	70	--	9.5	4.1
MAR											
04...	--	--	--	--	--	--	--	--	5.3	--	--
APR											
02...	--	--	--	--	--	--	--	--	28	--	--
MAY											
06...	0	2	0	0	0	30	10	20	--	11	4.1
JUN											
10...	--	--	0	--	--	--	--	--	12	--	--
JUL											
01...	--	--	--	--	--	--	--	--	7.3	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 02...	--	--	--	--	--	--	--	--	594	--	86
NOV 06...	ND	ND	ND	ND	ND	ND	ND	1500	697	--	90
DEC 05...	--	--	--	--	--	--	--	--	776	--	98
JAN 08...	--	--	--	--	--	--	--	--	377	--	80
FEB 06...	--	--	--	--	--	--	--	--	898	446	93
MAR 11...	--	--	--	--	--	--	--	--	153	--	97
APR 04...	--	--	--	--	--	--	--	700	144	--	92
MAY 02...	--	--	--	--	--	--	--	--	518	--	92
JUN 06...	--	--	--	--	--	--	--	4900	182	--	89
JUL 10...	--	--	--	--	--	--	--	28000	82	--	87
JUL 01...	--	--	--	--	--	--	--	13000	28	--	70

ARKANSAS RIVER BASIN

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07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30200	8670	14700	11200	18000	---	8490	13400	9040	13500	---	
2	28100	14900	18700	11900	18000	12600	5810	9760	9040	13700	---	
3	30400	21100	15800	19600	10600	10900	8430	7760	7930	13600	---	
4	30400	20800	15900	13000	10600	10900	6420	7760	7910	21200	---	
5	27100	14200	11500	12200	8530	6680	7460	9400	7480	20900	---	
6	26800	17600	10400	12100	6030	7720	7480	8670	7930	21700	---	
7	26500	17600	10400	9800	---	9850	6650	8670	7940	21800	---	
8	26700	18600	11600	12100	18100	8450	6660	---	7880	18400	---	
9	27800	18600	11700	14000	24000	8720	5810	8940	8730	17100	---	
10	30500	22900	15000	14100	25800	8850	5830	8940	8710	16900	---	
11	30400	22900	14900	4930	21700	8860	8770	8310	8670	12400	---	
12	28100	16800	9460	4910	19700	12400	5990	7220	8660	12400	---	
13	28100	18100	9620	8540	11300	12400	6010	6760	8650	12500	---	
14	26500	18100	14200	8530	11200	7430	6510	6760	8650	11200	---	
15	26300	19200	18100	11500	21800	7450	6800	28900	10800	11100	36500	
16	25200	19100	22900	11500	12700	10900	6810	25700	10800	10400	14900	
17	26500	20300	22700	9170	21800	10800	6720	9310	14500	10400	14900	
18	26400	20400	17500	9180	16700	7380	7730	8310	7570	8550	14100	
19	24900	29400	17500	29300	16700	8310	7730	8310	7580	8650	14000	
20	25000	30500	8090	17100	10900	8300	7890	13400	6940	109000	12100	
21	25400	29400	8060	12600	11000	7380	6600	8670	6930	109000	12100	
22	25500	---	10600	17100	8630	12900	6990	6760	5410	19100	10800	
23	23600	16900	10600	11600	8600	12900	---	8580	4850	20500	10900	
24	25000	12900	16500	11600	12600	12300	49200	8580	4850	22500	---	
25	25000	16900	16400	10600	12600	2670	12000	7490	5690	24900	---	
26	24900	18000	11000	10400	8730	9560	18000	7580	5690	---	---	
27	27600	12000	---	12900	9890	9550	10200	17600	6850	---	---	
28	27300	11800	---	19000	9730	14100	9640	17500	9580	---	---	
29	24600	14600	11100	19000	---	11600	9800	11600	6880	---	---	
30	6580	---	11100	---	---	10400	9800	8650	9580	---	---	
31	8520	---	12300	23500	---	8500	---	8670	---	---	---	
MEAN	25700	18700	13700	13100	14300	9690	9390	10600	8070	23300	15600	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	10.0	1.0	5.0	1.5	---	10.5	15.5	28.0	27.0	---	
2	17.5	12.5	3.0	4.0	2.0	3.5	7.5	18.0	22.0	28.0	---	
3	16.5	12.0	3.0	3.0	1.0	5.0	9.0	22.5	22.5	27.0	---	
4	17.0	12.0	5.0	5.0	1.0	7.0	12.0	24.0	22.0	30.0	---	
5	17.0	12.5	8.0	3.5	1.0	5.0	17.5	25.0	28.0	31.0	---	
6	16.0	11.5	1.0	4.0	3.0	10.0	19.0	20.0	29.5	30.0	---	
7	21.0	11.0	3.0	.0	---	12.0	17.0	20.5	29.0	28.0	---	
8	25.0	10.5	4.0	.5	.0	13.0	15.5	---	21.0	25.0	---	
9	14.0	9.0	3.0	3.0	.0	12.5	14.5	23.0	30.0	28.0	---	
10	15.0	7.5	11.0	5.5	1.0	16.0	12.0	25.0	29.0	25.5	---	
11	16.0	7.0	4.0	5.0	1.0	15.0	11.0	22.5	23.0	24.5	---	
12	20.0	7.0	.0	5.0	2.0	10.5	10.5	24.5	25.0	23.0	---	
13	19.5	12.0	2.0	6.0	6.0	6.0	12.0	25.0	26.0	24.0	---	
14	19.0	12.0	3.0	5.0	10.0	10.5	16.0	14.0	24.0	23.5	---	
15	20.0	10.0	7.0	7.0	.0	9.0	18.0	15.0	21.0	23.0	28.0	
16	23.0	14.0	5.0	9.0	3.0	11.0	18.0	17.5	22.5	24.5	28.0	
17	23.0	15.0	1.0	3.5	4.0	13.0	12.0	16.5	22.0	26.0	25.0	
18	22.0	14.0	3.0	4.0	2.0	14.0	19.0	18.0	21.0	23.0	26.5	
19	22.0	14.0	5.0	5.5	10.0	14.5	21.0	25.0	21.5	23.0	27.0	
20	20.0	8.0	3.0	2.0	9.5	7.0	22.0	24.0	27.0	22.5	26.0	
21	20.0	9.0	1.0	4.0	9.0	16.0	17.0	23.5	30.0	33.0	21.0	
22	20.0	---	7.0	3.0	10.0	13.0	16.5	18.0	24.0	32.0	25.0	
23	14.0	2.0	6.0	4.5	8.5	4.5	---	28.5	24.5	21.0	25.0	
24	14.0	7.0	7.0	4.0	9.0	6.0	16.0	29.0	25.0	28.0	---	
25	14.5	7.0	7.0	4.0	11.0	12.5	12.0	28.0	25.0	22.0	---	
26	16.0	8.0	6.0	.0	12.0	14.0	10.0	23.0	25.0	---	---	
27	16.0	6.0	---	.0	15.0	10.5	14.0	27.0	24.5	---	---	
28	15.0	.0	---	.0	16.0	13.5	20.0	29.0	24.0	---	---	
29	14.5	.0	3.0	.0	---	8.0	20.0	24.0	25.0	---	---	
30	15.0	---	4.0	---	---	8.0	20.0	28.0	25.0	---	---	
31	11.0	---	4.0	.0	---	12.0	---	27.5	---	---	---	
MEAN	18.0	9.5	4.0	3.5	5.5	10.5	15.0	22.5	25.0	26.0	25.5	

ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	NOV 6,79 1330	MAR 4,80 1500	MAY 6,80 1700	JUN 10,80 1415	JUL 1,80 1230					
TOTAL CELLS/ML	1500	700	4900	28000	13000					
DIVERSITY: DIVISION	0.4	1.1	0.8	0.8	1.6					
..CLASS	0.4	1.1	0.8	0.8	1.6					
...ORDER	0.8	1.8	1.6	1.0	2.3					
...FAMILY	2.0	3.0	2.7	2.4	3.0					
....GENUS	2.0	3.0	3.2	3.2	3.5					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	* 0	--	-	
....COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	1000	4	510	4
....MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	* 0	--	-	
....MICRACTINIUM	--	-	--	-	--	-	6900#	25	350	3
....DOCYSTACEAE										
....ANKISTRODESMUS	--	-	39	6	110	2	1000	4	460	3
....CHODATELLA	--	-	--	-	--	-	200	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	1100	4	350	3
....KIRCHNERIELLA	--	-	--	-	--	-	36	1	--	-
....DOCYSTIS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	810	3	300	2
....TREUBARIA	--	-	--	-	--	-	300	1	250	2
....SCENEDESMACEAE							* 0	--	100	1
....ACTINASTRUM	--	-	--	-	--	-	3600	13	1600	12
....SCENEDESMUS	--	-	--	-	500	10	7300#	26	1100	8
....TETRASTRUM	--	-	--	-	--	-	400	1	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	50	3	130#	19	110	2	400	1	460	3
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	100	7	79	11	570	12	2200	8	1700	13
....MELOSIRA	--	-	--	-	430	9	200	1	--	-
....STEPHANODISCUS	--	-	--	-	36	1	--	-	--	-
...PENNALES										
....ACHNANTHACEAE										
....COCCONEIS	50	3	--	-	--	-	--	-	--	-
....CYMBELLACEAE										
....CYMBELLA	--	-	7	1	71	1	--	-	--	-
....DIATOMACEAE										
....DIATOMA	--	-	26	4	36	1	--	-	--	-
....EUNOTIACEAE										
....EUNOTIA	--	-	20	3	--	-	--	-	--	-
....FRAGILARIACEAE										
....FRAGILARIA	150	10	--	-	250	5	--	-	--	-
....SYNEDRA	--	-	33	5	71	1	--	-	--	-
....GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	7	1	--	-	--	-	--	-
....NAVICULACEAE										
....ANOMOEONEIS	--	-	--	-	140	3	--	-	--	-
....DIPLONEIS	--	-	--	-	36	1	--	-	--	-
....NAVICULA	910#	62	130#	19	430	9	--	-	--	-
....NITZSCHACEAE										
....NITZSCHIA	100	7	180#	25	1800#	37	1500	5	1400	11
....SURIRELLACEAE										
....SURIRELLA	50	3	7	1	110	2	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	* 0	

ARKANSAS RIVER BASIN

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07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

CYANOPHYTA (BLUE-GREEN ALGAE)

.CYANOPHYCEAE									
..CHROOCOCCALES									
...CHROOCOCCACEAE									
....ANACYSTIS	--	-	--	-	110	2	710	3	2800# 21
....COCCOCHLORIS	--	-	--	-	36	1	--	-	-- -
..HORMOGONALES									
...NOSTOCACEAE									
....ANABAENA	--	-	--	-	--	-	--	-	460 3
...OSCILLATORIACEAE									
....OSCILLATORIA	--	-	--	-	--	-	--	-	1400 11
....SCHIZOTHRIX	--	-	46	7	--	-	--	-	-- -

EUGLENOPHYTA (EUGLENOIDS)

.EUGLENOPHYCEAE									
..EUGLENALES									
...EUGLENACEAE									
....EUTREPTIA	50	3	--	-	--	-	--	-	-- -

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

LOCATION.--Lat 36°46'08", long 99°21'58", in NW¼NW¼ 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 (1.9 km) east of Lovedale, 1.3 mi (2.1 km) upstream from Sleeping Bear Creek, and at mile 7.6 (12.2 km).

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

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Aug. 9, 1967, gage height, 14.80 ft (4.511 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-area determination of peak flow; maximum gage height, 16.17 ft (4.929 m) May 10, 1979; no flow each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 699 ft³/s (19.8 m³/s) Oct. 30, gage height, 8.28 ft (2.524 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	90	2.1	3.0	4.7	5.2	13	26	37	3.2	.00	.00
2	.08	29	2.1	3.3	5.0	5.1	15	25	30	2.9	.00	.00
3	.06	16	2.3	3.9	5.3	5.4	18	24	26	2.6	.02	.00
4	.08	11	2.4	4.0	5.7	5.5	17	23	24	2.3	.00	.00
5	.09	7.7	2.6	3.8	5.8	5.3	15	21	22	2.0	.00	.00
6	.09	5.8	2.4	3.9	5.9	5.4	12	19	20	1.8	.00	.00
7	.10	5.1	2.3	3.5	6.0	5.6	11	20	18	1.5	.00	.00
8	.10	4.9	2.2	3.3	6.1	5.5	9.7	21	16	1.3	.00	.00
9	.12	5.9	2.3	3.1	6.5	5.5	8.7	22	15	1.1	.00	.00
10	.09	5.4	2.4	3.3	6.2	5.2	8.8	21	14	.85	.00	.00
11	.13	4.9	2.4	3.1	6.6	5.6	8.4	18	13	.75	.00	.00
12	.13	4.3	2.2	3.1	6.8	7.8	7.9	16	12	.65	.00	.00
13	.12	3.7	2.2	2.9	7.7	8.6	7.7	14	10	.51	.00	.00
14	.14	3.4	2.1	2.9	8.4	8.8	7.5	13	9.1	.35	.08	.00
15	.16	3.1	2.3	2.9	7.8	8.0	7.9	17	7.7	.27	.20	.00
16	.15	2.9	2.1	2.9	7.0	6.9	7.1	43	7.8	.20	.20	.00
17	.16	2.8	1.9	3.0	8.0	6.3	7.2	57	12	.17	.09	.00
18	.19	2.8	2.1	3.1	7.7	5.8	7.0	47	12	.14	.05	.00
19	.16	2.5	2.3	6.3	7.8	5.3	7.1	40	10	.11	.36	.00
20	.13	2.6	2.4	13	8.4	4.8	7.0	34	9.1	.10	.19	.00
21	.11	2.5	2.4	15	8.0	4.6	6.5	74	8.9	.20	.09	.00
22	.09	2.2	2.5	13	7.4	4.5	5.8	58	11	.17	.06	.00
23	.14	2.2	2.5	11	7.0	6.4	5.6	40	16	.14	.04	.00
24	.19	2.2	2.6	9.5	7.2	11	13.8	27	16	.12	.03	.00
25	.21	2.3	2.6	8.3	7.0	12	19.0	23	10	.09	.00	.00
26	.22	2.4	2.6	7.2	6.7	12	19.4	20	7.6	.08	.00	.00
27	.21	2.3	2.6	6.2	6.5	12	9.6	18	6.1	.10	.01	.00
28	.20	2.2	3.1	5.8	6.4	13	4.5	20	5.0	.08	.02	.00
29	.26	2.0	3.2	5.4	5.9	20	3.2	110	4.7	.05	.00	.00
30	209	2.1	3.2	5.3	---	21	2.8	117	4.0	.02	.01	.00
31	411	---	2.9	4.9	---	16	---	53	---	.01	.00	---
TOTAL	623.99	236.2	75.3	171.9	195.5	254.1	853.9	1081	414.0	23.86	1.45	.00
MEAN	20.1	7.87	2.43	5.55	6.74	8.20	28.5	34.9	13.8	.77	.047	.000
MAX	411	90	3.2	15	8.4	21	19.4	117	37	3.2	.36	.000
MIN	.06	2.0	1.9	2.9	4.7	4.5	5.6	13	4.0	.01	.00	.000
AC=FT	1240	469	149	341	388	504	1690	2140	821	47	2.9	.000

CAL YR 1979	TOTAL	8949.71	MEAN	24.5	MAX	3780	MIN	.00	AC-FT	17750
WTR YR 1980	TOTAL	3931.20	MEAN	10.7	MAX	411	MIN	.00	AC-FT	7800

ARKANSAS RIVER BASIN

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07157980 CIMARRON RIVER AT FREEDOM, OK

LOCATION.--Lat 36°45'18", long 99°06'58", in SE¼SE¼ sec.3, T.26 N., R.18 W., Woodward County, Hydrologic Unit 11050001, on old bridge of State Highway 50, 1.0 mi (1.6 km) south of Freedom, 1.1 mi (1.8 km) upstream from unnamed tributary, and at mile 272.4 (438.3 km).

DRAINAGE AREA.--12,706 mi² (32,909 km²), of which 4,813 mi² (12,466 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to Sept. 30, 1980 (discontinued). Published as "near Freedom" prior to October 1975.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 1,503.99 ft (458.416 m), Oklahoma State Highway Department datum.

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

AVERAGE DISCHARGE.--7 years, 184 ft³/s (5.211 m³/s), 133,300 acre-ft/yr (164 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s (1,180 m³/s) May 10, 1979, gage height, 11.58 ft (3.530 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,330 ft³/s (123 m³/s) Oct. 30, gage height, 8.31 ft (2.533 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	1000	26	129	50	90	344	329	257	3.5	.00	.00
2	.11	266	37	135	66	103	397	337	212	1.2	.00	.00
3	.10	150	53	163	90	124	381	372	183	.20	.00	.00
4	.14	95	79	146	107	199	389	321	174	.00	.00	.00
5	.13	75	101	142	131	234	323	335	174	.00	.00	.00
6	.11	55	107	124	296	135	244	267	161	.00	.00	.00
7	.10	71	92	87	244	117	194	263	139	.00	.00	.00
8	.11	92	59	50	218	117	176	219	113	.00	.00	.00
9	.13	92	46	26	72	117	158	252	108	.00	.00	.00
10	.15	82	50	59	65	104	154	269	96	.00	.00	.00
11	.16	63	45	90	98	138	154	225	87	.00	.00	.00
12	.13	63	40	115	98	213	146	193	81	.00	.00	.00
13	.11	70	40	106	218	272	146	172	72	.00	.00	.00
14	.11	59	37	96	373	253	150	158	62	.00	.00	.00
15	.16	50	35	84	358	190	150	399	49	.00	5.8	.00
16	.17	53	25	79	150	138	148	707	64	.00	3.0	.00
17	.15	52	21	77	87	124	142	522	199	.00	1.5	.00
18	.14	52	23	107	176	106	131	648	223	.00	1.0	.00
19	.12	50	29	316	223	110	132	455	138	.00	.33	.00
20	.11	43	43	404	199	117	128	538	142	.00	.00	.00
21	.10	45	110	330	171	107	121	995	99	1.0	.00	.00
22	.12	50	200	316	135	104	116	770	118	1.2	.00	.00
23	.11	42	114	290	117	228	115	538	146	.40	.00	.00
24	.13	50	74	250	135	323	854	372	109	.00	.00	.00
25	.12	55	79	228	135	323	1310	284	64	.00	.00	.00
26	.11	57	79	124	135	404	1870	234	35	.00	.00	.00
27	.10	50	84	77	117	358	986	213	22	.00	.00	.00
28	.06	50	107	65	110	446	579	252	14	.00	.00	.00
29	.03	50	114	59	98	1050	418	656	10	.00	.00	.00
30	2630	31	120	59	---	652	352	675	6.0	.00	.00	.00
31	1420	---	124	45	---	397	---	411	---	.00	.00	---
TOTAL	4053.43	3013	2193	4378	4472	7395	10908	12381	3387.0	7.50	11.63	.00
MEAN	131	100	70.7	141	154	239	364	399	113	.24	.38	.000
MAX	2630	1000	200	404	373	1050	1870	995	287	3.5	5.8	.00
MIN	.03	31	21	26	50	90	115	158	6.0	.00	.00	.00
AC=FT	8040	5980	4350	8680	8870	14670	21640	24560	6720	15	23	.00

CAL YR 1979 TOTAL 79586.95 MEAN 218 MAX 14800 MIN .03 AC=FT 157900
WTR YR 1980 TOTAL 52199.56 MEAN 143 MAX 2630 MIN .00 AC=FT 103500

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER AT FREEDOM, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1974 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to September 1980.

WATER TEMPERATURE: October 1973 to September 1980.

INSTRUMENTATION.--Water quality monitor from October 1973 to September 1980.

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis.

Partial analyses were made each month on those samples having maximum, minimum and mean specific conductance for the month. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 176,000 micromhos Aug. 15, 1976, Oct. 26, 1977; minimum, 3,620 micromhos July 10, 1978.

WATER TEMPERATURE: Maximum, 38.0°C July 10, 1979; minimum, -1.0°C on Jan. 3, 18, 24, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 157,000 micromhos Aug. 15; minimum daily, 13,700 micromhos May 30.

WATER TEMPERATURE: Maximum daily, 34.0°C June 19, minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DEMAND, (PER- CENT SATUR- ATION)	OXYGEN CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
20...	1700	.11	134000	7.2	24.0	--	--	--	4100	3900	910	440
31...	1830	1420	15200	7.5	8.5	--	--	--	510	320	130	44
NOV												
02...	1700	266	22900	7.4	12.0	--	--	--	870	700	220	77
07...	1755	71	40800	7.8	10.5	--	--	--	1300	1100	310	120
30...	1645	31	58800	7.9	4.0	--	--	--	1900	1700	460	190
DEC												
16...	1720	25	47200	8.1	1.0	--	--	--	1500	1300	350	150
28...	1330	107	67800	7.9	4.5	--	--	--	1600	1500	380	170
31...	1710	124	27600	8.1	4.0	--	--	--	990	800	230	100
JAN												
04...	1705	146	39300	8.1	2.0	--	--	--	1200	1000	260	130
13...	1800	106	20500	8.0	9.5	--	--	--	800	610	180	84
30...	1600	59	53800	8.1	4.0	--	--	--	1800	1600	380	200
FEB												
05...	1800	131	15100	8.1	5.0	--	--	--	680	440	160	69
06...	1030	296	17200	8.2	.0	18.0	124	120	720	530	170	72
09...	1700	72	52400	7.8	2.0	--	--	--	1700	1500	390	170
11...	1615	98	45000	7.8	4.5	16.4	132	200	--	--	--	--
18...	1730	176	33700	8.1	5.0	--	--	--	1200	1000	290	120
MAR												
13...	1800	272	36900	8.0	12.0	--	--	--	1200	970	280	110
24...	1800	250	60500	7.7	6.0	--	--	--	1500	1400	350	150
31...	1705	446	16800	7.8	12.0	--	--	--	750	540	170	78
APR												
03...	1700	412	24100	7.7	13.0	--	--	--	970	780	230	96
09...	1830	176	14700	8.0	16.0	--	--	--	820	590	190	85
24...	1800	866	38600	7.5	14.5	--	--	--	1200	1000	290	110
MAY												
07...	1630	330	31700	7.6	21.0	--	--	--	1200	1000	300	110
14...	1500	163	43900	7.5	17.0	--	--	--	1300	1100	320	110
30...	2010	547	13700	7.7	28.0	--	--	--	940	780	240	83
JUN												
04...	1900	185	19400	7.5	28.0	--	--	--	1000	840	240	100
14...	1730	61	33700	7.8	30.0	--	--	--	1500	1300	350	140
20...	1900	120	48200	7.6	30.0	--	--	--	1400	1300	360	130
JUL												
01...	1930	3.2	58100	7.0	30.0	--	--	--	1900	1800	450	190
AUG												
17...	1900	1.3	109000	6.6	33.0	--	--	--	2200	2100	500	240

ARKANSAS RIVER BASIN

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07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	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 SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
20...	50000	96	341	72	180	2000	77000	--	--	97400	--	132
31...	3300	93	64	16	190	310	5200	--	--	9090	--	12.4
NOV												
02...	5100	93	75	20	170	590	9700	--	--	16300	--	22.2
07...	9600	94	117	23	170	900	16000	--	--	27000	--	36.7
30...	13000	94	129	25	190	1500	23000	--	--	40200	--	54.7
DEC												
16...	13000	95	147	13	180	310	20000	--	--	34900	--	47.5
28...	19000	96	204	14	150	570	30000	--	--	52700	--	71.7
31...	7300	94	101	11	190	510	11000	--	--	20600	--	28.0
JAN												
04...	9700	95	123	13	180	500	16000	--	--	28800	--	39.2
13...	4800	93	74	11	190	460	7900	--	--	14000	--	19.0
30...	14000	94	145	16	210	240	22000	--	--	41500	--	56.4
FEB												
05...	3700	92	62	9.7	240	400	5400	--	--	10200	--	13.9
06...	3900	92	63	8.4	190	470	5900	7	20	--	10700	14.6
09...	15000	95	160	24	170	1000	24000	--	--	39900	--	54.3
11...	--	--	--	--	--	--	--	--	--	--	--	--
18...	8800	94	110	18	190	730	14000	--	--	23600	--	32.1
MAR												
13...	8600	94	110	15	180	730	14000	--	--	24000	--	32.6
24...	15000	96	169	21	130	900	24000	--	--	41500	--	56.4
31...	3500	91	56	11	210	510	5700	--	--	9960	--	13.5
APR												
03...	5600	93	78	13	190	610	9300	--	--	15200	--	20.7
09...	2900	88	44	10	230	590	4900	--	--	9090	--	12.4
24...	8900	94	113	16	130	690	16000	--	--	25400	--	34.5
MAY												
07...	6900	93	87	4.6	180	75	11000	--	--	19600	--	26.7
14...	10000	94	123	17	140	490	16000	--	--	27700	--	37.7
30...	2600	86	37	6.6	160	700	4300	--	--	7850	--	10.7
JUN												
04...	4000	89	55	16	170	790	6500	--	--	11500	--	15.6
14...	7200	91	82	26	130	1100	12000	--	--	21200	--	28.8
20...	11000	94	126	32	130	990	18000	--	--	30300	--	41.2
JUL												
01...	14000	94	140	26	110	1200	21000	--	--	38300	--	52.1
AUG												
17...	28000	96	258	70	92	1700	45000	--	--	84700	--	115

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	23400	52800	26900	---	22400	20800	26700	14600	48700	---	---
2	---	23000	35000	29000	---	36600	21100	22900	15600	54000	---	---
3	---	27500	27700	37400	---	28500	24100	19600	17100	61500	---	---
4	---	31900	35500	39900	---	23000	14500	18300	16900	---	---	---
5	---	37900	36800	32800	---	20300	15100	18200	14700	---	---	---
6	---	35600	31800	30900	16000	20600	16000	18700	17600	---	---	---
7	---	40600	32500	28800	16000	23400	16400	31000	18800	---	---	---
8	---	49600	32800	41000	26100	24100	16000	36400	20800	---	---	---
9	---	67300	34800	41800	46300	24500	14700	19100	25800	---	---	---
10	---	61300	37600	43800	52000	25700	17400	15900	23100	---	---	---
11	---	53800	34400	43600	45600	27000	17300	16000	25800	---	---	---
12	---	47000	34300	32500	40100	54300	17500	16700	27700	---	---	---
13	---	48200	36200	20600	42700	48000	18700	18800	28600	---	---	---
14	---	40600	35500	23700	29700	22600	17900	41900	31900	---	---	---
15	---	34500	42300	28700	25300	20100	18800	41900	34300	---	157000	---
16	---	41400	47600	30500	30400	23100	18800	35300	38700	---	122000	---
17	---	36800	56000	28500	39400	23600	19200	22800	43800	---	69000	---
18	---	42500	55300	28000	31700	19400	20500	20700	25800	---	57000	---
19	---	50400	51700	40400	19900	23200	21600	17900	21500	---	51000	---
20	133000	39600	40900	40200	22300	24500	22100	16400	31100	---	---	---
21	127000	45500	33500	43400	22400	25300	22700	17800	32100	---	---	---
22	---	47600	24400	30200	21600	26800	22600	16600	33200	---	---	---
23	---	45700	29100	25700	20800	65300	23100	14500	34500	---	---	---
24	---	39200	33600	23500	35000	57000	19600	16400	25400	---	---	---
25	---	42400	34700	25200	33500	29300	21700	15500	24700	---	---	---
26	---	44000	32600	41100	25100	20400	21100	16500	27200	---	---	---
27	---	38000	32400	30900	22200	18700	23300	19800	30600	---	---	---
28	---	44100	61400	---	21600	33900	19400	20400	39300	---	---	---
29	---	43600	42700	---	19400	24100	18900	25100	49300	---	---	---
30	25000	56100	32500	---	---	21300	21800	16200	56400	---	---	---
31	16700	---	29500	---	---	16800	---	15800	---	---	---	---
MEAN	75400	42800	38000	32900	29400	28200	20100	21600	28200	54700	91200	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	54100	---	48500	26200	20800	26600	17900	58100	---	---
2	---	---	36500	29000	42600	35300	21200	22900	20100	65800	---	---
3	---	---	36600	40600	35700	28100	24100	19200	20100	---	---	---
4	---	---	36600	39300	31700	18300	14800	18500	19400	---	---	---
5	---	---	36700	31600	15100	18400	---	18300	19400	---	---	---
6	---	---	29700	30500	15100	20700	15900	18900	20400	---	---	---
7	---	40800	31900	28600	16100	23600	16500	31700	20300	---	---	---
8	---	48800	31900	43300	27500	23600	16000	25400	---	---	---	---
9	---	57400	35700	43200	52400	24900	14700	18700	26900	---	---	---
10	---	55300	38700	43400	52400	25900	16300	18600	26900	---	---	---
11	---	52200	34300	43300	45100	25900	17400	---	27700	---	---	---
12	---	48300	34300	---	45100	53500	17500	19200	29400	---	---	---
13	---	48200	34900	20500	45100	36900	18700	18300	31600	---	---	---
14	---	45600	---	25500	25300	21000	17900	43900	33700	---	---	---
15	---	46400	43100	30100	25300	---	18900	43900	35000	---	134000	---
16	---	45800	47200	30700	29900	23700	19000	41700	35000	---	---	---
17	---	---	55500	---	39900	23700	19400	20500	38500	---	109000	---
18	---	43400	59700	28800	33700	25200	20400	20400	30500	---	---	---
19	---	43300	42200	40700	21500	22400	21400	18400	29800	---	---	---
20	---	48800	38400	40300	22000	---	21900	26500	48200	---	---	---
21	---	48900	31400	44300	21800	25100	22700	19900	28400	---	---	---
22	---	---	---	30300	21900	26800	22300	15200	---	---	---	---
23	---	44400	28300	26800	20600	60200	23400	15900	36200	---	---	---
24	---	40400	37700	24300	39100	60500	38600	17700	21000	---	---	---
25	---	45500	34900	26400	34000	25500	21600	18500	20900	---	---	---
26	---	44400	32300	40400	24400	---	21100	18500	22100	---	---	---
27	---	42100	32300	38800	22200	18600	22800	19400	29800	---	---	---
28	---	41800	67800	45100	22200	35500	19400	32300	41400	---	---	---
29	---	44700	43900	50800	18800	22800	19300	25100	41600	---	---	---
30	---	58800	31500	53800	---	21300	20500	13700	58500	---	---	---
31	---	---	27600	42400	---	16800	---	15300	---	---	---	---
MEAN	---	47000	38800	36200	30900	28200	20200	22800	29700	62000	122000	---

ARKANSAS RIVER BASIN

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07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.0	.5	2.0	---	.0	8.5	15.0	25.5	27.5	---	---
2	---	9.0	1.0	3.0	---	.0	8.5	16.0	26.0	29.5	---	---
3	---	8.5	2.0	1.5	---	2.0	7.5	16.5	26.0	31.0	---	---
4	---	9.0	3.5	1.0	---	4.0	8.5	17.0	26.5	---	---	---
5	---	9.5	6.0	2.0	---	1.5	10.5	18.5	26.5	---	---	---
6	---	6.5	4.0	2.0	3.0	3.5	11.5	19.5	27.0	---	---	---
7	---	7.0	4.5	.0	.0	7.0	12.5	21.0	27.5	---	---	---
8	---	8.0	4.0	.0	.0	7.5	11.0	16.0	23.5	---	---	---
9	---	8.0	4.5	.0	.0	10.0	10.0	16.0	23.0	---	---	---
10	---	5.0	6.0	5.0	.0	10.0	11.5	20.5	25.0	---	---	---
11	---	3.5	6.0	4.0	.5	5.0	12.5	21.5	25.0	---	---	---
12	---	6.5	1.5	2.5	.5	6.0	10.5	20.0	24.0	---	---	---
13	---	6.5	.5	3.5	3.0	8.0	9.5	19.0	25.0	---	---	---
14	---	7.5	.5	6.0	2.5	9.5	9.5	19.0	25.5	---	---	---
15	---	7.5	2.5	7.5	.0	11.0	10.5	15.5	24.5	---	25.5	---
16	---	8.0	.0	7.0	.0	12.5	12.5	15.0	23.0	---	24.5	---
17	---	8.5	.0	5.0	.0	8.0	13.0	17.0	22.0	---	28.5	---
18	---	11.0	.0	5.0	.5	8.0	13.0	18.5	24.5	---	24.5	---
19	---	10.5	2.0	6.0	4.0	10.0	16.0	20.0	27.0	---	27.0	---
20	22.5	12.0	3.0	2.0	7.5	10.0	19.0	21.0	25.5	---	---	---
21	19.5	9.5	4.0	---	9.5	9.0	19.0	20.5	25.5	26.5	---	---
22	---	4.5	4.0	---	7.5	9.5	18.0	22.0	26.0	29.5	---	---
23	---	4.0	3.5	---	6.0	8.5	18.5	22.0	26.5	29.5	---	---
24	---	5.0	4.0	---	6.0	3.0	16.5	23.5	30.5	---	---	---
25	---	5.0	3.5	---	6.0	5.0	11.0	25.5	30.0	---	---	---
26	---	4.5	4.0	---	6.0	9.0	11.0	26.0	29.5	---	---	---
27	---	5.5	5.0	---	9.0	9.5	14.0	21.0	27.5	---	---	---
28	---	3.0	4.5	---	11.0	11.0	16.5	24.0	29.0	---	---	---
29	---	.5	3.0	---	2.0	6.0	18.5	23.0	28.5	---	---	---
30	14.5	.0	1.5	---	---	5.0	17.0	24.5	27.5	---	---	---
31	9.5	---	1.0	---	---	6.5	---	25.0	---	---	---	---
MEAN	16.5	6.5	3.0	3.5	3.5	7.0	13.0	20.0	26.0	29.0	27.5	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10.0	5.0	---	5.0	.0	15.0	26.0	27.0	30.0	---	---
2	---	12.0	5.0	3.0	7.5	.0	9.5	20.5	26.0	32.0	---	---
3	---	12.5	7.0	2.0	7.5	7.0	13.0	25.0	28.0	---	---	---
4	---	12.0	9.0	2.0	2.0	2.0	16.0	22.0	28.0	---	---	---
5	---	9.5	7.0	4.0	5.0	4.0	---	23.0	27.0	---	---	---
6	---	10.5	7.0	3.0	4.0	10.0	18.0	26.0	28.0	---	---	---
7	---	10.5	6.0	1.0	3.5	9.0	15.0	21.0	29.0	---	---	---
8	---	9.0	5.0	2.0	2.5	13.0	12.0	16.0	---	---	---	---
9	---	9.0	9.0	1.5	2.0	15.0	16.0	20.0	28.0	---	---	---
10	---	7.5	12.0	9.5	3.0	15.0	19.0	26.0	30.0	---	---	---
11	---	5.5	10.0	7.0	2.5	5.0	13.0	---	27.0	---	---	---
12	---	10.0	5.0	---	3.0	7.0	12.0	24.0	28.0	---	---	---
13	---	10.0	2.0	9.5	2.0	12.0	18.0	26.0	27.0	---	---	---
14	---	11.0	---	9.5	1.0	14.0	15.0	17.0	30.0	---	---	---
15	---	12.0	7.0	9.5	.5	---	12.0	13.0	30.0	---	33.0	---
16	---	13.0	1.0	8.5	.0	13.0	15.5	18.0	24.5	---	---	---
17	---	---	.0	---	3.0	12.5	15.0	22.0	24.0	---	33.0	---
18	---	13.0	5.0	8.0	5.0	12.0	17.0	20.0	28.0	---	---	---
19	---	14.0	7.0	4.0	9.0	15.0	14.0	25.0	34.0	---	---	---
20	24.0	9.0	7.0	2.0	7.0	---	25.0	25.0	30.0	---	---	---
21	22.0	5.0	7.0	3.5	13.0	14.0	22.0	26.0	30.0	---	---	---
22	---	---	---	4.0	5.0	15.0	21.0	27.0	---	---	---	---
23	---	9.0	4.0	6.0	7.5	5.0	23.0	25.0	32.0	---	---	---
24	---	9.0	7.0	9.0	7.0	6.0	14.5	27.0	33.0	---	---	---
25	---	7.0	8.0	7.0	9.0	10.0	9.0	29.0	32.0	---	---	---
26	---	7.0	8.0	4.0	11.0	---	14.0	30.0	27.0	---	---	---
27	---	5.0	4.0	3.0	13.0	10.0	14.0	23.0	29.0	---	---	---
28	---	1.0	4.5	2.0	15.0	14.0	20.0	27.0	29.0	---	---	---
29	---	1.0	4.0	3.5	5.0	6.0	21.0	25.0	27.0	---	---	---
30	15.0	4.0	4.0	4.0	---	8.0	24.0	28.0	30.0	---	---	---
31	8.5	---	4.0	4.0	---	12.0	---	26.0	---	---	---	---
MEAN	17.5	9.0	6.0	5.0	5.5	9.5	14.5	23.5	28.5	31.0	33.0	---

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	530	880	570	---	520	500	570	430	830	---	---
2	---	530	670	600	---	690	500	530	440	890	---	---
3	---	580	580	700	---	590	540	490	460	980	---	---
4	---	630	670	730	---	530	430	470	450	---	---	---
5	---	700	690	640	---	490	430	470	430	---	---	---
6	---	680	630	620	440	500	440	480	460	---	---	---
7	---	730	640	590	440	530	450	620	480	---	---	---
8	---	840	640	740	560	540	440	680	500	---	---	---
9	---	1000	670	750	800	540	430	480	560	---	---	---
10	---	980	700	770	870	560	460	440	530	---	---	---
11	---	890	660	770	790	570	460	440	560	---	---	---
12	---	810	660	640	730	900	460	450	580	---	---	---
13	---	820	680	500	760	820	480	480	590	---	---	---
14	---	730	670	530	610	520	470	750	630	---	---	---
15	---	710	750	590	550	490	480	750	660	---	2100	---
16	---	740	820	610	610	530	480	670	710	---	1700	---
17	---	690	920	590	720	530	480	520	770	---	1100	---
18	---	760	910	590	630	480	500	500	560	---	930	---
19	---	850	870	730	490	530	510	470	510	---	860	---
20	1800	720	740	730	520	540	520	450	620	---	---	---
21	1800	790	650	770	520	550	520	470	630	---	---	---
22	---	820	540	610	510	570	520	450	650	---	---	---
23	---	790	600	560	500	1000	530	430	660	---	---	---
24	---	720	650	530	670	930	720	450	550	---	---	---
25	---	760	660	550	650	600	510	440	550	---	---	---
26	---	770	640	740	550	500	500	450	580	---	---	---
27	---	700	640	620	520	480	530	490	620	---	---	---
28	---	780	980	---	510	660	480	500	720	---	---	---
29	---	770	760	---	480	540	480	550	840	---	---	---
30	550	920	640	---	---	510	510	450	920	---	---	---
31	450	---	600	---	---	450	---	440	---	---	---	---
MEAN	1200	760	700	640	600	590	490	510	590	900	1300	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1430	61.8	199	---	126	551	506	333	7.84	---	---
2	---	381	66.9	219	---	192	629	482	252	2.88	---	---
3	---	235	83.0	308	---	198	643	492	227	.53	---	---
4	---	162	143	288	---	285	521	407	211	---	---	---
5	---	142	188	245	---	310	426	425	202	---	---	---
6	---	101	182	208	352	182	323	346	200	---	---	---
7	---	140	159	139	290	167	267	440	180	---	---	---
8	---	209	102	99.9	330	171	232	402	153	---	---	---
9	---	248	83.2	52.6	156	171	203	327	163	---	---	---
10	---	217	94.5	123	153	157	210	320	137	---	---	---
11	---	151	80.2	187	209	212	206	267	132	---	---	---
12	---	138	71.3	199	193	518	190	234	127	---	---	---
13	---	155	73.4	143	447	602	202	223	115	---	---	---
14	---	116	66.9	137	614	358	197	320	105	---	---	---
15	---	95.8	70.9	134	532	251	197	808	87.3	---	32.90	---
16	---	106	55.3	130	247	197	192	1280	123	---	13.80	---
17	---	96.9	52.2	123	169	177	184	733	414	---	4.45	---
18	---	107	56.5	170	299	137	177	875	337	---	2.51	---
19	---	115	68.1	623	295	157	182	577	190	---	.77	---
20	.53	83.6	85.9	796	279	165	180	654	238	---	---	---
21	.49	96.0	193	686	240	153	170	1260	168	---	---	---
22	---	111	292	520	186	151	163	936	207	---	---	---
23	---	89.6	185	438	158	591	165	625	260	---	---	---
24	---	97.2	130	358	244	758	1660	452	162	---	---	---
25	---	113	141	339	237	489	1800	337	95.0	---	---	---
26	---	119	137	248	200	506	2520	284	54.8	---	---	---
27	---	94.5	145	129	164	425	1410	282	36.8	---	---	---
28	---	105	283	---	151	718	750	340	27.2	---	---	---
29	---	104	234	---	127	1620	542	974	22.7	---	---	---
30	3910	77.0	207	---	---	1000	485	820	14.9	---	---	---
31	1730	---	201	---	---	571	---	488	---	---	---	---
MEAN	1410	181	129	268	261	378	519	546	166	3.75	10.90	---

ARKANSAS RIVER BASIN

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07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7800	23000	9600	---	7300	6500	9500	3200	21000	---	---
2	---	7600	14000	11000	---	15000	6600	7500	3800	24000	---	---
3	---	9900	10000	15000	---	10000	8200	5800	4500	28000	---	---
4	---	12000	14000	16000	---	7600	3200	5200	4400	---	---	---
5	---	15000	15000	13000	---	6200	3500	5100	3300	---	---	---
6	---	14000	12000	12000	4000	6400	4000	5400	4800	---	---	---
7	---	17000	13000	11000	4000	7800	4200	12000	5400	---	---	---
8	---	21000	13000	17000	9200	8200	4000	15000	6500	---	---	---
9	---	31000	14000	17000	20000	8400	3300	5600	9100	---	---	---
10	---	27000	15000	18000	23000	9000	4700	3900	7700	---	---	---
11	---	24000	14000	18000	19000	9700	4600	4000	9100	---	---	---
12	---	20000	13000	13000	16000	24000	4700	4300	10000	---	---	---
13	---	21000	14000	6400	18000	21000	5400	5400	11000	---	---	---
14	---	17000	14000	8000	11000	7400	5000	17000	12000	---	---	---
15	---	16000	18000	11000	8800	6100	5400	17000	13000	---	77000	---
16	---	17000	20000	11000	11000	7700	5400	14000	16000	---	59000	---
17	---	15000	25000	10000	16000	7900	5600	7500	18000	---	31000	---
18	---	18000	24000	10000	12000	5700	6300	6400	9100	---	25000	---
19	---	22000	22000	17000	6000	7700	6900	5000	6800	---	22000	---
20	65000	16000	17000	17000	7200	8400	7100	4200	12000	---	---	---
21	62000	19000	13000	18000	7300	8800	7400	4900	12000	---	---	---
22	---	20000	8300	11000	6900	9600	7400	4300	13000	---	---	---
23	---	19000	11000	9000	6500	30000	7700	3200	14000	---	---	---
24	---	16000	13000	7900	14000	25000	16000	4200	8800	---	---	---
25	---	18000	14000	8700	13000	11000	6900	3700	8500	---	---	---
26	---	19000	13000	17000	8700	6200	6600	4200	9800	---	---	---
27	---	15000	12000	12000	7200	5400	7800	5900	12000	---	---	---
28	---	19000	28000	---	6900	13000	5700	6200	16000	---	---	---
29	---	18000	18000	---	5700	8200	5500	8700	21000	---	---	---
30	8600	25000	13000	---	---	6700	7000	4100	25000	---	---	---
31	4300	---	11000	---	---	4400	---	3900	---	---	---	---
MEAN	35000	18000	15000	13000	11000	10000	6100	6900	10000	24000	43000	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21100	1610	3340	---	1770	7160	8440	2480	198	---	---
2	---	5460	1400	4010	---	4170	8300	6820	2180	77.8	---	---
3	---	4010	1430	6600	---	3350	9760	5830	2220	15.1	---	---
4	---	3080	2990	6310	---	4080	3880	4510	2070	---	---	---
5	---	3040	4090	4980	---	3920	3470	4610	1550	---	---	---
6	---	2080	3470	4020	3200	2330	2940	3890	2090	---	---	---
7	---	3260	3230	2580	2640	2460	2490	8520	2030	---	---	---
8	---	5220	2070	2300	5420	2590	2110	8870	1980	---	---	---
9	---	7700	1740	1190	3890	2650	1560	3810	2650	---	---	---
10	---	5980	2030	2870	4040	2530	2140	2830	2000	---	---	---
11	---	4080	1700	4370	5030	3610	2060	2430	2140	---	---	---
12	---	3400	1400	4040	4230	13800	1940	2240	2190	---	---	---
13	---	3970	1510	1830	10600	15400	2270	2510	2140	---	---	---
14	---	2710	1400	2070	11100	5090	2090	7250	2010	---	---	---
15	---	2160	1700	2490	8510	3130	2220	18300	1720	---	1210	---
16	---	2430	1350	2350	4450	2870	2160	26700	2760	---	478	---
17	---	2110	1420	2080	3760	2640	2150	10600	9670	---	126	---
18	---	2530	1490	2890	5700	1630	2230	11200	5480	---	67.5	---
19	---	2970	1720	14500	3610	2290	2080	6140	2530	---	19.6	---
20	19.3	1860	1970	18500	3870	2560	2450	6100	4600	---	---	---
21	16.7	2310	3860	16000	3370	2450	2420	13200	3210	---	---	---
22	---	2700	4480	9390	2520	2540	2320	8940	4140	---	---	---
23	---	2150	3390	7050	2050	17700	2390	4650	5520	---	---	---
24	---	2160	2600	5330	5100	20400	36900	4220	2590	---	---	---
25	---	2670	2990	5360	4740	8970	24400	2840	1470	---	---	---
26	---	2920	2770	5690	3170	6280	33300	2650	926	---	---	---
27	---	2030	2720	2490	2270	4780	20800	3390	713	---	---	---
28	---	2570	8090	---	2050	14100	8910	4220	605	---	---	---
29	---	2430	5540	---	1510	24600	6210	15400	567	---	---	---
30	61100	2090	4210	---	---	13200	6650	7470	405	---	---	---
31	16500	---	3680	---	---	5580	---	4330	---	---	---	---
MEAN	19400	3770	2710	5360	4450	6560	7000	7190	2550	97.0	380	---

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15100	37600	17800	---	14300	13100	17600	8370	34400	---	---
2	---	14800	24000	19400	---	25200	13300	14700	9140	38500	---	---
3	---	18200	18400	25800	---	19000	15600	12200	10300	44200	---	---
4	---	21600	24300	27700	---	14800	8300	11200	10100	---	---	---
5	---	26200	25300	22300	---	12700	8750	11100	8450	---	---	---
6	---	24400	21500	20800	9440	13000	9440	11500	10700	---	---	---
7	---	28200	22100	19200	9440	15100	9750	20900	11600	---	---	---
8	---	35100	22300	28500	17200	15600	9440	25000	13100	---	---	---
9	---	48600	23800	29200	32600	15900	8450	11800	16900	---	---	---
10	---	44100	25900	30700	37000	16900	10500	9370	14900	---	---	---
11	---	38300	23500	30500	32100	17800	10400	9440	16900	---	---	---
12	---	33100	23400	22100	27900	38700	10600	9980	18400	---	---	---
13	---	34000	24900	13000	29800	33900	11500	11600	19100	---	---	---
14	---	28200	24300	15300	19900	14500	10900	29200	21600	---	---	---
15	---	26600	29500	19100	16500	12600	11600	29200	23400	---	117000	---
16	---	28900	33600	20500	20400	14900	11600	24200	26800	---	90400	---
17	---	25300	40000	19000	27300	15200	11900	14600	30700	---	49900	---
18	---	29700	39500	18600	21400	12000	12900	13000	16900	---	40800	---
19	---	35700	36700	28100	12400	14900	13700	10900	13600	---	36200	---
20	98800	27500	28500	27900	14300	15900	14100	9750	21000	---	---	---
21	94300	32000	22800	30700	14300	16500	14600	10800	21700	---	---	---
22	---	33600	15900	20300	13700	17700	14500	9900	22600	---	---	---
23	---	32100	19500	16900	13100	47100	14900	8300	23600	---	---	---
24	---	27200	22900	15200	24000	40800	27500	9750	16600	---	---	---
25	---	29600	23700	16500	22800	19600	13800	9060	16100	---	---	---
26	---	30800	22100	28600	16400	12800	13300	9820	18000	---	---	---
27	---	26300	22000	20800	14200	11500	15000	12300	20600	---	---	---
28	---	30900	44100	---	13700	23100	12000	12800	27200	---	---	---
29	---	30500	29800	---	12000	15600	11700	16400	34900	---	---	---
30	16300	40100	22100	---	---	13500	13900	9600	40300	---	---	---
31	9980	---	19800	---	---	10100	---	9290	---	---	---	---
MEAN	54800	29900	26300	22400	19700	18700	12600	13700	18800	39000	66900	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	40800	2640	6200	---	3470	14400	15600	6490	325	---	---
2	---	10600	2400	7070	---	7010	16700	13400	5230	125	---	---
3	---	7370	2630	11400	---	6360	18600	12300	5090	23.9	---	---
4	---	5540	5180	10900	---	7950	10100	9710	4740	---	---	---
5	---	5310	6900	8550	---	8020	8670	10000	3970	---	---	---
6	---	3620	6210	6960	7540	4740	6930	8290	4650	---	---	---
7	---	5410	5490	4510	6220	4770	5790	14800	4350	---	---	---
8	---	8720	3550	3850	10100	4930	4970	14800	4000	---	---	---
9	---	12100	2960	2050	6340	5020	3990	8030	4930	---	---	---
10	---	9760	3500	4890	6490	4750	4790	6810	3860	---	---	---
11	---	6510	2860	7410	8490	6630	4660	5730	3970	---	---	---
12	---	5630	2530	6860	7380	22300	4380	5200	4020	---	---	---
13	---	6430	2690	3720	17500	24900	4840	5390	3710	---	---	---
14	---	4490	2430	3970	20000	9980	4560	12500	3620	---	---	---
15	---	3590	2790	4330	15900	6460	4760	31500	3100	---	1830	---
16	---	4140	2270	4370	8260	5550	4640	46200	4630	---	732	---
17	---	3550	2270	3950	6410	5090	4560	20600	16500	---	202	---
18	---	4170	2450	5370	10200	3430	4560	22700	10200	---	110	---
19	---	4820	2870	24000	7470	4430	4880	13400	5070	---	32.3	---
20	29.3	3190	3310	30400	7680	4850	4870	14200	8050	---	---	---
21	25.5	3890	6770	27400	6600	4590	4770	29000	5800	---	---	---
22	---	4540	8590	17300	4990	4680	4540	20600	7200	---	---	---
23	---	3640	6000	13200	4140	27900	4630	12100	9300	---	---	---
24	---	3670	4580	10300	8750	33300	63400	9790	4890	---	---	---
25	---	4400	5060	10200	8310	16000	48800	6950	2780	---	---	---
26	---	4740	4710	9580	5980	13000	67200	6200	1700	---	---	---
27	---	3550	4990	4320	4490	10200	39900	7070	1220	---	---	---
28	---	4170	12700	---	4070	25100	18800	8710	1030	---	---	---
29	---	4120	9170	---	3180	46800	13200	29000	942	---	---	---
30	116000	3360	7160	---	---	26500	13200	17500	653	---	---	---
31	38300	---	6630	---	---	12800	---	10300	---	---	---	---
MEAN	38600	6530	4650	9370	8190	12000	14000	14500	4860	158	581	---

83

LOCATION.--Lat 36°31'02", long 98°52'45", in NW¼NE¼ 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 (6 km) south of Waynoka, and at mile 247.0 (397.4 km).

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 (416.768 m), 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 (8 km) 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 (15.2 m) downstream at present datum.

AVERAGE DISCHARGE.--43 years (water years 1938-80), 338 ft³/s (9.572 m³/s), 244,900 acre-ft/yr (302 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,500 ft³/s (2,680 m³/s) May 16, 1957, gage height, 15.10 ft (4.602 m), from rating curve extended above 45,000 ft³/s (1,270 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,800 ft³/s (561 m³/s) at 1300 Oct. 30, gage height, 9.04 ft (2.755 m), no other peak above base of 10,000 ft³/s (283 m³/s); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1720	59	137	126	108	453	37A	363	37	.00	.00
2	.70	872	59	131	118	80	402	327	304	26	.00	.00
3	.56	591	69	152	140	128	545	325	281	26	.00	.00
4	.70	412	66	165	163	131	477	319	252	19	.00	.00
5	.56	300	93	165	195	137	44A	293	226	11	.00	.00
6	.42	218	105	171	331	160	399	287	204	7.9	.00	.00
7	.28	179	89	148	392	144	353	264	179	5.6	.00	.00
8	.14	174	79	119	348	131	342	269	159	2.7	.00	.00
9	.00	260	81	87	242	127	301	256	144	2.0	.00	.00
10	.00	243	78	94	195	117	273	265	136	.99	.00	.00
11	.00	178	72	102	168	117	252	256	126	.43	.00	.00
12	.00	151	73	94	187	145	216	241	115	.07	.00	.00
13	.00	127	68	135	149	179	204	210	101	.00	.00	.00
14	.00	114	68	153	265	178	201	190	85	.00	.00	.00
15	.00	105	67	126	470	182	187	331	72	.00	.00	.00
16	.56	99	90	118	394	157	175	3080	81	.00	6.0	.00
17	1.0	94	80	109	176	132	174	914	227	.00	23	.00
18	.86	91	74	109	182	114	170	942	358	.00	7.4	.00
19	.00	88	57	224	202	108	165	729	368	.00	.24	.00
20	.00	135	60	533	334	107	158	616	295	.00	.00	.00
21	.00	155	77	668	323	113	144	1180	262	1.9	.00	.00
22	.00	112	144	533	234	110	131	785	203	1.7	.00	.00
23	.00	90	168	419	200	124	124	748	191	2.4	.00	.00
24	.00	88	105	365	191	228	303	545	189	.49	.00	.00
25	.00	92	94	315	202	237	1510	414	158	.00	.00	.00
26	.00	89	90	284	186	266	5210	332	126	.00	.00	.00
27	.00	86	97	212	180	288	2160	301	96	.00	.00	.00
28	.00	85	112	149	167	316	1080	290	74	.00	.00	.00
29	.00	78	146	140	156	589	575	366	61	.00	.00	.00
30	8550	69	139	126	---	920	442	624	48	.00	.00	.00
31	4090	---	144	110	---	555	---	480	---	.00	.00	---
TOTAL	12646.78	7095	2803	6393	6656	6428	17574	16557	5484	145.18	36.64	.00
MEAN	408	237	90.4	206	230	207	566	534	183	4.68	1.18	.000
MAX	8550	1720	168	668	470	920	5210	3080	368	37	23	.00
MIN	.00	69	57	87	118	80	124	190	48	.00	.00	.00
AC=FT	25080	14070	5560	12680	13200	12750	34860	32840	10880	288	73	.00
CAL YR 1979	TOTAL	132534.38	MEAN	363	MAX	25300	MIN	.00	AC=FT	262900		
WTR YR 1980	TOTAL	81818.60	MEAN	224	MAX	8550	MIN	.00	AC=FT	162300		

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06", long 97°54'51", in SW¼NE¼ 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 (1.6 km) downstream from Turkey Creek, 2.0 mi (3.2 km) south of Dover, 2.5 mi (4.0 km) upstream from Kingfisher Creek, and at mile 160.6 (258.4 km).

DRAINAGE AREA.--15,713 mi² (40,697 km²), of which 4,926 mi² (12,758 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 999.19 ft (304.553 m), revised, National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years, 777 ft³/s (22.00 m³/s), 562,900 acre-ft/yr (694 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s (1,760 m³/s) Oct. 11, 1973, gage height, 21.81 ft (6.648 m) from high-water mark; minimum daily, 4.3 ft³/s (0.12 m³/s) Sept. 23, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 26	2045	13,000 368	16.77 5.111	May 27	2300	19,800 561	18.02 5.492
May 16	1100	*34,700 983	*19.68 5.998	May 30	0345	20,600 583	18.12 5.523

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	5050	249	214	137	270	1340	2320	2810	293	40	30
2	64	3610	242	206	213	250	982	3230	1870	264	36	27
3	60	1370	233	205	254	243	940	2220	1330	245	37	23
4	58	843	223	200	258	303	1550	1650	1040	228	39	28
5	59	595	218	196	248	273	1530	1380	904	215	40	31
6	59	435	213	197	230	260	967	1300	791	201	39	24
7	59	336	205	197	231	268	860	1210	699	188	38	23
8	59	289	202	188	287	265	786	1150	609	176	31	20
9	53	275	203	192	387	278	706	1080	558	168	29	19
10	53	299	210	198	359	276	621	988	517	157	27	17
11	53	265	203	184	315	268	552	936	481	145	26	17
12	53	253	193	168	292	279	492	1670	436	136	26	22
13	52	234	185	155	275	274	459	1610	391	126	27	20
14	52	209	183	159	273	270	436	897	354	117	26	17
15	53	192	182	163	293	291	404	4540	312	108	27	14
16	53	177	175	168	291	327	386	24300	313	100	28	12
17	52	167	170	185	308	336	367	11300	512	95	28	9.4
18	51	156	165	176	544	324	362	8880	2000	91	26	11
19	52	150	175	188	391	285	356	5510	3060	83	88	11
20	50	1600	178	253	315	261	341	3120	5530	75	76	10
21	51	8400	167	374	296	252	323	6390	6500	69	44	8.0
22	52	3630	166	616	308	240	306	9510	3220	67	32	6.0
23	53	2030	161	566	442	270	293	4760	2020	66	27	4.3
24	54	1190	162	557	433	384	399	2460	1140	66	23	5.2
25	53	740	174	434	390	386	1470	1780	797	79	21	8.0
26	52	515	185	362	374	360	9650	1330	662	62	20	14
27	52	385	185	331	352	482	9900	9960	558	59	18	29
28	53	307	211	310	354	470	7680	10900	472	56	17	42
29	53	271	237	285	320	558	4030	6540	404	53	17	49
30	54	258	234	241	---	592	2770	14000	341	48	19	52
31	3960	---	215	148	---	799	---	4520	---	43	35	---
TOTAL	5599	34231	6104	8016	9170	10394	51258	151441	40631	3879	1007	602.9
MEAN	181	1141	197	259	316	335	1709	4885	1354	125	32.5	20.1
MAX	3960	8400	249	616	544	799	9900	24300	6500	293	88	52
MIN	50	150	161	148	137	240	293	897	312	43	17	4.3
AC=FT	11110	67900	12110	15900	18190	20620	101700	300400	80590	7690	2000	1200

CAL YR 1979 TOTAL 326284.0 MEAN 894 MAX 13300 MIN 50 AC=FT 647200
WTR YR 1980 TOTAL 322332.9 MEAN 881 MAX 24300 MIN 4.3 AC=FT 639300

ARKANSAS RIVER BASIN

85

07159720 COTTONWOOD CREEK NEAR NAVINA, OK

LOCATION.--Lat 35°46'36", long 97°32'45", SW¼NW¼ sec.17, T.15 N., R.4 W., Logan County, Hydrologic Unit 11050002, on downstream right bank, 0.5 mi (0.8 km) downstream from Deer Creek, 1.7 mi (2.7 km) southeast of Navina, 10.7 mi (17.2 km) southwest of Guthrie, and at mile 25.0 (40.2 km).

DRAINAGE AREA.--247 mi² (640 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 962.10 ft (293.248 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Low flow sustained by part of sewage effluent from Oklahoma City.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) May 30, 1980, gage height, 22.43 ft (6.837 m); minimum daily, 8.0 ft³/s (0.23 m³/s) Oct. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 26	0830	2,480 70.2	19.97 6.087	May 27	2200	2,350 66.6	19.81 6.038
May 16	1330	2,640 74.8	20.13 6.136	May 30	0100	*12,300 348	*22.43 6.837
May 18	1915	2,210 62.6	19.63 5.983				

Minimum daily discharge, 8.9 ft³/s (0.25 m³/s) Jan. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	44	14	20	18	29	31	163	567	45	16	15
2	18	36	15	19	24	27	48	650	487	42	16	17
3	19	31	18	14	37	33	186	353	447	38	16	20
4	19	29	17	12	31	32	96	164	396	34	16	18
5	20	1A	16	11	24	28	56	116	301	32	16	15
6	20	15	16	10	23	30	44	94	253	32	16	13
7	19	15	16	18	20	28	38	78	198	31	17	13
8	18	16	16	9.6	67	30	33	69	133	33	18	13
9	19	16	17	10	56	26	30	59	108	35	19	13
10	20	17	18	9.4	33	24	27	57	99	34	17	13
11	22	16	16	13	46	23	27	56	87	30	18	11
12	23	16	17	11	40	27	25	47	75	28	18	13
13	18	17	15	11	31	35	24	44	68	23	17	13
14	15	17	16	14	36	27	24	39	61	23	18	14
15	16	17	16	12	41	23	25	176	56	19	17	15
16	16	17	17	11	31	23	24	2320	53	18	16	14
17	15	17	16	9.4	28	23	24	1070	54	19	17	13
18	17	18	15	8.9	32	21	22	1430	126	19	15	13
19	17	20	17	60	36	20	23	1470	103	19	17	13
20	19	22	19	100	41	21	24	422	710	18	18	13
21	19	152	19	80	40	20	23	317	928	18	18	13
22	19	67	19	60	29	20	23	355	437	18	17	14
23	29	34	19	52	28	23	21	231	443	18	15	13
24	24	24	20	42	32	63	52	173	213	17	14	13
25	19	23	20	37	31	53	549	138	135	18	15	13
26	15	20	1A	31	32	43	2240	113	94	18	15	13
27	16	18	18	30	32	37	836	1250	73	18	14	13
28	18	17	70	29	31	38	751	1950	62	17	14	16
29	31	16	130	25	31	39	178	2540	53	17	14	17
30	35	15	83	22	---	36	123	8830	49	17	16	16
31	84	---	34	20	---	34	---	1530	---	17	16	---
TOTAL	677	800	777	811.3	981	936	5227	26304	6869	765	506	423
MEAN	21.8	26.7	25.1	26.2	33.8	30.2	174	849	229	24.7	16.3	14.1
MAX	84	152	130	100	67	63	2240	8830	928	45	19	20
MIN	15	15	14	8.9	18	20	21	39	49	17	14	11
AC=FT	1340	1590	1540	1610	1950	1860	10370	52170	13620	1520	1000	839

CAL YR 1979	TOTAL	24111.2	MEAN	66.1	MAX	1890	MIN	8.5	AC=FT	47820
WTR YR 1980	TOTAL	45076.3	MEAN	123	MAX	8830	MIN	8.9	AC=FT	89410

ARKANSAS RIVER BASIN

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to September 1980.

WATER TEMPERATURE: October 1977 to September 1980.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily 1,550 micromhos July 23, 26, 27; minimum daily, 100 micromhos May 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 09...	1500	43	1200	7.3	17.0	3.0	32	--	--	--	--	
NOV 06...	1340	39	1241	7.4	10.5	5.0	46	35	--	--	--	
DEC 06...	1230	39	1400	7.4	7.0	6.8	58	11	--	--	--	
JAN 11...	1300	29	1300	7.0	7.0	7.4	62	--	--	--	--	
FEB 08...	1515	121	948	7.5	3.0	8.8	66	12	--	--	--	
11...	1010	47	649	8.1	2.0	9.8	72	--	--	--	--	
MAR 07...	1145	29	1160	7.7	8.0	9.7	85	8.7	--	--	--	
APR 10...	1130	27	1290	7.9	16.5	4.8	51	4.0	400	170	93	
MAY 08...	1145	70	1140	7.4	17.5	7.5	82	3.6	350	130	84	
JUN 11...	1330	87	1270	7.7	24.0	3.6	44	4.1	--	--	--	
JUL 03...	1048	38	600	7.7	29.0	2.5	33	5.6	460	220	110	
AUG 07...	1413	19	1400	7.8	28.0	3.6	47	3.0	370	180	84	
SEP 11...	1245	13	1316	7.5	27.7	3.6	47	14	280	160	64	
DATE		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- LINE- LITY LAS (MG/L AS CACU3)	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 09...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--	--
APR 10...	40	130	41	2.8	6.6	230	260	150	.6	10	865	
MAY 08...	35	98	37	2.3	5.5	220	200	120	.4	14	694	
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 03...	45	120	36	2.4	8.2	240	240	150	.4	19	913	
AUG 07...	40	170	49	3.8	13	190	260	200	.6	16	960	
SEP 11...	30	170	55	4.4	14	120	220	200	.6	13	881	

ARKANSAS RIVER BASIN

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07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC=FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NU3)	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)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
OCT 09...	--	--	--	5.60	25	.010	.03	5.6	.120	.15	--
NOV 06...	--	--	--	.30	1.3	.090	.30	.39	10.0	13	25
DEC 06...	--	--	--	.83	3.7	.080	.26	.91	8.50	11	1.2
JAN 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	.35	1.6	.050	.16	.40	7.80	10	4.2
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	.52	2.3	.080	.26	.60	5.90	7.6	2.2
APR 10...	832	1.1	63.1	--	--	--	--	.77	5.60	7.2	.00
MAY 08...	692	.94	131	.43	>1.9	.200	.66	.63	2.40	3.1	.60
JUN 11...	--	--	--	1.20	5.4	.290	.95	1.5	.580	.75	2.0
JUL 03...	844	1.2	93.7	1.10	4.8	.420	1.4	1.5	2.60	3.3	1.5
AUG 07...	908	1.3	49.2	1.20	<5.3	.910	3.0	2.1	.660	.85	.20
SEP 11...	804	1.2	30.9	4.10	18	.500	1.6	4.6	4.00	5.2	5.5

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS- (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PU4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- (UG/L AS CR)
OCT 09...	--	5.90	2.40	7.4	20	3	460	<1	8	--
NOV 06...	35	3.90	4.00	12	--	--	--	--	--	--
DEC 06...	9.7	4.70	4.50	14	40	3	480	<1	0	--
JAN 11...	--	--	--	--	--	--	--	--	--	--
FEB 08...	12	3.40	2.80	8.6	0	2	430	<1	0	--
FEB 11...	--	--	--	--	--	--	--	--	--	--
MAR 07...	8.1	2.30	2.60	8.0	--	--	--	--	--	--
APR 10...	3.2	3.50	--	--	--	--	--	--	--	1
MAY 08...	3.0	.030	--	--	--	--	--	--	--	--
JUN 11...	2.6	.980	.930	2.9	0	4	470	0	10	--
JUL 03...	4.1	2.60	--	--	--	--	--	--	--	--
AUG 07...	.86	5.50	--	--	0	6	620	2	0	--
SEP 11...	9.5	7.00	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 09...	2	50	30	370	.0	0	0	8	11	1.3
NOV 06...	--	--	--	--	--	--	--	--	15	.6
DEC 06...	0	40	21	120	.1	100	2	8	13	.3
JAN 11...	--	--	--	--	--	--	--	--	--	--
FEB 08...	1	30	4	190	.2	0	1	9	11	1.3
FEB 11...	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	13	--
APR 10...	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	10	2.1
JUN 11...	3	60	0	160	.3	100	1	40	13	3.5
JUL 03...	--	--	--	--	--	--	--	--	13	--
AUG 07...	3	20	0	440	.0	100	1	3	17	--
SEP 11...	--	--	--	--	--	--	--	--	10	3.0

07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	878	1130	967	1310	---	---	1010	528	1350	1520	1380
2	1090	914	1160	1030	1290	1310	1220	---	---	1390	---	---
3	1190	1000	1180	1050	1370	1310	904	---	529	1250	---	1120
4	---	1040	1170	1080	1180	1290	1010	836	583	---	1490	866
5	1140	1130	1170	1090	1190	1350	1140	972	677	1450	1520	1050
6	---	1180	1190	1100	1290	1330	1220	1060	753	1450	1520	1250
7	---	1220	1180	1130	---	1280	1280	1110	---	1460	1530	1310
8	1150	1250	1170	1150	---	---	1330	1210	---	1460	1540	1340
9	1180	1260	---	1130	---	1340	1360	1160	1140	1450	1470	1350
10	1190	1250	1180	1170	---	1370	1390	---	1200	1270	1470	1330
11	1220	1280	1200	1190	---	1370	1390	1270	1240	1250	1420	1340
12	1150	1300	1190	1190	1130	---	1390	1300	1280	1260	1450	1360
13	1250	1320	1190	1160	1150	1360	1430	1310	1250	1260	1410	1340
14	1200	1320	---	1170	1210	1340	1450	1340	1380	1320	1410	1360
15	1150	1320	---	1210	1190	1350	1450	---	1410	1410	1400	1370
16	1100	1330	1190	1200	1250	1340	1450	336	1420	1450	1380	---
17	1120	1330	1220	1220	1340	1380	1440	---	---	1480	1420	1470
18	1200	1320	1220	1210	1370	1410	1460	---	963	1500	1430	1410
19	1240	1340	1190	---	1380	1420	1470	400	---	1500	1410	1390
20	1260	---	1210	---	1350	1420	1460	645	329	1510	1430	1370
21	1290	850	1200	---	1310	1420	1440	745	478	1530	1420	1390
22	1370	---	1210	---	1350	1420	1470	718	476	1530	1370	1420
23	1360	856	1210	850	1370	---	1450	872	562	1550	1350	1370
24	1330	930	1220	956	1400	---	1610	972	750	1530	1360	1360
25	1290	1040	1210	1020	1360	1320	---	1010	872	1540	1400	1360
26	1290	1140	1200	1060	---	1280	507	---	1000	1550	1420	1360
27	---	1180	1210	1110	1380	1250	670	354	1070	1550	1410	1350
28	1320	1220	---	1120	1370	1280	766	445	1170	1540	1430	1340
29	1410	1240	---	1140	1360	---	837	218	1240	1540	1430	1240
30	---	1270	805	---	---	1280	916	100	1320	1530	---	1330
31	1220	---	884	1180	---	1300	---	436	---	1550	---	---
MEAN	1220	1170	1160	1110	1300	1340	1230	826	945	1450	1440	1320

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	12.0	4.0	7.0	1.0	---	---	18.0	23.0	28.5	26.5	26.0
2	19.5	12.0	4.0	7.0	3.0	---	13.0	---	---	26.0	---	---
3	19.0	11.0	5.0	6.0	4.0	---	13.0	---	24.5	29.0	---	26.0
4	---	13.0	9.0	6.0	5.0	---	13.0	19.0	25.0	---	27.0	26.0
5	16.0	15.0	9.0	7.0	6.0	---	15.0	20.0	25.0	28.0	28.5	27.0
6	---	11.0	7.0	7.0	6.0	---	17.0	21.0	25.0	28.5	26.5	26.5
7	---	11.0	9.0	6.0	---	---	19.0	19.5	---	27.5	26.0	26.0
8	20.0	11.0	7.0	3.0	---	---	16.0	18.0	---	29.5	27.0	27.0
9	18.0	11.0	---	3.0	---	---	15.0	17.0	---	28.5	26.5	26.0
10	16.5	9.0	10.0	7.0	---	---	16.0	---	---	28.5	26.5	26.5
11	17.0	8.0	12.0	7.0	---	---	16.0	22.0	---	27.0	26.0	25.0
12	16.5	9.0	8.0	7.0	2.0	---	13.5	21.0	---	28.5	26.0	26.0
13	15.5	10.0	6.0	8.0	7.0	---	12.0	20.0	---	27.0	26.5	26.0
14	15.5	10.0	---	9.0	7.0	---	13.0	20.0	---	27.5	27.0	26.0
15	16.5	10.0	---	10.0	6.0	---	14.0	---	---	27.0	27.0	26.0
16	18.0	10.0	6.0	10.5	4.0	---	15.0	17.5	---	28.0	27.0	---
17	19.0	12.0	5.0	10.0	3.0	13.0	16.0	---	---	28.0	---	23.0
18	20.0	14.0	3.0	11.0	4.0	13.0	16.0	---	---	27.5	27.0	24.0
19	21.0	14.0	4.0	---	5.5	14.0	18.0	18.5	---	28.0	26.5	---
20	21.5	---	5.0	---	10.5	12.0	20.0	19.0	---	28.0	26.0	25.0
21	22.5	15.0	8.0	---	---	13.0	21.0	20.0	---	28.0	26.0	25.0
22	17.5	---	10.0	---	---	15.0	21.0	19.5	---	27.0	26.0	25.0
23	15.5	9.0	9.0	7.0	---	---	21.5	20.5	---	24.0	26.5	23.0
24	16.0	9.0	8.0	9.0	---	---	19.0	21.0	---	25.5	26.5	22.0
25	15.5	10.0	8.0	7.0	---	12.0	---	24.0	---	26.0	26.5	22.0
26	18.0	10.0	8.0	5.0	---	12.0	14.0	---	27.0	27.0	27.0	19.0
27	---	10.0	9.0	4.0	---	12.0	14.0	21.0	26.0	27.0	26.0	18.5
28	16.0	9.0	---	3.0	---	13.0	16.0	25.0	26.0	27.5	26.0	18.5
29	19.5	7.0	---	1.5	---	---	16.5	25.0	27.0	28.0	26.5	20.0
30	---	4.0	7.0	---	---	10.0	17.0	24.0	26.0	28.0	---	18.5
31	16.0	---	8.0	1.0	---	12.0	---	24.0	---	28.0	---	---
MEAN	18.0	10.5	7.0	6.5	5.0	12.5	16.0	20.5	25.5	27.5	26.5	24.0

LOCATION.--Lat 35°47'43", long 97°29'32", in SW¼ sec.2, T.15 N., R.3 W., Logan County, Hydrologic Unit 11050002, on downstream right bank, 0.3 mi (0.5 km) west of Seward, 7.7 mi (12.4 km) southwest of Guthrie, and at mile 19.2 (30.9 km).

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Aug. 29, Sept. 21.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	48	16	33	30	32	35	274	782	60	18	15
2	26	27	16	23	30	31	34	666	598	55	17	15
3	25	24	17	22	35	33	124	480	530	51	16	52
4	30	23	18	20	43	34	89	242	462	47	17	30
5	27	18	19	16	35	32	55	168	353	44	17	21
6	27	14	18	18	33	32	46	133	286	42	15	16
7	27	14	18	18	33	33	42	108	239	41	17	14
8	27	14	19	18	52	33	40	92	168	42	19	15
9	25	14	18	17	58	32	37	81	139	46	20	15
10	24	15	18	15	39	29	35	76	131	47	18	14
11	29	14	20	15	39	29	35	74	120	42	18	14
12	30	14	19	17	41	30	33	66	106	40	19	15
13	26	15	18	15	45	42	32	62	95	34	18	15
14	23	15	18	16	42	33	32	57	86	32	19	15
15	23	15	18	15	50	30	32	126	80	27	18	16
16	24	15	18	15	40	29	32	1820	75	24	16	18
17	24	15	18	15	34	28	31	1540	82	24	16	14
18	23	15	17	15	35	26	30	1240	147	25	16	14
19	27	16	16	18	38	26	30	2000	135	24	16	14
20	25	18	17	297	40	27	31	603	711	23	19	14
21	27	140	20	232	45	27	30	335	1410	22	21	13
22	25	73	20	153	37	26	30	400	550	23	18	15
23	32	35	20	76	33	28	29	247	687	22	18	14
24	31	24	20	55	34	56	37	176	291	21	14	15
25	27	22	19	48	35	64	469	140	181	21	14	14
26	24	20	20	45	32	46	2430	113	130	21	16	14
27	22	20	21	44	37	41	1270	979	100	20	14	14
28	22	19	45	38	35	39	421	2570	84	21	14	16
29	27	18	154	33	35	44	211	2820	73	21	13	26
30	30	18	82	32	---	40	143	9700	67	20	15	25
31	52	---	42	30	---	37	---	2570	---	19	16	---
TOTAL	838	752	819	1424	1115	1069	5925	29958	8898	1001	522	522
MEAN	27.0	25.1	26.4	45.9	38.4	34.5	198	966	297	32.3	16.8	17.4
MAX	52	140	154	297	58	64	2430	9700	1410	60	21	52
MIN	22	14	16	15	30	26	29	57	67	19	13	13
AC=PT	1660	1490	1620	2820	2210	2120	11750	59420	17650	1990	1040	1040
CAL YR 1979	TOTAL	35729	MEAN	97.9	MAX	3300	MIN 14	AC=PT	70870			
WTR YR 1980	TOTAL	52843	MEAN	144	MAX	9700	MIN 13	AC=PT	104800			

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAY												
09...	0925	82	1070	7.4	17.0	6.0	65	49	--	--	--	--
15...	0755	53	1300	7.6	14.0	--	--	--	420	170	99	42
16...	1100	1900	330	7.4	19.0	6.1	68	120	--	--	--	--
30...	0630	13200	171	7.0	20.0	--	--	--	75	9	20	6.2
JUN												
11...	1545	120	1250	7.3	23.0	4.2	56	35	--	--	--	--
16...	0650	72	1400	7.5	22.0	--	--	--	460	180	110	46
21...	0710	1770	365	7.0	22.0	--	--	--	130	48	33	12
26...	0710	137	900	7.3	19.0	--	--	--	320	120	76	32
JUL												
03...	0710	49	1360	7.9	25.0	--	--	--	460	180	110	44
03...	1300	53	1200	7.7	33.0	3.2	46	43	--	--	--	--
12...	0730	37	1260	8.1	25.0	--	--	--	400	150	93	40
27...	0710	21	1460	7.2	24.0	--	--	--	390	170	90	40
AUG												
09...	0650	22	1450	7.8	24.0	--	--	--	350	160	78	38
11...	1200	17	1400	7.9	26.5	2.8	36	38	--	--	--	--
20...	0645	18	1380	7.0	24.0	--	--	--	300	150	69	32
26...	0630	18	1290	7.5	24.0	--	--	--	290	160	66	30
SEP												
05...	0650	23	837	8.0	23.0	--	--	--	210	60	48	22
10...	1115	14	1266	7.5	24.0	2.8	34	51	--	--	--	--
19...	0750	14	1350	6.9	20.0	--	--	--	290	150	67	29
28...	0740	16	1260	6.8	15.0	--	--	--	240	130	55	25

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
MAY											
09...	.00	.00	.00	.01	.00	.04	.00	0	.00	.00	.00
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
11...	.06	.00	.00	.00	.00	.00	.00	0	.00	.00	.00
20...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
DATE	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	123	--	--	--	--	--	--	--	93
21...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
07...	.00	--	67	--	--	--	--	--	--	--	93
16...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	975	--	--	--	--	--	--	--	94
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	108	--	--	--	--	--	--	--	85
18...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JAN											
01...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	140	--	--	--	--	--	--	--	88
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
FEB											
04...	--	--	--	--	--	--	--	--	--	--	--
07...	.00	.00	142	--	--	--	--	--	--	--	96
13...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	101	--	--	--	--	--	--	--	76
17...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	564	--	--	--	--	--	--	--	94
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	1560	--	--	--	--	--	--	--	94

ARKANSAS RIVER BASIN

97

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
MAY											
09...	.00	.00	107	--	--	--	--	--	--	--	94
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	2020	51	63	75	95	98	100	100	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	172	--	--	--	--	--	--	--	89
16...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	130	--	--	--	--	--	--	--	92
12...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
11...	.00	.00	91	--	--	--	--	--	--	--	84
20...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	136	--	--	--	--	--	--	--	93
19...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
DATE	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
07...	75	86	92	93	--	93	94	95	95	100	--
16...	--	--	--	--	--	--	--	--	--	--	--
21...	32	53	98	100	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JAN											
01...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	77	93	100	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
FEB											
04...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	16	32	95	100	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
02...	28	37	74	80	--	80	80	--	80	81	83

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1220	1190	831	1320	1360	1230	918	527	1290	1440	1340
2	1110	957	1210	903	1300	1370	1240	683	553	1330	1420	1350
3	1110	970	1220	952	1270	1370	505	506	557	1360	1410	1280
4	1120	1010	1230	978	1320	1370	1130	704	560	1380	1380	1280
5	1200	1040	1240	1030	1190	1360	1020	854	655	1380	1410	837
6	1170	1080	1250	1050	1210	1370	1130	954	733	1410	1440	1070
7	1170	1130	1250	1070	1250	1370	1230	1050	813	1440	1450	1120
8	1160	1180	1250	1100	1200	1370	1290	1110	954	1440	1430	1190
9	1160	1200	1260	1110	1150	1370	1320	1150	1080	1430	1450	1240
10	1140	1210	1260	1070	1100	1480	---	1210	1170	1430	1450	1270
11	1140	1210	1250	1110	1080	1270	---	1220	1240	1270	1420	1270
12	1180	1220	1260	1130	1140	1340	---	1240	1270	1260	1380	1260
13	1200	1250	1270	1160	1030	1320	---	1240	1320	1270	1390	1260
14	1230	1250	1270	1130	1090	1330	---	1270	1350	1290	1380	1280
15	1210	1250	1260	1130	1170	1330	---	1300	1390	1270	1360	1260
16	1200	1260	1260	1140	1170	1370	---	336	1400	1360	1360	1270
17	1170	1250	1270	1150	1200	1370	1420	444	1370	1400	1350	1280
18	1150	1260	1290	1150	1220	1360	1400	563	1390	1420	1350	1290
19	1130	1260	1280	1150	1220	1330	1400	323	1080	1420	1390	1350
20	1180	1260	1280	870	1280	1300	1410	523	1050	1440	1380	1310
21	1240	1070	1280	592	1250	1310	1410	707	365	1430	---	1300
22	1210	575	1270	625	1220	1300	1420	790	551	1450	1360	1300
23	1280	667	1260	739	1200	1340	1400	802	442	1450	1350	1320
24	1300	808	1240	799	1270	1390	1360	909	617	1460	1330	1320
25	1320	893	1250	910	1310	1380	795	991	762	1450	1300	1300
26	1260	990	1240	982	1270	1230	280	1030	900	1450	1290	1290
27	1260	1070	1260	1010	1290	1240	543	622	982	1460	1340	1280
28	1270	1120	1190	1060	1260	1210	705	323	1090	1450	1340	1260
29	1270	1130	962	1070	1260	1270	426	508	1180	1450	1340	1230
30	1370	1170	778	1110	---	1270	908	171	1250	1450	1350	1270
31	1140	---	845	1160	---	1260	---	338	---	1450	1350	---
MEAN	1200	1100	1210	1010	1220	1330	1100	800	953	1390	1380	1260

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	13.0	2.0	4.0	.0	3.0	8.0	15.0	21.0	25.0	24.0	23.0
2	17.0	14.0	2.0	5.0	.0	.0	11.0	15.0	21.0	25.0	24.0	23.0
3	18.0	11.0	3.0	5.0	.0	.0	9.0	15.0	21.0	25.0	23.0	22.0
4	16.0	15.0	3.0	5.0	1.0	3.0	9.0	16.0	22.0	25.0	23.0	22.0
5	15.0	13.0	6.0	4.0	2.0	3.0	10.0	17.0	22.0	25.0	24.0	23.0
6	15.0	10.0	5.0	5.0	3.0	3.0	12.0	17.0	23.0	25.0	24.0	23.0
7	16.0	9.0	5.0	4.0	3.0	8.0	12.0	17.0	24.0	25.0	24.0	23.0
8	18.0	9.0	5.0	2.0	1.0	7.0	12.0	17.0	22.0	25.0	24.0	23.0
9	17.0	10.0	6.0	1.0	.0	7.0	11.0	14.0	20.0	25.0	24.0	23.0
10	14.0	8.0	7.0	3.0	.0	7.0	11.0	15.0	19.0	25.0	24.0	23.0
11	15.0	7.0	10.0	5.0	.0	8.0	12.0	17.0	20.0	25.0	24.0	23.0
12	16.0	7.0	7.0	4.0	.0	8.0	11.0	19.0	20.0	25.0	23.0	23.0
13	15.0	7.0	5.0	4.0	1.0	8.0	9.0	17.0	21.0	25.0	23.0	23.0
14	14.0	7.0	5.0	4.0	3.0	7.0	17.0	17.0	21.0	25.0	23.0	23.0
15	14.0	8.0	5.0	7.0	4.0	8.0	9.0	17.0	21.0	25.0	14.0	23.0
16	17.0	7.0	4.0	8.0	2.0	11.0	11.0	14.0	22.0	25.0	24.0	23.0
17	17.0	8.0	2.0	7.0	.0	10.0	12.0	17.0	21.0	25.0	24.0	19.0
18	18.0	10.0	1.0	7.0	.0	8.0	12.0	16.0	21.0	25.0	24.0	18.0
19	19.0	12.0	2.0	8.0	2.0	8.0	12.0	17.0	22.0	25.0	24.0	20.0
20	20.0	15.0	3.0	7.0	4.0	11.0	14.0	17.0	22.0	25.0	24.0	22.0
21	21.0	15.0	5.0	6.0	5.0	8.0	15.0	16.0	22.0	25.0	---	22.0
22	18.0	12.0	7.0	4.0	7.0	13.0	16.0	17.0	22.0	24.0	24.0	22.0
23	15.0	8.0	8.0	4.0	7.0	11.0	17.0	17.0	22.0	23.0	24.0	20.0
24	14.0	7.0	8.0	4.0	7.0	8.0	17.0	18.0	24.0	23.0	24.0	18.0
25	14.0	8.0	5.0	5.0	5.0	7.0	15.0	20.0	24.0	18.0	24.0	19.0
26	14.0	7.0	6.0	4.0	4.0	7.0	11.0	21.0	19.0	23.0	24.0	18.0
27	16.0	7.0	6.0	2.0	5.0	10.0	12.0	19.0	24.0	24.0	23.0	16.0
28	15.0	6.0	8.0	1.0	7.0	10.0	13.0	20.0	25.0	23.0	23.0	15.0
29	14.0	4.0	9.0	.0	7.0	11.0	15.0	21.0	25.0	24.0	23.0	15.0
30	17.0	2.0	7.0	.0	---	9.0	16.0	20.0	25.0	24.0	23.0	16.0
31	13.0	---	6.0	.0	---	7.0	---	21.0	---	24.0	23.0	---
MEAN	16.0	9.0	5.5	4.0	3.0	7.5	12.5	17.5	22.0	24.5	23.5	21.0

ARKANSAS RIVER BASIN

07160500 SKELETON CREEK NEAR LOVELL, OK

LOCATION.--Lat 36°03'36", long 97°35'05", in NW¼SW¼ 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 (3 km) upstream from Otter Creek, 2.8 mi (4.5 km) east of Lovell, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--410 mi² (1,062 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 909.76 ft (277.295 m) Oklahoma State Highway Department datum. Prior to Dec. 5, 1949, nonrecording gage at site 60 ft (18.3 m) downstream at datum 4.70 ft (1.433 m) higher. Prior to Oct. 1, 1979, gage at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years, 117 ft³/s (3.313 m³/s), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft³/s (2,130 m³/s) May 16, 1957, gage height, 34.58 ft (10.540 m); no flow at times in 1953-54, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 17, 1932, reached a stage of 32.0 ft (9.75 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 22	0145	3,830 108	23.38 7.126	May 28	0015	7,250 205	27.99 8.531
Apr. 27	0600	6,410 182	27.01 8.233	June 20	1030	*10,400 295	*30.55 9.312
May 16	2215	7,610 216	28.38 8.650				

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	19	27	33	34	45	48	150	142	61	11	7.0
2	8.5	15	29	30	31	47	60	340	110	53	7.9	6.0
3	8.8	10	27	27	37	46	200	175	91	46	7.6	7.0
4	9.8	7.2	26	29	34	45	120	107	82	48	8.2	6.7
5	8.4	7.5	26	31	35	44	55	87	75	45	7.8	5.1
6	8.2	6.5	25	28	33	46	45	78	68	38	7.3	7.8
7	8.3	6.4	26	26	33	45	46	70	61	38	11	6.9
8	9.4	8.2	25	26	37	43	48	67	55	37	11	6.4
9	9.9	8.8	21	26	42	42	46	67	51	31	9.2	5.9
10	10	15	24	24	38	44	43	60	52	30	9.1	4.3
11	10	22	25	28	40	55	40	58	49	32	11	4.8
12	7.9	15	25	27	44	185	37	278	46	28	9.6	2.2
13	7.4	11	23	27	45	90	36	138	42	27	7.8	10
14	9.2	12	23	26	52	60	34	65	39	22	7.5	9.1
15	10	10	22	27	98	45	35	785	35	22	7.6	7.8
16	9.8	9.4	24	25	66	44	34	5640	38	21	8.0	9.2
17	9.4	11	23	26	45	43	34	5590	654	18	7.3	6.9
18	11	12	22	27	44	42	34	1120	1590	16	7.1	8.1
19	11	13	18	30	47	41	33	909	4510	17	43	7.8
20	10	336	23	127	44	40	33	233	8820	18	26	8.1
21	9.5	3050	24	125	43	38	34	217	3330	17	10	6.7
22	9.1	2600	24	85	43	39	33	234	561	15	9.9	8.1
23	21	125	23	58	41	68	30	140	274	14	9.1	7.6
24	19	66	23	45	43	320	80	110	183	14	8.7	5.3
25	11	46	20	42	43	175	2380	93	137	14	9.9	5.1
26	9.9	40	22	39	44	76	4890	88	104	12	9.1	24
27	10	34	21	36	43	116	5160	3720	90	12	6.7	24
28	10	31	27	33	42	101	708	4330	79	12	7.7	11
29	12	29	82	28	44	103	192	708	69	12	7.7	8.8
30	54	26	55	33	---	77	139	987	65	11	7.0	12
31	59	---	40	31	---	50	---	247	---	12	7.7	---
TOTAL	409.8	6602.0	845	1205	1265	2255	14707	26891	21502	793	318.5	312.7
MEAN	13.2	220	27.3	38.9	43.6	72.7	490	867	717	25.6	10.3	10.4
MAX	59	3050	82	127	98	320	5160	5640	8820	61	43	48
MIN	7.4	6.4	18	24	31	38	30	58	35	11	6.7	4.3
AC=FT	813	13100	1680	2390	2510	4470	29170	53340	42650	1570	632	620
CAL YR 1979	TOTAL	39110.6	MEAN 107	MAX 4100	MIN 2.8	AC=FT 77580						
WTR YR 1980	TOTAL	77106.0	MEAN 211	MAX 8820	MIN 4.3	AC=FT 152900						

07161000 CIMARRON RIVER AT PERKINS, OK

LOCATION.--Lat 35°57'32", long 97°01'49", in SW¼SW¼ 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 (1.6 km) south of Perkins, 1.5 mi (2.4 km) upstream from Dugout Creek, 4.0 mi (6.4 km) downstream from Wildhorse Creek, and at mile 87.3 (140.5 km).

DRAINAGE AREA.--17,852 mi² (46,237 km²) of which 4,926 mi² (12,758 km²) 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 U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 814.88 ft (248.375 m) National Geodetic Vertical Datum of 1929 (levels by 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 (1.524 m) higher. Prior to Oct. 1, 1977, at same site and datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--41 years, 1,170 ft³/s (33.13 m³/s), 847,700 acre-ft/yr (1.05 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149,000 ft³/s (4,220 m³/s) May 17, 1957, gage height, 19.53 ft (5.953 m); minimum, 0.8 ft³/s (0.023 m³/s) Dec. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 5, 1926, reached a stage of 17.0 ft (5.18 m) from floodmarks, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Apr. 26	2100	20,800	589	15.27	4.654	May 31	0200	30,200	855	16.55	5.044
May 17	0900	61,500	1,740	17.83	5.435	June 19	1800	23,600	668	15.69	4.782
May 28	1700	26,900	762	16.14	4.919						

Minimum daily discharge, 55 ft³/s (1.56 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	1100	443	469	400	409	673	3140	9210	1100	136	74
2	154	3350	418	409	348	348	725	3940	5190	1010	127	92
3	146	3160	401	382	395	370	1470	5810	3860	934	126	100
4	134	1840	388	365	420	364	1720	6050	3120	862	131	125
5	134	1210	374	357	451	337	1320	2840	2650	802	121	105
6	133	906	359	353	444	345	1320	1970	2280	748	113	116
7	134	716	345	328	438	372	1220	1710	2010	691	113	97
8	129	587	337	332	458	344	995	1600	1830	640	111	87
9	114	483	330	332	452	338	825	1490	1640	589	111	88
10	96	435	318	332	490	341	763	1390	1520	549	115	94
11	96	412	310	324	571	348	713	1300	1430	518	106	96
12	100	432	302	320	543	383	661	1250	1360	487	108	94
13	91	415	311	320	530	370	616	1410	1290	450	97	101
14	92	380	302	301	535	397	557	1660	1220	417	97	106
15	96	364	298	282	510	365	505	1740	1150	386	96	90
16	98	339	292	272	532	348	480	30200	1300	356	91	86
17	111	315	290	273	529	325	460	48600	2600	332	92	81
18	120	305	299	268	488	344	447	17000	4190	300	92	91
19	108	292	286	338	461	353	438	16200	14900	277	83	91
20	100	307	275	440	576	359	412	10000	19500	258	80	77
21	107	1870	271	660	539	338	395	5070	17200	241	124	64
22	162	9090	292	864	484	323	386	6680	11000	228	137	56
23	132	6200	285	830	453	352	369	10400	5220	209	152	55
24	116	2630	269	839	441	485	485	5590	4010	192	120	65
25	118	1780	267	769	466	528	1970	3590	2870	180	100	92
26	125	1310	265	735	481	663	16700	2800	2110	173	87	62
27	113	984	271	631	455	544	17800	12400	1730	170	85	86
28	101	761	376	577	426	490	10700	22700	1500	172	101	114
29	94	604	427	536	415	536	6550	14800	1330	163	99	135
30	103	486	503	500	---	595	4200	17300	1210	153	82	129
31	117	---	553	450	---	670	---	22400	---	141	75	---
TOTAL	3640	43063	10457	14188	13731	12684	75955	283030	130430	13728	3308	2749
MEAN	117	1435	337	458	473	409	2532	9130	4348	443	107	91.6
MAX	166	9090	553	864	576	670	17800	48600	19500	1100	152	135
MIN	91	292	265	268	348	323	369	1250	1150	141	75	55
AC=FT	7220	85420	20740	28140	27240	25160	150700	561400	258700	27230	6560	5450

CAL YR 1979	TOTAL	369369	MEAN	1012	MAX	16400	MIN	60	AC=FT	732600
WTR YR 1980	TOTAL	606963	MEAN	1658	MAX	48600	MIN	55	AC=FT	1204000

ARKANSAS RIVER BASIN

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 current year.

WATER TEMPERATURE: October 1962 to September 1963, June 1965 to current year.

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

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 32,400 micromhos Mar. 18, 1957; minimum, 353 micromhos Apr. 30, 1970.

WATER TEMPERATURE: Maximum, 39.0°C June 18, 1974; minimum, -0.5°C on Jan. 28, 29, 31, 1980.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 21,600 micromhos Mar. 22; minimum, 798 micromhos June 19.

WATER TEMPERATURE: Maximum, 31.5°C July 2; minimum daily, -0.5°C on Jan. 28, 29, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACU3)
OCT												
04...	1330	129	9150	9.2	19.5	8.2	--	--	--	--	700	530
05...	0730	132	9830	7.6	13.0	--	--	--	--	--	660	490
15...	0730	92	9830	8.2	13.0	--	--	--	--	--	660	470
25...	0830	111	7590	8.2	13.0	--	--	--	--	--	520	330
NOV												
05...	0715	1290	8400	7.8	10.0	--	--	--	--	--	470	350
15...	0730	369	11700	7.9	7.0	--	--	--	--	--	680	490
19...	1000	297	--	7.3	16.5	48	8.0	107	K639	89	930	730
25...	0830	1820	3030	7.6	9.0	--	--	--	--	--	220	130
DEC												
05...	0730	374	11000	7.9	6.0	--	--	--	--	--	680	460
13...	1200	312	12500	9.8	4.0	210	12.0	113	--	69	800	560
15...	0730	301	14400	8.2	4.0	--	--	--	--	--	880	640
25...	0800	262	12900	8.2	5.0	--	--	--	--	--	820	580
JAN												
05...	0730	357	11900	8.0	3.0	--	--	--	--	--	740	520
15...	0730	289	15200	8.0	10.0	--	--	--	--	--	830	610
16...	1445	266	11200	--	10.5	5.4	13.2	115	133	171	830	620
25...	0730	763	9790	7.6	6.0	--	--	--	--	--	660	470
FEB												
05...	0730	451	11200	8.2	3.0	--	--	--	--	--	770	540
15...	0730	515	9560	8.1	7.0	--	--	--	--	--	650	440
25...	0730	442	13400	8.2	5.0	--	--	--	--	--	790	570
25...	1045	456	13000	8.4	6.0	8.9	10.9	98	420	29	830	610
MAR												
05...	0730	341	15300	8.2	2.0	--	--	--	--	--	850	620
10...	1200	341	12500	8.1	14.0	7.4	12.0	130	K6	K15	860	670
15...	0730	378	13000	8.2	10.0	--	--	--	--	--	720	520
25...	0730	434	10400	8.0	6.0	--	--	--	--	--	630	430
APR												
05...	0730	1330	8430	7.9	12.0	--	--	--	--	--	500	330
08...	1400	977	8200	7.5	14.0	440	10.6	112	460	K420	640	480
15...	0730	500	12000	8.0	9.0	--	--	--	--	--	790	660
25...	0730	562	11600	7.6	17.0	--	--	--	--	--	730	550
MAY												
05...	0730	3070	2280	7.4	20.0	--	--	--	--	--	260	130
07...	0930	1720	5700	7.8	22.0	72	9.8	116	280	260	570	390
15...	0745	1550	6610	7.6	20.0	--	--	--	--	--	510	340
25...	0715	3800	2910	7.5	24.0	--	--	--	--	--	370	230
JUN												
05...	0730	2720	5340	8.3	25.0	--	--	--	--	--	520	340

ARKANSAS RIVER BASIN

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07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	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)
JUN												
15...	0730	1180	7830	8.0	25.0	--	--	--	--	--	760	540
19...	1600	22400	1400	7.8	24.0	910	3.7	45	--	--	130	59
25...	0730	3050	2250	8.0	28.0	--	--	--	--	--	320	220
JUL												
05...	0730	814	7650	7.5	29.0	--	--	--	--	--	650	440
14...	1545	412	7330	8.7	33.0	8.7	8.2	120	K15	85	680	480
15...	0730	395	8010	7.5	27.0	--	--	--	--	--	650	440
25...	0730	183	8070	7.5	26.0	--	--	--	--	--	640	410
AUG												
05...	0730	120	8140	7.7	25.0	--	--	--	--	--	660	420
15...	0730	95	7930	7.7	26.0	--	--	--	--	--	660	420
20...	0930	75	7080	8.5	28.0	8.0	7.3	99	>600	103	630	410
25...	0730	103	7700	7.5	26.0	--	--	--	--	--	990	770
SEP												
05...	0730	100	6830	7.9	26.0	--	--	--	--	--	580	370
15...	0730	92	6330	7.6	26.0	--	--	--	--	--	510	300
24...	0915	65	6240	9.3	19.5	--	7.1	80	K78	88	640	--
25...	0800	92	5990	7.6	21.0	--	--	--	--	--	530	320

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
04...	180	60	1900	--	31	--	170	440	3100	.4	1.0	5760
05...	160	63	2000	87	34	9.6	170	440	3100	--	--	5840
15...	160	64	2000	87	34	9.6	190	440	3200	--	--	5710
25...	130	48	1500	86	29	9.0	190	400	2100	--	--	4460
NOV												
05...	140	30	1600	91	32	12	120	330	2600	--	--	4950
15...	180	55	2300	88	39	11	190	490	3200	--	--	7020
19...	260	67	3400	89	49	14	200	540	5200	.4	9.2	9600
25...	61	17	530	88	15	7.4	89	140	810	--	--	1670
DEC												
05...	180	56	2000	86	33	9.5	220	400	3400	--	--	6590
13...	210	68	2500	87	38	9.8	240	430	4100	.3	14	7610
15...	230	73	2900	88	43	10	240	490	4700	--	--	8600
25...	210	71	2400	86	37	9.2	240	460	4000	--	--	7740
JAN												
05...	180	70	2700	89	43	7.9	220	500	4400	--	--	7920
15...	200	80	3400	90	51	9.0	220	560	5200	--	--	10000
16...	200	80	3200	89	48	9.4	210	430	4900	.4	7.2	7140
25...	160	63	2200	88	37	7.6	190	470	3500	--	--	6400
FEB												
05...	190	71	2500	88	39	8.4	230	510	3700	--	--	7440
15...	160	61	2100	87	36	7.5	210	300	3400	--	--	6250
25...	190	77	3100	89	48	9.0	220	530	4700	--	--	8580
25...	200	79	3100	89	47	9.8	220	550	4800	.5	12	9070
MAR												
05...	210	80	3100	89	46	9.4	230	540	5100	--	--	9400
10...	210	82	2800	87	42	9.2	190	580	4500	.4	3.5	8300
15...	170	71	2600	89	42	8.5	200	520	4200	--	--	7890
25...	150	61	2100	88	37	8.0	200	430	3300	--	--	6220
APR												
05...	120	48	1600	87	31	8.8	170	320	2600	--	--	4830
08...	160	59	1600	84	27	8.5	160	470	2500	.4	9.7	5020
15...	190	77	2300	86	36	9.9	130	550	3800	--	--	7120
25...	170	73	2500	89	37	9.7	180	500	3700	--	--	6820
MAY												
05...	71	21	360	74	9.6	6.9	130	160	550	--	--	1270
07...	150	48	1100	80	20	9.7	180	350	1700	.4	10	3680
15...	130	44	1200	84	23	6.9	170	290	2000	--	--	3690
25...	100	29	460	73	10	7.8	140	250	670	--	--	1650
JUN												
05...	140	42	850	78	16	11	180	350	1400	--	--	3020
15...	190	69	1400	80	22	11	220	530	2300	--	--	4340
19...	35	11	170	72	6.4	8.3	74	68	270	.1	.1	603
25...	85	25	330	68	8.1	13	98	210	570	--	--	1210
JUL												
05...	160	61	1400	82	24	9.4	210	420	2300	--	--	4220
14...	160	68	1500	82	25	11	200	430	2300	.5	8.0	4730
15...	150	66	1500	83	26	9.2	210	440	2300	--	--	4330
25...	150	65	1400	82	24	8.5	230	410	2300	--	--	4620
AUG												
05...	140	76	1500	83	25	13	240	380	2400	--	--	4550
15...	160	64	1300	81	22	13	240	310	2100	--	--	4600
20...	150	61	1400	83	24	12	220	380	2300	.5	6.1	4360
25...	260	82	1300	74	18	14	220	380	2300	--	--	4330
SEP												
05...	140	56	1300	83	23	12	210	380	2000	--	--	4010
15...	120	51	1200	83	23	11	210	330	1900	--	--	3690
24...	160	58	1200	--	21	--	--	--	--	--	11	--
25...	130	49	1100	82	21	11	210	310	1700	--	--	3420

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
04...	--	7.8	2010	.02	.03	.040	.120	.05	.15	1.1	1.1	1.10
05...	--	7.9	2080	--	--	--	--	--	--	--	--	--
15...	--	7.7	1420	--	--	--	--	--	--	--	--	--
25...	--	6.0	1340	--	--	--	--	--	--	--	--	--
NOV												
05...	--	6.7	17200	--	--	--	--	--	--	--	--	--
15...	--	9.5	6990	--	--	--	--	--	--	--	--	--
19...	9620	13.1	7700	1.1	1.9	.180	.120	.22	.15	1.0	.80	1.20
25...	--	2.2	8210	--	--	--	--	--	--	--	--	--
DEC												
05...	--	8.9	6660	--	--	--	--	--	--	--	--	--
13...	7500	10.4	6410	1.7	6.3	.270	.250	.33	.32	1.0	.57	1.30
15...	--	11.7	6990	--	--	--	--	--	--	--	--	--
25...	--	10.5	5480	--	--	--	--	--	--	--	--	--
JAN												
05...	--	10.8	7630	--	--	--	--	--	--	--	--	--
15...	--	13.6	7800	--	--	--	--	--	--	--	--	--
16...	8960	9.7	5130	.55	.58	.160	.160	.19	.21	.17	.13	.33
25...	--	8.7	13200	--	--	--	--	--	--	--	--	--
FEB												
05...	--	10.1	9060	--	--	--	--	--	--	--	--	--
15...	--	8.5	8690	--	--	--	--	--	--	--	--	--
25...	--	11.7	10200	--	--	--	--	--	--	--	--	--
25...	8890	12.3	11200	.60	.71	.220	.330	.27	.43	.55	2.4	.77
MAR												
05...	--	12.8	8660	--	--	--	--	--	--	--	--	--
10...	8300	11.3	7640	.29	.29	.560	.250	.68	.32	.94	1.1	1.50
15...	--	10.7	8050	--	--	--	--	--	--	--	--	--
25...	--	8.4	7290	--	--	--	--	--	--	--	--	--
APR												
05...	--	6.5	17300	--	--	--	--	--	--	--	--	--
08...	4910	6.8	13200	.69	.52	.270	.180	.33	.23	2.4	1.1	2.70
15...	--	9.6	9610	--	--	--	--	--	--	--	--	--
25...	--	9.2	10300	--	--	--	--	--	--	--	--	--
MAY												
05...	--	1.7	10500	--	--	--	--	--	--	--	--	--
07...	3480	5.0	17100	.08	.08	.330	.200	.40	.26	1.1	.61	1.40
15...	--	5.0	15400	--	--	--	--	--	--	--	--	--
25...	--	2.2	16900	--	--	--	--	--	--	--	--	--
JUN												
05...	--	4.1	22200	--	--	--	--	--	--	--	--	--
15...	--	5.9	13800	--	--	--	--	--	--	--	--	--
19...	617	.82	36500	.83	2.2	.150	.150	.18	.19	9.3	.95	9.40
25...	--	1.6	9960	--	--	--	--	--	--	--	--	--
JUL												
05...	--	5.7	9280	--	--	--	--	--	--	--	--	--
14...	4600	6.4	5260	.00	.00	.000	.030	.00	.04	1.5	.94	1.50
15...	--	5.8	4620	--	--	--	--	--	--	--	--	--
25...	--	6.2	2280	--	--	--	--	--	--	--	--	--
AUG												
05...	--	6.1	1470	--	--	--	--	--	--	--	--	--
15...	--	6.2	1180	--	--	--	--	--	--	--	--	--
20...	4440	5.9	883	.00	.03	.240	.000	.29	.00	1.6	.78	1.80
25...	--	5.8	1200	--	--	--	--	--	--	--	--	--
SEP												
05...	--	5.4	1080	--	--	--	--	--	--	--	--	--
15...	--	5.0	917	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	4.6	850	--	--	--	--	--	--	--	--	--

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SUS- PENDE D RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE D TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE D RECOV- ERABLE (UG/L AS AG)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	.4	.2	.2	14	13	1	1	1	0	0	0
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	0	--
13...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	.0	.0	.2	0	0	1	2	2	0	0	0
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	0	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
07...	3.7	3.7	.0	11	6	5	2	1	1	0	0
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	0	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
20...	.0	.0	.0	4	1	3	1	0	1	0	0
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9520	3770	8080	8100	17100	17100			---	6920	8060	6920
2	9530	12400	9380	9640	14100	15000			2130	7630	7790	6950
3	9670	8240	10300	10200	12200	13900			2940	7940	8060	6830
4	9890	6000	10700	10500	12100	13400			4640	7760	8100	6810
5	9760	8730	11100	11900	12100	15300			5300	7620	8210	6740
6	9980	11600	11300	13600	12400	14900			4970	---	8270	6470
7	9920	10800	11600	13200	14200	15400			5180	---	8300	6490
8	9640	9770	11700	14100	13700	14800			5560	---	8380	5730
9	9740	9340	12300	13500	13000	13900			5930	---	8220	5760
10	9830	9480	11700	13400	12800	13200			6430	---	8270	6200
11	9760	9960	13500	13200	12200	---			6920	---	8180	6600
12	9630	11100	12300	13800	12900	---			6900	---	8050	6730
13	9800	11300	13300	15900	14100	---			7180	---	8140	6830
14	9690	11600	13600	16100	10600	---			7430	---	8030	6450
15	9820	12000	14600	14700	9420	---			7900	7950	7930	6220
16	9290	13000	14100	13500	9610	---			7310	8140	7960	5630
17	9030	13500	15000	13100	10100	---			4320	8170	7910	6110
18	8990	15200	13500	12800	10200	---			2220	8080	7680	6300
19	9240	15900	12800	11200	14400	---			798	8250	7380	6440
20	8920	14700	12700	10500	16100	---			898	8620	7530	6580
21	8700	9250	13300	10400	18100	---			1040	8330	7470	6740
22	8800	3130	13500	5600	17100	---			1840	8110	6840	6600
23	9300	2040	13900	6180	14200	---			1800	7910	6300	6740
24	10200	2070	13500	9250	13200	---			2650	7970	6760	6710
25	7540	3030	12800	10000	13900	---			2350	8080	8140	---
26	5960	2610	12500	14600	15600	---			2610	8210	7520	---
27	5930	3020	13000	15200	16000	---			3460	8150	6880	---
28	6800	4210	11600	16900	14700	---			4270	8130	6000	---
29	7650	5580	12000	17900	13100	---			5500	7940	6080	---
30	8020	7060	12900	16800	---	---			6290	8140	6420	---
31	7330	---	8190	17000	---	---			---	8210	6840	---
MEAN	8960	8680	12300	12700	13400	14700			4370	8010	7600	6480

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9540	6940	7900	8690	15600	14400	16900	5300	1020	6890	8190	6910
2	9570	12200	9300	9670	15400	14800	16200	7070	1800	7570	7790	6950
3	9670	9520	10200	10000	12500	14000	14400	4440	2850	7710	7910	6860
4	9890	6150	10600	11100	12200	13800	9100	2910	4650	7760	8060	6880
5	9830	8400	11000	11900	11200	15300	8430	2280	5340	7650	8140	6830
6	10000	11600	11200	12400	12900	15600	13400	4130	4960	7740	8210	6650
7	9970	10800	11500	12800	14100	15100	---	6430	5150	7840	8360	6590
8	9670	9760	11600	14600	13800	15400	8350	7790	5550	8000	8410	5780
9	9670	9240	12200	14600	13400	14000	9770	8820	5920	8130	8330	5700
10	9800	9520	11700	13600	13200	13700	12600	8760	6430	8140	8200	6170
11	9780	10300	11900	13200	12700	14100	15400	8550	6940	8100	8240	6510
12	9750	11000	12300	13600	14200	13900	12200	8130	7150	8070	8040	6740
13	9830	11500	13200	16100	14300	15400	11600	8420	7410	7980	8020	6800
14	9720	11600	13600	16300	11000	14600	11800	6760	7590	7930	8040	6470
15	9830	11700	14400	15200	9560	13000	12000	6610	7830	8010	7930	6330
16	9300	13000	14100	13800	9810	11900	12100	2810	7890	7980	8020	5580
17	9110	13500	13700	13300	10000	12900	12200	1300	4290	8140	7940	6030
18	9090	15000	13400	13100	11900	13500	11800	927	2300	8160	7680	6250
19	9250	16000	13000	13100	13400	14800	11700	1640	891	8240	7760	6450
20	8930	13800	12700	11100	15000	15800	12000	1790	816	8340	7780	6500
21	8690	13000	13300	11000	19500	19600	12400	2510	1040	8280	7370	6710
22	8780	5710	13400	5220	17800	21600	12500	4650	1640	8240	7040	6610
23	9340	1800	13500	6750	14900	18300	12300	3160	1780	8130	6360	6770
24	10300	2020	13800	8560	13200	10300	11300	2720	2720	8040	6680	6790
25	7590	3030	12900	9790	13400	10400	11600	2910	2250	8070	7700	5990
26	6030	2580	12700	12700	16300	7150	2070	5040	2590	8110	7620	5620
27	5920	2980	13000	15100	16900	9580	1540	3140	3430	7980	6840	5450
28	6790	4070	11600	17300	15400	9980	1970	1650	4270	8000	6140	5990
29	7670	5490	11900	17900	13200	10700	5520	1150	5510	8040	6150	5900
30	7840	6920	12900	16700	---	11100	5620	1270	6280	8180	6460	5890
31	7620	---	8370	16400	---	11400	---	1030	---	8240	6880	---
MEAN	8990	8970	12200	12800	13700	13700	10600	4330	4280	7990	7630	6360

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	11.5	2.5	5.5	.0	.0	13.5	18.5	---	30.5	26.0	26.5
2	22.0	11.5	3.5	6.5	1.5	.5	13.5	19.0	23.5	31.5	26.5	25.0
3	20.0	11.0	4.0	4.0	3.0	2.5	12.0	19.5	23.0	31.0	26.5	25.5
4	18.5	11.0	5.5	3.0	3.5	7.0	13.0	20.0	26.5	30.5	27.5	26.0
5	17.0	11.5	7.5	4.0	5.5	5.5	14.5	22.5	25.5	29.5	27.5	29.5
6	17.5	10.5	7.0	5.5	6.0	7.5	16.0	22.5	27.5	---	28.5	29.5
7	19.5	8.5	7.0	2.5	3.5	11.5	17.0	---	28.5	---	29.0	29.5
8	21.0	10.0	6.5	2.0	1.0	11.0	14.5	---	25.5	---	29.0	29.5
9	22.5	10.5	7.0	2.5	.5	12.0	14.5	---	24.0	---	29.5	29.5
10	16.0	7.0	9.5	5.5	1.0	13.0	16.0	---	25.0	---	29.0	27.0
11	13.5	6.0	12.0	7.5	2.0	9.5	17.0	---	26.5	---	27.5	27.0
12	18.0	8.5	4.5	6.0	2.5	8.5	12.5	---	26.0	---	28.5	27.0
13	18.5	8.5	3.5	5.5	5.5	10.0	10.5	---	26.0	---	28.0	28.5
14	14.5	9.0	4.5	7.5	8.0	11.5	11.5	---	26.0	---	28.5	29.5
15	15.5	10.0	5.0	11.5	6.0	12.5	14.5	---	26.5	30.5	28.0	28.0
16	18.5	10.5	2.5	10.5	.5	15.5	17.0	---	26.0	30.0	28.0	25.5
17	20.5	11.5	.0	9.5	.5	12.0	15.5	---	23.0	31.0	28.0	21.5
18	22.5	14.0	1.0	9.0	2.5	11.5	16.0	---	23.0	30.5	27.5	24.0
19	22.0	16.0	3.0	10.0	6.0	13.0	18.5	---	23.5	30.5	28.5	26.5
20	22.5	17.0	5.0	7.0	8.5	12.5	21.0	---	23.5	30.5	27.0	26.0
21	23.0	16.0	7.0	6.0	11.5	12.0	22.5	---	24.5	30.0	25.5	26.5
22	17.0	13.0	10.0	5.5	11.0	13.0	22.5	---	25.0	29.0	25.5	25.5
23	14.5	10.5	9.0	4.5	10.0	13.0	23.0	---	27.0	27.5	27.0	21.0
24	15.5	8.5	7.5	6.5	8.5	7.5	21.0	---	29.0	28.0	27.0	20.0
25	16.5	8.5	6.5	7.0	7.0	7.0	16.0	---	30.0	28.5	27.5	---
26	17.0	7.5	7.5	4.5	6.5	10.5	12.5	---	30.5	28.5	27.5	---
27	17.5	7.5	8.5	.5	9.0	13.0	12.5	---	30.5	29.5	29.0	---
28	18.0	5.5	9.0	-0.5	12.5	14.5	14.5	---	31.0	30.0	29.0	---
29	16.5	2.5	7.5	-0.5	7.0	13.0	17.0	---	31.0	30.0	28.5	---
30	18.5	2.0	6.0	.0	---	9.0	18.0	---	31.0	29.0	28.0	---
31	13.5	---	5.0	-0.5	---	10.5	---	---	---	28.0	26.5	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	8.0	1.0	4.0	.0	.0	10.0	16.0	24.0	29.0	26.0	24.0
2	16.0	11.0	2.0	5.0	.0	.0	12.0	18.0	24.0	30.0	25.0	25.0
3	17.0	9.0	2.0	4.0	.0	.0	10.0	17.0	24.0	30.0	25.0	22.0
4	14.0	10.0	3.0	2.0	2.0	5.0	11.0	18.0	25.0	29.0	25.0	25.0
5	13.0	10.0	6.0	3.0	3.0	2.0	12.0	20.0	25.0	29.0	25.0	26.0
6	16.0	8.0	5.0	4.0	3.0	4.0	---	21.0	26.0	29.0	26.0	27.0
7	17.0	8.0	5.0	1.0	4.0	10.0	---	23.0	26.0	29.0	26.0	26.0
8	19.0	9.0	5.0	.0	.0	8.0	13.0	18.0	25.0	20.0	26.0	26.0
9	15.0	11.0	5.0	.0	.0	9.0	11.0	16.0	23.0	28.0	27.0	26.0
10	10.0	6.0	7.0	4.0	.0	10.0	13.0	18.0	23.0	28.0	27.0	25.0
11	13.0	4.0	14.0	6.0	.0	9.0	15.0	24.0	25.0	29.0	26.0	25.0
12	17.0	7.0	4.0	5.0	.0	7.0	10.0	24.0	25.0	28.0	25.0	24.0
13	12.0	6.0	1.0	3.0	2.0	7.0	9.0	21.0	25.0	29.0	26.0	25.0
14	13.0	6.0	4.0	5.0	6.0	8.0	7.0	20.0	25.0	28.0	26.0	26.0
15	13.0	7.0	4.0	10.0	7.0	10.0	9.0	20.0	25.0	27.0	26.0	26.0
16	16.0	8.0	2.0	9.0	.0	14.0	14.0	16.0	27.0	27.0	26.0	25.0
17	18.0	9.0	.0	8.0	.0	9.0	13.0	16.0	23.0	28.0	26.0	18.0
18	20.0	12.0	.0	7.0	.0	8.0	13.0	17.0	22.0	28.0	25.0	20.0
19	19.0	13.0	1.0	10.0	4.0	10.0	14.0	18.0	23.0	28.0	26.0	23.0
20	20.0	16.0	3.0	7.0	5.0	13.0	17.0	19.0	23.0	28.0	26.0	23.0
21	20.0	15.0	5.0	5.0	9.0	8.0	17.0	19.0	24.0	29.0	26.0	24.0
22	14.0	12.0	9.0	5.0	9.0	10.0	19.0	20.0	25.0	27.0	25.0	25.0
23	11.0	10.0	9.0	2.0	8.0	13.0	19.0	20.0	25.0	25.0	25.0	20.0
24	12.0	8.0	6.0	4.0	8.0	6.0	20.0	21.0	27.0	25.0	26.0	19.0
25	13.0	9.0	5.0	6.0	5.0	6.0	17.0	24.0	28.0	26.0	26.0	21.0
26	14.0	6.0	6.0	5.0	3.0	7.0	12.0	26.0	29.0	27.0	26.0	18.0
27	25.0	7.0	7.0	.0	6.0	12.0	11.0	22.0	29.0	27.0	26.0	17.0
28	14.0	5.0	8.0	.0	10.0	12.0	12.0	21.0	29.0	27.0	26.0	16.0
29	13.0	2.0	7.0	.0	7.0	12.0	15.0	22.0	29.0	28.0	25.0	17.0
30	18.0	.0	5.0	.0	---	9.0	17.0	23.0	30.0	27.0	25.0	18.0
31	11.0	---	4.0	.0	---	7.0	---	23.0	---	26.0	25.0	---
MEAN	15.5	8.5	4.5	4.0	3.5	8.0	13.5	20.0	25.5	27.5	25.5	22.5

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	250	380	380	640	640			---	340	380	340
2	420	500	420	420	550	580			210	370	370	350
3	420	380	440	440	500	550			230	370	380	340
4	430	320	450	450	490	530			280	370	380	340
5	430	400	470	490	490	590			300	360	380	340
6	430	480	470	540	500	580			290	---	380	330
7	430	460	480	530	560	590			290	---	380	330
8	420	430	480	550	540	570			310	---	390	310
9	430	410	500	530	520	550			320	---	380	310
10	430	420	480	530	510	530			330	---	380	320
11	430	430	530	530	500	---			340	---	380	340
12	420	470	500	540	520	---			340	---	380	340
13	430	470	530	600	550	---			350	---	380	340
14	420	480	540	610	450	---			360	---	380	330
15	430	490	570	570	420	---			370	370	370	320
16	410	520	550	530	420	---			360	380	370	310
17	410	530	580	520	440	---			270	380	370	320
18	400	580	530	510	440	---			210	380	370	330
19	410	600	510	470	560	---			170	380	360	330
20	400	570	510	450	610	---			170	390	360	330
21	400	410	530	450	670	---			170	390	360	340
22	400	240	530	310	640	---			200	380	340	340
23	410	200	550	320	560	---			200	370	330	340
24	440	200	530	410	530	---			220	380	340	340
25	360	230	510	430	550	---			210	380	380	---
26	320	220	510	570	600	---			220	380	360	---
27	320	230	520	580	610	---			240	380	340	---
28	340	270	480	630	570	---			270	380	320	---
29	370	310	490	660	520	---			300	370	320	---
30	380	350	520	630	---	---			330	380	330	---
31	360	---	380	640	---	---			---	380	340	---
MEAN	400	400	500	510	530	570			270	380	360	330

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	742	455	481	691	707			---	1010	140	67.9
2	175	4520	474	464	517	608			2940	1010	127	86.9
3	166	3240	476	454	533	549			2400	933	129	91.8
4	156	1590	471	443	556	521			2360	861	134	115
5	156	1310	475	472	597	537			2150	780	124	96.4
6	154	1170	456	515	599	540			1790	---	116	103
7	156	889	447	469	662	593			1570	---	116	86.4
8	146	682	437	493	668	529			1530	---	117	72.8
9	132	535	445	475	635	502			1420	---	114	73.7
10	111	493	412	475	675	488			1350	---	118	81.2
11	111	478	444	464	771	---			1310	---	109	88.1
12	113	548	408	467	762	---			1250	---	111	86.3
13	106	527	445	518	787	---			1220	---	99.5	92.7
14	104	492	440	496	650	---			1190	---	99.5	94.4
15	111	482	459	434	578	---			1150	386	95.9	77.8
16	108	476	434	389	603	---			1260	365	90.9	72.0
17	123	451	454	383	628	---			1900	341	91.9	70.0
18	130	478	428	369	580	---			2380	308	91.9	81.1
19	120	473	394	429	697	---			6840	284	80.7	81.1
20	108	472	379	535	949	---			8950	272	77.8	68.6
21	116	2070	388	802	975	---			7890	254	121	58.8
22	175	5890	418	723	836	---			5940	234	126	51.4
23	146	3350	423	717	685	---			2820	209	135	50.5
24	138	1420	385	929	631	---			2380	197	110	59.7
25	115	1110	368	893	692	---			1630	185	103	---
26	108	778	365	1130	779	---			1250	177	84.6	---
27	97.6	611	380	988	749	---			1120	174	78.0	---
28	92.7	555	487	981	656	---			1090	176	87.3	---
29	93.9	506	565	955	583	---			1080	163	85.5	---
30	106	459	706	850	---	---			1080	157	73.1	---
31	114	---	567	778	---	---			---	145	68.8	---
MEAN	128	1230	448	612	680	557			2460	392	105	79.5

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	1100	2700	2700	5900	5900			---	2200	2600	2200
2	3200	4200	3100	3200	4800	5100			520	2500	2600	2200
3	3200	2700	3400	3400	4100	4700			810	2600	2600	2200
4	3300	1900	3600	3500	4100	4600			1400	2500	2700	2200
5	3300	2900	3700	4000	4100	5200			1700	2500	2700	2200
6	3300	3900	3800	4600	4200	5100			1500	---	2700	2100
7	3300	3600	3900	4500	4800	5300			1600	---	2700	2100
8	3200	3300	3900	4800	4700	5100			1800	---	2800	1800
9	3200	3100	4200	4600	4400	4700			1900	---	2700	1800
10	3300	3200	3900	4600	4300	4500			2100	---	2700	2000
11	3300	3300	4600	4500	4100	---			2200	---	2700	2100
12	3200	3700	4200	4700	4400	---			2200	---	2600	2200
13	3300	3800	4500	5500	4800	---			2300	---	2700	2200
14	3200	3900	4600	5500	3600	---			2400	---	2600	2100
15	3300	4100	5000	5000	3100	---			2600	2600	2600	2000
16	3100	4400	4800	4600	3200	---			2400	2700	2600	1800
17	3000	4600	5100	4500	3400	---			1300	2700	2600	1900
18	3000	5200	4600	4300	3400	---			560	2700	2500	2000
19	3100	5500	4300	3800	4900	---			130	2700	2400	2100
20	3000	5000	4300	3500	5500	---			140	2800	2500	2100
21	2900	3100	4500	3500	6200	---			170	2700	2400	2200
22	2900	880	4600	1800	5900	---			420	2700	2200	2100
23	3100	490	4700	2000	4800	---			410	2600	2000	2200
24	3400	500	4600	3100	4500	---			710	2600	2200	2200
25	2500	850	4300	3300	4700	---			600	2700	2700	---
26	1900	700	4200	5000	5300	---			700	2700	2500	---
27	1900	840	4400	5200	5500	---			1000	2700	2200	---
28	2200	1300	3900	5800	5000	---			1300	2700	1900	---
29	2500	1800	4100	6200	4500	---			1700	2600	1900	---
30	2600	2300	4400	5800	---	---			2000	2700	2100	---
31	2400	---	2700	5800	---	---			---	2700	2200	---
MEAN	3000	2900	4100	4300	4600	5000			1300	2600	2500	2100

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	3270	3230	3420	6370	6520			---	6530	955	440
2	1330	38000	3500	3530	4510	5340			7290	6820	892	546
3	1260	23000	3680	3510	4370	4700			8440	6560	885	594
4	1190	9440	3770	3450	4650	4520			11800	5820	955	742
5	1190	9470	3740	3860	4990	4730			12200	5410	882	624
6	1190	9540	3680	4380	5030	4750			9230	---	824	658
7	1190	6960	3630	3990	5680	5320			8680	---	824	550
8	1110	5230	3550	4300	5810	4740			8890	---	839	423
9	985	4040	3740	4120	5370	4290			8410	---	809	428
10	855	3760	3350	4120	5690	4140			8620	---	838	508
11	855	3670	3850	3940	6320	---			8490	---	773	544
12	864	4320	3420	4060	6450	---			8080	---	758	558
13	811	4260	3780	4750	6870	---			8010	---	707	600
14	795	4000	3750	4470	5200	---			7910	---	681	601
15	855	4030	4020	3810	4270	---			8070	2710	674	486
16	820	4030	3780	3380	4600	---			8420	2600	639	418
17	899	3910	3990	3320	4860	---			9130	2420	646	416
18	972	4280	3710	3110	4480	---			6340	2190	621	491
19	904	4340	3320	3470	6100	---			5230	2020	538	516
20	810	4140	3190	4160	8550	---			7370	1950	540	437
21	838	15700	3290	6240	9020	---			7890	1760	804	380
22	1270	21600	3630	4200	7710	---			12500	1660	814	318
23	1100	8200	3620	4480	5870	---			5780	1470	821	327
24	1060	3550	3340	7020	5360	---			7690	1350	713	386
25	796	4090	3100	6850	5910	---			4650	1310	729	---
26	641	2480	3010	9920	6880	---			3990	1260	587	---
27	580	2230	3220	8860	6760	---			4670	1240	505	---
28	600	2670	3960	9040	5750	---			5260	1250	518	---
29	634	2940	4730	8970	5040	---			6100	1140	508	---
30	723	3020	5980	7830	---	---			6530	1120	465	---
31	758	---	4030	7050	---	---			---	1030	445	---
MEAN	946	7340	3700	5080	5810	4910			7780	2710	716	500

ARKANSAS RIVER BASIN

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07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5810	2040	4870	4880	10800	10800			---	4110	4850	4110
2	5820	7710	5720	5890	8820	9410			1030	4570	4680	4130
3	5910	4970	6330	6260	7570	8690			1490	4780	4850	4050
4	6060	3500	6590	6460	7510	8360			2610	4660	4880	4030
5	5970	5290	6850	7380	7510	9610			3040	4570	4950	3990
6	6120	7180	6980	8490	7710	9350			2820	---	4990	3810
7	6080	6650	7180	8230	8890	9680			2960	---	5010	3820
8	5890	5980	7250	8820	8560	9280			3210	---	5060	3320
9	5960	5700	7640	8430	8100	8690			3460	---	4960	3340
10	6020	5790	7250	8360	7970	8230			3780	---	4990	3630
11	5970	6100	8430	8230	7570	---			4110	---	4930	3900
12	5890	6850	7640	8630	8030	---			4090	---	4850	3980
13	6000	6980	8300	10000	8820	---			4280	---	4910	4050
14	5930	7180	8490	10100	6520	---			4440	---	4830	3800
15	6010	7440	9150	9220	5750	---			4750	4780	4770	3650
16	5660	8100	8820	8430	5870	---			4360	4910	4790	3260
17	5490	8430	9410	8170	6190	---			2400	4930	4760	3570
18	5470	9540	8430	7970	6260	---			1070	4870	4600	3700
19	5630	10000	7970	6920	9020	---			437	4980	4410	3790
20	5420	9220	7900	6460	10100	---			481	5220	4510	3880
21	5270	5640	8300	6390	11400	---			544	5030	4470	3990
22	5340	1620	8430	3240	10800	---			899	4890	4050	3900
23	5670	987	8690	3620	8890	---			881	4760	3700	3990
24	6260	1000	8430	5640	8230	---			1300	4800	4000	3970
25	4510	1550	7970	6130	8690	---			1120	4870	4910	---
26	3470	1270	7770	9150	9810	---			1270	4950	4500	---
27	3460	1540	8100	9540	10100	---			1830	4910	4080	---
28	4030	2330	7180	10700	9220	---			2360	4900	3500	---
29	4580	3230	7440	11300	8170	---			3170	4780	3550	---
30	4830	4200	8030	10600	---	---			3690	4910	3780	---
31	4370	---	4940	10700	---	---			---	4950	4050	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2600	6060	5830	6180	11700	11900			---	12200	1780	821
2	2420	69700	6460	6500	8290	9860			14400	12500	1600	1030
3	2330	42400	6850	6460	8070	8680			15500	12100	1650	1090
4	2190	17400	6900	6370	8520	8220			22000	10800	1730	1360
5	2160	17300	6920	7110	9140	8740			21800	9900	1620	1130
6	2200	17600	6770	8090	9240	8710			17400	---	1520	1190
7	2200	12900	6690	7290	10500	9720			16100	---	1530	1000
8	2050	9480	6600	7910	10600	8620			15900	---	1520	780
9	1830	7430	6810	7560	9890	7930			15300	---	1490	794
10	1560	6800	6220	7490	10500	7580			15500	---	1550	921
11	1550	6790	7060	7200	11700	---			15900	---	1410	1010
12	1590	7990	6230	7460	11800	---			15000	---	1410	1010
13	1470	7820	6970	8640	12600	---			14900	---	1290	1100
14	1470	7370	6920	8210	9420	---			14600	---	1260	1090
15	1560	7310	7360	7020	7920	---			14700	4980	1240	887
16	1500	7410	6950	6190	8430	---			15300	4720	1180	757
17	1650	7170	7370	6020	8840	---			16800	4420	1180	781
18	1770	7860	6810	5770	8250	---			12100	3940	1140	909
19	1640	7880	6150	6320	11200	---			17600	3720	988	931
20	1460	7640	5870	7670	15700	---			25300	3640	974	807
21	1520	28500	6070	11400	16600	---			25300	3270	1500	689
22	2340	39800	6650	7560	14100	---			26700	3010	1500	590
23	2020	16500	6690	8110	10900	---			12400	2690	1520	593
24	1960	7100	6120	12800	9800	---			14100	2490	1300	697
25	1440	7450	5750	12700	10900	---			8680	2370	1330	---
26	1170	4490	5560	18200	12700	---			7240	2310	1060	---
27	1060	4090	5930	16300	12400	---			8550	2250	936	---
28	1100	4790	7290	16700	10600	---			9560	2280	954	---
29	1160	5270	8580	16400	9150	---			11400	2100	949	---
30	1340	5510	10900	14300	---	---			12100	2030	837	---
31	1380	---	7380	13000	---	---			---	1880	820	---
MEAN	1730	13500	6800	9320	10700	9000			15600	4980	1320	915

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 19,79 1000	MAR 10,80 1200	MAY 7,80 0930	JUN 19,80 1600
TOTAL CELLS/ML	13000	9100	86000	9200
DIVERSITY: DIVISION	1.0	1.2	1.6	1.4
..CLASS	1.0	1.2	1.6	1.4
...ORDER	1.9	1.6	1.7	1.8
....FAMILY	2.2	1.8	2.1	3.0
....GENUS	2.2	1.8	2.3	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	800	1	--	-
...COELASTRACEAE								
....COELASTRUM	2900#	22	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	89	1	71	1	5600	7	550	6
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	89	1	--	-	*	0	--	-
...OOCYSTIS	--	-	--	-	1600	2	--	-
...SELENASTRUM	--	-	140	2	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...WESTELLA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	2800	3	--	-
...SCENEDESMUS	710	6	430	5	5200	6	280	3
...TETRASTRUM	--	-	--	-	--	-	--	-
...TETRASPORALES								
...PALMELLACEAE								
...SPHAEROCYSTIS	--	-	--	-	--	-	550	6
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	4300#	34	6000#	66	1600	2	140	1
...CHLOROGONIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	3800#	30	360	4	--	-	410	4
....MELOSIRA	--	-	--	-	800	1	280	3
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	*	0	--	-
...COCCONEIS	--	-	--	-	--	-	140	1
...NAVICULACEAE								
....ENTOMONEIS	--	-	--	-	*	0	--	-
....NAVICULA	89	1	500	5	27000#	32	--	-
...NITZSCHIACEAE								
....NITZSCHIA	710	6	140	2	2400	3	550	6
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	140	1
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMUNAS	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	140	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	1300	14	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	1700#	18
....ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	280	3
...OSCILLATORIA	--	-	--	-	36000#	42	2100#	22
...PHORMIDIUM	--	-	--	-	--	-	--	-
...STIGONEMATACEAE	--	-	--	-	--	-	1900#	21

ARKANSAS RIVER BASIN

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07161000 CIMARRON RIVER AT PERKINS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 19,79 1000	MAR 10,80 1200	MAY 7,80 0930	JUN 19,80 1600
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
....EUGLENA	89	1	210	2
....TRACHELOMONAS	--	-	--	-
				140 1
PYRRHOPHYTA (FIRE ALGAE)				
..DINOPHYCEAE				
...PERIDINIALES				
...GLENODINIACEAE				
....GLENODINIUM	--	-	--	-
				-- -
DATE TIME	JUL 14,80 1545	AUG 20,80 0930	SEP 24,80 0915	
TOTAL CELLS/ML	150000	130000	130000	
DIVERSITY: DIVISION	0.8	0.9	1.2	
..CLASS	0.8	0.9	1.2	
...ORDER	1.1	1.8	1.9	
...FAMILY	1.4	2.0	2.1	
....GENUS	1.8	2.5	2.4	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCUCCALES				
...CHARACIACEAE				
...SCHROEDERIA	*	0	--	-
...COELASTRACEAE			*	0
...COELASTRUM	--	-	--	-
...MICRACTINIACEAE				
...GOLENKINIA	--	-	*	0
...OOCYSTACEAE			--	-
...ANKISTRODESMUS	*	0	850	1
...DICTYOSPHAERIUM	110000#	71	11000	8
...KIRCHNERIELLA	--	-	4200	3
...OOCYSTIS	8900	6	1600	1
...SELENASTRUM	--	-	2800	2
...TETRAEDRON	--	-	850	1
...TREUBARIA	--	-	1300	1
...WESTELLA	--	-	*	0
...SCENEDESMACEAE	--	-	--	-
...ACTINASTRUM	--	-	1700	1
...SCENEDESMUS	4500	3	--	-
...TETRASTRUM	--	-	5800	4
...TETRASPOALES	--	-	1000	1
...PALMELLACEAE				
...SPHAEROCYSTIS	--	-	--	-
...VOLVOCALES			2100	2
...CHLAMYDOMONADACEAE				
...CHLAMYDOMONAS	5300	4	4500	3
...CHLOROGONIUM	--	-	--	-
			*	0
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
...CYCLOTELLA	7500	5	850	1
...MELOSIRA	--	-	--	-
...PENNALES			9400	7
...ACHNANTHACEAE			--	-
...ACHNANTHES	--	-	--	-
...CUCONEIS	--	-	--	-
...NAVICULACEAE			--	-
...ENTOMONEIS	*	0	--	-
...NAVICULA	--	-	*	0

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 14,80 1545		AUG 20,80 0930		SEP 24,80 0915	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	--	-	--	-
....TRACHELOMONAS	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	850	1	--	-
...NITZSCHIA	840	1	*	0	5500	4
....NITZSCHIA						
...SURIPELLACEAE						
....SURIPELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	*	0
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	11000	8	2100	2
....ANACYSTIS	4200	3	35000#	26	72000#	54
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	4500	3	--	-	--	-
....ANABAENOPSIS	3400	2	2100	2	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	57000#	42	22000#	17
....PHORMIDIUM	2200	2	--	-	--	-
...STIGONEMATACEAE	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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LOCATION.--Lat 36°07'07", long 96°52'00", in SE¼SW¼ sec.15, T.19 N., R.4 E., Payne County, Hydrologic Unit 11050003, on right bank 200 ft (61.8 m) upstream from bridge on State Highway 51, 10.0 mi (16.1 km) east of Stillwater, and at mile 10.0 (16.1 km).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 838.28 ft (255.077 m) National Geodetic Vertical Datum of 1929. Prior to May 4, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 11.0 ft³/s (0.312 m³/s), 4.82 in/yr (122 mm/yr), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Oct. 2, 1959, gage height, 18.9 ft (5.76 m), from floodmarks, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurements at gage heights 13.4 ft (4.08 m) and 17.5 ft (5.33 m); 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 (5.06 m) at gage, based on floodmarks set by local resident at site 900 ft (274 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Apr. 25	1945	2,490	70.5	8.85	2.697	June 19	0915	2,090	59.2	7.82	2.384
June 17	1945	2,750	77.9	9.46	2.883	June 20	0800	*3,340	94.6	*10.82	3.298

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.00	.00	.00	.28	.26	.50	1.4	7.5	3.4	.77	.00	.00
2		.00	.00	.00	.22	.32	.42	2.6	16	2.8	.68	.00	.00
3		.00	.00	.01	.28	.42	.54	12	16	2.2	.50	.00	.00
4		.00	.00	.02	.28	.42	.65	3.1	17	1.9	.50	.00	.00
5		.00	.00	.04	.28	.42	.55	1.6	6.0	1.6	.35	.00	.00
6		.00	.00	.05	.24	.42	.56	1.1	4.2	1.4	.23	.00	.00
7		.00	.00	.06	.23	.64	.74	1.1	3.6	1.1	.19	.00	.00
8		.00	.00	.06	.23	1.1	.78	.91	3.0	1.5	.15	.00	.00
9		.00	.00	.05	.21	.71	.84	.78	2.8	1.5	.12	.00	.00
10		.00	.00	.06	.19	.52	.87	.78	2.7	1.7	.08	.00	.00
11		.00	.00	.08	.18	.58	.94	.68	3.4	1.7	.06	.00	.00
12		.00	.00	.06	.14	.53	1.3	.55	217	1.7	.04	.00	.00
13		.00	.00	.06	.12	3.6	.68	.51	11	1.6	.03	.00	.00
14		.00	.00	.06	.12	12	.39	.58	5.2	1.3	.01	.00	.00
15		.00	.00	.09	.13	4.2	.28	.60	142	1.2	.00	.00	.00
16		.00	.00	.10	.15	1.7	.32	.60	130	2.6	.00	.00	.00
17		.00	.00	.08	.15	.79	.25	.67	14	995	.00	5.1	.00
18		.00	.00	.09	.15	.63	.20	.80	182	97	.00	28	.00
19		.00	.00	.08	40	.65	.23	.79	22	426	.00	.49	.00
20		.00	.87	.08	25	.68	.38	.75	11	999	.00	.07	.00
21		.00	5.2	.08	4.1	.57	.56	.73	13	43	.00	1.5	.00
22		.00	.61	.11	1.8	.51	.42	.68	7.9	15	.00	.24	.00
23		.00	.13	.12	.90	.51	112	.68	6.4	5.6	.00	.08	.00
24		.00	.07	.10	.69	.58	59	195	5.1	3.2	.00	.01	.00
25		.00	.05	.10	.60	.63	5.2	741	4.3	2.2	.00	.00	.00
26		.00	.04	.11	.50	.51	2.6	385	3.6	1.8	.00	.00	.00
27		.00	.04	.14	.38	.55	1.8	34	85	1.3	.00	.00	.00
28		.00	.02	4.8	.35	.60	1.6	13	14	1.1	.00	.00	.00
29		.00	.00	3.4	.30	.60	9.7	8.5	8.2	1.1	.00	.00	.00
30		.00	.00	1.3	.31	---	10	6.6	6.6	.87	.00	.00	.00
31		.00	---	.54	.31	---	2.9	---	4.4	---	.00	.00	---
TOTAL		.00	7.03	11.93	78.82	35.65	217.20	1417.09	974.9	2621.37	3.71	35.49	.00
MEAN		.000	.23	.38	2.54	1.23	7.01	47.2	31.4	87.4	.12	1.14	.000
MAX		.00	5.2	4.8	40	12	112	741	217	999	.77	28	.00
MIN		.00	.00	.00	.12	.26	.20	.51	2.7	.87	.00	.00	.00
AC=FT		.00	.14	.24	156	71	431	2810	1930	5200	7.4	70	.00
CAL YR 1979	TOTAL	3603.60							7150				
WTR YR 1980	TOTAL	5403.19							10720				

ARKANSAS RIVER BASIN

07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK

LOCATION.--Lat 36°09'05", long 96°15'05", in SW¼SE¼ 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 (13.7 km) west of Sand Springs, and at mile 538.8 (866.9 km).

DRAINAGE AREA.--74,506 mi² (192,971 km²), of which 12,541 mi² (32,481 km²) 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 weir controlled by 18 40-foot (12.2 m) taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power pool was first filled Nov. 20, 1964. Capacity, 1,836,000 acre-ft (2.26 km³), at elevation 754.0 ft (229.82 m), top of flood control pool, 618,000 acre-ft (762 hm³), at elevation 723.0 ft (220.37 m) top of power pool, 520,700 acre-ft (354 hm³) at elevation 706.0 ft (215.19 m), 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 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,886,000 acre-ft (2.33 km³) Nov. 6, 1974, elevation, 754.86 ft (230.081 m); minimum since power pool was first filled, 297,800 acre-ft (367 hm³) Jan. 19, 1965, elevation, 705.07 ft (214.905 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 907,000 acre-ft (1.12 km³) June 23, elevation 732.65 ft (223.312 m); minimum, 480,600 acre-ft (593 hm³) Sept. 26, 27, elevation 717.15 ft (218.587 m).

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

716	457,000	728	758,900
719	520,700	730	820,800
722	592,400	732	885,500
725	671,900		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	577900	539000	693000	612800	559200	586100	617200	827800	740600	812000	554200	553300
2	573700	526000	686200	611300	558700	583800	620100	801300	726600	788200	555400	549000
3	571300	548100	680500	609200	565000	573000	624200	776100	720700	767600	556300	543200
4	569800	592600	673500	604900	560400	572700	638200	749400	712200	752100	552600	537400
5	564500	603300	668000	604100	554900	569100	661600	722200	699300	734300	551400	529300
6	565200	614600	665500	604100	548600	564000	682500	689600	686700	714600	550200	520300
7	565400	621600	661300	596400	542000	563300	695000	669600	684800	695500	549300	521000
8	560400	628200	661900	594200	535800	569300	699600	660200	680200	683300	545500	509800
9	558700	633700	661300	592900	531400	569800	713600	647900	672700	670700	541300	501100
10	557800	635300	659000	591100	529300	562800	707700	650400	665000	658000	542000	499600
11	558000	631100	650700	586600	524900	555400	709300	654500	658000	649800	540900	498600
12	557000	626300	643600	583800	527900	548800	709000	659100	649800	646000	539700	495000
13	557500	620300	634800	584800	529100	541100	699600	653100	654700	641700	538300	492600
14	557800	613600	625800	583600	531600	529300	689600	646900	650400	633400	536500	493000
15	558000	605400	632600	585800	533500	531400	679700	645000	647100	626300	534400	491100
16	558500	597700	638200	586800	536900	545300	668900	658800	635800	619800	536200	490500
17	557000	597200	634200	586600	536500	540400	658900	722700	675800	613300	536200	489200
18	557800	596400	631900	590400	532300	537600	681500	771300	700100	605400	535800	486900
19	555900	594700	631600	598200	531100	535800	685800	780100	776100	606900	536000	484600
20	557000	599200	630300	603600	530700	545300	639600	766400	852900	603100	545100	484800
21	559700	648500	619500	604600	535300	552300	632900	738100	892400	599000	549000	484800
22	558700	707300	618200	597000	542700	557000	631600	704400	903600	594900	553700	481900
23	559400	736300	618500	594700	549700	570000	627900	690700	906600	591100	553300	481600
24	557000	733700	617500	593900	558200	581100	627600	693800	894700	586600	556600	481200
25	558200	719800	614400	595400	563500	593700	663000	702700	878300	584100	554900	482700
26	554400	702100	611800	601000	571700	601500	690100	701000	870800	584100	554900	480600
27	555900	693800	611800	608200	581600	607900	866400	701300	864300	585800	555600	482300
28	556600	698100	613300	604600	587800	605600	881500	715700	855500	582300	556800	483100
29	552800	701800	618800	592900	584100	614600	892800	729500	844500	577600	560100	481600
30	556100	697800	617700	581600	---	614900	864900	724200	831300	566200	565700	482300
31	551400	---	618900	546200	---	612300	---	743200	---	559700	564200	---
MAX	577900	736300	693000	612800	587800	614900	892800	827800	906600	812000	565700	553300
MIN	551400	526000	611800	546200	524900	529300	617200	645000	635800	559700	534400	480600
†	720.32	725.92	722.88	721.10	721.67	722.78	731.37	727.47	730.33	720.67	720.86	717.23
‡	-31,700	+146,400	-78,900	-72,700	+37,900	+28,200	+252,600	-121,700	+88,100	-271,600	+4,500	-81,900
CAL YR 1979	MAX	859400	MIN	482700	‡	+111,100						
WTR YR 1980	MAX	906600	MIN	480600	‡	-100,800						

† 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 NW¼ 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 (16.3 km) upstream from Polecat Creek, 15.1 mi (24.3 km) downstream from Keystone Dam, and at mile 523.7 (842.6 km).

DRAINAGE AREA.--74,615 mi² (193,253 km²), of which 12,541 mi² (32,481 km²) 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 U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft (187.522 m), 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 (0.914 m) higher.

REMARKS.--Records poor. Except for 109 mi² (282 km²) 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 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Keystone Lake) 39 years (water years 1926-64), 6,554 ft³/s (185.6 m³/s), 4,745,000 acre-ft/yr (5.85 km³/yr); (since regulation by Keystone Lake) 16 years (water years 1965-80), 7,098 ft³/s (201.0 m³/s), 5,143,000 acre-ft/yr (6.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft³/s (6,970 m³/s) Oct. 5, 1959, gage height, 22.00 ft (6.706 m); minimum, 27 ft³/s (0.76 m³/s) Oct. 12, 13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1904, 22.8 ft (6.949 m) June 13, 1923, present datum, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,700 ft³/s (1,120 m³/s) Apr. 29, gage height, 8.65 ft (2.637 m); minimum daily discharge, 65 ft³/s (1.84 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4520	8100	14500	4580	9430	9760	15900	35200	23100	15200	2950	7930
2	3190	8820	14400	5580	6530	8130	16500	33000	21900	18600	2180	1960
3	3110	11600	14400	5020	5370	12200	16700	28900	13300	17700	252	3350
4	2390	11600	14500	6220	5370	8880	16600	28900	12200	14600	381	3340
5	2560	14500	14600	5210	8020	7310	16700	28300	12500	13300	1700	4190
6	2390	17700	11700	4410	8120	8400	16700	27700	12500	14500	1050	4040
7	200	21600	11800	6010	8200	7820	18000	23600	6260	14500	1010	2640
8	1410	21500	9440	6400	9110	4030	19300	14400	5920	11600	1320	2500
9	3360	21600	9500	5090	5150	3630	19300	14400	7080	11900	2120	4280
10	820	21600	9530	4950	5360	4480	19300	9520	7010	12000	2000	2880
11	1100	21600	9370	5640	6580	6590	19200	7740	6080	9440	207	1180
12	476	21700	9610	4920	5070	7550	19200	11800	6840	6620	900	956
13	943	21700	8920	3890	5040	7290	19100	12100	3570	4910	951	1990
14	222	21800	8920	3340	4020	8940	19000	9160	1100	7360	967	1590
15	181	22400	3240	4130	4750	3460	18900	8980	3340	7290	1030	253
16	1010	21900	268	3320	3040	252	18800	7290	11000	6520	1010	899
17	934	15500	2860	3570	4050	2800	18600	14000	13300	6500	188	766
18	1140	14200	3860	2560	6930	5220	17500	16800	16000	6940	164	215
19	457	13000	4220	2620	5870	5590	16000	24500	15100	4120	867	972
20	1160	12600	3480	2660	3350	3340	16100	29600	18600	469	970	1080
21	197	20900	7440	2850	2600	531	16300	29200	28200	5500	1410	221
22	483	29600	7130	7890	2070	2420	14000	28200	28800	4110	1220	124
23	1180	27100	4020	7340	186	1210	12900	22000	28600	3920	630	1150
24	303	27000	3030	6690	117	1780	13200	13000	28900	3190	1320	105
25	2040	26700	3230	6630	531	499	13500	8180	26800	2890	573	105
26	528	25500	5930	3360	447	775	16900	8070	19700	2910	1620	542
27	1940	19500	2960	4130	1270	8600	19700	9520	14100	1310	1190	581
28	203	16900	2600	3900	3430	16100	29200	15800	13800	746	1750	75
29	381	15400	1460	10200	12000	10700	33700	26600	13600	2570	1610	65
30	1950	14500	995	9920	---	12300	36400	25700	13400	3990	1250	930
31	2250	---	5630	12300	---	15800	---	22700	---	4370	209	---
TOTAL	43028	568120	223543	165330	142011	196387	563200	594860	432600	239575	34999	50909
MEAN	1388	18940	7211	5333	4897	6335	18770	19190	14420	7728	1129	1697
MAX	4520	29600	14600	12300	12000	16100	36400	35200	28900	18600	2950	7930
MIN	181	8100	268	2560	117	252	12900	7290	1100	469	164	65
AC-FT	85350	1127000	443400	327900	281700	389500	1117000	1180000	858100	475200	69420	101000

CAL YR 1979 TOTAL 3099359 MEAN 8491 MAX 32900 MIN 126 AC=FT 6148000
WTR YR 1980 TOTAL 3254562 MEAN 8892 MAX 36400 MIN 65 AC=FT 6455000

ARKANSAS RIVER BASIN

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. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 7,820 micromhos Feb. 16, 1978; minimum daily 518 micromhos July 27, 1977.

TEMPERATURE: Maximum daily 32.0°C July 3-6, 14, 1978; minimum daily 0.0°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,170 micromhos Mar. 27; minimum 862 micromhos Dec. 7.

TEMPERATURE: Maximum 28.5°C July 21, 29, Aug. 8, 9; minimum 0.0°C Jan. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, 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, NUNCAR- BONATE (MG/L CACO3)
OCT												
03...	1430	586	1700	5.8	21.5	2.7	--	--	K1000	K51	200	90
05...	1929	2560	1600	8.2	17.5	--	--	--	--	--	200	76
14...	0738	229	1460	8.1	13.0	--	--	--	--	--	210	92
25...	1053	2040	1520	8.0	16.0	--	--	--	--	--	210	86
NOV												
05...	0756	11500	1680	7.8	14.0	--	--	--	--	--	200	80
15...	1015	22000	1750	7.8	11.0	--	--	--	--	--	200	83
16...	0830	21900	1750	7.3	8.0	17	12.7	121	--	150	200	83
25...	1701	26500	1360	7.7	12.0	--	--	--	--	--	180	69
DEC												
11...	1145	9370	1250	6.2	15.0	38	12.0	145	--	320	--	--
JAN												
05...	0730	2880	1790	7.7	4.0	--	--	--	--	--	220	110
15...	0738	2880	1840	7.8	10.5	--	--	--	--	--	210	100
15...	1330	1250	2000	--	12.0	19	12.2	141	87	188	230	110
25...	0810	3020	2400	7.9	6.0	--	--	--	--	--	240	120
FEB												
05...	0845	2850	2000	7.8	6.0	--	--	--	--	--	230	110
15...	0800	4760	--	--	--	--	--	--	--	--	--	--
MAR												
05...	1500	7420	2250	6.7	6.0	5.7	15.2	127	81	168	260	130
15...	0730	4390	2410	8.3	10.5	--	--	--	--	--	270	120
25...	0730	750	3100	8.1	10.0	--	--	--	--	--	290	150
APR												
05...	0729	16700	1860	7.8	10.0	--	--	--	--	--	260	110
11...	1100	19400	1800	7.9	14.0	23	10.2	104	140	42	260	130
15...	0735	18900	1680	7.7	11.5	--	--	--	--	--	240	99
25...	0730	9910	1470	7.1	15.0	--	--	--	--	--	200	73
MAY												
05...	0800	29300	1510	7.4	16.0	--	--	--	--	--	170	73
07...	1510	25100	1400	7.4	17.0	35	11.6	121	500	300	180	83
15...	0740	10200	1320	7.4	17.5	--	--	--	--	--	170	75
25...	0800	8180	1240	7.3	19.0	--	--	--	--	--	180	65
JUN												
05...	1200	12500	1610	7.9	24.5	--	--	--	--	--	210	98
15...	0730	3820	1640	7.6	16.0	--	--	--	--	--	230	110
18...	0945	16000	1500	7.9	23.0	50	7.1	86	>600	K2980	200	110
25...	0725	29000	1450	7.6	17.5	--	--	--	--	--	210	96
JUL												
05...	0750	13700	1000	7.8	18.0	--	--	--	--	--	160	71
15...	0745	4660	991	7.8	18.5	--	--	--	--	--	160	69
16...	1015	2270	981	7.7	27.0	31	--	--	>600	301	160	44
25...	0745	1850	1880	7.8	18.0	--	--	--	--	--	240	120
AUG												
05...	0900	1130	1780	7.7	18.0	--	--	--	--	--	270	130
15...	0745	933	1780	7.4	19.0	--	--	--	--	--	250	120
21...	0930	763	1768	7.9	26.5	5.0	6.8	86	K2020	K4260	230	110
25...	0729	206	2050	7.4	17.0	--	--	--	--	--	--	--
SEP												
05...	0740	1730	1690	7.4	18.0	--	--	--	--	--	210	92
15...	0748	252	1740	7.8	15.0	--	--	--	--	--	230	89
25...	1000	105	1468	8.5	21.0	--	7.7	90	--	--	220	--
25...	1150	105	1280	7.5	14.5	--	--	--	--	--	190	65

ARKANSAS RIVER BASIN

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07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINEITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
03...	57	14	270	79	8.3	8.0	110	97	420	.4	3100	958
05...	57	13	240	78	7.5	6.9	120	96	370	--	--	882
14...	62	14	210	74	6.3	6.4	120	93	320	--	--	816
25...	61	13	220	75	6.7	6.7	120	95	330	--	--	840
NOV												
05...	57	14	250	78	7.7	6.8	120	99	380	--	--	910
15...	58	14	270	79	8.3	6.7	120	98	400	--	--	940
16...	58	14	270	79	8.3	7.5	120	94	400	.3	4.0	920
25...	52	12	200	76	6.5	7.0	110	83	290	--	--	739
DEC												
11...	44	--	180	--	--	6.5	94	78	300	.4	14	702
JAN												
05...	63	16	310	75	9.0	5.8	110	94	500	--	--	1070
15...	58	16	330	77	9.9	6.5	110	99	510	--	--	1090
15...	63	17	320	75	9.2	6.2	120	100	520	.3	7.2	1130
25...	66	18	470	81	13	6.9	120	110	740	--	--	1450
FEB												
05...	64	17	360	77	10	6.5	120	110	550	--	--	1200
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	75	18	340	73	9.2	6.3	130	120	520	.3	6.0	1160
15...	74	20	390	76	10	6.4	150	--	620	--	--	1350
25...	79	23	530	79	14	7.3	140	--	860	--	--	1780
APR												
05...	71	19	290	71	7.9	5.9	150	110	430	--	--	1040
11...	72	20	310	71	8.3	6.1	130	110	460	.3	7.0	1110
15...	66	18	260	70	7.3	5.6	140	97	390	--	--	941
25...	60	13	220	70	6.7	5.3	130	82	340	--	--	820
MAY												
05...	47	13	230	74	7.7	5.5	98	72	370	--	--	771
07...	49	13	250	75	8.2	5.8	93	83	360	.3	7.7	808
15...	48	13	190	70	6.3	5.3	98	70	310	--	--	728
25...	52	11	170	67	5.6	5.5	110	73	280	--	--	685
JUN												
05...	57	16	240	71	7.2	6.9	110	110	380	--	--	905
15...	66	17	230	67	6.5	7.6	120	130	380	--	--	1020
18...	55	16	220	69	6.7	6.2	98	100	330	.2	6.9	823
25...	56	16	200	67	6.1	7.0	110	100	330	--	--	909
JUL												
05...	46	12	140	63	4.8	9.1	93	75	220	--	--	621
15...	45	12	140	64	4.8	9.2	93	71	220	--	--	636
16...	46	12	150	65	5.1	7.1	120	73	230	.3	7.9	574
25...	63	19	280	71	7.9	11	120	120	460	--	--	1300
AUG												
05...	70	23	260	67	6.9	10	140	130	400	--	--	978
15...	64	23	280	69	7.6	11	130	130	410	--	--	972
21...	61	18	280	72	8.1	9.9	120	120	460	.4	6.6	1040
25...	--	--	--	--	--	--	140	--	--	--	--	1120
SEP												
05...	57	17	270	72	8.1	10	120	160	390	--	--	931
15...	62	18	280	72	8.1	10	140	100	410	--	--	966
25...	62	16	230	--	6.7	--	--	--	--	--	2.4	--
25...	51	14	210	70	6.7	6.6	120	87	260	--	--	706

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT												
03...	4040	1.3	.53	.56	.030	.040	.04	.05	1.3	1.5	1.30	.00
05...	--	1.2	--	--	--	--	--	--	--	--	--	--
14...	--	1.1	--	--	--	--	--	--	--	--	--	--
25...	--	1.1	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	1.2	--	--	--	--	--	--	--	--	--	--
15...	--	1.2	--	--	--	--	--	--	--	--	--	--
16...	924	1.2	.86	.80	.110	.040	.13	.05	.80	.61	.91	.26
25...	--	1.0	--	--	--	--	--	--	--	--	--	--
DEC												
11...	--	.95	.95	.95	.140	.140	.17	.18	1.1	.96	1.20	.10
JAN												
05...	--	1.4	--	--	--	--	--	--	--	--	--	--
15...	--	1.4	--	--	--	--	--	--	--	--	--	--
15...	1110	1.5	.94	.90	.130	.300	.16	.39	.38	.58	.51	.00
25...	--	1.9	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	1.6	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	1170	1.5	.70	.71	.100	.060	.12	.08	1.4	1.1	1.50	.30
15...	--	1.8	--	--	--	--	--	--	--	--	--	--
25...	--	2.4	--	--	--	--	--	--	--	--	--	--
APR												
05...	--	1.4	--	--	--	--	--	--	--	--	--	--
11...	1070	1.5	.99	1.0	.400	.360	.48	.46	1.3	.94	1.70	.40
15...	--	1.2	--	--	--	--	--	--	--	--	--	--
25...	--	1.1	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	1.0	--	--	--	--	--	--	--	--	--	--
07...	828	1.1	.69	.69	.290	.220	.35	.28	1.0	.64	1.30	.44
15...	--	.99	--	--	--	--	--	--	--	--	--	--
25...	--	.93	--	--	--	--	--	--	--	--	--	--
JUN												
05...	--	1.2	--	--	--	--	--	--	--	--	--	--
15...	--	1.3	--	--	--	--	--	--	--	--	--	--
18...	795	1.1	.48	.49	.110	.080	.13	.10	.99	.66	1.10	.36
25...	--	1.2	--	--	--	--	--	--	--	--	--	--
JUL												
05...	--	.84	--	--	--	--	--	--	--	--	--	--
15...	--	.87	--	--	--	--	--	--	--	--	--	--
16...	601	.78	.33	.50	.080	.180	.10	.23	1.1	1.3	1.20	.00
25...	--	1.7	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	1.3	--	--	--	--	--	--	--	--	--	--
15...	--	1.3	--	--	--	--	--	--	--	--	--	--
21...	1030	1.4	.36	.30	.120	.020	.15	.03	.98	.72	1.10	.36
25...	--	1.5	--	--	--	--	--	--	--	--	--	--
SEP												
05...	--	1.2	--	--	--	--	--	--	--	--	--	--
15...	--	1.3	--	--	--	--	--	--	--	--	--	--
25...	--	--	.28	.24	--	1.00	--	1.3	--	--	1.40	--
25...	--	.96	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1740	1020	2070	1860	2770	1990	1540	1840	1130	1850	1510
2		1700	980	2320	1680	2470	1700	1340	1790	1080	1920	1470
3		1630	1020	1930	2080	1820	1640	1290	1660	945	1680	1690
4		1660	950	1880	2400	3100	1610	1160	1770	945	1890	1690
5		1680	981	1780	1900	2620	1860	1520	1610	1010	1750	1710
6		1510	981	2450	2470	2750	1620	1300	1610	946	1930	1680
7		1570	862	2500	2600	2260	1770	1290	1590	982	1960	1670
8		2490	915	2020	2460	2340	1700	1860	1560	965	1880	1670
9		2560	1070	1880	2220	2550	1820	1810	1530	976	1930	1650
10		2410	1130	2060	2300	2980	1890	1900	1510	975	1790	1790
11		1850	1210	1680	2210	2880	1860	2080	1490	956	1700	1790
12		2130	1110	1680	2310	2540	1830	1690	1590	1010	1740	1660
13		1720	1010	1840	1950	2480	1640	1360	1520	1020	1740	1550
14		1730	1220	1890	2580	2100	1490	1430	1510	1050	1740	1630
15		1700	1030	1770	2520	2400	1720	1310	1620	1010	1750	1710
16		1660	1040	2060	2220	2660	1730	939	1760	1070	1790	1590
17		1710	1590	2100	3140	2600	1580	1320	1850	1660	1580	1630
18		1890	1470	2230	2810	2740	1770	1580	1770	1690	1940	1720
19		1830	1760	1710	2950	2520	1700	1740	1980	1250	2010	1660
20		1140	1640	2280	2550	1840	1810	1490	1670	1280	1940	1660
21		1410	1900	2840	2870	2680	1820	1710	1900	1620	1630	1560
22		1440	1650	2540	2310	2020	1780	1930	1860	1080	1820	1550
23		1400	1570	2100	2380	2250	2400	1730	1080	1840	1840	1590
24		1380	1720	2290	2160	2770	1570	1740	1570	1850	1800	1270
25		1380	1850	2400	2340	3120	1450	1260	1450	1860	2020	1520
26		1390	1800	2100	2590	2140	2260	1100	1360	1950	1770	1430
27		1410	1770	1790	2520	3060	1860	1570	1190	1870	1840	1340
28		1360	2290	2000	2840	2720	1390	1770	1210	1850	1780	1730
29		1090	2270	1840	2410	2960	1490	1630	1090	1860	1940	1650
30		1190	2370	2160	---	2360	1470	1600	1040	1940	1970	1460
31		---	2130	1650	---	1910	---	1550	---	1960	1950	---
MEAN		1660	1430	2060	2400	2530	1740	1530	1570	1340	1830	1610

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	1780	1050	2100	1960	2550	2000	1560	1840	1110	1870	1680
2	1660	1720	970	2350	1620	2310	1720	1350	1800	1090	1950	1700
3	1710	1630	1010	1870	2080	2140	1650	1320	1650	945	1680	1680
4	1560	1640	1020	1870	2370	2990	1600	1510	1700	945	1870	1680
5	1600	1680	981	1790	2000	2760	1860	1280	1610	1000	1780	1690
6	1560	1470	921	2480	2480	2760	1610	1250	1600	936	1940	1670
7	1480	1540	872	2710	2600	2300	1760	1760	1580	972	1930	1670
8	1560	2440	---	2010	2490	2310	1730	1670	1550	945	1930	1660
9	1510	2670	---	1930	2280	2410	1880	1680	1510	936	1940	1650
10	1520	2470	1140	2090	2330	2990	1910	1170	1480	945	1790	1810
11	1480	1840	1180	1710	2220	3100	1890	1950	1490	936	1750	1810
12	1400	2140	1080	1750	2440	2620	1790	1480	1590	972	1780	1630
13	1610	1720	998	1830	1950	2500	1640	1350	1550	1000	1780	1650
14	1460	1700	1180	1930	2500	2290	1490	1450	1490	1020	1750	1700
15	---	1750	1020	1840	2430	2410	1680	1320	1640	991	1780	1740
16	1430	1700	1020	2020	2130	2660	1710	909	1670	1020	1780	1710
17	1400	1660	1110	2090	3030	2510	1570	1330	1660	1640	1750	1700
18	1470	1910	1420	2230	2900	2690	1740	1550	1650	1650	1670	1740
19	1510	1820	1750	2100	2980	2630	1650	1770	1660	1240	1980	1740
20	1540	1330	1640	2200	2500	2310	---	1550	1530	1270	2000	1710
21	1670	1490	1910	2640	2780	2820	---	1740	1840	1640	1550	1600
22	917	1370	1650	2630	2390	1970	1480	1920	1870	1050	1810	1600
23	1490	1400	1740	2210	2460	2110	2360	1710	1080	1850	1860	1620
24	1470	1370	---	2260	2140	2760	1540	1730	1590	1850	1790	1290
25	1520	1360	1880	2400	2280	3100	1470	1240	1450	1880	2050	1280
26	1480	1390	1820	2010	2660	2100	2160	1100	1360	1880	1790	1380
27	1420	1460	1710	1820	2280	3170	1440	1510	1200	1870	1850	1390
28	1480	1460	2140	1890	2680	2770	1410	1770	1210	1870	1780	1620
29	1700	1130	2290	1880	2660	2930	1590	1590	1090	1880	1960	1630
30	905	1230	2270	2070	---	2250	1490	1600	1040	1900	1990	1560
31	1200	---	2100	1800	---	1870	---	1540	---	1950	1960	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		16.0	9.0	6.5	3.0	2.5	10.5	15.0	22.0	27.0	27.0	25.5
2		15.0	8.5	6.5	3.5	3.5	10.0	14.5	22.5	27.0	26.5	23.5
3		15.5	8.0	4.5	4.5	3.5	10.5	15.5	23.5	27.0	26.0	26.0
4		14.5	8.5	4.5	4.0	6.0	11.0	15.5	23.5	27.0	25.0	27.0
5		14.5	8.5	5.0	4.5	4.0	11.5	16.0	24.0	27.5	27.0	27.5
6		14.0	8.0	6.0	4.0	5.0	11.5	16.5	24.5	27.5	27.0	27.0
7		14.0	8.0	4.0	2.5	8.0	12.0	16.0	24.0	27.5	27.5	26.5
8		14.0	7.5	4.0	2.0	7.0	11.5	16.0	23.5	27.5	28.5	26.0
9		13.0	8.0	4.5	2.5	8.5	11.5	16.5	24.0	27.5	28.5	26.5
10		12.0	8.5	6.0	2.5	9.5	12.5	18.0	25.0	28.0	28.0	24.5
11		11.5	10.0	7.0	3.5	6.0	12.5	20.0	25.0	28.0	25.5	25.0
12		12.0	6.0	5.0	3.0	5.5	11.5	19.5	24.5	27.5	28.0	24.5
13		11.5	6.0	5.5	4.0	7.0	12.5	18.5	24.0	27.5	28.0	25.0
14		11.5	6.0	7.5	5.0	7.0	15.0	18.0	22.5	27.5	27.5	26.0
15		11.0	6.0	9.0	5.0	7.5	13.5	16.5	24.5	27.0	27.0	24.0
16		11.0	3.0	9.5	1.5	12.0	12.5	18.0	24.5	27.5	27.0	24.5
17		11.5	1.0	7.5	2.0	10.0	12.5	18.5	21.5	28.0	26.0	19.5
18		11.5	4.0	7.0	2.5	8.5	13.5	18.5	25.0	27.5	25.0	20.0
19		12.5	6.5	8.5	5.0	9.5	14.0	19.5	25.5	27.5	27.0	23.5
20		14.0	8.0	7.0	7.0	9.5	14.0	19.0	25.0	26.0	27.5	23.5
21		12.0	8.5	6.0	10.0	9.0	14.5	19.0	25.0	28.5	27.5	23.0
22		10.0	9.5	5.5	8.0	11.0	14.5	19.0	25.0	26.5	26.5	22.5
23		10.0	8.5	5.0	7.5	11.5	14.5	20.0	25.5	25.5	25.0	20.5
24		10.5	7.0	7.0	6.0	9.0	14.5	20.5	26.0	25.5	27.5	19.5
25		10.5	6.5	6.5	5.5	7.5	13.0	21.5	26.0	26.5	26.0	20.0
26		10.5	7.0	4.5	4.5	9.0	13.0	22.5	26.5	26.5	27.5	16.5
27		10.5	8.0	2.5	8.0	10.0	14.0	21.0	27.0	26.5	28.0	17.0
28		9.5	8.5	1.5	10.5	9.5	15.0	20.5	27.0	25.5	27.0	15.5
29		9.0	7.0	3.0	4.0	9.0	15.5	20.5	27.0	28.5	26.5	16.5
30		8.5	6.0	3.5	---	8.5	15.0	21.0	26.5	28.0	26.0	18.5
31		---	6.0	3.0	---	10.0	---	21.5	---	27.5	24.5	---
MEAN		12.0	7.0	5.5	4.5	8.0	13.0	18.5	24.5	27.0	27.0	23.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	13.0	8.0	6.0	5.0	1.5	13.0	17.0	22.5			
2	20.0	14.0	7.0	7.0	2.5	1.5	10.0	16.0	23.0			
3	20.0	14.0	9.0	5.0	3.0	2.0	9.5	15.0	23.0			
4	18.0	13.0	8.0	5.0	4.0	3.5	13.0	16.0	23.0			
5	17.5	14.0	8.0	4.0	6.0	5.0	10.0	15.5	24.5			
6	19.5	16.0	8.0	5.0	3.5	7.0	10.5	17.0	26.0			
7	18.5	13.0	7.0	3.0	2.0	8.0	11.0	16.0	26.0			
8	22.5	14.0	---	---	3.0	8.5	11.0	15.5	23.0			
9	17.0	14.0	---	---	2.5	---	14.0	16.5	20.0			
10	16.5	13.0	7.0	---	3.0	---	13.0	16.0	---			
11	15.0	13.0	12.0	---	2.5	---	12.5	17.0	---			
12	19.0	12.0	6.0	---	3.0	---	11.0	17.0	---			
13	12.5	11.0	5.0	4.5	4.0	---	11.0	17.5	---			
14	13.0	10.0	6.0	9.0	3.0	---	11.0	17.0	---			
15	---	11.0	6.0	10.5	3.5	---	11.5	17.5	---			
16	16.0	10.0	4.0	8.5	3.0	---	14.0	11.0	---			
17	18.5	10.0	1.0	6.0	2.5	8.0	12.5	18.0	---			
18	20.0	13.0	6.0	7.0	3.0	8.5	11.0	18.0	---			
19	21.5	15.0	5.0	8.0	5.0	9.0	12.5	19.0	---			
20	21.0	15.0	7.0	5.5	3.0	8.5	---	20.0	---			
21	21.0	12.0	9.0	6.0	3.5	9.0	---	19.0	---			
22	14.0	10.0	9.0	5.0	4.0	---	15.0	21.0	---			
23	13.5	12.0	9.0	5.5	4.0	8.0	15.5	19.5	---			
24	13.5	11.0	---	5.0	4.0	7.5	15.0	19.5	---			
25	16.0	12.0	6.0	6.0	3.0	10.0	15.0	19.0	---			
26	15.5	12.0	6.5	2.5	---	8.0	13.0	19.5	---			
27	17.0	11.0	8.5	4.0	---	10.5	13.5	20.0	---			
28	20.5	10.0	8.5	0	---	9.0	14.0	21.5	---			
29	19.0	9.0	7.0	3.0	---	9.5	14.0	20.0	---			
30	19.0	10.0	6.0	2.5	---	8.5	15.5	20.0	---			
31	13.5	---	5.0	3.5	---	9.0	---	22.0	---			
MEAN	17.5	12.0	7.0	5.5	3.5	7.5	12.5	18.0	23.5			

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		100	74	120	110	150	110	96	110	79	110	95
2		100	73	130	100	130	100	88	110	77	110	93
3		100	74	110	120	110	100	86	100	71	100	100
4		100	72	110	130	160	99	80	110	71	110	100
5		100	73	110	110	140	110	95	99	74	100	100
6		95	73	130	130	150	99	86	99	71	110	100
7		97	68	140	140	130	110	86	98	73	110	100
8		130	70	120	130	130	100	110	97	72	110	100
9		140	77	110	120	140	110	110	95	73	110	100
10		130	79	120	130	160	110	110	95	73	110	110
11		110	82	100	120	150	110	120	94	72	100	110
12		120	78	100	130	140	110	100	98	74	100	100
13		100	74	110	110	130	100	88	95	74	100	96
14		100	83	110	140	120	94	91	95	76	100	100
15		100	75	110	140	130	100	86	99	74	100	100
16		100	75	120	120	140	100	71	100	77	110	98
17		100	98	120	160	140	97	87	110	100	97	100
18		110	93	120	150	150	110	97	110	100	110	100
19		110	100	100	150	140	100	100	110	84	120	100
20		79	100	130	140	110	110	94	100	85	110	100
21		90	110	150	150	140	110	100	110	99	100	97
22		92	100	140	130	120	110	110	110	77	110	96
23		90	97	120	130	130	130	100	77	110	110	98
24		89	100	130	120	150	97	100	97	110	110	85
25		89	110	130	130	160	92	84	92	110	120	95
26		90	110	120	140	120	130	78	88	110	110	91
27		90	110	110	140	160	110	97	81	110	110	88
28		88	130	110	150	140	90	110	82	110	110	100
29		77	130	110	130	150	94	100	77	110	110	100
30		81	130	120	---	130	93	98	75	110	110	93
31		---	120	100	---	110	---	96	---	110	110	---
MEAN		100	92	120	130	140	100	95	97	88	110	98

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		2190	2900	1480	2800	3950	4720	9120	6860	3240	876	2030
2		2380	2840	1960	1760	2850	4450	7840	6500	3870	647	492
3		3130	2880	1490	1740	3620	4510	6710	3590	3390	68.0	904
4		3130	2820	1850	1880	3840	4440	6240	3620	2800	113	902
5		3920	2880	1550	2380	2800	4960	7260	3340	2660	459	1130
6		4540	2310	1550	2850	3430	4460	6430	3340	2780	312	1090
7		5660	2170	2270	3100	2740	5350	5480	1700	2860	300	713
8		7550	1780	2070	3200	1410	5210	4280	1620	2260	392	675
9		8160	1980	1510	1740	1370	5730	4280	1960	2350	630	1160
10		7580	2030	1600	2030	2130	5730	2830	1860	2370	594	855
11		6420	2070	1520	2140	2940	5700	2510	1610	1840	55.9	350
12		7030	2020	1330	2120	3080	5700	3190	1850	1320	243	258
13		5860	1780	1160	1530	2770	5160	2870	957	981	257	516
14		5890	2000	992	1610	3090	4820	2560	349	1510	261	429
15		6050	656	1230	1800	1540	5100	2370	1020	1460	278	68.3
16		5910	54.3	1080	953	95.3	5080	1710	2970	1360	300	238
17		4180	757	1160	1650	1060	4870	3290	3950	1760	49.2	207
18		4220	969	829	2850	2110	5200	4400	4750	1870	48.7	58.0
19		3860	1140	707	2490	2110	4320	6610	4480	934	281	262
20		2690	940	934	1320	992	4780	7510	5020	108	288	292
21		5080	2210	1150	1050	201	4940	7680	8380	1470	381	57.9
22		7350	1930	2980	727	784	4160	8380	8550	854	362	32.1
23		6590	1050	2380	65.3	425	4530	5940	5950	1160	187	304
24		6490	818	2350	37.9	721	3460	3510	7570	947	392	24.1
25		6420	959	2330	186	216	3350	1860	6660	858	186	26.9
26		6200	1760	1090	169	251	5930	1700	4680	864	481	133
27		4740	879	1230	480	3720	5850	2490	3080	389	353	138
28		4020	913	1160	1390	6090	7100	4690	3060	222	520	20.2
29		3200	512	3030	4210	4330	8550	7180	2830	763	478	17.5
30		3170	349	3210	---	4320	9140	6800	2710	1190	371	234
31		---	1820	3320	---	4690	---	5880	---	1300	62.1	---
MEAN		5120	1620	1690	1730	2380	5240	4960	3830	1670	330	454

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		430	200	530	460	750	500	370	460	240	460	360
2		410	190	610	410	650	410	300	440	220	480	340
3		390	200	490	530	450	400	290	400	180	410	410
4		400	180	470	630	850	390	250	440	180	470	410
5		410	190	440	480	700	460	360	390	200	430	420
6		360	190	650	650	740	390	290	390	180	490	410
7		370	150	660	690	590	440	290	380	190	500	410
8		660	170	510	650	610	410	460	370	190	470	410
9		680	220	470	580	680	450	450	360	190	490	400
10		640	240	530	600	810	470	480	360	190	440	440
11		460	260	410	570	780	460	530	350	180	410	440
12		550	230	410	600	680	460	410	380	200	430	400
13		420	200	460	490	660	400	310	360	200	430	370
14		420	270	470	690	540	350	330	360	210	430	390
15		410	210	440	670	630	420	290	390	200	430	420
16		400	210	530	580	710	420	180	430	220	440	380
17		420	380	540	860	690	380	300	460	400	380	390
18		470	340	580	760	740	440	380	440	410	490	420
19		460	430	420	800	670	410	430	500	280	510	400
20		240	400	600	680	460	450	350	410	280	490	400
21		320	480	770	780	720	450	420	480	390	390	370
22		330	400	680	600	510	440	490	460	220	450	370
23		320	370	540	630	590	630	420	220	460	460	380
24		320	420	600	560	750	370	430	370	460	450	280
25		320	460	630	610	860	340	280	340	460	510	360
26		320	450	540	690	550	590	230	310	490	440	330
27		320	440	440	670	840	460	370	260	470	460	300
28		310	600	510	770	730	320	440	260	460	440	420
29		230	590	460	640	810	350	390	230	460	490	400
30		260	620	560	---	620	340	380	210	490	500	340
31		---	550	400	---	480	---	370	---	500	490	---
MEAN		400	330	530	630	670	430	360	370	300	460	390

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		9400	7830	6550	11700	19800	21500	35200	28700	9850	3660	7710
2		9760	7390	9190	7230	14300	18300	26700	26000	11000	2830	1800
3		12200	7780	6640	7680	14800	18000	22600	14400	8600	279	3710
4		12500	7050	7890	9130	20400	17500	19500	14500	7100	483	3700
5		16100	7490	6190	10400	14000	20700	27500	13200	7180	1970	4750
6		17200	6000	7740	14300	16900	17600	21700	13200	7050	1390	4470
7		21600	4780	10700	15300	12500	21400	18500	6610	7440	1360	2920
8		38300	4330	8810	16000	6640	21400	17900	6160	5950	1680	2770
9		39700	5640	6460	8390	6660	23400	17500	7440	6100	2800	4620
10		37300	6180	7080	9350	10800	24500	12300	7040	6160	2380	3420
11		26800	6580	6240	10200	15300	23800	11100	6000	4590	229	1400
12		32200	5970	5450	9770	15000	23800	13100	7160	3570	1040	1030
13		24600	4820	4830	6830	14000	20400	10100	3630	2650	1100	1990
14		24700	6500	4240	7940	13900	18000	9270	1320	4170	1120	1670
15		24800	1840	4910	8610	7470	21400	7990	4020	3940	1200	287
16		23700	152	4750	4600	483	21300	4340	12800	3870	1200	922
17		17600	2930	5210	8870	5220	19100	11300	16500	7020	193	807
18		18000	3540	4010	14400	10400	20800	17200	19000	7680	217	244
19		16100	4900	2970	13300	10100	17700	28400	20400	3110	1190	1050
20		8160	3760	4310	6410	4150	19600	28000	20600	355	1280	1170
21		18100	9640	5930	5480	1030	19800	33100	36500	5790	1480	221
22		26400	7700	14500	3350	3330	16600	37300	35800	2440	1480	124
23		23400	4020	10700	316	1930	21900	24900	17000	4870	782	1180
24		23300	3440	10800	177	3600	13700	15100	28900	3960	1600	79.4
25		23100	4010	11300	875	1160	12400	6180	24600	3590	789	102
26		22000	7200	4900	833	1150	26900	5010	16500	3850	1920	483
27		16800	3520	4910	2300	19500	24500	9510	9900	1660	1480	471
28		14100	4210	5370	7130	31700	25200	18800	9690	927	2080	85.0
29		9560	2330	12700	20700	23400	31800	28000	8450	3190	2130	70.2
30		10200	1670	15000	---	20600	33400	26400	7600	5280	1690	854
31		---	8360	13300	---	20500	---	22700	---	5900	277	---
MEAN		20600	5210	7530	8330	11600	21200	18900	14800	5120	1400	1800

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		991	581	1180	1080	1580	1130	877	1050	644	1050	860
2		968	558	1320	957	1410	968	763	1020	615	1090	837
3		929	581	1100	1180	1040	934	735	946	538	957	963
4		946	541	1070	1370	1770	917	661	1010	538	1080	963
5		957	559	1010	1080	1490	1060	866	917	575	997	974
6		860	559	1400	1410	1570	923	741	917	539	1100	957
7		894	491	1420	1480	1290	1010	735	906	559	1120	951
8		1420	521	1150	1400	1330	968	1060	889	550	1070	951
9		1460	610	1070	1260	1450	1040	1030	872	556	1100	940
10		1370	644	1170	1310	1700	1080	1080	860	556	1020	1020
11		1050	689	957	1260	1640	1060	1180	849	545	968	1020
12		1210	632	957	1320	1450	1040	963	906	575	991	946
13		980	575	1050	1110	1410	934	775	866	581	991	883
14		986	695	1080	1470	1200	849	815	860	598	991	929
15		968	587	1010	1440	1370	980	746	923	575	997	974
16		946	593	1170	1260	1520	986	535	1000	610	1020	906
17		974	906	1200	1790	1480	900	752	1050	946	900	929
18		1080	837	1270	1600	1560	1010	900	1010	963	1110	980
19		1040	1000	974	1680	1440	968	991	1130	712	1150	946
20		649	934	1300	1450	1050	1030	849	951	729	1110	946
21		803	1080	1620	1630	1530	1040	974	1080	923	929	889
22		820	940	1450	1320	1150	1010	1100	1060	615	1040	883
23		798	894	1200	1360	1280	1370	986	615	1050	1050	906
24		786	980	1300	1230	1580	894	991	894	1050	1030	724
25		786	1050	1370	1330	1780	826	718	826	1060	1150	866
26		792	1030	1200	1480	1220	1290	627	775	1110	1010	815
27		803	1010	1020	1440	1740	1060	894	678	1070	1050	763
28		775	1300	1140	1620	1550	792	1010	689	1050	1010	986
29		621	1290	1050	1370	1690	849	929	621	1060	1110	940
30		678	1350	1230	---	1340	837	911	593	1110	1120	832
31		---	1210	940	---	1090	---	883	---	1120	1110	---
MEAN		945	814	1170	1370	1440	992	873	892	765	1050	916

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		21700	22700	14600	27000	41600	48500	83400	65500	26400	8360	18400
2		23100	21700	19900	16900	31000	43100	68000	60300	30900	6420	4430
3		29100	22600	14900	17100	34300	42100	57400	34000	25700	651	8710
4		29600	21200	18000	19900	42400	41100	51600	33300	21200	1110	8680
5		37500	22000	14200	23400	29900	47800	66200	30900	20600	4580	11000
6		41100	17700	16700	30900	35900	41600	55400	30900	21100	3120	10400
7		52100	15600	23000	32800	27200	49100	46800	15800	21900	3050	6780
8		82400	13300	19900	34400	14500	50800	41200	14800	17200	3810	6420
9		85100	15600	14700	18200	14200	54200	40000	18000	17900	6300	10900
10		79900	16600	15600	20400	22700	56300	27800	16800	18000	5510	7930
11		61200	17400	14600	22500	32100	55000	24700	14600	13900	541	3250
12		70900	16400	12700	21500	31900	53900	30700	17100	10300	2410	2440
13		57400	13800	11000	15500	30000	48200	25300	8720	7700	2540	4740
14		58000	16700	9740	16900	30900	43600	22900	3160	11900	2590	3990
15		58500	5140	11300	18500	16200	50600	20500	9520	11300	2770	665
16		55900	429	10500	10000	1030	50000	12900	29700	10700	2780	2200
17		40800	7000	11600	18500	11200	45200	28400	37700	16600	457	1920
18		41400	8720	8780	30400	22000	47700	40800	43600	18000	492	569
19		36500	11400	6890	27900	21700	41800	65600	46100	7920	2690	2480
20		22100	8780	9340	13700	9470	44800	67900	47800	923	2910	2760
21		45300	21700	12500	11400	2190	45800	76800	82200	13700	3540	530
22		65500	18100	30900	7380	7510	38200	83800	82400	6820	3430	296
23		58400	9700	23800	683	4180	47700	58600	47500	11100	1790	2810
24		57300	8020	23500	389	7590	31900	34800	69800	9040	3670	205
25		56700	9160	24500	1910	2400	30100	15900	59800	8270	1780	246
26		54500	16500	10900	1790	2550	58900	13700	41200	8720	4420	1190
27		42300	8070	11400	4940	40400	56400	23000	25800	3780	3370	1200
28		35400	9130	12000	15000	67400	62400	43100	25700	2110	4770	200
29		25800	5090	28900	44400	48800	77300	66700	22800	7360	4830	165
30		26500	3630	32900	---	44500	82300	63200	21500	12000	3780	2090
31		---	18400	31200	---	46500	---	54100	---	13200	626	---
MEAN		48400	13600	16800	18100	25000	49500	45500	35200	13700	3200	4250

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 16,79 0830	MAR 5,80 1500	MAY 7,80 1510	JUN 18,80 0945
TOTAL CELLS/ML	1300	0	1400	460
DIVERSITY: DIVISION	1.5	0.0	1.3	1.5
..CLASS	1.5	0.0	1.3	1.5
..ORDER	2.3	0.0	1.9	1.6
...FAMILY	2.7	0.0	2.4	1.9
....GENUS	3.2	0.0	3.3	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....COELASTRACEAE								
.....COELASTRUM	--	-	--	-	--	-	--	-
.....OOCYSTACEAE								
.....ANKISTRODESMUS	18	1	--	-	110	8	--	-
.....CHLORELLA	94	7	--	-	--	-	--	-
.....DICTYOSPHAERIUM	--	-	--	-	55	4	39	8
.....KIRCHNERIELLA	--	-	--	-	28	2	--	-
.....OOCYSTIS	--	-	--	-	69	5	--	-
.....SELENASTRUM	--	-	--	-	--	-	--	-
.....TREUBARIA	--	-	--	-	--	-	--	-
.....SCENEDESMACEAE								
.....ACTINASTRUM	--	-	--	-	--	-	100#	22
.....SCENEDESMUS	35	3	--	-	140	10	--	-
.....TETRASTRUM	24	2	--	-	170	12	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	18	1	--	-	55	4	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
.....COSCINODISCUS	--	-	--	-	14	1	--	-
.....CYCLOTELLA	320#	26	--	-	460#	33	52	11
.....MELOSIRA	--	-	--	-	55	4	26	6
.....SKELETONEMA	35	3	--	-	--	-	--	-
.....STEPHANODISCUS	--	-	--	-	14	1	--	-
...PENNALES								
....ACHNANTHACEAE								
.....ACHNANTHES	18	1	--	-	14	1	--	-
....COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	--	-	--	-
....NAVICULACEAE								
.....NAVICULA	59	5	--	-	42	3	13	3
....NITZSCHACEAE								
.....NITZSCHIA	47	4	--	-	55	4	--	-
....SURIRELLACEAE								
.....SURIRELLA	--	-	--	-	14	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
.....CHROOMONAS	--	-	--	-	--	-	--	-
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	240#	19	--	-	--	-	--	-
.....ANACYSTIS	--	-	--	-	83	6	--	-
...HORMOGONALES								
....NOSTOCACEAE								
.....ANABAENA	--	-	--	-	--	-	230#	50
.....ANABAENOPSIS	35	3	--	-	--	-	--	-
....OSCILLATORACEAE								
.....OSCILLATORIA	110	9	--	-	--	-	--	-
....PHORMIDIUM	--	-	--	-	--	-	--	-
....SCHIZOTHRIX	210#	17	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	14	1	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 16,80 1015	AUG 21,80 0930	SEP 25,80 1000
TOTAL CELLS/ML	2000	12000	17000
DIVERSITY: DIVISION	1.5	1.5	1.6
..CLASS	1.5	1.5	1.6
...ORDER	2.1	2.3	2.2
....FAMILY	2.3	2.5	2.7
.....GENUS	2.8	2.7	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....COELASTRACEAE						
.....COELASTRUM	--	-	--	-	1200	7
.....OOCYSTACEAE						
.....ANKISTRODESMUS	--	-	250	2	--	-
.....CHLORELLA	--	-	--	-	--	-
.....DICTYOSPHAERIUM	--	-	--	-	--	-
.....KIRCHNERIELLA	--	-	--	-	--	-
.....OOCYSTIS	39	2	64	1	--	-
.....SELENASTRUM	13	1	--	-	--	-
.....TREUBARIA	13	1	--	-	--	-
.....SCENEDESMACEAE						
.....ACTINASTRUM	--	-	--	-	--	-
.....SCENEDESMUS	180	9	1500	12	1400	8
.....TETRASTRUM	--	-	--	-	--	-
...VOLVOCALES						
....CHLAMYDOMONADACEAE						
.....CHLAMYDOMONAS	230	12	890	7	400	2
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
.....COSCINODISCUS						
.....CYCLOTILLA	680#	35	5000#	41	3200#	19
.....MELOSIRA	170	9	--	-	400	2
.....SKELETONEMA	--	-	--	-	--	-
.....STEPHANODISCUS	--	-	--	-	--	-
...PENNALES						
....ACHNANTHACEAE						
.....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	13	1	--	-	--	-
....FRAGILARIACEAE						
.....SYNEDRA	13	1	--	-	200	1
....NAVICULACEAE						
.....NAVICULA	77	4	380	3	2800#	17
....NITZSCHACEAE						
.....NITZSCHIA	65	3	890	7	1900	11
....SURIPELLACEAE						
.....SURIPELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
.....CHROOMONAS	13	1	--	-	--	-
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	64	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROCOCCALES						
....CHROCOCCACEAE						
.....AGMENELLUM	410#	21	1400	11	--	-
.....ANACYSTIS	39	2	700	6	200	1
...HORMOGONALES						
....NOSTOCACEAE						
.....ANABAENA	--	-	--	-	--	-
.....ANABAENOPSIS	--	-	--	-	--	-
....OSCILLATORIACEAE						
.....OSCILLATORIA	--	-	--	-	4800#	29
....PHORMIDIUM	--	-	1100	9	--	-
....SCHIZOTRICH	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	--	-	300	2
....TRACHELOMONAS	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07165000 HEYBURN LAKE NEAR HEYBURN, OK

LOCATION.--Lat 35°56'52", long 96°17'55", in SE¼ 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 (4.0 km) northwest of Heyburn, 3.4 mi (5.5 km) upstream from bridge on U.S. Highway 66, 11.0 mi (17.7 km) southwest of Sapulpa, and at mile 48.6 (28.2 km).

DRAINAGE AREA.--123 mi² (318.6 km²).

PERIOD OF RECORD.--October 1950 to current year. Prior to Oct. 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 8.25 ft (2.515 m) diameter concrete conduit extending from an uncontrolled concrete drop inlet at the upstream side of dam to a concrete stilling basin near downstream toe of dam and three 36-inch (.91 m) gated low-flow pipes which drain into the conduit below the drop inlet. Spillway is 200-foot (61.0 m) channel in a natural saddle about 1,000 ft (304.8 m) west of right abutment. Storage began Sept. 29, 1950; conservation pool was first filled Mar. 10, 1951. Capacity, 144,800 acre-ft (179 hm³), at elevation 802.0 ft (244.45 m) maximum pool, 55,030 acre-ft (67.9 hm³), at elevation 784.0 ft (238.96 m), spillway crest and top of flood-control pool, and 6,620 acre-ft (8.2 hm³) at elevation 761.5 (232.11 m), conservation pool. Dead storage, 226 acre-ft (3,280 m³) below elevation 740.0 ft (225.55 m), invert of low-flow sluices. Reservoir was designed for flood control and conservation. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft (39.7 hm³), Nov. 4, 1974, elevation, 776.85 ft (236.784 m); minimum since conservation pool was first filled, 4,410 acre-ft (5.44 hm³) Oct 20, 21, 1972, elevation, 758.49 ft (231.188 m). Minimum elevation since conservation pool was first filled, 758.48 ft (231.185 m) Oct. 13, 14, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 10,020 acre-ft (12.4 hm³) June 18, elevation, 764.66 ft (233.068 m); minimum, 4,950 acre-ft (6.10 hm³) Sept. 26, 27, elevation, 759.31 ft (231.438 m).

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

759	4,750	765	10,430
761	6,180	768	14,440
763	8,130	771	19,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6300	5990	6750	6560	6720	6660	6980	7250	7030	6780	5920	5330
2	6280	5980	6740	6580	6710	6650	7000	7780	6990	6750	5900	5330
3	6270	5970	6730	6570	6710	6640	7120	7730	6940	6720	5870	5320
4	6230	5950	6720	6570	6710	6640	7080	7510	6900	6690	5840	5310
5	6210	5940	6710	6560	6690	6620	7010	7340	6850	6660	5810	5310
6	6200	5930	6690	6550	6690	6620	6980	7220	6810	6640	5780	5290
7	6170	5920	6680	6540	6730	6630	6950	7120	6790	6610	5730	5270
8	6160	5930	6670	6540	6750	6620	6890	7040	6760	6580	5700	5260
9	6130	5930	6660	6540	6740	6610	6850	6980	6740	6540	5660	5240
10	6110	5920	6660	6540	6730	6600	6820	6940	6720	6530	5630	5220
11	6100	5910	6650	6530	6730	6620	6800	7580	6690	6510	5610	5200
12	6080	5900	6640	6520	6730	6640	6770	8650	6660	6480	5590	5180
13	6070	5890	6630	6510	6740	6630	6740	8050	6640	6450	5580	5170
14	6040	5880	6630	6510	6800	6620	6720	7670	6600	6410	5550	5160
15	6070	5880	6620	6520	6880	6620	6720	7890	6580	6370	5520	5140
16	6070	5870	6590	6520	6860	6630	6710	7940	6740	6350	5510	5120
17	6060	5860	6580	6520	6850	6590	6710	7630	6850	6320	5520	5090
18	6050	5870	6570	6510	6810	6580	6700	8700	6700	6290	5510	5080
19	6040	5870	6570	6700	6810	6570	6700	8200	6390	6270	5480	5050
20	6030	7110	6570	6910	6780	6650	6690	7810	9200	6240	5480	5020
21	6070	7450	6570	6950	6780	6700	6680	7560	8420	6230	5470	5010
22	6050	7270	6570	6950	6770	6720	6670	7440	7910	6200	5440	4990
23	6040	7140	6600	6920	6760	7140	6660	7330	7580	6170	5420	4980
24	6030	7030	6580	6880	6750	7420	6760	7220	7370	6150	5410	4970
25	6010	6980	6580	6850	6720	7290	7260	7130	7200	6110	5380	4970
26	5990	6920	6580	6820	6710	7180	8430	7040	7080	6110	5370	4950
27	5990	6880	6580	6790	6710	7090	8040	7210	7000	6080	5350	4990
28	5980	6830	6580	6770	6700	7030	7710	7190	6930	6050	5330	4990
29	5960	6790	6580	6760	6700	7050	7480	7190	6870	6020	5310	4990
30	6020	6770	6580	6750	---	7060	7340	7190	6820	5980	5280	4980
31	6000	---	6570	6730	---	7010	---	7100	---	5950	5250	---
MAX	6300	7450	6750	6950	6880	7420	8430	8700	9850	6780	5920	5330
MIN	5960	5860	6570	6510	6690	6570	6660	6940	6580	5950	5250	4950
†	760.78	761.66	761.45	761.62	761.59	761.92	762.25	762.01	761.72	760.72	759.75	759.35
‡	-330	+770	-200	+160	-30	+310	+330	-240	-280	-870	-700	-270

CAL YR 1979 MAX 17310 MIN 5120 † +1,410
WTR YR 1980 MAX 9850 MIN 4950 ‡ -1,350

† 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 NE¼ 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 (3.2 km) east of Haskell, 23.5 mi (37.8 km) upstream from Verdigris River, and at mile 483.7 (778.3 km).

DRAINAGE AREA.--75,473 mi² (195,475 km²), of which 12,541 mi² (32,481 km²) probably is noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft (161.544 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Keystone Lake (station 07164200) 55.1 mi (88.7 km) upstream.

COOPERATION.--Gage-height record and 28 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--8 years, 9,498 ft³/s (269.0 m³/s), 6,881,000 acre-ft/yr (8.48 km³/hr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft³/s (3,060 m³/s) Nov. 6, 1974, gage height, 17.30 ft (5.273 m); minimum daily, 193 ft³/s (5.47 m³/s) Feb. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,900 ft³/s (1,130 m³/s) June 18, gage height, 12.86 ft (3.92 m); minimum daily discharge, 359 ft³/s (10.2 m³/s) Oct. 16, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1570	1030	12800	3670	9680	12000	12800	37000	22600	12600	4800	611
2	2280	4780	12700	3610	8090	9510	13200	36800	22800	14700	3790	7610
3	2640	5700	12400	4270	5190	8650	14300	34600	19000	16400	3190	3860
4	2170	6290	12500	3870	4050	12600	14200	30900	13300	14300	910	3360
5	1930	6300	12700	4600	4390	9310	13900	29100	12900	11800	667	3410
6	1900	8170	12000	4010	6220	8470	14000	28400	13000	12400	1380	4020
7	1890	10600	10400	3380	6240	9490	14100	27200	12500	12800	1160	4080
8	698	12500	10500	4720	6910	8540	15500	17800	6960	11900	1090	3080
9	568	12200	8670	4550	7220	5400	17000	12500	6250	9360	1100	2380
10	2330	12300	8380	3560	4860	4700	17000	11700	7110	9280	1610	4080
11	1180	12400	8940	3440	4950	5430	17200	7410	6830	9170	1730	3130
12	927	12500	8980	3930	5980	8280	16900	7430	6130	5800	772	1490
13	598	12700	8780	4130	5040	8710	16900	10500	6270	5700	861	1230
14	822	12700	8350	2910	4820	8380	16800	10300	3460	5700	1010	1750
15	532	12800	8460	2530	4640	9840	16800	8620	2380	5700	1010	1660
16	359	13400	3560	2920	4910	5450	16800	9010	4250	5700	1060	925
17	604	12700	1740	2480	3610	2500	16800	8390	14800	5650	1040	1060
18	732	10000	2540	2440	4140	3080	16400	13200	32700	5500	854	1110
19	1030	9580	3420	2260	6190	5590	14800	20000	28900	5890	641	841
20	509	9720	3330	1980	5940	5560	14000	28100	20200	3790	755	982
21	874	18100	3030	2080	4000	4330	14100	30000	23200	2000	932	1210
22	603	20000	6160	2250	3020	2240	14000	28900	26600	4300	1060	799
23	485	25300	4960	5550	2760	2660	12000	27600	26200	3670	1220	547
24	928	25600	3280	5510	1010	3450	11700	17800	26200	3630	655	1060
25	475	25400	2740	4800	645	3530	12100	13300	25900	3290	1130	893
26	1150	25000	2820	4880	616	2360	15300	8320	22200	3170	651	953
27	553	22300	4640	3280	1240	1970	17300	10200	15500	3320	1230	770
28	1370	17600	2750	2940	786	7350	23400	10500	13100	2270	1010	926
29	575	15000	2420	3140	2300	12700	28800	20200	12800	1810	1030	958
30	359	13400	2030	7510	---	8620	36500	26900	12600	3190	1400	619
31	1420	---	1320	8550	---	10300	---	25000	---	4690	1090	---
TOTAL	34061	406070	207300	119750	129447	211000	494600	607680	466640	219480	40838	59404
MEAN	1099	13540	6687	3863	4464	6806	16490	19600	15550	7080	1317	1980
MAX	2640	25600	12800	8550	9680	12700	36500	37000	32700	16400	4800	7610
MIN	359	1030	1320	1980	616	1970	11700	7410	2380	1810	641	547
AC=FT	67560	805400	411200	237500	256800	418500	981000	1205000	925600	435300	81000	117800
CAL YR 1979 TOTAL	2667067			MEAN 7307	MAX 28900	MIN 359	AC=FT 5290000					
WTR YR 1980 TOTAL	2996270			MEAN 8187	MAX 37000	MIN 359	AC=FT 5943000					

ARKANSAS RIVER BASIN

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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, near right bank on downstream side of pier of county road bridge, 2.8 mi (4.5 km) east of Lenapah, 4.5 mi (7.2 km) upstream from Cedar Creek, and at mile 144.6 (232.7 km).

DRAINAGE AREA.--3,639 mi² (942.5 km²).

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 (196.562 m) National Geodetic Vertical Datum of 1929.

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

COOPERATION.--Gage-height record and 16 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation) 11 years (water years 1939-49), 2,599 ft³/s (73.60 m³/s), 1,833,000 acre-ft/yr (2.32 km³/yr); (since regulation) 14 years (water years 1967-80), 2,514 ft³/s (71.20 m³/s), 1,821,000 acre-ft/yr (2.25 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft³/s (3,880 m³/s) May 20, 1943, gage height, 40.44 ft (12.326 m), from floodmarks; no flow at times in 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) Nov. 22, gage height, 33.09 ft (10.086 m); minimum daily, 5.5 ft³/s (0.16 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	132	1630	786	235	1250	11000	871	293	30	19	13
2	64	136	1430	696	448	1090	8150	867	270	28	28	12
3	51	137	1420	546	586	836	11200	794	246	27	29	14
4	46	134	1170	425	597	789	11800	738	234	26	28	15
5	44	114	731	413	562	834	10200	714	212	25	26	12
6	43	96	545	403	523	651	10100	981	148	23	25	11
7	42	86	492	306	338	605	10700	718	119	21	25	11
8	42	88	463	210	236	553	10800	497	101	20	59	9.3
9	39	148	439	172	198	487	10700	404	88	21	72	9.6
10	38	143	296	157	180	534	9330	369	82	19	58	13
11	38	104	187	152	177	548	9130	340	79	18	49	12
12	38	84	139	152	172	1200	8920	609	77	15	42	10
13	38	72	119	142	168	2830	6050	550	72	13	36	8.4
14	38	65	108	130	251	3440	4110	338	67	11	34	8.9
15	39	60	99	117	1930	3240	4430	294	61	9.3	31	11
16	41	56	94	104	2190	3130	3490	602	58	8.4	30	12
17	44	52	91	92	1600	3000	2350	676	136	7.8	32	11
18	65	48	87	89	1340	2760	1870	544	150	7.4	60	11
19	132	47	83	95	1070	2640	1410	491	80	7.2	262	11
20	119	3240	82	170	1210	1880	1190	497	70	12	280	12
21	108	33500	82	203	1680	1440	959	728	62	18	161	12
22	141	35500	103	169	2370	1350	874	930	59	21	105	9.8
23	142	8720	364	151	3650	1350	825	839	56	22	74	7.8
24	119	1680	660	175	4110	3120	1060	690	50	22	58	7.4
25	99	2380	820	194	4030	3840	1310	608	45	20	44	6.6
26	90	3680	1100	259	3490	5350	4060	446	42	21	36	6.1
27	87	3570	1400	294	2080	8580	2040	469	38	22	29	5.8
28	83	2620	1200	289	1470	12300	1080	400	35	19	24	5.8
29	76	1890	1050	280	1370	12700	936	343	33	15	19	5.8
30	78	1810	900	249	---	21400	916	323	31	13	17	5.5
31	103	---	820	226	---	17800	---	308	---	12	15	---
TOTAL	2192	100392	18204	7846	38261	121527	160990	17978	3094	554.1	1807	299.8
MEAN	70.7	3346	587	253	1319	3920	5466	580	103	17.9	58.3	9.99
MAX	142	35500	1630	786	4110	21400	11800	981	293	30	280	15
MIN	38	47	82	89	168	487	825	294	31	7.2	15	5.5
AC=FT	4350	199100	36110	15560	75890	241000	319300	35660	6140	1100	3580	595

CAL YR 1979 TOTAL 699219.0 MEAN 1916 MAX 35500 MIN 33 AC=FT 1387000
WTR YR 1980 TOTAL 473144.9 MEAN 1293 MAX 35500 MIN 5.5 AC=FT 938500

ARKANSAS RIVER BASIN

07171300 OOLOGAH LAKE NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'19", long 95°40'43", in NE¼NW¼ sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070103, in gage tower 1,000 ft (304.8 m) from left end of dam on Verdigris River, 2.0 mi (3.2 km) southeast of Oologah, and at mile 90.3 (145.3 km).

DRAINAGE AREA.--4,339 mi² (11,238 km²).

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 (1.87 km³) at elevation 661.0 ft (201.47 m), top of flood control pool, 553,400 acre-ft (682 hm³) at elevation 638.0 ft (194.46 m), conservation pool. Dead storage 9,260 acre-ft (11.4 hm³) below elevation 592.0 ft (180.44 m). Figures given herein represent total contents. Reservoir is used for flood control and conservation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,426,000 acre-ft (1.76 km³) Apr. 26, 1973, elevation, 659.33 ft (200.964 m); minimum since conservation pool first filled 33,750 acre-ft (41.6 hm³) Aug. 28, Oct. 27, 1969, elevation, 602.87 ft (183.755 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 706,700 acre-ft (871 hm³) Nov. 23, elevation, 642.84 ft (195.938 m); minimum, 490,400 acre-ft (605 hm³) Sept. 30, elevation, 637.78 ft (194.395 m).

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

633	417,600	639	583,500
635	469,400	641	646,000
637	524,700	643	712,200

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	536200	526100	651200	554600	549700	567600	687700	588100	563000	546800	516000	503100
2	534400	525200	642400	559500	549700	561500	684100	583200	565100	545400	516300	504800
3	534400	525000	642100	557200	551700	561200	687400	578300	563900	544200	516000	504000
4	531300	523800	638500	556300	552000	563900	688400	574000	562400	543400	514600	503700
5	531300	527000	637200	556300	554900	561500	682800	570300	561200	543600	514600	503700
6	531300	524400	629000	558600	554900	560900	678900	567600	557200	542800	513700	502500
7	529300	524100	621500	556900	559700	560900	675000	565100	561800	541900	514000	502200
8	531900	526700	607100	556300	559500	560000	668100	562000	556000	540500	513500	501700
9	529600	528700	595800	554600	557400	558900	661900	558000	553700	539000	512600	502000
10	526700	526400	584100	552000	557400	560300	656700	557700	553100	539000	511200	500600
11	528000	525800	578000	554600	558000	558900	665200	556900	552600	537900	511700	499200
12	530700	525800	565400	551700	557700	563300	670100	562700	551400	536700	511200	498200
13	527000	525500	560000	553100	557400	567300	671700	563900	549400	535300	509700	499800
14	523800	525200	554300	551100	559500	568200	665900	562000	547400	533300	510600	500100
15	524100	524700	554600	552800	573100	563000	658400	563300	549400	532100	508300	498200
16	524700	524400	555100	554000	569700	570000	648600	563300	550800	532400	509100	499500
17	524100	523200	550500	553100	567600	560900	640100	564200	552800	531000	508000	496600
18	522900	522400	550300	552600	565700	557400	627400	565400	552800	530400	508000	495500
19	521200	524400	551400	559200	564500	555400	614500	564500	554600	529000	507100	493900
20	519800	536500	551100	558300	562000	558000	601600	565100	554900	527500	507400	493100
21	524100	608000	550000	558000	561800	556900	588400	564800	553400	528700	509700	492500
22	525200	678600	550800	558300	563900	554600	579200	565100	553100	527500	509400	496000
23	525000	702200	552800	555100	564200	556000	578000	565100	553100	526400	508600	492300
24	525000	689000	554000	555400	565400	566600	582900	565100	552800	525200	508000	492500
25	524100	675600	555400	557200	570600	569100	585600	565100	552000	523800	507400	494100
26	522900	666200	556000	555700	571900	570900	601300	567600	550800	524100	506800	491700
27	524400	661600	559700	554300	571500	576800	603100	572800	548200	523200	505100	492000
28	523500	699000	555100	554600	575800	592700	599700	567900	549700	521800	504800	492300
29	522400	655400	554300	551400	576800	611700	595900	563600	549400	520400	502800	491700
30	524100	651200	553700	553100	---	648900	591500	563600	546800	519800	500900	490600
31	525200	---	553400	550800	---	676300	---	565700	---	518100	500100	---
MAX	536200	702200	651200	559500	576800	676300	688400	588100	565100	546800	516300	504800
MIN	519800	522400	550000	550800	549700	554600	578000	556900	546800	518100	500100	490600
†	637.02	641.16	638.00	637.91	638.78	641.93	639.26	638.42	637.77	636.77	636.14	635.79
‡	-11,000	+126,000	-97,800	-2,600	+26,000	+99,500	-84,800	-25,800	-18,900	-28,700	-18,000	-9,500

CAL YR 1979 MAX 702200 MIN 455700 ‡ +93,200
WTR YR 1980 MAX 702200 MIN 490600 ‡ -45,600

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

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07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'17", long 95°41'01", in NW¼ sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on right bank 0.3 mi (0.5 km) downstream from Oologah Dam, 1.2 mi (1.9 km) upstream from Fourmile Creek, 2 mi (3 km) southeast of Oologah, and at mile 90.0 (144.8 km).

DRAINAGE AREA.--4,339 mi² (11,238 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 552.00 ft (168.250 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Since regulation by Oologah Lake) 16 years (water years 1965-80), 2,773 ft³/s (78.53 m³/s), 2,009,000 acre-ft/yr (2.48 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 16, 1973, gage height, 38.05 ft (11.598 m); no flow at times in 1967, 1969, 1975-76.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 65.2 ft (19.87 m), from floodmarks. Flood of May 9, 1961, reached a stage of 52.8 ft (16.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) Apr. 7, gage height, 25.70 ft (7.833 m); minimum daily discharge, 0.02 ft³/s (0.0006 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	2.2	3310	377	251	2070	7440	3360	964	85	33	31
2	4.3	2.0	3310	373	55	2080	9910	3350	944	83	32	31
3	2.7	1.7	2680	377	55	1350	9920	3340	937	83	33	31
4	2.2	1.5	2300	377	54	662	11100	3320	929	84	35	29
5	3.1	1.6	2290	377	54	654	12700	2870	922	85	35	29
6	3.8	1.6	3740	373	53	656	12700	2210	912	86	35	29
7	3.4	1.9	5230	373	53	652	13500	2200	908	83	35	29
8	2.5	2.3	5200	368	53	646	14400	2180	899	85	35	29
9	3.1	2.2	5180	368	53	645	14300	1650	546	85	34	28
10	4.1	2.2	5170	368	53	642	11900	918	136	86	34	30
11	61	2.9	5160	319	53	642	5960	902	87	82	34	27
12	97	2.6	4720	238	53	670	4280	942	82	83	34	26
13	97	2.5	2750	238	52	662	4280	908	77	83	33	25
14	98	2.8	1620	217	55	2120	5410	895	72	59	31	25
15	98	3.1	701	163	1400	3940	8120	894	74	37	31	14
16	98	3.4	696	163	2170	3930	8100	903	75	38	31	2.6
17	82	4.4	382	159	2140	3920	8080	894	75	36	32	2.7
18	36	5.0	131	159	2130	3920	8050	913	75	34	33	2.5
19	3.0	4.7	130	171	2110	2920	8030	905	76	34	32	1.1
20	3.0	3.7	126	187	2100	1990	8010	887	76	34	33	.67
21	3.7	2.7	125	165	2100	1990	7980	876	79	34	32	.70
22	3.4	2.2	124	473	2090	1990	5740	872	80	34	32	.57
23	2.3	2870	123	724	2090	2080	1730	871	82	33	31	.12
24	2.4	9530	124	715	2090	2160	1540	870	83	33	32	.02
25	2.5	10400	122	649	2090	2010	3400	869	84	33	32	.26
26	2.7	9080	594	609	2090	3280	3630	867	88	33	31	3.3
27	2.5	5520	1210	610	2090	4920	3450	1570	86	33	31	4.6
28	1.9	3830	1180	607	2080	5130	3400	2400	85	33	31	3.7
29	1.9	3830	1170	606	2080	5230	3380	2390	85	32	30	.66
30	4.3	3510	1170	532	---	5280	3360	1680	86	33	29	.22
31	3.3	---	849	475	---	5240	---	956	---	33	29	---
TOTAL	737.7	48629.2	61617	11910	31797	74081	224010	48660	9704	1729	1005	436.72
MEAN	23.8	1621	1988	384	1096	2390	7467	1570	323	55.8	32.4	14.6
MAX	98	10400	5230	724	2170	5280	14400	3360	964	86	35	31
MIN	1.9	1.5	122	159	52	642	1540	867	72	32	29	.02
AC=FT	1460	96460	122200	23620	63070	146900	444300	96520	19250	3430	1990	866

CAL YR 1979 TOTAL 671589.71 MEAN 1840 MAX 11600 MIN .01 AC=FT 1332000
WTR YR 1980 TOTAL 514316.62 MEAN 1405 MAX 14400 MIN .02 AC=FT 1020000

ARKANSAS RIVER BASIN

07172500 HULAH LAKE NEAR HULAH, OK

LOCATION.--Lat 36°55'44", long 96°05'18", in SE¼ 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 (.8 km) downstream from Hickory Creek, 2.0 mi (3.2 km) west of Hulah, 15.7 mi (25.3 km) upstream from Little Caney River, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--732 mi² (1,896 km²).

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-ft (143.9 m) concrete ogee-type weir controlled by 10 taintor gates. Outlet works consist of nine rectangular sluices, two 24-inch (0.61 m) gated pipes, and one 10-inch (254 mm) water-supply pipe. Closure for diversion made Feb. 6, 1950; regulated storage began Oct. 25, 1950; conservation pool was first filled Sept. 24, 1951. Capacity, 292,600 acre-ft (361 hm³) at elevation 765.0 ft (233.17 m), top of taintor gates, 65,600 acre-ft (80.9 hm³) at elevation 740.0 ft (225.55 m), crest of spillway, and 34,660 acre-ft (42.7 hm³) at elevation 733.0 ft (223.42 m) conservation pool. Dead storage, 506 acre-ft (.62 hm³) below elevation 706.0 ft (215.19 m) invert of sluices. 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 293,400 acre-ft (362 hm³) June 23, 1957, elevation, 764.87 ft (233.132 m); minimum since conservation pool was first filled, 11,250 acre-ft (13.9 hm³) Mar. 20, 1957, elevation, 723.22 ft (220.437 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 110,500 acre-ft (136 hm³) Nov. 24, elevation, 747.72 ft (227.905 m), minimum, 19,400 acre-ft (23.9 hm³) Sept. 30, elevation, 729.28 ft (222.285 m).

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

729	18,610	739	56,350
732	27,660	743	78,170
735	38,680	748	112,600

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25310	22400	68870	31190	31480	31010	67590	57970	31010	29120	24670	21550
2	25180	22320	61520	31260	31480	31050	64080	54030	31010	29010	24580	21550
3	25020	22200	54500	31190	31480	31080	63660	48580	30970	28910	24420	21460
4	24860	22140	47460	31150	31480	31330	60540	42980	30940	28810	24270	21400
5	24740	22140	41730	31120	31510	31260	56740	38960	30940	28670	24110	21320
6	24610	21930	34560	31150	31510	31300	52660	36210	30870	28540	24020	21260
7	24480	21900	36480	31050	31760	31370	48760	33560	30830	28370	23890	21170
8	24330	22320	34490	30970	31980	31370	44970	32020	30760	28230	23800	21030
9	24230	22140	32340	30940	32020	31440	40700	31550	30690	28090	23650	21030
10	24080	21960	31260	30940	32050	31400	38000	31620	30620	27930	23460	20910
11	23950	21870	31480	30900	32050	31660	38000	31660	30510	27760	23340	20830
12	23800	21810	31370	30800	31980	31800	37610	31580	30410	27630	23250	20710
13	23710	21700	31370	30760	31910	31330	37450	31440	30270	27490	23130	20710
14	23580	21610	31370	30690	32310	31010	36320	31330	30120	27330	23070	20600
15	23520	21520	31370	30760	32380	30800	35590	31580	30090	27160	22880	20540
16	23430	21460	31510	30760	34040	30800	34790	32380	30340	26990	22820	20540
17	23430	21400	31400	30720	33860	30480	34190	32600	30340	26760	23070	20260
18	23490	21520	31440	30650	33630	30440	33590	32860	30300	26600	22880	20180
19	23370	21400	31440	31010	33300	30510	32670	32890	30190	26470	22730	20090
20	23250	21400	31440	31010	32560	30720	31910	32670	30190	26340	22610	19980
21	23430	109700	31400	31120	31840	30800	31370	32640	30120	26210	22460	19870
22	23250	110200	31370	31190	31440	30940	31190	32270	30090	26010	22320	19870
23	23100	110300	31400	31260	31190	32560	31910	31940	30020	25880	22200	19670
24	23040	110500	31300	31300	30970	38400	36320	31660	29980	25760	22080	19590
25	22910	109700	31260	31370	30720	38400	43400	31330	29840	25630	22260	19650
26	22820	106200	31260	31510	30690	37690	59930	30870	29770	25630	22140	19560
27	22700	99210	31260	31480	30760	43310	69200	30870	29710	25530	22080	19540
28	22580	91650	31260	31480	30760	47860	64720	30690	29530	25370	21930	19480
29	22460	83760	31260	31440	31120	57730	63820	30690	29430	25210	21810	19420
30	22700	76300	31260	31550	---	64880	60850	30690	29290	24990	21700	19400
31	22550	---	31220	31480	---	67930	---	30970	---	24830	21640	---
MAX	25310	110500	68870	31550	34040	67930	67590	57970	31010	29120	24670	21550
MIN	22460	21400	31220	30650	30690	30440	31190	30690	29290	24830	21640	19400
†	730.39	742.69	733.03	733.10	733.00	741.23	739.90	732.96	732.48	731.13	730.08	729.28
‡	-2,880	+53,750	-45,080	+260	-360	+36,810	-7,080	-29,880	-1,680	-4,460	-3,190	-2,240

CAL YR 1979 MAX 110500 MIN 15930 ‡ +14,230
WTR YR 1980 MAX 110500 MIN 19400 ‡ -6,030

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

143

07173000 CANEY RIVER NEAR HULAH, OK

LOCATION.--Lat 36°55'34", long 96°05'01", in NE¼NE¼ sec.11, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, on left bank 1,200 ft (365.8 m) downstream from Hulah Dam, 2.1 mi (3.4 km) upstream from Opossum Creek, 2.5 mi (4.0 km) west of Hulah, and at mile 95.9 (154.3 km).

DRAINAGE AREA.--733 mi² (1,898 km²).

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 (213.055 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 18, 1939, nonrecording gage. Feb. 18, 1939, to Sept. 30, 1948, water-stage recorder at county road bridge, 0.2 mi (0.3 km) upstream at datum 14.04 ft (4.279 m) lower. Oct. 1, 1948, to Sept. 30, 1972, at site 0.6 mi (1.0 km) downstream at datum 17.04 ft (5.194 m) lower.

REMARKS.--Records fair. Flow completely regulated since February 1950 by Hulah Lake (station 07172500). About 5 to 9 ft³/s (0.14 to 0.25 m³/s) is diverted above station by city of Bartlesville for municipal water supply.

COOPERATION.--Gage-height record and 16 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Hulah Dam) 13 years (water years 1938-50), 413 ft³/s (11.70 m³/s), 299,200 acre-ft/yr (369 hm³/yr); (since regulation by Hulah Dam) 30 years (water years 1951-80), 334 ft³/s (9.459 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s (1,440 m³/s) Apr. 10, 1944, gage height, 39.45 ft (12.024 m), at former site and datum; no flow at times in 1939-40, 1946, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.2 ft (12.25 m) occurred at former site and datum, date unknown, from floodmark, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s (111 m³/s) Nov. 27, gage height, 7.15 ft (2.179 m); minimum daily discharge, 7.8 ft³/s (0.22 m³/s) Sept. 16, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	29	3770	29	28	80	1120	1820	54	12	21	16
2	38	29	3730	29	28	74	2760	2310	54	12	21	16
3	42	29	3680	29	28	73	2790	2910	42	16	21	14
4	40	29	3610	30	28	72	2770	2890	31	16	21	14
5	38	29	3230	30	28	69	2770	2110	31	13	21	14
6	37	29	1870	29	28	69	2770	1470	28	12	21	14
7	40	29	1000	29	28	70	2740	1440	22	12	21	14
8	40	29	990	29	29	70	2670	936	22	12	21	13
9	37	29	990	30	29	70	2660	375	18	12	21	13
10	37	29	583	30	29	70	1670	161	17	12	25	13
11	39	29	30	30	53	70	704	161	17	12	25	13
12	37	29	30	30	73	284	697	165	16	12	21	13
13	30	30	29	30	73	475	697	165	17	12	21	17
14	30	32	29	30	73	354	682	131	17	12	21	16
15	33	32	29	30	197	267	682	90	17	12	21	11
16	30	32	29	29	298	262	690	172	14	12	21	7.8
17	30	32	29	29	300	219	682	329	13	37	22	8.0
18	30	32	29	29	304	122	682	334	13	60	22	7.8
19	30	30	29	29	448	50	682	334	14	22	21	8.0
20	30	138	29	29	626	27	682	334	12	22	23	8.2
21	31	124	29	29	637	26	536	334	15	22	26	8.2
22	34	74	29	29	481	24	261	339	15	22	23	8.4
23	30	65	29	29	344	31	150	339	13	22	21	8.2
24	30	64	29	29	344	581	156	339	13	22	21	8.2
25	30	567	29	29	341	1120	450	339	15	22	23	8.2
26	30	2060	29	29	242	1130	96	339	15	32	27	8.2
27	30	3570	29	29	166	562	37	249	15	31	27	8.0
28	30	3900	29	29	164	360	42	165	16	26	27	8.2
29	30	3870	29	29	122	664	1100	105	16	22	21	8.2
30	30	3810	29	29	---	41	1840	54	14	22	18	8.2
31	29	---	29	28	---	38	---	54	---	22	18	---
TOTAL	1032	18810	24064	907	5569	7424	36268	21293	616	607	684	332.8
MEAN	33.3	627	776	29.3	192	239	1209	687	20.5	19.6	22.1	11.1
MAX	42	3900	3770	30	637	1130	2790	2910	54	60	27	17
MIN	29	29	29	28	28	24	37	54	12	12	18	7.8
AC=FT	2050	37310	47730	1800	11050	14730	71940	42230	1220	1200	1360	660

CAL YR 1979 TOTAL 87143.0 MEAN 239 MAX 3900 MIN 19 AC=FT 172800
WTR YR 1980 TOTAL 117608.8 MEAN 321 MAX 3900 MIN 7.8 AC=FT 233300

ARKANSAS RIVER BASIN

07174200 LITTLE CANEY RIVER BELOW COTTON CREEK NEAR COPAN, OK

LOCATION.--Lat 36°53'42", long 95°58'09", in W½ sec.19, T.28 N., R.13 E., Washington County, Hydrologic Unit 11070106, near right bank on downstream side of pier of bridge on State Highway 10, 2 mi (3 km) west of Copan, 4.2 mi (6.8 km) downstream from Cotton Creek, and at mile 8.8 (14.2 km).

DRAINAGE AREA.--502 mi² (1,300 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 672.23 ft (204.900 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--22 years, 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,200 ft³/s (940 m³/s) Mar. 10, 1974, gage height, 25.30 ft (7.711 m); no flow at times in 1962-66, 1971, 1979-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1944 reached a stage of 29.3 ft (8.93 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,700 ft³/s (246 m³/s) Nov. 21, gage height, 25.26 ft (7.698 m), backwater from construction dam, no other peak above base of 5,000 ft³/s (142 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	6.9	16.0	16	18	81	2180	365	67	8.8	.00	.88
2	.40	2.8	121	17	16	75	1420	287	65	7.4	.00	1.3
3	.10	2.1	9.0	17	15	68	1170	231	62	5.9	.00	.98
4	.00	2.1	7.8	16	15	65	1110	186	59	5.2	.00	.88
5	.00	1.9	6.8	16	15	63	817	145	54	4.4	.00	.78
6	.00	2.1	6.0	15	15	62	578	130	51	3.9	.00	.62
7	.00	2.1	5.2	15	15	58	436	128	48	3.4	.00	.50
8	.00	3.9	4.6	14	18	54	599	118	43	3.0	.00	.33
9	.00	8.6	4.1	14	21	51	733	95	38	1.9	.00	.20
10	.00	9.0	3.7	13	25	48	574	80	31	1.4	.00	.10
11	.00	3.9	3.3	13	22	47	449	65	27	.76	.00	.00
12	.00	2.3	3.0	13	20	434	722	189	24	.24	.00	.00
13	.00	2.1	2.8	12	19	638	558	138	20	.00	.00	.00
14	.00	2.3	2.7	12	30	344	185	70	17	.00	.00	.00
15	.00	3.0	2.5	12	27.8	253	297	53	15	.29	.00	.00
16	.00	3.6	2.3	13	52.7	188	244	196	15	1.1	.00	.00
17	.00	1.9	2.1	13	46.4	149	207	577	35	.58	.00	.00
18	3.0	1.9	2.0	12	32.6	120	213	397	101	.09	.00	.00
19	2.6	1.9	1.6	14	23.4	103	233	333	102	.00	.00	.00
20	2.2	1000	1.7	19	19.9	87	197	196	64	.00	2.0	.00
21	1.9	8300	2.0	20	21.7	78	163	134	52	.00	4.0	.00
22	1.7	7000	2.0	26	19.2	71	137	102	47	.00	6.5	.00
23	2.0	6000	2.0	27	15.7	93	115	81	34	.00	10	.00
24	2.3	3300	1.9	26	13.0	1050	426	69	29	.00	2.7	.00
25	2.6	2000	1.8	26	11.2	1170	1290	63	25	.00	1.8	.00
26	2.4	1000	1.9	25	10.7	808	2920	51	21	.00	1.3	.00
27	2.3	800	1.8	23	10.4	1630	2960	91	19	.00	.93	.00
28	2.2	500	1.4	21	9.5	3280	1480	181	17	.00	.60	.00
29	2.3	300	1.4	20	8.9	2890	840	90	15	.00	.31	.00
30	2.5	246	1.5	19	---	3890	533	73	11	.00	.22	.00
31	7.9	---	1.6	18	---	3670	---	74	---	.00	1.0	---
TOTAL	38.90	30558.1	1194	537	3495	21658	24186	4988	1208	48.36	31.36	6.57
MEAN	1.25	1019	38.5	17.3	121	699	806	161	40.3	1.56	1.01	.22
MAX	7.9	8300	164	27	527	3890	2960	577	102	8.8	10	1.3
MIN	.00	1.9	1.4	12	15	47	115	51	11	.00	.00	.00
AC=FT	77	60610	2370	1070	6930	42960	47970	9890	2400	96	62	13

CAL YR 1979 TOTAL 74376.07 MEAN 204 MAX 8300 MIN .00 AC=FT 147500
WTR YR 1980 TOTAL 87949.29 MEAN 240 MAX 8300 MIN .00 AC=FT 174400

ARKANSAS RIVER BASIN

145

07174600 SAND CREEK AT OKESA, OK

LOCATION.--Lat 36°43'10", long 96°07'56", in NW¼NW¼ 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 (0.8 km) northeast of Okesa, 9 mi (14 km) southwest of Bartlesville, and at mile 17.2 (27.7 km).

DRAINAGE AREA.--139 mi² (360 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 689.20 ft (210.068 m) National Geodetic Vertical Datum of 1929. Prior to May 25, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 13 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--21 years, 69.3 ft³/s (1.963 m³/s), 50,210 acre-ft/yr (61.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) Sept. 13, 1961, gage height, 27.7 ft (8.44 m), from floodmarks; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 21	0315	*12,900 365	*23.12 7.047	Apr. 26	0530	5,810 165	15.25 4.648
Mar. 29	1845	3,380 95.7	11.89 3.624	June 17	1545	5,690 161	15.25 4.648

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	19	7.5	13	25	150	71	74	9.8	.00	.00
2	.00	.00	18	8.2	12	22	120	58	31	8.4	.00	.00
3	.00	.00	17	8.3	12	19	345	46	19	7.5	.00	.00
4	.00	.00	16	8.2	12	18	183	39	14	6.2	.00	.00
5	.00	.00	15	7.9	12	17	110	33	11	5.6	.00	.00
6	.00	.00	14	7.5	12	19	81	29	9.2	5.0	.00	.00
7	.00	.00	14	7.0	13	19	65	25	7.5	4.0	.00	.00
8	.00	.00	13	6.8	18	17	118	21	6.0	3.2	.00	.00
9	.00	.00	13	6.8	18	17	99	18	5.3	2.7	.00	.00
10	.00	.00	13	6.6	17	16	58	16	4.5	2.2	.00	.00
11	.00	.00	12	6.0	17	16	44	16	4.0	1.6	.00	.00
12	.00	.00	11	5.8	17	95	36	118	3.6	1.2	.00	.00
13	.00	.58	10	5.4	17	107	32	50	3.1	.94	.00	.00
14	.00	1.7	10	5.2	75	74	28	27	2.6	.58	.00	.00
15	.00	2.7	9.6	5.3	476	50	25	22	2.1	.36	.00	.00
16	.00	2.3	8.5	5.2	219	39	24	200	3.0	.29	.00	.00
17	.00	1.9	8.5	5.2	96	33	24	139	1830	.18	.00	.00
18	.00	1.8	8.9	5.3	71	30	23	216	288	.08	.00	.00
19	.00	1.3	8.3	7.0	75	27	24	145	119	.00	.00	.00
20	.00	3420	7.8	37	84	26	26	75	76	.00	.00	.00
21	.00	5240	8.0	66	71	27	24	52	79	.00	.00	.00
22	.00	267	8.0	52	56	27	22	41	59	.00	.00	.00
23	.00	131	7.8	45	44	121	22	33	43	.00	.00	.00
24	.00	84	7.8	35	38	1060	1440	32	39	.00	.00	.00
25	.00	61	7.8	29	34	206	1880	32	32	.00	.00	.00
26	.00	48	7.6	25	33	100	3040	25	24	.00	.00	.00
27	.00	39	7.3	23	31	380	406	24	19	.00	.00	.00
28	.00	32	7.7	19	28	793	202	21	15	.00	.00	.00
29	.00	25	7.8	16	26	1480	130	17	14	.00	.00	.00
30	.00	22	8.2	15	---	882	88	15	12	.00	.00	.00
31	.00	---	8.4	14	---	270	---	159	---	.00	.00	---
TOTAL	.00	9381.28	333.0	501.2	1647	6032	8869	1815	2848.9	59.83	.00	.00
MEAN	.000	313	10.7	16.2	56.8	195	296	58.5	95.0	1.93	.000	.000
MAX	.00	5240	19	66	476	1480	3040	216	1830	9.8	.00	.00
MIN	.00	.00	7.3	5.2	12	16	22	15	2.1	.00	.00	.00
AC=FT	.00	18610	661	994	3270	11960	17590	3600	5650	119	.00	.00

CAL YR 1979	TOTAL	21571.13	MEAN	59.1	MAX	5240	MIN	.00	AC=FT	42790
WTR YR 1980	TOTAL	31487.21	MEAN	86.0	MAX	5240	MIN	.00	AC=FT	62450

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK

LOCATION.--Lat 36°30'31", long 95°50'36", in NE¼NW¼ sec.5, T.23 N., R.14 E., Washington County, Hydrologic Unit 11070106, near left bank on downstream side of pier of county road bridge, 1 mi (1.6 km) upstream from Buck Creek, 2.2 mi (3.5 km) downstream from Double Creek, 4.5 mi (7.2 km) southeast of Ramona, and at mile 32.0 (51.5 km).

DRAINAGE AREA.--1,955 mi² (5,063 km²).

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft (178.744 m) National Geodetic Vertical Datum of 1929. Dec. 4, 1935, to Feb. 28, 1939, nonrecording gage at site 16.2 mi (26.1 km) downstream at datum 21.41 ft (6.526 m) lower. Sept. 1, 1945, to Feb. 15, 1946, nonrecording gage at present site and datum.

REMARKS.--Records fair. Some regulation since February 1950 by Hulah Lake (station 07172500).

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 949 ft³/s (26.88 m³/s), 687,600 acre-ft/yr (848 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft³/s (1,090 m³/s) Oct. 3, 1945, gage height, 30.12 ft (9.181 m); no flow Aug. 9 to Sept. 15, 1936, Sept. 11 to Nov. 3, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft³/s (212 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Nov. 23	1130	*11,500	326	*27.41	8.355	Apr. 27	1300	9,640	273	27.00	8.230
Mar. 30	1800	8,710	247	24.32	7.413						

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	81	4720	74	80	340	5030	2850	609	57	24	29
2	25	60	4480	76	76	271	3770	2580	387	53	21	52
3	24	45	4350	77	76	248	4360	2710	250	49	21	58
4	26	40	4220	74	74	239	4510	3400	207	44	192	44
5	28	39	4060	73	72	231	4160	3350	176	42	56	26
6	33	38	3360	72	70	223	3720	2800	149	41	28	21
7	26	38	1990	72	72	219	3400	1810	134	40	23	17
8	23	43	992	71	80	221	3190	1740	120	35	22	16
9	20	63	1190	69	84	213	3290	1360	102	33	22	16
10	17	137	1180	68	88	207	3360	634	95	31	22	16
11	15	99	880	70	84	204	2560	426	90	28	22	15
12	18	66	247	70	91	419	1130	1620	77	27	21	14
13	22	54	110	68	110	1810	1250	981	68	26	21	17
14	25	49	91	68	170	1850	1150	531	64	25	25	17
15	30	47	87	68	1370	1050	949	406	60	24	23	21
16	33	44	85	71	2210	663	865	548	58	23	22	20
17	38	62	72	70	1340	541	795	746	244	23	24	21
18	35	62	70	69	1050	490	762	1130	2080	22	31	22
19	32	52	79	76	870	376	738	1520	445	22	128	19
20	28	101	74	170	874	289	756	888	235	49	64	16
21	31	6620	70	178	1080	260	730	651	220	48	47	13
22	37	10300	70	228	1050	242	644	560	176	29	34	13
23	40	11400	76	210	867	464	431	528	157	24	32	13
24	42	11000	74	178	591	3190	352	494	129	23	31	13
25	42	9500	74	158	545	3490	3650	578	108	23	29	19
26	42	5640	73	141	520	3020	7810	507	98	22	25	67
27	42	4030	73	122	482	2620	9530	1380	90	24	24	41
28	37	4820	78	107	376	5720	7260	735	78	28	24	30
29	33	5140	78	98	357	6490	2930	526	68	32	26	30
30	37	4960	78	93	---	8340	2270	444	62	33	28	27
31	49	---	74	88	---	7400	---	796	---	29	30	---
TOTAL	962	74630	33155	3127	14809	51140	85352	39229	6836	1009	1142	743
MEAN	31.0	2488	1070	101	511	1650	2845	1265	228	32.5	36.8	24.8
MAX	49	11400	4720	228	2210	8340	9530	3400	2080	57	192	67
MIN	15	38	70	68	70	204	352	406	58	22	21	13
AC=FT	1910	148000	65760	6200	29370	101400	169300	77810	13560	2000	2270	1470
CAL YR 1979	TOTAL	260615	MEAN	714	MAX	11400	MIN	15	AC=FT	516900		
WTR YR 1980	TOTAL	312134	MEAN	853	MAX	11400	MIN	13	AC=FT	619100		

ARKANSAS RIVER BASIN

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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 current year.

WATER TEMPERATURE: October 1966 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,880 micromhos Feb. 5, 1967; minimum daily, 114 micromhos Oct. 20, 1973.

WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 19, 1980; minimum daily, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR--

SPECIFIC CONDUCTANCE: Maximum daily, 1,020 micromhos Mar. 13; minimum daily, 118 micromhos Nov. 23.

WATER TEMPERATURE: Maximum daily, 38.0°C on July 18, 19; minimum daily, 1.0°C on Feb. 16, 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	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										
05...	1400	28	552	8.1	20.0	170	33	55	8.6	36
15...	1330	30	602	7.9	25.0	200	40	64	9.7	40
25...	1400	42	588	7.4	17.0	200	48	63	9.8	40
NOV										
05...	1300	39	648	7.5	13.0	240	120	78	10	34
15...	1500	47	596	7.8	10.0	190	55	63	9.1	38
25...	1000	9790	137	6.9	10.0	47	9	14	2.8	8.5
DEC										
05...	1230	4060	151	7.3	8.0	65	4	21	3.0	6.8
15...	1100	86	213	7.6	6.0	83	10	27	3.8	11
25...	1100	74	452	7.4	5.0	150	50	49	6.7	33
JAN										
05...	1000	74	613	8.1	5.0	180	58	57	8.6	53
15...	1000	70	652	8.2	6.0	180	63	59	8.6	58
25...	1300	158	944	7.9	7.0	270	150	90	12	96
FEB										
05...	1330	72	737	8.1	3.0	230	100	74	12	68
15...	1330	1370	699	8.0	3.0	210	100	66	11	67
25...	1030	545	391	7.7	5.0	140	45	46	7.2	29
MAR										
05...	1600	231	520	8.1	7.0	170	46	53	8.1	35
15...	0930	1080	450	7.7	9.0	140	43	43	7.7	35
25...	1100	3490	387	7.7	10.0	120	34	36	6.9	31
APR										
05...	0830	4160	345	7.5	11.0	140	25	43	6.7	17
15...	1300	943	389	7.7	14.0	150	30	48	7.3	20
25...	1320	4220	426	7.2	17.0	160	37	50	7.8	26
MAY										
05...	1030	3470	323	7.4	18.0	140	20	45	6.8	14
15...	1100	401	496	7.4	20.0	160	43	51	8.7	35
25...	1400	608	468	7.9	24.0	170	31	54	8.8	29
JUN										
05...	1000	185	563	7.9	25.0	180	51	56	10	44
15...	0930	60	692	7.5	35.0	220	68	69	11	52
25...	1330	107	493	7.5	33.0	150	53	48	8.1	42
JUL										
05...	0830	42	644	7.5	30.0	200	66	62	10	55
15...	1400	24	722	8.0	33.0	220	74	70	12	61
25...	1300	23	845	7.5	30.0	250	46	77	13	69
AUG										
05...	0930	57	909	7.5	27.0	260	84	81	15	80
15...	1330	23	665	7.3	30.0	200	66	57	13	61
25...	0830	29	833	7.6	25.0	260	78	77	16	73
SEP										
05...	1430	26	602	8.5	30.0	170	41	52	10	51
15...	1100	22	664	7.4	27.0	200	48	61	11	52
25...	1300	20	748	7.5	24.0	220	47	67	12	62

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT									
05...	35	1.2	4.7	140	32	65	--	--	--
15...	34	1.2	5.1	160	40	70	346	.47	28.0
25...	35	1.2	5.1	150	32	66	335	.46	38.0
NOV									
05...	23	1.0	5.4	120	--	68	401	.55	42.2
15...	34	1.2	4.9	140	47	67	354	.48	44.9
25...	32	.5	3.9	38	9.9	15	118	.16	3120
DEC									
05...	18	.4	3.0	61	8.0	14	119	.16	1300
15...	22	.5	3.4	73	13	23	146	.20	33.9
25...	32	1.2	4.0	100	33	78	297	.40	59.3
JAN									
05...	39	1.7	4.0	120	32	120	377	.51	75.3
15...	40	1.9	4.2	120	34	120	404	.55	76.4
25...	43	2.5	4.3	120	--	200	602	.82	257
FEB									
05...	38	1.9	3.7	130	50	150	466	.63	90.6
15...	40	2.0	3.6	110	44	140	436	.59	1610
25...	30	1.1	2.8	100	25	52	250	.34	368
MAR									
05...	31	1.2	2.9	120	30	73	308	.42	192
15...	35	1.3	3.0	96	30	73	290	.39	846
25...	36	1.2	2.9	84	27	62	255	.35	2400
APR									
05...	21	.6	2.7	110	22	28	209	.28	2350
15...	22	.7	2.7	120	22	34	231	.31	588
25...	26	.9	3.0	120	37	31	252	.34	2870
MAY									
05...	18	.5	2.3	110	21	26	218	.30	2040
15...	31	1.2	3.3	120	27	72	344	.47	372
25...	27	1.0	2.9	140	21	56	290	.39	476
JUN									
05...	34	1.4	3.7	130	35	88	336	.46	168
15...	34	1.5	4.2	150	39	110	459	.62	74.4
25...	37	1.5	4.1	100	26	85	335	.46	96.8
JUL									
05...	37	1.7	4.9	130	29	120	416	.57	47.2
15...	36	1.8	5.9	150	30	130	432	.59	28.0
25...	37	1.9	5.4	200	--	--	483	.66	30.0
AUG									
05...	39	2.1	6.3	180	18	180	520	.71	80.0
15...	39	1.9	6.0	130	19	120	383	.52	23.8
25...	37	2.0	6.5	180	33	140	478	.65	37.4
SEP									
05...	38	1.7	5.4	130	18	100	348	.47	24.4
15...	36	1.6	5.9	150	25	100	381	.52	22.6
25...	38	1.8	5.9	170	26	120	427	.58	23.1

ARKANSAS RIVER BASIN

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07175500 CANEY RIVER NEAR RAMONA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	522	568	138	627	729	465	259	323	341	566	918	822
2	524	597	167	624	738	471	291	319	527	587	918	715
3	535	610	163	612	739	512	350	333	386	614	927	691
4	538	636	167	620	746	517	348	323	571	632	927	651
5	552	648	151	613	737	520	345	323	563	644	909	602
6	563	636	142	622	716	529	358	324	577	654	450	564
7	575	609	166	640	719	508	366	359	597	664	218	552
8	588	602	175	646	724	534	370	350	625	680	178	554
9	586	600	177	654	719	546	367	355	645	692	173	566
10	594	582	176	656	722	555	352	373	644	702	219	581
11	596	575	174	653	727	563	368	410	646	708	329	593
12	592	582	186	651	725	562	402	150	661	712	421	601
13	601	596	194	654	751	1020	401	485	678	714	493	598
14	603	600	202	652	770	527	375	432	692	718	579	637
15	602	596	213	652	699	450	389	496	692	722	665	664
16	608	587	226	652	670	417	405	405	689	732	723	677
17	610	598	249	648	524	434	422	610	687	741	766	684
18	613	590	273	638	551	460	430	461	158	749	802	696
19	615	556	318	626	399	452	435	480	368	759	972	704
20	603	562	359	617	371	457	448	436	415	777	1020	722
21	589	124	375	601	382	469	448	470	370	812	945	741
22	587	137	382	586	345	478	451	466	378	825	891	753
23	589	118	397	819	372	494	457	465	429	835	863	766
24	597	232	418	628	360	414	461	473	467	842	843	762
25	588	137	452	944	391	387	426	468	493	845	833	748
26	586	163	464	762	400	369	336	502	---	850	833	766
27	587	178	506	744	394	403	206	473	508	863	821	776
28	588	168	570	756	400	342	248	490	525	872	802	777
29	586	179	609	743	406	268	303	443	531	882	792	791
30	579	160	617	725	---	299	346	505	557	891	792	796
31	568	---	622	718	---	227	---	280	---	900	794	---
MEAN	583	451	304	670	584	473	372	412	532	748	704	685

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	8.0	6.0	2.0	5.0	10.0	17.0	25.0	30.0	30.0	26.0
2	20.0	13.0	8.0	5.0	3.0	3.0	12.0	17.0	25.0	35.0	27.0	24.0
3	20.0	12.0	7.0	4.0	3.0	4.0	12.0	17.0	28.0	31.0	27.0	24.0
4	20.0	11.0	7.0	5.0	2.0	8.0	12.0	18.0	27.0	29.0	29.0	30.0
5	20.0	13.0	8.0	5.0	3.0	7.0	11.0	18.0	25.0	30.0	27.0	30.0
6	7.0	12.0	7.0	4.0	4.0	5.0	13.0	18.0	26.0	30.0	25.0	26.0
7	6.0	12.0	7.0	5.0	4.0	8.0	14.0	18.0	28.0	30.0	30.0	26.0
8	8.0	11.0	6.0	5.0	3.0	8.0	13.0	17.0	26.0	32.0	30.0	30.0
9	7.0	10.0	6.0	4.0	3.0	8.0	14.0	18.0	25.0	30.0	26.0	30.0
10	8.0	9.0	8.0	4.0	3.0	10.0	15.0	17.0	25.0	30.0	27.0	27.0
11	18.0	9.0	8.0	4.0	3.0	10.0	15.0	20.0	29.0	29.0	27.0	27.0
12	17.0	8.0	7.0	4.0	3.0	9.0	14.0	18.0	26.0	29.0	30.0	27.0
13	25.0	10.0	7.0	4.0	4.0	9.0	14.0	22.0	26.0	30.0	28.0	25.0
14	24.0	8.0	6.0	6.0	4.0	9.0	12.0	21.0	25.0	29.0	30.0	28.0
15	25.0	10.0	6.0	6.0	3.0	9.0	14.0	20.0	35.0	33.0	30.0	27.0
16	16.0	10.0	5.0	6.0	1.0	10.0	13.0	18.0	25.0	33.0	27.0	27.0
17	16.0	---	4.0	7.0	1.0	10.0	14.0	20.0	25.0	33.0	27.0	25.0
18	18.0	10.0	3.0	9.0	2.0	10.0	15.0	19.0	23.0	38.0	28.0	25.0
19	20.0	10.0	5.0	7.0	3.0	12.0	14.0	18.0	25.0	38.0	30.0	27.0
20	19.0	13.0	5.0	7.0	5.0	11.0	16.0	20.0	24.0	30.0	27.0	25.0
21	20.0	10.0	5.0	7.0	5.0	10.0	17.0	20.0	25.0	33.0	27.0	25.0
22	18.0	13.0	7.0	6.0	5.0	11.0	18.0	20.0	25.0	35.0	27.0	26.0
23	17.0	12.0	7.0	6.0	5.0	13.0	19.0	22.0	27.0	30.0	25.0	22.0
24	17.0	15.0	7.0	5.0	6.0	10.0	19.0	20.0	28.0	30.0	25.0	25.0
25	17.0	10.0	5.0	7.0	5.0	10.0	17.0	24.0	33.0	30.0	25.0	24.0
26	17.0	9.0	5.0	5.0	5.0	10.0	13.0	25.0	---	27.0	27.0	20.0
27	19.0	10.0	7.0	4.0	5.0	10.0	12.0	25.0	33.0	27.0	26.0	25.0
28	15.0	9.0	7.0	4.0	8.0	11.0	14.0	25.0	29.0	32.0	26.0	24.0
29	14.0	9.0	7.0	3.0	6.0	11.0	15.0	23.0	30.0	28.0	25.0	20.0
30	17.0	9.0	7.0	3.0	---	10.0	16.0	24.0	31.0	30.0	25.0	20.0
31	14.0	---	7.0	3.0	---	10.0	---	23.0	---	31.0	25.0	---
MEAN	16.5	11.0	6.5	5.0	4.0	9.0	14.0	20.0	27.0	31.0	27.5	24.0

ARKANSAS RIVER BASIN

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

LOCATION.--Lat 36°18'26", long 95°41'52", in SE¼SW¼ sec.10, T.21 N., R.15 E., Rogers County, Hydrologic Unit 11070105, near left bank on downstream side of pier of bridge on State Highway 20, 2.3 mi (3.7 km) downstream from Caney River, 4.5 mi (7.2 km) west of Claremore, 12.4 mi (20.0 km) upstream from Bird Creek, and at mile 76.0 (122.3 km).

DRAINAGE AREA.--6,534 mi² (16,923 km²).

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 (164.171 m), 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.--Records fair. Flow regulated since May 1963 by Oologah Lake 14.3 mi (23.0 km) upstream (station 07171300); some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950 (station 07172500).

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Oologah Lake) 27 years (water years 1936-62), 3,723 ft³/s (105.4 m³/s), 2,695,000 acre-ft/yr (3.32 km³/yr); (since regulation by Oologah Lake) 16 years (water years 1965-80), 3,925 ft³/s (111.2 m³/s), 2,844,000 acre-ft/yr (3.51 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 182,000 ft³/s (5,150 m³/s) May 21, 1943, gage height, 55.05 ft (16.779 m); no flow at times in 1936, 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,500 ft³/s (581 m³/s) Nov. 25, gage height, 20.93 ft (6.379 m); minimum daily 14 ft³/s (0.40 m³/s) Sept. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	65	7910	419	505	2620	13800	6660	1710	158	92	82
2	35	89	7680	412	187	2580	14600	6650	1460	152	90	754
3	34	82	7100	417	179	2010	14600	6500	1150	142	88	468
4	31	58	6460	416	179	971	15700	6970	1040	139	89	147
5	29	50	6370	416	179	928	17100	6900	994	135	307	102
6	34	48	7430	411	175	923	16700	5940	945	131	210	79
7	50	46	9080	405	175	943	16800	4850	912	129	137	67
8	55	54	7960	405	195	938	17700	4260	884	127	110	58
9	53	60	7660	403	195	934	17600	3760	727	126	90	56
10	49	62	7620	402	191	925	16500	1930	269	126	75	52
11	50	137	7560	398	199	923	10400	1520	207	121	70	55
12	145	110	6770	294	195	989	6610	2870	188	112	67	55
13	158	80	3990	285	199	1900	6110	2870	169	110	69	49
14	154	59	2170	283	151	3720	6700	1780	149	107	68	48
15	155	52	763	209	2450	6220	9590	1460	141	77	68	48
16	157	50	740	199	5380	5830	9490	1630	140	66	72	44
17	156	48	610	199	4460	5630	9390	1760	300	61	72	34
18	128	56	215	199	3700	5520	9320	2280	3500	59	82	29
19	70	74	203	223	3700	4510	9240	2870	1900	56	80	28
20	50	107	207	590	3600	2750	9220	2260	794	54	169	29
21	70	3770	207	505	3600	2640	9200	1820	449	64	166	27
22	70	9120	203	596	3510	2620	7720	1630	348	94	112	22
23	50	11600	207	1030	3440	2730	3200	1520	298	76	93	16
24	56	19000	207	992	3120	6270	1600	1460	271	65	82	14
25	74	20500	207	918	2940	6550	5630	1460	236	63	81	14
26	54	17900	348	819	2880	7150	10700	1500	216	71	79	14
27	44	9990	1290	803	2850	8280	13600	2000	203	72	76	35
28	40	7940	1270	778	2760	9560	13800	2840	190	70	71	68
29	37	8630	1260	763	2630	12200	9640	2840	180	74	69	42
30	44	8400	1250	703	---	13600	6250	2430	165	80	68	35
31	62	---	1110	631	---	14300	---	1600	---	87	69	---
TOTAL	2233	118237	106057	15523	53924	137664	328510	96820	20135	3004	3071	2571
MEAN	72.0	3941	3421	501	1859	4441	10950	3123	671	96.9	99.1	85.7
MAX	158	20500	9080	1030	5380	14300	17700	6970	3500	158	307	754
MIN	29	46	203	199	151	923	1600	1460	140	54	67	14
AC=FT	4430	234500	210400	30790	107000	273100	651600	192000	39940	5960	6090	5100
CAL YR 1979	TOTAL	997417	MEAN	2733	MAX	20500	MIN	29	AC=FT	1978000		
WTR YR 1980	TOTAL	887749	MEAN	2426	MAX	20500	MIN	14	AC=FT	1761000		

ARKANSAS RIVER BASIN

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07176460 BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'05", long 96°09'45", in NW¼NE¼ sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 450 ft (137 m) north of dam on Birch Creek, 1.5 mi (2.4 km) south of Barnsdall and at mile 0.8 (1.3 km).

DRAINAGE AREA.--66.0 mi² (170.9 km²).

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 (71.7 hm³) at elevation 774.0 ft (235.92 m), crest of uncontrolled spillway and 19,180 acre-ft (23.7 hm³) at elevation 750.5 ft (228.75 m), top of conservation pool. Dead storage, 3,360 acre-ft (4.14 hm³) below elevation 730.0 ft (222.50 m). 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 25,240 acre-ft (31.1 hm³) May 22, 1978, elevation, 755.48 ft (230.270 m); minimum since conservation pool was first filled, 13,080 acre-ft (16.1 hm³) Oct. 26-29, 1977, elevation, 744.68 ft (226.868 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents 23,720 acre-ft (29.2 hm³) Apr. 27, elevation, 754.29 ft (229.908 m), minimum, 17,130 acre-ft (21.1 hm³) Nov. 19, elevation, 748.65 ft (228.189 m).

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

746	14,370	752	20,920
748	16,430	754	23,350
750	18,620	756	25,920

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18090	17450	18430	18070	18170	20400	20400	21240	19290	18900	17640	17840
2	18070	17420	18410	18050	18170	20170	20170	20470	19240	18860	17610	18040
3	18030	17400	18400	18050	18160	19950	19950	19950	19240	18820	17550	18000
4	17970	17380	18390	18050	18140	19730	19730	19410	19240	18780	17520	17980
5	17960	17350	18380	18030	18140	19560	19560	19160	19110	18750	17480	17960
6	17950	17300	18360	18010	18130	19390	19390	19150	19230	18710	17440	17940
7	17910	17320	18340	18000	18190	19230	19230	19090	18950	18670	17410	17890
8	17880	17400	18310	17980	18200	19120	19120	19040	18980	18640	17380	17870
9	17840	17420	18310	17970	18200	18710	19090	19010	19010	18580	17350	17860
10	17800	17400	18310	17970	18200	18690	19070	18990	19070	18530	17310	17840
11	17780	17380	18280	17950	18200	18740	19020	19060	19080	18480	17290	17820
12	17730	17370	18250	17930	18200	18930	18980	20500	19020	18450	17270	17900
13	17680	17330	18240	17930	18190	18990	18920	20510	19010	18410	17240	17770
14	17650	17320	18240	17900	18430	19010	18890	20500	18830	18360	17200	17740
15	17640	17320	18210	17900	18740	19010	18860	20690	18890	18310	17180	17730
16	17640	17240	18180	17900	18770	19010	18830	20830	18730	18270	17150	17690
17	17620	17200	18170	17900	18780	19000	18800	20530	19470	18220	17790	17640
18	17650	17130	18170	17880	18620	18980	18780	21110	19800	18180	17870	17620
19	17630	17280	18160	18080	18630	18970	18760	20870	20290	18160	17840	17600
20	17620	18050	18160	18170	18670	18980	18750	20630	20530	18090	17950	17540
21	17650	18550	18150	18210	18660	18980	18690	20330	20090	18030	18040	17530
22	17620	18530	18150	18240	18670	18980	18670	20020	19580	17990	18040	17500
23	17590	18550	18140	18250	18670	19880	18640	19760	19240	17970	18000	17440
24	17570	18550	18130	18280	18670	20150	19400	19600	19160	17930	17990	17420
25	17540	18550	18110	18270	18650	20240	21540	19430	19090	17890	17970	17400
26	17530	18500	18100	18250	18640	20110	23670	19200	19110	17870	17950	17360
27	17510	18500	18090	18240	18640	19810	23720	19170	19070	17840	17910	17360
28	17480	18480	18090	18200	18620	19660	23710	19170	19020	17820	17910	17320
29	17450	18460	18090	18190	18600	20580	23150	19090	19000	17780	17900	17290
30	17500	18450	18090	18190	---	20760	22190	19170	18950	17730	17880	17280
31	17520	---	18080	18180	---	20650	---	19160	---	17690	17860	---
MAX	18090	18550	18430	18280	18670	20760	23720	21240	20530	18900	18040	18040
MIN	17450	17130	18080	17880	18130	18690	18640	18990	18730	17690	17150	17280
†	749.01	749.85	749.52	749.61	750.16	751.77	753.06	750.48	750.30	749.17	749.32	748.79
‡	-610	+930	-370	+100	+620	+1,850	+1,540	-3,030	-210	-1,260	+170	-580
CAL YR 1979	MAX 21450	MIN 14720	‡ +3,360									
WTR YR 1980	MAX 23720	MIN 17130	‡ -850									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07176465 BIRCH CREEK BELOW BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'08", long 96°09'38" NW¼NE¼ sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 300 ft (91 m) downstream from Birch Dam, 1.5 mi (2.4 km) south of Barnsdall, and at mile 0.7 (1.1 km).

DRAINAGE AREA.--66.0 mi² (179.9 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 690.00 ft (210.312 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for period of no gage height record July 27 to August 29 which is poor. Flow completely regulated since March 1977 by Birch Lake (station 07176460).

COOPERATION.--Gage-height record and 19 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 623 ft³/s (17.6 m³/s) May 22-24, 1978, gage height, 9.53 ft (2.905 m); no flow at times in 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 533 ft³/s (15.1 m³/s) Apr. 29, gage height, 9.17 ft (2.795 m); minimum daily, 3.8 ft³/s (0.11 m³/s) Oct. 7, 8, Sept. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.0	5.0	4.7	4.7	4.4	184	520	5.0	10	5.0	4.0
2	6.0	5.4	5.0	4.7	5.4	4.4	184	420	5.0	5.8	5.0	4.0
3	6.0	5.4	5.0	5.0	5.4	4.4	184	280	5.0	5.0	5.0	4.0
4	4.4	5.4	5.0	5.0	5.0	4.4	155	280	5.0	5.2	5.0	4.0
5	4.1	5.2	5.0	5.0	5.0	4.4	106	120	5.0	5.2	5.0	4.0
6	4.1	5.2	4.7	5.0	5.0	4.4	106	11	5.0	4.8	5.0	4.2
7	3.8	5.0	4.7	5.7	4.8	4.4	106	11	5.0	4.7	5.0	4.2
8	3.8	5.1	4.7	6.1	4.7	4.4	43	11	5.0	4.7	5.0	4.2
9	4.7	5.4	4.7	5.0	4.8	4.4	5.0	11	5.0	4.7	5.0	4.2
10	4.7	5.0	4.7	4.4	4.9	4.4	5.0	11	5.0	5.3	5.0	4.4
11	4.7	5.2	4.7	4.4	5.0	4.4	5.0	11	5.0	5.7	5.0	4.4
12	5.0	4.8	4.7	4.4	4.9	4.4	5.0	11	5.0	5.8	5.0	4.4
13	5.0	4.7	5.0	4.7	4.7	4.4	5.0	11	5.0	6.1	5.0	4.1
14	4.7	4.5	5.0	4.7	4.7	4.4	5.0	11	5.0	5.9	4.7	4.1
15	5.0	4.6	5.0	4.7	4.7	4.4	5.0	40	5.0	5.9	4.5	4.3
16	5.0	4.4	5.0	4.7	4.7	4.4	5.0	130	5.0	6.1	4.5	4.1
17	4.7	4.5	5.0	4.7	4.7	4.4	5.0	200	5.0	6.4	4.5	4.3
18	5.0	4.8	5.0	4.7	4.6	4.4	5.0	200	5.0	6.3	4.5	3.8
19	5.0	4.8	5.0	4.7	4.6	4.4	5.0	200	5.0	6.1	4.5	3.8
20	5.0	4.8	5.0	4.7	4.6	4.4	5.0	202	120	6.0	4.2	3.8
21	5.0	4.8	5.0	4.7	4.6	4.4	5.0	202	290	5.8	4.0	3.8
22	5.0	4.8	5.0	4.4	4.5	4.4	5.0	197	290	5.8	4.0	3.8
23	5.0	4.8	5.0	4.4	4.5	4.4	5.0	130	202	5.5	4.0	3.8
24	4.9	4.8	5.0	4.4	4.5	4.4	5.0	74	30	5.5	4.0	4.0
25	5.0	4.8	5.0	5.0	4.5	4.4	25	74	8.4	5.5	4.0	4.0
26	5.0	4.8	5.0	4.9	4.5	108	74	74	8.4	5.5	3.9	3.9
27	5.7	4.8	5.0	4.7	4.5	184	74	25	8.4	5.5	3.9	4.1
28	6.1	4.8	4.7	4.7	4.5	119	74	5.0	8.4	5.5	3.9	4.1
29	5.4	4.8	4.7	4.8	4.4	12	329	5.0	8.3	5.5	3.9	4.3
30	5.7	4.8	4.7	4.7	---	12	532	5.0	9.4	5.0	4.0	4.1
31	5.0	---	4.7	4.4	---	112	---	5.0	---	5.0	4.0	---
TOTAL	154.3	147.2	151.7	148.1	137.4	657.0	2256.0	3487.0	1078.3	175.8	140.0	122.2
MEAN	4.98	4.91	4.89	4.78	4.74	21.2	75.2	112	35.9	5.67	4.52	4.07
MAX	6.1	5.4	5.0	6.1	5.4	184	532	520	290	10	5.0	4.4
MIN	3.8	4.4	4.7	4.4	4.4	4.4	5.0	5.0	5.0	4.7	3.9	3.8
AC=FT	306	292	301	294	273	1300	4070	6920	2140	349	278	242
CAL YR 1979	TOTAL	6823.2	MEAN 18.7	MAX 178	MIN 1.8	AC=FT 13530						
WTR YR 1980	TOTAL	8655.0	MEAN 23.6	MAX 532	MIN 3.8	AC=FT 17170						

ARKANSAS RIVER BASIN

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07176500 BIRD CREEK NEAR AVANT, OK

LOCATION.--Lat 36°29'11", long 96°03'45", in NW¼ sec.7, T.23 N., R.12 E., Osage County, Hydrologic Unit 11070107, near left bank on downstream side of pier of county road bridge at Avant, 1.5 mi (2.4 km) upstream from Candy Creek, and at mile 54.2 (87.2 km).

DRAINAGE AREA.--364 mi² (943 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft (198.510 m) National Geodetic Vertical Datum of 1929.

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

COOPERATION.--Gage-height record and 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--35 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s), Oct. 2, 1959, gage height, 31.40 ft (9.571 m); maximum gage height, 32.03 ft (9.763 m) Mar. 11, 1974; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 21	1045	*12,100 343	*18.05 5.502	June 17	2130	6,060 172	10.70 3.261
Apr. 26	1215	8,750 248	15.93 4.855	June 19	0615	6,540 185	11.59 3.533

Minimum daily discharge, 1.4 ft³/s (0.04 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

JAN	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.6	50	25	39	56	534	836	461	32	26	2.8
2	1.9	4.1	43	26	37	50	416	728	197	34	27	93
3	1.6	3.7	40	26	35	48	845	479	117	32	33	48
4	1.4	3.4	39	22	35	45	688	465	89	28	38	18
5	2.0	3.4	35	21	35	44	388	383	75	24	43	16
6	2.6	3.4	33	21	33	39	320	157	67	22	56	14
7	2.9	3.4	33	24	35	39	276	143	59	24	62	13
8	3.4	4.4	29	24	47	37	246	134	53	23	61	13
9	3.4	7.2	29	22	48	33	213	130	47	21	58	13
10	3.4	8.6	28	21	52	33	159	131	44	21	58	12
11	3.6	11	26	21	55	31	141	137	42	23	64	11
12	3.7	11	23	21	55	164	125	1820	42	14	68	11
13	3.7	8.8	20	19	50	314	125	423	41	10	68	13
14	3.8	6.9	19	18	150	188	121	254	38	15	68	13
15	4.3	5.8	18	18	1360	123	117	349	37	17	68	11
16	4.8	5.3	18	17	818	91	113	1360	43	16	72	9.6
17	4.6	5.0	17	17	329	73	117	885	2320	16	82	8.0
18	4.8	5.2	16	18	223	59	117	1720	1590	17	307	7.4
19	4.8	5.5	16	39	185	53	113	1040	2100	18	47	7.4
20	4.5	1350	16	202	176	46	113	603	737	19	12	7.4
21	4.9	8780	16	305	178	42	113	539	962	19	22	7.0
22	6.5	2600	16	225	147	42	113	475	544	19	12	6.8
23	6.3	457	16	165	119	368	105	371	426	18	5.9	6.8
24	5.4	263	16	127	99	2860	1640	283	233	16	4.6	6.8
25	4.4	178	16	103	86	684	3470	284	100	16	4.1	6.9
26	4.3	136	16	87	74	303	7140	269	71	17	4.0	8.7
27	4.3	111	16	75	67	363	2070	296	52	19	3.8	9.3
28	4.0	88	16	65	65	1060	794	158	43	21	3.7	9.3
29	3.8	73	16	56	60	1960	646	116	36	25	3.7	9.3
30	4.8	60	16	50	---	2380	924	105	35	29	3.7	9.6
31	6.2	---	21	42	---	718	---	132	---	28	3.6	---
TOTAL	122.1	14207.7	729	1922	4692	12346	22302	15205	10701	653	1389.1	422.1
MEAN	3.94	474	23.5	62.0	162	398	743	490	357	21.1	44.8	14.1
MAX	6.5	8780	50	305	1360	2860	7140	1820	2320	34	307	93
MIN	1.4	3.4	16	17	33	31	105	105	35	10	3.6	2.8
AC=FT	242	28180	1450	3810	9310	24490	44240	30160	21230	1300	2760	837
CAL YR 1979	TOTAL	53445.9	MEAN	146	MAX	8780	MIN	1.4	AC=FT	106000		
WTR YR 1980	TOTAL	84691.0	MEAN	231	MAX	8780	MIN	1.4	AC=FT	168000		

ARKANSAS RIVER BASIN

07176800 CANDY CREEK NEAR WOLCO, OK

LOCATION.--Lat 36°32'06", long 96°02'54", in NW¼NW¼ sec.29, T.29 N., R.12 E., Osage County, Hydrologic Unit 11070107, 1.3 mi (2.1 km) east of Wolco, 3.3 mi (5.3 km) northeast of Avant, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--30.6 mi² (79.3 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft (205.130 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage-height record, 8 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--11 years, 26.7 ft³/s (0.756 m³/s), 19,340 acre-ft/yr (23.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,520 ft³/s (270 m³/s) Mar. 10, 1974, gage height, 18.16 ft (5.535 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) Apr. 26, gage height, 9.45 ft (2.880 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.96	.06	.27	1.5	25	10	22	.00	.00	.00
2	.00	.00	.87	.09	.27	1.5	16	7.7	8.8	.00	.00	4.3
3	.00	.00	.71	.11	.33	1.3	20	6.6	4.2	.00	.00	.21
4	.00	.00	.63	.11	.33	1.0	16	5.9	2.4	.00	.00	.00
5	.00	.00	.55	.11	.31	.88	11	5.2	1.3	.00	.00	.00
6	.00	.00	.60	.07	.23	.88	8.5	4.8	.77	.00	.00	.00
7	.00	.00	.47	.00	.33	.88	7.0	5.2	.44	.00	.00	.00
8	.00	.00	.40	.00	1.3	.77	6.2	6.2	.11	.00	.00	.00
9	.00	.00	.28	.00	1.3	.77	5.5	6.2	.00	.00	.00	.00
10	.00	.00	.19	.00	1.1	.88	4.8	5.9	.00	.00	.00	.00
11	.00	.00	.11	.00	1.1	.88	4.2	5.0	.00	.00	.00	.00
12	.00	.00	.14	.00	1.0	.83	3.5	267	.00	.00	.00	.00
13	.00	.00	.07	.00	1.0	31	3.2	32	.00	.00	.00	.00
14	.00	.00	.11	.00	.66	9.2	3.0	15	.00	.00	.00	.00
15	.00	.00	.09	.00	263	5.0	3.0	17	.00	.00	.00	.00
16	.00	.00	.05	.10	36	3.0	3.0	144	.00	.00	.00	.00
17	.00	.00	.00	.10	11	2.0	2.8	35	1.0	.00	.00	.00
18	.00	.00	.00	.00	5.9	1.3	2.6	271	8.8	.00	.00	.00
19	.00	.00	.00	7.1	5.5	1.0	2.6	55	54	.00	.00	.00
20	.00	126	.02	40	6.6	.77	2.4	19	25	.00	.00	.00
21	.00	366	.05	19	5.2	.88	2.2	21	12	.00	.00	.00
22	.00	34	.12	14	4.8	1.0	2.2	13	5.8	.00	.00	.00
23	.00	10	.13	6.3	4.5	184	2.0	8.8	3.0	.00	.00	.00
24	.00	5.6	.33	3.8	3.5	256	4.0	6.6	1.6	.00	.00	.00
25	.00	3.7	.33	.10	2.8	44	192	5.9	.78	.00	.00	.00
26	.00	2.5	.20	2.9	2.2	28	942	4.8	.30	.00	.00	.00
27	.00	2.0	.11	2.4	2.0	24	104	3.5	.09	.00	.00	.00
28	.00	1.8	.11	1.8	1.9	97	37	2.4	.00	.00	.00	.00
29	.00	1.4	.11	1.2	1.7	312	21	2.2	.00	.00	.00	.00
30	.00	1.1	.11	1.0	---	152	14	2.0	.00	.00	.00	.00
31	.00	---	.09	.74	---	58	---	50	---	.00	.00	---
TOTAL	.00	554.10	7.94	101.09	431.47	1304.39	1470.7	1043.9	152.39	.00	.00	4.51
MEAN	.000	18.5	.26	3.26	14.9	42.1	49.0	33.7	5.08	.000	.000	.15
MAX	.00	366	.96	40	263	312	942	271	54	.00	.00	4.3
MIN	.00	.00	.00	.00	.23	.77	2.0	2.0	.00	.00	.00	.00
AC-FT	.00	1100	16	201	856	2590	2920	2070	302	.00	.00	8.9
CAL YR 1979	TOTAL	6569.06	MEAN	18.0	MAX	1550	MIN	.00	AC-FT	13030		
WTR YR 1980	TOTAL	5070.49	MEAN	13.9	MAX	942	MIN	.00	AC-FT	10060		

07177000 HOMINY CREEK NEAR SKIATOOK, OK

LOCATION.--Lat 36°20'55", long 96°06'35", in SW¼SE¼ sec.27, T.22 N., R.11 E., Osage County, Hydrologic Unit 11070107, near left bank on downstream side of pier of bridge on State Highway 20, 1.0 mi (1.6 km) upstream from Tall Chief Creek, 6.0 mi (9.7 km) west of Skiatook, and at mile 16.7 (26.9 km).

DRAINAGE AREA.--340 mi² (881 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 619.66 ft (188.872 m) National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage and May 26, 1945, to Sept. 30, 1958, water-stage recorder at site 600 ft (182.9 m) upstream at same datum.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--36 years, 181 ft³/s (5.126 m³/s), 131,100 acre-ft/yr (162 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,600 ft³/s (1,010 m³/s) Oct. 3, 1959, gage height, 38.82 ft (11.832 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 35.0 ft (10.67 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 26	2215	*7,070 200	*28.49 8.684	June 19	1930	5,320 151	25.53 7.782

Minimum daily discharge, 0.06 ft³/s (0.002 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.45	11	3.9	14	16	185	160	160	18	10	.23
2	.17	.45	8.6	3.8	16	15	139	120	123	16	12	2.0
3	.23	.44	6.8	4.1	18	14	235	90	75	16	12	1.8
4	.24	.45	5.8	4.0	16	12	290	70	45	14	13	1.0
5	.25	.45	5.3	4.1	15	13	152	54	23	13	12	.74
6	.25	.68	5.1	4.2	16	13	114	43	20	11	12	1.2
7	.26	1.0	4.9	4.1	18	12	98	38	19	10	12	1.7
8	.26	1.6	4.9	3.6	23	12	87	33	17	8.7	12	2.0
9	.27	1.6	4.7	3.8	21	12	76	28	15	8.3	11	2.0
10	.27	1.2	4.5	4.0	20	12	66	23	13	6.0	11	1.9
11	.27	1.1	4.3	4.1	19	11	56	40	12	5.4	12	1.7
12	.28	1.7	4.0	4.0	18	13	50	1500	12	4.7	11	1.6
13	.29	2.4	3.9	3.9	20	71	45	500	11	4.5	12	1.5
14	.30	2.6	3.9	4.3	97	68	40	200	11	4.3	11	1.5
15	.30	2.9	3.9	4.5	673	40	35	350	11	4.2	11	1.5
16	.56	2.7	3.8	4.7	552	27	30	800	11	4.4	11	1.5
17	.40	2.6	3.9	4.5	208	20	25	500	501	4.8	19	1.5
18	.32	2.6	3.8	4.5	99	18	20	1200	1540	4.9	14	1.5
19	.32	2.8	3.9	8.4	60	16	16	589	3940	4.8	25	1.8
20	.33	17	3.8	588	45	15	14	190	2300	5.3	16	2.1
21	.34	1990	3.8	173	35	16	13	117	1030	6.0	11	2.1
22	.65	482	3.8	60	30	15	12	83	198	6.2	7.1	1.7
23	.45	73	4.0	41	27	14	20	42	57	6.1	6.1	1.3
24	.37	36	4.5	32	23	1760	297	40	42	6.0	4.5	1.0
25	.37	24	3.9	27	21	463	1280	36	32	6.3	3.3	1.1
26	.38	20	3.8	24	19	248	6030	32	32	9.8	2.4	.99
27	.38	18	3.8	22	18	172	4160	42	31	10	1.7	2.6
28	.39	16	3.8	20	17	139	496	41	26	9.7	1.5	4.2
29	.40	15	3.9	18	17	279	300	38	22	9.7	.85	4.2
30	.62	13	4.0	17	---	975	220	36	19	8.4	.62	4.7
31	.50	---	4.0	16	---	321	---	41	---	9.2	.40	---
TOTAL	10.48	2733.72	144.1	1120.5	2175	4832	14601	7076	10348	255.7	298.47	54.66
MEAN	.34	91.1	4.65	36.1	75.0	156	487	228	345	8.25	9.63	1.82
MAX	.65	1990	11	588	673	1760	6030	1500	3940	18	25	4.7
MIN	.06	.44	3.8	3.6	14	11	12	23	11	4.2	.40	.23
AC-FT	21	5420	286	2220	4310	9580	28960	14040	20530	507	592	108
CAL YR 1979	TOTAL	39989.23	MEAN	110	MAX	4590	MIN	.00	AC-FT	79320		
WTR YR 1980	TOTAL	43649.63	MEAN	119	MAX	6030	MIN	.06	AC-FT	86580		

ARKANSAS RIVER BASIN

07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW¼NW¼ 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 (2.4 km) upstream from Delaware Creek, 2.4 mi (3.9 km) downstream from Hominy Creek, 2.5 mi (4.0 km) southeast of Sperry, and at mile 25.0 (40.2 km).

DRAINAGE AREA.--905 mi² (2,344 km²).

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 (176.610 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage-height record and 18 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--42 years, 487 ft³/s (13.79 m³/s), 346,300 acre-ft/yr (427 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s (2,550 m³/s) Oct. 3, 1959, gage height, 32.60 ft (9.936 m), from rating curve extended above 49,000 ft³/s (1,390 m³/s); no flow at times in 1939, 1954-57, 1964-66, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 31.68 ft (9.656 m), discharge 72,200 ft³/s (2,040 m³/s). Flood in 1915 reached a stage similar to flood of Oct. 31, 1941, 30.14 ft (9.187 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,700 ft³/s (416 m³/s) at 1100 Apr. 27, gage height, 26.59 ft (8.104 m), no other peak above base of 11,000 ft³/s (312 m³/s); minimum, 1.2 ft³/s (0.034 m³/s), Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	14	67	25	44	72	902	899	336	60	10	17
2	4.1	13	57	28	58	69	642	875	442	56	10	147
3	4.1	11	50	33	50	63	738	610	210	50	9.5	138
4	3.5	9.5	48	32	40	59	1310	524	140	43	8.8	53
5	3.5	7.7	47	29	38	56	706	510	104	38	8.7	29
6	4.6	6.0	43	26	36	56	462	306	82	34	8.7	23
7	4.1	5.4	41	24	37	54	376	203	68	31	7.9	20
8	1.8	6.6	40	24	53	51	318	179	56	30	8.2	19
9	1.2	9.2	37	23	58	50	285	164	50	27	8.7	18
10	1.2	9.8	37	24	54	48	243	155	45	25	8.7	17
11	1.4	12	34	23	70	45	200	159	41	25	7.9	17
12	1.4	18	30	22	64	69	184	3340	37	25	8.0	16
13	2.5	22	29	20	63	306	163	2890	37	23	13	16
14	2.6	18	27	20	103	369	151	513	33	22	13	16
15	3.5	15	26	18	1240	217	144	323	30	20	11	16
16	4.8	12	25	19	1730	147	140	1430	30	20	9.7	15
17	9.0	10	24	19	747	105	137	2450	330	19	8.8	12
18	8.8	9.5	24	19	369	69	138	1790	6120	18	93	12
19	8.7	9.4	23	95	261	48	135	3290	5620	18	193	11
20	9.8	43	29	272	251	75	132	1040	6910	18	105	10
21	8.4	4820	31	680	231	52	132	606	3250	18	71	9.5
22	11	7300	24	387	190	48	129	622	1090	18	53	8.5
23	8.8	879	22	256	155	404	119	446	683	18	45	6.6
24	8.7	394	22	140	129	4820	445	357	433	17	34	6.5
25	9.7	250	22	155	123	2800	3570	306	247	14	28	7.6
26	11	182	22	124	107	797	9580	288	163	14	24	10
27	8.0	141	22	100	97	624	13700	255	136	14	22	10
28	6.7	112	22	84	87	931	5960	239	112	14	20	11
29	5.3	93	22	71	79	1140	1020	148	92	13	19	12
30	7.7	78	25	63	---	4190	1020	122	74	11	17	16
31	13	---	28	52	---	1750	---	118	---	11	16	---
TOTAL	186.8	14510.1	1000	2907	6564	19584	43181	25157	27001	764	900.6	719.7
MEAN	6.03	484	32.3	93.8	226	632	1439	812	900	24.6	29.1	24.0
MAX	13	7300	67	680	1730	4820	13700	3340	6910	60	193	147
MIN	1.2	5.4	22	18	36	45	119	118	30	11	7.9	6.5
AC=FT	371	28780	1980	5770	13020	38840	85650	49900	53560	1520	1790	1430
CAL YR 1979 TOTAL	120645.8		MEAN 331	MAX 11200	MIN 1.2	AC=FT 239300						
WTR YR 1980 TOTAL	142475.2		MEAN 389	MAX 13700	MIN 1.2	AC=FT 282600						

ARKANSAS RIVER BASIN

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07178050 BIRD CREEK NEAR CATOOSA, OK

LOCATION.--Lat 36°14'21", long 95°50'52", in NW¼SW¼ sec.5, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at bridge on U.S. Highway 75, approximately 5.5 mi (8.8 km) northwest of Catoosa.

DRAINAGE AREA.--1,080 mi² (2,797 km²).

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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 03...	1305	--	--	22.5	--	--	--	150	--	46
NOV 15...	1330	--	8.0	14.0	8.4	14.0	146	160	22	51
DEC 10...	1545	575	8.2	17.0	14	10.8	142	150	40	47
JAN 14...	1545	--	8.6	13.5	6.8	6.2	74	160	60	49
FEB 12...	1630	700	7.6	4.0	13	13.9	108	200	75	60
MAR 07...	0830	570	7.8	9.0	33	13.4	118	170	67	51
APR 12...	0945	530	7.6	13.0	39	12.2	117	150	54	46
MAY 09...	0915	530	7.2	16.0	15	11.8	120	160	23	49
JUN 18...	0750	380	7.4	22.0	460	4.8	54	110	38	33
JUL 16...	1500	577	7.4	32.0	5.7	--	--	160	33	51
AUG 22...	0845	436	7.2	26.0	6.6	3.3	42	--	--	--
SEP 26...	0900	463	7.1	20.2	--	--	--	130	19	41

DATE	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- LINEITY LAB (MG/L AS CaCO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 03...	7.8	57	50	2.0	9.1	--	--	--	--	--
NOV 15...	8.3	52	40	1.8	8.4	140	44	57	323	.44
DEC 10...	7.8	36	38	1.3	6.4	110	47	49	325	.44
JAN 14...	8.3	48	39	1.7	6.3	97	53	67	346	.47
FEB 12...	11	70	43	2.2	5.2	120	50	130	402	.55
MAR 07...	9.6	46	37	1.6	4.2	100	49	75	315	.43
APR 12...	9.1	39	35	1.4	3.7	98	38	65	294	.40
MAY 09...	9.9	41	35	1.4	4.5	140	42	63	295	.40
JUN 18...	6.8	22	29	.9	3.6	72	24	40	197	.27
JUL 16...	8.6	46	37	1.6	6.7	130	48	62	319	.43
AUG 22...	--	--	--	--	--	--	31	45	253	.34
SEP 26...	6.4	36	36	1.4	6.1	110	36	43	255	.35

ARKANSAS RIVER BASIN

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK
(National stream-quality accounting network station)

LOCATION.--Lat 36°09'43", long 95°37'07", in NW¼NW¼ sec.4, T.19 N., R.16 E., Rogers County, Hydrologic Unit 11070105,
at bridge on State Highway 33, 6.0 mi (9.6 km) west of Inola, and at navigation channel mile 36.6 (58.9 km).

DRAINAGE AREA.--7,911 mi² (20,489 km²).

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT 03...	1040	--	8.3	22.0	12	--	--	K25	43	150	38
NOV 15...	0900	535	7.6	11.5	17	12.8	126	325	K8	180	62
DEC 11...	0915	350	8.3	12.5	48	10.4	120	--	190	130	16
JAN 15...	0930	435	8.9	10.5	14	10.2	114	K22	K12	150	22
FEB 13...	1235	450	7.4	3.0	14	14.4	108	55	K2	160	57
MAR 06...	1030	360	7.2	7.0	30	13.8	115	78	K20	130	28
APR 11...	1530	400	7.6	13.0	68	11.4	110	380	68	150	36
MAY 08...	1200	385	7.4	16.0	30	12.4	126	110	210	150	40
JUN 17...	1615	480	7.7	24.0	54	5.6	67	K3420	K1940	150	51
JUL 17...	0900	452	7.4	30.0	68	--	--	K26	79	150	30
AUG 21...	1500	564	8.4	31.0	13	6.8	93	--	--	170	53
SEP 25...	1615	410	7.7	25.0	25	4.6	56	K29	K74	130	42

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	POTA- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT- Y LAB (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 03...	46	8.0	35	33	1.3	5.3	110	52	45	.4	5.7
NOV 15...	57	9.6	49	42	1.6	6.3	120	67	57	.6	5.9
DEC 11...	40	6.3	15	20	.6	3.5	110	28	7.0	.2	3.6
JAN 15...	48	7.8	25	26	.9	4.1	130	42	37	.3	5.2
FEB 13...	48	8.5	35	32	1.2	3.9	98	47	55	.3	4.1
MAR 06...	40	6.8	17	22	.7	3.5	100	35	27	.2	4.0
APR 11...	46	7.5	20	22	.7	3.4	110	35	31	.2	4.4
MAY 08...	47	7.9	19	21	.7	3.1	110	31	28	.2	7.0
JUN 17...	46	8.8	23	24	.8	3.4	100	45	40	.2	6.2
JUL 17...	46	8.6	32	31	1.1	4.3	120	47	43	.4	7.7
AUG 21...	53	9.8	46	36	1.5	6.2	120	63	63	.5	1.5
SEP 25...	40	7.3	28	31	1.1	4.3	88	40	43	.5	5.3

ARKANSAS RIVER BASIN

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07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
OCT 03...	278	271	.38	1.6	1.7	.030	.010	.04	.01	.77	.62
NOV 15...	350	345	.48	3.4	4.5	.080	.070	.10	.09	1.2	.70
DEC 11...	187	172	.25	3.5	.40	.130	.090	.16	.12	.97	.57
JAN 15...	250	254	.34	.89	1.5	1.00	1.00	1.2	1.3	.10	.40
FEB 13...	279	266	.38	.75	1.2	8.70	.770	1.1	.99	.73	.83
MAR 06...	213	196	.29	.55	.50	.280	.280	.34	.36	.58	.92
APR 11...	266	215	.31	.37	.36	.300	.230	.36	.30	1.1	.97
MAY 08...	224	212	.30	.42	.44	.320	.330	.39	.43	.88	.77
JUN 17...	250	236	.34	.72	.65	.060	.110	.07	.14	1.1	.46
JUL 17...	269	267	.37	1.2	1.3	.040	.050	.05	.06	1.5	1.3
AUG 21...	499	320	.68	1.2	1.0	.040	.000	.05	.00	1.3	1.2
SEP 25...	229	225	.31	.89	.90	.110	.140	.13	.18	.89	1.4
DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DISSOLV (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)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)
OCT 03...	.80	.17	.63	2.4	11	2.3	.350	1.1	.300	--	--
NOV 15...	1.30	.53	.77	4.7	21	5.3	1.80	5.5	1.70	2	0
DEC 11...	1.10	.44	.66	4.6	20	1.1	.120	.37	.080	--	--
JAN 15...	1.10	.00	1.4	2.0	8.8	2.9	.440	1.4	.350	--	--
FEB 13...	1.60	.00	1.6	2.4	10	2.8	.400	1.2	.350	1	0
MAR 06...	.86	.00	1.2	1.4	6.2	1.7	.170	.52	.110	--	--
APR 11...	1.40	.20	1.2	1.8	7.8	1.6	.190	.58	.050	--	--
MAY 08...	1.20	.10	1.1	1.6	7.2	1.5	.160	.49	.050	2	0
JUN 17...	1.20	.63	.57	1.9	8.5	1.2	.200	.61	.100	--	--
JUL 17...	1.50	.20	1.3	2.7	12	2.6	.240	74	.130	--	--
AUG 21...	1.30	.10	1.2	2.5	11	2.2	.160	.49	.110	4	0
SEP 25...	1.00	.00	1.5	1.9	8.4	2.4	.170	.52	.160	--	--

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	--	ND	--	ND	--	ND	--	ND	--	ND	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--
DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	--	--	--	--	--	--	--	--	54	--	98
NOV 15...	ND	--	ND	--	ND	ND	ND	8900	43	--	99
DEC 11...	--	--	--	--	--	--	--	--	80	--	98
JAN 15...	--	--	--	--	--	--	--	--	52	--	94
FEB 13...	--	--	--	--	--	--	--	--	43	--	72
MAR 06...	--	--	--	--	--	--	--	4200	66	--	96
APR 11...	--	--	--	--	--	--	--	--	150	--	95
MAY 08...	--	--	--	--	--	--	--	2900	102	--	75
JUN 17...	--	--	--	--	--	--	--	1100	86	--	91
JUL 17...	--	--	--	--	--	--	--	7600	27	--	82
AUG 21...	--	--	--	--	--	--	--	43000	22	--	74
SEP 25...	--	--	--	--	--	--	--	90	23	--	98

ARKANSAS RIVER BASIN

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 15,79 0900	MAR 6,80 1030	MAY 8,80 1200	JUN 17,80 1615
TOTAL CELLS/ML	8900	4200	2900	1100
DIVERSITY: DIVISION	1.1	0.8	1.8	1.4
..CLASS	1.1	0.8	1.8	1.4
...ORDER	0.0	0.0	2.4	2.2
...FAMILY	0.0	0.0	2.7	2.5
....GENUS	0.0	0.0	3.6	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	13	1
....COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
....MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	250	6	--	-	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	--	-	160	4	230	8	--	-
....CHLORELLA	250	3	250	6	--	-	26	2
....CHODATELLA	*	0	--	-	17	1	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	120	4	--	-
....KIRCHNERIELLA	70	1	32	1	420	14	--	-
....OOCYSTIS	--	-	32	1	--	-	13	1
....TETRAEDRON	*	0	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	17	1	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	490	6	--	-	--	-	--	-
....SCENEDESMUS	140	2	--	-	240	8	--	-
....TETRASTRUM	70	1	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	*	0	63	1	160	5	--	-
...VOLVOCAEAE								
....PANDORINA	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	580	7	2600#	61	610#	21	310#	28
....MELOSIRA	--	-	250	6	230	8	130	12
....SKELETONEMA	490	6	--	-	--	-	--	-
...PENNALES								
...ACHNANTHACEAE								
...RHODICOSPHEINIA	*	0	32	1	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	130	3	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	250	6	--	-	78	7
....SYNEDRA	*	0	--	-	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	63	1	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	32	1	--	-	13	1
...NITZSCHIAEAE								
....NITZSCHIA	160	2	32	1	100	4	120	11
...XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	--	-	17	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE	*	0	32	1	--	-	--	-
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	35	1	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	52	2	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 15,79 0900		MAR 6,80 1030		MAY 8,80 1200		JUN 17,80 1615	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	6500#	73	--	-	310	11	180#	16
....COCCOCHLORIS	--	-	--	-	87	3	--	-
...HORMOGONALES								
..OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	170	6	--	-
....OSCILLATORIA	--	-	--	-	87	3	180#	16
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	35	1	--	-
....TRACHELOMONAS	--	-	32	1	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	39	4

DATE TIME	JUL 17,80 0900	AUG 21,80 1500	SEP 25,80 1615
TOTAL CELLS/ML	7600	43000	90
DIVERSITY: DIVISION	1.1	1.5	1.0
..CLASS	1.1	1.5	1.0
...ORDER	1.9	2.3	1.0
...FAMILY	2.1	2.6	1.0
....GENUS	2.3	2.8	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	39	1	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	100	1	630	1	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	*	0	--	-
....MICRACTINIUM	--	-	280	1	--	-
...OOCYSTACEAE						
....ANKISTRODES MUS	51	1	--	-	--	-
....CHLORELLA	--	-	--	-	--	-
....CHODATELLA	*	0	--	-	--	-
....CLOSTERIOPSIS	*	0	*	0	--	-
....DICTYOSPHAERIUM	--	-	1500	4	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
....OOCYSTIS	*	0	*	0	--	-
....TETRAEDRON	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	1700	4	--	-
....CRUCIGENIA	170	2	--	-	--	-
...SCENEDESMUS	*	0	1300	3	52#	57
....TETRASTRUM	51	1	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	1700	4	--	-
...VOLVOCAEEAE						
....PANDORINA	410	5	--	-	--	-

ARKANSAS RIVER BASIN

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 17,80 0900		AUG 21,80 1500		SEP 25,80 1615	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	450	6	2300	5	26#	29
....MELOSIRA	260	3	5900	14	13	14
....SKELETONEMA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
...RHOICOSPHENIA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	*	0	*	0	--	-
...NITZSCHIAEAE						
....NITZSCHIA	170	2	970	2	--	-
..XANTHOPHYCEAE						
...HETEROCOCCALES						
...CHLOROTHECIACEAE						
....OPHIOCYTIUM	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHRUOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	*	0	420	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	3900#	52	13000#	31	--	-
....ANACYSTIS	120	2	*	0	--	-
...COCCOCHLORIS	--	-	--	-	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	1700#	23	12000#	28	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	280	1	--	-
....TRACHELOMONAS	*	0	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	*	0	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07185000 NEOSHO RIVER NEAR COMMERCE, OK

LOCATION.--Lat 36°55'43", long 94°57'26", in SW¼SE¼ sec.5, T.28 N., R.22 E., Ottawa County, Hydrologic Unit 11070206, on downstream side of left pier of county road bridge, 1.3 mi (2.1 km) upstream from Mud Creek, 2.2 mi (3.5 km) downstream from Four Mile Creek, 4.5 mi (7.2 km) west of Commerce, and at mile 153.4 (246.8 km).

DRAINAGE AREA.--5,876 mi² (15,219 km²).

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 (228.286 m), Corps of Engineers datum.

REMARKS.--Records fair. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi (360 km) upstream.

AVERAGE DISCHARGE.--41 years, 3,494 ft³/s (98.95 m³/s), 2,531,000 acre-ft/yr (3.12 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 267,000 ft³/s (7,560 m³/s) July 15, 1951, computed by flood-routing methods from hydrograph defined at Miami, mile 144.2 (232.0 km), by several discharge measurements, gage-height record, and by comparison with computed inflow into Lake O' The Cherokees; maximum gage height, 34.03 ft (10.327 m) July 16, 1951, from floodmark; no flow at times in 1953-54, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Nov. 23	0115	*40,700	1,150	*20.14	6.139	Mar. 31	1645	26,700	756	17.88	5.450

Minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	191	2450	267	904	4300	26400	2300	490	290	75	42
2	149	278	2310	266	831	3650	26400	2200	380	280	70	40
3	141	392	1750	261	456	2320	23000	2120	320	270	65	38
4	138	346	1470	253	242	2110	7210	2040	310	260	60	37
5	134	270	1420	247	240	2100	8110	1570	300	240	75	35
6	130	210	1390	241	236	2040	8130	1140	290	220	400	40
7	125	163	1360	241	220	1990	9970	1030	282	206	575	70
8	122	153	1320	236	285	1930	10900	892	274	201	260	100
9	119	202	1290	228	351	1850	12300	666	270	206	160	90
10	116	194	1240	216	313	1300	11200	586	265	180	140	620
11	113	200	1220	223	276	660	10300	566	260	160	130	960
12	110	168	1190	214	260	649	10100	612	240	140	100	290
13	107	321	1150	206	256	2030	9990	554	220	130	90	200
14	104	1230	1130	209	257	5290	10900	398	206	120	92	100
15	100	1220	1110	204	2030	4780	11000	315	200	110	80	58
16	96	1470	1090	214	3050	3210	10900	325	180	120	67	53
17	92	1670	977	218	2680	2710	10700	348	160	160	66	46
18	100	1650	726	213	2320	2500	10400	350	260	170	188	44
19	120	1320	602	227	2320	2360	10000	357	240	200	687	43
20	130	2630	572	272	2360	2170	9530	575	220	195	345	43
21	160	28400	585	273	3020	1610	9060	787	200	190	270	42
22	200	36900	594	326	4620	1290	8490	979	270	185	190	44
23	260	38400	479	540	4670	1270	7800	844	320	180	140	49
24	230	24200	373	564	2790	2080	5730	792	668	170	94	52
25	200	4150	322	557	1670	2750	3040	769	490	160	75	53
26	180	2980	308	900	1140	5590	2910	830	320	150	62	49
27	160	3080	300	1470	1010	4050	3620	1670	260	140	55	45
28	140	2830	292	1230	3920	7080	3130	1010	230	135	52	48
29	130	2650	283	982	4450	12300	2830	828	260	130	49	49
30	125	2540	277	944	---	21900	2540	750	300	100	46	48
31	153	---	273	916	---	26400	---	668	---	85	44	---
TOTAL	4339	160608	29853	13358	47177	136269	296490	28871	8685	5483	4802	3428
MEAN	140	5354	963	431	1627	4396	9883	931	290	177	155	114
MAX	260	38400	2450	1470	4670	26400	26400	2300	668	290	687	960
MIN	92	153	273	204	220	649	2540	315	160	85	44	35
AC=FT	8610	318600	59210	26500	93580	270300	588100	57270	17230	10880	9520	6800

CAL YR 1979 TOTAL 1163834 MEAN 3189 MAX 38400 MIN 43 AC=FT 2308000
WTR YR 1980 TOTAL 739363 MEAN 2020 MAX 38400 MIN 35 AC=FT 1467000

ARKANSAS RIVER BASIN

07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'45", in NE¼SW¼ 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 (0.2 km) upstream from Rock Creek, 3.0 mi (4.8 km) southeast of Quapaw, and at mile 13.9 (22.4 km). Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 mi² (6,501 km²), 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 (227.457 m) National Geodetic Vertical Datum of 1929. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

REMARKS.--Records good. Occasional releases from flood gates at old Riverton Hydroelectric plant, 15 mi (24 km) above station.

AVERAGE DISCHARGE.--41 years, 1,929 ft³/s (54.63 m³/s), 10.44 in/yr (265 m/yr), 1,398,000 acre-ft/yr (1.72 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190,000 ft³/s (5,380 m³/s) May 19, 1943, gage height, 43.4 ft (13.23 m), from floodmark, from rating curve extended above 54,000 ft³/s (1,530 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 5.8 ft³/s (0.16 m³/s) July 8, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,800 ft³/s (1,070 m³/s) at 1945 Nov. 21, gage height, 21.74 ft (6.626 m), no other peak above base of 18,000 ft³/s (510 m³/s); minimum, 136 ft³/s (3.85 m³/s) Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	333	1060	1220	492	414	1160	6240	1500	1050	373	182	187		
2	340	932	895	481	408	983	4060	1240	947	351	173	189		
3	433	617	1010	468	413	1060	3660	1250	879	333	175	192		
4	457	474	898	459	413	1030	3710	1220	763	321	178	185		
5	411	410	844	455	404	996	3060	1160	663	316	201	170		
6	296	357	810	445	392	985	2740	1130	680	308	222	175		
7	346	334	773	425	399	961	2540	1070	654	299	202	177		
8	327	350	731	425	442	924	2710	1020	617	295	183	174		
9	203	652	687	425	436	890	3340	973	584	288	176	171		
10	380	908	670	426	444	837	3330	939	564	255	167	173		
11	369	669	651	411	430	807	3170	911	556	236	161	173		
12	242	561	622	411	414	910	2700	1060	533	188	159	195		
13	217	471	608	401	415	2040	2340	1240	478	185	159	221		
14	274	409	564	397	444	2350	2140	1310	338	187	680	201		
15	399	373	509	410	2390	1730	2050	1180	368	198	2340	183		
16	233	354	485	403	5010	1340	1940	1110	408	201	743	170		
17	275	340	484	404	4010	1200	1850	1070	2200	204	499	162		
18	472	332	484	403	3130	1220	1770	1110	943	202	1240	159		
19	364	325	395	414	2570	1390	1680	1120	715	199	898	161		
20	365	782	450	467	2900	1400	1580	1050	664	197	537	162		
21	471	33500	462	492	4380	1420	1480	1180	617	196	433	160		
22	694	31200	468	509	4180	1430	1320	1020	553	192	351	150		
23	381	18800	478	518	2670	1510	1220	991	657	184	302	146		
24	327	5700	534	530	1970	2070	1830	962	1310	186	273	145		
25	397	2980	580	530	1700	2520	1260	897	886	188	260	139		
26	227	1920	583	507	1560	2690	1590	872	622	176	245	137		
27	231	1900	577	483	1450	2310	2230	1250	528	191	231	137		
28	262	1660	560	477	1370	2350	1920	3170	473	191	219	137		
29	270	1460	526	462	1310	4090	1770	1650	436	190	207	136		
30	300	1340	511	447	---	10400	1610	1190	408	183	199	139		
31	677	---	499	425	---	10600	---	1250	---	179	193	---		
TOTAL	10973	111170	19568	14002	46468	65603	72240	37095	21094	7192	12188	5006		
MEAN	354	3706	631	452	1602	2116	2408	1197	703	232	393	167		
MAX	694	33500	1220	530	5010	10600	6240	3170	2200	373	2340	221		
MIN	203	325	395	397	392	807	1220	872	338	176	159	136		
CF8M	.14	1.48	.25	.18	.64	.84	.96	.48	.28	.09	.16	.07		
IN.	.16	1.65	.29	.21	.69	.97	1.07	.55	.31	.11	.18	.07		
AC-FT	21760	220500	38810	27770	92170	130100	143300	73580	41840	14270	24170	9930		
CAL YR 1979	TOTAL	743884	MEAN	2038	MAX	33500	MIN	203	CF8M	.81	IN	11.02	AC-FT	1475000
WTR YR 1980	TOTAL	422599	MEAN	1155	MAX	33500	MIN	136	CF8M	.46	IN	6.26	AC-FT	838200

ARKANSAS RIVER BASIN

169

07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'50", long 94°35'12", in NE¼ sec. 22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, on downstream side of right pier of bridge on State Highway 43, 0.8 mi (1.3 km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3.0 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--872 mi² (2,258 km²).

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 (228.786 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 6, 1960, to Aug. 25, 1961, at site 100 ft (30.5 m) downstream.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--41 years, 789 ft³/s (22.34 m³/s), 12.28 in/yr (312 mm/yr), 571,600 acre-ft/yr (705 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft³/s (3,880 m³/s) Apr. 19, 1941, gage height, 28.4 ft (8.66 m), from floodmark, from rating curve extended above 60,000 ft³/s (1,700 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 5.1 ft³/s (0.14 m³/s) Sept. 5, 6, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,480 ft³/s (127 m³/s) Mar. 31, gage height, 8.24 ft (2.512 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum, 38 ft³/s (1.08 m³/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	196	439	252	285	379	2970	604	1930	260	80	67
2	107	202	407	245	274	364	2320	582	1240	245	74	67
3	104	179	374	251	267	348	1920	553	785	215	71	67
4	104	160	349	246	260	338	1610	524	549	200	69	67
5	99	144	326	241	254	328	1380	498	430	185	67	65
6	94	134	311	234	249	318	1240	480	377	175	63	65
7	89	128	294	241	245	308	1140	460	342	165	59	63
8	85	147	283	250	260	302	1020	441	285	158	61	61
9	82	300	268	258	258	295	936	425	265	153	59	59
10	80	417	256	266	250	289	865	412	240	145	61	55
11	78	452	250	269	239	283	814	402	224	139	59	51
12	76	400	242	268	233	295	774	471	220	136	57	49
13	74	351	236	264	228	321	733	968	200	131	57	47
14	72	317	223	262	238	346	700	1090	194	123	134	47
15	80	294	217	258	310	365	676	946	181	117	330	47
16	89	276	685	264	685	373	651	898	175	115	224	45
17	87	262	1010	264	1010	423	628	946	224	107	159	43
18	85	251	1000	257	1000	1000	610	946	253	104	142	43
19	84	248	946	257	946	1160	586	1070	321	97	133	43
20	82	253	824	282	824	1110	560	1110	292	94	109	42
21	80	968	707	313	707	1210	538	1020	269	92	107	42
22	110	2360	631	343	631	1410	518	925	228	92	99	42
23	104	1790	564	367	564	1400	499	857	486	89	89	42
24	104	1320	228	376	504	1930	487	811	580	89	80	40
25	101	1080	262	373	474	2780	487	759	480	89	76	40
26	98	918	279	364	449	2350	521	707	420	94	71	40
27	97	746	286	349	428	1840	650	765	375	97	67	38
28	96	592	285	333	410	1540	676	817	335	97	71	43
29	95	532	276	318	394	1360	649	785	305	94	74	45
30	102	482	269	305	---	2070	620	740	275	92	71	43
31	148	---	261	295	---	4020	---	1010	---	85	69	---
TOTAL	2895	15899	12988	8865	12876	30855	27778	23022	12480	4074	2942	1508
MEAN	93.4	530	419	286	444	995	926	743	416	131	94.9	50.3
MAX	148	2360	1010	376	1010	4020	2970	1110	1930	260	330	67
MIN	72	128	217	234	228	283	487	402	175	85	57	38
CF8M	.11	.61	.48	.33	.51	1.14	1.06	.85	.48	.15	.11	.06
IN.	.12	.68	.55	.38	.55	1.32	1.19	.98	.53	.17	.13	.06
AC=FT	5740	31540	25760	17580	25540	61200	55100	45660	24750	8080	5840	2990
CAL YR 1979	TOTAL	238638	MEAN 654	MAX	12600	MIN 72	CF8M .75	IN 10.18	AC=FT	473300		
WTR YR 1980	TOTAL	156182	MEAN 427	MAX	4020	MIN 38	CF8M .49	IN 6.66	AC=FT	309800		

ARKANSAS RIVER BASIN

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'17", long 95°02'19", in SW¼ 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 (15.9 km) upstream from Big Cabin Creek, and at mile 77.0 (123.9 km).

DRAINAGE AREA.--10,298 mi² (26,672 km²).

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 (0.335 m), 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 (230.12 m). Storage began Mar. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft (207.87 m), sill of powerhouse penstock, and 745.0 ft (227.08 m), maximum power pool is 1,492,000 acre-ft (1.84 km³). Capacity between gage heights 745.0 ft (227.08 m), and 755.0 ft (230.12 m) is 525,000 acre-ft (647 hm³) and is reserved for flood control. Dead storage below gage height 682.0 ft (207.87 m) is 180,200 acre-ft (222 hm³). 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 (2.73 km³), May 25, 1957, gage height, 755.27 ft (230.206 m), minimum since power-pool was first filled, 642,900 acre-ft (793 hm³) Sept. 28, 1954, gage height, 713.41 ft (217.447 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,741,000 acre-ft (2.15 km³) Nov. 25 gage height, 746.46 ft (227.521 m); minimum, 1,226,000 acre-ft (1.51 km³) Sept. 25, gage height, 734.14 ft (223.766 m).

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

733	1,186,000	740	1,452,000
735	1,257,000	743	1,581,000
737	1,332,000	747	1,767,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1287000	1302000	1650000	1316000	1308000	1295000	1489000	1560000	1630000	1600000	1430000	1330000
2	1286000	1300000	1629000	1316000	1310000	1300000	1537000	1550000	1630000	1590000	1430000	1340000
3	1286000	1310000	1612000	1310000	1313000	1299000	1581000	1550000	1630000	1590000	1430000	1330000
4	1286000	1310000	1590000	1305000	1312000	1300000	1594000	1560000	1630000	1590000	1430000	1330000
5	1286000	1310000	1573000	1303000	1315000	1303000	1596000	1560000	1630000	1590000	1420000	1320000
6	1285000	1310000	1552000	1303000	1317000	1304000	1595000	1560000	1620000	1590000	1410000	1310000
7	1283000	1310000	1535000	1305000	1320000	1305000	1591000	1570000	1630000	1590000	1410000	1300000
8	1282000	1310000	1513000	1304000	1318000	1310000	1593000	1570000	1620000	1580000	1400000	1290000
9	1278000	1310000	1494000	1302000	1318000	1316000	1600000	1560000	1630000	1580000	1390000	1290000
10	1276000	1310000	1472000	1304000	1320000	1318000	1610000	1570000	1630000	1570000	1390000	1280000
11	1276000	1310000	1454000	1306000	1321000	1316000	1620000	1570000	1620000	1560000	1390000	1280000
12	1280000	1310000	1434000	1305000	1322000	1311000	1630000	1570000	1620000	1550000	1380000	1280000
13	1280000	1320000	1413000	1304000	1324000	1318000	1630000	1580000	1620000	1550000	1370000	1270000
14	1280000	1320000	1391000	1308000	1324000	1324000	1630000	1590000	1620000	1530000	1370000	1270000
15	1280000	1320000	1373000	1309000	1336000	1327000	1632000	1600000	1620000	1520000	1370000	1260000
16	1280000	1330000	1357000	1311000	1343000	1336000	1630000	1590000	1620000	1510000	1360000	1260000
17	1280000	1330000	1339000	1313000	1345000	1333000	1640000	1600000	1620000	1500000	1370000	1260000
18	1280000	1334000	1325000	1315000	1362000	1324000	1640000	1610000	1620000	1490000	1370000	1250000
19	1280000	1338000	1318000	1321000	1359000	1318000	1639000	1610000	1610000	1480000	1360000	1250000
20	1280000	1426000	1314000	1323000	1352000	1311000	1640000	1610000	1610000	1470000	1360000	1240000
21	1280000	1444000	1310000	1324000	1348000	1301000	1640000	1610000	1620000	1470000	1360000	1230000
22	1280000	1559000	1309000	1323000	1348000	1300000	1640000	1610000	1610000	1470000	1360000	1230000
23	1290000	1667000	1315000	1320000	1347000	1306000	1630000	1610000	1610000	1470000	1360000	1230000
24	1290000	1736000	1318000	1320000	1339000	1310000	1630000	1600000	1610000	1470000	1360000	1230000
25	1290000	1734000	1321000	1311000	1328000	1310000	1610000	1610000	1610000	1460000	1350000	1230000
26	1290000	1723000	1323000	1313000	1314000	1310000	1600000	1610000	1620000	1470000	1350000	1230000
27	1290000	1710000	1319000	1317000	1301000	1308000	1600000	1610000	1610000	1470000	1340000	1230000
28	1290000	1695000	1311000	1311000	1298000	1307000	1590000	1610000	1610000	1460000	1340000	1230000
29	1290000	1679000	1308000	1307000	1299000	1322000	1580000	1610000	1600000	1460000	1340000	1230000
30	1297000	1663000	1313000	1308000	---	1371000	1570000	1610000	1600000	1450000	1340000	1230000
31	1299000	---	1314000	1307000	---	1433000	---	1620000	---	1440000	1340000	---
MAX	1299000	1736000	1650000	1324000	1362000	1433000	1640000	1620000	1630000	1600000	1430000	1340000
MIN	1276000	1300000	1308000	1302000	1298000	1295000	1489000	1550000	1600000	1440000	1340000	1230000
†	736.13	744.80	736.52	736.35	736.12	739.55	742.64	743.93	743.46	739.74	737.08	734.16
‡	+12,000	+364,000	-349,000	-7,000	-8,000	+134,000	+137,000	+50,000	-20,000	-160,000	-100,000	-110,000
CAL YR 1979	MAX	1740000	MIN	1241000	‡	+66,000						
WTR YR 1980	MAX	1736000	MIN	1230000	‡	-57,000						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

171

07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'15", long 95°02'44", in SE¼ sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi (0.8 km) upstream from bridge on State Highway 82, 1.5 mi (2.4 km) south of Langley, 3.6 mi (5.8 km) downstream from Pensacola Dam, 6.3 mi (10.1 km) upstream from Big Cabin Creek, and at mile 73.4 (118.1 km).

DRAINAGE AREA.--10,335 mi² (26,768 km²).

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 (185.212 m), Corps of Engineers datum. Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mile (0.2 km) upstream at same datum. Feb. 10, 1954, to Sept. 30, 1963, water-stage recorder at site 0.5 mi (0.8 km) downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi (3.2 and 4.8 km) upstream at same datum.

REMARKS.--Records good. Low flow values of 25 ft³/s (0.71 m³/s) consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (station 07190000).

AVERAGE DISCHARGE.--41 years, 6,931 ft³/s (196.3 m³/s), 5,022,000 acre-ft/yr (6.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300,000 ft³/s (8,500 m³/s) May 20, 1943, gage height, 45.5 ft (13.87 m), from floodmarks, from computation of outflow from Lake O' The Cherokees; minimum daily, 9 ft³/s (0.25 m³/s), Mar. 25, 1940 (caused by closure of Pensacola Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) Apr. 10, gage height, 14.88 ft (4.535 m); minimum daily discharge, 25 ft³/s (0.708 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	25	12600	25	419	6920	12400	7390	30	3440	3360	623
2	1080	25	12600	2360	47	1540	12400	8250	2750	4190	65	203
3	25	25	12600	5710	35	5850	12700	4580	5790	1870	448	3190
4	25	25	12600	3370	1660	3120	12500	35	3270	25	1180	3200
5	55	256	12600	1690	34	2950	12500	3450	1630	914	3880	4040
6	25	25	12600	129	25	2980	12600	3720	1210	588	3930	3540
7	35	25	12400	1850	1830	3380	12000	68	4410	60	2490	5040
8	4550	3040	12500	2060	1950	711	12600	2020	35	2460	2850	5290
9	25	1330	12500	640	25	35	12700	3380	50	2950	4960	3650
10	25	1580	12500	444	35	3690	12400	25	552	2980	25	1800
11	25	35	12400	171	552	3130	12600	180	1030	4610	4010	57
12	25	553	12200	2700	689	5670	12600	5980	1360	4890	3950	4140
13	25	43	12300	407	163	904	12500	48	1060	3700	3270	3790
14	25	247	12200	75	164	5550	12300	50	3080	5080	1140	2400
15	25	25	12300	142	1660	6830	12300	1060	2060	5680	3950	2350
16	25	25	10200	243	5280	915	12500	716	1480	5850	3950	2380
17	25	25	11800	90	1880	9150	12600	329	70	4980	323	78
18	25	135	9070	270	6530	11400	12600	35	6840	4520	2950	1910
19	81	707	6010	353	7460	8290	12700	3690	7990	5590	3640	3080
20	177	3450	1720	35	10300	9070	11700	1140	25	5450	4170	3460
21	35	9590	9060	1430	10300	11400	12200	1620	25	1550	1320	3590
22	173	12600	173	2380	10200	6250	12400	3880	5330	25	123	2760
23	25	12600	35	3000	10300	2550	12800	5270	1270	25	1730	141
24	25	12500	25	2820	10400	8940	12500	5360	1650	25	134	25
25	25	12700	25	7480	10400	10000	12600	723	864	773	2160	128
26	25	12600	25	899	10300	11200	12700	3260	403	25	3240	25
27	25	12700	4860	35	10300	12100	12500	3540	970	35	3190	25
28	35	12600	6320	6380	7750	12200	12500	6000	4930	3170	1250	35
29	25	12500	25	2710	7070	12200	12000	4590	3760	2960	1020	25
30	29	12500	70	2360	---	12500	12500	3860	527	3790	190	25
31	25	---	25	2040	---	12500	---	438	---	2810	100	---
TOTAL	6910	134491	242343	54298	127758	203925	374900	84687	64451	85015	68998	61000
MEAN	223	4483	7818	1752	4405	6378	12500	2732	2148	2742	2226	2033
MAX	4550	12700	12600	7480	10400	12500	12800	8250	7990	5850	4960	5290
MIN	25	25	25	25	25	35	11700	25	25	25	25	25
AC=FT	13710	266800	480700	107700	253400	404500	743600	168000	127800	168600	136900	121000
CAL YR 1979 TOTAL	2406746	MEAN	6594	MAX	20800	MIN	25	AC=FT	4774000			
WTR YR 1980 TOTAL	1508776	MEAN	4122	MAX	12800	MIN	25	AC=FT	2993000			

ARKANSAS RIVER BASIN

07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE¼NE¼ 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 (7.9 km) northeast of Big Cabin, 0.9 mi (1.5 km) downstream from White Oak Creek, 6.8 mi (10.9 km) upstream from Mustang Creek, and at mile 13.0 (20.9 km).

DRAINAGE AREA.--450 mi² (1,165 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft (189.586 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi (7.2 km) downstream at same datum and present site used as supplemental gage.

REMARKS.--Records good above 10 ft³/s (0.28 m³/s) and poor below. Low flow sustained by sewage from city of Vinita.

AVERAGE DISCHARGE.--33 years, 315 ft³/s (8,920 m³/s), 9.18 in/yr (233 mm/yr), 228,200 acre-ft/yr (281 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft³/s (1,470 m³/s) Oct. 3, 1959, gage height, 34.55 ft (10.531 m), at former site; maximum gage height, 44.58 ft (13.588 m) Nov. 4, 1974; minimum, 0.10 ft³/s (0.003 m³/s) at times in 1954, 1956 and 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft (10.656 m) at former site, discharge, 63,000 ft³/s (1,780 m³/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,160 ft³/s (231 m³/s) Nov. 21, gage height, 29.88 ft (9.107 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	12	27	15	27	48	515	183	1220	4.2	1.2	.90
2	1.3	7.8	23	14	27	40	321	127	270	3.6	1.1	1.6
3	1.0	4.8	20	16	26	36	802	115	136	2.9	1.1	2.6
4	1.0	3.7	20	17	26	35	585	98	88	2.5	1.0	1.6
5	1.0	2.9	19	19	27	35	287	80	63	2.3	1.0	1.3
6	1.0	2.6	17	22	29	35	205	87	47	2.0	1.0	1.3
7	1.3	2.9	15	28	29	35	167	89	35	1.7	.90	1.2
8	1.3	3.1	14	27	36	33	344	62	26	1.6	.80	1.1
9	1.3	3.4	14	24	36	32	241	49	20	1.4	.80	1.0
10	1.3	4.8	13	20	35	31	161	41	17	1.3	.80	1.0
11	1.0	4.4	13	18	34	27	119	35	14	1.3	.75	1.0
12	1.0	2.9	13	16	34	403	102	1540	12	1.3	.70	1.0
13	1.0	2.1	11	14	34	641	92	861	9.9	1.3	.70	1.0
14	1.0	1.8	12	12	129	284	82	246	8.1	1.3	.80	1.1
15	1.0	1.6	12	11	2530	149	74	122	7.3	1.2	.75	1.2
16	1.1	1.6	12	11	1470	332	66	345	6.2	1.2	.75	1.3
17	1.2	1.6	12	11	361	1520	61	257	172	1.1	.75	1.6
18	1.1	1.6	12	11	235	230	64	325	179	1.0	1.6	2.3
19	1.0	1.8	12	53	190	126	60	401	331	1.0	2.9	2.1
20	1.0	102	12	801	179	106	56	179	144	1.0	1.5	1.8
21	1.0	6440	12	361	159	237	49	116	103	1.0	2.1	1.5
22	2.2	4300	12	232	128	180	42	88	43	1.0	3.1	1.5
23	2.3	372	13	160	104	360	38	77	26	1.2	2.1	1.5
24	2.1	181	14	113	86	2510	41	67	20	1.3	1.4	1.5
25	1.8	117	13	91	76	763	290	61	15	1.5	1.2	1.5
26	1.6	85	16	75	67	365	1960	57	11	4.8	1.1	1.8
27	1.3	62	18	64	61	290	3040	1640	8.9	6.4	1.0	1.6
28	1.0	46	19	51	56	1640	668	584	7.0	2.9	1.0	2.6
29	1.3	38	20	41	50	1650	341	206	5.6	2.1	1.0	2.0
30	4.8	30	19	36	---	4990	214	113	4.6	1.6	.90	1.4
31	29	---	16	32	---	1080	---	2340	---	1.4	.90	---
TOTAL	70.6	11840.4	475	2416	6281	18243	11087	10561	3049.6	60.4	36.70	44.90
MEAN	2.28	395	15.3	77.9	217	588	370	341	102	1.95	1.18	1.50
MAX	29	6440	27	801	2530	4990	3040	2340	1220	6.4	3.1	2.6
MIN	1.0	1.6	11	11	26	27	38	35	4.6	1.0	.70	.90
CF8M	.005	.88	.03	.17	.48	1.31	.82	.76	.23	.004	.003	.003
IN.	.01	.98	.04	.20	.52	1.51	.92	.87	.25	.00	.00	.00
AC=FT	140	23490	942	4790	12460	36180	21990	20950	6050	120	73	89

CAL YR 1979 TOTAL 58605.70 MEAN 161 MAX 6440 MIN 1.0 CF8M .36 IN 4.84 AC=FT 116200
WTR YR 1980 TOTAL 64165.60 MEAN 175 MAX 6440 MIN .70 CF8M .39 IN 5.30 AC=FT 127300

ARKANSAS RIVER BASIN

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07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'24", in NE¼NW¼ sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi (2.9 km) upstream from Cherokee Creek, 4.8 mi (7.7 km) northeast of Row, 6.5 mi (10.5 km) southeast of Sycamore, and at mile 35.0 (56.3 km).

DRAINAGE AREA.--133 mi² (344 km²).

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 (266.7 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 108 ft³/s (3.059 m³/s), 11.03 in/yr (280 mm/yr), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s (1,130 m³/s), July 27, 1975, gage height, 22.07 ft (6.727 m); minimum, 1.2 ft³/s (34.0 m³/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.--Maximum discharge, 245 ft³/s (6.94 m³/s) Mar. 25, gage height, 5.20 ft (1.585 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 4.2 ft³/s (0.12 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	13	18	46	28	30	46	193	52	65	29	8.2	5.1		
2	13	20	43	27	29	43	174	50	60	27	8.0	4.9		
3	12	22	40	27	29	42	159	49	57	25	7.7	5.0		
4	12	23	37	26	28	41	141	47	56	23	7.2	4.9		
5	11	24	36	26	27	39	127	46	55	22	6.6	5.2		
6	11	23	34	27	27	38	114	45	51	21	6.0	5.8		
7	11	22	32	27	26	37	106	43	49	19	5.6	5.9		
8	11	21	31	27	26	35	99	42	44	18	5.6	5.8		
9	12	21	30	27	25	34	94	41	41	16	5.6	6.2		
10	11	22	29	28	26	34	88	40	39	15	5.6	6.5		
11	11	26	28	28	26	33	83	39	37	14	5.4	6.3		
12	11	27	27	28	26	32	79	60	35	14	5.2	6.4		
13	11	28	26	28	25	31	75	45	32	14	4.8	6.2		
14	11	28	25	28	25	32	72	41	31	13	4.5	6.1		
15	12	27	24	28	29	33	69	42	29	13	5.0	5.8		
16	12	26	24	28	33	35	66	42	29	12	5.4	5.4		
17	11	24	23	27	41	46	65	42	29	11	5.7	5.1		
18	11	23	23	27	80	87	63	44	31	11	6.7	5.3		
19	12	22	22	27	86	129	62	46	33	10	7.3	5.7		
20	13	22	22	27	79	121	61	52	34	10	7.1	6.2		
21	13	32	22	28	74	113	58	59	35	9.7	7.5	6.3		
22	13	43	22	29	69	111	57	60	36	9.1	7.8	6.2		
23	14	117	22	29	65	116	55	59	39	8.6	7.7	5.7		
24	14	99	23	31	61	172	54	57	42	8.4	7.5	5.1		
25	15	83	24	32	58	237	52	54	44	8.4	7.2	5.3		
26	16	71	26	32	56	216	53	55	42	8.5	6.4	6.1		
27	16	64	27	32	52	179	70	134	40	8.9	5.9	6.6		
28	16	58	28	32	50	154	61	113	38	9.1	5.4	6.9		
29	16	53	29	32	48	136	58	97	35	9.1	5.3	7.2		
30	16	50	29	32	---	151	55	83	33	8.8	5.3	7.2		
31	17	---	29	31	---	169	---	72	---	8.3	5.2	---		
TOTAL	398	1139	883	886	1256	2742	2563	1751	1221	433.9	194.4	176.4		
MEAN	12.8	36.0	28.5	28.6	43.3	88.5	85.4	56.5	40.7	14.0	6.27	5.88		
MAX	17	117	46	32	86	237	193	134	65	29	8.2	7.2		
MIN	11	18	22	26	25	31	52	39	29	8.3	4.5	4.9		
CF8M	.10	.29	.21	.22	.33	.67	.64	.43	.31	.11	.05	.04		
IN.	.11	.32	.25	.25	.35	.77	.72	.49	.34	.12	.05	.05		
AC=FT	789	2260	1750	1760	2490	5440	5080	3470	2420	861	386	350		
CAL YR 1979	TOTAL	28054.0	MEAN	76.9	MAX	1310	MIN	11	CF8M	.58	IN	7.85	AC=FT	55650
WTR YR 1980	TOTAL	13643.7	MEAN	37.3	MAX	237	MIN	4.5	CF8M	.28	IN	3.82	AC=FT	27060

ARKANSAS RIVER BASIN

07191220 SPAVINAW CREEK NEAR SYCAMORE,OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1968, 1977, and January to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	PH (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)	HARD- NESS (MG/L AS CACO3)
JAN 10...	0930	28	.1	7.3	11.0	10.8	98	5	130
FEB 25...	1130	59	.1	7.1	10.5	10.9	99	12	120
MAR 13...	1200	32	.1	7.8	12.0	11.0	95	8	120
APR 18...	1400	63	.0	7.6	14.5	10.6	105	12	110
MAY 14...	1430	40	.1	7.4	17.0	8.9	94	14	120
JUN 24...	1400	42	--	7.3	19.5	8.0	90	--	--
JUL 10...	1000	15	.0	7.6	19.5	6.6	75	9	130
AUG 20...	1200	7.2	.0	7.7	20.5	7.0	79	16	140
SEP 17...	1500	5.0	--	7.6	22.0	7.8	90	--	--

[illegible][illegible]

ARKANSAS RIVER BASIN

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07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'54", long 95°11'36", in SE¼NW¼ 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 (3.2 km) northwest of Locust Grove, 3.5 mi (5.6 km) downstream from Salina Creek, and at mile 47.3 (76.1 km).

DRAINAGE AREA.--11,534 mi² (29,873 km²).

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 17 22-foot (6.706 m) taintor gates. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft (548 hm³) at elevation 636.0 ft (193.85 m), top of taintor gates, 200,300 acre-ft (247 hm³) at elevation 619.0 ft (188.67 m) power pool, and 48,630 acre-ft (60.0 hm³) at elevation 599.0 ft (182.58 m), 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 (538 hm³) Nov. 9, 1974, elevation, 635.56 ft (193.719 m); minimum since power pool first filled, 183,100 acre-ft (226 hm³) Dec. 24, 1967, elevation, 617.38 ft (188.177 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 221,800 acre-ft (273 hm³/s) Nov. 25, elevation, 620.92 ft (189.256 m); minimum, 190,600 acre-ft (235 hm³/yr) Apr. 13, elevation, 618.10 (188.397 m).

MONTH-END ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980.

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	619.30	203,600	--
Oct. 31	618.94	199,600	-4,000
Nov. 30	619.55	206,300	+6,700
Dec. 31	619.12	201,600	-4,700
CAL YR 79	--	--	-4,700
Jan. 31	620.26	214,300	+12,700
Feb. 29	619.14	201,800	-12,500
Mar. 31	619.06	201,000	-800
Apr. 30	619.10	201,400	+400
May 31	619.41	204,800	+3,400
June 30	618.91	199,300	-5,500
July 31	619.81	209,200	+9,900
Aug. 31	619.32	203,800	-5,400
Sept. 30	619.62	207,100	+3,300
WTR YR 80	--	--	+3,500

ARKANSAS RIVER BASIN

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'45", long 95°10'59", in SE¼NW¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 300 ft (91.4 m) downstream from Robert S. Kerr Dam, 2.2 mi (3.5 km) northwest of Locust Grove, 10 mi (16.1 km) northeast of Chouteau, and at mile 47.2 (75.9 km).

DRAINAGE AREA.--11,534 mi² (29,873 km²).

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 (168.859 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 3, 1941, nonrecording gage at bridge on State Highway 33, 8.2 mi (13.2 km) downstream, at datum 17.63 ft (5.374 m) lower. Apr. 3, 1941, to Sept. 30, 1950; Oct. 4, 1963, to Apr. 6, 1964, at site 2.5 mi (4.0 km) downstream at datum 2.17 ft (0.661 m) lower (now used as supplementary gage). Supplemental water-stage recorder Oct. 4, 1963, to July 10, 1973, at site 8.2 mi (13.2 km) downstream.

REMARKS.--Records good. Flow regulated 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), 17 years (water years 1964-80), 7,819 ft³/s (221.4 m³/s), 5,665,000 acre-ft/yr (6.98 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft³/s (11,328 m³/s) May 20, 1943, gage height, 45.00 ft (13.716 m), site and datum then in use, from rating curve extended above 140,000 ft³/s (3,965 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 12 ft³/s (0.32 m³/s) Nov. 13, 1963, (caused by closure of Robert S. Kerr Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,300 ft³/s (971 m³/s) Nov. 24, gage height, 17.73 ft (5.404 m); minimum daily discharge, 98 ft³/s (2.78 m³/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	186	11500	179	310	4240	11100	6910	143	2190	2840	609
2	1540	190	11100	2130	184	1670	13500	7390	5730	3040	236	185
3	206	186	15200	5390	186	3800	15700	3590	7140	1650	435	3690
4	182	182	8060	3520	1230	2660	12400	215	3700	225	1170	3630
5	372	182	12800	1080	113	3230	12700	4630	1690	607	3570	3800
6	202	186	16600	199	109	3660	10900	4900	217	207	4510	4780
7	462	182	9830	1600	1530	4470	10800	235	7400	249	2580	4780
8	750	314	11600	1770	6320	217	13100	171	211	723	2520	1130
9	190	210	11500	228	128	110	11200	3110	187	4300	3930	3830
10	186	194	11200	186	103	2740	14400	175	182	2380	218	1670
11	190	254	11700	185	98	2820	13300	163	178	4530	3280	190
12	190	621	11500	1840	100	5130	13200	7590	611	8540	5120	4060
13	186	273	13300	300	104	348	14500	630	539	2860	3450	3360
14	268	194	8740	230	106	7520	10900	682	1870	4310	210	1290
15	178	194	10200	200	5260	4830	12900	1130	3020	3350	3630	1120
16	422	190	16300	190	9950	570	11800	792	668	5670	4050	2770
17	186	190	13700	185	290	10900	12700	1280	211	5080	200	177
18	348	186	8850	180	7950	12000	12100	197	5670	2660	1940	1980
19	198	1440	2490	175	7360	8820	9390	4770	7900	4830	2520	3700
20	194	5320	1380	300	10800	10000	11600	1200	276	3330	4760	922
21	206	16900	261	200	10200	10400	11700	3150	190	1340	550	2400
22	768	19900	199	2300	9980	4260	12500	2810	5640	254	220	1720
23	210	16400	199	2500	8420	3500	17700	6860	1320	267	2250	211
24	182	14900	422	3400	8090	13600	8140	7410	2280	1790	227	333
25	178	338	191	10200	9980	11400	10000	212	417	1680	1890	173
26	178	14300	198	229	10500	14200	17800	1500	736	247	4320	157
27	174	19400	5320	172	12100	12300	14900	4850	1110	232	2740	156
28	170	15200	7320	4820	5750	10500	12800	11000	7310	4180	209	153
29	170	13300	203	2550	9300	14300	9280	1300	4260	2380	194	186
30	240	8250	238	2560	---	16000	10900	4930	537	2830	299	159
31	194	---	182	2310	---	16000	---	168	---	2090	450	---
TOTAL	9378	149762	232283	51308	136551	216195	373910	93950	71343	78021	64518	53321
MEAN	303	4992	7493	1655	4709	6974	12460	3031	2378	2517	2081	1777
MAX	1580	19900	16600	10200	12100	16000	17800	11000	7900	8540	5120	4780
MIN	170	182	182	172	98	110	8140	163	143	207	194	153
AC=FT	18600	297100	460700	101800	270800	428800	741700	186300	141500	154800	128000	105800

CAL YR 1979 TOTAL 3125362 MEAN 8563 MAX 47700 MIN 147 AC=FT 6199000
WTR YR 1980 TOTAL 1530540 MEAN 4182 MAX 19900 MIN 98 AC=FT 3036000

07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°52'16", long 95°13'43", in NW¼NW¼ 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 (6.4 km) north of Fort Gibson, and at mile 7.7 (12.4 km).

DRAINAGE AREA.--12,492 km² (32,354 km²).

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 (12.2 m) taintor gates, outlet works consists of ten 5.7 ft x 7.0 ft sluice gates. Regulated storage began Sept. 5, 1949; power pool was first maintained in 1953. Capacity, 1,284,000 acre-ft (1,583 hm³) at elevation 582.0 ft (177.39 m), flood-control pool, 365,200 acre-ft (450 hm³) at elevation 554.0 ft (168.86 m), maximum power pool, and 311,300 acre-ft (384 hm³) at elevation 551.0 ft (167.94 m) (minimum power pool). Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,278,000 acre-ft (1.58 km³) May 12, 1961, elevation, 581.88 ft (177.357 m); minimum since first use of power pool, 303,800 acre-ft (375 hm³) May 26, 1955, elevation, 550.56 ft (167.811 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 421,600 acre-ft (520 hm³) Apr. 1, elevation, 556.82 ft (169.719 m); minimum, 337,100 acre-ft (416 hm³) Feb. 7, elevation, 552.48 ft (168.396 m).

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

552	328,500	556	404,500
554	365,200	558	447,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359900	348300	383300	361000	342200	357600	407300	385500	377600	385300	370900	371800
2	359500	348300	379500	359700	342700	346700	401100	379100	381900	387100	369000	370300
3	359700	348300	386900	362500	343300	342000	398300	376200	384500	384700	369000	372800
4	352800	348300	376600	364100	342000	344700	394700	376200	372000	383900	367500	377600
5	351900	349400	379500	358400	340600	346900	393700	378500	365200	383100	372000	377900
6	351900	346900	386500	360400	338000	350500	390700	373600	361400	382500	374500	382500
7	351900	342000	385100	358600	340200	357200	397300	377500	377400	380100	370300	386500
8	351500	342900	382900	358400	353800	357200	389500	370500	371700	378500	367500	381500
9	349000	344000	382100	356300	353600	357600	386100	374700	371500	382700	371300	382900
10	347000	343600	379300	353800	353400	359900	388700	375300	371500	385700	369200	381300
11	347400	343400	381900	353200	349700	355900	392500	376400	367500	388100	370900	376000
12	347600	344500	379900	356100	348500	356600	397500	386500	367500	400100	372000	374700
13	346900	344300	382100	357600	348500	347200	406500	381100	365400	389700	370900	380300
14	346500	344300	377400	355700	348700	351500	405700	380900	363100	383500	366500	382700
15	346900	344500	379700	356800	359100	357600	405100	383300	366900	370900	369600	378100
16	347200	344700	392500	357600	370900	357800	397100	380500	366700	373000	374700	378700
17	347800	344700	396500	356300	354200	368000	389500	378500	370300	371300	377200	375800
18	347800	344700	396900	356500	360400	371300	385100	376800	376400	367100	369800	378500
19	347800	341100	380500	358700	362700	367100	377200	378500	387900	372800	367100	378500
20	347800	355700	366300	360100	366200	366200	374900	374300	389100	375800	372800	372800
21	350100	385300	357200	359500	369200	363700	375300	380300	389500	364600	366200	371900
22	350500	393300	358600	362200	367100	356300	377000	377000	395700	362900	366200	372800
23	350800	391100	360800	363500	360100	358400	390500	382500	383900	362700	369400	372800
24	350800	395900	359700	368600	355300	375300	386100	384700	396300	364600	369400	372800
25	351200	371300	360300	373600	357600	378100	383100	376400	382700	367300	369200	372600
26	350800	366500	358600	356600	361200	386900	394900	378300	378900	367100	374100	371700
27	351500	366000	364800	352800	367100	392300	403100	386300	372800	365600	376600	370500
28	351500	388900	366200	353400	363700	396500	405500	395100	388500	372800	373000	368200
29	350500	391700	363300	349600	366900	409000	398300	384500	389500	365200	372600	368400
30	353400	383300	363500	344200	---	419900	392900	381900	385700	367100	370900	368400
31	350500	---	360800	346500	---	420800	---	376200	---	369200	369600	---
MAX	359900	395900	396900	373600	370900	420800	407300	395100	396300	400100	377200	386500
MIN	346500	341100	357200	344200	338000	342000	374900	370500	361400	362700	366200	368200
†	553.22	554.94	553.77	553.00	554.09	556.78	555.42	554.58	555.06	554.21	554.23	554.17
‡	-12,400	+32,800	-22,500	-14,300	+20,400	+53,900	-27,900	-16,700	+9,500	-16,500	+400	-1,200
CAL YR 1979	MAX	437300	MIN	338600	‡	+3,800						
WTR YR 1980	MAX	420800	MIN	338000	‡	+5,500						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°51'15", long 95°13'45", in SE¼NW¼ sec.19, T.16 N., R.19 E., Cherokee County, Hydrologic Unit 11070209, on left bank 1.1 mi (1.8 km) downstream from Fort Gibson Dam, 4.5 mi (7.2 km) north of Fort Gibson, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--12,495 mi² (32,362 km²).

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 (147.447 m), 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 (7.1 km) downstream at datum 8.00 ft (2.438 m) lower and used as auxiliary gage since June 10, 1971.

REMARKS.--Records fair. Flow completely regulated by Fort Gibson Lake (station 07193000).

COOPERATION.--Gage-height record and 10 discharge measurements furnished by Corps of Engineers, records computed by Geological Survey.

AVERAGE DISCHARGE.--30 years, 7,713 ft³/s (218.4 m³/s), 5,588,000 acre-ft/yr (6.89 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 223,000 ft³/s (6,320 m³/s) May 26, 1957, gage height, 37.60 ft (11.460 m); minimum, 12 ft³/s (0.34 m³/s), Oct. 10, 1957, Aug. 23, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 43.0 ft (13.11 m), from high-water profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 ft³/s (617 m³/s) Nov. 23, gage height, 12.10 ft (3.688 m); minimum daily, 15 ft³/s (0.42 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	1450	12400	47	2630	8560	19700	11700	37	2000	1820	632
2	1140	65	12400	3620	50	6190	19500	11500	3430	1500	996	2190
3	1930	15	12600	3660	15	6550	19500	3590	5490	2490	16	1510
4	782	24	12500	3100	2080	1850	17200	92	10700	653	1260	1830
5	637	21	12600	3100	1060	1860	13600	2940	5190	631	833	3060
6	15	712	12600	274	1300	1680	13700	7940	2140	500	2580	2020
7	15	2610	12600	2560	1060	1500	13600	1440	196	1140	4560	2500
8	955	21	12600	1920	20	50	13500	692	2070	1080	3270	3850
9	1200	15	12600	1300	120	15	13500	567	15	1670	2280	2740
10	603	15	12600	1210	20	1700	13600	220	15	781	1000	2100
11	15	15	12700	972	2240	5070	12200	68	1930	3060	2330	3120
12	15	15	12500	168	515	5470	11400	2770	15	1970	4150	4370
13	15	407	12300	49	640	5440	11500	4330	1180	7510	3340	340
14	19	15	11800	824	635	5250	11400	455	3200	6170	2740	18
15	51	15	8610	646	1570	2130	12800	635	999	10300	693	3160
16	36	15	9650	255	3520	1580	16000	2690	3030	4610	1670	2440
17	15	27	11600	875	9330	6030	15900	2790	15	5060	1670	1240
18	47	30	9690	250	4720	11600	14500	2610	1730	4780	5730	281
19	123	3120	11700	50	7390	11800	13600	4200	3950	647	3510	2850
20	222	115	9220	20	9010	11800	13500	3490	734	2210	2070	4030
21	131	8340	5000	928	10100	11800	13000	215	15	6920	3530	2650
22	23	17300	16	924	11500	9700	12000	5120	1180	743	15	1170
23	15	18600	15	1150	11500	4520	11500	3330	8490	15	15	103
24	18	13800	898	1870	11400	10100	11700	6920	388	15	15	15
25	15	13800	15	7660	9690	11700	12900	4980	2290	15	1390	742
26	15	14000	1160	10100	8850	11700	12200	681	2380	643	1660	15
27	44	13900	1640	1890	8960	11700	12400	7480	3950	643	1100	997
28	15	13700	7320	4810	8890	11600	12400	7150	15	20	2180	1420
29	18	12900	2360	4820	8860	11300	14000	7410	2930	5630	16	15
30	248	12400	43	6040	---	14200	13300	6240	2230	1650	725	15
31	2060	---	1610	960	---	17600	---	3270	---	530	773	---
TOTAL	12387	147462	255547	66052	137675	222045	415000	117515	69934	75586	57937	51423
MEAN	400	4915	8243	2131	4747	7163	13830	3791	2331	2438	1869	1714
MAX	2060	18600	12700	10100	11500	17600	19700	11700	10700	10300	5730	4370
MIN	15	15	15	20	15	15	11300	68	15	15	15	15
AC=FT	24570	292500	506900	131000	273100	440400	823200	233100	138700	149900	114900	102000
CAL YR 1979	TOTAL	2791297	MEAN	7647	MAX	26600	MIN	15	AC=FT	5537000		
WTR YR 1980	TOTAL	1628563	MEAN	4450	MAX	19700	MIN	15	AC=FT	3230000		

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 current year.

WATER TEMPERATURE: October 1951 to September 1963, October 1973 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected 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, 496 micromhos Sept. 7, 1975; minimum daily, 188 micromhos Oct. 18, 1974.

WATER TEMPERATURE: Maximum daily, 31.5°C July 31, Aug. 1, 1955; minimum daily, 0.0°C Jan. 23-25, 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum daily, 31.0°C Aug. 2; minimum daily, 3.0°C on several days during February and March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	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)	
DATE	TIME												
OCT													
10...	1515	603	--	7.4	19.5	1.0	12.8	162	K7	K1800	100	23	
NOV													
27...	1300	13900	--	8.6	12.5	12	9.2	107	K19	96	110	25	
DEC													
19...	1030	11700	290	7.9	6.5	7.1	14.6	119	K5	71	120	22	
JAN													
23...	0850	1150	--	--	3.5	5.1	--	--	K4	K9	110	40	
FEB													
26...	1130	8850	--	7.5	5.0	9.4	11.9	93	60	K1	110	36	
MAR													
12...	0930	5470	300	8.2	5.5	6.4	13.9	115	K7	K3	120	32	
APR													
16...	0930	16000	270	7.6	16.0	15	10.4	106	K11	K37	110	36	
MAY													
21...	1000	215	320	8.1	19.5	4.9	10.6	116	K3	130	140	52	
JUN													
10...	1030	15	320	7.8	23.0	5.4	9.5	112	K14	160	140	32	
JUL													
08...	0930	1080	315	7.6	26.0	1.8	7.3	90	28	43	130	40	
AUG													
06...	0900	2580	315	7.6	25.0	2.0	--	--	23	22	130	42	
SEP													
10...	0930	2100	334	7.8	25.6	1.7	9.0	111	K11	K6	--	--	
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)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
10...	33	4.9	7.9	14	.3	3.5	80	31	9.4	.2	1.7	156	
NOV													
27...	37	5.3	11	20	.4	3.6	89	29	12	.2	1.2	170	
DEC													
19...	38	5.2	10	18	.4	3.9	94	30	12	.1	2.8	168	
JAN													
23...	36	5.2	8.4	14	.3	3.4	71	44	11	.2	2.8	167	
FEB													
26...	37	5.1	9.6	15	.4	3.6	77	32	--	.2	1.9	175	
MAR													
12...	38	5.4	10	15	.4	3.4	85	32	15	.2	1.3	168	
APR													
16...	36	5.6	10	16	.4	4.0	77	41	11	.2	5.1	--	
MAY													
21...	43	6.9	11	15	.4	3.6	84	50	11	.1	3.6	201	
JUN													
10...	45	7.1	12	15	.4	3.7	110	49	16	.1	3.2	196	
JUL													
08...	41	6.7	11	15	.4	3.6	90	46	15	.4	3.8	191	
AUG													
06...	39	6.7	11	16	.4	3.6	83	48	12	.3	3.2	188	
SEP													
10...	--	6.9	12	--	--	3.9	85	44	18	.2	1.6	186	

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 10...	141	.21	254	.31	.33	.100	.060	.12	.08	.72	.69	.82
NOV 27...	154	.23	6380	.25	.33	.060	.030	.07	.04	.78	.77	.84
DEC 19...	161	.23	5310	.47	.49	.060	.210	.07	.27	1.7	.99	1.80
JAN 23...	156	.23	519	.46	.52	.060	.060	.07	.08	.28	.21	.34
FEB 26...	--	.24	4180	.37	.37	.080	.000	.10	.00	1.0	.72	1.10
MAR 12...	158	.23	2480	.36	.39	.220	.220	.27	.28	1.2	.88	1.40
APR 16...	163	.30	9500	.81	.81	1.00	1.00	1.2	1.3	.20	.10	1.20
MAY 21...	183	.27	117	.62	.61	.310	.180	.38	.23	.53	.14	.84
JUN 10...	204	.27	7.9	.43	.46	.210	.130	.25	.17	.63	.60	.84
JUL 08...	183	.26	557	.27	.37	.200	.150	.24	.19	.90	1.1	1.10
AUG 06...	174	.26	1310	.10	.06	.030	.020	.04	.03	1.3	.57	1.30
SEP 10...	--	--	1060	.15	.34	.060	.350	.07	.45	.72	.85	.78
DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DISSOLV (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)	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)
OCT 10...	.07	.75	1.1	5.0	1.1	.060	.18	.040	--	--	--	--
NOV 27...	.04	.80	1.1	4.8	1.1	.070	.21	.040	1	0	1	400
DEC 19...	.60	1.2	2.3	10	1.7	.050	.15	.020	--	--	--	--
JAN 23...	.07	.27	.80	3.5	.79	.050	.15	.050	--	--	--	--
FEB 26...	.38	.72	1.5	6.5	1.1	.050	.15	.000	1	0	1	100
MAR 12...	.30	1.1	1.8	7.8	1.5	.060	.18	.010	--	--	--	--
APR 16...	.10	1.1	2.0	8.9	1.9	.060	.18	.020	--	--	--	--
MAY 21...	.52	.32	1.5	6.5	.93	.060	.18	.020	2	0	2	100
JUN 10...	.11	.73	1.3	5.6	1.2	.070	.21	.010	--	--	--	--
JUL 08...	.00	1.2	1.4	6.1	1.6	.050	.15	.050	--	--	--	--
AUG 06...	.71	.59	1.4	6.2	.65	.060	.18	.030	3	0	3	0
SEP 10...	.00	1.2	.93	4.1	1.5	.090	.28	.050	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)
OCT 10...	--	--	--	--	--	--	--	--	--	--	--
NOV 27...	.1	.1	.0	0	0	5	0	0	0	0	0
DEC 19...	--	--	--	--	--	--	--	--	--	0	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	.0	.0	.0	2	1	1	5	5	0	0	0
MAR 12...	--	--	--	--	--	--	--	--	--	0	--
APR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	.3	.3	.0	9	2	7	0	0	0	1	1
JUN 10...	--	--	--	--	--	--	--	--	--	0	--
JUL 08...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.0	.0	.0	0	0	6	0	0	0	0	0
SEP 10...	--	--	--	--	--	--	--	--	--	0	--

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. X FINER THAN .062 MM
OCT 10...	--	--	--	--	4.6	--	--	--	23	37	89
NOV 27...	0	10	0	40	5.7	--	--	17000	19	713	98
DEC 19...	--	--	--	--	6.4	--	--	--	27	853	97
JAN 23...	--	--	--	--	6.0	--	--	--	38	118	76
FEB 26...	0	110	40	70	--	5.6	.1	--	16	382	72
MAR 12...	--	--	--	--	5.0	--	--	18000	13	192	82
APR 16...	--	--	--	--	10	--	--	--	14	605	87
MAY 21...	0	20	0	20	--	5.6	1.8	9900	13	7.5	74
JUN 10...	--	--	--	--	11	--	--	50000	14	.57	51
JUL 08...	--	--	--	--	6.5	--	--	110000	9	26	75
AUG 06...	0	10	6	4	--	6.7	.4	67000	8	56	58
SEP 10...	--	--	--	--	10	--	--	71000	8	45	62

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	---	272	248	251	283	264	291	296	---	275	322
2	263	---	272	248	256	283	264	291	300	285	275	316
3	266	---	265	249	---	283	263	300	296	287	283	318
4	265	---	265	249	---	283	258	300	294	287	---	317
5	289	---	264	248	251	281	260	---	294	289	---	316
6	335	---	---	249	252	282	262	295	---	291	275	316
7	---	274	262	248	254	283	262	294	293	289	273	313
8	294	---	261	249	251	284	262	300	292	288	274	315
9	268	---	261	249	---	398	264	300	293	288	273	316
10	282	---	263	248	---	282	265	309	299	289	---	311
11	271	---	265	249	253	280	266	318	297	---	274	312
12	---	---	265	261	254	280	271	309	293	286	273	318
13	---	---	267	---	---	279	---	300	292	285	274	316
14	---	---	268	---	---	279	271	291	293	283	273	316
15	---	---	268	---	252	278	271	291	292	---	275	316
16	---	---	270	---	260	278	274	291	---	282	275	315
17	---	---	---	---	258	276	279	291	284	276	281	---
18	---	---	272	---	---	277	281	291	---	276	275	368
19	---	283	272	---	---	276	279	291	285	276	276	317
20	---	278	272	---	258	275	292	291	283	280	278	314
21	---	273	272	---	260	275	297	291	283	275	277	316
22	---	---	273	284	259	275	300	291	284	279	275	316
23	---	272	284	256	262	272	305	291	283	279	279	315
24	---	272	---	250	263	---	306	291	286	---	---	322
25	---	279	275	248	---	274	---	300	282	---	---	---
26	---	281	272	248	---	273	301	300	283	---	280	---
27	---	276	271	248	264	272	---	291	285	---	275	315
28	---	278	271	246	263	272	---	291	---	---	278	317
29	---	279	272	249	260	269	315	300	287	274	281	---
30	274	272	271	249	---	268	328	300	285	274	---	318
31	280	---	273	252	---	265	---	---	---	274	280	---
MEAN	279	276	269	251	257	281	279	296	290	282	276	318

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.0	9.0	6.0	5.0	---	11.0	20.0	24.0	---	30.0	27.0
2	24.0	---	9.0	6.0	5.0	3.0	12.0	21.0	24.0	---	31.0	27.0
3	23.0	---	11.0	6.0	4.5	3.5	12.5	22.0	25.0	---	30.0	28.0
4	---	---	11.0	7.0	---	7.0	12.0	22.0	26.0	---	---	28.0
5	22.0	18.0	11.0	7.0	4.0	8.0	12.5	---	24.0	---	30.0	28.0
6	22.0	18.0	---	7.0	4.0	8.5	12.0	19.0	---	29.0	30.0	28.0
7	21.0	17.0	10.0	7.0	4.0	7.0	11.0	20.0	22.0	---	29.0	28.0
8	22.0	18.0	12.0	6.5	3.0	8.0	11.5	21.0	22.0	30.0	29.0	27.0
9	20.0	18.0	11.0	7.0	3.0	8.0	11.0	21.0	24.0	---	30.0	26.5
10	19.0	14.0	11.0	7.0	3.5	---	12.0	22.0	24.0	---	---	27.0
11	20.5	14.0	10.0	6.0	3.5	7.0	12.0	22.0	23.0	---	29.0	27.0
12	---	12.0	7.0	6.5	4.5	7.5	12.0	24.0	23.0	---	30.0	27.0
13	---	12.0	7.0	6.5	5.0	8.0	---	20.0	22.0	---	29.0	27.0
14	20.0	11.0	8.0	7.0	4.5	9.0	12.5	23.0	24.0	29.0	29.0	26.0
15	20.0	12.0	7.0	7.5	4.0	9.0	11.0	21.0	23.0	---	29.0	28.0
16	21.0	12.0	7.0	7.0	3.0	9.0	11.0	---	---	30.0	29.0	27.0
17	21.0	11.0	---	7.0	3.0	9.0	13.0	---	---	28.0	29.0	---
18	19.0	12.0	7.0	7.0	---	9.5	11.0	---	---	28.0	29.0	28.0
19	19.0	12.0	7.0	7.0	---	10.0	12.0	---	---	29.0	30.0	27.0
20	20.0	11.0	8.0	7.5	4.0	10.0	12.0	---	---	28.0	29.0	27.0
21	20.0	12.0	8.0	---	4.5	10.0	12.0	---	28.0	24.0	29.0	27.5
22	19.0	---	9.0	5.0	5.0	10.0	12.0	---	28.0	30.0	29.0	24.0
23	20.0	12.0	7.0	6.0	5.5	9.5	11.0	---	28.0	30.0	29.0	24.0
24	19.0	12.0	---	6.0	5.5	---	12.0	---	28.0	29.0	29.0	24.0
25	20.0	13.0	8.0	6.0	---	9.5	---	---	29.0	30.0	28.0	25.0
26	19.0	12.0	8.0	5.0	---	9.5	12.0	---	28.0	28.0	28.0	22.0
27	19.0	11.0	8.0	5.0	6.0	10.0	---	---	29.0	28.0	29.0	22.0
28	18.0	11.0	7.0	5.5	5.0	10.5	---	---	28.0	28.0	29.0	21.0
29	---	11.0	7.5	5.0	3.0	11.5	21.0	22.0	29.0	29.0	28.0	---
30	---	10.0	7.0	5.0	---	11.0	20.0	22.0	---	---	---	21.0
31	17.0	---	7.0	4.5	---	12.0	---	---	---	---	28.0	---
MEAN	20.0	13.0	8.5	6.5	4.5	8.5	12.5	21.5	25.5	28.5	29.0	26.7

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 27,79 1300	MAR 12,80 0930	MAY 21,80 1000	JUN 10,80 1030
TOTAL CELLS/ML	17000	18000	9900	50000
DIVERSITY: DIVISION	1.5	0.6	1.8	1.8
..CLASS	1.5	0.6	1.8	1.8
..ORDER	1.8	0.8	2.2	2.2
...FAMILY	2.0	0.9	2.5	2.5
....GENUS	2.9	1.5	2.8	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	*	0	--	-	--	-	--	-
....COELASTRACEAE								
....COELASTRUM	560	3	--	-	--	-	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	140	1	2200	12	*	0	1900	4
....CHLORELLA	--	-	--	-	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....GLOEOACTINIUM	350	2	--	-	130	1	--	-
....KIRCHNERIELLA	*	0	--	-	--	-	700	1
....OOCYSTIS	210	1	--	-	170	2	530	1
....SELENASTRUM	--	-	--	-	*	0	2600	5
....TETRAEDRON	*	0	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
....WESTELLA	--	-	--	-	--	-	2100	4
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	--	-
....SCENEDESMUS	700	4	--	-	740	7	3900	8
....TETRASTRUM	140	1	540	3	130	1	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	100	1	--	-
....CHLAMYDOMONAS	*	0	130	1	340	3	350	1
....CHLOROGONIUM	--	-	--	-	--	-	*	0
....PLATYMONAS	110	1	--	-	--	-	--	-
...ZYGNEMATALES								
....DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	3400#	20	12000#	68	770	8	8300#	16
....MELOSIRA	1300	8	--	-	370	4	5300	10
....SKELETONEMA	350	2	--	-	--	-	--	-
....STEPHANODISCUS	--	-	2600	14	--	-	--	-
...PENNALES								
....ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	350	1
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	--	-	530	1
...NAVICULACEAE								
....NAVICULA	--	-	130	1	--	-	--	-
...NITZSCHIA								
....NITZSCHIA	110	1	130	1	540	5	530	1
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	810	8	2600	5
....CRYPTOMONADACEAE								
....CRYPTOMONAS	250	1	--	-	840	8	350	1

ARKANSAS RIVER BASIN

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07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 27,79 1300	MAR 12,80 0930	MAY 21,80 1000	JUN 10,80 1030				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	5200#	30	--	-	--	-	--	-
....ANACYSTIS	3500#	20	--	-	67	1	1200	2
....COCCOCHLORIS	--	-	--	-	67	1	1400	3
..HORMOGONALES								
..NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-
..OSCILLATORIACEAE								
....LYNGBYA	600	3	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	4700#	47	18000#	35
....SPIRULINA	--	-	--	-	--	-	--	-
..RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

DATE TIME	JUL 8,80 0930	AUG 6,80 0900	SEP 10,80 0930
TOTAL CELLS/ML	110000	67000	71000
DIVERSITY: DIVISION	0.5	0.3	0.5
..CLASS	0.5	0.3	0.5
..ORDER	1.4	1.2	1.1
..FAMILY	1.8	1.8	1.8
..GENUS	2.4	2.0	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
..CHLOROCOCCALES						
..CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	*	0
..COELASTRACEAE						
....COELASTRUM	940	1	--	-	*	0
..OOCYSTACEAE						
....ANKISTRODESMUS	*	0	--	-	*	0
....CHLORELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	*	0	*	0	1400	2
....GLOEOACTINIUM	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	--	-	--	-
....OOCYSTIS	*	0	*	0	--	-
....SELENASTRUM	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	*	0
....TREUBARIA	--	-	--	-	*	0
....WESTELLA	--	-	--	-	--	-
..SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	870	1
....SCENEDESMUS	1600	1	--	-	660	1
....TETRASTRUM	--	-	--	-	*	0
..VOLVOCALES						
..CHLAMYDOMONADACEAE						
....CARTERIA	--	-	--	-	--	-
....CHLAMYDOMONAS	*	0	--	-	*	0
....CHLOROGONIUM	--	-	--	-	--	-
....PLATYMONAS	--	-	--	-	--	-
..ZYGNEMATALES						
..DESMIDIACEAE						
....COSMARIUM	--	-	--	-	*	0

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

CHRYSTOPHYTA					
.BACILLARIOPHYCEAE					
..CENTRALES					
...COSCINODISCACEAE					
....CYCLOTELLA	*	0	1200	2	930 1
....MELOSIRA	700	1	650	1	760 1
....SKELETONEMA	--	-	--	-	-- -
....STEPHANODISCUS	--	-	--	-	-- -
..PENNALES					
...ACHNANTHACEAE					
....ACHNANTHES	*	0	--	-	-- -
..FRAGILARIACEAE					
....SYNEDRA	1200	1	400	1	* 0
....NAVICULACEAE	--	-	--	-	-- -
....NAVICULA	--	-	--	-	-- -
....NITZSCHIACEAE	--	-	--	-	-- -
....NITZSCHIA	1100	1	490	1	710 1
CRYPTOPHYTA (CRYPTOMONADS)					
.CRYPTOPHYCEAE					
..CRYPTOMONADALES					
...CRYPTOCHRYSIDACEAE					
....CHROOMONAS	*	0	--	-	-- -
...CRYPTOMONADACEAE					
....CRYPTOMONAS	550	1	*	0	* 0
CYANOPHYTA (BLUE-GREEN ALGAE)					
.CYANOPHYCEAE					
..CHROOCOCCALES					
...CHROOCOCCACEAE					
....AGMENELLUM	19000#	17	--	-	2400 3
....ANACYSTIS	27000#	25	21000#	32	6300 9
....COCCOCHLORIS	--	-	--	-	-- -
..HORMOGONALES					
...NOSTOCACEAE					
....ANABAENA	1400	1	3900	6	1100 2
....ANABAENOPSIS	5500	5	9300	14	8400 12
...OSCILLATORIACEAE					
....LYNGBYA	--	-	--	-	24000# 34
....OSCILLATORIA	47000#	43	29000#	43	22000# 31
....SPIRULINA	2200	2	--	-	-- -
....RIVULARIACEAE	--	-	--	-	-- -
....RAPHIIDIOPSIS	--	-	--	-	660 1
PYRRHOPHYTA (FIRE ALGAE)					
.DINOPHYCEAE					
..PERIDINIALES					
...GLENODINIACEAE					
....GLENODINIUM	*	0	--	-	-- -

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'12", in NE¼ 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 (2.4 km) north of Watts, 4.5 mi (7.2 km) downstream from Cincinnati Creek, and at mile 106.2 (170.9 km).

DRAINAGE AREA.--635 mi² (1,645 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 893.78 ft (272.424 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulations at low flow by Lake Francis Dam, 0.8 mile (1.29 km) above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

AVERAGE DISCHARGE.--25 years, 578 ft³/s (16.37 m³/s), 12.37 in/yr (314 mm/yr), 418,800 acre-ft/yr (516 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft³/s (1,930 m³/s) July 25, 1960, gage height, 25.96 ft (7.913 m), from rating curve extended above 51,000 ft³/s (1,440 m³/s); minimum, 8.6 ft³/s (0.24 m³/s) Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft³/s (85.2 m³/s) Mar. 30, gage height, 7.71 ft (2.350 m), no peak above base of 6,500 ft³/s (184 m³/s); minimum daily discharge, 31 ft³/s (0.88 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	287	169	126	116	134	1160	200	227	117	48	37
2	100	199	162	134	115	137	927	201	206	114	47	31
3	101	163	152	138	115	136	782	223	175	108	45	33
4	109	145	143	138	113	128	687	256	171	101	47	39
5	136	132	146	146	112	123	600	243	163	94	42	44
6	140	120	143	130	113	132	549	216	156	89	39	52
7	123	123	139	126	115	126	486	200	145	85	37	52
8	107	130	137	126	134	122	451	185	134	80	36	45
9	93	166	134	126	130	122	420	178	128	75	37	44
10	98	255	135	127	127	117	392	175	121	73	38	41
11	108	217	124	118	119	116	358	161	119	71	35	61
12	105	175	124	122	116	137	342	154	119	70	33	66
13	101	156	127	120	118	156	314	170	111	66	33	55
14	106	146	127	118	124	174	302	207	107	63	39	50
15	104	139	126	121	145	165	289	186	106	59	41	46
16	100	133	117	121	212	159	283	217	107	58	44	41
17	101	131	116	122	259	346	285	439	186	59	37	39
18	108	134	115	121	248	870	277	425	257	56	45	42
19	116	124	116	120	225	652	267	1120	273	55	45	48
20	120	140	120	126	216	547	251	719	258	54	44	50
21	110	314	126	127	206	522	237	511	288	51	39	47
22	107	551	126	123	191	531	230	510	349	49	38	39
23	117	435	138	126	180	496	223	540	387	53	38	33
24	127	329	148	127	173	1090	218	439	377	58	38	37
25	120	276	155	125	157	1210	217	363	245	59	36	50
26	118	243	151	122	158	893	227	307	197	63	33	64
27	114	219	148	120	150	742	236	313	171	62	32	77
28	111	204	140	118	146	653	229	364	148	60	35	76
29	110	189	137	115	140	619	212	274	131	55	36	69
30	127	180	132	116	---	1890	204	235	129	54	43	65
31	188	---	127	114	---	1830	---	231	---	51	42	---
TOTAL	3527	6155	4200	3859	4473	14875	11655	9962	5691	2162	1222	1473
MEAN	114	205	135	124	154	480	389	321	190	69.7	39.4	49.1
MAX	188	551	169	146	259	1890	1160	1120	387	117	48	77
MIN	93	120	115	114	112	116	204	154	106	49	32	31
CF8M	.18	.32	.21	.20	.24	.76	.61	.51	.30	.11	.06	.08
IN.	.21	.36	.25	.23	.26	.87	.68	.58	.33	.13	.07	.09
AC=FT	7000	12210	8330	7650	8870	29500	23120	19760	11290	4290	2420	2920
CAL YR 1979	TOTAL	160186	MEAN 439	MAX 12100	MIN 93	CF8M .69	IN 9.38	AC=FT 317700				
WTR YR 1980	TOTAL	69254	MEAN 189	MAX 1890	MIN 31	CF8M .30	IN 4.06	AC=FT 137400				

ARKANSAS RIVER BASIN

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'54", long 94°42'30", in SW¼ sec.24, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at bridge on State Highway 33, 6.0 mi (9.7 km) southeast of Kansas, 6.0 mi (9.7 km) downstream from Sager Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--August 1955 to September 1976, April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft (260.479 m), National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--22 years (water years 1956-76, 80), 117 ft³/s (3.313 m³/s), 14.44 in/yr (367 mm/yr), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s (668 m³/s) Aug. 14, 1961, gage height, 15.66 ft (4.773 m), from rating curve extended above 7,200 ft³/s (204 m³/s); minimum daily, 0.6 ft³/s (0.017 m³/s) Oct. 11-13, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) Mar. 24, gage height, 7.20 ft (2.195 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 8.0 ft³/s (0.23 m³/s) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	30	37	27	31	34	136	49	45	16	12	12
2	19	27	35	27	30	33	126	49	41	15	12	14
3	20	24	33	30	30	31	122	49	39	15	11	14
4	21	23	32	31	29	31	111	46	35	14	10	14
5	21	22	31	30	30	31	104	43	32	13	10	14
6	21	22	31	29	30	31	97	42	30	13	9.5	14
7	21	24	30	29	30	31	92	41	29	12	9.1	13
8	20	32	29	30	33	31	89	40	27	12	8.8	12
9	21	39	28	30	32	30	83	39	26	12	8.6	16
10	23	33	28	30	29	29	78	38	24	12	8.5	17
11	24	29	29	30	29	29	75	36	23	12	8.4	15
12	24	27	28	30	28	36	71	35	22	11	8.4	14
13	24	25	27	29	29	43	67	38	21	9.0	8.3	14
14	24	24	27	29	32	40	64	37	19	9.4	8.4	12
15	25	23	27	30	51	38	64	36	18	9.8	8.7	11
16	26	23	25	31	62	42	62	46	18	10	8.0	10
17	27	23	25	31	73	71	62	51	30	10	9.0	18
18	27	22	26	29	69	69	61	52	50	9.8	10	16
19	26	23	26	30	66	138	58	58	40	9.6	11	14
20	25	119	27	32	61	122	54	53	32	9.2	11	13
21	23	198	27	32	57	111	51	53	28	9.1	11	12
22	21	126	28	34	53	98	50	66	25	9.4	11	11
23	20	97	30	34	49	105	49	60	24	9.2	11	12
24	21	76	38	34	46	246	50	55	22	9.1	11	12
25	23	68	37	34	43	230	52	50	21	9.0	11	14
26	22	61	34	34	41	185	54	46	19	8.9	12	14
27	22	54	32	33	38	155	55	99	17	8.8	12	14
28	21	47	30	33	36	136	51	88	16	20	12	14
29	20	43	28	33	35	122	50	65	15	17	14	14
30	25	39	27	33	---	155	49	55	17	15	13	14
31	36	---	27	32	---	148	---	50	---	13	12	---
TOTAL	711	1423	919	960	1202	2631	2187	1565	805	362.3	320.7	408
MEAN	22.9	47.4	29.6	31.0	41.4	84.9	72.9	50.5	26.8	11.7	10.3	13.6
MAX	36	198	38	34	73	246	136	99	50	20	14	18
MIN	18	22	25	27	28	29	49	35	15	8.8	8.0	10
CFSM	.21	.43	.27	.28	.38	.77	.66	.46	.24	.11	.09	.12
IN.	.24	.48	.31	.32	.41	.89	.74	.53	.27	.12	.11	.14
AC=FT	1410	2820	1820	1900	2380	5220	4340	3100	1600	719	636	809
WTR YR 1980 TOTAL 13494.0 MEAN 36.9 MAX 246 MIN 8.0 CFSM .34 IN 4.56 AC-FT 26770												

ARKANSAS RIVER BASIN

189

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'17", long 94°55'15", in SE¼ 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 (0.3 km) downstream from U.S. Highway 62, 2.2 mi (3.5 km) northeast of Tahlequah, 6.5 mi (10.5 km) upstream from Baron Fork, and at mile 55.8 (89.8 km).

DRAINAGE AREA.--959 mi² (2,482 km²).

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 (202.430 m), Corps of Engineers datum. Prior to Feb. 23, 1939, nonrecording gage.

REMARKS.--Records good.

AVERAGE DISCHARGE.--45 years, 883 ft³/s (25.00 m³/s), 12.50 in/yr (318 mm/yr), 639,700 acre-ft/yr (789 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) May 10, 1950, gage height, 27.94 ft (98.516 m), from rating curve extended above 77,000 ft³/s (2,180 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 10-14, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1916 reached a stage of about 26 ft (7.9 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,700 ft³/s (360 m³/s) Mar. 31, gage height, 7.12 ft (2.170 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum, 38.1 ft³/s (1.08 m³/s) Aug. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	207	323	217	197	254	2170	328	297	159	60	45
2	126	252	304	211	194	249	1650	320	282	151	57	59
3	122	280	288	214	192	244	1410	313	266	140	54	59
4	119	245	276	216	190	241	1200	315	242	132	53	56
5	119	219	263	221	190	233	1050	326	221	125	52	54
6	122	200	252	225	183	226	934	338	208	117	50	53
7	139	185	244	222	181	223	846	318	196	111	49	51
8	150	180	236	222	194	223	767	301	186	104	47	52
9	143	192	231	212	197	221	700	284	176	99	45	56
10	135	203	229	210	204	217	649	274	164	94	44	58
11	125	240	224	207	201	213	603	263	156	90	42	56
12	120	279	220	209	197	220	557	255	149	85	42	57
13	123	259	213	203	193	228	522	238	144	83	41	55
14	126	232	208	202	197	243	494	233	140	80	40	60
15	126	213	208	199	217	260	466	252	135	77	39	64
16	131	200	202	201	269	269	448	277	153	73	39	62
17	133	192	201	201	352	312	442	265	186	71	40	60
18	130	185	194	199	440	563	432	373	172	68	56	58
19	130	181	193	202	461	1130	428	447	227	66	57	56
20	133	194	190	208	444	1110	418	875	267	66	56	53
21	137	495	190	212	415	954	404	861	288	65	53	52
22	159	805	195	212	389	851	380	652	275	64	51	53
23	153	969	206	216	362	862	366	576	324	61	51	58
24	148	855	217	216	341	1210	355	606	323	59	49	59
25	148	690	223	214	323	1870	349	533	390	57	47	66
26	153	574	233	215	306	2130	353	455	324	58	46	61
27	151	491	243	212	289	1680	352	393	261	63	45	61
28	148	429	242	210	278	1400	354	374	222	64	46	71
29	144	380	236	205	264	1200	351	446	195	65	45	80
30	169	348	230	203	---	1110	335	387	175	64	48	88
31	219	---	223	200	---	2000	---	333	---	62	46	---
TOTAL	4312	10374	7137	6516	7860	22146	19785	12211	6744	2673	1490	1773
MEAN	139	346	230	210	271	714	660	394	225	86.2	48.1	59.1
MAX	219	969	323	225	461	2130	2170	875	390	159	60	88
MIN	119	180	190	199	181	213	335	233	135	57	39	45
CF8M	.15	.36	.24	.22	.28	.75	.69	.41	.24	.09	.05	.06
IN.	.17	.40	.28	.25	.30	.86	.77	.47	.26	.10	.06	.07
AC-FT	8550	20580	14160	12920	15590	43930	39240	24220	13360	5300	2960	3520

CAL YR 1979 TOTAL 231710 MEAN 635 MAX 12700 MIN 119 CF8M .66 IN 8.99 AC-FT 459600
WTR YR 1980 TOTAL 103021 MEAN 281 MAX 2170 MIN 39 CF8M .29 IN 4.00 AC-FT 204300

ARKANSAS RIVER BASIN

07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in SE¼ 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 (0.6 km) southeast of Eldon, 6.0 mi (9.7 km) downstream from Tyner Creek, and at mile 8.8 (14.2 km).

DRAINAGE AREA.--307 mi² (795 km²).

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 (213.707 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--32 years, 288 ft³/s (8.156 m³/s), 12.73 in/yr (323 mm/yr), 208,700 acre-ft/yr (257 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) Apr. 3, 1957, gage height, 20.33 ft (6.197 m), maximum gage height, 22.73 ft (6.928 m), Apr. 20, 1976; minimum, 1.7 ft³/s (0.048 m³/s) Oct. 25, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1945, reached a stage of 23.8 ft (7.25 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,300 ft³/s (36.8 m³/s) May 19, gage height, 7.08 ft (2.158 m). No peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 3.0 ft³/s (0.085 m³/s) Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	59	83	52	39	66	508	66	124	46	6.0	3.4
2	15	63	76	50	41	66	417	91	110	40	5.6	3.8
3	14	63	71	49	41	64	364	187	96	36	5.5	3.6
4	13	59	66	48	41	63	327	206	92	33	5.4	3.6
5	12	57	62	46	41	61	289	181	86	31	5.2	3.6
6	13	54	59	45	40	59	256	154	82	27	5.0	3.7
7	12	51	57	45	39	59	230	132	78	25	4.7	3.6
8	11	50	54	45	39	58	208	117	75	23	4.6	3.6
9	11	50	52	43	39	57	188	104	72	21	4.5	3.5
10	10	51	50	42	39	56	171	92	70	19	4.3	3.5
11	9.8	53	48	41	39	54	156	82	67	17	4.2	3.3
12	9.4	58	45	40	39	55	140	74	65	16	4.2	3.3
13	9.2	66	44	41	39	58	130	73	63	16	4.0	3.2
14	9.0	60	42	40	39	60	122	66	61	14	4.2	3.3
15	9.0	56	40	39	39	62	115	62	59	13	4.0	3.3
16	9.2	53	38	39	45	63	109	73	70	12	4.0	3.2
17	9.4	52	36	39	63	64	103	78	100	11	4.0	3.0
18	9.7	51	35	39	93	400	96	186	60	9.1	4.5	3.0
19	10	50	34	39	102	320	94	1050	63	8.1	4.2	3.1
20	11	54	33	39	103	250	92	710	153	7.5	4.2	3.2
21	12	165	32	39	103	190	90	503	199	7.4	4.2	3.2
22	19	251	31	39	102	198	86	652	242	7.6	4.0	3.3
23	18	242	30	41	97	205	84	643	168	7.1	3.9	3.5
24	17	211	30	41	91	521	84	478	132	7.0	3.9	3.7
25	17	178	29	41	86	744	86	364	105	6.8	3.9	4.0
26	20	153	29	41	80	606	88	287	86	6.8	3.8	3.7
27	20	134	34	39	76	513	78	227	73	6.9	3.6	3.9
28	21	115	37	39	70	443	74	188	62	6.8	3.5	4.2
29	23	100	43	39	68	388	71	159	55	6.6	3.4	4.2
30	29	91	46	39	---	590	68	142	50	6.5	3.4	4.3
31	45	---	54	39	---	675	---	136	---	6.2	3.3	---
TOTAL	463.7	2750	1420	1298	1773	7068	4924	7563	2818	500.4	133.2	105.8
MEAN	15.0	91.7	45.8	41.9	61.1	228	164	244	93.9	16.1	4.30	3.53
MAX	45	251	83	52	103	744	508	1050	242	46	6.0	4.3
MIN	9.0	50	29	39	39	54	68	62	50	6.2	3.3	3.0
CF8M	.05	.30	.15	.14	.20	.74	.53	.80	.31	.05	.01	.01
IN	.06	.33	.17	.16	.21	.86	.60	.92	.34	.06	.02	.01
AC=FT	920	5450	2820	2570	3520	14020	9770	15000	5590	993	264	210
CAL YR 1979 TOTAL	83276.7			228		5780		9.0	CF8M .74	IN 10.09	AC=FT 165200	
WTR YR 1980 TOTAL	30817.1			84.2		1050		3.0	CF8M .27	IN 3.73	AC=FT 61130	

07197500 TENKILLER FERRY LAKE NEAR GORE, OK

LOCATION.--Lat 35°35'43", long 95°02'57", in SE¼SW¼ sec.14, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, at gage tower on right bank, 0.6 mi (1.0 km) upstream from Tenkiller Ferry Dam on Illinois River, 6.0 mi (9.7 km) northeast of Gore, and at mile 12.8 (20.6 km).

DRAINAGE AREA.-1,610 mi² (4,170 km²).

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 (179.8 m) concrete modified ogee weir in right abutment controlled by 10 taintor gates. Outlet works consist of a 19-foot (5.8 m) 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 (1,520 hm³) at elevation 667.0 ft (203.30 m), flood-control pool, 791,900 acre-ft (976 hm³) at elevation, 642.0 ft (195.68 m), spillway crest, 628,700 acre-ft at elevation 630.0 ft (192.02 m), maximum power pool, and 283,100 acre-ft (349 hm³) at elevation 594.5 ft (181.20 m), conservation and minimum power pool. Figures given herein represent total contents. Reservoir is used for flood control and for power development.

COOPERATION.-Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.-Maximum contents, 1,218,000 acre-ft (1.50 km³) June 5, 1957, elevation, 666.36 ft (203.107 m); minimum since conservation pool was first filled, 305,700 acre-ft (377 hm³) Oct. 21, 1954, elevation, 597.50 ft (182.118 m).

EXTREMES FOR CURRENT YEAR.-Maximum contents, 665,200 acre-ft (820 hm³) May 22, elevation, 632.85 ft (192.893 m); minimum, 527,600 acre-ft (650 hm³) Sept. 26, elevation, 621.42 ft (189.409 m)

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

621	523,000	630	628,700
624	556,800	633	667,200
627	591,800	636	706,900

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639300	604500	611200	610400	586700	564800	592500	637900	660500	645300	591600	545200
2	638000	601000	611600	611100	586700	564700	597200	640400	659200	643600	590900	546100
3	636900	601300	611800	610900	586700	563100	601000	642300	657600	641700	590700	544000
4	635800	601300	612200	610900	584600	560200	604200	643800	655900	641700	588100	542200
5	634800	598100	612800	611000	582200	557500	607100	645200	653800	641500	587000	539700
6	634500	594800	613100	611500	580500	553900	609500	645800	652300	641400	585200	538700
7	634100	591800	613800	611200	579200	551800	612000	646900	652800	639200	583200	538600
8	633100	590700	613800	608800	576600	549900	613700	647600	652800	637400	582100	536200
9	631200	590900	614100	606900	574800	548200	615400	648200	651900	634700	579600	534900
10	629900	590900	614300	605300	574100	546100	617000	648900	649500	632100	579200	534500
11	627500	590900	614800	603500	572200	543000	618900	649600	648500	627800	577100	533500
12	624600	591300	615300	603200	570100	541100	620100	650200	647400	624800	575000	532500
13	622700	591600	615500	603500	568300	538600	621200	650600	645600	623700	573000	531700
14	621900	591700	615700	602000	566200	537100	622100	649300	645300	620700	571300	531300
15	618600	591700	615700	602000	565700	537200	623200	649300	645300	617800	569200	531000
16	618600	591900	615400	601500	565600	539200	624400	649600	644700	614700	568400	529900
17	618400	591900	614400	600900	565800	539500	625500	650400	645200	611700	568400	529600
18	618400	592200	613200	600500	563200	540600	626600	657400	645300	609300	566500	529300
19	617900	592300	611700	600200	560300	542400	627500	661200	646400	608900	564300	528700
20	617500	593900	610000	600000	560600	545200	628300	662500	647300	608500	561900	528300
21	617000	597600	608400	598600	561200	548100	629300	663900	647900	607800	559500	527900
22	616400	599500	608400	598600	562400	549900	630100	663700	648900	606600	559100	527900
23	615900	601600	609400	597200	563300	554000	630800	663400	649600	605500	558600	528100
24	615500	603900	609400	596400	563900	557800	632000	663900	650400	605000	558200	527700
25	612700	605800	609000	595600	564400	562500	632900	664200	649500	603900	555700	528100
26	609600	607100	609100	595500	564800	567600	633500	664200	648200	603500	553700	527600
27	609600	608200	609300	595500	565100	572200	634400	661800	646600	603200	551300	528500
28	609800	609000	609600	594600	566000	576000	635100	660800	646900	601800	548900	528400
29	606400	609800	609800	594600	565000	579400	635700	659300	647300	599400	546800	528200
30	607200	610500	610000	591600	---	582500	636200	658900	647200	596700	546200	527900
31	605900	---	610100	588200	---	587100	---	659700	---	594100	545700	---
MAX	639300	610500	615700	611500	586700	587100	636200	664200	660500	645300	591600	546100
MIN	605900	590700	608400	588200	560300	537100	592500	637900	644700	594100	545700	527600
†	628.15	628.52	628.49	626.71	624.71	626.61	630.61	632.43	631.47	627.19	623.04	621.45
‡	-34,700	+4,600	-400	-21,900	-23,200	+22,100	+49,100	+23,500	-12,500	-53,100	-48,400	-17,800

CAL YR 1979 MAX 701100 MIN 546800 ‡ +57,400
WTR YR 1980 MAX 664200 MIN 527600 ‡ -112,700

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE&SW¼ sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110104, on right bank 4.3 mi (6.9 km) downstream from Tenkiller Ferry Dam, 4.5 mi (7.2 km) northeast of Gore, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--1,626 mi² (4,211 km²).

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 (144.170 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to Feb. 19, 1952.

REMARKS.--Records good. Except for 16 mi² (41 km²) intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (station 07197500).

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--42 years (water years 1924-25, 1939-80), 1,508 ft³/s (42.71 m³/s), 1,093,000 acre-ft/yr (1.35 km³/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) May 11, 1950, gage height, 29.6 ft (9.02 m), present site and datum, from floodmark, from rating curve extended above 42,000 ft³/s (1,190 m³/s) by velocity-area studies; minimum, 2.0 ft³/s (0.057 m³/s) Sept. 16, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,110 ft³/s (116 m³/s) May 22, gage height, 7.57 ft (2.307 m); minimum daily discharge, 46 ft³/s (1.30 m³/s) Apr. 16, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	822	1000	102	146	903	300	58	59	100	1080	1130	105
2	802	1960	142	146	229	232	79	61	1070	924	120	661
3	540	169	144	226	223	946	89	58	1310	1060	102	883
4	599	154	98	220	1250	1680	151	58	1130	107	1150	1020
5	540	1860	100	156	1410	1600	62	50	1280	104	490	1190
6	111	1820	96	149	1100	1920	66	307	1160	100	757	399
7	137	1550	96	161	1000	1340	154	68	115	1230	1000	109
8	599	1160	79	1430	1620	1180	149	58	96	876	599	1210
9	1100	241	100	1020	1040	1180	84	56	582	1350	1150	822
10	588	159	92	1060	582	1380	84	51	1300	1370	159	120
11	1450	100	102	1030	1180	1720	58	59	666	2070	1020	390
12	1680	87	96	213	1180	1350	87	59	582	1460	997	429
13	975	164	96	151	1180	1420	51	166	1010	604	1090	434
14	128	144	91	883	1230	1050	51	946	122	1450	1060	115
15	1820	223	208	443	708	235	68	989	100	1510	932	193
16	74	151	278	588	337	69	48	66	1260	1420	345	425
17	341	135	582	588	208	220	54	55	1190	1530	107	115
18	54	69	708	345	1830	258	50	66	307	1140	982	105
19	420	199	997	599	1980	213	53	74	102	128	989	104
20	164	326	1020	326	510	171	56	1300	98	105	1060	107
21	303	146	1020	1010	229	156	53	1180	98	643	1140	104
22	968	92	286	238	80	169	55	1710	105	561	120	113
23	353	113	190	835	111	104	53	1620	91	515	100	174
24	268	77	208	708	113	275	56	1080	102	109	105	115
25	1640	65	471	649	146	265	54	1040	982	495	1140	115
26	1610	69	210	349	226	275	48	1100	1100	109	1020	104
27	177	82	216	149	156	190	49	1800	1070	102	1070	107
28	80	100	156	690	229	85	56	1300	128	666	1180	109
29	1750	98	144	226	745	199	66	1640	102	1160	1040	98
30	1430	92	144	1690	---	133	59	1030	130	1290	161	100
31	822	---	216	1660	---	74	---	126	---	1140	113	---
TOTAL	22345	12605	8488	18084	21735	20389	2101	18232	17488	26408	22428	10075
MEAN	721	420	274	583	749	658	70.0	588	583	852	723	336
MAX	1820	1960	1020	1690	1980	1920	154	1800	1310	2070	1180	1210
MIN	54	65	79	146	80	69	48	50	91	100	100	98
AC-FT	44320	25000	16840	35870	43110	40440	4170	36160	34690	52380	44490	19980

CAL YR 1979 TOTAL 349430 MEAN 957 MAX 3990 MIN 54 AC-FT 693100
WTR YR 1980 TOTAL 200378 MEAN 547 MAX 2070 MIN 48 AC-FT 397400

ARKANSAS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
10...	1050	21	240	7.6	13.5	--	10.2	106	94	20	34
NOV											
28...	0900	12	--	4.5	6.0	.70	10.0	86	86	12	31
DEC											
18...	1545	110	--	7.5	11.0	1.6	12.6	114	79	6	29
JAN											
22...	1015	14	220	--	6.5	.60	--	--	88	13	32
FEB											
27...	1510	9.5	--	7.0	9.5	.70	10.3	91	98	24	34
MAR											
12...	1300	1940	200	7.7	6.0	1.3	13.6	112	79	8	29
APR											
16...	1500	32	210	8.0	15.0	.90	10.8	109	83	13	30
MAY											
22...	1630	4130	190	7.5	14.0	.60	13.4	131	83	14	30
JUN											
10...	1500	3520	190	7.4	14.0	.70	12.4	122	84	13	31
JUL											
08...	1200	420	265	7.7	19.0	.70	8.1	88	94	0	34
AUG											
06...	1230	495	260	7.6	16.0	.60	--	--	97	17	35
SEP											
10...	1330	740	--	7.6	16.9	1.1	10.8	112	91	8	33

DATE	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- LINEITY LAB (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT										
10...	2.1	12	21	.5	2.6	74	10	25	149	.20
NOV										
28...	2.1	12	24	.6	2.5	74	8.4	21	136	.19
DEC										
18...	1.7	7.0	17	.3	2.1	73	8.3	14	118	.16
JAN										
22...	2.0	12	22	.6	2.2	75	6.5	23	133	.18
FEB										
27...	3.2	10	18	.4	2.3	74	9.4	24	126	.17
MAR										
12...	1.6	4.2	10	.2	2.1	71	9.1	6.9	107	.15
APR										
16...	2.0	8.5	18	.4	2.2	70	8.5	14	117	.16
MAY										
22...	1.9	4.3	10	.2	2.2	69	8.7	6.8	113	.15
JUN										
10...	1.5	4.4	10	.2	2.2	71	9.3	6.5	107	.15
JUL										
08...	2.3	15	25	.7	2.4	100	9.7	28	148	.20
AUG										
06...	2.3	11	19	.5	2.6	80	9.4	19	133	.18
SEP										
10...	2.1	15	26	.7	2.4	83	7.4	27	149	.20

ARKANSAS RIVER BASIN

07228400 DEER CREEK AT HYDRO, OK

LOCATION.--Lat 35°32'28", long 98°34'40", in NW¼SE¼ sec.4, T.12 N., R.13 W., Caddo County, Hydrologic Unit 11090201, on downstream side of second pier from right bank of bridge on State Highway 58 at south edge of Hydro, 3.2 mi (5.1 km) downstream from Little Deep Creek, 7 mi (11 km) east of Weatherford, and at mile 7.4 (11.9 km).

DRAINAGE AREA.--274 mi² (710 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to December 1963; December 1977 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,454.01 ft (443.182 m) National Geodetic Vertical Datum of 1929. October 1960 to December 1963 gage at same site and at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years (water years 1961-63, 1979-80), 59.2 ft³/s (1.677 m³/s), 42,890 acre-ft/yr (52.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,940 ft³/s (253 m³/s) Nov. 2, 1961, gage height, 17.54 ft (5.346 m), present datum; minimum, 5.0 ft³/s (0.14 m³/s) Aug. 23, 24, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1948, reached a stage of about 32 ft (9.8 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 27	0945	3.030	85.8	13.75	4.191	June 22	1415	*4,480	127	*16.29	4.965

Minimum daily discharge, 5.8 ft³/s (0.16 m³/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	30	17	20	45	18	26	28	112	20	6.7	8.9
2	9.5	22	17	20	34	20	27	29	85	19	7.3	9.8
3	8.4	19	17	19	21	21	55	27	74	18	7.7	8.1
4	9.5	18	17	19	20	21	44	25	69	16	8.0	7.4
5	9.1	17	17	19	20	18	25	24	68	14	7.2	6.9
6	9.4	16	19	19	20	20	21	24	64	14	6.5	6.6
7	8.8	17	20	18	22	21	21	23	64	15	6.5	6.3
8	8.6	17	21	18	28	20	21	22	66	15	6.4	6.3
9	9.2	18	22	20	20	20	20	22	59	15	6.4	6.9
10	8.3	18	24	20	21	21	20	23	57	14	6.4	12
11	8.9	18	25	20	23	22	21	22	58	15	6.2	10
12	11	16	19	19	23	28	20	25	57	15	6.4	8.2
13	8.9	19	20	19	23	25	20	22	55	13	6.8	8.1
14	9.0	17	21	19	23	23	20	22	53	11	6.6	11
15	14	18	20	20	24	22	20	295	53	12	6.5	8.5
16	15	21	20	20	21	22	20	953	52	11	7.6	7.1
17	13	19	17	20	22	22	20	174	57	12	7.3	6.9
18	12	19	18	20	22	22	21	746	50	12	8.7	6.8
19	13	19	19	29	23	22	23	190	50	12	7.2	8.1
20	12	111	19	38	22	22	22	81	135	12	11	8.5
21	12	32	19	34	21	21	21	220	76	13	7.6	8.3
22	12	19	18	28	22	22	20	162	2880	13	7.4	8.2
23	12	17	18	25	23	31	20	76	955	8.0	7.5	7.5
24	12	16	18	25	23	28	29	58	69	6.2	7.4	8.5
25	11	16	18	24	21	25	44	50	35	6.1	6.4	9.2
26	12	16	19	20	19	24	53	44	25	11	6.4	8.7
27	11	16	19	19	20	25	37	538	20	11	5.8	13
28	11	16	27	21	21	26	30	288	18	9.6	5.9	16
29	11	15	25	25	21	28	25	340	18	8.4	6.4	14
30	129	16	23	32	---	28	24	936	20	7.7	6.0	14
31	139	---	20	43	---	27	---	214	---	7.2	6.4	---
TOTAL	578.5	648	613	712	668	715	790	5703	5454	386.2	216.6	269.8
MEAN	18.7	21.6	19.8	23.0	23.0	23.1	26.3	184	182	12.5	6.99	8.99
MAX	139	111	27	43	45	31	55	953	2880	20	11	16
MIN	8.3	15	17	18	19	18	20	22	18	6.1	5.8	6.3
AC=FT	1150	1290	1220	1410	1320	1420	1970	11310	10820	766	430	535
CAL YR 1979	TOTAL	13877.3	MEAN	38.0	MAX	1570	MIN	8.3	AC=FT	27530		
WTR YR 1980	TOTAL	16754.1	MEAN	45.8	MAX	2880	MIN	5.8	AC=FT	33230		

ARKANSAS RIVER BASIN

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07228400 DEER CREEK AT HYDRO, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1977 to September 1980.

WATER TEMPERATURE: December 1977 to September 1980.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected 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, 2,250 micromhos June 5, 1980; minimum daily, 359 micromhos July 24, 1979.

WATER TEMPERATURE: Maximum daily, 35.0°C July 16, Sept. 8, 1980; minimum daily 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,250 micromhos June 5; minimum daily, 409 micromhos June 22.

WATER TEMPERATURE: Maximum daily, 35.0°C July 16, Sept. 8; minimum daily, 1.0°C Jan. 31, Mar. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT										
01...	0950	9.6	1250	8.4	21.0	--	--	660	460	200
03...	1530	8.5	--	8.1	21.0	6.8	79	590	400	180
16...	1345	15	1060	7.9	19.0	--	--	540	350	170
31...	1345	100	438	7.3	16.0	--	--	200	120	67
NOV										
01...	0950	47	716	7.8	12.0	--	--	350	240	110
10...	0930	18	1260	8.1	7.0	--	--	640	420	200
13...	1515	19	1300	8.0	10.5	12.9	120	--	--	--
26...	0925	16	1390	8.0	7.0	--	--	690	480	210
DEC										
06...	1330	18	1500	8.2	7.5	15.5	137	730	520	220
JAN										
09...	1300	20	1500	8.2	3.5	15.7	122	740	530	220
FEB										
14...	1200	23	1500	7.4	8.5	12.9	114	--	--	--
MAR										
05...	1315	18	1450	8.2	5.0	12.3	102	780	590	230
APR										
03...	1310	40	--	8.1	14.0	9.9	103	1100	950	310
MAY										
08...	1415	22	1650	8.0	17.0	8.9	98	820	620	230
JUN										
12...	1110	61	--	8.3	23.5	8.2	102	1200	1000	320
JUL										
03...	1450	18	--	7.8	31.0	6.2	88	950	770	230
AUG										
06...	1015	6.9	1300	8.7	26.0	6.1	79	560	370	170
SEP										
09...	1100	11	950	8.7	27.0	6.4	84	360	170	110

ARKANSAS RIVER BASIN

07228400 DEER CREEK NEAR HYDRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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- LINEITY LAB (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)
OCT									
01...	38	38	14	.6	4.2	200	480	23	--
03...	33	42	13	.8	5.0	190	450	28	.7
16...	28	31	14	.6	4.8	190	390	18	--
31...	8.9	12	13	.4	4.8	86	130	7.4	--
NOV									
01...	18	18	12	.4	4.8	110	250	9.3	--
10...	34	35	13	.6	4.6	220	470	18	--
13...	--	--	--	--	--	--	--	--	--
26...	39	33	9	.5	3.9	210	540	18	--
DEC									
06...	43	38	10	.6	3.3	210	580	21	.4
JAN									
09...	46	38	10	.6	2.5	210	600	23	.4
FEB									
14...	--	--	--	--	--	--	--	--	--
MAR									
05...	51	44	11	.7	2.8	190	680	26	.4
APR									
03...	82	50	9	.7	3.9	160	920	37	.3
MAY									
08...	60	47	11	.7	3.4	200	640	24	.4
JUN									
12...	98	60	10	.8	4.8	170	960	45	.3
JUL									
03...	90	52	11	.7	8.6	180	880	40	.3
AUG									
06...	34	47	15	.9	5.9	190	430	27	.5
SEP									
09...	20	35	17	.8	5.2	190	220	18	.4
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
OCT									
01...	--	980	--	1.3	--	--	--	--	--
03...	19	924	872	1.2	--	--	--	--	--
16...	--	797	--	1.0	--	--	--	--	--
31...	--	313	--	.43	--	--	--	--	--
NOV									
01...	--	510	--	.69	--	--	--	--	--
10...	--	972	--	1.3	--	--	--	--	--
13...	--	--	--	--	0	6	150	3	0
26...	--	1110	--	1.5	--	--	--	--	--
DEC									
06...	18	1130	1050	1.5	--	--	--	--	--
JAN									
09...	16	1140	1070	1.5	--	--	--	--	--
FEB									
14...	--	--	--	--	200	3	190	<1	0
MAR									
05...	13	1060	1160	1.4	--	--	--	--	--
APR									
03...	7.0	1160	1510	1.5	--	--	--	--	--
MAY									
08...	15	1210	1140	1.6	--	--	--	--	--
JUN									
12...	20	1790	1610	2.4	--	--	--	--	--
JUL									
03...	--	1650	--	2.2	--	--	--	--	--
AUG									
06...	21	850	--	1.1	0	13	310	1	10
SEP									
09...	22	554	545	.75	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07228400 DEER CREEK NEAR HYDRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	716	1360	1360	1320	1480	1510	1330	1430	2020	1100	856
2	1200	1030	1370	1340	1340	1450	1290	1290	1740	1950	1070	851
3	1180	1290	1350	1350	1320	1460	1680	1520	2040	1960	1030	874
4	1190	1240	1370	1330	1330	1450	2080	1520	2140	1930	1000	876
5	1170	1240	1380	1330	1290	1410	1590	1540	2250	1920	1020	901
6	1150	1250	1390	1320	1300	1410	1400	1530	2240	1910	1040	919
7	1170	1230	1390	1330	1340	1440	1320	1550	2170	1870	1030	884
8	1180	1250	1410	1320	---	1450	1310	1580	1860	1830	1010	850
9	1130	1220	1390	1290	1280	1440	1330	1550	2050	1830	982	839
10	1130	1260	1380	1290	1280	1460	1370	1480	2080	1810	963	851
11	---	1260	1350	1310	1430	1440	1390	1510	2100	1680	954	1320
12	1130	1280	1380	1300	1420	1350	1390	1580	2110	1670	918	948
13	1150	1310	1360	1300	1390	1450	1400	1530	2020	1750	900	819
14	1170	1320	1380	1290	1440	1470	1410	1580	2000	1650	909	829
15	1100	1360	1390	1300	1450	1460	1370	672	1970	1670	918	768
16	1060	1340	1510	1280	1480	1490	1410	609	1880	1680	891	858
17	1140	1330	1480	1310	1440	1490	1440	927	1840	1620	863	884
18	1130	1330	1400	1300	1490	1510	1460	709	1780	1620	872	871
19	1190	1330	1430	1260	1390	1410	1440	891	1860	1570	843	823
20	1130	1250	1410	1020	1390	1460	1430	1060	588	1520	808	890
21	1180	954	1450	1020	1370	1430	1450	836	1610	1430	703	875
22	1160	1250	1450	1340	1380	1420	1470	927	409	1380	733	892
23	1140	1320	1440	1410	1390	1280	1490	1210	536	1310	815	878
24	1180	1310	1440	1390	1400	1270	1400	1580	1050	991	802	844
25	1180	1380	1450	1370	1410	1440	1240	1780	1360	882	808	820
26	1200	1390	1420	1380	1410	1460	1490	1890	1620	963	802	835
27	1200	1370	1450	1370	1400	1500	1630	545	1690	1600	798	802
28	1180	1340	---	1340	1390	1490	1770	709	1850	1350	777	836
29	1140	1380	1340	---	1380	1410	1690	682	1920	1320	720	853
30	1150	1370	1430	---	---	1450	1470	500	1900	1340	863	917
31	438	---	1460	1300	---	1520	---	800	---	1300	794	---
MEAN	1140	1260	1410	1310	1380	1440	1470	1210	1740	1590	888	869

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	12.0	4.0	4.0	2.0	2.0	9.0	15.5	26.0	32.0	23.0	27.5
2	17.0	12.0	5.0	5.0	3.0	1.0	10.0	17.5	24.0	33.0	26.5	29.5
3	16.0	12.0	2.0	4.0	3.5	3.0	12.0	23.0	24.0	31.0	24.0	32.5
4	14.0	9.0	7.0	4.0	4.0	5.0	10.0	21.5	28.0	30.5	31.0	33.5
5	17.0	9.5	10.0	4.0	5.0	8.0	17.0	18.0	29.5	29.5	32.0	34.0
6	17.5	8.5	7.0	4.0	4.0	6.0	16.0	18.0	31.0	31.0	33.0	28.0
7	20.0	8.0	6.0	2.0	---	8.0	13.0	18.0	30.0	32.5	33.0	27.5
8	18.0	9.0	8.0	2.0	---	7.0	11.0	20.0	22.5	34.5	34.0	35.0
9	15.0	11.0	9.0	4.0	---	14.0	11.0	18.0	25.5	33.5	28.0	32.5
10	12.0	7.0	7.0	---	---	9.0	11.0	26.0	26.0	33.0	29.0	30.0
11	---	8.0	8.0	6.0	---	9.0	13.0	24.0	28.5	32.5	30.5	30.5
12	18.0	8.0	3.0	6.5	---	10.0	15.0	21.0	28.0	29.0	30.5	25.0
13	16.0	6.0	4.0	4.5	7.0	10.0	12.0	22.5	27.0	30.0	31.5	26.0
14	14.0	7.0	4.0	7.0	10.0	11.5	13.0	21.0	27.5	33.0	31.5	34.0
15	16.0	8.0	6.0	9.0	9.5	10.0	19.0	16.0	30.5	34.0	25.5	30.0
16	19.0	7.0	5.0	7.0	3.0	14.0	15.0	16.0	28.5	35.0	28.5	22.5
17	16.0	7.0	6.0	6.0	3.5	16.0	14.0	20.0	29.0	35.0	31.0	15.5
18	20.0	8.0	2.0	6.0	2.0	11.0	14.0	17.0	28.5	29.0	28.0	19.5
19	21.0	6.0	3.0	9.0	6.0	9.0	14.0	20.0	30.0	28.0	33.0	22.0
20	20.5	9.0	6.0	7.0	8.0	10.0	14.0	17.5	28.5	32.0	30.0	24.0
21	19.5	4.0	7.0	5.0	10.0	12.0	16.0	18.0	28.0	32.0	30.5	23.5
22	19.0	7.0	9.0	5.0	8.0	10.0	19.0	21.0	19.0	28.0	31.5	19.0
23	14.0	4.0	8.0	3.0	7.0	12.0	20.0	23.5	24.0	29.0	30.0	19.0
24	14.0	4.0	5.0	4.0	6.0	7.5	19.0	25.5	27.5	27.0	30.0	20.0
25	13.0	7.0	7.0	6.0	6.0	8.0	16.0	29.5	29.0	27.0	34.0	20.0
26	13.0	7.0	4.0	3.0	5.5	9.0	16.0	29.5	30.0	27.0	32.5	17.0
27	13.0	7.0	8.5	4.0	5.0	12.0	14.5	28.5	29.5	29.0	29.5	15.5
28	13.0	6.0	---	2.0	10.0	12.0	16.0	22.5	30.5	30.0	31.0	15.5
29	13.5	4.0	6.0	---	6.0	10.0	21.0	21.5	32.0	31.0	33.0	17.0
30	14.5	3.0	4.5	---	---	11.0	16.0	21.0	31.5	27.0	25.0	18.0
31	16.0	---	4.0	1.0	---	8.0	---	23.0	---	26.0	25.0	---
MEAN	16.5	7.5	6.0	5.0	6.0	9.0	14.5	21.0	28.0	30.5	30.0	25.0

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LOCATION.--Lat 35°34'00", long 98°22'45", in SE¼SW¼ sec.28, T.13 N., R.11 W., Blaine County, Hydrologic Unit 11090202, on downstream side of left abutment of Chicago, Rock Island and Pacific Railroad Co. bridge, 1.0 mi (1.6 km) north of Bridgeport, 2.8 mi (4.5 km) upstream from Lumpmouth Creek, and at mile 267.3 (429.8 km).

DRAINAGE AREA.--25,229 mi² (65,343 km²), of which 4,801 mi² (12,435 km²) is probably noncontributing.

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 1,384.25 ft (421.919 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1947, at site 0.2 mi (0.3 km) downstream at same datum. Oct. 1, 1947, to Sept. 30, 1948, nonrecording gage at present site and datum.

REMARKS.--Records poor. Occasional slight regulation by Conchas Reservoir in New Mexico, and by Lake Meredith in Texas since 1964.

AVERAGE DISCHARGE.--31 years, 384 ft³/s (10.87 m³/s), 278,200 acre-ft/yr (343 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft³/s (4,250 m³/s) June 23, 1948, gage-height, 14.60 ft (4.450 m), from floodmarks, from rating curve extended above 50,000 ft³/s (1,420 m³/s), no flow at times in 1946, 1951-56, 1964, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft (5.91 m), a higher stage probably occurred during flood in October 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,220 ft³/s (233 m³/s) at 1430 May 30, gage height, 9.80 ft (2.987 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Sept. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	197	68	110	140	120	510	565	3000	80	3.5	3.6
2	9.5	177	77	105	130	130	360	543	1060	70	2.8	5.0
3	9.5	111	77	100	120	130	474	786	626	45	2.7	5.6
4	9.5	93	81	94	294	120	310	742	418	35	2.7	4.7
5	9.8	75	81	91	220	110	251	666	332	29	2.7	4.3
6	9.9	62	82	100	224	100	208	529	265	24	2.7	4.0
7	9.9	61	87	91	200	85	167	522	251	22	2.7	3.8
8	9.9	68	88	91	230	95	140	474	220	20	2.7	3.6
9	8.8	71	89	94	300	110	130	450	210	18	2.7	4.0
10	9.5	75	88	97	400	105	120	450	200	17	2.7	6.3
11	9.9	88	88	93	350	100	118	400	185	16	2.7	5.8
12	9.9	116	86	87	300	97	115	400	180	14	2.5	5.0
13	10	129	87	82	260	94	110	350	170	12	2.7	4.7
14	11	121	86	78	220	90	110	350	170	11	2.8	6.1
15	13	113	87	90	190	88	105	350	170	10	2.5	5.0
16	21	104	81	110	215	84	105	400	165	10	2.3	4.3
17	21	97	78	132	265	96	100	500	160	9.9	2.4	4.5
18	19	90	86	128	240	120	98	1400	160	9.0	3.4	6.0
19	17	86	89	144	205	200	90	2240	570	8.2	5.1	3.2
20	15	246	101	231	190	150	86	1710	2110	8.0	4.1	2.5
21	14	529	96	267	221	132	84	2500	1100	7.4	6.6	2.5
22	16	184	97	299	150	111	82	1180	800	7.0	4.4	2.2
23	17	155	101	357	130	122	80	543	600	6.6	4.3	2.7
24	15	124	100	248	150	184	139	333	400	6.4	4.3	3.0
25	17	107	98	200	170	168	378	266	300	5.8	4.3	3.5
26	15	95	97	180	200	183	1070	241	220	5.1	3.7	4.0
27	15	86	97	160	170	196	1200	1250	185	11	3.6	5.2
28	15	80	97	130	150	234	989	2280	150	9.8	3.4	8.3
29	14	72	110	120	130	384	813	3560	130	8.2	3.4	9.2
30	108	68	140	110	---	644	610	7270	110	6.1	3.7	8.7
31	192	---	100	120	---	564	---	5210	---	3.9	3.5	---
TOTAL	681.1	3640	2820	4339	6164	5146	9152	38460	14617	545.4	103.6	141.3
MEAN	22.0	121	91.0	140	213	166	305	1241	487	17.6	3.34	4.71
MAX	192	529	140	357	400	644	1200	7270	3000	80	6.6	9.2
MIN	8.8	61	68	78	120	84	80	241	110	3.9	2.3	2.2
AC=FT	1350	7220	5590	8610	12230	10210	18190	76290	28990	1080	205	280
CAL YR 1979	TOTAL	65717.1	MEAN 180	MAX 6050	MIN 8.8	AC=FT	130300					
WTR YR 1980	TOTAL	85809.4	MEAN 234	MAX 7270	MIN 2.2	AC=FT	1					

ARKANSAS RIVER BASIN

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 current year.

WATER TEMPERATURE: October 1948 to September 1960, October 1969 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,830 micromhos June 11, 1975; minimum daily, 223 micromhos Aug. 16, 1973.
WATER TEMPERATURE: Maximum daily, 40.0°C July 9, 22, 1973; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,620 micromhos Mar. 8, 9; minimum daily, 647 micromhos Sept. 24.
WATER TEMPERATURE: Maximum daily, 30.0°C July 2; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMMOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT											
01...	1030	11	1220	8.4	14.5	--	--	570	390	170	35
03...	1630	9.5	1300	7.5	21.0	7.1	82	--	--	--	--
12...	1300	9.9	--	--	--	--	--	--	--	--	--
21...	1025	14	1120	8.3	19.0	--	--	560	350	170	32
30...	1130	17	1010	8.3	16.0	--	--	490	290	150	27
NOV											
04...	0945	95	1080	7.4	10.0	--	--	420	260	120	29
13...	1330	134	2000	8.1	10.0	14.2	130	--	--	--	--
16...	1005	104	--	--	--	--	--	--	--	--	--
20...	1045	104	1660	7.4	10.0	--	--	440	320	120	34
29...	1010	71	2350	8.1	1.0	--	--	750	530	200	61
DEC											
06...	1500	82	2200	8.2	9.0	13.5	123	--	--	--	--
08...	0935	88	--	8.1	3.0	--	--	780	570	210	63
11...	1110	84	--	--	--	--	--	--	--	--	--
18...	1000	55	1870	8.2	2.0	--	--	680	490	190	51
28...	0928	97	1670	8.2	5.0	--	--	570	390	160	42
JAN											
02...	0950	105	2060	8.3	5.0	--	--	690	500	180	59
09...	1500	94	2450	8.1	4.0	16.0	126	--	--	--	--
17...	1140	131	--	--	--	--	--	--	--	--	--
19...	0945	131	1940	8.3	6.0	--	--	630	450	160	55
31...	1115	120	2320	8.1	.0	--	--	820	570	210	71
FEB											
12...	0925	300	2090	8.1	1.5	--	--	700	490	180	60
14...	1430	220	2250	7.9	9.5	13.4	123	--	--	--	--
17...	0930	265	1940	8.2	.0	--	--	660	460	170	57
28...	1045	150	2320	8.2	10.5	--	--	680	490	170	62
MAR											
05...	1430	110	2100	8.5	5.5	12.2	103	--	--	--	--
08...	1045	95	2620	8.2	6.5	--	--	690	520	170	64
14...	1025	90	2360	8.0	9.0	--	--	670	470	170	59
21...	1150	131	--	--	--	--	--	--	--	--	--
25...	0955	157	2120	8.3	4.5	--	--	630	430	160	55
APR											
01...	1100	522	2100	--	9.0	11.6	107	--	--	--	--
03...	1010	474	1780	8.3	8.0	--	--	540	360	140	45
16...	0845	105	2550	8.1	14.5	--	--	690	490	170	64
18...	1035	98	--	--	--	--	--	--	--	--	--
24...	1045	157	2170	7.8	15.0	--	--	640	460	160	58

ARKANSAS RIVER BASIN

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07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAY											
01...	1300	565	--	--	--	--	--	--	--	--	--
08...	1525	474	200	--	16.0	10.0	107	--	--	--	--
14...	0955	350	2400	7.7	17.5	--	--	650	460	160	61
18...	1200	1400	982	7.9	10.0	--	--	330	210	89	25
19...	1140	2160	--	--	--	--	--	--	--	--	--
27...	1100	242	1750	7.7	20.0	--	--	540	360	140	47
28...	1430	1490	--	--	--	--	--	--	--	--	--
JUN											
03...	0945	626	1690	8.2	23.5	--	--	550	350	140	49
12...	1240	180	2800	--	26.0	8.4	110	--	--	--	--
16...	0945	165	2550	7.9	24.0	--	--	920	750	230	83
20...	1630	--	--	--	--	--	--	--	--	--	--
23...	1430	600	936	7.5	28.5	--	--	380	240	110	25
JUL											
01...	1135	80	2010	7.3	29.5	--	--	930	780	240	81
03...	1200	45	2800	8.0	32.0	6.4	94	--	--	--	--
17...	1115	9.9	--	--	--	--	--	--	--	--	--
19...	0930	8.2	1630	7.3	26.5	--	--	800	670	210	66
30...	1135	6.0	1270	7.8	28.5	--	--	570	470	150	47
AUG											
01...	0945	3.5	1270	7.8	24.5	--	--	540	400	140	47
06...	1140	2.7	1200	8.5	27.0	5.5	72	--	--	--	--
11...	1050	2.6	--	--	--	--	--	--	--	--	--
17...	0935	2.6	1080	7.5	24.0	--	--	480	340	130	37
25...	0845	4.3	825	7.8	22.5	--	--	330	240	84	29
SEP											
01...	1030	3.6	858	7.6	25.5	--	--	300	240	72	29
10...	1500	6.3	980	8.5	30.0	5.8	80	--	--	--	--
16...	1035	4.3	747	7.7	20.0	--	--	300	170	82	22
18...	1035	6.0	--	--	--	--	--	--	--	--	--
24...	1035	3.0	647	8.1	24.0	--	--	230	65	66	17

ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT										
01...	40	13	.7	5.2	180	460	32	918	1.2	27.3
03...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
21...	50	16	.9	4.9	210	380	27	833	1.1	31.5
30...	33	16	.7	3.7	200	330	17	--	--	--
NOV										
04...	76	35	1.6	7.1	160	290	89	726	.99	186
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
20...	170	45	3.5	9.5	120	350	250	1080	1.4	303
29...	240	51	3.8	9.8	220	500	350	1580	2.1	303
DEC										
06...	--	--	--	--	--	--	--	--	--	--
08...	230	39	3.6	9.5	210	560	350	1610	2.1	383
11...	--	--	--	--	--	--	--	--	--	--
18...	170	35	2.8	7.6	190	550	270	1440	1.9	214
28...	170	39	3.1	8.2	180	370	270	1220	1.6	320
JAN										
02...	230	42	3.8	8.9	190	480	360	1510	2.0	428
09...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
19...	230	44	4.0	8.9	180	450	340	1400	1.9	495
31...	260	41	4.0	9.4	250	580	370	1700	2.3	551
FEB										
12...	250	43	4.1	8.6	210	480	370	1540	2.0	1250
14...	--	--	--	--	--	--	--	--	--	--
17...	220	42	3.7	7.8	200	460	320	1420	1.9	1020
28...	270	46	4.5	9.9	190	490	410	1590	2.1	644
MAR										
05...	--	--	--	--	--	--	--	--	--	--
08...	300	48	5.0	11	170	540	480	1750	2.3	449
14...	250	44	4.2	9.6	200	500	390	1570	2.1	382
21...	--	--	--	--	--	--	--	--	--	--
25...	220	43	3.8	8.5	200	470	330	1420	1.9	602
APR										
01...	--	--	--	--	--	--	--	--	--	--
03...	180	42	3.4	8.0	180	390	250	1180	1.6	1510
16...	280	47	4.6	9.9	200	520	440	1710	2.3	485
18...	--	--	--	--	--	--	--	--	--	--
24...	220	42	3.8	8.7	180	500	320	1470	2.0	623
MAY										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
14...	260	46	4.4	8.8	190	440	380	1580	2.1	1490
18...	82	35	2.0	6.7	120	220	140	644	.88	2430
19...	--	--	--	--	--	--	--	--	--	--
27...	170	40	3.2	7.7	180	380	220	1150	1.5	750
28...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	150	37	2.8	9.6	200	400	210	1060	1.4	1790
12...	--	--	--	--	--	--	--	--	--	--
16...	230	35	3.3	11	170	720	360	1810	2.4	806
20...	--	--	--	--	--	--	--	--	--	--
23...	54	23	1.2	8.3	140	260	74	617	.84	1000
JUL										
01...	110	20	1.6	12	150	830	130	1660	2.2	359
03...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
19...	60	14	.9	7.7	130	760	45	1320	1.8	29.2
30...	58	18	1.1	7.2	99	550	42	958	1.3	15.5
AUG										
01...	57	18	1.1	8.0	140	480	41	972	1.3	9.1
06...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	53	19	1.1	7.0	140	430	33	787	1.0	5.5
25...	44	22	1.1	7.7	87	320	28	582	.79	6.7
SEP										
01...	60	30	1.5	6.8	62	290	38	554	.75	5.3
10...	--	--	--	--	--	--	--	--	--	--
16...	42	23	1.1	5.9	130	210	22	500	.68	5.8
18...	--	--	--	--	--	--	--	--	--	--
24...	41	27	1.2	6.9	170	120	24	418	.57	3.3

ARKANSAS RIVER BASIN

203

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM
OCT										
01...	.61	.330	--	--	--	--	--	--	--	--
03...	--	--	107	2.7	93	--	--	--	--	--
12...	--	--	80	2.1	69	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
NOV										
04...	--	--	--	--	--	--	--	--	--	--
13...	--	--	553	200	90	--	--	--	--	--
16...	--	--	261	73	94	1	11	84	99	100
20...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	232	51	70	--	--	--	--	--
08...	--	--	--	--	--	1	11	86	100	100
11...	--	--	212	48	55	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	.110	--	--	--	--	--	--	--	--
09...	--	--	285	72	72	--	--	--	--	--
17...	--	--	200	71	39	0	6	78	99	99
19...	--	.130	--	--	--	--	--	--	--	--
31...	--	.100	--	--	--	--	--	--	--	--
FEB										
12...	--	.060	--	--	--	--	--	--	--	--
14...	--	--	556	330	95	--	--	--	--	--
17...	--	.080	--	--	--	--	--	--	--	--
28...	--	.090	--	--	--	--	--	--	--	--
MAR										
05...	--	--	440	131	34	--	--	--	--	--
08...	1.7	.040	--	--	--	--	--	--	--	--
14...	--	.120	--	--	--	--	--	--	--	--
21...	--	--	106	37	72	0	4	66	98	--
25...	--	.100	--	--	--	--	--	--	--	--
APR										
01...	--	--	2270	3200	48	--	--	--	--	--
03...	1.0	.100	--	--	--	--	--	--	--	--
16...	--	.150	--	--	--	--	--	--	--	--
18...	--	--	158	42	70	0	3	78	99	100
24...	--	.160	--	--	--	--	--	--	--	--
MAY										
01...	--	--	3580	5460	17	1	5	95	100	--
08...	--	--	1340	1720	30	--	--	--	--	--
14...	.55	.130	--	--	--	--	--	--	--	--
18...	--	.140	--	--	--	--	--	--	--	--
19...	--	--	9080	53000	19	7	18	81	100	100
27...	--	.090	--	--	--	--	--	--	--	--
28...	--	--	9670	38900	36	8	17	80	100	--
JUN										
03...	--	--	--	--	--	--	--	--	--	--
12...	--	--	238	116	64	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	1	23	93	100	--
23...	--	--	--	--	--	--	--	--	--	--
JUL										
01...	.53	.080	--	--	--	--	--	--	--	--
03...	--	--	47	5.7	79	--	--	--	--	--
17...	--	--	21	.56	73	1	9	87	100	--
19...	--	.090	--	--	--	--	--	--	--	--
30...	--	.090	--	--	--	--	--	--	--	--
AUG										
01...	--	--	--	--	--	--	--	--	--	--
06...	--	--	21	.15	62	--	--	--	--	--
11...	--	--	13	.09	63	0	14	85	99	100
17...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	1.4	.130	--	--	--	--	--	--	--	--
10...	--	--	14	.24	62	--	--	--	--	--
16...	--	.200	--	--	--	--	--	--	--	--
18...	--	--	51	.83	39	1	17	81	99	100
24...	--	.300	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1200	2080	2070	2290	2400	2070	2040	1420	2010	1270	858
2	1200	1180	1980	2060	2320	2310	1790	2260	1530	1990	1270	857
3	1200	1200	1990	2060	2030	2310	1780	2270	1690	1910	1250	832
4	1200	1080	2100	2020	2020	2390	2200	2250	---	1900	1230	802
5	1200	1250	2090	2010	2050	2430	2220	2250	1820	1910	1180	802
6	1210	1260	2000	2040	2210	2580	2270	2230	1840	1800	1160	802
7	1100	1070	2060	2080	2200	2590	2250	2190	1960	1800	1170	838
8	1100	1170	2120	2100	2080	2420	2330	2180	1960	1680	1150	839
9	1100	1660	2020	2030	2030	2420	2350	2210	2110	1720	1150	839
10	1100	1660	2020	2040	2080	2440	2360	2300	2150	1670	1100	832
11	1100	2010	2020	2000	2080	2460	2430	2330	2350	1620	1100	825
12	1100	2050	2020	1990	2090	2410	2430	2330	2410	1560	1100	792
13	1100	2130	2000	2020	2070	2410	2470	2390	2470	1560	1120	793
14	1080	2120	2000	2110	2070	2360	2480	2400	2510	1570	1120	790
15	1070	2320	2000	2100	2090	2340	2540	1010	2510	1570	1120	743
16	1070	2320	1860	2090	2060	2410	2550	1020	2550	1580	1120	747
17	1030	2310	1850	2060	1940	2520	2530	1040	2550	1580	1080	650
18	1030	2230	1870	2010	1940	2520	2520	982	2430	1620	1080	652
19	1020	2220	1850	1940	2070	2520	2520	1010	2250	1630	1000	649
20	1010	1660	1920	2010	2250	2500	2510	2030	1000	1450	991	652
21	1120	1650	1980	2020	2250	2430	2510	2030	991	1450	954	855
22	1120	1500	1980	2030	2250	2440	2520	1720	991	1410	927	727
23	1100	1330	1980	2030	2250	2330	2350	1710	936	1410	840	740
24	1100	1330	2000	2070	2180	2300	2170	1710	936	1350	826	647
25	1120	2160	2010	2030	2170	2120	1890	2120	1240	1340	825	854
26	1120	2160	2000	2110	2290	2380	1890	2120	1520	1340	825	855
27	1130	2150	2000	2030	2310	2380	1940	1790	2040	1360	872	853
28	1100	2170	1670	2030	2320	2380	1940	1430	2040	1350	872	839
29	1040	2350	1680	2030	2320	2380	1970	1430	2050	1320	872	844
30	1010	2240	1680	2310	---	2290	1960	1320	2050	1270	872	842
31	1060	---	1780	2320	---	2220	---	1320	---	1270	838	---
MEAN	1110	1770	1960	2060	2150	2410	2260	1850	1870	1580	1040	788

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.5	8.0	2.0	4.0	1.5	.0	8.5	15.5	22.5	29.5	24.5	25.5
2	16.5	7.0	2.0	5.0	1.0	.0	7.5	14.0	---	30.0	22.5	26.0
3	16.0	5.0	3.0	2.0	1.5	2.5	6.0	14.5	23.5	28.0	29.5	26.0
4	16.0	10.0	3.0	3.0	2.0	4.5	11.0	16.0	---	28.5	26.0	25.5
5	14.5	10.5	4.0	3.0	3.5	4.0	10.5	16.5	25.0	27.0	28.5	26.5
6	15.5	8.5	4.0	3.5	3.0	3.5	13.5	17.0	25.5	25.5	27.0	25.0
7	17.5	7.0	4.0	2.0	.0	7.0	12.0	15.5	24.0	25.0	26.0	26.0
8	17.0	10.0	3.0	1.5	.0	6.5	11.5	15.5	24.5	24.5	25.5	25.5
9	14.5	9.5	10.0	.0	.0	7.5	12.0	16.0	23.0	25.5	25.0	22.5
10	16.0	8.0	9.0	3.0	.0	9.0	12.0	15.0	24.0	25.0	24.5	24.0
11	13.5	8.0	9.0	2.0	.0	8.0	12.5	15.0	25.0	26.5	25.0	23.5
12	10.0	5.0	8.0	2.5	1.5	8.5	9.5	16.5	25.5	26.5	25.5	29.5
13	10.0	5.0	7.0	12.0	3.5	9.5	10.5	16.0	26.0	25.5	24.5	22.0
14	16.5	6.0	5.0	10.0	4.0	9.0	16.0	17.5	24.0	25.0	24.0	21.0
15	17.0	7.0	5.0	11.0	4.5	7.5	15.0	17.0	23.5	25.5	24.5	22.5
16	15.5	8.0	.0	9.0	.0	8.0	14.5	16.0	24.0	27.0	26.0	20.0
17	18.5	6.0	1.0	10.0	.0	8.5	15.0	16.5	22.5	26.5	24.0	19.5
18	19.0	9.0	2.0	6.5	.0	9.0	14.5	10.0	22.0	27.5	24.5	20.0
19	20.0	9.0	2.0	6.0	6.0	10.0	12.5	14.5	25.5	26.5	25.0	23.5
20	20.5	10.0	4.0	5.5	7.0	9.5	14.0	15.0	25.0	26.0	26.5	23.0
21	19.0	9.0	6.0	3.5	8.5	8.0	15.5	15.5	23.0	25.5	26.0	21.0
22	17.0	8.0	6.0	3.0	7.5	7.5	15.0	17.0	29.0	25.0	26.5	23.0
23	10.0	5.0	6.0	2.0	5.0	5.0	14.5	17.5	28.5	24.5	24.5	20.0
24	14.5	5.0	6.0	3.5	6.5	4.0	15.0	16.5	25.0	25.0	23.5	24.0
25	15.0	5.0	7.0	3.0	7.5	4.5	12.0	17.0	27.0	25.5	22.5	21.5
26	12.0	5.0	5.0	2.0	8.5	5.5	9.5	17.5	26.5	25.0	25.0	20.0
27	10.5	5.0	5.0	2.0	9.0	9.5	26.5	20.0	27.0	25.0	26.5	12.0
28	15.5	3.0	5.0	.0	10.5	12.0	25.0	16.0	28.5	26.5	26.0	19.0
29	14.0	1.0	5.0	.0	5.0	11.5	24.5	18.5	27.5	26.5	25.5	20.0
30	16.0	1.0	6.0	.0	---	11.0	24.0	23.0	29.5	28.5	24.5	20.0
31	9.5	---	6.0	.0	---	9.0	---	21.0	---	28.0	25.0	---
MEAN	15.0	7.0	5.0	4.0	3.5	7.0	14.0	16.5	25.0	26.5	25.5	22.5

07229300 WALNUT CREEK AT PURCELL, OK

DRAINAGE AREA.-- 202 mi² (523 km²).

GAGE.--Water-stage recorder. Datum of gage is 1,017.68 ft (310.189 m) Oklahoma State Highway Department datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 46.6 ft³/s (1.320 m³/s), 33,760 acre-ft/yr (41.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,200 ft³/s (770 m³/s) May 23, 1975, gage height, 16.80 ft (5.121 m), from rating curve extended above 8,200 ft³/s (232 m³/s) on basis of slope-area measurement at peak; no flow at times in 1966-67.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,100 ft³/s (116 m³/s) at 2115 May 15, gage height, 10.39 ft (3.167 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily discharge, 0.09 ft³/s (0.003 m³/s), Sept. 21. 22.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	12	5.9	19	19	18	22	43	68	2.6	.46	.32
2	3.9	9.3	6.2	18	19	18	21	304	61	2.4	.45	92
3	3.7	9.2	5.7	18	19	17	32	69	54	2.1	.46	6.5
4	3.8	9.4	5.6	18	18	17	25	42	54	1.9	.46	.43
5	3.8	9.8	5.6	18	19	18	22	31	50	1.8	.44	.23
6	3.9	9.7	5.5	17	19	17	22	26	47	1.6	.42	.17
7	4.1	10	5.3	16	23	16	20	21	45	1.5	.41	.16
8	4.1	11	4.9	15	40	16	19	17	42	1.6	.41	.17
9	4.0	12	4.9	17	35	16	20	16	46	1.2	.41	.15
10	4.0	11	5.2	16	32	15	20	14	46	1.1	.41	.14
11	4.4	12	5.5	17	30	16	20	12	40	1.6	.39	.13
12	4.6	11	6.7	15	28	19	21	9.8	38	1.0	.40	.11
13	4.2	11	7.7	14	27	20	22	8.8	36	1.2	.39	.10
14	4.0	12	6.8	15	26	18	23	8.0	34	.87	.39	.11
15	4.1	12	6.6	16	26	17	21	798	33	.73	.38	.11
16	4.6	12	6.6	17	23	20	21	529	32	.68	.38	.13
17	10	12	6.0	17	22	21	21	47	32	.64	.37	.19
18	8.1	12	7.2	17	23	18	21	820	34	.63	.37	.14
19	6.1	12	9.5	53	24	17	21	140	36	.60	.34	.12
20	5.5	158	8.8	94	22	17	22	70	685	.59	.32	.10
21	5.1	122	8.1	54	19	19	21	126	100	.59	.32	.09
22	8.0	14	7.9	41	18	19	21	88	41	.59	.32	.09
23	7.7	11	10	30	18	29	19	61	17	.56	.32	.13
24	6.3	7.9	12	26	18	35	28	52	8.3	.56	.37	.14
25	5.9	6.6	9.4	23	18	26	80	46	5.0	.55	.29	.14
26	5.7	5.9	9.0	21	17	22	77	42	3.8	.55	.28	.14
27	5.6	5.3	9.2	19	18	22	39	37	3.5	.53	.29	.38
28	5.5	5.0	67	19	19	25	28	42	3.1	.52	.30	.37
29	5.4	4.6	63	18	19	36	23	454	3.0	.50	.30	.34
30	9.5	4.6	32	19	---	31	26	228	2.9	.47	.28	.33
31	27	---	23	18	---	26	---	93	---	.46	.30	---
TOTAL	186.9	554.3	376.8	735	658	641	798	4294.6	1700.6	32.22	11.43	103.63
MEAN	6.03	18.5	12.2	23.7	22.7	20.7	26.6	139	56.7	1.04	.37	3.45
MAX	27	158	67	94	40	36	80	820	685	2.6	.46	92
MIN	3.7	4.6	4.9	14	17	15	19	8.0	2.9	.46	.28	.09
AC=PT	371	1100	747	1460	1310	1270	1580	8520	3370	64	23	206
CAL YR 1979	TOTAL	19558.50	MEAN	53.6	MAX	4620	MIN	3.7	AC=PT	38790		
WTR YR 1980	TOTAL	10092.48	MEAN	27.6	MAX	820	MIN	.09	AC=PT	20020		

ARKANSAS RIVER BASIN

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'15", long 97°13'05", in NW¼SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hyrdologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek, 13 mi (20.9 km) east of Norman, and at mile 96.4 (111.1 km).

DRAINAGE AREA.--256 mi² (663 km²).

RESERVOIR CONTENTS RECORDS

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 an earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft (242 hm³) at elevation 1,049.4 ft (319.86 m), crest of drop inlet; 119,600 acre-ft (147 hm³) at elevation 1,039.0 ft (316.687 m), top of conservation pool; 13,640 acre-ft (16.8 hm³) at elevation 1,010.0 ft (307.848 m), minimum conservation pool. Dead storage, 1,200 acre-ft (1.48 hm³) below elevation 997.0 ft (303.886 m), 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, 147,100 acre-ft (181 hm³) May 30, 1975, elevation, 1,043.20 ft (317.967 m), minimum since conservation pool first reached 15,370 acre-ft (19.0 hm³) Nov. 30, 1965, elevation, 1,011.0 ft (308.153 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 132,000 acre-ft (163 hm³) June 2, elevation, 1,040.97 ft (317.288 m); minimum, 104,000 acre-ft (128 hm³) Sept. 26, elevation, 1,036.30 ft (315.864 m).

MONTH-END ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980.

DATE	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,038.30	115,400	--	--
Oct. 31	1,037.75	112,200	-3,200	727
Nov. 30	1,037.72	112,000	-200	861
Dec. 31	1,037.78	112,300	+300	744
CAL YR 79	--	--	+24,900	11,596
Jan 31	1,037.92	113,100	+800	963
Feb. 29	1,038.06	114,000	+900	763
Mar. 31	1,038.03	113,800	-200	972
Apr. 30	1,038.04	113,800	0	1,043
May 31	1,040.96	131,900	+18,100	942
June 30	1,039.15	120,500	-11,400	1,300
July 31	1,038.07	114,000	-6,500	1,631
Aug. 31	1,037.04	108,100	-5,900	1,609
Sept. 30	1,036.54	105,300	-2,800	1,312
WTR YR 80	--	--	-10,100	12,867

ARKANSAS RIVER BASIN

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07229900 LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to March 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 04...	1430	115000	420	8.0	22.0	8.5	8.3	98	150	2	28
NOV 08...	0930	111000	430	8.4	13.5	12	9.9	99	170	6	30
DEC 13...	1105	111000	400	8.2	8.0	5.4	13.6	117	170	6	30
JAN 10...	1000	112000	450	7.2	7.5	24	9.0	78	160	11	30
FEB 14...	1115	114000	--	6.8	5.5	6.0	13.0	107	170	16	30
MAR 11...	1100	113000	412	8.5	7.0	4.7	14.0	120	170	12	31

DATE	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- LINEITY FIELD (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 04...	20	17	19	.6	5.1	150	13	28	212	.29
NOV 08...	22	18	32	.6	5.4	160	13	22	226	.31
DEC 13...	22	20	35	.7	5.1	160	13	31	212	.29
JAN 10...	21	18	19	.6	4.9	150	12	40	260	.35
FEB 14...	22	20	20	.7	4.9	150	9.4	30	217	.30
MAR 11...	23	20	20	.7	4.9	160	12	30	234	.32

ARKANSAS RIVER BASIN

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD, NEAR NORMAN, OK

LOCATION.--Lat 35°13'14", long 97°13'00", in NE&SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, at right bank of outlet channel, 170 ft (51.8 m) upstream from State Highway 9, 1,200 ft (365.8 m) downstream from Lake Thunderbird, 1.0 mi (1.6 km) upstream from Prairie Creek, 13.0 mi (20.9 km) east of Norman, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--257 mi² (666 km²).

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 (294.321 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 28, 1956, nonrecording gage 800 ft (243.8 m) downstream at same datum. Nov. 28, 1956, to Oct. 14, 1964, water-stage recorder at site 800 ft (243.8 m) downstream at same datum. Oct. 15, 1964, to Sept. 1, 1965, nonrecording gage at site 170 ft (51.8 m) downstream at same datum.

REMARKS.--Records good except for August and September, which are poor. 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 ft³/s (1.668 m³/s), 42,640 acre-ft/yr (52.6 hm³/yr); (after regulation by Lake Thunderbird) 15 years, (water years 1966-80), 16.1 ft³/s (0.456 m³/s), 11,660 acre-ft/yr (14.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s (980 m³/s) May 25, 1957, gage height, 28.85 ft (8.793 m), from high-water mark, at site then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times in 1954-56, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 582 ft³/s (16.5 m³/s) June 3, gage height, 6.26 ft (1.908 m); minimum daily discharge, 0.42 ft³/s (0.012 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.51	.51	.53	.44	.61	.77	.94	.87	.53	.53	.47
2	.52	.51	.49	.53	.44	.64	.85	.74	102	.53	.53	.47
3	.52	.47	.53	.53	.44	.68	.73	.61	455	.53	.58	.46
4	.50	.52	.53	.53	.44	.68	.72	.61	573	.56	.56	.58
5	.53	.50	.51	.53	.44	.63	.77	.71	565	.54	.53	.45
6	.52	.51	.52	.51	.44	.69	.78	.70	558	.56	.53	.44
7	.52	.53	.49	.45	.56	.69	.79	.65	594	.55	.53	.44
8	.53	.53	.49	.45	.64	.63	.72	.60	949	.53	.54	.42
9	.47	.52	.49	.45	.52	.65	.72	.61	545	.53	.53	.45
10	.51	.50	.47	.49	.52	.69	.75	.61	543	.53	.53	.45
11	.52	.52	.50	.47	.52	.67	.74	.61	540	.53	.54	.42
12	.53	.51	.50	.45	.52	.70	.70	.60	259	.53	.57	.45
13	.47	.51	.51	.45	.52	.63	.74	.58	.60	.53	.57	.48
14	.53	.51	.45	.44	.53	.64	.75	.61	.61	.53	.57	.54
15	.53	.53	.45	.46	.56	.68	.78	1.2	.61	.55	.54	.49
16	.53	.52	.45	.62	.53	.73	.74	.65	.61	.53	.55	.54
17	.56	.52	.44	.64	.56	.67	.74	.62	.61	.53	.57	.54
18	.53	.53	.45	.60	.56	.72	.78	1.5	.61	.53	.59	.54
19	.53	.53	.45	.70	.58	.76	.75	.62	.61	.54	.54	.52
20	.53	1.0	.45	.64	.57	.76	.78	156	1.7	.53	.59	.52
21	.56	.66	.45	.68	.53	.74	.69	81	.61	.53	.61	.52
22	.51	.51	.45	.60	.58	.78	.69	133	.67	.53	.61	.50
23	.53	.53	.53	.60	.54	.94	.69	266	.77	.54	.57	.50
24	.49	.53	.48	.86	.53	.69	.74	262	110	.54	.53	.50
25	.53	.53	.45	.54	.55	.71	.91	262	110	.53	.53	.50
26	.52	.52	.45	.52	.59	.71	.70	261	109	.55	.49	.50
27	.53	.48	.45	.52	.68	.74	.69	170	.73	.54	.49	.54
28	.52	.47	.67	.52	.67	.74	.67	164	.53	.63	.49	.50
29	.53	.46	.57	.52	.67	.89	.69	.88	.54	.61	.49	.50
30	.63	.52	.53	.52	---	.75	.82	.87	.53	.55	.46	.50
31	.49	---	.53	.52	---	.78	---	.87	---	.53	.48	---
TOTAL	16.45	15.99	15.24	16.87	15.67	22.02	22.39	1858.51	5731.71	16.80	16.77	15.03
MEAN	.53	.53	.49	.54	.54	.71	.75	60.0	191	.54	.54	.50
MAX	.73	1.0	.67	.86	.68	.94	.91	266	573	.63	.61	.84
MIN	.47	.46	.44	.44	.44	.61	.67	.58	.53	.53	.46	.42
AC-FT	33	32	30	33	31	44	44	3690	11370	33	33	30

CAL YR 1979 TOTAL 2731.19 MEAN 7.48 MAX 256 MIN .40 AC-FT 5420
WTR YR 1980 TOTAL 7763.45 MEAN 21.2 MAX 573 MIN .42 AC-FT 15400

ARKANSAS RIVER BASIN

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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 (2.4 km) downstream from Dance Creek, 5.0 mi (8.0 km) south of Tecumseh, and at mile 77.2 (124.2 km).

DRAINAGE AREA.--456 mi² (1,181 km²).

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 (273.869 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair above 2.0 ft³/s (0.057 m³/s) and poor below. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi (30.9 km) upstream (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 21 years (water years 1944-64), 149 ft³/s (4.22 m³/s), 107,900 acre-ft/yr (133.0 hm³/yr); (since regulation by Lake Thunderbird) 15 years (water years 1966-80), 76.6 ft³/s (2.169 m³/s), 55,500 acre-ft/yr (68.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s) May 25, 1957, gage height, 18.84 ft (5.742 m); maximum gage height, 19.68 ft (5.998 m) 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 (7.797 m), from flood mark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,930 ft³/s (111 m³/s) May 29, gage height, 15.50 ft (4.724 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	8.6	17	13	13	11	25	334	296	26	.00	.00
2	1.3	6.6	15	12	14	12	35	601	237	24	.00	.00
3	.90	6.1	12	12	17	17	74	167	792	22	.00	.80
4	1.1	5.7	9.7	11	16	19	30	87	975	21	.00	.40
5	1.1	5.2	9.7	11	15	13	22	59	916	20	.00	.25
6	1.3	4.8	8.1	11	12	12	19	48	967	19	.00	.20
7	1.6	4.8	7.6	9.2	17	14	17	40	1060	18	.00	.15
8	1.3	5.7	6.6	7.6	183	12	14	35	1080	17	.00	.16
9	.93	6.1	6.1	8.6	76	12	12	31	1040	16	.00	.40
10	.93	4.8	7.6	12	50	15	13	29	1020	15	.00	1.6
11	1.1	4.4	7.6	11	82	14	13	26	1010	14	.00	.80
12	1.8	4.8	9.2	8.1	53	17	12	23	794	12	.00	.30
13	1.6	4.8	9.7	8.1	45	16	12	21	123	10	.00	.12
14	1.3	4.8	7.6	8.6	45	11	13	19	81	6.0	.00	.00
15	1.6	4.8	7.1	9.2	36	9.7	12	460	67	3.0	.00	.00
16	2.5	4.8	6.6	9.7	26	12	12	472	58	2.0	.00	.00
17	20	4.8	4.0	8.6	21	15	12	119	53	1.2	.00	.00
18	7.1	5.2	6.1	8.6	26	11	13	2000	53	1.0	1.5	.00
19	3.6	5.7	8.6	38	28	9.7	12	400	48	.80	.24	.00
20	2.9	949	8.1	124	24	12	12	324	1080	5.1	.19	.00
21	2.5	1360	7.1	107	21	14	10	794	305	7.6	.16	.00
22	8.1	265	7.1	58	18	12	9.7	358	188	2.5	.13	.00
23	4.0	167	10	33	17	61	9.7	655	116	1.5	.00	.00
24	2.9	119	16	26	17	86	23	585	274	.80	.00	.00
25	2.5	89	8.6	23	17	36	537	548	254	.50	.00	.00
26	2.1	67	6.6	19	14	25	244	524	242	.40	.00	.00
27	2.1	49	6.1	12	16	25	117	752	202	.30	.00	.80
28	2.1	32	9.7	9.0	17	42	69	259	46	.26	.00	.35
29	2.5	24	43	10	16	74	48	2450	33	.22	.00	.17
30	42	20	26	11	---	69	167	868	29	.16	.00	.12
31	26	---	17	12	---	35	---	504	---	.11	.00	---
TOTAL	152.36	3243.5	331.2	661.3	952	743.4	1614.4	13592	13439	267.45	2.22	6.62
MEAN	4.91	108	10.7	21.3	32.8	24.0	53.8	438	448	8.63	.072	.22
MAX	42	1360	43	124	183	86	537	2450	1080	26	1.5	1.6
MIN	.90	4.4	4.0	7.6	12	9.7	9.7	19	29	.11	.00	.00
AC-FT	302	6430	657	1310	1890	1470	3200	26960	26660	530	4.4	13
CAL YR 1979 TOTAL	27442.40		MEAN 75.2	MAX 3820	MIN .00	AC-FT 54430						
WTR YR 1980 TOTAL	35005.45		MEAN 95.6	MAX 2450	MIN .00	AC-FT 69430						

ARKANSAS RIVER BASIN

07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", in NE¼ 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 (4.5 km) northwest of Sasakwa, 8.7 mi (14.0 km) downstream from Salt Creek, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--865 mi² (2,240 km²).

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 (226.875 m) National Geodetic Vertical Datum of 1929 (levels by 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 (1.484 m) higher.

REMARKS.--Records fair. Flow regulated by Lake Thunderbird 72.3 mi (116.3 km) upstream since March 1965 (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 22 years (water years 1943-64), 410 ft³/s (11.61 m³/s), 296,800 acre-ft/yr (366 hm³/yr); (since regulation by Lake Thunderbird) 15 years (water years 1966-80), 244 ft³/s (6.910 m³/s), 176,800 acre-ft/yr (218 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,600 ft³/s (1,260 m³/s) May 11, 1950, gage height, 33.48 ft (10.205 m); no flow at times most years after 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,130 ft³/s (88.6 m³/s) Nov. 21, gage height, 16.08 ft (4.901 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	24	66	39	24	27	71	249	1930	49	.00	.00
2	1.5	35	57	32	29	26	56	799	907	41	.00	.00
3	1.1	18	52	29	33	22	331	911	560	35	.00	.00
4	.79	10	46	27	34	25	304	451	628	30	.00	.00
5	.56	6.4	43	26	32	27	175	267	782	26	.00	.00
6	.45	4.6	40	25	29	26	121	162	774	23	.00	.00
7	.30	3.8	37	26	28	24	90	119	727	20	.00	.00
8	.30	3.9	33	28	235	23	68	113	691	18	.00	.00
9	.15	6.1	30	24	304	23	54	101	680	16	.00	.00
10	.04	5.3	29	23	162	23	42	85	664	13	.00	.00
11	.01	3.8	28	21	124	22	36	71	646	11	.00	.00
12	.19	3.5	29	21	133	23	32	58	629	10	.00	.00
13	.00	3.2	33	21	99	25	28	47	537	9.7	.00	.00
14	.00	3.2	33	20	80	25	28	16	190	8.2	.00	.00
15	.00	3.5	31	19	72	25	28	34	92	6.7	.00	.00
16	.08	3.0	28	19	66	24	27	213	70	5.1	.00	.00
17	.76	2.9	23	19	54	145	28	571	61	2.0	.00	.00
18	.72	3.1	23	19	43	96	28	932	55	1.7	.00	.00
19	.58	3.4	21	20	45	60	27	1680	51	1.5	.00	.00
20	.57	4.2	22	67	47	48	27	1420	966	1.2	.00	.00
21	4.4	2260	24	165	45	45	26	1720	1330	1.0	.00	.00
22	9.6	2240	24	166	40	43	27	1860	767	.87	.00	.00
23	6.9	1390	25	108	36	46	25	1050	606	.59	.00	.00
24	8.7	692	28	70	33	123	25	799	295	.57	.00	.00
25	5.4	388	33	56	31	135	36	643	236	.45	.00	.00
26	5.5	263	32	48	29	86	430	546	237	.28	.00	.00
27	4.7	189	28	41	28	64	413	485	209	.16	.00	.08
28	2.8	138	24	34	27	58	200	802	192	.03	.13	.07
29	1.7	101	25	29	27	66	127	1350	113	.00	.00	.00
30	2.1	79	33	26	---	73	91	2440	63	.00	.00	.00
31	3.1	---	47	25	---	100	---	2290	---	.00	.00	---
TOTAL	65.00	7890.9	1027	1293	1969	1578	3001	22344	15688	332.05	.13	.15
MEAN	2.10	263	33.1	41.7	67.9	50.9	100	721	523	10.7	.004	.005
MAX	9.6	2260	66	166	304	145	430	2440	1930	49	.13	.08
MIN	.00	2.9	21	19	24	22	25	34	51	.00	.00	.00
AC=FT	129	15650	2040	2560	3910	3130	5950	44320	31120	659	.3	.3
CAL YR 1979	TOTAL	84172.20	MEAN	231	MAX	9240	MIN	.00	AC=FT	167000		
WTR YR 1980	TOTAL	35188.23	MEAN	151	MAX	2440	MIN	.00	AC=FT	109500		

ARKANSAS RIVER BASIN

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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 current year.

WATER TEMPERATURE: October 1955 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 138,000 micromhos Oct. 31, 1956; minimum daily, 118 micromhos Sept. 11, 1977.

WATER TEMPERATURE: Maximum daily, 38.5°C July 13, 1978; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,700 micromhos Oct. 25; minimum daily, 301 micromhos Nov. 22.

WATER TEMPERATURE: Maximum daily, 37.0°C June 30, July 5; minimum daily, 0.5°C Jan. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
OCT										
05...	1540	.64	2570	7.9	21.0	460	260	97	53	370
15...	1726	.56	2420	8.2	17.5	470	220	96	55	320
25...	1800	5.3	3700	7.7	20.0	--	--	120	--	500
NOV										
05...	1650	6.1	1410	7.8	14.0	280	74	56	35	180
15...	1600	3.8	1360	8.1	12.0	280	79	59	32	160
25...	1605	353	407	7.5	9.0	110	33	27	11	38
DEC										
05...	1550	42	1220	7.7	8.0	270	110	59	30	150
15...	1325	31	1930	8.1	8.0	400	180	87	44	220
25...	1203	33	2640	8.3	7.0	520	270	110	59	350
JAN										
05...	1635	25	1860	8.1	5.5	420	220	83	52	250
15...	1627	19	2070	8.0	13.0	470	250	87	61	290
25...	1622	54	1430	8.2	9.0	310	130	66	36	180
FEB										
05...	1657	31	2230	7.8	8.5	490	250	96	60	280
15...	1615	70	1660	7.7	7.0	380	190	83	41	190
25...	1612	31	2320	7.9	10.0	490	250	99	60	300
MAR										
05...	1705	27	2790	7.9	11.0	540	380	99	70	350
15...	1532	24	2890	7.9	16.0	530	300	99	69	390
25...	1725	121	2210	7.9	12.0	440	240	94	50	280
APR										
05...	1617	161	1410	7.8	18.0	290	140	66	30	160
15...	1622	28	3090	7.9	20.0	580	350	110	74	390
25...	1617	44	3470	8.0	19.5	620	370	120	78	460
MAY										
05...	1728	243	918	8.2	24.0	220	84	50	24	100
15...	1552	36	1950	8.3	19.5	390	180	80	47	230
25...	1230	637	693	7.6	25.5	200	33	45	22	66
JUN										
05...	1527	796	588	7.9	27.0	190	23	41	22	50
15...	1232	90	954	8.1	25.5	270	67	54	32	94
25...	1650	262	745	7.5	33.5	190	45	45	20	77
JUL										
05...	1805	26	1490	8.0	37.0	340	130	71	40	170
15...	1932	6.5	1480	7.9	34.0	340	130	67	43	170
25...	1825	.41	1350	8.0	30.0	310	120	57	41	150

ARKANSAS RIVER BASIN

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT									
05...	76	7.5	6.3	200	25	710	1480	2.0	2.5
15...	60	6.5	6.4	250	21	620	1350	1.8	2.0
25...	--	--	8.9	160	33	1100	2150	2.9	30.8
NOV									
05...	73	4.6	5.2	210	38	320	774	1.0	12.7
15...	69	4.2	4.8	200	33	300	736	1.0	7.5
25...	53	1.6	3.9	80	25	70	234	.32	223
DEC									
05...	54	4.0	4.5	160	21	270	688	.94	78.0
15...	54	4.8	4.4	220	27	440	1060	1.4	88.7
25...	59	6.7	4.8	250	25	660	1450	1.9	129
JAN									
05...	56	5.3	4.2	200	38	520	1090	1.4	73.6
15...	57	5.8	4.3	220	41	580	1200	1.6	61.6
25...	55	4.4	4.5	180	30	390	842	1.1	123
FEB									
05...	55	5.5	4.0	240	45	550	1230	1.6	103
15...	52	4.3	4.2	190	33	410	929	1.2	176
25...	57	5.9	4.3	240	43	580	1300	1.7	109
MAR									
05...	58	6.6	4.3	160	45	800	1490	2.0	109
15...	61	7.4	4.7	230	40	780	1590	2.1	103
25...	58	5.8	4.6	200	27	580	1290	1.7	421
APR									
05...	54	4.1	4.5	150	33	350	767	1.0	333
15...	59	7.1	5.2	230	38	850	1830	2.4	138
25...	61	8.0	6.1	250	36	990	2070	2.8	246
MAY									
05...	49	2.9	4.4	140	21	200	497	.68	326
15...	56	5.0	4.6	210	30	470	1050	1.4	102
25...	41	2.0	4.4	170	15	120	390	.53	671
JUN									
05...	35	1.6	4.4	170	13	85	301	.41	647
15...	43	2.5	5.2	200	15	180	536	.73	130
25...	46	2.4	4.5	150	16	140	429	.58	303
JUL									
05...	51	4.0	6.3	210	20	360	775	1.0	54.4
15...	51	4.0	5.9	210	--	350	850	--	--
25...	51	3.7	5.9	190	--	300	833	--	--

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2480	2760	813	2150	2310	2390	1920	2160	420	1150	---	---
2	2640	1860	930	1890	2400	2530	2090	918	603	1250	---	---
3	2640	1860	1040	1850	2420	2590	1090	575	719	1390	---	---
4	2590	1690	1120	1930	2400	2780	1410	702	718	1450	---	---
5	2570	1410	1220	1860	2230	2790	1410	918	588	1490	---	---
6	2530	1330	1410	1910	2240	2550	1440	1060	564	1570	---	---
7	2530	1310	1410	2030	2130	2560	1730	1200	551	1630	---	---
8	2510	1280	1510	1840	1590	2600	1950	1280	556	1660	---	---
9	2490	1160	1540	1710	1610	2710	2330	1370	535	1660	---	---
10	2480	1280	1590	1780	940	2670	2420	1330	550	1660	---	---
11	2470	1270	1670	1870	1180	2700	2600	1470	523	1650	---	---
12	2420	1220	1670	2060	1320	2830	2840	1730	515	1670	---	---
13	2420	1280	1740	2040	1290	2850	3010	1910	534	1510	---	---
14	2400	1320	1900	2010	1660	2870	2960	1920	810	1460	---	---
15	2420	1360	1930	2070	1660	2890	3090	1950	954	1480	---	---
16	2400	1390	2020	2180	1840	2740	3120	2850	1160	1470	---	---
17	2320	1390	1950	2160	1770	1720	3150	542	1250	1450	---	---
18	2340	1540	1980	2140	1990	1210	3100	936	1510	1430	---	---
19	2310	2010	1980	2080	2110	1650	3290	416	1780	1440	---	---
20	2340	---	2080	3380	2180	2180	3280	465	772	1410	---	---
21	2370	427	2210	1870	2210	2490	3320	483	345	1350	---	---
22	2270	301	2230	1410	2220	2770	3110	505	438	1320	---	---
23	2650	351	2070	1070	2220	2940	3460	641	643	1320	---	---
24	2430	350	2240	1170	2240	2820	2420	678	734	1350	---	---
25	3700	407	2640	1430	2320	2210	3470	693	745	1350	---	---
26	3490	471	2520	1430	2360	1740	1670	706	644	1360	---	---
27	2740	538	2200	1600	2460	2060	585	688	637	1370	---	1030
28	2320	599	2190	1670	2450	2340	768	411	628	---	1820	945
29	2290	667	2270	1710	2620	2770	840	863	702	---	---	---
30	2190	757	2540	1900	---	2330	987	397	1150	---	---	---
31	2370	---	2470	1980	---	2040	---	345	---	1460	---	---
MEAN	2520	1160	1840	1880	2010	2460	2300	1040	743	1460	1820	988

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	14.0	4.0	7.0	3.0	7.0	18.0	21.0	25.5	35.0	---	---
2	23.5	13.0	5.0	7.5	4.0	3.0	19.0	19.0	25.0	37.0	---	---
3	21.0	14.0	5.0	5.0	7.0	7.0	13.0	20.0	25.5	28.5	---	---
4	19.5	12.0	6.0	3.0	5.5	13.0	16.0	20.0	25.0	35.0	---	---
5	21.0	14.0	8.0	5.5	8.5	11.0	18.0	24.0	27.0	37.0	---	---
6	21.5	13.0	7.0	6.5	9.0	14.5	18.0	26.0	28.0	32.5	---	---
7	22.0	8.0	8.0	4.0	4.5	17.5	23.0	25.0	27.5	36.0	---	---
8	27.5	13.0	8.0	4.5	2.5	15.0	20.0	21.0	25.0	28.0	---	---
9	18.5	11.0	8.0	5.0	1.0	16.0	19.0	22.0	25.0	34.0	---	---
10	16.5	8.0	11.0	6.0	2.5	17.5	21.0	26.0	26.5	27.0	---	---
11	19.0	7.0	14.0	8.0	3.0	12.0	22.0	25.5	28.0	28.0	---	---
12	20.0	11.0	6.0	8.5	4.0	12.0	13.5	29.5	27.5	36.0	---	---
13	19.5	11.0	6.0	8.5	7.0	15.5	9.5	27.0	27.5	35.5	---	---
14	15.0	11.0	7.0	9.5	8.5	14.0	15.0	27.5	29.0	36.5	---	---
15	17.5	12.0	8.0	13.0	7.0	16.0	20.0	19.5	25.5	34.0	---	---
16	18.0	12.0	5.0	14.0	1.5	20.0	22.0	24.5	27.5	24.5	---	---
17	21.0	13.0	3.0	10.5	2.5	13.5	20.0	23.5	29.5	34.5	---	---
18	22.0	13.0	5.0	11.0	5.5	13.5	22.0	19.5	32.0	34.5	---	---
19	21.0	18.0	6.0	9.5	11.0	15.5	24.5	20.5	31.5	34.0	---	---
20	21.0	---	9.0	8.0	13.0	15.0	25.0	21.0	24.5	33.0	---	---
21	22.0	16.0	10.0	7.5	15.5	17.0	26.0	17.0	26.5	28.5	---	---
22	17.0	13.0	12.0	7.0	16.0	16.0	25.0	20.0	25.5	32.5	---	---
23	18.5	13.0	10.0	7.0	13.0	13.5	25.5	22.5	30.0	33.0	---	---
24	20.0	13.0	10.0	9.0	9.0	11.5	22.0	25.0	32.0	29.0	---	---
25	20.0	9.0	7.0	9.0	10.0	12.0	19.5	25.5	33.5	30.0	---	---
26	20.0	9.0	9.0	6.0	10.0	15.0	15.0	29.0	33.0	31.0	---	---
27	19.5	10.0	10.0	3.0	13.5	14.0	14.0	27.5	34.5	27.5	---	17.0
28	20.5	7.0	10.0	1.0	16.0	18.5	19.5	24.0	34.0	---	30.0	17.0
29	16.5	5.0	8.5	.5	9.0	14.0	22.0	23.0	32.0	---	---	---
30	16.5	3.0	7.0	2.0	---	10.0	20.0	24.0	37.0	---	---	---
31	13.0	---	8.0	3.5	---	16.0	---	25.0	---	27.0	---	---
MEAN	20.0	11.0	8.0	7.0	7.5	13.5	19.5	23.5	28.5	32.0	30.0	17.0

ARKANSAS RIVER BASIN

07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'32", long 96°14'24", in NE¼SW¼ 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 (0.8 km) northeast of Calvin, 2.4 mi (3.9 km) upstream from Shawnee Creek, 8.5 mi (13.7 km) downstream from Little River, and at mile 93.9 (151.1 km).

DRAINAGE AREA.--27,952 mi² (72,396 km²), of which 4,801 mi² (12,435 km²) 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 U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area, WSP 1391: 1941.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft (208.093 m) National Geodetic Vertical Datum of 1929. January 1905 to December 1908, nonrecording gage at site 0.8 mi (1.3 km) upstream at datum 4.00 ft (1.219 m) 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 (0.611 m) higher.

REMARKS.--Records poor. Occasional slight regulation by dams in New Mexico and Texas.

AVERAGE DISCHARGE.--41 years (water years 1906, 1939-42, 1945-80), 1,549 ft³/s (43.87 m³/s), 1,122,000 acre-ft/yr (1.38 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174,000 ft³/s (4,930 m³/s) May 11, 1950, gage height, 17.35 ft (5.288 m); maximum gage height, 21.00 ft (6.401 m), Aug. 7, 1906, from floodmark, site and datum then in use; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) May 30, gage height, 6.93 ft (2.112 m), no peak above base of 25,000 ft³/s (708 m³/s); no flow Aug. 3 to Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	59	249	369	232	286	731	3450	11900	298	1.4	.00
2	19	56	254	340	241	278	1130	5300	9640	246	.72	.00
3	21	51	238	307	254	277	1920	5630	6540	202	.00	.00
4	16	51	221	259	306	256	1560	4550	5330	164	.00	.00
5	14	51	187	226	304	205	1320	3270	5070	139	.00	.00
6	12	61	173	240	257	175	1350	2720	4410	124	.00	.00
7	11	78	161	239	296	227	1030	2260	3730	95	.00	.00
8	11	88	153	228	579	233	767	2030	3420	80	.00	.00
9	10	111	176	201	1290	227	597	1810	3130	59	.00	.00
10	9.5	114	175	222	943	223	515	1600	2860	45	.00	.00
11	10	114	168	214	778	220	400	1360	2720	33	.00	.00
12	8.8	101	155	190	647	201	320	1210	2590	26	.00	.00
13	7.9	90	178	207	595	181	270	1000	2460	25	.00	.00
14	7.9	76	161	214	487	192	200	866	2320	23	.00	.00
15	7.6	67	176	213	415	199	160	678	1930	21	.00	.00
16	7.9	63	195	205	573	243	130	3320	1800	20	.00	.00
17	23	59	185	200	639	345	150	6660	1600	19	.00	.00
18	23	58	162	169	510	466	110	6030	1500	14	.00	.00
19	24	63	170	169	420	337	98	11000	1400	14	.00	.00
20	24	69	166	200	381	266	92	7010	5000	13	.00	.00
21	26	5450	160	352	339	228	86	5540	5830	13	.00	.00
22	43	2990	164	638	298	215	80	7900	5610	11	.00	.00
23	40	2280	185	701	269	281	76	5990	5220	10	.00	.00
24	41	1440	199	667	361	332	72	5480	6540	9.5	.00	.00
25	42	990	207	567	439	424	69	5280	5810	7.0	.00	.00
26	41	791	209	686	431	444	68	4660	2910	5.9	.00	.00
27	41	646	210	749	347	398	2970	3760	1560	5.6	.00	.00
28	43	413	197	541	291	346	3570	4060	816	4.9	.00	.00
29	42	320	192	435	260	332	3960	7510	646	4.2	.00	4.0
30	50	274	619	391	---	407	5600	13000	391	3.0	.00	14
31	64	---	467	309	---	449	---	12100	---	2.0	.00	---
TOTAL	762.6	17074	6532	10648	13182	8893	27401	147034	114683	1736.1	2.12	18.00
MEAN	24.6	569	211	343	455	287	913	4743	3823	56.0	.068	.60
MAX	64	5450	619	749	1290	466	3960	13000	11900	298	1.4	14
MIN	7.6	51	153	169	232	175	68	678	391	2.0	.00	.00
AC=FT	1510	33670	12960	21120	26150	17640	54350	291600	227500	3440	4.2	36

CAL YR 1979 TOTAL 334696.60 MEAN 917 MAX 30500 MIN 7.6 AC=FT 663900
WTR YR 1980 TOTAL 347965.82 MEAN 951 MAX 13000 MIN .00 AC=FT 690200

ARKANSAS RIVER BASIN

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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 current year.

WATER TEMPERATURE: July 1965 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected 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, 11,400 micromhos Nov. 17, 1966; minimum daily, 205 micromhos Nov. 1, 1972.

WATER TEMPERATURE: Maximum daily, 34.0°C July 7, 1975; minimum, 0.0°C on many days during the winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,550 micromhos Sept. 22; minimum daily, 391 micromhos Nov. 23.

WATER TEMPERATURE: Maximum daily, 29.0°C June 30; minimum daily, 0.0°C on several days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, KF AGAR 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)
OCT												
22...	1800	43	1200	8.2	18.5	25	9.8	105	K620	K1400	280	120
NOV												
27...	1730	18	935	7.8	10.5	620	10.5	93	K2500	K1400	260	140
DEC												
17...	1630	198	1710	7.9	1.0	31	13.9	97	110	307	480	240
JAN												
14...	1545	214	1780	8.4	10.0	29	12.0	108	150	166	480	260
FEB												
20...	1530	381	1720	8.2	11.0	80	10.8	98	70	97	520	280
MAR												
24...	1300	327	1970	8.5	8.0	29	9.6	83	234	204	440	260
APR												
09...	1500	59	1930	--	18.0	230	9.7	104	39	103	490	280
MAY												
20...	1400	7010	685	7.7	20.5	1500	7.7	88	--	--	200	79
JUN												
26...	1035	4020	850	8.1	27.0	380	6.9	90	--	--	270	160
JUL												
08...	1445	80	1270	--	37.0	6.4	--	--	K21	K27	350	290

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)	ALKA- LINEITY LAB (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...	64	29	130	50	3.4	5.9	160	96	220	.4	6.4
NOV											
27...	67	22	97	55	2.6	6.4	120	130	140	.3	6.8
DEC											
17...	120	43	170	55	3.4	6.7	240	240	290	.7	12
JAN											
14...	120	43	160	42	3.2	7.2	220	240	270	.7	11
FEB											
20...	130	47	200	45	3.8	7.1	240	270	320	.7	11
MAR											
24...	100	46	220	52	4.6	7.5	180	240	350	.6	5.5
APR											
09...	120	46	190	45	3.7	8.2	210	310	280	.8	9.3
MAY											
20...	50	18	55	37	1.7	5.7	120	110	77	.3	8.2
JUN											
26...	71	23	56	30	1.5	9.6	110	170	95	.5	6.5
JUL											
08...	84	34	120	42	2.8	9.1	63	--	170	.5	6.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 22...	--	--	--	--	--	--	--	--	13	--	--
NOV 27...	0	0	0	0	0	190	140	50	--	7.0	8.6
DEC 17...	--	--	0	--	--	--	--	--	7.7	--	--
JAN 14...	--	--	--	--	--	--	--	--	8.0	--	--
FEB 20...	0	1	0	0	0	50	50	4	--	6.0	4.1
MAR 24...	--	--	0	--	--	--	--	--	9.4	--	--
APR 09...	--	--	--	--	--	--	--	--	18	--	--
MAY 20...	2	0	0	0	0	210	200	10	--	7.9	--
JUN 26...	--	--	0	--	--	--	--	--	29	--	--
JUL 08...	--	--	--	--	--	--	--	--	30	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--
NOV 27...	--	ND	--	ND	--	ND	--	ND	--	ND	--
DEC 17...	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	--	ND	--	ND	--	ND	--	ND	--	ND	--
JUN 26...	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...	--	--	--	--	--	--	--	--	110	12	86
NOV 27...	ND	--	ND	--	ND	ND	ND	--	587	--	85
DEC 17...	--	--	--	--	--	--	--	--	14	--	95
JAN 14...	--	--	--	--	--	--	--	--	148	--	90
FEB 20...	ND	--	ND	--	--	--	--	--	306	316	80
MAR 24...	--	--	--	--	--	--	--	44000	123	109	61
APR 09...	--	--	--	--	--	--	--	--	251	--	98
MAY 20...	ND	--	ND	--	--	--	--	3900	4170	--	60
JUN 26...	--	--	--	--	--	--	--	12000	1470	--	89
JUL 08...	--	--	--	--	--	--	--	1600000	20	--	32

ARKANSAS RIVER BASIN

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2470	1680	1060	1180	2030	2050	1880	1900	---	982	1640	4160
2	2450	1370	1140	1160	1940	---	1680	1510	927	1070	1680	4180
3	1420	1320	1160	1290	1960	2030	2080	---	1010	1160	---	---
4	1450	1680	1230	1330	1860	2010	1260	---	1010	1240	---	4210
5	1480	1600	1320	1450	1810	2020	1580	1250	1010	1250	---	4200
6	1490	1220	1400	---	1800	2040	1720	1200	954	1250	3850	---
7	1500	1370	1480	1470	1840	1970	1850	1340	963	1280	3860	---
8	1540	1180	1540	1480	1580	1990	1860	1710	954	1310	3910	4260
9	1540	851	1610	1560	1410	---	1820	1850	927	1340	3890	4280
10	1570	1180	1610	1570	1380	1920	1870	1870	936	1360	---	---
11	1590	1250	1610	1590	1380	1900	1970	---	936	1380	3920	4330
12	1640	1290	1580	1640	1440	1880	---	1870	936	1460	3940	4340
13	1650	1270	---	---	1550	1910	2090	1890	927	1450	---	4370
14	1660	1260	1510	1570	1570	1910	2100	---	963	1470	3950	---
15	1620	1290	1560	1570	1540	2010	2080	1950	---	1510	3960	4410
16	---	1300	1610	1600	1600	2050	2080	1770	1430	---	---	4430
17	1390	1300	1770	1600	1730	1640	2050	854	1460	1480	---	4480
18	1620	1300	1760	1650	1840	2290	2040	836	---	1470	3940	4490
19	---	1280	1670	1630	1910	1870	---	736	1580	1440	---	4490
20	2020	1370	1700	1490	1910	1620	2080	736	1290	---	3990	4510
21	1410	994	1720	1400	1920	1680	2100	736	1000	1350	---	4520
22	1130	426	1710	1590	2030	1770	2100	691	---	1300	4090	4550
23	1200	391	1640	1180	2000	---	2190	1030	723	1300	---	4510
24	1480	676	1570	1070	---	1730	2240	1050	625	---	---	4480
25	1190	703	1620	1100	2060	2120	2000	---	640	1310	4160	---
26	1210	763	1650	1320	2120	2080	1790	1160	768	1290	---	4510
27	1250	938	1640	---	2220	1850	1540	1210	805	1280	4210	4380
28	1310	935	1640	1480	2210	1670	1170	1230	---	1300	4220	---
29	---	946	1640	1660	2230	1680	1240	1030	863	1310	4230	3860
30	---	979	1520	1710	---	1800	1710	636	900	---	---	3860
31	1280	---	1280	1800	---	1800	---	527	---	---	---	---
MEAN	1540	1140	1530	1470	1820	1900	1860	1250	981	1320	3730	4340

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	7.0	5.0	4.0	.0	.0	11.5	17.5	---	27.5	22.5	25.5
2	16.0	11.0	3.0	6.0	.0	---	15.5	18.0	23.0	27.0	23.0	25.0
3	16.0	7.0	2.0	4.5	3.0	.0	13.0	---	23.0	26.5	---	---
4	12.5	8.0	3.0	2.5	3.5	9.0	11.0	---	23.0	27.0	---	25.0
5	16.0	9.0	4.0	6.0	5.0	4.0	12.0	19.0	25.0	28.0	---	25.0
6	16.0	8.0	3.0	---	4.5	3.5	14.0	19.5	25.5	28.0	26.5	---
7	15.0	6.0	5.0	4.0	4.0	10.0	16.5	21.0	26.0	27.5	27.0	---
8	18.0	9.0	7.0	.0	2.5	8.5	13.0	17.5	24.0	27.0	27.0	25.5
9	18.0	11.0	7.0	.0	.0	---	11.0	18.0	23.0	27.0	27.0	25.5
10	9.0	5.0	9.0	5.0	1.5	9.0	11.5	18.5	23.0	26.5	---	---
11	11.0	6.0	13.0	6.0	.5	10.5	14.0	---	24.0	26.0	26.5	25.0
12	15.5	6.0	5.0	4.5	.0	9.0	---	18.0	23.0	26.5	26.0	24.0
13	13.0	5.0	---	---	3.0	8.5	7.0	17.0	24.5	27.0	---	24.5
14	12.0	5.0	4.0	4.5	6.0	9.0	5.5	---	23.0	26.5	26.5	---
15	12.0	6.0	5.0	9.5	8.0	11.0	6.0	17.0	---	27.0	26.5	24.5
16	---	7.0	4.0	9.0	2.0	12.5	10.0	15.0	25.0	---	---	25.0
17	17.0	7.0	.0	8.0	1.0	11.0	12.0	18.0	25.0	27.0	---	22.0
18	16.0	7.0	3.0	6.5	.0	8.0	12.5	19.5	---	26.5	26.0	21.0
19	---	14.0	4.0	9.5	1.5	9.5	---	18.0	26.0	27.5	---	23.0
20	16.0	17.0	5.0	8.5	6.5	8.0	15.0	18.0	24.0	---	27.0	23.5
21	17.0	17.0	6.0	6.5	6.5	8.0	17.5	19.0	24.5	27.5	---	25.5
22	13.0	11.0	12.0	6.0	9.0	10.0	17.5	18.0	---	27.0	25.5	26.0
23	10.0	7.0	10.0	4.5	8.0	---	17.5	18.5	26.0	23.0	---	22.0
24	12.0	6.0	7.0	4.0	---	8.0	19.0	19.5	28.0	---	---	21.0
25	12.5	7.0	8.0	6.0	5.0	10.0	18.5	---	28.0	23.0	25.0	---
26	13.0	6.0	8.0	4.5	3.0	9.0	14.0	24.0	28.0	25.0	---	19.0
27	13.0	7.0	9.0	---	4.5	13.0	11.5	24.5	28.5	27.0	25.5	19.5
28	15.0	5.0	10.0	.0	9.0	12.0	13.0	24.0	---	23.0	25.0	---
29	---	2.0	9.0	.0	8.5	12.0	15.0	23.5	28.0	23.0	---	16.0
30	---	5.0	8.0	.0	---	8.0	18.0	23.5	29.0	---	---	17.5
31	10.0	---	6.0	.0	---	7.0	---	22.0	---	---	---	---
MEAN	14.0	8.0	6.0	4.5	4.0	8.5	13.0	19.5	25.0	26.5	26.0	23.0

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	MAR 24,80 1300	MAY 20,80 1400	JUN 26,80 1035	JUL 8,80 1445				
TOTAL CELLS/ML	44000	3900	12000	1600000				
DIVERSITY: DIVISION	1.4	1.4	1.3	0.0				
..CLASS	1.5	1.4	1.3	0.0				
...ORDER	2.2	1.9	1.4	0.1				
...FAMILY	3.0	2.3	1.6	0.4				
....GENUS	3.4	2.4	1.8	0.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	580	1	--	-	--	-	--	-
...MICRACTINIACEAE								
...GOLENKINIA	780	2	--	-	--	-	--	-
...MICRACTINIUM	9200#	21	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	1900	4	--	-	430	3	*	0
...DICTYOSPHAERIUM	1800	4	--	-	--	-	--	-
...KIRCHNERIELLA	*	0	--	-	--	-	--	-
...OOCYSTIS	2300	5	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	*	0
...SCENEDESMUS	3900	9	1900#	50	5100#	41	--	-
...TETRASPORALES								
...PALMELLACEAE								
...GLOEOCYSTIS	--	-	110	3	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	2900	7	27	1	140	1	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	2700	6	--	-	--	-	*	0
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	390	1	--	-	--	-	--	-
...COCCONEIS	--	-	27	1	--	-	--	-
...CYMBELLACEAE								
...AMPHORA	--	-	27	1	--	-	--	-
...CYMBELLA	--	-	27	1	--	-	--	-
...FRAGILARIACEAE								
...HANNAEA	780	2	--	-	--	-	--	-
...SYNEDRA	*	0	--	-	--	-	--	-
...NAVICULACEAE								
...CALONEIS	--	-	82	2	--	-	--	-
...ENTOMONEIS	--	-	27	1	--	-	--	-
...NAVICULA	390	1	160	4	--	-	--	-
...NITZSCHIA								
...NITZSCHIA	390	1	82	2	1000	8	--	-
..CHRYSOPHYCEAE								
...CHRYSDOMONADALES								
...OCHROMONADACEAE								
...OCHROMONAS	390	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHAMAESIPHONALES								
...CHAMAESIPHONACEAE								
...ENTOPHYSALIS	--	-	410	10	--	-	--	-
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	4500	10	--	-	--	-	19000	1
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	--	-	1400000#	92
...ANABAENOPSIS	--	-	--	-	--	-	27000	2
...OSCILLATORIACEAE								
...LYNGBYA	--	-	--	-	720	6	--	-
...OSCILLATORIA	10000#	23	520	13	5100#	41	81000	5
...RIVULARIACEAE								
...RAPHIIDIOPSIS	--	-	470	12	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°48'05", long 95°39'16", in NE¼ sec.19, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on downstream left bank at county road bridge, 0.9 mi (1.4 km) south of junction of State Highway 63 and county road, 1.2 mi (1.9 km) northeast of Arch and 6.3 mi (10.1 km) southwest of Haileyville.

DRAINAGE AREA.--139 mi² (360 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 605.35 ft (184.511 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,160 ft³/s (259 m³/s) June 7, 1979, gage height, 21.57 ft (6.575 m). No flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 3	0200	*3,380 95.7	17.10 5.212	May 16	0915	2,400 68.0	14.77 4.502

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	29	.54	2.7	3.9	2.4	.80	187	118	.19	.00	.00
2	.06	13	.48	2.5	3.6	2.1	.87	1920	56	.11	.00	.00
3	.03	6.7	.45	2.3	3.3	2.1	.80	1570	33	.09	.00	.00
4	.01	3.8	.36	2.2	3.1	2.0	.73	247	26	.07	.00	.00
5	.00	2.2	.32	1.9	3.0	1.6	.94	120	14	.05	.00	.00
6	.00	1.3	.28	1.6	2.7	1.5	3.6	82	12	.03	.00	.00
7	.00	.79	.23	1.2	2.4	1.4	2.9	60	7.5	.02	.00	.00
8	.00	.47	.20	.91	303	1.2	2.2	43	6.6	.01	.00	.00
9	.00	.43	.19	.99	526	1.2	1.9	31	5.7	.00	.00	.00
10	.00	.25	.13	.98	148	1.1	1.7	23	4.9	.00	.00	.00
11	.00	.19	.13	.94	105	.98	1.7	16	4.2	.00	.00	.00
12	.00	.14	.34	.99	82	.93	1.5	12	3.7	.00	.00	.00
13	.00	.08	.59	1.0	56	.86	1.3	9.4	3.3	.00	.00	.00
14	.00	.04	.78	.87	41	.83	9.7	5.9	2.8	.00	.00	.00
15	.00	.02	1.9	.68	30	.71	12	140	2.4	.00	.00	.00
16	.00	.01	.94	.66	24	.53	8.1	1640	2.0	.00	.00	.00
17	39	.01	.78	.66	18	1.4	6.8	237	1.8	.00	.00	.00
18	62	.01	1.1	.63	14	1.9	5.2	302	1.6	.00	.00	.00
19	12	.01	.94	.70	12	2.1	4.5	1030	1.6	.00	.00	.00
20	4.3	.02	.87	1.1	10	1.6	6.3	216	2.7	.00	.00	.00
21	2.1	.14	.94	21	8.6	1.2	6.1	148	2.1	.00	.00	.00
22	2.9	.25	.94	64	7.4	1.0	4.9	204	1.6	.00	.00	.00
23	7.0	1.7	1.5	39	6.4	.95	3.9	117	1.2	.00	.00	.00
24	5.5	2.5	13	24	5.5	.82	3.4	80	1.3	.00	.00	.00
25	2.6	1.9	16	16	4.9	.77	6.3	51	1.4	.00	.00	.00
26	1.4	1.5	12	12	4.2	.65	462	34	1.3	.00	.00	.00
27	.69	1.0	10	8.6	3.7	.58	216	24	1.0	.00	.00	.00
28	.54	.79	7.2	6.4	3.4	.60	98	17	.80	.00	.00	.00
29	.54	.67	5.3	5.5	2.9	.60	57	152	.43	.00	.00	14
30	1.8	.59	4.1	4.9	---	.69	37	729	.32	.00	.00	32
31	22	---	3.3	4.4	---	.75	---	309	---	.00	.00	---
TOTAL	164.56	69.51	85.83	231.31	1438.0	37.05	96.14	9756.3	321.25	.57	.00	46.00
MEAN	5.31	2.32	2.77	7.46	49.6	1.20	32.3	315	10.7	.018	.000	1.53
MAX	62	29	16	64	526	2.4	462	1920	118	.19	.00	32
MIN	.00	.01	.13	.63	2.4	.53	.73	5.9	.32	.00	.00	.00
AC-FT	326	138	170	459	2850	73	1920	19350	637	1.1	.00	91
CAL YR 1979	TOTAL	51822.11	MEAN	142	MAX	5870	MIN	.00	AC-FT	102800		
WTR YR 1980	TOTAL	13118.52	MEAN	35.8	MAX	1920	MIN	.00	AC-FT	26020		

ARKANSAS RIVER BASIN

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07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since April 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field on a weekly basis. Additional samples were collected for chemical analyses on a monthly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CF8)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT											
03...	1155	.03	228	7.4	23.5	7.8	93	70	0	17	6.6
NOV											
06...	1105	1.3	138	7.2	12.0	7.6	71	--	--	--	--
14...	1230	.04	148	7.1	8.0	6.4	54	--	--	--	--
20...	1500	.02	155	7.3	19.0	7.3	78	--	--	--	--
27...	1215	1.0	158	7.4	11.0	7.5	68	--	--	--	--
DEC											
06...	1155	.32	155	7.0	7.0	7.4	61	--	--	--	--
13...	1150	.48	151	7.0	7.0	7.8	63	--	--	--	--
19...	1400	1.0	162	7.3	7.0	9.0	78	--	--	--	--
26...	1045	12	190	7.2	9.0	10.1	87	--	--	--	--
JAN											
02...	1120	2.5	230	7.4	7.0	11.2	92	--	--	--	--
09...	1150	1.0	233	7.5	5.0	10.9	84	84	13	22	7.0
17...	1015	.66	250	7.4	8.0	10.0	84	--	--	--	--
23...	0815	40	197	6.8	5.0	11.2	88	--	--	--	--
FEB											
05...	1025	3.0	165	6.3	4.5	12.6	96	--	--	--	--
12...	1200	80	110	6.9	2.0	13.8	99	--	--	--	--
19...	1245	12	118	7.0	6.0	12.0	98	--	--	--	--
26...	1200	4.4	123	7.2	6.5	10.8	87	--	--	--	--
MAR											
04...	1250	2.0	139	7.2	9.5	11.8	104	--	--	--	--
11...	1230	.94	141	6.9	10.5	8.2	73	--	--	--	--
18...	1045	1.9	152	6.9	12.0	6.5	60	--	--	--	--
25...	1030	.80	166	6.9	11.0	5.5	50	--	--	--	--
APR											
02...	1115	.87	173	7.1	13.0	8.6	81	51	12	13	4.6
08...	1300	2.2	177	7.2	19.0	7.8	84	--	--	--	--
15...	1150	12	210	7.4	12.5	9.5	89	66	15	17	5.7
22...	1215	4.9	205	7.3	22.0	7.9	90	--	--	--	--
29...	1425	53	100	6.8	20.0	8.0	88	--	--	--	--
MAY											
03...	1420	718	77	6.9	20.0	8.0	87	--	--	--	--
13...	1235	9.1	107	6.8	24.0	7.2	85	34	9	8.5	3.1
20...	0920	239	72	6.7	21.0	7.8	87	--	--	--	--
27...	1115	19	100	6.9	26.0	6.6	80	--	--	--	--
JUN											
03...	1255	39	86	6.7	25.5	6.6	80	28	3	6.9	2.5
11...	1115	4.4	105	6.8	25.0	5.9	70	--	--	--	--
18...	1130	1.8	118	6.8	25.5	3.9	47	--	--	--	--
25...	1125	1.2	136	6.9	29.0	5.8	74	--	--	--	--
JUL											
02...	1105	.13	148	7.0	31.0	5.6	75	52	0	13	4.8

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT 03...	17	33	.9	4.0	95	0	78	6.1	13	18	.2
NOV 06...	--	--	--	--	57	0	47	5.8	--	--	--
14...	--	--	--	--	59	0	48	7.5	--	--	--
20...	--	--	--	--	63	0	52	5.1	--	--	--
27...	--	--	--	--	63	0	52	4.0	--	--	--
DEC 06...	--	--	--	--	66	0	54	11	--	--	--
13...	--	--	--	--	66	0	54	11	--	--	--
19...	--	--	--	--	73	0	60	5.9	--	--	--
26...	--	--	--	--	70	0	57	7.1	--	--	--
JAN 02...	--	--	--	--	81	0	66	5.2	--	--	--
09...	9.0	25	.4	3.8	--	--	74	--	28	8.1	.1
17...	--	--	--	--	--	--	84	--	--	--	--
23...	--	--	--	--	--	--	49	--	--	--	--
FEB 05...	--	--	--	--	--	--	32	--	--	--	--
12...	--	--	--	--	--	--	15	--	--	--	--
19...	--	--	--	--	--	--	19	--	--	--	--
26...	--	--	--	--	--	--	20	--	--	--	--
MAR 04...	--	--	--	--	--	--	27	--	--	--	--
11...	--	--	--	--	--	--	32	--	--	--	--
18...	--	--	--	--	--	--	35	--	--	--	--
25...	--	--	--	--	--	--	37	--	--	--	--
APR 02...	8.9	26	.5	2.3	--	--	41	--	13	11	.1
08...	--	--	--	--	--	--	44	--	--	--	--
15...	12	27	.6	2.6	--	--	52	--	27	13	.1
22...	--	--	--	--	--	--	54	--	--	--	--
29...	--	--	--	--	--	--	22	--	--	--	--
MAY 03...	--	--	--	--	--	--	18	--	--	--	--
13...	5.1	23	.4	2.1	--	--	29	--	15	5.1	.1
20...	--	--	--	--	--	--	18	--	--	--	--
27...	--	--	--	--	--	--	29	--	--	--	--
JUN 03...	4.7	25	.4	2.3	--	--	22	--	9.8	4.0	.1
11...	--	--	--	--	--	--	30	--	--	--	--
18...	--	--	--	--	--	--	37	--	--	--	--
25...	--	--	--	--	--	--	40	--	--	--	--
JUL 02...	6.7	21	.4	2.7	--	--	48	--	12	5.2	.3

ARKANSAS RIVER BASIN

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07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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 03...	5.5	118	128	.16	.01	.00	.00	.000	.00	.00	.010
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC 06...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
09...	7.1	121	128	.16	.49	.01	.04	.000	.00	.01	.040
17...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR 02...	4.3	100	81	.14	.25	.03	.13	.000	.00	.03	.040
08...	--	--	--	--	--	--	--	--	--	--	--
15...	.1	119	108	.16	3.8	.00	.00	.000	.00	.00	.060
22...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--
13...	5.7	71	60	.10	1.8	.07	.31	.010	.03	.08	.030
20...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	8.6	57	55	.08	6.2	.13	.58	.010	.03	.14	.110
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL 02...	5.6	85	85	.12	.03	.00	<.00	.000	.00	.00	.000

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	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)
OCT										
03...	.01	.040	.12	0	1	60	<1	30	2	<10
NOV										
06...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	30	1	--	2	0	0	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	30	1	--	2	0	0	--
19...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
09...	.05	.050	.15	0	0	60	2	0	0	70
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	20	0	--	0	0	7	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAR										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	60	0	--	0	0	3	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.05	.130	.40	20	0	60	<1	0	1	10
08...	--	--	--	--	--	--	--	--	--	--
15...	.08	.070	.21	20	0	50	<1	0	1	<10
22...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
13...	.04	.070	.21	30	1	50	<1	0	0	30
20...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	.14	.110	.34	100	1	150	4	0	7	220
11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	.00	.080	.25	0	2	70	2	0	3	<10

ARKANSAS RIVER BASIN

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07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
03...	0	100	.0	<10	<3	6.6	1.2	44	.00	93
NOV										
06...	--	--	--	--	--	--	--	84	.30	98
14...	--	--	--	--	--	--	--	41	.00	98
20...	--	--	--	--	--	--	--	68	.00	97
27...	0	--	.0	3	--	--	--	49	.06	97
DEC										
06...	--	--	--	--	--	--	--	35	.03	100
13...	0	--	.0	3	--	--	--	43	.06	100
19...	--	--	--	--	--	--	--	44	.12	100
26...	--	--	--	--	--	--	--	79	2.6	99
JAN										
02...	--	--	--	--	--	--	--	40	.27	98
09...	0	90	.5	11	4	8.2	--	38	.15	97
17...	--	--	--	--	--	--	--	47	.08	95
23...	--	--	--	--	--	--	--	70	7.6	98
FEB										
05...	0	--	.5	0	--	--	--	32	.27	95
12...	--	--	--	--	--	--	--	43	9.3	90
19...	--	--	--	--	--	--	--	35	1.1	93
26...	--	--	--	--	--	--	--	43	.51	96
MAR										
04...	--	--	--	--	--	--	--	40	.22	96
11...	0	--	.0	0	--	--	--	37	.09	98
18...	--	--	--	--	--	--	--	71	.36	98
25...	--	--	--	--	--	--	--	65	.14	97
APR										
02...	0	280	.0	<10	4	3.5	1.1	70	.17	95
08...	--	--	--	--	--	--	--	52	.31	91
15...	0	110	.0	<10	<3	3.9	1.0	59	1.9	90
22...	--	--	--	--	--	--	--	47	.62	86
29...	--	--	--	--	--	--	--	82	12	97
MAY										
03...	--	--	--	--	--	--	--	205	397	95
13...	0	80	.2	<10	8	5.0	.9	47	1.2	95
20...	--	--	--	--	--	--	--	104	67	94
27...	--	--	--	--	--	--	--	60	3.1	96
JUN										
03...	2	80	.0	<10	<3	9.9	1.1	59	6.5	96
11...	--	--	--	--	--	--	--	37	--	78
18...	--	--	--	--	--	--	--	39	.19	87
25...	--	--	--	--	--	--	--	30	.10	91
JUL										
02...	0	140	.2	<10	10	8.5	--	35	.01	90

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°51'07", long 95°39'15", on east edge of NE¼ sec. 6, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, at right downstream end of county road bridge, 3.3 mi (5.3 km) south of Bache, 5 mi (8 km) west of Haileyville, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--134 mi² (347.1 km²)

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.66 ft (183.081 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft³/s (109.0 m³/s) June 7, 1979, gage height, 17.69 ft (5.392 m); no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 720 ft³/s (20.4 m³/s) May 2, gage height, 7.61 ft (2.320 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	16	.48	1.2	1.2	.89	2.5	47	63	.10	.00	.00
2	.27	5.7	.42	1.0	1.2	.75	1.9	426	35	.06	.00	.00
3	.15	3.1	.37	.94	1.0	.89	1.5	490	17	.04	.00	.00
4	.12	3.2	.36	.56	1.2	.89	1.1	87	11	.01	.00	.00
5	.09	2.3	.47	.54	1.2	.75	.87	33	6.0	.00	.00	.00
6	.08	1.2	.64	.64	1.2	.64	.76	17	3.8	.00	.00	.00
7	.06	.97	.64	.64	1.1	.64	.67	9.8	4.0	.00	.00	.00
8	.05	.67	.64	.64	69	.48	.49	6.5	4.0	.00	.00	.00
9	.03	.98	.64	.72	116	.42	.42	4.2	3.3	.00	.00	.00
10	.01	.64	.64	1.1	54	.75	.41	3.1	2.8	.00	.00	.00
11	.00	.73	.75	.99	26	1.2	.36	2.2	1.4	.00	.00	.00
12	.00	.49	1.0	.77	16	1.2	.33	1.6	.64	.00	.00	.00
13	.00	.46	2.8	.75	11	1.1	.30	1.2	.42	.00	.00	.00
14	.00	.50	5.4	.82	8.9	.89	.30	.83	.30	.00	.00	.00
15	.00	.42	5.4	.94	7.5	.64	.36	53	.22	.00	.00	.00
16	.00	.48	3.7	1.1	6.2	.75	.51	388	.18	.00	.00	.00
17	.03	.57	2.0	1.2	4.7	2.2	.66	109	.16	.00	.00	.00
18	.04	.52	1.2	1.3	3.7	4.1	.71	222	.16	.00	.00	.00
19	.03	.48	.89	1.8	3.1	3.4	.72	396	.19	.00	.00	.00
20	.03	.47	.64	2.0	2.9	3.1	.68	131	2.2	.00	.00	.00
21	.04	1.2	.54	14	2.5	2.0	.61	78	4.5	.00	.00	.00
22	2.3	.68	.45	14	2.2	1.2	.59	78	2.0	.00	.00	.00
23	5.1	.62	1.3	12	1.7	1.1	.42	47	1.7	.00	.00	.00
24	3.8	.58	4.4	7.9	1.5	4.7	.37	26	1.3	.00	.00	.00
25	4.8	.62	5.1	5.4	1.5	5.4	.81	18	.65	.00	.00	.00
26	3.9	1.1	4.9	4.0	1.5	3.7	15	13	.35	.00	.00	.00
27	3.5	.91	4.5	3.1	1.2	2.5	21	8.2	.29	.00	.00	.00
28	3.0	.72	3.7	2.2	1.2	2.5	11	4.8	.49	.00	.00	.00
29	2.1	.58	2.0	2.0	1.1	2.5	6.7	11	.27	.00	.00	.00
30	7.6	.51	1.7	1.7	---	2.9	4.1	251	.15	.00	.00	.00
31	33	---	1.3	1.5	---	2.5	---	157	---	.00	.00	---
TOTAL	70.45	47.60	58.97	87.45	351.5	56.68	76.15	3120.43	167.47	.21	.00	.00
MEAN	2.27	1.59	1.90	2.82	12.1	1.83	2.54	101	5.58	.007	.000	.000
MAX	33	16	5.4	14	116	5.4	21	490	63	.10	.00	.00
MIN	.00	.42	.36	.54	1.0	.42	.30	.83	.15	.00	.00	.00
AC=FT	140	94	117	173	697	112	151	6190	332	.4	.00	.00
CAL YR 1979 TOTAL	37434.18			103	3460			74250				
WTR YR 1980 TOTAL	4036.91			11.0	490			8010				

ARKANSAS RIVER BASIN

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07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analysis on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT											
03...	1000	.15	224	7.4	--	6.6	73	75	2	19	6.7
09...	1330	.03	255	7.7	16.0	8.7	90	--	--	--	--
17...	1150	.05	315	7.4	19.0	7.9	87	--	--	--	--
24...	1235	3.4	245	7.2	16.0	4.8	49	--	--	--	--
NOV											
06...	1310	1.2	222	7.3	12.0	8.4	78	--	--	--	--
14...	1400	.48	235	7.4	9.5	9.6	85	--	--	--	--
20...	1610	.48	240	7.1	16.0	5.8	59	--	--	--	--
27...	1410	.89	245	7.1	10.5	6.9	62	--	--	--	--
DEC											
06...	1220	.75	229	7.2	7.5	10.4	87	--	--	--	--
13...	1315	2.5	221	7.3	6.5	9.6	77	--	--	--	--
19...	1605	.89	250	7.4	7.0	12.0	98	--	--	--	--
26...	1150	7.1	250	7.3	9.0	8.2	70	--	--	--	--
JAN											
02...	1245	2.2	220	7.2	7.0	10.8	89	--	--	--	--
09...	1400	.89	255	7.3	4.0	10.2	77	55	7	13	5.5
17...	1130	1.2	240	7.4	10.0	9.7	86	--	--	--	--
23...	1015	12	268	7.1	5.5	11.7	92	--	--	--	--
FEB											
05...	1310	1.5	340	7.2	8.0	11.4	95	--	--	--	--
12...	1230	16	95	6.7	3.0	13.2	97	--	--	--	--
19...	1350	3.4	205	7.1	9.0	11.4	100	--	--	--	--
26...	1340	1.5	217	7.3	7.5	11.2	92	--	--	--	--
MAR											
04...	1030	.89	224	7.2	7.0	11.1	92	--	--	--	--
11...	1020	1.5	225	7.2	10.5	9.0	80	--	--	--	--
18...	1210	4.4	238	7.2	13.0	9.1	85	--	--	--	--
25...	1125	5.8	244	7.2	11.0	8.4	76	--	--	--	--
APR											
01...	1020	2.5	260	7.2	13.5	9.1	87	65	20	16	6.1
08...	1030	.54	289	7.2	16.0	7.5	76	--	--	--	--
15...	1000	.36	300	7.2	11.5	8.0	73	75	30	18	7.2
22...	1015	.75	313	7.3	19.0	6.9	74	--	--	--	--
29...	1505	6.7	330	7.2	20.5	7.6	84	--	--	--	--
MAY											
02...	2024	697	112	6.8	17.0	6.6	68	--	--	--	--
13...	1445	1.2	151	7.3	23.0	8.7	100	45	8	11	4.3
20...	1100	127	99	6.9	20.0	7.6	83	--	--	--	--
27...	1400	8.3	167	6.9	27.0	5.6	69	--	--	--	--
JUN											
03...	1042	21	116	6.8	25.0	5.6	67	36	7	9.3	3.1
11...	0940	1.5	131	6.8	23.0	5.9	68	--	--	--	--
18...	1010	.15	142	6.9	25.0	4.6	55	--	--	--	--
25...	0915	.75	158	7.0	28.0	5.6	71	--	--	--	--
JUL											
03...	0730	.04	165	7.1	28.0	4.6	58	61	0	16	5.2

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
03...	11	23	.6	2.9	89	0	73	5.7	22	7.6	.2
09...	--	--	--	--	99	0	81	3.2	--	--	--
17...	--	--	--	--	95	0	78	6.1	--	--	--
24...	--	--	--	--	95	0	78	9.6	--	--	--
NOV											
06...	--	--	--	--	63	0	52	5.1	--	--	--
14...	--	--	--	--	62	0	51	3.9	--	--	--
20...	--	--	--	--	65	0	53	8.3	--	--	--
27...	--	--	--	--	69	0	57	8.8	--	--	--
DEC											
06...	--	--	--	--	72	0	59	7.3	--	--	--
13...	--	--	--	--	72	0	59	5.8	--	--	--
19...	--	--	--	--	88	0	72	5.6	--	--	--
26...	--	--	--	--	62	0	51	5.0	--	--	--
JAN											
02...	--	--	--	--	58	0	48	5.9	--	--	--
09...	19	52	1.1	4.7	--	--	43	--	26	24	.2
17...	--	--	--	--	--	--	43	--	--	--	--
23...	--	--	--	--	--	--	52	--	--	--	--
FEB											
05...	--	--	--	--	--	--	47	--	--	--	--
12...	--	--	--	--	--	--	16	--	--	--	--
19...	--	--	--	--	--	--	37	--	--	--	--
26...	--	--	--	--	--	--	43	--	--	--	--
MAR											
04...	--	--	--	--	--	--	44	--	--	--	--
11...	--	--	--	--	--	--	47	--	--	--	--
18...	--	--	--	--	--	--	50	--	--	--	--
25...	--	--	--	--	--	--	53	--	--	--	--
APR											
01...	21	39	1.1	5.0	--	--	50	--	37	23	.2
08...	--	--	--	--	--	--	53	--	--	--	--
15...	25	40	1.3	5.7	--	--	56	--	41	28	.1
22...	--	--	--	--	--	--	57	--	--	--	--
29...	--	--	--	--	--	--	62	--	--	--	--
MAY											
02...	--	--	--	--	--	--	23	--	--	--	--
13...	9.1	28	.6	4.1	--	--	41	--	20	8.8	.2
20...	--	--	--	--	--	--	26	--	--	--	--
27...	--	--	--	--	--	--	38	--	--	--	--
JUN											
03...	6.6	26	.5	3.1	--	--	34	--	10	5.2	.1
11...	--	--	--	--	--	--	39	--	--	--	--
18...	--	--	--	--	--	--	46	--	--	--	--
25...	--	--	--	--	--	--	50	--	--	--	--
JUL											
03...	9.7	24	.5	4.0	--	--	59	--	10	8.6	.5

ARKANSAS RIVER BASIN

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07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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											
03...	5.2	126	11	.17	.05	.00	.00	.000	.00	.00	.000
09...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
JAN											
02...	--	--	--	--	--	--	--	--	--	--	--
09...	11	138	133	.19	.33	.01	.04	.000	.00	.01	.040
17...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
01...	4.1	144	140	.20	.97	.07	.31	.000	.00	.07	.060
08...	--	--	--	--	--	--	--	--	--	--	--
15...	.1	168	152	.23	.16	.00	<.00	.000	.00	.00	.040
22...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
MAY											
02...	--	--	--	--	--	--	--	--	--	--	--
13...	7.5	107	88	.15	.35	.02	.09	.010	.03	.03	.040
20...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	7.0	69	63	.09	3.9	.26	1.2	.020	.07	.28	.140
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	6.4	104	100	.14	.01	.00	.00	.000	.00	.00	.000

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	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)
OCT										
03...	.00	.040	.12	0	1	60	<1	10	4	20
09...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
NOV										
06...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	20	1	--	4	0	0	--
27...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	0	1	--	1	0	0	--
19...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
07...	.05	.050	.15	50	1	60	1	0	0	120
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	10	0	--	0	0	3	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAR										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	140	1	--	2	10	4	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
APR										
01...	.08	.100	.31	30	1	50	<1	0	3	<10
08...	--	--	--	--	--	--	--	--	--	--
15...	.05	.050	.15	20	1	50	<1	0	1	20
22...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
13...	.05	.120	.37	20	1	70	<1	0	2	40
20...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUN										
03...	.18	.160	.49	60	1	60	3	0	4	130
11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUL										
03...	.00	.080	.25	0	2	110	1	0	3	30

ARKANSAS RIVER BASIN

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07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
03...	0	340	.0	<10	4	5.4	.8	35	.01	92
09...	--	--	--	--	--	--	--	60	.00	97
17...	--	--	--	--	--	--	--	170	.02	98
24...	--	--	--	--	--	--	--	38	.35	92
NOV										
06...	--	--	--	--	--	--	--	60	.19	99
14...	--	--	--	--	--	--	--	38	.05	100
20...	0	--	.0	0	--	--	--	39	.05	96
27...	--	--	--	--	--	--	--	33	.08	95
DEC										
06...	--	--	--	--	--	--	--	29	.06	98
13...	0	--	.0	2	--	--	--	41	.28	99
19...	--	--	--	--	--	--	--	31	.07	72
26...	--	--	--	--	--	--	--	44	.84	100
JAN										
02...	--	--	--	--	--	--	--	37	.22	100
09...	0	70	.0	15	7	8.6	.5	--	--	--
17...	--	--	--	--	--	--	--	66	.21	94
23...	--	--	--	--	--	--	--	50	1.6	95
FEB										
05...	0	--	.0	0	--	--	--	44	.18	97
12...	--	--	--	--	--	--	--	59	2.5	93
19...	--	--	--	--	--	--	--	40	.37	89
26...	--	--	--	--	--	--	--	35	.14	89
MAR										
04...	--	--	--	--	--	--	--	28	.07	85
11...	0	--	.0	0	--	--	--	25	.10	90
18...	--	--	--	--	--	--	--	30	.36	85
25...	--	--	--	--	--	--	--	35	.55	91
APR										
01...	0	190	.0	<10	5	8.7	--	30	.20	89
08...	--	--	--	--	--	--	--	26	.04	94
15...	1	230	.0	<10	<3	6.4	.9	9	.01	88
22...	--	--	--	--	--	--	--	19	.04	95
29...	--	--	--	--	--	--	--	25	.45	98
MAY										
02...	--	--	--	--	--	--	--	165	311	54
13...	0	270	.2	<10	<3	10	2.0	33	.11	76
20...	--	--	--	--	--	--	--	146	50	88
27...	--	--	--	--	--	--	--	61	1.4	90
JUN										
03...	2	100	.0	<10	<3	11	1.9	--	--	--
11...	--	--	--	--	--	--	--	66	.27	96
18...	--	--	--	--	--	--	--	36	.01	97
25...	--	--	--	--	--	--	--	27	.05	89
JUL										
03...	0	100	.0	<10	8	9.1	1.0	19	.00	70

ARKANSAS RIVER BASIN

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK

LOCATION.--Lat 35°02'25", long 95°34'15", NE¼NW¼ sec. 36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, approximately 400 ft (122 m) east of State Highway 31 bridge along Blue Creek, 1.5 mi (2.4 km) south of Blocker, and at mile 0.0 (0.0 km).

DRAINAGE AREA.--4.6 mi² (11.9 km²).

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMMOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN												
11...	1130	.04	68	7.3	7.0	--	--	11.8	98	--	--	--
25...	0745	.22	90	7.3	5.5	10	7.0	11.2	113	.09	22	15
FEB												
15...	1100	.43	50	6.4	9.0	--	--	10.0	88	--	--	--
MAR												
24...	1420	1.8	68	6.1	11.0	40	25	11.8	109	.46	13	7
APR												
18...	1030	.01	86	6.3	15.0	0	3.4	16.0	164	.29	22	14
MAY												
28...	0945	.29	--	7.2	24.0	30	--	5.9	72	.47	18	0

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)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	4.2	2.8	6.9	39	.6	.9	7	22	5.9	.1	6.9	55
FEB												
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	2.4	1.6	4.0	39	.5	.8	6	10	4.5	.1	7.7	44
APR												
18...	4.2	2.8	6.4	37	.6	1.1	8	22	6.1	.1	7.9	55
MAY												
28...	3.8	2.1	4.9	35	.5	1.2	--	14	5.0	.0	9.9	45

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	54	.07	.03	.05	.05	4.3	.020	.000	2.8	.02	.00	.12
FEB												
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	35	.06	.21	.03	.03	--	.150	.120	--	.18	.15	.42
APR												
18...	56	.07	.00	.04	.03	--	.000	.000	--	.00	.00	.52
MAY												
28...	57	.06	.04	.02	.04	--	.040	.010	--	.05	.01	.56

ARKANSAS RIVER BASIN

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07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
JAN 11...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.04	.14	.10	.04	1050	.19	.84	1050	.010	.03	.010	230
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	.31	.57	.14	.43	--	.60	2.7	--	.080	.25	.020	--
APR 18...	.26	.52	.26	.26	--	.56	2.5	--	.000	.00	.000	--
MAY 28...	.42	.60	.17	.43	--	.62	2.7	--	.030	.09	.010	--

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
JAN 11...	1130	200	150	50	--	0	0	0	--	40	40
25...	0745	280	200	80	250	0	0	1	66	20	10
FEB 15...	1100	510	480	30	--	1	1	0	--	40	20
MAR 24...	1420	830	590	240	--	1	1	0	--	60	10
APR 18...	1030	100	50	50	--	1	0	1	--	20	10
MAY 28...	0945	240	180	60	--	1	0	1	--	40	40

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 11...	0	0	0	3	--	0	0	0	--	--	40
25...	8	0	0	<1	0	0	0	0	30	25	20
FEB 15...	20	0	--	<1	--	0	0	0	--	--	20
MAR 24...	50	0	--	<1	--	10	10	0	--	--	0
APR 18...	10	0	--	<1	--	10	10	0	--	--	0
MAY 28...	2	0	--	<1	--	0	0	0	--	--	0

ARKANSAS RIVER BASIN

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
JAN											
11...	40	0	--	160	40	120	--	0	0	0	--
25...	20	0	5	300	130	170	15000	0	0	0	30
FEB											
15...	20	0	--	960	--	<10	--	100	100	0	--
MAR											
24...	0	2	--	1000	490	510	--	0	0	0	--
APR											
18...	0	10	--	170	90	80	--	0	0	2	--
MAY											
28...	0	2	--	520	450	70	--	0	0	0	--
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV- FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV- FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV- (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
JAN											
11...	30	20	8	--	.1	.1	.0	--	0	0	<10
25...	10	8	2	1400	.1	.1	.0	.0	0	0	<10
FEB											
15...	10	--	<1	--	.1	.1	.0	--	0	--	<10
MAR											
24...	10	4	6	--	.1	.1	.0	--	0	--	<10
APR											
18...	10	8	2	--	.1	.1	.0	--	0	--	<10
MAY											
28...	40	10	30	--	.0	.0	.0	--	0	--	<10
DATE	MOLYB- DENUM, RECOV- FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV- FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN											
11...	--	0	0	0	0	0	3	--	10	.00	94
25...	0	0	0	0	40	30	6	31	23	.01	85
FEB											
15...	--	0	0	0	40	30	6	--	6	.01	89
MAR											
24...	--	0	0	0	20	10	6	--	8	.04	79
APR											
18...	--	0	0	0	30	--	<3	--	4	.00	84
MAY											
28...	--	0	0	0	30	20	6	--	12	.01	64

ARKANSAS RIVER BASIN

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07232010 BLUE CREEK NEAR BLOCKER, OK

LOCATION.--Lat 34°02'26", long 95°34'21", in SW¼NW¼ sec.36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204 on right bank at downstream side of bridge on State Highway 31, 1.5 mi (2.4 km) south of Blocker and at mile 3.9 (6.3 km).

DRAINAGE AREA.--12.1 mi² (31.3 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 592.47 ft (180.585 m), Oklahoma State Highway Department datum.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum 6,170 ft³/s (175 m³/s) Apr. 19, 1976, gage height, 8.41 ft (2.563 m); no flow each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 637 ft³/s (18.0 m³/s) at 1215 May 18, gage height, 4.10 ft (1.250 m), no other peak above base of 500 ft³/s (14.2 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.05	.08	.18	.14	.31	.77	1.4	.44	.00	.00	.00
2	.00	.00	.09	.17	.14	.33	.71	65	.31	.00	.00	.00
3	.00	.00	.09	.15	.12	.36	.66	21	.24	.00	.00	.00
4	.00	.00	.10	.14	.12	.38	.56	5.3	.17	.00	.00	.00
5	.00	.00	.10	.13	.12	.36	.51	2.1	.11	.00	.00	.00
6	.00	.00	.12	.16	.10	.38	.48	1.2	.09	.00	.00	.00
7	.00	.00	.12	.18	.14	.40	.46	.88	.07	.00	.00	.00
8	.00	.00	.10	.17	3.6	.36	.37	.65	.06	.00	.00	.00
9	.00	.00	.09	.16	3.8	.37	.35	.48	.04	.00	.00	.00
10	.00	.01	.10	.14	1.5	.37	.33	.40	.03	.00	.00	.00
11	.00	.04	.10	.10	1.3	.36	.31	.34	.02	.00	.00	.00
12	.00	.05	.14	.08	1.1	.41	.25	.29	.01	.00	.00	.00
13	.00	.04	.10	.08	.85	.39	.26	.24	.01	.00	.00	.00
14	.00	.04	.13	.09	.79	.36	.25	.17	.00	.00	.00	.00
15	.00	.05	.13	.09	.67	.37	.23	13	.00	.00	.00	.00
16	.00	.05	.10	.09	.58	.43	.22	7.4	.00	.00	.00	.00
17	.00	.05	.11	.08	.51	1.3	.24	1.5	.01	.00	.00	.00
18	.00	.04	.12	.08	.47	1.6	.23	136	.01	.00	.00	.00
19	.00	.00	.14	.09	.46	1.1	.23	26	4.0	.00	.00	.00
20	.00	.01	.15	.12	.42	.89	.23	6.5	1.7	.00	.00	.00
21	.00	1.1	.14	.12	.40	.77	.21	8.3	.65	.00	.00	.00
22	.00	.28	.13	.13	.35	.68	.18	9.7	.32	.00	.00	.00
23	.00	.17	.22	.18	.31	1.9	.18	4.3	.24	.00	.00	.00
24	.00	.15	.50	.26	.28	4.8	.18	2.1	.15	.00	.00	.00
25	.00	.12	.54	.25	.27	2.4	6.5	1.2	.10	.00	.00	.00
26	.00	.11	.46	.22	.24	1.5	23	.83	.07	.00	.00	.00
27	.00	.11	.39	.19	.25	1.1	4.6	.57	.05	.00	.00	.00
28	.00	.10	.31	.19	.26	1.0	1.8	.40	.04	.00	.00	.00
29	.00	.09	.27	.19	.28	.99	1.2	1.2	.02	.00	.00	.00
30	.00	.08	.23	.17	---	.92	.74	1.2	.01	.00	.00	.00
31	.38	---	.19	.14	---	.87	---	.70	---	.00	.00	---
TOTAL	.38	2.74	5.59	4.52	19.57	27.76	46.24	320.35	8.97	.00	.00	.00
MEAN	.012	.091	.18	.15	.67	.90	1.54	10.3	.30	.000	.000	.000
MAX	.38	1.1	.54	.26	3.8	4.8	23	136	4.0	.00	.00	.00
MIN	.00	.00	.08	.08	.10	.31	.18	.17	.00	.00	.00	.00
AC=FT	.8	5.4	11	9.0	39	55	92	635	18	.00	.00	.00

CAL YR 1979 TOTAL 2909.80 MEAN 7.97 MAX 548 MIN .00 AC=FT 5770
WTR YR 1980 TOTAL 436.12 MEAN 1.19 MAX 136 MIN .00 AC=FT 865

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	
OCT											
31...	0945	.54	140	7.7	12.0	100	87	9.8	94	2.1	
NOV											
09...	1150	.01	500	6.0	13.5	--	--	5.0	49	--	
20...	0905	.01	185	7.8	16.0	60	34	--	--	1.6	
DEC											
07...	1010	.17	140	7.8	7.0	--	--	11.4	95	--	
21...	0845	.19	190	7.3	7.0	30	12	11.8	99	.31	
JAN											
11...	1020	.10	178	7.3	7.0	--	--	1.2	102	--	
25...	0900	.24	120	7.4	5.0	10	5.6	10.2	82	.12	
FEB											
15...	1215	.69	70	6.6	9.0	--	--	11.0	97	--	
MAR											
24...	1730	3.9	100	6.8	10.5	--	--	--	--	--	
25...	0900	1.6	86	6.2	9.0	80	64	9.0	80	2.8	
APR											
18...	1200	1.3	142	7.0	19.0	5	5.1	8.4	91	.41	
MAY											
28...	1125	.41	112	7.3	25.0	30	11	7.5	93	.54	
JUN											
17...	1415	.01	--	7.2	24.0	5	3.1	7.8	95	--	
DATE		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)	ALKA- LINITY FIELD (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT											
31...	40	10		8.9	4.2	9.6	31	.7	5.6	30	19
NOV											
09...	--	--	--	--	--	--	--	--	--	--	--
20...	49	14	11	5.3	15		37	.9	4.5	35	32
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
21...	47	36		9.1	5.8	18	61	1.1	1.5	11	48
JAN											
11...	--	--	--	--	--	--	--	--	--	--	--
25...	30	23		5.6	4.0	9.7	40	.8	.9	7	31
FEB											
15...	--	--	--	--	--	--	--	--	--	--	--
MAR											
24...	--	--	--	--	--	--	--	--	--	--	--
25...	25	16		5.3	2.8	7.1	37	.6	1.5	9	20
APR											
18...	35	22		6.6	4.4	13	44	1.0	1.3	13	36
MAY											
28...	29	0		6.3	3.3	7.9	35	.6	1.7	29	20
JUN											
17...	36	6		8.9	3.3	11	37	.8	3.7	30	27

ARKANSAS RIVER BASIN

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07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, 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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	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)
OCT 31...	8.3	.1	6.1	109	83	.15	.16	--	--	.10
NOV 09...	--	--	--	--	--	--	--	--	--	--
20...	14	.2	6.2	118	109	.16	.00	--	--	.04
DEC 07...	--	--	--	--	--	--	--	--	--	--
21...	19	.0	7.5	131	116	.18	.07	--	--	.04
JAN 11...	--	--	--	--	--	--	--	--	--	--
25...	9.7	.1	7.0	72	73	.10	.05	--	--	.09
FEB 15...	--	--	--	--	--	--	--	--	--	--
MAR 24...	--	--	--	--	--	--	--	--	--	--
25...	6.3	.1	8.0	64	58	.09	.28	--	--	.10
APR 18...	11	.1	7.0	89	87	.12	.31	--	--	.02
MAY 28...	5.8	.0	9.3	68	72	.09	.08	--	--	.02
JUN 17...	11	.1	12	103	95	.14	.00	.02	.010	.03
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 31...	.72	--	.170	.120	--	.21	.15	1.7	1.3	1.90
NOV 09...	--	--	--	--	--	--	--	--	--	--
20...	.02	--	.160	.230	--	.19	.30	.63	1.4	.79
DEC 07...	--	--	--	--	--	--	--	--	--	--
21...	.04	--	.000	.030	--	.00	.04	.39	.24	.39
JAN 11...	--	1.7	--	--	1.7	--	--	--	--	--
25...	.08	--	.020	.010	--	.02	.01	.11	.03	.13
FEB 15...	--	--	--	--	--	--	--	--	--	--
MAR 24...	--	--	--	--	--	--	--	--	--	--
25...	.32	--	.040	.350	--	.05	.45	2.3	2.2	2.30
APR 18...	.03	--	.020	.020	--	.02	.03	1.6	.36	1.60
MAY 28...	.02	--	.130	.000	--	.16	.00	.51	.52	.64
JUN 17...	--	240	.050	--	120	.06	--	.65	--	.70

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)	
	DATE											
	OCT 31...	.50	1.4	--	2.0	8.9	--	.130	.40	.010	--	
	NOV 09...	--	--	--	--	--	--	--	--	--	--	
	20...	.00	1.6	--	.83	3.7	--	.060	.18	.040	--	
	DEC 07...	--	--	--	--	--	--	--	--	--	--	
	21...	.12	.27	--	.43	1.9	--	.010	.03	.010	--	
	JAN 11...	--	--	152	--	--	154	--	--	--	400	
	25...	.09	.04	--	.22	.97	--	.010	.03	.010	--	
	FEB 15...	--	--	--	--	--	--	--	--	--	--	
	MAR 24...	--	--	--	--	--	--	--	--	--	--	
	25...	.00	2.5	--	2.4	11	--	.130	.40	.040	--	
	APR 18...	1.2	.38	--	1.6	7.2	--	.010	.03	.000	--	
	MAY 28...	.12	.52	--	.66	2.9	--	.030	.09	.010	--	
	JUN 17...	--	--	890	.73	3.2	1130	.030	.09	--	340	
		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
	DATE	TIME										
	OCT 31...	0945	3000	2800	250	--	2	1	1	--	120	50
	NOV 09...	1150	1100	1100	50	--	1	0	1	--	60	10
	20...	0905	930	910	20	--	0	0	0	--	110	70
	DEC 07...	1010	400	350	50	--	0	0	1	--	50	20
	21...	0845	--	--	--	--	--	--	--	--	--	--
	JAN 11...	1020	250	200	50	170	--	--	0	45	40	30
	25...	0900	240	180	60	--	1	1	0	--	30	20
	FEB 15...	1215	560	520	40	--	1	1	0	--	50	30
	MAR 24...	1730	--	--	--	--	--	--	--	--	--	--
	25...	0900	1500	1400	70	--	1	0	1	--	60	20
	APR 18...	1200	90	30	60	--	1	0	1	--	30	20
	MAY 28...	1125	300	270	30	--	2	0	2	--	50	40
	JUN 17...	1415	150	150	0	650	2	0	2	29	80	20

ARKANSAS RIVER BASIN

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07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 31...	70	0	0	<1	--	4	0	4	--	--	10
NOV 09...	50	0	0	<1	--	0	0	0	--	--	50
20...	40	0	0	4	--	0	0	0	--	--	140
DEC 07...	30	0	0	<1	--	0	0	0	--	--	50
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	9	--	--	2	0	--	--	0	10	30	--
25...	10	0	0	<1	--	0	0	0	--	--	10
FEB 15...	20	0	--	<1	--	0	0	0	--	--	10
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
25...	40	0	--	<1	--	10	10	0	--	--	0
APR 18...	6	10	9	1	--	0	0	0	--	--	0
MAY 28...	9	0	0	1	--	0	0	0	--	--	0
JUN 17...	60	0	--	<1	1	10	0	10	13	30	0
DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT 31...	7	3	--	4100	--	270	--	0	0	0	--
NOV 09...	50	0	--	1300	1200	80	--	0	0	0	--
20...	140	4	--	1500	--	80	--	100	100	0	--
DEC 07...	50	0	--	590	520	70	--	0	0	0	--
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	0	500	270	230	40	9000	--	--	0	3000
25...	8	2	--	240	80	160	--	0	0	1	--
FEB 15...	10	0	--	1200	870	330	--	0	0	0	--
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
25...	0	1	--	2000	1800	210	--	0	0	0	--
APR 18...	0	1	--	220	160	60	--	0	0	2	--
MAY 28...	0	4	--	540	460	80	--	0	0	0	--
JUN 17...	0	3	8	420	310	110	11000	100	100	0	20

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT 31...	600	200	400	--	1.3	.1	1.2	--	2	0	<10
NOV 09...	210	50	160	--	.1	.1	.0	--	0	0	<10
20...	220	60	160	--	1.5	1.5	.0	--	4	0	<10
DEC 07...	90	10	80	--	.1	.1	.0	--	0	0	<10
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	210	40	170	2000	--	--	2.3	.0	0	0	0
25...	40	0	40	--	.1	.1	.0	--	0	0	<10
FEB 15...	60	40	20	--	.0	.0	.0	--	0	--	<10
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
25...	90	50	40	--	.0	.0	.0	--	0	--	<10
APR 18...	70	20	50	--	.1	.0	.1	--	0	--	<10
MAY 28...	110	60	50	--	.0	.0	.0	--	0	--	<10
JUN 17...	410	150	260	2100	.3	.2	.1	.0	1	--	<10
DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 31...	--	0	0	0	0	0	10	--	118	.17	93
NOV 09...	--	0	0	0	60	60	4	--	44	.00	96
20...	--	0	0	0	20	10	10	--	34	.00	99
DEC 07...	--	0	0	0	0	0	5	--	17	.01	99
21...	--	--	--	--	--	--	--	--	36	.02	94
JAN 11...	2	--	--	0	--	--	20	71	20	.01	97
25...	--	0	0	0	20	10	6	--	15	.01	97
FEB 15...	--	0	0	0	30	20	10	--	13	.02	94
MAR 24...	--	--	--	--	--	--	--	--	39	.41	97
25...	--	0	0	0	30	--	<3	--	--	--	--
APR 18...	--	0	0	0	10	--	<3	--	5	.02	98
MAY 28...	--	0	0	0	40	--	<3	--	13	.01	85
JUN 17...	0	0	0	0	80	70	8	60	17	.00	79

ARKANSAS RIVER BASIN

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07232024 DEER CREEK NEAR McALESTER, OK

LOCATION.--Lat 34°56'58", long 95°51'00", near center of sec. 32, T.6 N., R.14 E., Pittsburg County, Hydrologic Unit 11090204, on right bank 500 ft (152 m) downstream from bridge on U.S. Highway 270, 0.4 mi (0.6 km) west of junction with Indian Nation Turnpike and 4.1 mi (6.6 km) west of McAlester.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to July 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 603.65 ft (183.992 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Low flows regulated by City of McAlester sewage-treatment plant.

EXTREMES FOR CURRENT PERIOD.--Water year 1979: Maximum daily discharge, 1,740 ft³/s (49.3 m³/s) May 21; minimum daily discharge, 0.41 ft³/s (0.012 m³/s) Oct. 7.

October to July 1980: Maximum daily discharge, 106 ft³/s (3.00 m³/s) May 16; minimum daily discharge, 0.71 ft³/s (0.020 m³/s) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	1.5	1.9	1.9	4.8	46	71	3.1	25	1.4	2.1	5.7
2	.50	1.5	1.9	1.4	4.9	33	44	28	25	1.4	2.0	2.9
3	.54	1.5	2.0	1.5	5.5	342	20	334	26	2.0	1.9	2.8
4	.51	1.5	2.1	2.1	4.9	55	22	57	22	1.6	2.0	2.8
5	.88	1.7	1.9	3.1	4.7	28	14	26	13	1.4	1.7	2.7
6	.62	1.9	2.0	2.8	4.7	22	8.7	15	15	1.4	2.7	
7	.41	3.4	2.3	2.2	7.6	18	5.5	9.6	1620	340	1.4	2.6
8	.43	2.2	2.5	2.2	8.6	14	3.1	5.4	1010	17	1.3	2.6
9	.48	1.4	2.3	2.8	7.4	12	1.8	3.9	42	12	1.5	2.5
10	.55	1.9	2.2	4.9	8.3	8.2	1.6	2.6	30	44	1.3	2.5
11	.60	1.3	2.3	3.2	27	6.9	243	17	22	6.5	1.5	2.4
12	.62	1.1	3.0	4.8	92	6.5	63	16	18	4.8	1.3	2.4
13	.60	1.6	2.2	9.6	31	5.7	23	9.3	17	3.5	1.2	2.4
14	.53	7.5	2.0	4.8	22	5.1	14	4.5	15	2.4	1.3	2.3
15	.53	47	3.0	3.0	18	4.6	9.0	2.5	12	1.9	1.3	2.3
16	.54	74	2.9	6.0	11	4.4	6.3	2.3	8.2	1.7	1.2	2.3
17	.57	41	2.4	25	8.4	5.0	5.7	1.9	6.3	5.1	1.3	2.3
18	.60	11	2.2	53	6.8	24	25	2.7	4.3	2.7	1.5	2.5
19	.61	4.7	2.6	146	8.3	213	60	2.3	1.7	2.1	1.6	2.6
20	.62	3.2	2.7	69	8.6	673	26	105	1.5	1.9	1.7	6.3
21	.74	4.2	2.3	24	11	64	25	1740	1.5	1.8	1.6	9.7
22	.63	4.1	2.0	14	141	259	13	908	1.6	1.7	25	3.8
23	4.8	6.1	1.7	9.8	658	110	9.1	77	2.4	1.3	3.6	2.9
24	3.9	3.9	2.0	7.6	73	33	7.7	42	5.3	2.3	2.5	2.8
25	1.8	4.0	2.4	6.9	161	17	6.6	32	20	2.1	2.6	2.7
26	1.6	85	2.1	16	207	52	4.6	30	11	2.2	1.8	2.6
27	1.5	32	2.3	30	89	321	2.5	46	4.1	6.8	1.9	2.6
28	1.4	5.6	3.9	14	89	38	6.4	62	2.3	4.0	2.8	2.5
29	1.5	3.4	3.0	9.0	---	25	5.4	56	2.0	2.6	2.0	2.4
30	1.4	2.2	2.5	7.0	---	26	2.7	33	1.2	2.1	2.4	2.4
31	1.4	---	2.0	5.8	---	16	---	28	---	2.4	2.5	---
TOTAL	31.86	361.4	72.6	493.4	1723.5	2487.4	749.7	3702.1	2985.4	672.7	79.2	92.0
MEAN	1.03	12.0	2.34	15.9	61.6	80.2	25.0	119	99.5	21.7	2.55	3.07
MAX	4.8	85	3.9	146	658	673	243	1740	1620	340	25	9.7
MIN	.41	1.1	1.7	1.4	4.7	4.4	1.6	1.9	1.2	1.3	1.2	2.3
AC=FT	63	717	144	979	3420	4930	1490	7340	5920	1330	157	182

WTR YR 1979 TOTAL 13451.26 MEAN 36.9 MAX 1740 MIN .41 AC=FT 26680

ARKANSAS RIVER BASIN

07232024 DEER CREEK NEAR MCALESTER, OK---Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	20	1.2	1.4	1.6	2.1	2.0	4.5	4.6	.90		
2	2.3	4.5	1.2	1.4	1.6	1.6	1.7	103	2.7	1.1		
3	2.4	1.8	1.2	1.4	1.6	1.6	1.5	64	2.4	1.2		
4	2.4	1.6	1.3	1.4	1.6	1.9	1.6	13	2.2	1.1		
5	2.4	1.6	1.5	1.3	1.6	1.7	1.6	4.0	2.1	1.8		
6	2.4	1.5	1.3	1.3	2.2	1.8	1.4	3.0	2.4	1.8		
7	2.6	1.4	1.3	1.3	2.1	1.9	1.2	2.2	2.8	1.8		
8	2.6	2.2	1.6	1.3	39	1.9	1.3	1.7	2.2	2.7		
9	2.4	10	1.6	1.3	31	1.6	1.2	1.3	2.1	2.7		
10	2.4	5.4	1.6	1.4	13	1.4	1.1	1.4	4.4	1.4		
11	2.6	3.0	1.6	1.4	7.0	1.7	1.1	2.1	2.3	1.2		
12	2.6	2.0	2.5	1.3	4.2	2.3	1.0	1.6	1.1	1.1		
13	2.5	1.6	4.9	1.4	3.3	2.1	1.0	1.5	1.1	1.4		
14	2.4	1.5	4.0	1.5	2.7	1.8	1.0	1.9	2.3	1.7		
15	2.4	1.4	6.4	1.6	2.1	1.7	1.0	64	3.3	1.2		
16	2.4	1.4	5.8	2.1	2.2	1.7	1.1	106	3.4	1.5		
17	23	2.1	3.9	2.0	1.7	21	2.6	29	5.0	1.1		
18	17	1.6	2.3	1.6	1.6	4.6	2.3	87	9.0	.93		
19	4.0	1.4	2.2	1.8	1.8	2.2	1.6	72	6.1	.87		
20	3.0	1.4	2.3	5.6	2.4	1.9	1.4	15	20	2.6		
21	5.2	16	2.3	6.1	2.3	1.7	1.3	7.5	5.9	.82		
22	22	5.0	2.4	3.9	2.1	1.6	1.2	7.9	2.2	4.5		
23	4.8	1.4	2.5	3.7	1.9	1.8	1.3	5.0	1.8	1.0		
24	3.0	1.3	13	4.2	1.4	4.6	1.5	3.5	1.9	.89		
25	2.6	1.3	4.0	3.9	1.3	2.4	2.6	2.9	1.6	.83		
26	2.6	1.3	1.5	3.6	2.0	1.9	44	2.5	1.2	.90		
27	5.8	1.2	1.4	3.4	2.0	1.8	5.4	2.2	1.2	18		
28	31	1.2	1.5	3.1	2.0	2.5	2.3	2.0	.82	1.4		
29	16	1.2	1.5	2.4	1.9	2.5	1.6	14	.71	.85		
30	26	1.2	1.4	1.7	---	2.7	1.3	13	.78	.78		
31	51	---	1.4	1.9	---	2.0	---	6.8	---	.75		
TOTAL	256.1	98.5	82.6	71.7	141.2	84.0	91.2	645.5	99.61	60.82		
MEAN	8.26	3.28	2.66	2.31	4.87	2.71	3.04	20.8	3.32	1.96		
MAX	51	20	13	6.1	39	21	44	106	20	18		
MIN	2.3	1.2	1.2	1.3	1.3	1.4	1.0	1.3	.71	.75		
AC=FT	508	195	164	142	280	167	181	1280	198	121		
CAL YR 1979	TOTAL	13422.6	MEAN	36.8	MAX	1740	MIN	1.2	AC=FT	26620		

ARKANSAS RIVER BASIN

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07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT											
03...	1750	2.3	340	7.3	19.5	4.6	51	--	--	--	--
09...	1523	2.3	368	7.0	18.0	4.1	44	--	--	--	--
17...	1635	55	480	7.1	18.0	3.5	38	--	--	--	--
24...	1350	2.0	270	7.1	16.5	2.8	29	64	0	19	4.1
NOV											
06...	1705	3.3	420	7.3	11.5	5.2	48	--	--	--	--
14...	1520	1.6	330	7.2	9.5	5.2	46	--	--	--	--
21...	1030	11	435	7.4	16.0	4.1	41	--	--	--	--
28...	1050	1.1	370	7.3	7.5	5.2	43	--	--	--	--
DEC											
06...	1645	1.3	560	7.6	8.0	7.2	61	--	--	--	--
14...	0842	4.0	260	7.3	5.0	7.0	54	--	--	--	--
20...	1215	2.7	510	7.5	5.5	8.4	81	--	--	--	--
26...	1525	1.5	370	7.1	10.0	6.4	57	--	--	--	--
JAN											
02...	1640	1.4	500	7.3	6.0	7.3	58	--	--	--	--
09...	1600	1.4	560	7.4	5.0	11.0	85	95	20	26	7.2
18...	1140	1.7	600	7.4	8.0	11.0	95	--	--	--	--
22...	1325	3.6	320	7.1	6.0	7.2	58	--	--	--	--
FEB											
05...	1600	1.7	625	7.3	5.5	7.6	60	--	--	--	--
13...	1145	3.3	380	7.3	5.0	13.4	99	--	--	--	--
19...	1520	1.9	500	7.3	9.0	7.9	69	--	--	--	--
27...	0900	2.3	559	7.4	5.0	6.6	51	--	--	--	--
MAR											
05...	0855	1.7	528	7.4	6.0	6.6	52	--	--	--	--
12...	0830	2.0	568	7.3	10.0	3.6	32	--	--	--	--
18...	1455	4.4	300	7.1	13.5	3.3	31	--	--	--	--
25...	1550	2.3	575	7.2	12.0	3.2	30	--	--	--	--
APR											
02...	0815	1.6	420	7.2	14.5	3.2	31	76	0	21	5.8
09...	0820	1.3	579	7.3	14.0	3.0	29	--	--	--	--
16...	0735	1.1	590	7.4	10.5	6.3	56	100	0	27	7.8
23...	0810	1.3	435	7.2	18.0	5.0	53	--	--	--	--
29...	1655	1.6	390	7.0	22.0	1.8	21	--	--	--	--
MAY											
02...	1317	52	287	7.1	22.0	2.6	30	66	16	19	4.6
02...	1555	191	226	7.1	18.0	1.5	16	63	6	18	4.5
14...	0855	1.9	583	7.1	20.0	1.4	15	--	--	--	--
20...	1517	13	170	6.7	20.0	4.3	47	--	--	--	--
27...	1550	2.4	370	7.0	27.0	1.8	22	--	--	--	--
JUN											
04...	0810	2.3	385	7.1	24.0	2.3	27	93	9	26	6.9
11...	1625	2.3	595	7.7	27.5	8.4	101	--	--	--	--
18...	1545	7.0	620	7.5	29.0	4.9	63	--	--	--	--
25...	1615	1.9	370	7.3	33.0	6.6	90	--	--	--	--
JUL											
02...	1850	1.4	595	7.8	33.0	11.4	156	110	0	32	7.2
09...	1625	2.3	580	7.5	32.0	6.2	84	--	--	--	--
16...	1235	1.5	604	7.6	30.0	6.9	90	--	--	--	--
23...	1510	.88	500	7.4	28.0	3.5	44	--	--	--	--

ARKANSAS RIVER BASIN

07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
03...	--	--	--	--	100	0	82	8.0	--	--	--
09...	--	--	--	--	86	0	71	14	--	--	--
17...	--	--	--	--	120	0	98	15	--	--	--
24...	19	42	1.0	8.0	86	0	71	11	30	15	.3
NOV											
06...	--	--	--	--	120	0	98	9.6	--	--	--
14...	--	--	--	--	110	0	90	11	--	--	--
21...	--	--	--	--	140	0	115	8.9	--	--	--
28...	--	--	--	--	125	0	100	10	--	--	--
DEC											
06...	--	--	--	--	153	0	120	6.1	--	--	--
14...	--	--	--	--	79	0	65	6.3	--	--	--
20...	--	--	--	--	150	0	123	7.6	--	--	--
26...	--	--	--	--	98	0	80	12	--	--	--
JAN											
02...	--	--	--	--	150	0	123	12	--	--	--
09...	53	52	2.4	9.9	--	--	120	--	82	37	.7
16...	--	--	--	--	--	--	160	--	--	--	--
22...	--	--	--	--	--	--	67	--	--	--	--
FEB											
05...	--	--	--	--	--	--	120	--	--	--	--
13...	--	--	--	--	--	--	39	--	--	--	--
19...	--	--	--	--	--	--	120	--	--	--	--
27...	--	--	--	--	--	--	140	--	--	--	--
MAR											
05...	--	--	--	--	--	--	140	--	--	--	--
12...	--	--	--	--	--	--	140	--	--	--	--
18...	--	--	--	--	--	--	73	--	--	--	--
25...	--	--	--	--	--	--	140	--	--	--	--
APR											
02...	38	49	1.9	7.8	--	--	120	--	34	25	.5
09...	--	--	--	--	--	--	160	--	--	--	--
16...	66	56	2.9	10	--	--	150	--	63	38	.6
23...	--	--	--	--	--	--	120	--	--	--	--
29...	--	--	--	--	--	--	100	--	--	--	--
MAY											
02...	23	40	1.2	6.0	--	--	76	--	45	11	.4
02...	16	33	.9	5.9	--	--	69	--	22	11	.2
14...	--	--	--	--	--	--	150	--	--	--	--
20...	--	--	--	--	--	--	45	--	--	--	--
27...	--	--	--	--	--	--	97	--	--	--	--
JUN											
04...	33	41	1.5	7.3	--	--	110	--	57	21	.4
11...	--	--	--	--	--	--	140	--	--	--	--
18...	--	--	--	--	--	--	140	--	--	--	--
25...	--	--	--	--	--	--	110	--	--	--	--
JUL											
02...	64	53	2.7	11	--	--	140	--	54	46	.9
09...	--	--	--	--	--	--	140	--	--	--	--
16...	--	--	--	--	--	--	140	--	--	--	--
23...	--	--	--	--	--	--	140	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
03...	--	--	--	--	--	--	--	138	.86	91
09...	--	--	--	--	--	--	--	123	.76	96
17...	--	--	--	--	--	--	--	260	39	82
24...	1	330	.0	<10	6	9.8	.7	124	.67	95
NOV										
06...	--	--	--	--	--	--	--	106	.94	96
14...	--	--	--	--	--	--	--	65	.28	97
21...	--	--	--	--	--	--	--	89	2.6	98
28...	0	--	.0	0	--	--	--	102	.30	98
DEC										
06...	--	--	--	--	--	--	--	76	.27	90
14...	0	--	.0	5	--	--	--	80	.86	90
20...	--	--	--	--	--	--	--	63	.46	96
26...	--	--	--	--	--	--	--	77	.31	98
JAN										
02...	--	--	--	--	--	--	--	56	.21	98
09...	2	120	.0	16	5	12	1.0	56	.21	93
18...	--	--	--	--	--	--	--	108	.50	98
22...	--	--	--	--	--	--	--	103	1.0	97
FEB										
05...	2	--	.0	1	--	--	--	77	.35	98
13...	--	--	--	--	--	--	--	45	.40	88
19...	--	--	--	--	--	--	--	29	.15	88
27...	--	--	--	--	--	--	--	16	.10	87
MAR										
05...	--	--	--	--	--	--	--	47	.22	87
12...	0	--	.0	0	--	--	--	40	.22	90
18...	--	--	--	--	--	--	--	111	1.3	96
25...	--	--	--	--	--	--	--	34	.21	77
APR										
02...	0	290	.0	<10	6	8.5	1.5	38	.16	89
09...	--	--	--	--	--	--	--	62	.22	91
16...	2	360	.0	<10	4	13	--	49	.15	78
23...	--	--	--	--	--	--	--	56	.20	85
29...	--	--	--	--	--	--	--	52	.22	96
MAY										
02...	1	280	.1	<10	<3	16	3.3	297	.42	92
02...	2	270	.2	0	10	12	5.0	--	--	--
14...	--	--	--	--	--	--	--	38	.19	89
20...	--	--	--	--	--	--	--	154	5.4	93
27...	--	--	--	--	--	--	--	62	.40	98
JUN										
04...	2	480	.2	<10	<3	14	1.0	77	.48	98
11...	--	--	--	--	--	--	--	49	.30	74
18...	--	--	--	--	--	--	--	49	.93	81
25...	--	--	--	--	--	--	--	40	.21	93
JUL										
02...	0	260	.0	<10	<3	14	6.5	44	.17	89
09...	--	--	--	--	--	--	--	63	.39	91
16...	--	--	--	--	--	--	--	57	.23	89
23...	--	--	--	--	--	--	--	46	.11	90

ARKANSAS RIVER BASIN

07232029 MATHULDY CREEK NEAR CROWDER, OK

LOCATION.--Lat 35°04'17", long 95°36'47", NE¼NE¼ sec.21, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on county road bridge 4.3 miles (6.9 km) southeast of Crowder, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--5.41 mi² (14.01 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	
FEB 19...	1400	.01	260	6.7	14.0	--	--	9.4	94	--	--	--	
MAR 25...	1040	1.8	114	6.9	9.0	120	110	11.8	104	1.0	33	26	
MAY 28...	1530	.34	194	7.4	28.0	40	18	6.0	78	.62	52	22	
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)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
FEB 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	7.2	3.6	8.5	34	.6	2.3	7	29	8.7	.1	7.5	82	
MAY 28...	12	5.3	12	32	.7	2.7	30	44	8.7	.1	6.6	105	
DATE		SOLIDS, SUM OF CONSTITU- ENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
FEB 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	72	.11	.40	.30	.28	.200	.040	.24	.05	.90	.70	1.10	
MAY 28...	109	.14	.10	.03	.00	.120	.000	.15	.00	.65	.62	.77	
DATE		NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	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)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)
FEB 19...	--	--	--	--	--	--	--	--	440	410	30	1	1
MAR 25...	.36	.74	1.4	6.2	.190	.58	.030	2400	2300	90	0	0	
MAY 28...	.15	.62	.80	3.5	.040	.12	.010	770	700	70	2	1	

ARKANSAS RIVER BASIN

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07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
FEB 19...	0	50	20	30	0	0	3	0	0	0	0	0
MAR 25...	0	110	0	120	0	--	<1	10	10	0	25	22
MAY 28...	1	50	30	20	10	--	<1	10	0	10	50	48
DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
FEB 19...	0	1700	1600	150	0	0	0	210	180	30	.0	.0
MAR 25...	3	3200	3100	110	100	100	0	120	80	40	.1	.1
MAY 28...	2	660	530	130	0	0	0	160	60	100	.1	.1
DATE	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SED- MENT, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB 19...	.0	0	<10	0	0	0	60	40	20	58	.00	97
MAR 25...	.0	0	<10	0	0	0	50	40	10	57	.28	93
MAY 28...	.0	0	<10	0	0	0	40	0	40	20	.02	83

ARKANSAS RIVER BASIN

07232500 BEAVER RIVER NEAR GUYMON, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°43'24", long 101°29'30", in NW¼SW¼ 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 (1.9 km) upstream from Goff Creek, 2.5 mi (4.0 km) north of Guymon, and at mile 650.7 (1,047.0 km).

DRAINAGE AREA.--2,139 mi² (5,540 km²), which includes that of Dry Sand Draw and of which 964 mi² (2,497 km²) 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 (905.466 m), revised, National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair except for winter periods which are poor.

AVERAGE DISCHARGE.--43 years, 24.1 ft³/s (0.683 m³/s), 17,460 acre-ft/yr (21.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,400 ft³/s (1,570 m³/s) June 15, 1964, gage height, 13.68 ft (4.170 m); maximum gage height, 13.82 ft (4.212 m), Sept. 23, 1941, from floodmark; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft³/s (4.11 m³/s) June 11, gage height, 5.99 ft (1.826 m), no peak above base of 2,400 ft³/s (68.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	5.1	5.0	1.2	6.4	14	5.9	.00	.00	.00
2	.00	.00	.00	3.0	5.0	5.7	6.7	12	4.7	.00	.00	.00
3	.00	.00	.00	3.1	5.0	5.0	6.5	11	3.9	.00	.00	.00
4	.00	.00	.00	2.6	7.0	4.7	6.1	9.5	2.9	.00	.00	.00
5	.00	.00	.00	2.3	6.8	4.7	6.2	8.6	2.3	.00	.00	.00
6	.00	.00	.00	2.1	6.4	4.7	6.2	7.9	1.7	.00	.00	.00
7	.00	.00	.00	.00	3.3	4.2	5.7	7.5	1.2	.00	.00	.00
8	.00	.00	.00	.00	1.6	4.2	5.3	7.5	1.1	.00	.00	.00
9	.00	.00	.00	.43	5.7	4.5	4.9	6.9	1.7	.00	.00	.00
10	.00	.00	.00	6.2	5.0	4.2	5.0	6.1	2.5	.00	.00	.00
11	.00	.00	.00	1.9	5.0	4.8	4.2	5.7	6.7	.00	.00	.00
12	.00	.00	.00	2.0	5.0	5.7	4.4	5.3	3.6	.00	.00	.00
13	.00	.00	.00	2.1	6.0	5.4	4.5	4.7	14	.00	.00	.00
14	.00	.00	.00	1.9	7.6	4.5	4.4	4.9	8.5	.00	.00	.00
15	.00	.00	.00	3.8	6.0	4.5	4.3	5.9	6.1	.00	.00	.00
16	.00	.00	.00	2.8	6.0	3.9	4.0	6.7	5.7	.00	.00	.00
17	.00	.00	.00	2.5	5.0	4.2	3.6	6.9	5.7	.00	.00	.00
18	.00	.00	1.4	2.8	5.0	4.2	3.3	8.6	5.0	.00	.00	.00
19	.00	.00	2.1	2.4	5.0	4.2	3.3	6.8	5.2	.00	.00	.00
20	.00	.00	.96	.70	5.4	3.9	3.1	6.3	12	.00	.00	.00
21	.00	.00	.73	5.0	4.5	3.9	2.9	5.1	7.0	.00	.00	.00
22	.00	.00	.60	7.2	4.5	3.3	2.7	4.1	5.4	.00	.00	.00
23	.00	.00	.46	4.5	4.2	4.1	3.5	3.7	4.1	.00	.00	.00
24	.00	.00	.75	3.8	4.5	5.7	13	3.0	2.2	.00	.00	.00
25	.00	.00	1.1	3.8	4.2	5.7	16	2.5	.00	.00	.00	.00
26	.00	.00	1.0	.80	3.9	4.9	11	3.4	.00	.00	.00	.00
27	.00	.00	1.4	.00	3.9	13	9.4	6.8	.00	.00	.00	.00
28	.00	.00	1.9	1.3	3.9	13	8.4	20	.00	.00	.00	.00
29	.00	.00	1.6	4.2	3.5	10	7.7	17	.00	.00	.00	.00
30	.00	.00	1.7	5.0	---	7.9	11	10	.00	.00	.00	.00
31	.00	---	5.1	5.0	---	6.3	---	7.4	---	.00	.00	---
TOTAL	.00	.00	20.80	88.33	143.9	166.2	183.7	235.8	211.80	.00	.00	.00
MEAN	.000	.000	.67	2.85	4.96	5.36	6.12	7.61	7.06	.000	.000	.000
MAX	.00	.00	5.1	7.2	7.6	13	16	20	67	.00	.00	.00
MIN	.00	.00	.00	.00	1.6	1.2	2.7	2.5	.00	.00	.00	.00
AC=FT	.00	.00	41	175	285	330	364	468	420	.00	.00	.00
CAL YR 1979	TOTAL	1313.04	MEAN	3.60	MAX	151	MIN	.00	AC=FT	2600		
WTR YR 1980	TOTAL	1050.53	MEAN	2.87	MAX	67	MIN	.00	AC=FT	2080		

07233200 OPTIMA LAKE NEAR HARDESTY, OK

LOCATION.--Lat 36°39'23", long 101°08'13", in NE¼NE¼ sec.8, T.2 N., T.18 E., Texas County, Hydrologic Unit 11100102, in control tower for dam on Beaver River, 4.5 mi (7.2 km) northeast of Hardesty, and at mile 623.2 (1,002.7 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) 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 Corps of Engineers).

REMARKS.--Reservoir is formed by earth dam having a concrete gate tower with a 12'0" x 16'5" 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 (763 hm³) at elevation 2,814.2 ft (857.77 m), maximum pool; 382,500 acre-ft (472 hm³) at elevation 2,796.0 ft (852.22 m), uncontrolled spillway crest; 229,500 acre-ft (283 hm³) at elevation 2,779.0 ft (847.04 m), top of flood-control pool; 129,000 acre-ft (159 hm³) at elevation 2,763.5 ft (842.32 m), 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,610 acre-ft (9.38 hm³) May 30 to June 2, 1980, elevation 2,722.90 ft (829.940 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,610 acre-ft (9.38 hm³) May 30 to June 2, elevation 2,722.90 ft (829.940 m); minimum, 4,370 acre-ft (5.388 hm³) Oct. 23-28, elevation 2,719.60 ft (828.934 m).

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

2,719	3,870	2,722	6,660
2,720	4,730	2,723	7,720
2,721	5,670		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4910	4820	4820	4910	5190	5480	5770	6060	7610	7080	5860	5480
2	4910	4730	4820	4910	5190	5480	5860	6160	7610	7080	5860	5480
3	4910	4730	4820	4910	5190	5480	5860	6160	7500	6970	5860	5380
4	4910	4730	4820	4910	5290	5480	5860	6160	7500	6870	5860	5380
5	4820	4730	4820	4910	5290	5480	5860	6160	7500	6870	5860	5380
6	4820	4640	4820	4910	5290	5480	5860	6160	7500	6760	5860	5290
7	4730	4640	4820	4910	5290	5480	5860	6160	7500	6660	5770	5290
8	4730	4640	4820	4910	5290	5480	5860	6160	7500	6660	5770	5290
9	4730	4730	4820	4910	5290	5480	5860	6160	7400	6660	5670	5290
10	4730	4820	4820	4910	5290	5480	5860	6160	7400	6660	5670	5290
11	4730	4820	4820	4910	5380	5480	5860	6160	7400	6560	5670	5190
12	4730	4820	4820	4910	5380	5480	5860	6160	7400	6560	5570	5190
13	4730	4820	4820	4910	5380	5480	5860	6160	7400	6560	5100	5190
14	4640	4910	4820	4910	5380	5480	5860	6160	7400	6460	5670	5100
15	4640	4910	4820	4910	5380	5480	5860	6260	7290	6460	5670	5100
16	4550	4820	4820	4910	5380	5480	5860	6260	7290	6360	5670	5100
17	4550	4820	4820	4910	5380	5570	5860	6360	7290	6360	5670	5100
18	4550	4820	4820	4960	5380	5570	5860	6360	7290	6360	5570	5100
19	4460	4820	4820	5010	5480	5570	5860	6360	7290	6360	5570	5100
20	4460	4730	4820	5010	5480	5570	5860	6360	7290	6360	5570	5100
21	4460	4820	4820	5100	5480	5570	5860	6360	7290	6260	5570	5010
22	4460	4820	4820	5100	5480	5570	5860	6360	7290	6260	5570	5010
23	4370	4820	4820	5100	5480	5570	5860	6360	7180	6160	5570	5010
24	4370	4820	4820	5100	5480	5570	5960	6360	7180	6160	5570	5010
25	4370	4820	4820	5100	5480	5570	5960	6360	7180	6160	5570	5010
26	4370	4820	4820	5100	5480	5570	5960	6460	7180	6060	5570	5010
27	4370	4820	4910	5190	5480	5770	5960	6460	7180	6060	5570	5010
28	4370	4820	4910	5190	5480	5770	5960	6510	7180	6060	5570	5010
29	4550	4820	4910	5190	5480	5770	5960	6560	7180	6060	5570	4910
30	4640	4820	4910	5190	---	5770	6060	7080	7180	6060	5570	4910
31	4820	---	4910	5190	---	5770	---	7610	---	5960	5480	---
MAX	4910	4910	4910	5190	5480	5770	6060	7610	7610	7080	5860	5480
MIN	4370	4640	4820	4910	5190	5480	5770	6060	7180	5960	5100	4910
†	2720.10	2720.10	2720.20	2720.50	2720.80	2721.10	2721.40	2722.90	2722.50	2721.30	2720.80	2720.20
‡	-90	0	+90	+280	+290	+290	+290	+1,550	-430	-1,220	-480	-570

CAL YR 1979 MAX 5960 MIN 76 ‡ +4,830
WTR YR 1980 MAX 7610 MIN 4370 ‡ 0

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07233210 BEAVER RIVER NEAR HARDESTY, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°39'23", long 101°08'06", in SE¼NE¼ sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, on left bank of outlet channel, 500 ft (152 m) downstream from Optima Dam, 5 mi (8 km) northeast of Hardesty, and at mile 623.1 (1,002.6 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage 2,690.00 ft (819.912 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) June 8, 1978, gage height, 10.42 ft (3.176 m); no flow at times in 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s (0.48 m³/s) July 8, gage height, 8.41 ft (2.563 m); minimum daily discharge, 0.02 ft³/s (0.001 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.04	.02	.05	.06	.08	.06	.29	.08	.08	.08	.04
2	.02	.04	.03	.05	.06	.08	.08	.29	.08	.08	.08	.04
3	.02	.04	.03	.05	.06	.08	.10	.25	.08	.09	.08	.04
4	.02	.04	.03	.05	.06	.09	.10	.25	.08	.12	.08	.04
5	.02	.04	.03	.05	.06	.10	.10	.25	.09	.13	.10	.04
6	.02	.04	.05	.06	.06	.10	.10	.25	.10	.10	.10	.04
7	.02	.04	.14	.06	.06	.10	.10	.39	.14	.10	.04	.04
8	.02	.03	.14	.06	.06	.10	.08	.34	.14	2.0	.04	.05
9	.02	.03	.10	.06	.06	.10	.08	.27	.18	.41	.04	.06
10	.02	.03	.10	.06	.06	.10	.08	.22	.19	.21	.04	.05
11	.02	.03	.10	.06	.06	.10	.08	.16	.25	.16	.04	.05
12	.02	.03	.10	.06	.06	.14	.08	.16	.25	.14	.04	.04
13	.02	.03	.10	.06	.06	.18	.08	.10	.25	.14	.04	.04
14	.02	.03	.08	.06	.06	.18	.08	.10	.25	.13	.15	.03
15	.02	.03	.08	.06	.06	.18	.08	.14	.25	.10	.16	.04
16	.02	.03	.10	.06	.06	.18	.08	.17	.25	.10	.05	.03
17	.03	.02	.10	.06	.06	.18	.08	.14	.27	.10	.04	.03
18	.03	.02	.08	.09	.06	.18	.08	.19	.29	.10	.04	.03
19	.03	.02	.08	.28	.06	.18	.08	.14	.29	.10	.03	.03
20	.03	.03	.06	.14	.06	.18	.08	.10	.42	.10	.03	.03
21	.03	.03	.04	.14	.07	.18	.08	.06	.39	.10	.03	.03
22	.03	.02	.04	.14	.08	.18	.08	.05	.34	.10	.04	.02
23	.03	.02	.04	.18	.08	.28	.10	.04	.34	.32	.04	.02
24	.03	.02	.04	.18	.08	.33	.21	.05	.33	.59	.03	.03
25	.03	.03	.04	.18	.08	.29	.18	.04	.30	.37	.04	.02
26	.04	.02	.04	.14	.08	.29	.14	.05	.25	.27	.07	.02
27	.04	.03	.05	.06	.08	.29	.14	.12	.25	.17	.33	.02
28	.04	.03	.05	.06	.08	.18	.14	.39	.24	.14	.06	.02
29	.15	.03	.05	.06	.08	.08	.14	.10	.27	.15	.04	.02
30	1.5	.02	.05	.06	---	.06	.28	.09	.10	.09	.04	.02
31	.98	---	.05	.06	---	.06	---	.08	---	.08	.04	---
TOTAL	3.34	.89	2.04	2.74	1.91	4.83	3.17	5.27	6.74	6.87	2.06	1.01
MEAN	.11	.030	.066	.088	.066	.16	.11	.17	.22	.22	.066	.034
MAX	1.5	.04	.14	.28	.08	.33	.28	.39	.42	2.0	.33	.06
MIN	.02	.02	.02	.05	.06	.06	.06	.04	.08	.08	.03	.02
AC-FT	6.6	1.8	4.0	5.4	3.8	9.6	6.3	10	13	14	4.1	2.0
CAL YR 1979	TOTAL	47.23	MEAN	.13	MAX	12	MIN	.01	AC-FT	94		
WTR YR 1980	TOTAL	40.87	MEAN	.11	MAX	2.0	MIN	.02	AC-FT	81		

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LOCATION.--Lat 36°49'20", long 100°31'05", in SW¼ 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 (2.4 km) downstream from Home Creek, 5 mi (8.0 km) upstream from Clear Creek, and at mile 576.0 (926.8 km).

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1341: Drainage area.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft³/s (1,980 m³/s) Oct. 8, 1946, maximum gage height, 14.55 ft (4.435 m) by slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 ft³/s (1,190 m³/s); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,360 ft³/s (152 m³/s) at 1900 May 31, gage height, 9.91 ft (3.021 m), no other peak above base of 4,000 ft³/s (113 m³/s); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.67	.38	1.8	8.3	42	48	1700	11	.00	.00
2	.00	.00	2.6	.32	1.1	9.4	37	51	325	7.9	.00	.00
3	.00	.00	.93	.26	.28	15	46	49	262	7.0	.00	.00
4	.00	.00	.39	.25	6.7	19	47	43	225	4.9	.00	.00
5	.00	.00	.29	.27	9.1	14	42	38	189	2.3	.00	.00
6	.00	.00	.39	.22	8.0	16	38	34	149	1.2	.00	.00
7	.00	.00	.25	.03	5.7	14	34	32	196	.49	.00	.00
8	.00	.00	.25	.08	.23	13	31	30	174	.16	.00	.00
9	.00	.00	.27	.13	.75	14	30	29	128	.00	.00	.00
10	.00	.00	.28	.59	1.2	15	30	28	115	.00	.00	.00
11	.00	.00	.25	.27	8.2	16	27	25	99	.00	.00	.00
12	.00	.00	.49	.29	14	19	25	23	90	.00	.00	.00
13	.00	.11	.53	.32	14	19	25	21	1040	.00	.00	.00
14	.00	.33	1.3	.28	12	18	25	20	520	.00	.00	.00
15	.00	.32	.50	.29	6.4	18	23	24	258	.00	22	.00
16	.00	.35	.36	.26	4.6	17	21	32	172	.00	.46	.00
17	.00	.36	.64	.25	7.9	17	19	32	126	.00	.00	.00
18	.00	.27	1.1	.31	23	17	20	32	101	.00	.00	.00
19	.00	.28	.61	.44	23	16	20	30	97	.00	.00	.00
20	.00	.46	.44	.49	22	15	19	45	115	.00	.00	.00
21	.00	.27	.38	.28	19	13	17	91	91	.00	.00	.00
22	.00	.19	.32	.25	17	14	15	54	94	.00	.00	.00
23	.00	.42	.32	.29	17	23	15	38	80	.00	.00	.00
24	.00	.40	.31	.19	18	33	22	32	55	.00	.00	.00
25	.00	.35	.29	1.8	18	30	32	26	48	.00	.00	.00
26	.00	.38	.24	.81	19	32	48	23	39	.00	.00	.00
27	.00	.32	.30	.33	18	34	49	23	33	.00	.00	.00
28	.00	.22	.27	.43	17	48	43	34	27	.00	.00	.00
29	.00	.23	.24	.77	14	50	35	214	23	.00	.00	.00
30	.00	.81	.26	.68	---	45	38	1940	18	.00	.00	.00
31	.00	---	.40	.93	---	42	---	3880	---	.00	.00	---
TOTAL	.00	6.07	15.87	12.49	326.96	673.7	915	7021	6589	34.95	22.46	.00
MEAN	.0000	.20	.51	.40	11.3	21.7	30.5	226	220	1.13	.72	.0000
MAX	.00	.81	2.6	1.8	23	50	49	3880	1700	11	22	.00
MIN	.00	.00	.24	.03	.23	8.3	15	20	18	.00	.00	.00
AC=FT	.00	12	31	25	649	1340	1810	13930	13070	69	45	.00
CAL YR 1979	TOTAL	5657.25	MEAN 15.5	MAX 655	MIN .00	AC=FT	11220					
WTR YR 1980	TOTAL	15617.50	MEAN 42.7	MAX 3880	MIN .00	AC=FT	30980					

ARKANSAS RIVER BASIN

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 current year.

WATER TEMPERATURE: October 1967 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected 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, 6,580 micromhos Apr. 29, 1978; minimum daily, 286 micromhos July 31, 1971.

WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 1978; minimum, 0.0°C on many days during winter periods.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED 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)
NOV												
15...	1615	.18	5390	7.6	13.0	--	--	--	--	--	1500	1400
25...	1630	.03	5230	7.8	7.0	--	--	--	--	--	1400	1300
30...	1730	.20	4800	8.0	5.0	--	--	--	--	--	1400	1200
DEC												
05...	1430	.00	5350	8.1	7.5	1.5	14.6	133	K66	325	1500	1300
FEB												
13...	1030	19	4700	8.1	1.0	4.1	15.7	121	73	66	780	580
MAR												
04...	1030	19	5200	8.3	5.0	18	12.4	95	95	119	790	590
APR												
02...	1500	40	4800	8.5	8.0	38	10.7	103	K13	45	660	460
MAY												
06...	1130	36	5500	8.4	2.0	21	9.5	114	70	39	790	590
JUN												
11...	1055	99	--	8.6	20.0	140	8.8	106	480	224	720	480
JUL												
01...	1645	11	5400	8.4	34.0	24	6.9	108	56	122	820	670

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)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV												
15...	320	160	600	47	6.8	9.2	75	910	1300	--	--	3650
25...	310	150	600	62	7.0	8.9	130	890	1200	--	--	3510
30...	310	140	500	44	5.9	7.7	150	790	1100	--	--	3180
DEC												
05...	320	170	600	46	6.7	8.9	160	880	1200	.8	23	3600
FEB												
13...	170	87	740	67	12	8.1	200	430	1200	1.0	27	3030
MAR												
04...	170	89	870	70	13	9.8	200	450	1500	1.6	22	3220
APR												
02...	150	69	600	66	10	9.6	200	320	1000	1.4	20	2380
MAY												
06...	170	88	870	70	14	9.2	200	280	1600	1.6	22	3350
JUN												
11...	180	65	560	62	9.1	13	240	390	950	1.3	25	2430
JUL												
01...	180	91	810	68	12	15	150	520	1400	1.5	22	3330

ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV											
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	11	1	360	340	20	1	1	0	70	10	60
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
02...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	2	2	1200	1200	30	3	3	0	60	40	20
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)
NOV											
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	.0	.0	.2	2	1	1	1	0	1	1	1
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
02...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	.0	.0	.2	4	1	3	0	0	1	0	0
JUN										0	--
11...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	17	--	--	--	--	--	--
FEB											
13...	0	30	10	20	--	4.8	1.3	--	12	.62	92
MAR											
04...	--	--	--	--	13	--	--	3300	40	2.1	89
APR											
02...	--	--	--	--	13	--	--	--	74	8.0	99
MAY											
06...	0	10	0	20	--	13	1.6	9900	63	6.1	88
JUN											
11...	--	--	--	--	10	--	--	18000	330	88	86
JUL											
01...	--	--	--	--	13	--	--	91000	67	2.0	69

07234000 BEAVER RIVER AT BEAVER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4740	---	4050	4940	5660	5610	785	5520	---	
2		---	4690	4700	---	4940	5660	5630	1500	5600	---	
3		---	5180	4670	---	5540	5660	5600	2140	5580	---	
4		---	5160	4670	4020	5500	5660	5620	2650	5470	---	
5		---	5160	4670	4030	5530	5660	5740	3090	5760	---	
6		---	5160	4680	---	5500	5660	5880	3490	6080	---	
7		---	5170	4700	---	5520	5940	5910	3800	6170	---	
8		---	5170	4690	---	5550	5940	5930	1740	6240	---	
9		---	5180	4690	---	5700	5930	6100	2850	6150	---	
10		---	---	4690	---	5660	5940	6170	3640	5980	---	
11		---	---	4690	4710	5550	5930	6220	4150	6000	---	
12		---	---	4690	4720	5370	5940	6310	4460	4850	---	
13		---	---	4700	4720	5360	5940	6340	740	4840	---	
14		---	---	4010	4720	5610	6130	6360	578	6280	---	
15		5390	---	3950	4710	5740	6130	5620	705	6360	295	
16		5370	---	3980	4710	5660	6120	5570	982	6210	1600	
17		5390	4680	4000	4710	5780	6120	5810	1500	---	4600	
18		5280	4690	4000	4950	4470	6130	5740	2050	6250	4170	
19		5230	4660	4020	4940	4470	6130	5830	2700	---	4800	
20		5230	4760	4000	4960	4470	6120	5720	3010	---	---	
21		5220	4760	---	4950	4470	3880	1620	3400	6040	---	
22		5200	4770	---	4950	4470	3870	2530	3090	---	---	
23		5220	4780	---	4950	4480	3870	3560	3920	6180	---	
24		5190	5370	---	4940	4770	3880	4580	2560	---	---	
25		5230	5410	---	4470	4770	3870	5240	4090	---	---	
26		4810	5450	---	4460	4770	3870	5390	4740	---	---	
27		4780	5460	---	4470	4770	3880	5640	4980	6140	---	
28		4790	5450	---	4480	4770	5810	4920	5070	---	---	
29		4790	5440	---	---	4770	5420	5000	5180	---	---	
30		4800	5460	---	---	5050	5420	582	5300	---	---	
31		---	5170	---	---	5660	---	509	---	---	---	
MEAN		5120	5080	4430	4650	5160	5390	5070	2960	5890	3090	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1.0	---	4.0	4.0	11.0	20.0	27.0	21.0	---	
2		---	2.0	8.0	---	6.0	13.0	21.0	27.0	21.0	---	
3		---	6.0	6.0	---	11.0	14.0	23.0	26.0	23.0	---	
4		---	7.0	9.0	6.0	9.0	8.0	18.0	28.0	23.0	---	
5		---	4.0	10.0	7.0	10.0	12.0	25.0	29.0	22.0	---	
6		---	7.0	3.0	---	12.0	15.0	29.0	26.0	31.0	---	
7		---	5.0	6.0	---	7.0	10.0	22.0	27.0	27.0	---	
8		---	8.0	4.0	---	17.0	14.0	16.0	23.0	30.0	---	
9		---	10.0	4.0	---	16.0	15.0	23.0	25.0	28.0	---	
10		---	---	6.0	---	15.0	16.0	26.0	24.0	28.0	---	
11		---	---	5.0	2.0	7.0	13.0	17.0	28.0	32.0	---	
12		---	---	9.0	2.0	8.0	16.0	24.0	28.0	33.0	---	
13		---	---	10.0	3.0	17.0	17.0	27.0	27.0	30.0	---	
14		---	---	9.0	4.0	17.0	16.0	21.0	28.0	30.0	---	
15		13.0	---	5.0	4.0	16.0	21.0	14.0	29.0	25.0	25.0	
16		13.0	---	6.0	5.0	15.0	22.0	16.0	22.0	28.0	28.0	
17		14.0	1.0	9.0	4.0	11.0	20.0	21.0	25.0	26.0	26.0	
18		12.0	2.0	7.0	8.0	12.0	21.0	22.0	28.0	33.0	33.0	
19		12.0	4.0	3.0	9.0	13.0	24.0	---	30.0	25.0	25.0	
20		11.0	6.0	.0	7.0	11.0	22.0	---	29.0	---	---	
21		10.0	8.0	---	9.0	12.0	24.0	---	30.0	30.0	---	
22		10.0	5.0	---	11.0	10.0	22.0	28.0	---	---	---	
23		9.0	2.0	---	10.0	5.0	20.0	27.0	---	36.0	---	
24		10.0	4.0	---	10.0	6.0	17.0	29.0	24.0	---	---	
25		7.0	3.0	---	9.0	3.0	14.0	25.0	24.0	---	---	
26		10.0	4.0	---	12.0	4.0	15.0	24.0	20.0	---	---	
27		11.0	6.0	---	11.0	4.0	18.0	20.0	20.0	31.0	---	
28		9.0	4.0	---	10.0	6.0	23.0	27.0	22.0	---	---	
29		8.0	3.0	---	---	9.0	20.0	31.0	23.0	---	---	
30		5.0	5.0	---	---	7.0	17.0	21.0	22.0	---	---	
31		---	7.0	---	---	9.0	---	27.0	---	---	---	
MEAN		10.5	5.0	6.0	7.0	10.0	17.0	23.0	26.0	28.0	27.5	

ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	MAR 4,80 1030	MAY 6,80 1130	JUN 11,80 1055	JUL 1,80 1645				
TOTAL CELLS/ML	3300	9900	18000	91000				
DIVERSITY: DIVISION	0.2	1.0	1.3	1.0				
..CLASS	0.2	1.0	1.3	1.0				
...ORDER	0.8	1.7	1.7	1.3				
...FAMILY	1.7	2.4	2.7	2.0				
....GENUS	2.2	2.8	3.5	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	900	1
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	710	4	--	-
....MICRACTINIUM	--	-	--	-	4000#	22	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	890	9	500	3	21000#	23
...CHLORELLA	--	-	--	-	710	4	--	-
...CHODATELLA	--	-	--	-	100	1	--	-
...DICTYOSPHAERIUM	--	-	--	-	1600	9	3000	3
...KIRCHNERIELLA	--	-	140	1	--	-	--	-
...OOCYSTIS	--	-	140	1	--	-	600	1
...SELENASTRUM	--	-	69	1	100	1	*	0
...TREUBARIA	--	-	--	-	--	-	*	0
...WESTELLA	--	-	--	-	400	2	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	270	3	2000	11	9600	11
...SCENEDESMUS	--	-	820	8	600	3	18000#	20
...TETRASTRUM	--	-	270	3	400	2	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	69	1	--	-	--	-
...CHLAMYDOMONAS	130	4	140	1	500	3	3000	3
...CHLOROGONIUM	--	-	--	-	--	-	*	0
...VOLVOCAEAE								
...PANDORINA	--	-	1100	11	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCEAE								
...CYCLOTELLA	470	14	960	10	1200	7	1200	1
...MELOSIRA	--	-	--	-	600	3	--	-
..PENNALES								
...FRAGILARIACEAE								
...ASTERIONELLA	--	-	--	-	--	-	900	1
...SYNEDRA	63	2	140	1	--	-	--	-
...GOMPHONEMATAEAE								
...GOMPHONEMA	--	-	69	1	--	-	--	-
...NAVICULACEAE								
...CALONEIS	--	-	69	1	--	-	--	-
...NAVICULA	540#	16	410	4	200	1	--	-
...PLAGIOTROPIS	1100#	34	--	-	--	-	--	-
...NITZSCHIAEAE								
...NITZSCHIA	980#	30	4400#	44	2200	12	32000#	35
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	2300	13	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

261

07234100 CLEAR CREEK NEAR ELMWOOD, OK

LOCATION.--Lat 36°38'42", long 100°30'07", in SW¼SW¼ 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 (304.8 m) downstream from small irrigation dam, 2.8 mi (4.5 km) northeast of Elmwood, and at mile 16.9 (27.2 km).

DRAINAGE AREA.--170 mi² (440 km²).

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

REVISED RECORDS.--WSP 2121: 1966.

GAGE.--Water-stage recorder. Datum of gage is 2,541.26 ft (774.576 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 7.12 ft³/s (0.202 m³/s), 5,160 acre-ft/yr (6.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Oct. 16, 1969, gage height, 13.97 ft (4.258 m), from floodmark, from rating curve extended above 12,500 ft³/s (343 m³/s) on basis of slope-area measurement at gage height 13.15 ft (4.008 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 288 ft³/s (8.16 m³/s) June 22, gage height, 5.53 ft (1.686 m), no peak above base of 500 ft³/s (14.2 m³/s); no flow Sept. 18, 20-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	3.8	1.7	2.5	1.7	2.2	2.8	1.7	2.3	2.2	.38	.45
2	.99	1.4	1.7	2.5	1.9	2.3	2.6	1.3	2.8	2.2	.29	.40
3	1.1	1.3	1.7	2.3	1.8	3.0	2.6	1.6	2.9	2.2	.56	.37
4	1.1	1.3	1.7	2.3	1.9	3.0	2.4	1.6	2.6	2.2	.69	.37
5	1.0	1.2	1.7	2.3	1.7	3.0	2.5	1.5	2.3	2.2	.71	.48
6	.98	1.2	1.7	2.2	2.0	3.1	2.7	1.7	2.3	2.2	.84	.38
7	1.0	1.3	1.6	2.3	1.8	3.1	2.8	2.2	2.2	2.0	1.1	.42
8	1.0	1.5	1.6	2.3	1.7	3.3	2.7	1.3	2.0	1.9	1.0	.66
9	.88	1.3	1.6	2.2	1.7	3.3	2.5	2.0	2.0	1.8	.94	.85
10	.91	1.3	1.7	2.2	1.8	3.3	3.0	2.2	1.9	1.3	.88	.87
11	.96	1.3	1.8	2.4	1.9	3.1	2.8	2.1	1.9	.94	.87	.90
12	1.0	1.2	1.9	2.2	2.0	3.3	2.7	2.1	2.0	.94	.52	.53
13	1.0	1.2	2.0	2.3	1.9	3.3	2.6	2.2	1.9	.78	.60	.42
14	1.1	1.3	1.9	2.3	1.9	3.5	2.5	2.2	2.0	.40	1.3	.35
15	1.1	1.2	2.0	1.8	1.7	3.7	2.6	2.7	1.8	.14	1.6	.24
16	1.0	1.3	1.9	1.7	1.5	3.9	2.5	2.6	1.8	.02	1.2	.08
17	.93	1.5	2.0	1.8	1.8	3.5	2.3	2.4	1.8	.20	1.1	.07
18	1.2	1.6	2.2	1.9	1.9	3.9	2.3	2.5	2.0	.35	1.1	.00
19	1.4	1.7	2.2	2.1	2.0	3.9	2.4	2.2	1.9	.04	1.4	.05
20	1.2	1.8	2.4	2.0	2.2	3.5	2.0	2.3	2.1	.06	1.3	.00
21	1.1	1.7	2.4	2.0	2.2	3.3	2.0	2.2	1.8	1.7	.93	.00
22	1.2	1.7	2.5	2.0	2.2	3.3	2.2	1.9	59	.06	1.1	.00
23	1.2	1.7	2.5	2.0	2.3	3.3	2.3	1.7	27	.03	.95	.00
24	1.2	1.7	2.5	1.9	2.3	3.1	2.4	1.9	3.1	.10	.71	.00
25	1.2	1.7	2.6	1.9	2.3	3.0	2.0	1.8	2.6	.15	.44	.10
26	1.2	1.7	2.5	1.7	2.3	3.0	1.7	1.9	2.3	.26	.08	.13
27	1.2	1.8	2.5	1.6	2.4	3.3	1.6	2.3	2.2	.40	.38	.15
28	1.2	1.7	2.5	1.6	2.4	3.3	1.7	2.4	2.1	.36	.82	.13
29	1.3	1.7	2.5	1.6	2.3	2.9	1.6	1.8	2.2	.29	.15	.30
30	6.3	1.7	2.5	1.6	---	2.7	1.9	1.7	2.2	.39	.06	.60
31	6.3	---	2.5	1.6	---	2.7	---	2.0	---	.40	.11	---
TOTAL	44.15	46.8	64.5	63.1	57.5	99.1	70.7	62.0	147.0	28.21	23.91	9.30
MEAN	1.42	1.56	2.08	2.04	1.98	3.20	2.36	2.00	4.90	.91	.77	.31
MAX	6.3	3.8	2.6	2.5	2.4	3.9	3.0	2.7	59	2.2	1.6	.90
MIN	.88	1.2	1.6	1.6	1.5	2.2	1.6	1.3	1.8	.02	.06	.00
AC-FT	88	93	128	125	114	197	140	123	292	56	47	18
CAL YR 1979	TOTAL	1065.83	MEAN	2.92	MAX	172	MIN	.57	AC-FT	2110		
WTR YR 1980	TOTAL	716.27	MEAN	1.96	MAX	59	MIN	.00	AC-FT	1420		

ARKANSAS RIVER BASIN

07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°33'14", long 99°34'16", in NE¼SE¼ 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 (3.2 km) southeast of Fort Supply and at mile 5.5 (8.8 km).

DRAINAGE AREA.--1,735 mi² (4,494 km²), of which 241 mi² (624 km²) 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 is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of a 540-foot (164.6 m) uncontrolled gravity type concrete weir, one 36-inch (914 mm) diameter gated by-pass, and one 18-foot (5.49 m) 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 (124 hm³) at elevation 2,028.0 ft (618.134 m), crest of spillway, and 13,890 acre-ft (17.1 hm³) at elevation 2,004.0 ft (610.819 m), conservation pool, designated in 1965. No storage below elevation 1,987.0 ft (605.638 m). 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 (123 hm³) June 25, 1957, elevation, 2,026.97 ft (617.820 m); no contents at times November 1942 to January 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,640 acre-ft (21.8 hm³) Apr. 28, elevation, 2,005.88 ft (611.392 m); minimum, 10,980 acre-ft (13.5 hm³) Sept. 29, 30, elevation, 2,002.34 ft (610.313 m).

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

2,002	10,430	2,009	25,020
2,004	13,890	2,012	33,280
2,006	17,890	2,016	46,170

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13280	15410	14150	14250	13970	14020	15710	15140	17530	14310	13200	12010
2	13280	15240	14310	14290	14000	14210	15830	14810	17470	14270	13150	12030
3	13180	15040	14170	14360	14080	14040	15650	14730	17070	14270	13170	11980
4	13170	14870	14230	14270	14150	13870	15530	14610	16380	14350	13080	11910
5	13150	14380	14150	14210	14230	13890	15610	14520	15710	14270	13040	11860
6	13130	14210	14100	14000	14310	13850	15240	14350	15240	14270	12970	11840
7	13110	14290	14060	13910	14460	13870	15100	14360	14870	14230	13080	11810
8	12990	14400	14000	13830	14580	13930	14900	14250	14580	14230	13000	11780
9	13040	14420	13980	13970	14190	13970	14750	14190	14350	14170	12970	11670
10	13020	14380	14000	13950	14040	13980	14580	14020	14150	14120	12610	11670
11	13000	14290	13890	13950	13980	14080	14440	14170	14060	14100	12880	11670
12	12970	14210	14000	14120	14080	14000	14400	14270	14100	14080	12630	11570
13	12970	14140	14060	13970	14100	14150	14360	14360	14150	14020	12610	11520
14	13000	14060	14170	14000	14150	14270	14360	14520	14150	13950	12570	11500
15	12950	13950	14170	14000	14150	14330	14360	14940	14040	13890	12790	11490
16	12880	13910	14190	14020	14190	14000	14350	15140	14080	13800	12720	11400
17	12910	13980	14270	14080	14230	14250	14310	15240	14140	13800	12720	11400
18	12970	13970	14310	14100	14290	14350	14310	15240	14170	13740	12700	11340
19	12890	13980	14210	14310	14330	14270	14310	15300	14150	13650	12610	11400
20	12880	14000	14020	14480	14400	14270	14290	15490	14210	13570	12560	11240
21	12730	13970	13980	14560	14380	14270	14270	15610	14350	13570	12520	11260
22	12770	14000	13980	14630	14350	14170	14230	15750	14710	13530	12490	11110
23	12770	14020	14000	14610	14360	14310	14250	15570	15450	13520	12430	11070
24	12750	14080	14060	14560	14350	14560	14980	14920	15240	13520	12430	11040
25	12770	14080	14080	14440	14330	14690	15630	14440	14960	13440	12360	11010
26	12790	14080	14080	14290	14270	14730	16190	14400	14590	13420	12240	10990
27	12700	14100	14140	14210	14250	14960	17530	14730	14360	13420	12260	11010
28	12720	14080	14150	14080	14170	15080	17320	15550	14360	13390	12240	11010
29	12910	14100	14170	13980	13980	15140	16620	15910	14360	13400	12260	10980
30	13370	14120	14190	13910	---	15430	15910	16500	14330	13290	12200	10980
31	15160	---	14230	13930	---	15750	---	16950	---	13240	12120	---
MAX	15160	15410	14310	14630	14580	15750	17530	16950	17530	14350	13610	12030
MIN	12700	13910	13890	13830	13970	13850	14230	14020	14040	13240	12120	10980
†	2004.66	2004.12	2004.18	2004.02	2004.05	2004.96	2005.04	2005.55	2004.23	2003.65	2003.02	2002.34
‡	+1,870	-1,040	+110	-300	-50	+1,770	+160	+1,040	-2,620	-1,090	-1,120	-1,140

CAL YR 1979 MAX 45090 MIN 12700 † +900
WTR YR 1980 MAX 17530 MIN 10980 ‡ -2,310

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

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07237000 WOLF CREEK NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°34'00", long 99°33'05", in SE¼SE¼ 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 (1.6 km) southeast of Fort Supply, 1.6 mi (2.6 km) downstream from Fort Supply Dam, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--1,739 mi² (4,504 km²), of which 241 mi² (624 km²) 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 (596.914 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

REMARKS.--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 ft³/s (2.95 m³/s), 73,350 acre-ft/yr (92.9 hm³/yr); (since regulation by Fort Supply Dam) 38 years (water years 1943-80), 58.4 ft³/s (1.654 m³/s), 42,310 acre-ft/yr (52.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 24, 1939, gage height, 15.60 ft (4.775 m), present datum, from rating curve extended above 8,000 ft³/s (227 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.6 ft (5.97 m), present datum, was reached prior to October 1937, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 620 ft³/s (17.6 m³/s) Apr. 28, 29, gage height, 8.22 ft (2.505 m); minimum daily discharge, 0.44 ft³/s (0.012 m³/s), Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	155	12	23	25	59	3.0	595	15	36	2.2	.77
2	.91	230	12	23	24	59	41	393	163	26	2.1	.69
3	.86	228	14	23	24	59	124	229	437	10	2.1	.61
4	.84	221	28	58	24	58	125	224	494	8.8	2.1	.56
5	1.1	219	49	93	14	59	126	222	491	8.3	2.0	.55
6	.94	175	49	90	5.2	52	124	220	362	8.2	1.9	.55
7	.91	17	49	90	20	30	125	222	241	8.1	1.6	.54
8	.91	13	49	57	60	29	124	219	237	8.1	1.5	.54
9	.89	33	48	26	138	29	122	217	236	7.8	1.4	.53
10	.85	82	48	25	140	29	122	195	207	8.0	1.3	.53
11	.83	80	28	24	89	29	114	65	162	7.2	1.2	.52
12	.79	79	2.3	24	31	29	70	49	60	7.0	1.0	.52
13	.79	78	1.7	24	29	28	68	46	65	6.2	1.1	.51
14	.74	74	1.7	24	29	28	67	45	41	6.4	1.1	.51
15	.74	93	1.6	24	29	28	50	47	39	6.0	2.0	.50
16	.74	55	1.8	24	28	27	59	75	39	6.3	1.8	.48
17	.74	18	1.8	24	28	27	59	136	39	7.8	1.3	.48
18	.74	17	1.8	24	27	27	58	136	39	4.5	1.1	.48
19	.74	16	.63	26	27	29	58	132	39	4.1	1.0	.47
20	.70	14	124	25	27	56	57	81	39	3.9	1.0	.47
21	.69	12	82	25	40	44	57	79	38	4.0	.97	.47
22	.65	12	26	25	58	4.0	57	78	39	4.3	.96	.47
23	.64	12	25	59	59	3.0	57	207	124	2.1	.94	.46
24	.64	12	25	90	58	4.0	59	435	239	1.9	.91	.45
25	.61	12	24	90	58	5.3	137	373	235	1.9	.88	.45
26	.59	12	24	90	58	5.5	222	79	236	1.9	.86	.44
27	.61	12	23	90	58	3.4	223	58	184	1.9	.90	.46
28	.59	12	23	89	58	2.9	426	80	46	2.4	.90	.47
29	.60	12	23	91	59	3.1	616	122	41	3.0	.94	.48
30	2.7	13	23	62	---	2.9	606	19	38	3.8	1.1	.50
31	40	---	23	27	---	3.1	---	16	---	2.2	1.0	---
TOTAL	64.99	2018	906.7	1489	1324.2	852.2	4156.0	5094	4665	218.1	41.16	15.46
MEAN	2.10	67.3	29.2	48.0	45.7	27.5	139	164	156	7.04	1.33	.52
MAX	40	230	124	93	140	59	616	595	494	36	2.2	.77
MIN	.59	12	1.6	23	5.2	2.9	3.0	16	15	1.9	.86	.44
AC-FT	129	4000	1800	2950	2630	1690	8240	10100	9250	433	82	31

CAL YR 1979 TOTAL 35633.91 MEAN 98.2 MAX 1940 MIN .59 AC-FT 71080
WTR YR 1980 TOTAL 20844.81 MEAN 57.0 MAX 616 MIN .44 AC-FT 41350

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'18", long 99°16'40", in SE¼SE¼ sec.25, T.23 N., R.20 W., Woodward County, Hydrologic Unit 11100501, near right bank on downstream side of pier of bridge on State Highway 15, 200 ft (61.0 m) downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6.0 mi (9.7 km) east of Woodward, 7.2 mi (11.6 km) upstream from Indian Creek, 27.5 mi (44.2 km) downstream from Wolf Creek, and at mile 460.2 (740.5 km).

DRAINAGE AREA.--11,589 mi² (30,016 km²), of which 4,812 mi² (12,463 km²) 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 1903-6. Gage-height records collected in this vicinity since 1919 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.-Water-stage recorder. Datum of gage is 1,830.43 ft (557.915 m) National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording gage at railway bridge 200 ft (61.0 m) 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 (12.6 km) upstream at datum 37.01 ft (11.281 m) higher than present datum.

REMARKS.--Records good. Some regulation since May 1942 by Fort Supply Lake on Wolf Creek 33 mi (53 km) upstream (station 07236500).

AVERAGE DISCHARGE.--42 years (water years 1939-80), 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (170 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) Oct. 10, 1946, gage height, 9.80 ft (2.987 m), 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 (3.35 m), site and datum then in use; from reports of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 5, maximum gage height, 8.82 ft (2.688 m) June 5, no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 2.6 ft³/s (0.074 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	6.8	3.9	3.7	7.0	6.0	10.2	6.85	1.82	1.39	1.6	4.5
2	6.7	1.19	3.7	3.8	6.5	6.8	1.13	6.85	1.85	1.28	1.6	4.1
3	6.2	1.87	3.4	3.8	7.5	8.5	1.38	5.19	8.48	1.19	1.6	4.1
4	6.4	1.65	3.4	3.7	8.1	8.3	2.01	3.84	1.370	1.03	1.5	4.9
5	7.1	1.68	3.6	5.1	5.8	7.8	2.08	3.74	1.600	9.2	1.5	5.2
6	7.2	1.70	5.2	7.9	5.2	8.0	2.08	3.59	1.250	8.6	1.4	5.7
7	7.4	1.35	5.5	7.9	4.5	7.7	2.10	3.93	8.31	8.0	1.2	5.0
8	6.5	7.5	5.5	8.5	4.4	6.4	2.08	3.82	6.11	7.5	1.0	4.5
9	6.2	6.5	5.7	7.3	4.4	6.1	2.00	3.64	5.53	7.0	1.0	3.8
10	8.1	6.3	5.7	5.2	1.00	5.8	1.99	3.47	5.08	6.6	8.3	4.9
11	7.2	8.9	5.6	4.5	8.0	5.9	1.99	2.86	4.84	6.3	7.5	4.5
12	6.4	9.1	5.0	4.3	7.5	6.4	1.74	1.99	3.96	5.9	6.9	3.9
13	7.8	8.9	3.1	4.3	7.0	6.2	1.42	1.74	3.07	5.5	6.5	4.4
14	6.4	8.9	2.6	4.2	6.6	6.1	1.36	1.59	2.68	5.0	8.0	3.4
15	6.2	8.6	2.4	4.1	6.4	5.8	1.34	2.15	2.41	4.7	1.7	3.2
16	6.6	9.5	2.1	4.0	5.1	5.8	1.25	2.60	2.26	4.3	1.4	3.5
17	7.3	8.2	2.1	3.9	5.2	5.6	1.27	2.59	5.44	4.0	9.7	3.1
18	7.0	6.2	2.5	4.0	6.5	5.7	1.22	3.44	4.06	3.8	1.7	3.0
19	7.3	5.3	2.1	5.3	6.7	5.6	1.23	3.32	3.32	3.5	2.3	3.1
20	7.0	5.2	3.4	5.7	6.3	5.8	1.24	3.12	2.99	3.2	1.5	2.8
21	6.8	5.0	9.0	5.9	6.0	7.1	1.22	2.94	2.60	3.2	1.0	2.9
22	6.0	4.6	7.5	5.3	6.1	7.3	1.19	2.62	3.16	3.1	9.7	2.6
23	7.2	4.3	4.6	5.1	7.3	6.6	1.17	2.44	2.63	2.8	8.1	2.9
24	7.9	4.3	4.2	6.2	7.6	6.2	2.03	2.96	2.79	2.6	7.0	3.2
25	6.8	4.1	3.9	8.6	7.5	5.6	2.27	4.98	3.47	2.3	6.1	2.8
26	7.2	4.1	3.8	8.9	7.5	5.6	3.26	4.40	3.31	2.3	6.1	3.4
27	7.1	3.9	3.7	8.7	7.5	5.9	3.65	3.98	3.25	2.2	5.7	5.9
28	6.9	3.9	4.0	9.3	7.6	7.0	3.64	3.16	2.59	2.0	5.7	7.3
29	9.2	3.2	3.8	1.00	7.4	7.4	4.79	2.86	1.76	1.8	5.3	5.8
30	16.1	3.6	3.7	8.6	---	8.9	6.69	2.93	1.55	1.7	4.9	4.3
31	7.6	---	3.6	7.5	---	9.5	---	2.05	---	1.6	4.9	---
TOTAL	439.1	2383	1283	1853	1932	2074	6184	10560	14152	1676	330.4	122.7
MEAN	14.2	79.4	41.4	59.8	66.6	66.9	206	341	472	54.1	10.7	4.09
MAX	16.1	170	90	100	100	95	669	685	1600	139	23	7.3
MIN	6.0	3.2	2.1	3.7	4.4	5.6	1.02	1.59	1.55	1.6	4.9	2.6
AC=PT	871	4730	2540	3680	3830	4110	12270	20950	28070	3320	655	243
CAL YR 1979	TOTAL	52882.8	MEAN 145	MAX 1860	MIN 6.0	AC=PT	104900					
MTR YR 1980	TOTAL	42989.2	MEAN 117	MAX 1600	MIN 2.6	AC=PT	85270					

ARKANSAS RIVER BASIN

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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 current year.

WATER TEMPERATURE: October 1974 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected 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, 3,760 micromhos Nov. 27, 1975; minimum daily, 348 micromhos Aug. 22, 1977.

WATER TEMPERATURE: Maximum daily, 35.5°C Aug. 12, 1976; minimum daily, 0.0°C Nov. 19, 20, 1975, Feb. 6, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	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)
OCT												
03...	1000	7.0	--	7.8	16.0	2.1	8.4	90	540	910	820	590
NOV												
05...	1500	170	1100	8.1	12.0	75	11.4	112	3000	3800	250	90
DEC												
04...	1630	35	1800	8.0	10.0	13	12.5	118	170	380	460	250
JAN												
07...	1630	79	1300	8.1	.0	25	18.9	138	260	120	300	100
FEB												
12...	1200	91	--	8.1	1.5	25	17.6	133	53	110	330	130
MAR												
03...	1330	66	1200	7.7	5.0	16	10.5	97	59	130	400	200
APR												
01...	1630	99	2550	8.2	15.0	120	9.7	104	42	93	510	310
MAY												
07...	1350	469	1700	8.2	20.0	110	8.6	102	5100	7700	290	150
JUN												
10...	1815	500	2040	8.3	--	210	--	--	247	3300	380	180
JUL												
02...	1050	128	2650	8.5	26.0	44	7.1	95	132	74	540	340
AUG												
05...	1415	15	2850	9.0	33.0	3.1	--	--	K24	2550	760	590
SEP												
09...	1600	3.8	2750	8.7	30.0	2.6	5.4	76	--	426	650	460

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINITY LAB (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 03...	230	59	360	57	5.5	9.5	230	590	490	1.0	32
NOV 05...	62	23	120	61	3.3	8.2	160	120	170	.7	7.0
DEC 04...	130	34	180	54	3.6	6.9	210	230	280	.6	18
JAN 07...	82	24	130	48	3.2	6.2	200	170	180	.7	13
FEB 12...	89	26	140	47	3.4	6.8	200	160	200	.3	15
MAR 03...	110	31	160	46	3.5	5.7	200	230	230	.7	17
APR 01...	130	44	290	55	5.6	6.4	200	290	440	.9	19
MAY 07...	76	25	160	54	4.1	6.2	140	150	250	.6	12
JUN 10...	99	33	240	57	5.3	8.6	200	160	360	.9	22
JUL 02...	140	47	290	53	5.4	10	200	320	460	1.0	18
AUG 05...	210	57	330	48	5.2	9.3	170	630	470	.8	21
SEP 09...	190	42	290	49	5.0	12	190	460	420	.7	33
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 03...	1920	1910	2.6	36.3	1.1	.60	3.00	3.30	3.6	4.3	.90
NOV 05...	628	608	.85	288	.55	.15	.050	.220	.06	.28	.79
DEC 04...	1170	1010	1.5	111	1.3	.85	1.40	1.50	1.7	1.9	.60
JAN 07...	763	727	1.0	163	.32	.23	.580	.570	.70	.73	1.2
FEB 12...	732	759	1.0	180	.27	.27	.660	.660	.80	.85	1.8
MAR 03...	907	906	1.2	162	.08	.36	.630	.660	.76	.85	.67
APR 01...	1410	1340	1.9	377	.94	.36	.100	.040	.12	.05	1.6
MAY 07...	800	766	1.0	1010	.32	.37	.370	.060	.45	.08	1.5
JUN 10...	1090	1050	1.4	1470	.69	.69	.150	.050	.18	.06	1.3
JUL 02...	1430	1410	1.9	494	.27	.19	.180	.050	.22	.06	1.1
AUG 05...	1870	1830	2.5	75.7	.66	.67	.360	.240	.44	.31	1.8
SEP 09...	1590	1570	2.1	16.3	1.9	1.9	.780	.590	.94	.76	1.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

ARKANSAS RIVER BASIN

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07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	--	--	--	--	--	--	--	--	226	4.3	98
NOV 05...	ND	ND	ND	ND	ND	ND	ND	1800	289	133	92
DEC 04...	--	--	--	--	--	--	--	--	89	8.4	96
JAN 07...	--	--	--	--	--	--	--	--	131	28	93
FEB 12...	ND	--	ND	--	--	--	--	--	52	13	90
MAR 03...	--	--	--	--	--	--	--	12000	57	10	72
APR 01...	--	--	--	--	--	--	--	--	210	56	87
MAY 07...	ND	--	--	--	--	--	--	89000	646	818	62
JUN 10...	--	--	--	--	--	--	--	21000	203	274	98
JUL 02...	--	--	--	--	--	--	--	60000	126	44	83
AUG 05...	ND	--	ND	--	--	--	--	270000	12	.49	31
SEP 09...	--	--	--	--	--	--	--	83000	11	.11	47

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2920	1560	1520	1610	---	1630	2320	1350	---	2400	---	---
2	3180	1260	---	---	---	---	2320	---	2560	---	2740	2500
3	2890	1160	1620	---	1240	1920	2500	1380	710	2350	---	2680
4	2760	1120	1600	1950	1370	1460	1840	1550	695	2600	2840	2740
5	---	1070	1680	1570	1450	1480	1800	1650	817	2640	---	---
6	2610	1040	1290	---	1410	1480	---	1730	1030	---	2870	2500
7	2550	---	1250	1140	---	1440	1730	1650	1320	2630	3040	---
8	2490	---	1240	1130	---	1680	1850	1760	1650	---	3010	2630
9	2730	1470	---	1190	---	1700	1890	---	1820	2550	2970	2500
10	2350	---	1260	---	---	1700	1830	---	1900	2520	---	---
11	2290	1200	---	1500	---	---	---	1810	2290	2470	2890	2800
12	2720	1190	1290	1550	1200	1660	1840	2390	1580	2460	2800	2770
13	---	1220	1660	1560	1360	1700	---	2440	1840	2430	2850	2420
14	---	1220	1660	1510	1430	1680	2110	2440	2160	2430	2790	---
15	2780	1250	2030	1520	---	---	2100	---	---	2450	2360	2480
16	2720	1180	---	1500	1530	---	2110	2000	2710	2440	2420	2570
17	2710	---	---	1530	1760	1710	2150	2140	791	2400	2510	2430
18	2730	1570	2390	---	1400	1740	2100	1890	820	2320	802	2630
19	2770	1610	2260	---	1450	1720	---	1770	1000	2290	927	2680
20	---	1650	2150	---	1510	1710	---	1800	---	---	1300	2510
21	---	1720	1050	---	1410	---	2060	2060	1430	2400	1660	---
22	---	---	1120	1410	1460	1460	2050	2150	1610	2350	1850	---
23	2940	1800	---	1430	1300	---	2020	2150	1940	2300	---	2440
24	3240	1730	1480	1410	---	1940	---	---	1870	2350	---	2470
25	2870	1740	---	---	---	1980	---	---	---	2440	2570	2700
26	2760	1760	1450	---	1330	1840	1580	1270	1740	2570	2700	2560
27	2790	1820	1470	---	1320	---	---	---	1690	---	2650	---
28	2750	---	1370	---	1330	---	1580	1830	1740	2670	2650	---
29	---	1900	1540	---	---	---	1420	1930	2160	2680	---	2720
30	---	1960	---	---	---	---	---	1690	2340	2770	2810	2580
31	1620	---	1600	---	---	2220	---	2220	---	2780	2610	---
MEAN	2700	1470	1570	1440	1400	1690	1960	1870	1620	2490	2440	2590

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	13.0	7.0	9.0	---	6.0	17.0	18.0	---	38.0	---	---
2	25.0	14.0	---	---	---	---	12.0	---	29.0	---	26.0	33.0
3	24.0	14.0	10.0	---	4.0	9.5	15.0	21.0	28.0	34.0	---	33.0
4	23.0	13.0	12.0	5.0	5.0	11.0	12.0	23.0	28.5	31.0	26.0	34.0
5	---	14.0	11.0	7.0	10.0	10.0	13.5	24.0	29.0	33.0	---	---
6	14.0	12.0	10.0	---	10.0	12.0	---	25.0	27.0	---	26.0	27.0
7	26.5	---	13.0	4.0	---	9.0	15.0	23.0	28.0	33.5	32.0	---
8	28.0	---	11.0	4.0	---	15.0	16.0	19.0	27.0	---	26.0	33.0
9	20.0	12.0	---	4.0	---	17.0	12.0	---	26.0	34.0	31.0	31.0
10	21.0	---	13.0	---	---	17.0	14.0	---	28.0	35.0	---	---
11	26.0	7.0	---	7.0	---	---	---	24.0	29.0	30.0	34.0	30.0
12	16.0	11.0	5.0	8.0	7.5	12.0	12.0	24.0	29.0	30.0	32.0	28.0
13	---	12.0	6.0	11.0	11.0	16.0	---	23.0	25.0	34.0	32.0	26.5
14	---	12.0	7.0	11.5	8.5	14.0	17.0	23.0	26.0	34.0	29.0	---
15	26.0	13.0	9.0	12.0	---	---	19.0	---	---	34.0	27.0	30.0
16	26.0	10.0	---	11.5	4.0	---	15.0	18.0	26.0	35.0	25.0	28.0
17	26.0	---	---	10.0	8.0	12.0	15.0	17.0	26.5	35.0	36.0	28.0
18	25.0	17.0	8.0	---	5.0	16.5	14.0	22.0	27.0	30.0	33.0	31.0
19	19.5	16.0	9.0	---	12.0	18.0	---	24.0	30.0	25.0	34.0	25.0
20	---	17.0	10.0	---	16.0	17.0	---	25.0	---	---	32.5	22.0
21	---	13.0	7.0	---	16.0	---	25.0	25.0	27.0	26.0	33.0	---
22	---	---	10.0	9.0	12.0	11.0	24.0	25.0	---	35.0	25.0	---
23	20.0	7.0	---	10.0	10.0	---	23.0	23.0	32.0	24.0	---	26.0
24	21.0	8.0	10.0	11.0	---	11.0	---	---	33.0	26.0	---	28.0
25	22.0	10.0	---	---	---	15.0	---	---	---	29.0	35.0	23.0
26	21.0	11.0	10.0	---	13.0	19.0	15.0	28.0	32.0	33.0	34.0	17.0
27	21.0	10.0	10.0	---	16.0	---	---	---	30.0	---	32.0	---
28	19.5	---	9.0	---	17.0	---	17.0	27.0	28.0	30.0	33.0	---
29	---	6.0	8.0	---	---	---	22.0	26.0	33.0	24.0	---	22.0
30	---	4.0	---	---	---	---	---	25.0	32.0	34.0	24.0	29.0
31	12.0	---	7.0	---	---	16.0	---	25.0	---	24.0	32.0	---
MEAN	22.0	11.5	9.0	8.5	10.5	13.5	16.5	23.0	28.5	31.0	30.5	28.0

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 5,79 1500	MAR 3,80 1330	MAY 7,80 1350	JUN 10,80 1815
TOTAL CELLS/ML	1800	12000	89000	21000
DIVERSITY: DIVISION	1.1	1.1	1.6	0.8
..CLASS	1.1	1.1	1.6	0.8
..ORDER	1.8	0.0	2.1	1.3
...FAMILY	2.4	0.0	2.7	2.6
....GENUS	2.9	0.0	3.2	3.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	13	1	--	--	2000	2	--	--
...COELASTRACEAE								
....COELASTRUM	--	--	--	--	--	--	1800	9
...HYDRODICTYACEAE								
....PEDIASTRUM	--	--	--	--	--	--	--	--
...MICRACTINIACEAE								
....GOLENKINIA	--	--	190	2	--	--	500	2
...MICRACTINIUM	--	--	--	--	1600	2	810	4
...OOCYSTACEAE								
....ANKISTRODESMUS	81	4	580	5	5100	6	600	3
...CHLORELLA	120	7	1100	9	--	--	1500	7
...CHODATELLA	--	--	--	--	*	0	--	--
...CLOSTERIOPSIS	--	--	--	--	790	1	--	--
...DICTYOSPHAERIUM	--	--	--	--	7100	8	1600	8
...KIRCHNERIELLA	--	--	870	7	790	1	--	--
...OOCYSTIS	--	--	--	--	1600	2	1200	6
...SELENASTRUM	--	--	--	--	--	--	710	3
...TREUBARIA	--	--	--	--	*	0	--	--
...WESTELLA	--	--	--	--	--	--	--	--
...SCENEDESMACEAE								
...ACTINASTRUM	40	2	--	--	--	--	810	4
...CRUCIGENIA	--	--	--	--	1600	2	--	--
...SCENEDESMUS	320#	18	--	--	4700	5	5800#	28
...TETRASTRUM	--	--	--	--	--	--	400	2
...TETRASPORALES								
...PALMELLACEAE								
...SPHAEROCYSTIS	--	--	--	--	--	--	810	4
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	67	4	580	5	1600	2	810	4
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
....CYCLOTELLA	630#	35	5800#	50	5100	6	2600	12
...MELOSIRA	150	8	--	--	3500	4	--	--
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	--	--	--	*	0	--	--
...CYMBELLACEAE								
....CYMBELLA	13	1	--	--	--	--	--	--
...FRAGILARIACEAE								
....FRAGILARIA	--	--	--	--	--	--	*	0
...SYNEDRA	--	--	190	2	--	--	--	--
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	--	190	2	--	--	--	--
...NAVICULACEAE								
....NAVICULA	200	11	290	2	2800	3	--	--
...NITZSCHACEAE								
....NITZSCHIA	94	5	1300	11	10000	11	--	--
...SURIARELLACEAE								
....SURIARELLA	--	--	290	2	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES			380	3	--	--	--	--
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	--	--	--	--	--	--	--
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	--	--	--	--	--	--	--

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 5,79 1500	MAR 3,80 1330	MAY 7,80 1350	JUN 10,80 1815
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	--	-	--	-
....ANACYSTIS	--	-	--	-
....GOMPHOSPHAERIA	--	-	35000#	40
..HORMOGONALES				
...OSCILLATORIAEAE				
....OSCILLATORIA	--	-	3900	4
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	--	-	--	-
....EUTREPTIA	67	4	--	-
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..PERIDINIALES				
...GLENODINIAEAE				
....GLENODINIUM	--	-	*	0

DATE TIME	JUL 2,80 1050	AUG 5,80 1415	SEP 9,80 1600
TOTAL CELLS/ML	60000	270000	83000
DIVERSITY: DIVISION	1.5	0.6	0.5
..CLASS	1.5	0.6	0.5
...ORDER	1.8	1.2	1.4
....FAMILY	2.7	1.4	1.5
.....GENUS	3.4	1.5	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	1700	3	--	-	*	0
...COELASTRACEAE						
....COELASTRUM	--	-	7700	3	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	4100	7	--	-	--	-
...MICRACTINIAEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	1900	3	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	1900	3	*	0	*	0
....CHLORELLA	--	-	--	-	--	-
....CHODATELLA	--	-	*	0	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-
...DICTYOSPHAERIUM	3900	6	4300	2	1200	1
....KIRCHNERIELLA	--	-	--	-	--	-
...OOCYSTIS	*	0	--	-	990	1
....SELENASTRUM	--	-	--	-	--	-
....TREUBARIA	*	0	--	-	--	-
....WESTELLA	--	-	*	0	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	3900	6	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	12000#	19	21000	8	4200	5
....TETRASTRUM	--	-	--	-	--	-
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	2200	1	--	-

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LOCATION.--Lat 36°11'06", long 98°55'15", in NW¼ 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 (3.2 km) upstream from Seiling Creek, 2.2 mi (3.5 km) north of Seiling, 2.8 mi (4.5 km) downstream from Deep Creek, and at mile 422.6 (680.0 km).

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft (510.702 m) National Geodetic Vertical Datum of 1929. July 1, 1946, to Aug. 17, 1964, at site 60 ft (18.3 m) downstream and prior to Oct. 1, 1954, at datum 5.00 ft (1.524 m) higher.

AVERAGE DISCHARGE.--34 years, 214 ft³/s (6.060 m³/s), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,360 ft³/s (180 m³/s) May 27, gage height, 12.98 ft (3.956 m), no peak above base of 3,500 ft³/s (99.1 m³/s); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	258	72	68	105	97	151	782	487	259	17	2.0
2	8.0	114	71	68	110	87	157	793	376	232	16	.90
3	7.9	125	71	69	120	102	185	792	345	204	18	.70
4	7.4	153	71	69	125	123	204	585	887	180	14	.98
5	7.4	159	71	69	111	118	250	454	1310	158	12	.90
6	7.5	158	70	73	104	113	257	432	1500	139	9.9	1.3
7	7.4	160	70	97	102	115	260	443	1500	125	8.3	.76
8	7.3	143	71	99	94	113	258	531	997	118	7.4	.56
9	6.9	104	73	102	90	102	251	480	765	108	6.2	.54
10	7.2	94	75	102	83	97	249	427	674	101	5.4	.52
11	7.9	88	77	83	141	94	247	396	607	92	4.2	.68
12	8.6	99	81	75	163	102	242	345	553	85	4.3	.39
13	8.5	104	79	74	142	107	224	272	454	78	4.7	.31
14	8.2	103	73	73	116	102	191	247	361	72	4.7	.22
15	8.8	107	64	71	110	99	184	547	310	66	5.2	.04
16	10	108	61	70	100	96	184	1210	279	64	5.5	.00
17	10	113	57	69	87	90	175	733	283	60	6.2	.00
18	11	108	60	69	92	87	172	547	574	54	6.5	.00
19	11	89	69	79	105	87	171	574	451	50	6.7	.00
20	10	473	63	92	105	87	170	514	486	46	7.0	.00
21	9.2	342	60	102	104	86	168	641	417	45	8.7	.00
22	8.7	108	94	104	97	94	165	574	799	45	10	.00
23	9.3	92	99	97	96	108	161	425	803	42	9.0	.00
24	11	86	79	92	105	110	188	368	600	39	8.4	.00
25	12	82	73	93	110	115	343	404	435	35	8.0	.00
26	13	79	71	111	110	104	566	589	438	33	6.7	.00
27	13	78	69	113	110	102	578	2590	414	31	6.0	1.4
28	14	77	68	107	113	109	495	1100	386	27	5.0	3.1
29	15	75	69	75	108	128	452	1850	345	26	4.7	3.6
30	28	74	69	68	---	142	570	1950	300	22	4.8	3.6
31	395	---	69	80	---	155	---	798	---	20	4.3	---
TOTAL	697.2	3953	2219	2613	3158	3271	7868	22393	18136	2686	244.8	22.50
MEAN	22.5	132	71.6	84.3	109	106	262	722	605	85.7	7.90	.75
MAX	395	473	99	113	163	155	578	2590	1500	259	18	3.6
MIN	6.9	74	57	68	83	86	151	247	279	20	4.2	.00
AC=PT	1380	7840	4400	5180	6260	6490	15610	44420	35970	5270	486	45
CAL YR 1979	TOTAL	75945.30	MEAN 208	MAX 2050	MIN 6.9	AC=PT	150600					
NTR YR 1980	TOTAL	67231.50	MEAN 184	MAX 2590	MIN .00	AC=PT	133400					

ARKANSAS RIVER BASIN

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1953-59, 1968-71, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (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, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
APR 03...	0930	172	2400	8.3	10.0	--	--	10.9	104	34	--	K37
22...	1200	164	1990	8.6	21.0	5	72	10.8	130	46	K75	K24
MAY 05...	1500	454	1600	8.4	22.0	10	7.7	8.7	106	--	--	K49
DATE	100 ML	HARD- NESS (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)	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)
APR 03...	--	--	--	--	--	--	--	--	--	--	--	--
22...	K1	570	150	47	220	45	4.0	6.1	300	350	.9	15
MAY 05...	166	--	--	--	--	--	--	--	--	--	--	--
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, NON- VOLA- TILE, 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, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
APR 03...	--	--	--	120	--	--	--	--	1.9	--	--	--
22...	1080	1.4	478	196	147	49	.01	.010	.02	.190	.23	2.7
MAY 05...	--	--	--	207	169	38	.00	.010	.01	.030	.04	1.7
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	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 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)	LEAD, DIS- SOLVED (UG/L AS PB)
APR 03...	1.20	3.1	14	.220	.67	--	--	--	--	--	--	--
22...	2.90	2.9	13	.330	1.0	4	700	10	0	0	60	0
MAY 05...	1.70	1.7	7.6	.010	.03	--	--	--	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO APRIL 1980

DATE	APR 22, 80
TIME	1200
TOTAL CELLS/ML	42000
DIVERSITY: DIVISION	1.5
..CLASS	1.5
..ORDER	2.2
...FAMILY	2.8
....GENUS	3.3

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
..CHLOROCOCCALES		
...COELASTRACEAE		
....COELASTRUM	2500	6
...OOCYSTACEAE		
....ANKISTRODESMUS	250	1
....KIRCHNERIELLA	1500	4
...SCENEDESMACEAE		
....ACTINASTRUM	740	2
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	740	2
CHRYSOPHYTA		
..BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	11000#	27
....HELOSIRA	740	2
...PENNIALES		
...ACHNANTHACEAE		
....ACHNANTHES	4700	11
...CYMBELLACEAE		
....CYMBELLA	490	1
...NAVICULACEAE		
....ANOMOEONEIS	250	1
....NAVICULA	250	1
...NITZSCHIACEAE		
....NITZSCHIA	4400	11
...SURIRELLACEAE		
....SURIRELLA	740	2
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONADALES		
...CRYPTOMONADACEAE		
....CRYPTOMONAS	1200	3
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....AGMENELLUM	2000	5
....ANACYSTIS	2500	6
....GOMPHOSPHAERIA	7400#	18

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 2,80 1050		AUG 5,80 1415		SEP 9,80 1600	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	2900	5	3400	1	*	0
...MELOSIRA	3400	6	--	-	--	-
...PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	*	0	--	-
...NITZSCHACEAE						
....NITZSCHIA	12000#	20	4600	2	--	-
...SURIPELLACEAE						
....SURIPELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE	--	-	--	-	--	-
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	*	0	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	7700	13	1400	1	17000#	20
....ANACYSTIS	4300	7	16000	6	25000#	31
...GOMPHOSPHAERIA	--	-	--	-	--	-
...HORMOGONALES						
...OSCILLATORIA						
....OSCILLATORIA	--	-	200000#	76	34000#	41
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	*	0	--	-
....EUTREPTIA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	*	0

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07238500 CANTON LAKE NEAR CANTON, OK

LOCATION.--Lat 36°05'03", long 98°36'05", in SE4NE4 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 (3.2 km) northwest of Canton, and at mile 394.3 (634.4 km).

DRAINAGE AREA.--12,483 mi² (32,331 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

RESERVOIR CONTENTS RECORDS

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 sixteen taintor gates with net length of 640 feet (195.1 m), three sluice gates and two 24-inch (610 mm) valved pipes. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 383,800 acre-ft (473 hm³) at elevation 1,638.0 ft (499.26 m) (flood-control pool), 116,000 acre-ft (143 hm³) at elevation 1,615.2 ft (492.31 m). (Normal water-supply pool, designated in 1965), 99,400 acre-ft (123 hm³) at elevation 1,613.0 ft (492 m) (crest of spillway), and 18,460 acre-ft (22.8 hm³) at elevation 1,596.5 ft (486.61 m) (conservation pool). Dead storage, 4 acre-ft (4,930 m³) at elevation 1,582.0 ft (482.19 m) (invert of bypass gates). 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 1966, used since Oct. 1, 1967.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft (319 hm³) May 25, 1951, elevation, 1,628.05 ft (496.230 m); minimum since conservation pool was first filled, 867 acre-ft (1.07 hm³) May 5, 1955, elevation, 1,585.66 ft (483.309 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 140,400 acre-ft (173 hm³) June 2, elevation, 1,618.10 ft (493.197 m); minimum, 101,700 acre-ft (125 hm³) Apr. 18, elevation, 1,613.31 ft (491.737 m).

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

1,613	99,400	1,616	122,500
1,614	106,800	1,617	130,800
1,615	114,500	1,619	148,500

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109900	106200	112600	115300	116900	116600	119100	112000	139600	123200	116900	109600
2	109300	106400	112300	115700	117000	115900	118700	113100	139800	123600	116800	109300
3	109200	106400	112700	115500	117000	115500	117300	114300	139200	123200	116400	109100
4	108900	106100	112400	115500	117200	116400	115900	115500	138500	122900	116100	108900
5	108700	107000	112800	115500	117300	116100	114100	116500	137800	122800	116000	108800
6	108500	106900	112700	116000	117300	116100	113300	117200	138000	122700	115700	108600
7	108300	107200	112900	115900	118000	116300	112200	117700	138700	122500	115500	108300
8	108400	107800	112900	116100	117900	116300	111200	117100	138800	122300	115200	108300
9	107800	108400	113000	115600	117000	116300	110100	116300	138800	122200	114900	108200
10	107600	108400	112700	116200	116200	116300	108900	116300	138200	122000	114600	107900
11	107500	108600	113600	116400	115800	116100	108000	115600	137600	121900	114400	107600
12	107300	108600	113300	115800	115900	116600	106800	115900	136500	121700	114200	107400
13	107000	108700	113400	116600	116100	116400	105600	116300	135700	121500	114000	107200
14	106600	108900	113300	116400	116300	116300	104500	116700	134100	121100	113900	107200
15	106700	109000	113600	116900	116800	116000	103300	119600	133300	120800	113300	107000
16	106700	109100	113600	117000	116300	117100	102400	121500	132000	120700	113300	106900
17	106700	109000	113300	116900	116300	116300	101900	123200	131700	120500	113100	106400
18	106400	109400	113400	116700	116100	116100	101800	124700	130600	120300	112800	106400
19	106300	109600	113500	117500	116300	116200	102100	124700	129500	119900	112500	105900
20	105800	111000	113600	117500	116100	116600	102300	125200	130800	119700	112400	105500
21	105700	112200	113700	117500	116300	116400	102500	124700	130000	119900	112200	105100
22	105700	112200	113800	117500	116600	116700	102800	124200	130100	119500	111900	105400
23	105700	112300	114200	117400	116400	118500	103100	123500	130000	119300	111700	105100
24	105700	112300	114000	117400	116400	117500	104100	122700	129500	119100	111500	104900
25	105800	112600	114100	117500	116300	117500	105800	121700	128500	119000	111300	104800
26	105800	112400	114300	117700	116400	117900	107000	121100	127400	118700	111000	104700
27	105800	112600	114500	117400	116300	118500	108000	123200	126400	118600	110900	104900
28	105800	112800	115000	117500	116700	118600	108900	126800	125400	118400	110600	104700
29	105800	112600	115100	117100	117300	119700	109700	131700	123800	117900	110300	104700
30	105800	112600	115200	117300	---	119300	110800	135100	123200	117700	109800	104500
31	105800	---	115200	117000	---	119400	---	138200	---	117300	109600	---
MAX	109900	122600	115200	117700	118000	119700	119100	138200	139800	123600	116900	109600
MIN	105700	106100	112300	115300	115800	115500	101800	112000	123200	117300	109600	104500
†	1613.87	1614.75	1615.09	1615.31	1615.35	1615.61	1614.52	1617.85	1616.08	1615.35	1614.37	1613.69
‡	-4,300	+6,800	+2,600	+1,800	+300	+2,100	-8,600	+27,400	-15,000	-5,900	-7,700	-5,100

CAL YR 1979 MAX 126200 MIN 69480 † +45,310
WTR YR 1980 MAX 139800 MIN 101800 ‡ -5,600

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

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07238500 CANTON LAKE NEAR CANTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1960-64, 1968 to April 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 03...	1400	109200	--	7.6	20.0	10	7.5	86	360	200	88
NOV 07...	1215	107900	1300	8.3	11.5	17	14.4	138	360	190	89
DEC 06...	1045	112600	1450	8.5	5.0	5.0	16.2	134	370	200	92
JAN 09...	0945	115600	1350	8.3	2.0	5.0	17.2	129	360	200	88
FEB 14...	0915	116300	1350	8.0	3.0	2.8	14.4	112	--	--	--
MAR 05...	1030	116100	1500	8.3	1.0	--	8.4	63	400	--	99
APR 01...	1320	119100	1500	8.2	9.5	14	11.1	105	370	210	94

DATE	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- LINEITY FIELD (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 03...	33	140	45	3.2	9.5	160	240	190	834	1.1
NOV 07...	34	140	57	3.2	9.5	170	230	190	855	1.1
DEC 06...	35	140	44	3.2	9.2	170	260	190	844	1.1
JAN 09...	33	130	44	3.0	9.0	160	220	180	757	1.0
FEB 14...	38	140	--	--	8.9	160	250	200	853	--
MAR 05...	37	--	--	--	8.6	--	260	210	--	--
APR 01...	34	140	44	3.1	8.3	160	270	190	870	1.1

ARKANSAS RIVER BASIN

07239000 NORTH CANADIAN RIVER AT CANTON, OK

LOCATION.--Lat 36°04'45", long 98°35'25", in NE¼SW¼ sec.33, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, on right bank 2,700 ft (823.0 m) downstream from Canton Dam, 1.5 mi (2.4 km) northwest of Canton, 4.8 mi (7.7 km) upstream from Minnehaha Creek, and at mile 393.8 (633.6 km).

DRAINAGE AREA.--12,484 mi² (32,334 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1914 are contained in reports of U.S. Weather Bureau

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft (476.250 m), Corps of Engineers datum. Oct. 1, 1937, to Jan. 5, 1955, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 1.91 ft (0.582 m) lower prior to Oct. 1, 1950, and at datum 6.91 ft (2.106 m) lower thereafter.

REMARKS.--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 ft³/s (7.250 m³/s), 185,500 acre-ft/yr (229 hm³/yr); (since regulation by Canton Dam) 32 years (water years 1949-80), 165 ft³/s (4.673 m³/s), 119,500 acre-ft/yr (147 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s (702 m³/s) Oct. 12, 1946, gage height, 12.83 ft (3.911 m), 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 (5.121 m), at site 300 ft (91.4 m) upstream from former site at datum 1.91 ft (0.582 m) lower than present datum, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 887 ft³/s (25.1 m³/s) June 6, gage height, 8.37 ft (2.551 m); minimum daily discharge, 9.2 ft³/s (0.26 m³/s) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	23	19	18	79	92	303	16	23	142	15	9.8
2	29	23	19	18	79	92	755	15	413	135	14	9.7
3	29	23	19	18	79	91	855	15	781	131	14	9.7
4	28	22	19	18	79	90	853	14	814	128	14	9.8
5	28	21	19	18	78	90	855	14	868	127	14	9.8
6	28	20	19	18	76	91	857	14	873	126	24	9.7
7	28	20	19	17	76	91	781	256	875	124	14	9.7
8	28	20	19	17	233	90	712	583	871	81	14	9.7
9	28	20	19	17	487	90	708	578	865	42	13	9.7
10	28	20	18	17	489	91	708	582	861	39	13	9.7
11	28	20	18	15	290	91	705	584	860	38	13	9.7
12	28	19	18	15	110	91	703	291	858	38	13	9.5
13	26	19	18	15	110	90	703	36	859	38	14	9.2
14	23	19	18	14	109	92	704	14	858	37	13	9.2
15	21	19	18	14	107	93	703	14	856	37	13	9.6
16	21	19	18	13	97	92	636	11	852	36	12	9.4
17	21	19	18	72	96	53	370	10	781	36	11	9.7
18	22	19	18	170	96	15	185	199	820	36	11	9.7
19	22	19	18	95	97	15	27	549	820	36	11	9.9
20	22	21	18	92	97	13	24	621	821	35	11	10
21	21	20	18	198	95	11	22	724	810	35	10	10
22	20	19	19	124	94	11	22	764	692	34	11	9.7
23	20	19	19	89	93	11	22	765	808	33	11	9.7
24	20	19	19	87	93	10	21	767	809	29	11	9.9
25	21	19	19	86	91	9.8	21	770	808	17	11	9.9
26	24	19	19	84	91	9.6	18	771	805	16	11	9.9
27	26	19	18	84	92	9.7	16	359	804	16	11	9.9
28	25	19	18	82	93	9.7	16	353	801	16	11	9.9
29	24	19	18	80	93	9.9	15	81	794	16	11	9.9
30	25	19	18	80	---	9.8	16	26	606	16	11	9.9
31	23	---	18	81	---	10	---	24	---	16	11	---
TOTAL	766	596	572	1766	3799	1664.5	12336	9820	23366	1686	391	291.9
MEAN	24.7	19.9	18.5	57.0	131	53.7	411	317	779	54.4	12.6	9.73
MAX	29	23	19	198	489	93	857	771	875	142	24	10
MIN	20	19	18	13	76	9.6	15	10	23	16	10	9.2
AC-FT	1520	1180	1130	3500	7540	3300	24470	19480	46350	3340	776	579
CAL YR 1979 TOTAL	34873.1			95.5	MAX 744	MIN 3.1	AC-FT 69170					
WTR YR 1980 TOTAL	57054.4			156	MAX 875	MIN 9.2	AC-FT 113200					

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LOCATION.--Lat 35°50'30", long 98°28'00", on the north line of sec.27, T.16 N., R.12 W., Blaine County, Hydrologic Unit 11100301, on right bank on downstream side of bridge pier on U.S. Highways 270 and 281, 2.5 mi (4.0 km) west of Watonga, and at mile 364.9 (587.1 km).

PERIOD OF RECORD.--October 1979 to September 1980.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft³/s (68.0 m³/s) May 15, gage height, 12.21 ft (3.722 m); minimum daily discharge, 5.2 ft³/s (0.15 m³/s) Sept. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	31	25	26	187	93	22	61	154	501	23	8,4
2	29	26	23	26	158	93	339	56	128	208	21	8,5
3	29	25	23	27	98	93	792	50	619	181	22	7,7
4	29	25	22	26	86	95	802	46	892	165	21	7,2
5	28	24	22	27	85	90	800	47	928	158	18	7,0
6	28	22	22	28	83	90	812	117	962	154	17	7,0
7	28	21	21	25	89	89	812	55	959	152	24	6,9
8	27	23	22	26	88	87	744	320	950	149	19	6,8
9	27	25	22	26	90	88	726	613	963	115	17	7,0
10	26	26	22	29	329	89	732	631	961	83	16	7,3
11	27	24	22	26	387	90	734	642	956	76	15	7,3
12	28	22	21	25	174	96	731	719	951	70	15	6,8
13	28	21	20	22	118	91	727	288	953	67	15	6,3
14	28	21	22	23	112	88	732	128	943	64	15	6,0
15	29	21	22	23	109	89	728	924	935	62	14	5,6
16	26	21	19	23	106	88	726	850	933	60	13	5,3
17	25	21	20	22	106	86	622	193	942	59	12	5,3
18	23	21	30	52	109	82	352	264	860	55	11	6,7
19	23	20	33	133	104	56	181	387	912	53	11	7,3
20	22	43	26	107	102	34	83	640	1020	52	10	6,0
21	21	44	24	104	99	27	67	777	983	52	11	5,3
22	22	29	24	153	97	23	58	816	1060	52	9,7	5,2
23	21	24	24	115	95	29	56	803	809	49	9,9	5,4
24	21	23	24	94	96	32	64	806	925	48	9,7	6,4
25	21	23	23	90	96	25	108	813	892	45	9,1	7,0
26	21	23	23	88	94	20	239	820	883	33	8,9	7,2
27	21	22	24	87	94	20	98	961	881	30	8,9	11
28	25	22	31	88	93	21	71	960	883	29	8,8	14
29	27	20	32	81	93	23	60	1470	873	27	9,1	13
30	59	22	29	82	---	25	59	970	867	25	8,3	12
31	72	---	27	91	---	22	---	237	---	24	8,1	---
TOTAL	870	735	744	1795	3577	1974	13097	16464	25977	2898	430,5	222,9
MEAN	28,1	24,5	24,0	57,9	123	63,7	437	531	866	93,5	13,9	7,43
MAX	72	44	33	193	387	96	812	1470	1060	501	24	14
MIN	21	20	19	22	83	20	22	46	128	24	8,1	5,2
AC=PT	1730	1460	1480	3560	7090	3920	25980	32660	51530	5750	854	442
WTR YR 1980	TOTAL	68784,4	MEAN	188	MAX	1470	MIN	5,2	AC=PT	136400		

ARKANSAS RIVER BASIN

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 (3.2 km) north of courthouse in El Reno, 2.2 mi (3.5 km) downstream from Target Creek, and at mile 307.4 (494.6 km).

DRAINAGE AREA.--13,042 mi² (33,779 km²), of which 4,899 mi² (12,688 km²) 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 (1.6 km) upstream March 1914 to March 1934 and at present site thereafter are contained in reports of U.S. Weather Bureau, Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,299.02 ft (395.941 m) National Geodetic Vertical Datum of 1929. October 1902 to April 1908, nonrecording gage at site about 50 ft (15.2 m) downstream at different datum.

REMARKS.--Records fair. 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 1903-7, 1938-48), 264 ft³/s (7.476 m³/s), 191,300 acre-ft/yr (236 hm³/yr); (since regulation by Canton Lake) 32 years (water years 1949-80), 196 ft³/s (5.550 m³/s), 141,000 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) Oct. 28, 1941, gage height, 15.98 ft (4.871 m); maximum gage height, 18.20 ft (5.547 m) 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 (404.256 m) above mean sea level at railroad bridge 1.0 mi (1.6 km) above station, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,210 ft³/s (90.9 m³/s) May 18, gage height, 10.19 ft (3.106 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	39	24	36	72	80	30	171	1010	757	38	5.0
2	16	50	24	32	82	80	22	715	532	586	35	5.2
3	15	36	26	26	82	80	61	394	333	260	30	6.8
4	14	28	26	23	99	98	526	195	449	192	29	6.0
5	14	24	25	22	86	111	695	140	931	166	25	5.0
6	15	21	24	21	79	90	720	118	957	155	24	4.5
7	15	20	24	19	73	88	745	125	988	149	23	4.0
8	15	21	23	20	79	85	762	123	970	146	21	3.7
9	14	21	22	21	78	85	729	123	946	144	18	3.4
10	14	20	22	23	125	85	699	411	936	142	16	3.0
11	14	22	23	21	277	80	715	510	923	125	15	4.5
12	14	23	22	20	308	80	710	529	899	112	14	3.5
13	15	23	21	19	223	85	694	603	883	92	14	3.0
14	15	22	21	20	131	85	691	417	866	83	13	2.5
15	16	21	22	19	106	85	702	518	849	75	13	2.1
16	18	20	20	20	97	85	712	2480	842	72	12	1.8
17	19	19	19	19	97	88	706	2140	853	72	9.8	1.6
18	20	19	20	19	98	88	644	2150	861	72	11	1.5
19	18	20	20	25	117	88	455	1440	791	68	11	1.4
20	16	26	16	40	102	76	319	719	986	67	10	1.3
21	14	89	28	85	90	56	168	1300	1250	63	11	1.6
22	15	104	29	78	85	19	130	1390	1290	58	9.0	1.3
23	14	63	26	90	85	39	115	1090	1410	57	8.8	1.2
24	13	44	24	89	85	54	115	1030	953	55	8.4	1.1
25	13	34	23	80	85	50	314	985	919	52	7.4	1.2
26	13	30	22	71	80	50	395	954	863	51	6.7	1.3
27	12	30	22	66	80	47	348	946	825	50	6.4	1.5
28	12	28	60	68	80	44	232	951	806	47	6.0	1.8
29	12	26	120	70	80	42	153	1650	788	45	5.6	2.5
30	15	26	60	70	---	38	129	2190	779	44	6.0	2.0
31	18	---	40	69	---	38	---	2360	---	41	5.4	---
TOTAL	465	969	898	1301	3161	2199	13436	28867	26688	4098	462.5	85.3
MEAN	15.0	32.3	29.0	42.0	109	70.9	448	931	890	132	14.9	2.84
MAX	20	104	120	90	308	111	762	2480	1410	757	38	6.8
MIN	12	19	16	19	72	19	22	118	333	41	5.4	1.1
AC=FT	922	1920	1780	2580	6270	4360	26650	57260	52940	8130	917	169
CAL YR 1979	TOTAL	47327.0	MEAN 130	MAX 978	MIN 10	AC=FT 93870						
WTR YR 1980	TOTAL	82629.8	MEAN 226	MAX 2480	MIN 1.1	AC=FT 163900						

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 98°57'11", in SW¼SW¼ 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 (792.5 m) upstream from Lake Hefner, 3.0 mi (4.8 km) northeast of Bethany, and 7.6 mi (12.2 km) northwest of the State Capitol in Oklahoma City.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,200.96 ft (336.053 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi (4.3 km) upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi (4.8 km) upstream at different datum. May 1, 1950, to May 19, 1954, water-stage recorder and concrete control at present site and datum. May 20, 1954, to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft (762.0 m) downstream at datum 2.80 ft (0.853 m) lower than present datum. Used as supplementary gage after Apr. 25, 1975.

REMARKS.--Records fair. 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 (99.4 hm³), 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 ft³/s (42.5 m³/s) May 28, 1955; no flow at times in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.3	1.1	.57	.00	.00	.00	305	2.7	2.1	1.8	1.9
2	1.6	1.2	1.1	.49	.00	.00	.00	203	2.6	2.1	1.8	1.9
3	1.5	1.2	1.2	.56	.00	.00	.00	56	2.4	2.1	1.8	2.1
4	1.9	1.3	1.1	.60	.00	.00	.00	13	2.3	2.1	1.8	2.1
5	1.7	1.3	1.1	.59	.00	.00	.00	12	2.3	2.0	1.8	2.1
6	1.7	1.3	1.1	.81	.00	.00	.00	8.0	2.3	1.9	1.8	2.0
7	1.6	1.4	1.1	.96	.00	.00	5.1	7.0	2.3	1.9	1.8	2.0
8	1.4	1.4	1.2	1.3	.00	.00	143	6.8	2.3	1.9	1.8	2.0
9	1.2	1.3	1.2	1.3	.00	.00	281	7.1	2.2	1.9	1.8	2.2
10	1.6	1.3	1.0	1.4	.00	.00	273	7.0	2.3	1.9	1.8	2.2
11	1.5	1.3	.65	.86	.00	.00	252	6.7	2.2	1.9	1.8	2.1
12	1.5	1.2	.97	.61	.00	.00	353	6.6	2.2	1.9	1.8	1.9
13	1.4	1.2	.64	.57	.00	.00	687	6.5	2.1	1.8	1.9	1.8
14	1.5	1.2	.93	.73	.00	.00	545	6.3	2.1	1.8	1.8	1.7
15	1.5	1.3	.54	.47	.00	.00	545	11	2.1	1.7	1.7	1.5
16	1.5	1.2	.33	.12	.00	.00	567	375	3.0	1.7	1.7	1.2
17	1.5	1.1	.29	.01	.00	.00	567	18	2.3	1.8	1.8	1.0
18	1.5	1.2	.70	.00	.00	.00	251	21	2.2	1.9	1.7	.80
19	1.4	1.2	.59	.43	.00	.00	121	8.0	4.8	1.9	1.7	.57
20	1.4	1.8	.59	.89	.00	.00	13	7.2	2.5	1.9	1.8	.19
21	1.5	1.5	.88	.73	.00	.00	9.9	7.7	3.6	1.9	1.8	.03
22	1.4	1.4	.73	.16	.00	.00	9.4	6.1	2.4	1.9	1.8	.00
23	1.4	1.4	.72	.03	.00	.00	12	2.8	2.4	1.8	1.8	.00
24	1.3	1.3	.61	.00	.00	.00	623	2.7	2.2	1.8	1.8	.00
25	1.4	1.3	.53	.00	.00	.00	481	2.6	2.3	1.8	1.8	.00
26	1.3	1.4	.54	.00	.00	.00	245	2.5	2.3	1.8	1.8	.0
27	1.2	1.3	.54	.00	.00	.00	240	13	2.3	1.8	1.8	.00
28	1.3	1.4	1.8	.00	.00	.00	157	3.2	2.2	1.8	1.8	.00
29	1.3	1.3	.84	.00	.00	.00	11	46	2.2	1.8	1.8	.00
30	2.0	1.3	.52	.00	---	.00	14	4.7	2.2	1.8	1.8	.00
31	1.3	---	.50	.00	---	.00	---	3.1	---	1.8	1.8	---
TOTAL	45.7	39.3	24.84	14.19	.00	.00	6405.40	1185.6	73.3	58.2	55.5	33.29
MEAN	1.47	1.31	.80	.46	.000	.000	214	38.2	2.44	1.88	1.79	1.11
MAX	2.0	1.8	1.8	1.4	.00	.00	687	375	4.8	2.1	1.9	2.2
MIN	1.2	1.1	.29	.00	.00	.00	.00	2.5	2.1	1.7	1.7	.00
AC=FT	91	78	49	28	.00	.00	12710	2350	145	115	110	66
CAL YR 1979 TOTAL	23198.85			MEAN 63.6	MAX 1270	MIN .00	AC=FT 46010					
WTR YR 1980 TOTAL	7935.32			MEAN 21.7	MAX 687	MIN .00	AC=FT 19740					

ARKANSAS RIVER BASIN

07240500 LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°29'11", long 97°39'58", on north line of SW $\frac{1}{4}$ 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 (4.7 km) upstream from Mustang Creek, 9.0 mi (14.5 km) west of State Capitol in Oklahoma City, and at mile 281.5 (452.9 km).

DRAINAGE AREA.--13,221 mi² (34,242 km²), of which 4,899 mi² (12,688 km²) 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 (324.847 m) 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 (21.1 hm³) below elevation 1,242.27 ft (378.644 m), top of spillway gates. Dead storage, 1,400 acre-ft (1.73 hm³) below elevation 1,229.77 ft (374.834 m), 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 (25.8 hm³) June 14, 1944, elevation, 1,242.67 ft (378.766 m), from capacity table then in use, minimum observed, 1,870 acre-ft (2.31 hm³) May 14, 1955, elevation, 1,230.62 ft (375.093 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,310 acre-ft (21.3 hm³) May 19, elevation, 1,242.40 ft (378.684 m); minimum, 9,710 acre-ft (12.0 hm³) Sept. 30, elevation, 1,237.40 ft (377.160 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet) †	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,240.20	13,950	
Oct. 31	1,239.00	12,120	-1,830
Nov. 30	1,239.00	12,120	0
Dec. 31	1,238.80	11,820	-300
CAL YR 79	--	--	-300
Jan. 31	1,239.80	13,340	+1,520
Feb. 29	1,238.90	11,970	-1,370
Mar. 31	1,237.85	10,380	-1,540
Apr. 30	1,239.70	13,180	+2,800
May 31	1,242.10	16,850	+3,670
June 30	1,241.85	16,470	-380
July 31	1,240.95	15,090	-1,380
Aug. 31	1,239.00	12,120	-2,970
Sept. 30	1,237.40	9,710	-2,410
WTR YR 80	--	--	-4,240

† Elevation at 0800 the following day.

ARKANSAS RIVER BASIN

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07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER, NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'46", long 97°39'47", in southeast corner of SW¼ sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, on left bank 200 ft (61.0 m) upstream from bridge on State Highway 4, 0.5 mi (0.8 km) downstream from Lake Overholser, 2.4 mi (3.9 km) upstream from Mustang Creek, 9.1 mi (14.6 km) southwest of State Capitol in Oklahoma City, and at mile 281.0 (452.1 km).

DRAINAGE AREA.--13,222 mi² (34,245 km²), of which 4,899 mi² (12,688 km²) 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 (364.132 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, at datum 10.00 ft (3.048 m) higher and through Mar. 24, 1971 at site 200 ft (61.0 m) downstream.

REMARKS.--Records poor. 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.--26 years, 102 ft³/s (2.889 m³/s), 73,900 acre-ft/yr (91.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Nov. 3, 1974, gage height, 29.18 ft (8.894 m); no flow at times in 1952-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.9 ft (12.47 m), present datum, was reached in October 1923, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,160 ft³/s (118 m³/s) May 18, gage height, 24.18 ft (7.370 m); minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.9	4.5	4.0	35	122	133	190	2000	579	3.7	2.8
2	1.4	2.7	4.0	3.1	36	110	100	395	1160	567	3.7	2.4
3	1.7	2.7	3.8	3.5	37	120	90	4.0	773	437	3.7	2.9
4	1.2	2.7	3.5	3.5	49	116	287	3.0	398	296	3.7	4.1
5	1.2	2.5	3.3	3.5	91	134	786	2.0	629	198	3.7	4.4
6	1.3	2.5	3.0	4.8	124	160	888	145	740	187	3.6	4.7
7	1.7	2.5	2.8	3.8	116	127	428	206	740	157	3.6	4.1
8	1.9	2.5	2.6	3.6	95	140	170	143	744	139	3.6	3.7
9	3.7	2.5	2.4	3.3	104	146	60	134	736	139	3.5	3.6
10	2.1	2.5	2.2	3.3	99	124	12	151	744	139	3.5	3.3
11	2.1	2.5	2.1	4.3	100	119	4.0	461	736	139	3.5	3.1
12	2.1	2.5	1.7	3.3	260	139	3.2	461	788	72	3.5	2.8
13	2.4	2.5	1.6	3.1	522	146	2.8	463	906	8.2	3.4	2.4
14	2.5	2.5	1.8	3.1	220	139	2.6	583	772	6.1	3.4	2.1
15	2.5	2.5	1.6	3.1	165	139	2.5	467	739	5.9	3.3	1.6
16	2.7	2.5	1.8	3.0	145	123	2.3	1400	644	5.5	3.8	1.6
17	3.0	2.8	1.9	2.8	146	122	2.1	341	698	5.3	5.0	1.8
18	3.1	3.1	1.9	2.7	154	126	1.9	2400	737	5.2	5.8	2.2
19	3.1	2.9	1.7	2.8	154	110	1.9	3090	758	5.0	4.0	2.4
20	3.0	2.9	1.6	1.6	167	114	2.0	1330	912	5.3	3.7	2.4
21	2.7	63	1.6	96	159	102	2.1	1370	927	5.3	3.9	2.2
22	21	25	1.6	120	142	83	2.0	1450	1080	5.2	3.5	2.2
23	19	33	1.6	66	129	66	1.9	1340	1260	5.0	3.2	2.3
24	10	27	1.6	58	124	60	2.1	1090	1210	4.9	3.0	2.4
25	10	14	1.6	80	154	52	183	673	806	4.7	3.0	2.5
26	4.8	14	1.6	68	151	48	4.2	602	739	4.4	3.1	2.4
27	1.7	14	1.6	57	130	45	1.8	1810	739	4.2	3.1	2.9
28	1.6	13	71	45	129	90	1.8	1230	739	4.2	3.1	3.3
29	1.6	6.4	60	35	124	64	1.8	2710	713	4.2	3.1	3.1
30	72	5.0	28	35	---	48	1.8	3260	576	4.0	3.0	3.1
31	26	---	8.7	39	---	50	---	2890	---	4.0	2.8	---
TOTAL	214.9	293.2	228.5	904.8	4061	3284	3181.8	30794.0	25145	3145.6	110.5	106.4
MEAN	6.93	9.77	7.37	29.2	140	106	106	993	838	101	3.56	3.55
MAX	72	63	71	120	522	160	888	3260	2000	579	5.8	2.4
MIN	1.2	2.5	1.6	2.7	35	45	1.8	2.0	398	4.0	2.8	1.6
AC-FT	426	582	433	1790	8050	6510	6310	61080	49880	6240	219	211

CAL YR 1979 TOTAL 35127.7 MEAN 96.2 MAX 1720 MIN 1.2 AC-FT 69680
WTR YR 1980 TOTAL 71469.7 MEAN 195 MAX 3260 MIN 1.2 AC-FT 141800

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW¼NW¼ sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, near left bank on downstream side of pier of county road bridge, 2.2 mi (3.5 km) northwest of Harrah, 3.8 mi (6.1 km) downstream from Choctaw Creek, and at mile 230.0 (370.1 km).

DRAINAGE AREA.--13,501 mi² (34,968 km²), of which 4,899 mi² (12,688 km²) 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 (321.774 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. 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 by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--12 years, 284 ft³/s (8.043 m³/s), 205,800 acre-ft/yr (254 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s (196 m³/s) Nov. 5, 1974, gage height, 17.93 ft (5.465 m); minimum, 23 ft³/s (0.65 m³/s) Aug. 8, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,000 ft³/s (142 m³/s) May 30, gage height, 16.10 ft (4.907 m); minimum daily discharge, 61 ft³/s (1.73 m³/s) Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	265	116	166	175	174	131	377	3570	799	93	67
2	79	133	104	96	152	182	128	469	2530	797	90	164
3	83	107	96	96	146	180	197	561	1680	798	88	166
4	79	94	97	99	140	179	177	332	1200	703	85	104
5	80	88	100	101	140	174	131	187	780	446	88	87
6	82	83	98	78	168	181	430	146	888	385	89	83
7	81	84	99	74	256	219	592	162	1090	358	87	78
8	70	88	95	61	486	202	497	318	1050	334	86	75
9	70	87	89	73	338	176	203	268	1050	286	86	79
10	77	88	86	92	265	181	150	238	1020	270	81	79
11	80	87	85	87	293	175	133	214	1010	270	77	88
12	79	86	83	81	284	181	121	423	975	270	79	79
13	74	84	88	77	321	233	117	512	965	247	85	75
14	70	83	91	74	512	207	110	517	1010	179	84	71
15	70	88	88	70	379	188	113	671	950	120	81	68
16	79	89	81	68	263	184	123	2310	901	118	80	67
17	87	89	77	65	259	175	116	1360	946	105	77	67
18	83	90	83	64	214	170	111	1990	969	105	108	70
19	84	81	91	63	224	176	115	3270	926	109	141	69
20	82	124	90	667	229	163	106	2940	1700	105	90	67
21	77	885	90	556	230	164	96	1920	1950	109	85	63
22	120	413	87	370	233	164	92	1730	1490	101	93	62
23	169	204	89	312	209	159	95	1470	1860	101	83	62
24	135	190	111	229	194	330	101	338	1510	101	78	70
25	110	187	101	298	190	221	109	154	1420	101	72	72
26	97	147	82	229	205	170	1360	114	1090	101	73	66
27	95	139	83	187	231	156	467	2470	962	101	72	73
28	81	138	424	172	201	163	247	4300	935	99	72	134
29	74	138	1170	154	189	189	203	4040	914	107	74	165
30	78	139	677	154	--	184	167	4880	888	101	75	93
31	239	--	218	120	--	145	--	4620	--	96	70	--
TOTAL	2844	4598	4969	5033	7126	5745	6738	43301	38229	7922	2622	2563
MEAN	91.7	153	160	162	246	185	225	1397	1274	256	84.6	83.4
MAX	239	885	1170	667	512	330	1360	4880	3570	799	141	166
MIN	70	81	77	61	140	145	92	114	780	96	70	62
AC-FT	5640	9120	9860	9980	14130	11400	13360	85890	75830	15710	5200	5080
CAL YR 1979	TOTAL	109207	MEAN	299	MAX	3700	MIN	52	AC-FT	216600		
WTR YR 1980	TOTAL	131690	MEAN	360	MAX	4880	MIN	61	AC-FT	261200		

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 each month on those samples having maximum, minimum and mean specific conductance for the month. An additional sample was collected twice 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, 4,700 micromhos Sept. 25, 1980; minimum daily, 262 micromhos June 9, 1974.

WATER TEMPERATURE: Maximum daily, 35.0°C July 11, Aug. 9, 1969; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,700 micromhos Sept. 25; minimum daily, 374 micromhos May 30.

WATER TEMPERATURE: Maximum daily, 33.0°C July 2; minimum daily, 1.0°C Dec. 17, 18, Jan. 31, Feb. 1, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT											
10...	1405	76	1800	7.7	16.0	8.4	89	63	84	K2900	K2200
12...	0830	80	1760	7.5	16.5	--	--	--	--	--	--
19...	0830	76	2000	7.4	20.0	--	--	--	--	--	--
22...	1220	88	1900	7.7	15.0	7.6	78	73	15	35000	2600000
23...	0830	177	1150	7.3	14.0	--	--	--	--	--	--
NOV											
04...	0830	99	1480	7.7	10.0	--	--	--	--	--	--
09...	1210	103	1800	7.6	10.0	8.5	79	66	4.4	>6000000	28000
10...	0900	88	1940	7.3	7.0	--	--	--	--	--	--
22...	1030	395	609	7.4	11.0	--	--	--	--	--	--
27...	1140	134	1500	7.6	9.0	8.4	75	45	5.0	160000	71000
DEC											
06...	0930	97	1530	8.0	6.0	--	--	--	--	--	--
13...	1430	85	2800	8.0	6.0	10.6	87	56	13	K9950	6600
14...	0930	92	2650	7.8	5.0	--	--	--	--	--	--
27...	1115	74	2300	7.9	9.0	8.4	76	65	17	--	4700
29...	1030	1210	400	7.2	10.0	--	--	--	--	--	--
JAN											
05...	1130	132	1940	7.0	6.0	--	--	--	--	--	--
10...	1315	92	2200	7.5	10.0	8.2	76	96	18	2800	K17000
15...	0930	71	2600	7.8	11.5	--	--	--	--	--	--
22...	1040	402	840	7.9	2.0	10.0	74	86	11	138000	84000
25...	0900	450	1010	6.9	8.0	--	--	--	--	--	--
FEB											
05...	0930	109	1470	8.1	6.0	--	--	--	--	--	--
12...	1515	289	1053	7.2	5.0	11.0	88	86	32	--	--
15...	0930	425	1200	8.1	7.5	--	--	--	--	--	--
25...	0930	187	1350	7.7	8.0	--	--	--	--	--	--
27...	1310	236	1140	7.7	10.5	9.4	87	59	9.4	5450	K11000
MAR											
05...	0930	172	1510	7.3	5.0	--	--	--	--	--	--
05...	1200	172	1390	7.7	6.5	10.3	87	42	4.8	--	--
14...	0900	211	1340	8.2	10.0	--	--	--	--	--	--
20...	0915	160	1410	7.8	14.0	6.8	69	34	10	K400000	43500
24...	0930	329	1400	7.4	8.0	--	--	--	--	--	--
APR											
06...	0900	432	1350	8.1	14.0	--	--	--	--	--	--
15...	0900	105	1360	8.0	11.0	--	--	--	--	--	--
15...	1215	105	1360	7.9	18.0	--	--	65	--	--	--
25...	0930	73	1530	8.1	17.0	--	--	--	--	--	--
27...	1000	463	810	7.7	17.0	6.1	77	53	--	K750000	--
MAY											
05...	0830	211	1100	8.1	19.5	--	--	--	--	--	--
07...	1245	156	1490	7.6	22.0	7.8	93	65	16	--	--
15...	0930	566	1470	8.1	20.0	--	--	--	--	--	--
19...	1100	3350	380	7.8	22.0	--	--	110	--	--	--
25...	0730	270	1020	8.0	24.0	--	--	--	--	--	--
JUN											
05...	0800	792	927	8.2	24.0	--	--	--	--	--	--
10...	0930	1020	1460	7.6	24.0	5.6	68	29	--	--	--
14...	0800	1020	1450	7.5	24.0	--	--	--	--	--	--
25...	0800	1460	1050	7.9	29.0	--	--	--	--	--	--
30...	1300	896	--	8.3	30.0	6.1	84	42	--	50500	K10400

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
JUL											
05...	1100	506	1480	7.5	30.0	--	--	--	--	--	--
07...	1130	358	1733	8.4	27.0	7.3	95	44	--	--	--
15...	0830	144	1850	8.2	26.5	--	--	--	--	--	--
25...	0830	120	1850	7.3	25.0	--	--	--	--	--	--
28...	1230	99	1650	8.2	30.5	--	--	65	18	K1350	4000
AUG											
05...	0830	87	2020	7.1	25.0	--	--	--	--	--	--
05...	1045	85	1900	8.2	27.5	11.6	151	70	21	K2027	K3783
15...	0800	78	2070	7.0	25.0	--	--	--	--	--	--
25...	0800	68	1780	7.4	25.0	--	--	--	--	--	--
27...	1145	71	1655	8.2	28.6	12.4	168	--	--	--	--
SEP											
05...	0800	85	1610	7.8	25.5	--	--	--	--	--	--
09...	1015	73	1670	8.0	26.5	8.6	109	65	--	--	--
15...	0800	66	1890	8.0	25.0	--	--	--	--	--	--
25...	0800	69	4700	7.7	22.0	--	--	--	--	--	--
30...	1215	85	1490	7.5	21.0	--	--	42	6.6	K9250	--

DATE	STREP- TOCOCCHI 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)	ALKA- LINEITY LAB (MG/L AS CACO3)
OCT										
10...	K1200000	--	--	--	--	--	--	--	--	--
12...	--	340	130	89	29	210	56	4.9	15	210
19...	--	370	160	96	31	250	68	5.7	16	210
22...	380000	--	--	--	--	--	--	--	--	--
23...	--	210	110	56	18	140	67	4.2	9.9	100
NOV										
04...	--	290	110	74	26	180	66	4.6	14	180
09...	57000	--	--	--	--	--	--	--	--	--
10...	--	380	190	98	32	240	66	5.4	16	190
22...	--	160	48	45	11	58	51	2.0	7.0	110
27...	3700	--	--	--	--	--	--	--	--	--
DEC										
06...	--	340	140	88	28	190	54	4.5	14	200
13...	7000	--	--	--	--	--	--	--	--	--
14...	--	520	330	140	42	420	63	8.0	15	190
27...	--	--	--	--	--	--	--	--	--	--
29...	--	120	24	37	7.3	43	42	1.7	4.7	98
JAN										
05...	--	390	200	100	35	280	60	6.1	14	190
10...	K400	--	--	--	--	--	--	--	--	--
15...	--	490	310	130	41	400	63	7.8	17	180
22...	12700	--	--	--	--	--	--	--	--	--
25...	--	220	85	57	20	130	54	3.8	9.3	140
FEB										
05...	--	390	200	99	35	180	49	4.0	11	190
12...	--	--	--	--	--	--	--	--	--	--
15...	--	360	200	88	33	140	45	3.2	8.3	160
25...	--	360	170	88	33	170	50	3.9	10	190
27...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	--	390	180	97	35	170	48	3.8	10	210
05...	--	--	--	--	--	--	--	--	--	--
14...	--	340	160	85	31	150	48	3.5	10	180
20...	K1000	--	--	--	--	--	--	--	--	--
24...	--	340	150	83	32	160	50	3.8	10	190
APR										
06...	--	370	160	93	34	150	46	3.4	7.9	210
15...	--	370	160	93	33	190	52	4.3	10	210
15...	--	--	--	--	--	--	--	--	--	--
25...	--	340	140	85	30	190	54	4.5	12	200
27...	K1600	--	--	--	--	--	--	--	--	--
MAY										
05...	--	270	110	67	24	110	46	2.9	8.8	160
07...	--	--	--	--	--	--	--	--	--	--
15...	--	400	220	99	36	160	46	3.5	9.7	180
19...	--	--	--	--	--	--	--	--	--	--
25...	--	290	130	74	25	100	42	2.6	11	160

ARKANSAS RIVER BASIN

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07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	STREP- TOCOC 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)	ALKA- LINITY LAB (MG/L AS CaCO3)
JUN										
05...	--	270	90	72	22	87	40	2.3	12	180
10...	--	--	--	--	--	--	--	--	--	--
14...	--	380	200	96	34	150	45	3.4	10	180
25...	--	280	140	71	24	110	45	2.9	11	140
30...	K9090	--	--	--	--	--	--	--	--	--
JUL										
05...	--	390	180	97	35	160	47	3.5	9.0	210
07...	--	--	--	--	--	--	--	--	--	--
15...	--	430	160	110	38	220	52	4.6	10	270
25...	--	390	160	100	33	230	56	5.1	11	230
28...	K540	--	--	--	--	--	--	--	--	--
AUG										
05...	--	390	160	97	35	280	60	6.2	16	230
05...	K1621	--	--	--	--	--	--	--	--	--
15...	--	390	180	100	34	260	58	5.7	12	210
25...	--	330	130	84	29	240	60	5.8	17	200
27...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	310	120	79	27	220	59	5.5	14	190
09...	--	--	--	--	--	--	--	--	--	--
15...	--	320	140	82	29	270	63	6.5	11	180
25...	--	660	500	180	51	720	70	12	18	160
30...	K1260	--	--	--	--	--	--	--	--	--
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	IODIDE, DIS- SOLVED (MG/L AS I)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)
OCT										
10...	--	--	--	1040	1.4	213	10	140	5.80	26
12...	140	320	--	1030	1.4	222	--	--	--	--
19...	140	380	--	1140	1.5	234	--	--	--	--
22...	--	--	--	1100	1.5	261	58	143	.77	3.4
23...	99	230	--	645	.88	308	--	--	--	--
NOV										
04...	140	260	--	863	1.1	231	--	--	--	--
09...	--	--	--	1020	1.3	284	18	112	1.40	6.3
10...	150	390	--	1140	1.5	271	--	--	--	--
22...	50	95	--	342	.47	365	--	--	--	--
27...	--	--	--	860	1.1	311	7	76	1.30	5.6
DEC										
06...	140	330	--	1000	1.3	262	--	--	--	--
13...	--	--	--	1650	2.2	379	71	42	.47	2.1
14...	160	730	--	1700	2.3	422	--	--	--	--
27...	--	--	--	1370	1.8	274	11	29	.41	1.8
29...	30	60	--	277	.38	905	--	--	--	--
JAN										
05...	130	480	--	1240	1.6	442	--	--	--	--
10...	--	--	--	1310	1.7	325	14	47	.69	3.1
15...	150	710	--	1620	2.2	311	--	--	--	--
22...	--	--	--	622	.85	675	106	34	.80	3.5
25...	120	180	--	653	.89	793	--	--	--	--
FEB										
05...	200	270	--	958	1.3	282	--	--	--	--
12...	--	--	--	636	.86	496	122	568	.71	3.1
15...	220	190	--	818	1.1	939	--	--	--	--
25...	200	220	--	880	1.2	444	--	--	--	--
27...	--	--	--	858	1.1	547	94	750	.52	2.3
MAR										
05...	200	240	--	927	1.2	430	--	--	--	--
05...	--	--	--	896	1.2	416	0	762	.54	2.4
14...	180	200	--	820	1.1	467	--	--	--	--
20...	--	--	--	897	1.2	388	14	129	.53	2.3
24...	180	220	--	852	1.1	757	--	--	--	--
APR										
06...	220	190	--	857	1.1	1000	--	--	--	--
15...	160	280	--	962	1.3	273	--	--	--	--
15...	--	--	--	963	1.3	273	13	979	.87	<3.9
25...	140	270	--	927	1.2	183	--	--	--	--
27...	--	--	--	468	.64	585	151	57	.88	<3.9

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	SULFATE DIS- SOLVED (MG/L) AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL)	IODIDE, DIS- SOLVED (MG/L) AS I)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS NO3)
MAY										
05...	120	170	--	666	.91	379	--	--	--	--
07...	--	--	.050	861	1.1	363	69	142	--	--
15...	240	220	--	917	1.2	1400	--	--	--	--
19...	--	--	.010	246	.33	2230	1100	46	--	--
25...	160	140	--	624	.85	455	--	--	--	--
JUN										
05...	120	120	--	628	.85	1340	--	--	--	--
10...	--	--	--	890	1.2	2450	308	142	.52	<2.3
14...	230	230	--	866	1.1	2390	--	--	--	--
25...	160	160	--	614	.84	2420	--	--	--	--
30...	--	240	--	897	1.2	2170	115	126	.31	<1.4
JUL										
05...	210	240	--	879	1.2	1200	--	--	--	--
07...	--	--	--	922	1.2	891	164	149	--	--
15...	--	--	--	974	1.3	379	--	--	--	--
25...	180	360	--	1070	1.4	347	--	--	--	--
28...	--	--	--	1050	1.4	281	48	98	2.60	12
AUG										
05...	190	400	--	1150	1.5	270	--	--	--	--
05...	--	--	--	1150	1.5	264	71	144	1.70	7.3
15...	150	420	--	1180	1.6	249	--	--	--	--
25...	140	340	--	1020	1.3	187	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	150	310	--	937	1.2	215	--	--	--	--
09...	--	--	--	1080	1.4	213	11	977	2.20	9.7
15...	150	400	--	1100	1.5	196	--	--	--	--
25...	98	1500	--	2800	3.8	522	--	--	--	--
30...	--	--	--	863	1.1	198	24	755	1.30	5.5
	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 TOTAL (MG/L) AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N)	NITRO- GEN, DISSOLV (MG/L) AS N)	PHOS- PHATE, TOTAL (MG/L) AS PO4)
OCT										
10...	.010	.03	5.8	--	.050	.06	--	--	--	15.0
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
22...	.530	1.7	1.3	--	6.00	7.7	2.2	8.2	9.5	15.0
23...	--	--	--	--	--	--	--	--	--	--
NOV										
04...	--	--	--	--	--	--	--	--	--	--
09...	.270	.89	1.7	--	11.0	14	2.0	13	15	15.0
10...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	.140	.46	1.4	--	5.90	7.6	.20	6.1	7.5	8.90
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	.110	.36	.58	--	10.0	13	3.0	13	14	17.0
14...	--	--	--	--	--	--	--	--	--	--
27...	.190	.62	.60	--	11.0	14	3.0	14	15	16.0
29...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
10...	.100	.33	.79	--	12.0	15	1.0	13	14	12.0
15...	--	--	--	--	--	--	--	--	--	--
22...	.090	.30	.89	--	2.00	2.6	.80	2.8	3.7	3.40
25...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	--	--	--	--	--	--	--
12...	.050	.16	.76	--	4.10	5.3	9.9	14	15	3.00
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	.080	.26	.60	--	5.70	7.3	.00	2.5	3.1	6.40
MAR										
05...	--	--	--	--	--	--	--	--	--	--
05...	.100	.33	.64	--	7.30	9.4	3.7	11	12	9.50
14...	--	--	--	--	--	--	--	--	--	--
20...	.190	.62	.72	--	8.00	10	4.0	12	13	8.60
24...	--	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DISSOLV (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)
1PR										
06...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	.230	.76	1.1	--	9.20	12	4.8	14	15	15.0
25...	--	--	--	--	--	--	--	--	--	--
27...	.120	.39	1.0	--	4.10	5.3	.30	4.4	5.4	2.60
MAY										
05...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	11	--	9.20
15...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	1.4	--	2.40
25...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	--	--	--	--	--	--	--	--	--	--
10...	.180	.59	.70	--	.420	.54	1.1	1.5	2.2	1.50
14...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
30...	.890	2.9	1.2	--	.060	.08	1.8	1.9	3.1	2.30
JUL										
05...	--	--	--	--	--	--	--	--	--	--
07...	--	--	1.7	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
28...	.800	2.6	3.4	--	.840	1.1	1.9	2.7	6.1	11.0
AUG										
05...	--	--	--	--	--	--	--	--	--	--
05...	.850	2.8	2.5	--	1.10	1.4	.80	1.9	4.4	11.0
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
09...	1.40	4.6	3.6	--	1.50	1.9	1.2	2.7	6.3	12.0
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
30...	.350	1.2	1.6	4.50	4.40	5.7	1.2	5.6	7.2	7.70
DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	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)
OCT										
10...	5.90	5.00	2.50	7.7	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
22...	5.10	5.00	4.80	15	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
NOV										
04...	--	--	--	--	--	--	--	--	--	--
09...	5.80	5.00	4.90	15	3	2	4	0	50	14
10...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	2.90	2.90	2.90	8.9	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	5.50	5.70	5.60	17	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
27...	5.70	5.30	5.20	16	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
10...	4.80	4.00	4.30	13	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	1.20	1.10	1.00	3.1	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	--	--	--	--	--	--	--
12...	1.20	.970	.970	3.0	2	<1	10	9	20	41
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	2.20	2.10	2.20	6.7	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELENIUM, DIS- SOLVED (UG/L AS SE)	ZINC, DIS- SOLVED (UG/L AS ZN)	PHENOLS (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)
FEB										
05...	--	--	--	--	--	--	--	--	--	--
12...	50	.0	0	10	4	5400	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	78000	--	--	--	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	15000	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	10.1	12.0	168	11.3
24...	--	--	--	--	--	--	--	--	--	--
APR										
06...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	11000	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	--	--	--	--	--	--	--	--	--	--
07...	70	.1	1	5	--	190000	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	20000	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	600000	--	--	--	.080
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	140000	52.6	58.1	1276	4.31
AUG										
05...	--	--	--	--	--	--	--	--	--	--
05...	40	.0	1	10	0	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	82000	46.5	57.2	372	28.8
SEP										
05...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	16000	48.8	56.0	292	24.7

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1830	1200	1620	1430	1470	1480	1470	1430	489	1500	1950	1830
2	1820	1310	1770	1600	1510	1520	1430	476	488	1520	2000	1710
3	1870	1360	1880	1610	1450	1470	1450	918	561	1550	2090	1380
4	1780	1480	1860	1940	1460	1440	1280	1030	724	1500	1790	1480
5	1860	1640	1960	1940	1470	1510	---	1100	927	1480	2020	1610
6	1800	1680	1530	1950	1480	1470	1350	1310	1090	1470	2040	1870
7	1850	1730	2010	1910	1440	1480	1350	1460	1270	1530	2010	1770
8	1720	1800	2030	1960	880	1480	1400	1460	1340	1540	2020	1760
9	1790	1750	2070	2040	1240	1490	1380	1110	1440	1590	2050	1680
10	1840	1940	1980	1920	1100	1460	1390	1290	1460	1640	1940	1760
11	1750	1800	2250	1900	1100	1470	1390	1400	1450	1640	2040	1750
12	1760	1720	2440	2140	1070	1460	1580	1470	1450	1650	1980	1670
13	1840	1780	2380	2110	1090	1550	1670	1470	1460	1650	1980	1730
14	1940	1870	2650	2040	1190	1340	1560	1480	1450	1640	1990	2030
15	1700	1840	2380	2600	1200	---	1580	1470	---	1850	2070	1890
16	1730	1920	2270	2500	1240	---	1610	527	---	1910	2010	1780
17	1780	1800	2390	2430	1250	---	1590	653	1480	2070	1970	2110
18	1820	1540	2310	2870	1280	1390	1530	863	1500	1880	2070	2010
19	2000	1800	2390	3090	1280	1470	1670	404	1450	1870	1420	1870
20	1830	1790	2290	2650	1290	1520	1490	424	1430	1860	1550	1940
21	1780	934	2490	787	1310	1540	1590	510	684	1900	1750	2320
22	1650	609	2460	731	1350	1500	1620	549	1140	1880	1800	2400
23	1150	914	2520	984	1360	1500	1700	748	813	1900	1750	1920
24	1360	1230	2320	982	1360	1400	1620	824	1020	1940	1740	2110
25	1600	1380	1960	1010	1350	790	1530	1020	1050	1850	1780	4700
26	1630	1370	1900	1230	1350	1250	574	1200	1140	1900	1810	1800
27	1800	1530	2120	1090	1330	1380	538	526	1320	1960	1840	2060
28	1860	1730	1970	1240	1340	1360	797	451	1430	1960	1820	1850
29	1770	1670	400	1280	1360	1370	1050	597	1470	2040	1940	4160
30	1780	1650	767	1340	---	1400	1320	374	1480	1850	1910	1480
31	1980	---	1020	1390	---	1330	---	517	---	1860	2530	---
MEAN	1760	1560	2010	1760	1300	1420	1400	937	1180	1750	1920	2010

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	11.0	5.0	6.0	1.0	4.0	11.5	20.0	24.0	29.0	25.0	25.0
2	18.0	11.0	4.0	7.0	3.0	1.5	14.0	17.5	24.0	33.0	24.0	25.0
3	17.0	10.0	3.0	6.0	6.0	3.0	11.0	17.0	25.0	29.0	26.0	23.0
4	15.0	10.0	5.0	5.0	6.0	8.0	11.0	19.0	24.0	30.0	32.0	25.0
5	15.0	11.0	8.0	6.0	6.0	5.0	---	19.5	24.0	30.0	25.0	25.5
6	16.0	9.0	6.0	6.5	6.0	6.0	14.0	20.0	25.0	29.0	26.0	26.0
7	16.5	7.5	7.0	4.0	6.0	12.0	19.0	21.0	25.0	29.0	26.5	26.0
8	19.0	10.0	6.0	3.0	2.0	11.0	15.0	18.5	26.0	29.0	26.0	25.0
9	16.0	10.5	6.0	3.5	1.0	11.0	14.0	16.0	23.0	28.0	26.0	25.5
10	15.0	7.0	7.0	7.0	4.0	12.0	18.5	19.0	23.0	27.5	26.5	25.0
11	15.0	7.0	14.0	7.0	4.0	11.0	18.0	21.0	25.0	29.0	26.0	25.0
12	16.5	7.0	5.0	6.0	3.0	10.0	13.0	25.0	24.0	27.5	25.0	25.0
13	15.0	7.0	4.0	5.0	4.5	10.0	10.0	21.0	24.0	27.5	26.5	25.0
14	12.0	8.0	5.0	7.0	7.0	10.0	10.0	19.0	24.0	26.0	25.0	25.5
15	14.0	9.0	6.0	11.5	7.5	---	11.0	20.0	---	26.5	25.0	25.0
16	16.0	10.0	4.0	11.0	4.0	---	15.0	17.0	---	26.0	26.0	25.0
17	19.0	10.0	1.0	10.0	2.5	---	15.0	17.0	27.0	32.0	26.5	19.0
18	19.0	13.0	1.0	7.5	2.0	11.0	14.0	19.0	26.0	27.5	26.5	19.5
19	20.0	15.0	5.0	10.0	6.0	11.5	15.0	22.0	26.5	25.0	26.0	23.5
20	20.0	17.0	7.0	11.0	8.0	12.5	18.0	19.0	26.0	27.5	26.0	23.5
21	16.0	16.0	9.0	8.0	11.0	11.0	18.0	19.0	25.0	27.5	26.0	24.0
22	16.0	11.0	12.0	7.0	10.0	15.0	19.0	20.0	25.5	26.5	25.0	25.0
23	14.0	6.0	10.0	6.0	10.0	11.0	20.0	20.0	25.5	27.0	26.0	21.0
24	15.0	6.0	8.0	6.0	9.0	8.0	20.0	24.0	26.0	25.0	25.0	20.0
25	14.0	8.0	8.0	8.0	8.0	8.0	17.0	24.0	29.0	25.0	25.0	22.0
26	15.0	7.0	9.0	7.0	6.5	10.0	13.0	25.0	30.0	26.0	25.0	21.0
27	15.5	9.0	10.0	4.0	8.0	14.0	14.0	21.0	30.0	27.0	25.0	18.0
28	15.0	5.0	10.0	2.0	11.5	13.0	14.0	21.5	30.0	26.0	25.0	17.0
29	14.0	4.0	10.0	2.0	11.0	13.0	16.5	23.0	30.0	26.0	25.0	17.0
30	18.0	2.0	8.0	2.5	---	11.0	19.0	22.0	30.0	26.0	29.0	19.0
31	12.0	---	6.0	1.0	---	9.0	---	23.0	---	25.5	25.0	---
MEAN	16.0	9.0	6.5	6.0	6.0	9.5	15.0	20.5	26.0	27.5	26.0	23.0

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

DATE TIME	OCT 10,79 1405	NOV 9,79 1210	DEC 13,79 1430	JAN 10,80 1315	FEB 12,80 1515					
TOTAL CELLS/ML	110000	10000	21000	7400	5400					
DIVERSITY: DIVISION	0.6	1.1	0.9	0.9	1.4					
..CLASS	0.6	1.1	0.9	0.9	1.4					
...ORDER	0.8	2.0	1.7	1.7	2.2					
....FAMILY	0.8	2.6	1.8	1.8	2.6					
.....GENUS	1.3	2.9	2.3	2.4	0.0					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE										
....PLANKTOSPHAERIA	--	-	--	-	--	-	--	-	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-
....GOLENKINIOPSIS	--	-	--	-	--	-	* 0		--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	6800	6	670	6	600	3	350	5	240	4
....CHLORELLA	87000#	78	1500	14	--	-	--	-	110	2
....CHODATELLA	980	1	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	2400	2	220	2	--	-	150	2	640	12
....OOCYSTIS	--	-	--	-	--	-	--	-	190	4
....SELENASTRUM	--	-	--	-	--	-	* 0		--	-
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	250	3	500	9
....SCENEDESMUS	--	-	1200	12	--	-	42	1	240	4
....TETRASTRUM	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	980	1	2500#	24	1300	6	180	2	270	5
....CHLOROGONIUM	--	-	--	-	--	-	--	-	--	-
....PLATYMONAS	--	-	--	-	--	-	--	-	--	-
...ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	--	-	32	1
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE	--	-	--	-	--	-	--	-	64	1
...CYCLOTELLA	7300	7	1300	12	560	3	110	1	260	5
...MELOSIRA	--	-	--	-	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-	110	2
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	75	1	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	--	-	--	-	* 0		--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	--	-	370	2	--	-	--	-
...NAVICULACEAE										
....NAVICULA	--	-	450	4	230	1	* 0		64	1
...NITZSCHACEAE										
....NITZSCHIA	3400	3	2200#	22	1300	6	180	2	180	3
...SURIPELLACEAE										
....SURIPELLA	--	-	--	-	--	-	* 0		* 0	
...XANTHOPHYCEAE										
...HETEROCOCCALES										
...CHLOROTHECIACEAE										
....OPHIOCYTIUM	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOCHRYSIDACEAE										
...CHROMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	OCT 10,79 1405	NOV 9,79 1210	DEC 13,79 1430	JAN 10,80 1315	FEB 12,80 1515	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHAMAESIPHONALES						
...CHAMAESIPHONACEAE						
....ENTOPHYSALIS	--	-	--	-	--	-
...CHROOCOCCALES			1300	6	--	-
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	--	-
....ANACYSTIS	--	-	150	1	--	-
...GOMPHOSPHAERIA	--	-	--	-	1300#	18
...HORMOGONALES			--	-	--	-
...NOSTOCACEAE						
....APHANIZOMENON	--	-	--	-	--	-
...OSCILLATORIACEAE			--	-	--	-
....LYNGBYA	--	-	--	-	--	-
...OSCILLATORIA	--	-	--	-	--	-
...SCHIZOTHRIX	2000	2	--	-	3800#	51
...SPIRULINA	--	-	--	-	850	11
			2300	11		32
						1
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	980	1	--	-	*	0
...EUTREPTIA	--	-	75	1	--	-
...TRACHELOMONAS	--	-	--	-	69	1
DATE TIME	FEB 27,80 1310	MAR 5,80 1200	APR 15,80 1215	MAY 7,80 1245	JUN 10,80 0930	
TOTAL CELLS/ML	78000	15000	11000	190000	20000	
DIVERSITY: DIVISION	1.3	1.0	1.5	1.3	1.7	
..CLASS	1.3	1.0	1.5	1.3	1.7	
...ORDER	1.7	1.6	2.2	1.8	1.8	
...FAMILY	1.8	1.7	2.6	2.6	2.7	
....GENUS	2.2	2.6	2.9	3.0	3.7	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	--	-	--	-
...CHLOROCOCCACEAE					220	1
...PLANKTOSPHAERIA	--	-	--	-	--	-
...COELASTRACEAE						
...COELASTRUM	--	-	--	-	--	-
...HYDRODICTYACEAE					1200	6
...PEDIASTRUM	--	-	--	-	--	-
...MICRACTINIACEAE					1200	6
...GOLENKINIA	*	0	--	-	--	-
...GOLENKINIOPSIS	--	-	--	-	--	-
...MICRACTINIUM	--	-	--	-	64000#	34
...OOCYSTACEAE						
...ANKISTRODESMUS	700	1	450	3	2700	1
...CHLORELLA	8200	11	5600#	38	--	-
...CHODATELLA	--	-	--	-	4500	2
...DICTYOSPHAERIUM	--	-	--	-	5500	3
...KIRCHNERIELLA	5600	7	1900	13	1400	1
...OOCYSTIS	2800	4	1300	9	1700	1
...SELENASTRUM	--	-	--	-	1000	1
...TETRAEDRON	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	--	-	--	-	24000	13
...CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	700	1	--	-	290	1
...TETRASTRUM	--	-	--	-	2600	13
...VOLVOCELES					290	1
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	5200	7	2400#	16	6500	3
...CHLOROGONIUM	--	-	--	-	--	-
...PLATYMONAS	*	0	--	-	--	-
...ZYGNEMATALES						
...DESMIDIACEAE						
...CLOSTERIUM	--	-	--	-	--	-

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	FEB 27,80 1310		MAR 5,80 1200		APR 15,80 1215		MAY 7,80 1245		JUN 10,80 0930	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE	--	-	--	-	--	-	--	-	--	-
...CYCLOTELLA	6600	9	1000	7	970	9	21000	11	1900	10
...MELOSIRA	520	1	--	-	--	-	--	-	3700#	18
...STEPHANODISCUS	--	-	--	-	*	0	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	--	-	--	-	--	-	--	-	*	0
...COCCONEIS	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
...SYNEDRA	*	0	75	1	--	-	--	-	--	-
...GOMPHONEMATAACEAE										
...GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
...NAVICULA	*	0	75	1	*	0	--	-	140	1
...NITZSCHIA										
...NITZSCHIA	*	0	220	2	350	3	2700	1	500	2
...SURIPELLACEAE										
...SURIPELLA	520	1	75	1	120	1	--	-	--	-
..XANTHOPHYCEAE										
..HETEROCOCCALES										
...CHLOROTHECIACEAE										
...OPHIOCYTIUM	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	--	-	--	-	120	1	--	-	--	-
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHAMAESIPHONALES										
...CHAMAESIPHONACEAE										
...ENTOPHYSALIS	--	-	--	-	--	-	--	-	--	-
..CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	--	-	--	-	--	-	--	-	580	3
...ANACYSTIS	45000#	58	--	-	5000#	47	24000	13	3000	15
...GOMPHOSPHERIA	--	-	--	-	--	-	--	-	2000	10
..HORMOGONALES										
...NOSTOCACEAE										
...APHANIZOMENON	--	-	--	-	--	-	21000	11	--	-
...OSCILLATORIACEAE										
...LYNGBYA	--	-	--	-	580	6	--	-	--	-
...OSCILLATORIA	--	-	--	-	160	1	--	-	--	-
...SCHIZOTHRIX	--	-	1600	11	--	-	--	-	--	-
...SPIRULINA	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	--	-	--	-	78	1	--	-	140	1
...EUTREPTIA	--	-	--	-	--	-	--	-	--	-
...TRACHELOMONAS	*	0	--	-	--	-	--	-	140	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 7,80 1130	JUL 28,80 1230	AUG 27,80 1145	SEP 30,80 1215
TOTAL CELLS/ML	600000	140000	82000	16000
DIVERSITY: DIVISION	1.3	1.3	0.9	1.6
..CLASS	1.3	1.3	0.9	1.6
...ORDER	1.4	1.7	1.5	2.3
....FAMILY	1.4	2.4	2.7	2.5
.....GENUS	1.9	2.8	3.1	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
.....SCHROEDERIA	--	-	--	-	--	-	--	-
....CHLOROCOCCACEAE								
...PLANKTOSPHAERIA	--	-	--	-	8700	11	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	*	0	--	-	--	-
....GOLENKINIOPSIS	--	-	--	-	--	-	--	-
...MICRACTINIUM	4500	1	50000#	37	2400	3	250	2
...OOCYSTACEAE								
....ANKISTRODES MUS	--	-	1300	1	7200	9	500	3
....CHLORELLA	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	2600	2	--	-	--	-
...DICTYOSPHAERIUM	--	-	14000	10	10000	12	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	5100	4	1400	2	--	-
...TETRAEDRON	--	-	--	-	--	-	*	0
...TREUBARIA	--	-	*	0	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	1900	2	1200	8
...SCENEDESMUS	20000	3	7700	6	27000#	33	3000#	19
...TETRASTRUM	9000	1	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	6700	1	10000	7	8700	11	430	3
....CHLOROGONIUM	--	-	1300	1	--	-	--	-
....PLATYMONAS	--	-	--	-	--	-	--	-
...ZYGNEATALES								
...DESMIDIACEAE								
...CLOSTERIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	210000#	35	13000	10	4300	5	800	5
....MELOSIRA	4500	1	1300	1	--	-	120	1
...STEPHANODISCUS	--	-	--	-	--	-	*	0
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
...COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	970	1	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	--	-	--	-	120	1
...NITZSCHACEAE								
....NITZSCHIA	--	-	1300	1	1400	2	430	3
...SURIPELLACEAE								
....SURIPELLA	--	-	--	-	--	-	--	-
...XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
...OPHIOCYTIUM	--	-	--	-	--	-	*	0

ARKANSAS RIVER BASIN

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07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 7,80 1130		JUL 28,80 1230		AUG 27,80 1145		SEP 30,80 1215	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	*	0	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHAMAESIPHONALES								
...CHAMAESIPHONACEAE								
...ENTOPHYSALIS	--	-	--	-	--	-	--	-
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	280000#	48	--	-	--	-	--	-
...ANACYSTIS	56000	9	26000#	19	5300	7	2200	14
...GOMPHOSPHAERIA	--	-	--	-	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
...APHANIZOMENON	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
...LYNGBYA	--	-	--	-	--	-	--	-
...OSCILLATORIA	--	-	--	-	--	-	5600#	36
...SCHIZOTHRIX	--	-	--	-	--	-	--	-
...SPIRULINA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	*	0	1900	2	680	4
...EUTREPTIA	--	-	--	-	--	-	--	-
...TRACHELOMONAS	*	0	--	-	480	1	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'53", long 96°12'25", in center of SW¼ sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, near left bank on downstream side of pier of bridge on U.S. Highway 75, 2.3 mi (3.7 km) upstream from Wewoka Creek, 2.5 mi (4.0 km) northeast of Wetumka, and at mile 84.4 (135.8 km).

DRAINAGE AREA.--14,290 mi² (37,011 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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 (208.264 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some regulation by Lake Overholser (station 07240500) and other dams upstream.

AVERAGE DISCHARGE.--43 years, 658 ft³/s (18.63 m³/s), 476,700 acre-ft/yr (588 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,000 ft³/s (1,870 m³/s) Apr. 15, 1945, gage height, 26.40 ft (8.047 m); 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 (8.20 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,010 ft³/s (255 m³/s) Nov. 21, gage height, 10.52 ft (3.200 m); minimum daily discharge, 40 ft³/s (1.13 m³/s) Sept. 2, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	161	255	683	211	283	352	937	4820	853	114	43
2	162	159	234	514	203	286	352	1020	5010	849	105	40
3	149	173	218	343	199	272	413	3580	4480	828	101	46
4	142	209	196	269	198	260	388	1570	4100	780	96	47
5	137	241	176	234	189	251	327	978	3310	773	90	47
6	133	190	156	203	179	247	316	792	1830	768	88	44
7	130	170	148	184	177	244	317	623	1440	716	85	79
8	130	162	143	170	203	244	300	460	1230	599	80	102
9	134	159	143	159	227	243	281	383	1200	537	80	79
10	138	151	138	148	289	244	486	340	1210	466	79	70
11	140	143	132	140	471	259	605	335	1130	420	80	63
12	140	140	132	132	591	262	464	369	1090	379	77	59
13	140	138	132	128	584	262	322	335	1040	355	75	59
14	140	138	128	123	537	260	259	304	989	338	73	55
15	139	132	125	120	561	254	235	302	937	327	68	49
16	135	130	125	118	490	264	223	463	917	314	64	43
17	149	128	120	116	532	373	217	519	945	288	71	40
18	147	128	118	113	500	337	212	2770	910	245	85	41
19	143	128	118	111	405	282	207	3970	892	215	73	41
20	131	151	116	132	384	270	206	2740	1450	195	64	43
21	131	6710	111	190	343	293	204	2660	1190	186	62	43
22	147	4640	109	290	332	289	197	3530	1170	178	62	41
23	139	1530	111	543	324	286	193	3220	1800	178	64	45
24	138	1210	116	613	320	633	199	2190	1460	175	76	47
25	136	854	116	492	309	492	234	1840	1630	170	66	50
26	132	583	116	380	297	432	771	1600	1500	158	55	51
27	174	445	116	328	290	368	633	1360	1360	151	54	63
28	175	376	113	279	279	411	625	2600	1180	147	54	80
29	169	324	113	252	279	344	923	3240	950	141	49	75
30	163	279	113	248	---	318	608	5110	873	132	46	71
31	179	---	176	235	---	319	---	4770	---	122	43	---
TOTAL	4507	20082	4363	7990	9903	9582	11069	54910	52043	11983	2279	1656
MEAN	145	669	141	258	341	309	349	1771	1735	387	73.5	55.2
MAX	179	6710	255	683	591	633	923	5110	5010	853	114	102
MIN	130	128	109	111	177	243	193	302	873	122	43	40
AC-FT	8940	39830	8650	15850	19640	19010	21960	108900	103200	23770	4520	3280
CAL YR 1979	TOTAL	226033	MEAN 619	MAX 11100	MIN 70	AC-FT 448300						
WTR YR 1980	TOTAL	190367	MEAN 520	MAX 6710	MIN 40	AC-FT 377600						

ARKANSAS RIVER BASIN

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07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

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. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was 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, 37,100 micromhos Dec. 31, 1954; minimum daily, 98 micromhos Apr. 30, 1977.

WATER TEMPERATURE: Maximum daily, 39.0°C July 5, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,060 micromhos Dec. 31; minimum daily, 300 Nov. 21.

WATER TEMPERATURE: Maximum daily, 31.0°C July 2; minimum daily, 0.0°C Feb. 1, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-HF (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)
OCT												
02...	1400	153	1500	8.5	24.0	3.4	8.4	102	K21	63	300	100
05...	0730	138	1510	8.1	14.0	--	--	--	--	--	300	92
14...	0730	140	1500	7.4	14.5	--	--	--	--	--	280	100
25...	0730	138	1540	7.5	13.0	--	--	--	--	--	310	130
NOV												
05...	0730	255	1230	8.0	11.0	--	--	--	--	--	310	100
05...	1230	234	1400	8.4	14.0	18	14.4	142	80	63	330	99
15...	0730	135	1580	7.6	6.0	--	--	--	--	--	360	100
25...	0730	915	1090	7.8	9.0	--	--	--	--	--	240	100
DEC												
04...	1100	209	1400	7.9	5.0	33	12.2	97	134	220	340	110
JAN												
09...	1130	162	1600	7.4	9.0	16	8.4	74	42	36	330	160
FEB												
13...	1330	578	--	--	6.0	140	12.9	105	410	3900	260	--
MAR												
04...	1045	260	1500	8.2	9.5	12	12.8	116	K8	K14	390	170
APR												
14...	1400	248	--	8.5	15.0	64	11.0	112	K103	--	380	190
MAY												
06...	1645	754	595	7.9	27.0	350	5.2	67	--	--	160	53
JUN												
09...	1430	1240	890	--	26.5	250	6.4	84	K885	K1415	250	71
JUL												
09...	1230	537	--	8.8	33.0	99	10.0	143	--	--	370	190
AUG												
06...	1330	89	1500	8.6	31.5	27	8.6	116	K9	223	330	110
SEP												
17...	1030	40	1784	8.3	26.0	--	8.2	95	300	230	330	140

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
02...	68	32	190	57	4.8	9.6	200	110	290	.7	5.4	855
05...	70	31	180	67	4.5	11	210	100	300	--	--	855
14...	58	34	190	72	4.9	12	180	100	300	--	--	845
25...	71	31	190	68	4.7	12	180	110	310	--	--	886
NOV												
05...	80	27	140	49	3.5	9.8	210	110	200	--	--	720
05...	87	27	160	59	3.8	20	230	110	240	.8	10	850
15...	100	27	180	60	4.1	9.8	260	120	270	--	--	936
25...	69	17	120	59	3.4	9.1	140	87	190	--	--	635
DEC												
04...	95	26	140	55	3.3	9.2	230	110	230	.4	13	783
JAN												
09...	89	25	170	52	4.1	8.8	170	92	290	.5	12	913
FEB												
13...	69	21	140	53	3.8	6.7	--	--	--	.4	10	789
MAR												
04...	100	34	180	49	4.0	8.8	220	180	280	.7	8.8	957
APR												
14...	96	33	150	46	3.4	7.8	190	210	220	.8	5.3	874
MAY												
06...	47	11	52	40	1.8	5.5	110	37	89	.3	9.0	305
JUN												
09...	69	19	79	40	2.2	8.5	180	88	110	.4	13	513
JUL												
09...	94	32	150	46	3.4	10	180	200	220	.7	6.3	868
AUG												
06...	80	32	190	54	4.5	12	220	110	320	.8	1.0	890
SEP												
17...	78	33	240	60	5.7	15	190	170	360	.8	1.8	976

[illegible]

ARKANSAS RIVER BASIN

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07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN DIS- SOLVED (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)	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)
OCT											
02...	.96	2.5	11	3.8	.700	2.1	.420	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	1.7	6.8	30	5.4	3.10	9.5	2.50	9	2	7	400
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	3.7	4.4	19	5.2	1.60	4.9	1.30	--	--	--	--
JAN											
09...	.28	3.5	15	2.6	1.70	5.2	1.50	--	--	--	--
FEB											
13...	2.4	9.3	41	3.1	1.00	3.1	.880	4	1	3	600
MAR											
04...	2.7	4.7	21	5.7	1.70	5.2	1.70	--	--	--	--
APR											
14...	.79	4.0	18	2.0	.900	2.8	.570	--	--	--	--
MAY											
06...	.84	4.3	19	2.5	1.50	4.6	.400	6	3	3	400
JUN											
09...	1.0	4.1	18	1.9	.900	2.8	.430	--	--	--	--
JUL											
09...	--	4.1	18	--	.930	2.9	.600	--	--	--	--
AUG											
06...	1.3	2.3	10	1.3	1.00	3.1	.600	12	3	9	200
SEP											
17...	--	--	--	--	--	--	--	12	0	12	100
DATE	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	200	200	0	0	<1	0	0	0	3	0	<3
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	200	400	5	1	4	30	30	0	5	5	0
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	300	100	1	1	0	30	30	0	10	10	0
JUN											
09...	--	--	--	--	--	--	--	--	--	--	--
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	0	200	1	0	3	0	0	10	1	--	<3
SEP											
17...	0	200	0	0	1	10	10	0	0	0	3

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	3	1	2	910	900	<10	8	6	2	90	80
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	41	23	18	8300	7600	670	10	0	74	250	70
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	19	17	2	14000	14000	90	57	56	1	980	970
JUN											
09...	--	--	--	--	--	--	--	--	--	--	--
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	11	8	3	1600	1600	20	17	17	0	300	300
SEP											
17...	5	2	3	700	690	10	4	2	2	190	180
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	9	.1	.1	.0	14	5	9	1	1	0	0
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
FEB											
13...	180	.7	.6	.1	30	19	11	1	1	0	2
MAR											
04...	--	--	--	--	--	--	--	--	--	--	0
APR											
14...	--	--	--	--	--	--	--	--	--	--	--
MAY											
06...	10	.6	.6	.0	27	19	8	1	1	0	1
JUN											
09...	--	--	--	--	--	--	--	--	--	--	0
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	4	.0	.0	.0	10	1	9	0	0	0	0
SEP											
17...	10	.1	.0	.1	13	6	7	0	0	0	0

ARKANSAS RIVER BASIN

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07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, SUS- PENDE- RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE- RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE- TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE- (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
02...	--	--	--	--	--	14	--	--	--	141	75
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	0	0	240	240	4	--	9.6	1.1	110000	350	63
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	9.1	--	--	--	116	97
JAN											
09...	--	--	--	--	--	8.4	--	--	--	181	95
FEB											
13...	2	0	170	0	220	--	8.9	10	--	742	48
MAR											
04...	--	--	--	--	--	11	--	--	29000	36	64
APR											
14...	--	--	--	--	--	16	--	--	--	126	86
MAY											
06...	1	0	80	60	20	--	16	--	16000	940	80
JUN											
09...	--	--	--	--	--	27	--	--	1400	3860	19
JUL											
09...	--	--	--	--	--	18	--	--	370000	--	--
AUG											
06...	0	0	50	50	4	--	33	.8	90000	3720	3
SEP											
17...	0	0	30	30	4	--	--	--	570000	508	4

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1300	1180	1770	1280	1610	1240	609	387	1280	1290	1600
2	1510	1490	1230	766	1320	1620	1220	400	444	1390	1290	1580
3	1560	1480	1280	621	1330	1620	1310	482	453	1450	1330	1600
4	1540	1390	1340	932	1340	1600	993	327	493	1480	1330	1510
5	1510	1230	1450	1020	1400	1610	1180	482	519	1510	1300	1590
6	1460	1760	1450	1040	1380	1610	1390	582	551	1510	1310	1580
7	1450	1160	1430	1140	1400	1620	1330	718	624	1520	1350	1580
8	1450	1260	1450	1280	1280	1580	1150	954	772	1520	1280	1770
9	1450	1340	1370	1370	1280	1550	1390	1010	837	1430	1310	2050
10	1510	1340	1460	1360	1300	1550	1360	1050	1000	1410	1350	1490
11	1510	1350	1510	1410	1640	1570	1490	1250	1190	1420	1370	1700
12	1500	1390	1620	1530	1250	1570	1420	1290	1330	1380	1400	1690
13	1480	1470	1610	1580	1170	1540	1440	1440	1430	1440	1340	1820
14	1500	1550	1620	1640	743	1540	1440	1160	1420	1450	1350	1930
15	---	1580	1680	1640	883	1600	1450	1220	1420	1470	1370	2050
16	1520	1590	1730	1610	1020	1510	1410	1290	1430	1430	1350	1990
17	1420	1720	1770	1650	1100	1440	1350	1430	1400	1450	1280	1930
18	1560	1720	1820	1650	1180	1540	1360	727	1410	1430	1280	1880
19	1430	1680	1810	1600	1380	1500	1420	645	1420	1410	1250	1800
20	1420	1560	1980	1600	1270	1410	1380	427	1340	1370	1230	1630
21	1410	300	1950	1580	1260	1380	1350	645	1150	1400	1330	1780
22	1410	302	1920	1530	1350	1360	1410	454	1430	1440	1350	1980
23	1410	320	1880	1400	1340	1360	1410	445	1250	1500	1350	1890
24	1440	511	1890	1790	1360	1250	1350	436	745	1510	1410	1760
25	1540	1090	1960	756	1430	1070	1270	527	900	1550	1390	1780
26	1480	808	1950	921	1400	1350	1220	763	936	1490	1450	1580
27	1480	755	1940	869	1430	1330	830	772	954	1500	1550	1400
28	1480	902	1900	1030	1470	1260	844	927	1070	1490	1540	1620
29	1520	1060	1950	1080	1450	1390	747	609	1140	1440	1660	1360
30	1580	1170	2040	1120	---	1120	726	518	1190	1460	1670	1430
31	1130	---	2060	1160	---	1010	---	327	---	1500	1430	---
MEAN	1470	1220	1680	1300	1290	1450	1260	771	1020	1450	1370	1710

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	10.5	5.0	6.0	.0	3.0	13.0	18.0	24.0	30.5	25.5	24.0
2	18.0	11.0	5.0	6.0	1.0	1.0	19.5	19.0	24.0	31.0	25.5	24.0
3	18.5	9.0	5.0	3.0	2.5	1.5	14.0	19.5	24.0	30.5	---	24.0
4	16.0	10.0	4.0	4.0	3.5	5.5	13.5	18.0	25.0	30.0	---	25.0
5	14.0	11.0	6.0	3.0	4.0	3.0	11.0	19.5	25.5	30.0	---	24.5
6	17.0	10.0	6.0	5.0	4.5	5.5	12.5	20.5	26.0	30.0	---	25.0
7	18.5	8.0	6.0	3.0	5.0	7.5	18.0	23.0	27.0	30.0	---	25.0
8	20.0	10.0	6.0	5.0	3.0	9.0	15.0	20.5	25.0	30.0	---	25.0
9	19.0	11.0	8.0	2.0	1.5	10.0	14.0	19.5	25.0	30.0	---	25.0
10	12.0	7.0	9.0	5.0	.0	10.5	14.0	18.5	25.0	30.0	---	25.0
11	13.0	7.0	10.0	7.0	1.0	11.5	16.5	21.5	25.5	29.5	---	24.5
12	14.5	7.0	7.0	5.5	1.0	10.0	14.0	25.0	25.5	29.5	---	24.5
13	14.5	6.0	4.0	7.0	2.5	9.0	10.0	23.5	26.5	29.0	---	24.0
14	14.5	6.0	5.0	8.5	4.0	10.0	10.0	23.0	27.0	29.0	---	24.0
15	---	6.0	5.0	9.5	4.5	10.5	9.5	22.5	27.0	29.0	---	24.5
16	16.0	7.0	4.0	10.0	2.0	14.0	12.5	20.0	27.0	27.5	26.0	25.0
17	18.0	10.0	.5	9.0	1.5	13.5	16.0	22.5	27.0	29.0	26.5	20.0
18	19.5	13.0	.5	9.0	2.0	10.0	17.0	21.0	25.0	29.0	26.5	20.0
19	20.0	14.0	3.0	9.0	4.0	14.0	17.5	20.0	25.0	29.0	25.0	20.0
20	21.0	17.0	3.0	10.5	5.5	14.0	19.0	20.0	27.5	29.0	26.0	20.0
21	21.5	16.0	10.0	11.0	10.5	9.5	19.0	20.0	27.0	28.5	26.0	20.0
22	18.0	13.0	12.0	9.0	10.0	11.0	20.0	20.0	27.0	29.0	25.0	24.0
23	12.0	11.0	12.0	5.5	12.5	14.0	20.0	20.5	27.0	25.0	24.0	24.0
24	15.0	8.0	9.0	5.5	9.0	12.0	20.0	22.0	27.5	25.0	24.0	24.0
25	13.0	9.0	8.0	9.0	6.5	15.0	19.0	24.5	29.0	27.0	24.5	24.0
26	13.0	8.0	7.5	6.0	5.0	9.0	16.0	26.0	27.5	28.0	---	24.0
27	15.0	10.0	9.0	2.5	7.5	12.5	14.0	27.0	30.0	28.0	25.0	18.0
28	16.0	9.0	10.0	1.0	9.5	12.5	15.0	24.0	30.0	28.0	25.0	26.5
29	14.0	6.0	9.0	1.0	9.5	14.0	16.5	24.5	30.5	12.0	24.0	17.5
30	18.0	5.0	7.0	.5	---	10.5	18.0	24.5	30.5	27.0	24.0	18.0
31	13.0	---	5.0	.5	---	9.0	---	24.5	---	27.5	24.0	---
MEAN	16.5	9.5	6.5	6.0	4.5	10.0	15.5	21.5	26.5	28.5	25.0	23.0

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 5,79 1230	MAR 4,80 1045	MAY 6,80 1045	JUN 9,80 1430				
TOTAL CELLS/ML	110000	29000	16000	1400				
DIVERSITY: DIVISION	1.0	1.0	1.2	0.7				
..CLASS	1.0	1.0	1.2	0.7				
...ORDER	1.3	1.9	2.0	0.7				
...FAMILY	2.0	2.2	2.3	0.7				
....GENUS	2.5	3.0	2.4	0.7				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
....COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
....HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
....MICRACTINIACEAE								
....GOLENKINIA	2500	2	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	360	2	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	4900	4	1400	5	--	-	--	-
....CHLORELLA	20000#	18	1600	5	--	-	--	-
....CHODATELLA	4900	4	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	580	4	--	-
....KIRCHNERIELLA	980	1	5100#	17	140	1	--	-
....OOCYSTIS	--	-	3300	11	--	-	280#	20
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
....WESTELLA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	32000#	28	1600	5	1200	8	--	-
....TETRASTRUM	2000	2	780	3	--	-	--	-
...TETRASPORALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	2500	2	8200#	28	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...COSCINODISCUS	--	-	--	-	--	-	--	-
...CYCLOTELLA	39000#	34	4900#	17	650	4	--	-
...MELOSIRA	--	-	--	-	290	2	--	-
...STEPHANODISCUS	--	-	--	-	*	0	--	-
..PENNALES								
...FRAGILARIACEAE								
....SYNEDRA	1500	1	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	--	-	220	1	--	-
...NITZSCHACEAE								
....NITZSCHIA	3400	3	580	2	720	5	--	-
...SURIPELLACEAE								
....SURIPELLA	--	-	190	1	--	-	--	-
..XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
...OPHIOCYTIUM	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 5,79 1230	MAR 4,80 1045	MAY 6,80 1045	JUN 9,80 1430
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	--	-	--	-
....ANACYSTIS	--	-	3700#	24
....GOMPHOSPHAERIA	--	-	--	-
...HORMOGONALES				
...NOSTOCACEAE				
....ANABAENA	--	-	--	-
...OSCILLATORIA				
....OSCILLATORIA	--	-	--	-
....PHORMIDIUM	--	-	7300#	47
....SCHIZOTHRIX	--	-	--	-
....SPIRULINA	--	-	1600	5
EUGLENOPHYTA (EUGLENOIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
....EUGLENA	--	-	*	0
....TRACHELOMONAS	--	-	190	1

DATE TIME	JUL 9,80 1230	AUG 6,80 1330	SEP 17,80 1700
TOTAL CELLS/ML	370000	90000	570000
DIVERSITY: DIVISION	0.8	1.5	0.7
..CLASS	0.8	1.5	0.7
...ORDER	0.9	2.0	0.8
...FAMILY	1.2	2.7	1.0
....GENUS	2.2	3.5	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	*	0	--	-	--	-
...COELASTRACEAE						
...COELASTRUM	5200	1	--	-	*	0
...HYDRODICTYACEAE						
...PEDIASTRUM	5200	1	1200	1	*	0
...MICRACTINIACEAE						
....GOLENKINIA	--	-	6600	7	*	0
....MICRACTINIUM	6500	2	--	-	--	-
...ODCYSTACEAE						
....ANKISTRODESMUS	*	0	--	-	*	0
....CHLORELLA	*	0	--	-	--	-
....CHODATELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	16000	4	3000	3	22000	4
....KIRCHNERIELLA	--	-	2400	3	*	0
...ODCYSTIS	7200	2	9000	10	3600	1
....SELENASTRUM	--	-	600	1	*	0
....TETRAEDRON	--	-	600	1	--	-
....TREUBARIA	*	0	900	1	--	-
....WESTELLA	--	-	--	-	6000	1
...SCENEDESMACEAE						
....ACTINASTRUM	2600	1	2400	3	--	-
....CRUCIGENIA	3900	1	--	-	11000	2
...SCENEDESMUS	7500	2	7200	8	15000	3
....TETRASTRUM	--	-	--	-	4800	1
...TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	*	0	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	1500	2	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 9,80 1230		AUG 6,80 1330		SEP 17,80 1700	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....COSCINODISCUS	*	0	--	-	--	-
....CYCLOTELLA	7200	2	2400	3	*	0
....MELOSIRA	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-
..PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	*	0	--	-	--	-
...NAVICULACEAE						
....NAVICULA	*	0	--	-	--	-
...NITZSCHACEAE						
....NITZSCHIA	2300	1	11000	12	6300	1
....SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
..XANTHOPHYCEAE						
...HETEROCOCCALES						
...CHLOROTHECIACEAE						
....OPHIOCYTIUM	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHROODMONAS	--	-	*	0	*	0
....CRYPTOMONADACEAE						
....CRYPTOMONAS	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....AGMENELLUM	110000#	31	13000	15	46000	8
....ANACYSTIS	180000#	50	21000#	24	390000#	69
....GOMPHOSPHERIA	--	-	--	-	37000	6
...HORMOGONALES						
....NOSTOCACEAE						
....ANABAENA	--	-	2700	3	--	-
...OSCILLATORIA						
....OSCILLATORIA	--	-	4200	5	9000	2
....PHORMIDIUM	--	-	--	-	--	-
....SCHIZOTRICH	--	-	--	-	--	-
....SPIRULINA	*	0	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK

LOCATION.--Lat 35°38'58", long 97°21'12", on east line of NE¼ 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 (3.1 km) southwest of Arcadia, 2.0 mi (3.2 km) upstream from Coffee Creek, and at mile 213.1 (342.9 km).

DRAINAGE AREA.--105 mi² (272 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR OK-77-1; 1975 (gage height only).

GAGE.--Water-stage recorder. Datum of gage is 941.65 ft (287.015 m), National Geodetic Vertical Datum of 1929.

Prior to Nov. 1, 1974, at site 0.3 mi (0.5 km) downstream at same datum. May 2, 1978, to May 14, 1979, the gage was temporarily moved 1.3 mi (2.1 km) downstream to county road bridge, at a 5.00 ft (1.524 m) lower datum.

REMARKS.--Records fair except for period of no gage-height record record July 3 to Aug. 11 which is poor. Low flow sustained by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--11 years, 65.1 ft³/s (1.844 m³/s), 47,160 acre-ft/yr (58.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) Nov. 2, 1974, gage height, 26.9 ft (8.20 m) from floodmark; minimum daily, 9.8 ft³/s (0.28 m³/s) Aug. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Apr. 25	1745	3,450	97.7	13.94	4.249	May 27	1315	*9,410	266	*23.47	7.154
May 15	2100	3,040	86.1	13.10	3.993	May 29	1530	8,240	233	21.87	6.666
May 18	0730	2,780	78.7	12.51	3.813	June 20	0945	4,470	127	15.90	4.846

Minimum daily discharge, 11 ft³/s (0.31 m³/s) Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	27	25	19	36	31	31	264	60	48	24	28
2	28	23	25	16	36	28	32	381	56	43	26	53
3	26	22	24	18	36	32	33	67	58	40	25	39
4	27	21	25	17	33	33	30	47	54	39	23	26
5	26	20	25	14	34	31	28	48	56	38	24	27
6	26	20	24	15	33	31	30	49	52	37	22	26
7	25	17	25	15	34	31	29	47	54	36	23	26
8	24	21	24	14	102	30	28	46	50	36	21	27
9	25	20	24	15	64	30	27	44	52	37	22	28
10	26	20	23	14	44	31	29	43	49	35	20	28
11	24	15	24	14	85	31	28	55	52	36	21	28
12	26	18	23	12	54	63	27	54	49	34	21	28
13	25	17	22	12	48	38	27	43	47	35	19	27
14	24	17	23	12	52	32	28	44	43	33	20	26
15	25	18	22	12	44	30	28	624	38	34	23	27
16	26	19	25	12	39	32	27	242	34	32	20	27
17	28	20	24	11	32	32	27	59	42	30	21	27
18	29	20	24	12	35	31	29	963	35	31	38	28
19	27	20	25	165	37	31	27	114	45	29	30	29
20	25	184	25	201	35	31	27	67	1330	30	23	25
21	25	187	25	162	36	31	27	119	159	28	41	26
22	61	41	23	68	33	30	27	70	267	27	31	26
23	30	31	34	50	32	87	27	57	115	28	27	27
24	27	29	34	46	33	119	40	58	100	27	27	27
25	26	27	23	43	32	42	1210	52	90	26	28	26
26	25	26	21	39	32	36	283	47	80	27	29	26
27	24	26	23	37	33	35	126	3150	70	47	28	28
28	24	26	449	36	33	49	109	213	62	35	29	47
29	23	25	98	35	32	36	105	3910	56	30	33	30
30	68	23	32	35	---	33	116	292	50	27	29	27
31	62	---	21	35	---	32	---	69	---	26	28	---
TOTAL	917	1000	1264	1206	1209	1189	2642	11338	3305	1041	796	870
MEAN	29.6	33.3	40.8	38.9	41.7	38.4	88.1	366	110	33.6	25.7	29.0
MAX	68	187	449	201	102	119	1210	3910	1330	48	41	53
MIN	23	15	21	11	32	28	27	43	34	26	19	25
AC-FT	1820	1980	2510	2390	2400	2360	5240	22490	6560	2060	1580	1730
CAL YR 1979	TOTAL	27033	MEAN 74.1	MAX 2450	MIN 15	AC-FT 53620						
WTR YR 1980	TOTAL	26777	MEAN 73.2	MAX 3910	MIN 11	AC-FT 53110						

ARKANSAS RIVER BASIN

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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 (discontinued).

WATER TEMPERATURE: October 1969 to January 1980 (discontinued).

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for October and November. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
02...	0730	31	1240	7.3	16.0	--	--	--	220	99
11...	0950	25	1400	7.7	14.5	9.7	99	64	--	--
22...	0800	120	731	7.2	16.0	--	--	--	180	50
30...	0900	26	1730	7.3	18.0	--	--	--	240	130
NOV										
08...	1520	21	1600	7.7	13.0	9.6	96	85	--	--
13...	0800	16	1600	7.0	7.0	--	--	--	250	140
21...	0800	191	409	6.9	15.0	--	--	--	140	33
27...	0800	28	1000	6.8	8.0	--	--	--	220	75
DEC										
13...	1700	19	1100	7.8	6.0	12.2	100	32	--	--
JAN										
08...	1238	16	1200	7.6	9.0	8.1	66	79	--	--
FEB										
11...	1330	57	1140	8.0	5.0	12.8	103	71	--	--
MAR										
10...	1300	29	1460	8.2	15.0	14.3	147	51	--	--
APR										
11...	1245	28	1310	8.4	21.5	10.6	125	44	--	--
MAY										
09...	1300	41	1370	7.9	21.0	8.1	95	36	--	--
JUN										
12...	1330	242	1540	7.8	29.0	7.1	97	45	--	--
JUL										
02...	1130	131	1400	8.2	30.0	7.9	108	54	--	--
AUG										
12...	1430	152	1475	8.0	32.0	6.3	89	40	--	--
SEP										
12...	1145	28	1567	7.7	27.6	6.9	91	50	--	--

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINEITY LAB (MG/L AS CAC03)	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)
OCT										
02...	48	24	140	69	4.1	11	120	78	220	711
11...	--	24	--	--	--	--	--	--	230	--
22...	44	17	77	47	2.5	7.5	130	100	100	432
30...	54	26	210	64	5.9	15	110	140	330	960
NOV										
08...	--	27	--	--	--	--	--	--	300	--
13...	56	26	190	61	5.3	15	110	120	280	887
21...	39	11	30	39	1.1	4.4	110	42	36	249
27...	50	22	110	51	3.3	9.9	140	110	150	605
DEC										
13...	--	23	--	--	--	--	--	--	140	--
JAN										
08...	--	31	--	--	--	--	--	--	190	--
FEB										
11...	--	20	--	--	--	--	--	--	210	--
MAR										
10...	--	39	--	--	--	--	--	--	250	--
APR										
11...	--	--	--	--	--	--	--	--	210	--
MAY										
09...	--	36	--	--	--	--	--	--	--	--
JUN										
12...	--	42	--	--	--	--	--	--	220	--
JUL										
02...	--	41	--	--	--	--	--	--	250	--
AUG										
12...	--	26	--	--	--	--	--	--	200	--
SEP										
12...	--	23	--	--	--	--	--	--	320	--

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)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT									
02...	.97	59.5	--	--	--	--	--	--	--
11...	--	--	1.8	3.60	4.6	5.40	40	290	1.5
22...	.59	140	--	--	--	--	--	--	--
30...	1.3	68.4	--	--	--	--	--	--	--
NOV									
08...	--	--	1.1	3.00	3.9	5.50	50	11	.1
13...	1.2	38.3	--	--	--	--	--	--	--
21...	.34	128	--	--	--	--	--	--	--
27...	.82	45.7	--	--	--	--	--	--	--
DEC									
13...	--	--	.73	14.0	18	4.00	80	<10	.1
JAN									
08...	--	--	1.4	13.0	17	5.10	50	<10	.0
FEB									
11...	--	--	.78	4.70	6.1	1.70	80	<10	.1
MAR									
10...	--	--	.51	13.0	17	4.00	40	<10	.2
APR									
11...	--	--	.79	11.0	14	3.90	30	<10	.5
MAY									
09...	--	--	1.1	.000	.00	1.10	50	100	.3
JUN									
12...	--	--	.66	8.70	11	3.60	40	12	3.0
JUL									
02...	--	--	1.7	5.40	7.0	3.90	30	44	.0
AUG									
12...	--	--	1.5	11.0	14	5.10	80	<10	.0
SEP									
12...	--	--	1.6	12.0	15	9.10	30	<10	.0

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	1200	1040	1020								
2	1240	1340	1060	988								
3	1400	1360	1080	1020								
4	1480	1380	1140	1030								
5	1440	1550	---	1070								
6	1340	1520	1180	1100								
7	1460	1300	1280	1070								
8	1320	1440	1210	1140								
9	1260	1410	1190	1130								
10	1250	1190	1160	1280								
11	1410	1440	1040	1200								
12	1260	1380	1080	1230								
13	1340	1600	1080	1240								
14	1470	1300	1270	1220								
15	1540	1250	1270	1270								
16	1310	1140	1240	1190								
17	1220	1230	1110	1240								
18	1160	1340	1260	1180								
19	1240	1320	1370	1200								
20	1440	1330	1280	358								
21	1660	409	1240	411								
22	731	758	1240	718								
23	1020	945	1170	981								
24	1370	905	864	1090								
25	1550	1200	950	1120								
26	1620	1040	977	1170								
27	1680	1000	1060	1190								
28	1400	1030	334	1120								
29	1920	1010	467	1160								
30	1730	1070	784	1150								
31	640	---	1040	---								
MEAN	1350	1210	1080	1080								

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	10.0	4.0	5.0								
2	16.0	11.0	8.0	7.0								
3	16.0	9.0	4.0	6.0								
4	16.0	12.0	5.0	4.0								
5	13.0	13.0	---	8.0								
6	16.0	9.0	5.0	9.0								
7	16.0	10.0	7.0	3.0								
8	19.0	11.0	6.0	4.0								
9	16.0	12.0	7.0	9.0								
10	11.0	7.0	9.0	7.0								
11	20.0	5.0	5.0	7.0								
12	16.0	7.0	5.0	6.0								
13	15.0	7.0	3.0	5.0								
14	25.0	9.0	6.0	6.0								
15	14.0	8.0	8.0	11.0								
16	18.0	9.0	4.0	10.0								
17	18.0	9.0	.0	9.0								
18	20.0	9.0	3.0	7.0								
19	20.0	9.0	4.0	8.0								
20	20.0	18.0	7.0	9.0								
21	21.0	15.0	8.0	7.0								
22	16.0	9.0	12.0	7.0								
23	11.0	5.0	10.0	5.0								
24	17.0	6.0	7.0	7.0								
25	13.0	8.0	5.0	8.0								
26	20.0	8.0	7.0	6.0								
27	16.0	8.0	10.0	2.0								
28	14.0	5.0	10.0	.0								
29	12.0	3.0	9.0	2.0								
30	18.0	3.0	6.0	5.0								
31	16.0	---	5.0	---								
MEAN	16.5	9.0	6.5	6.5								
WTR YR 1980	MEAN	9.5	MAX	25.0	MIN	.0						

ARKANSAS RIVER BASIN

07243000 DRY CREEK NEAR KENDRICK, OK

LOCATION.--Lat 35°46'55", long 96°51'20", in NW¼NW¼ sec.14, T.15 N., R.4 W., Lincoln County, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi (1.6 km) downstream from Beaver Creek and 4.5 mi (7.2 km) west of Kendrick.

DRAINAGE AREA.--69.0 mi² (178.7 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (251.5 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--25 years, 20.6 ft³/s (0.583 m³/s), 14,920 acre-ft/yr (18.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Nov. 2, 1974, gage height, 19.20 ft (5.852 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,700 ft³/s (133 m³/s) at 0945 June 19, gage height, 14.43 ft (4.398 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.55	1.0	1.1	2.0	2.0	3.2	130	18	6.8	.14	.00
2	.00	.42	.98	1.1	2.2	2.0	17	44	14	6.3	.00	.43
3	.00	.42	.98	1.2	2.0	2.6	18	29	13	5.7	.12	.00
4	.00	.46	1.0	1.1	1.9	2.2	5.3	14	12	5.0	.07	.00
5	.00	.46	1.0	1.1	1.9	1.9	4.4	11	11	4.6	.02	.00
6	.00	.46	1.0	1.2	1.8	2.0	4.1	10	10	4.2	.00	.00
7	.00	.60	.98	1.1	2.2	2.1	4.0	9.4	9.5	3.9	.00	.00
8	.00	.75	1.0	1.1	4.2	2.0	3.5	8.8	8.6	3.6	.00	.00
9	.00	.75	1.1	1.2	2.7	2.0	3.2	8.5	8.7	3.2	.00	.00
10	.00	.60	1.1	1.3	2.3	2.1	3.5	8.4	8.6	2.9	.00	.00
11	.00	.55	1.1	1.2	2.4	2.1	3.5	142	8.2	2.6	.00	.00
12	.00	.60	.95	1.1	2.5	2.9	3.2	218	7.8	2.2	.00	.00
13	.00	.66	.98	1.2	2.8	2.3	3.3	17	7.4	2.0	.00	.00
14	.00	.60	1.0	1.2	3.5	2.1	3.4	12	7.0	1.8	.00	.00
15	.00	.66	1.1	1.3	2.8	2.1	3.4	82	6.7	1.5	.00	.00
16	.00	.60	.99	1.3	2.6	2.3	3.4	93	20	1.3	.00	.00
17	.00	.55	.89	1.2	2.4	2.0	3.3	19	314	1.2	.00	.00
18	.00	.66	1.1	1.3	2.4	2.1	3.8	296	89	1.1	.00	.00
19	.00	.60	1.3	1.6	2.3	2.2	3.4	43	1570	1.0	.00	.00
20	.00	42	1.3	2.1	2.2	2.5	3.3	19	695	.94	.00	.00
21	.00	5.2	1.3	3.6	2.0	2.6	3.3	18	78	.90	.00	.00
22	.04	1.4	1.3	2.3	2.0	2.4	3.2	14	40	.85	.00	.00
23	.04	.89	1.4	2.1	2.0	6.6	3.2	13	25	.76	.00	.00
24	.00	.84	1.4	2.0	2.0	10	4.1	11	16	.74	.00	.00
25	.00	.89	1.2	2.0	1.9	3.1	381	10	13	.71	.00	5.2
26	.00	.89	1.2	1.9	1.9	2.6	215	9.2	11	.67	.00	.27
27	.00	.89	1.2	1.8	2.1	2.4	33	394	9.9	.66	.00	.48
28	.00	.84	2.0	1.9	2.1	2.5	15	58	8.9	.61	.00	1.2
29	.14	.93	1.7	1.9	2.0	14	12	200	8.0	.51	.00	.02
30	32	.93	1.3	2.1	---	6.1	12	153	7.6	.38	.00	.00
31	1.5	---	1.1	1.8	---	3.6	---	31	---	.23	.00	---
TOTAL	33.72	66.65	35.95	81.7	67.1	99.4	781.7	2125.3	3055.9	68.86	.35	7.60
MEAN	1.09	2.22	1.16	2.64	2.31	3.21	26.1	68.6	102	2.22	.011	.25
MAX	32	42	2.0	21	4.2	14	381	394	1570	6.8	.14	5.2
MIN	.00	.42	.89	1.1	1.8	1.9	3.2	8.4	6.7	.23	.00	.00
AC-FT	67	132	71	162	133	197	1550	4220	6060	137	.7	15
CAL YR 1979	TOTAL	5136.14	MEAN 14.1	MAX 1740	MIN .00	AC-FT 10190						
WTR YR 1980	TOTAL	6424.23	MEAN 17.6	MAX 1570	MIN .00	AC-FT 12740						

ARKANSAS RIVER BASIN

317

07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'15", long 96°04'08", on line between secs. 19 and 20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, near left bank on downstream side of pier of county road bridge, 3.0 mi (4.8 km) upstream from Adams Creek, 4.0 mi (6.4 km) south of Beggs, 8.0 mi (12.9 km) downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0 (136.8 km).

DRAINAGE AREA.--2,018 mi² (5,277 km²).

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 632.55 ft (192.801 m) National Geodetic Vertical Datum of 1929.

Prior to Aug. 29, 1939, nonrecording gage at site 450 ft (137.2 m) downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--42 years, 796 ft³/s (22.54 m³/s), 576,700 acre-ft/yr (711 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft³/s (1,890 m³/s) May 11, 1943, gage height, 34.55 ft (10.531 m); no flow at times in 1939, 1954, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 22	2300	3,060 86.7	14.17 4.319	June 23	0700	*5,210 148	*18.67 5.691
June 8	0800	3,850 109	15.88 4.840				

Minimum daily discharge, 9.8 ft³/s (0.28 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	238	70	139	102	194	1310	1990	393	31	14
2	26	30	195	139	111	96	210	1610	2060	310	31	19
3	23	27	178	194	116	86	237	1980	2220	265	29	19
4	22	34	159	196	136	77	317	1560	2550	230	27	27
5	23	35	137	186	146	68	285	1280	3020	189	25	19
6	24	35	122	166	127	88	261	1210	3390	172	24	16
7	23	38	112	146	107	94	221	1110	3700	148	23	17
8	23	35	101	131	116	84	198	949	3830	132	23	18
9	21	31	92	120	111	76	175	767	3550	124	22	17
10	20	30	83	104	110	82	159	617	1980	110	21	16
11	19	28	77	97	116	78	145	507	828	96	20	17
12	19	25	71	95	116	78	126	421	578	78	19	18
13	18	28	71	91	173	78	110	694	447	73	18	21
14	21	26	67	91	265	78	104	714	365	66	19	29
15	20	25	69	81	337	78	98	694	311	59	19	24
16	18	25	61	74	356	83	94	785	278	55	18	19
17	19	26	58	75	305	92	96	694	509	50	21	16
18	19	26	56	70	255	98	95	1050	3000	50	44	14
19	19	25	53	75	208	94	93	2240	3550	45	53	13
20	21	38	51	81	209	91	95	2160	4020	48	28	12
21	22	2220	45	130	212	82	90	1820	4510	46	20	12
22	26	2980	61	226	195	82	83	1940	5050	42	16	11
23	27	2930	73	258	171	103	77	2100	5190	40	14	9.8
24	31	1750	69	284	156	378	79	2100	5000	38	12	9.9
25	31	912	69	322	137	419	106	2000	4610	41	11	14
26	33	738	74	331	125	268	1410	1670	4130	39	10	16
27	32	588	77	311	117	216	1840	1160	3190	38	11	15
28	25	457	74	273	112	190	1180	904	1440	35	11	20
29	27	357	66	229	103	188	1090	995	779	34	12	35
30	33	293	65	176	---	182	1190	1540	532	35	13	46
31	33	---	64	151	---	189	---	1960	---	33	14	---
TOTAL	745	13817	2788	4973	4887	3998	10458	40541	76607	3114	659	553.7
MEAN	24.0	461	89.9	160	169	129	349	1308	2554	100	21.3	18.5
MAX	33	2980	238	331	356	419	1840	2240	5190	393	53	46
MIN	18	25	45	70	103	68	77	421	278	33	10	9.8
AC-FT	1480	27410	5530	9860	9690	7930	20740	80410	151900	6180	1310	1100

CAL YR 1979 TOTAL 238444.0 MEAN 653 MAX 8440 MIN 11 AC-FT 473000
WTR YR 1980 TOTAL 163140.7 MEAN 446 MAX 5190 MIN 9.8 AC-FT 323600

ARKANSAS RIVER BASIN

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 by a local observer on a daily basis. Partial analyses were made each month on those samples at or near 5th, 15th, and 25th of October and November. An additional sample was collected 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, 10,500 micromhos Jan. 12, 1955; minimum daily, 83 micromhos June 10, 1974.

WATER TEMPERATURE: Maximum daily, 38.5°C Aug. 8, 1970; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,800 micromhos Oct. 23; minimum daily, 122 micromhos June 22.

WATER TEMPERATURE: Maximum daily, 36.0°C June 28; minimum daily, 3.0°C Jan. 31, Feb. 1, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED 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)
OCT												
02...	1230	26	1200	8.0	23.0	42	--	--	45	47	260	50
05...	1800	23	1290	8.0	20.0	--	--	--	--	--	290	67
15...	1730	18	1390	7.9	17.0	--	--	--	--	--	310	70
25...	1730	29	1460	7.7	19.0	--	--	--	--	--	300	71
NOV												
05...	1630	34	1400	7.7	14.0	--	--	--	--	--	290	61
14...	1030	26	1300	8.6	11.5	9.9	13.0	142	K30	K18	290	77
15...	1630	24	1420	8.2	12.0	--	--	--	--	--	290	79
25...	1630	853	285	7.4	13.0	--	--	--	--	--	74	15
DEC												
10...	1130	83	675	7.8	11.0	68	11.0	122	--	77	170	43
JAN												
14...	1145	93	940	8.6	11.0	15	10.2	115	57	37	250	68
FEB												
12...	1200	116	900	7.9	1.0	18	16.4	117	--	--	250	82
MAR												
06...	1430	89	--	7.8	9.5	9.2	12.1	109	K9	K9	340	130
APR												
12...	1230	126	1000	8.3	14.0	28	12.0	118	52	55	280	79
MAY												
09...	1200	769	520	7.6	20.0	210	10.6	118	250	300	170	45
JUN												
17...	1000	256	870	7.9	24.0	320	5.7	68	K850	K167	260	52
JUL												
17...	1511	50	1145	8.2	33.0	54	--	--	317	334	350	63
AUG												
22...	1230	16	1157	8.3	29.0	22	7.8	104	K110	216	300	75
SEP												
26...	1230	16	1456	7.2	20.1	1.3	--	--	450	330	330	79

ARKANSAS RIVER BASIN

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07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
02...	58	28	130	51	3.5	8.0	210	71	210	.5	1.8	648
05...	64	31	150	66	3.9	8.2	220	77	230	--	--	713
15...	68	34	160	66	4.0	8.7	240	88	250	--	--	776
25...	66	33	180	69	4.5	10	230	100	270	--	--	841
NOV												
05...	62	33	170	69	4.3	10	230	100	250	--	--	787
14...	62	32	180	57	4.6	10	210	79	260	.5	4.8	764
15...	63	32	170	69	4.4	9.8	210	94	270	--	--	794
25...	17	7.6	25	52	1.3	5.4	59	18	38	--	--	177
DEC												
10...	38	19	67	45	2.2	6.3	130	43	120	.3	5.0	397
JAN												
14...	53	28	97	45	2.7	5.9	180	58	140	.3	5.5	504
FEB												
12...	53	29	110	48	3.0	5.0	170	57	190	.2	5.1	553
MAR												
06...	71	40	150	48	3.5	6.0	210	76	260	.4	7.7	704
APR												
12...	59	32	120	48	3.1	6.1	200	54	200	.4	4.6	629
MAY												
09...	38	17	43	35	1.5	5.0	210	24	71	.3	5.3	292
JUN												
17...	57	29	67	35	1.8	5.5	210	42	120	.3	8.5	465
JUL												
17...	77	39	120	42	2.8	6.6	290	57	190	.4	8.1	672
AUG												
22...	62	34	140	50	3.5	6.7	220	71	220	.6	4.4	681
SEP												
26...	64	41	230	59	5.5	11	250	140	290	.7	2.6	872
DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
02...	634	.88	45.5	.08	.11	.060	.010	.07	.01	1.3	.80	1.40
05...	--	.97	44.3	--	--	--	--	--	--	--	--	--
15...	--	1.0	37.7	--	--	--	--	--	--	--	--	--
25...	--	1.1	65.9	--	--	--	--	--	--	--	--	--
NOV												
05...	--	1.0	72.2	--	--	--	--	--	--	--	--	--
14...	1060	1.0	53.6	1.8	--	.080	--	.10	--	1.0	--	1.10
15...	--	1.0	51.5	--	--	--	--	--	--	--	--	--
25...	--	.24	408	--	--	--	--	--	--	--	--	--
DEC												
10...	381	.54	89.0	1.2	1.0	.430	.200	.52	.26	1.1	1.6	1.50
JAN												
14...	504	.69	127	1.8	1.9	.360	.120	.44	.15	.50	.48	.86
FEB												
12...	556	.75	173	1.0	1.0	.230	.030	.28	.04	1.5	.73	1.70
MAR												
06...	737	.96	169	.03	.01	.020	.000	.02	.00	1.6	.72	1.60
APR												
12...	597	.86	214	.03	.04	.480	.000	.58	.00	2.1	1.1	2.60
MAY												
09...	278	.40	606	.57	.37	.120	.090	.15	.12	1.8	.88	1.90
JUN												
17...	458	.63	321	.63	.56	.080	.050	.10	.06	1.3	1.1	1.40
JUL												
17...	673	.91	90.7	.00	.07	.030	.000	.04	.00	1.8	1.3	1.80
AUG												
22...	671	.93	29.4	.00	.00	.010	.000	.01	.00	1.6	1.1	1.60
SEP												
26...	930	1.1	37.7	.00	.00	.010	.000	.01	.00	1.6	1.2	1.60

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DISSOLV (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)	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)
UCT												
02...	.59	.81	1.5	6.6	.92	.220	.67	.070	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.00	--	2.9	13	--	.840	2.6	--	5	0	5	300
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
10...	.00	1.8	2.7	12	2.8	.550	1.7	.260	--	--	--	--
JAN												
14...	.26	.60	2.7	12	2.5	.660	2.0	.450	--	--	--	--
FEB												
12...	.94	.76	2.7	12	1.8	.570	1.7	.420	3	1	2	400
MAR												
06...	.88	.72	1.6	7.2	.73	.540	1.7	.290	--	--	--	--
APR												
12...	1.5	1.1	2.6	12	1.1	.500	1.5	.270	--	--	--	--
MAY												
09...	.93	.97	2.5	11	1.3	.530	1.6	.130	5	3	2	300
JUN												
17...	.30	1.1	2.0	9.0	1.7	.420	1.3	.180	--	--	--	--
JUL												
17...	.50	1.3	1.8	8.0	1.4	.200	.61	.130	--	--	--	--
AUG												
22...	.50	1.1	1.6	7.1	1.1	.160	.49	.080	3	0	3	300
SEP												
26...	.40	1.2	1.6	7.1	1.2	.140	.43	.070	--	--	--	--

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
02...	--	--	--	--	13	--	--	--	174	12	92
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	0	110	100	10	35	--	--	43000	59	4.1	97
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
10...	--	--	--	--	9.4	--	--	--	106	24	93
JAN											
14...	--	--	--	--	11	--	--	--	45	11	94
FEB											
12...	0	30	20	8	--	8.1	11	--	176	55	66
MAR											
06...	--	--	--	--	21	--	--	78000	32	7.7	81
APR											
12...	--	--	--	--	17	--	--	--	60	20	76
MAY											
09...	0	180	160	20	--	14	2.8	110000	511	1060	97
JUN											
17...	--	--	--	--	21	--	--	14000	280	194	95
JUL											
17...	--	--	--	--	11	--	--	110000	52	7.0	94
AUG											
22...	0	40	--	<3	--	--	--	850000	64	2.8	91
SEP											
26...	--	--	--	--	--	--	--	10000	61	2.6	96

ARKANSAS RIVER BASIN

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07243500 DEEP FORK NEAR BEGGS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1500	490	1030	728	1180	1250	491	323	589	1280	1710
2	1170	1360	505	1020	744	1190	1180	445	298	633	1290	1680
3	1220	1390	516	1080	810	1200	1150	409	278	691	1320	1650
4	1220	1370	546	1020	867	1230	1070	427	264	747	1370	1680
5	1290	1400	567	933	901	1280	884	473	263	786	1410	1640
6	1230	1470	597	832	881	1300	1050	527	283	828	1410	1740
7	1240	1390	625	753	945	1280	1090	473	318	909	1390	1760
8	1270	1400	643	712	923	1290	1000	473	371	945	1270	1480
9	1300	1430	700	707	866	1320	1000	509	420	963	1270	1510
10	1320	1390	696	---	842	1390	1050	545	503	1010	1320	1630
11	1340	1210	723	748	900	1280	1080	591	560	1040	1410	1530
12	1360	1200	753	796	963	1270	1130	645	623	1060	1430	1640
13	1360	1320	764	796	955	1330	1180	491	685	1100	1450	1710
14	1380	1360	786	811	871	1310	1200	445	734	1120	1450	1790
15	1390	1420	785	841	890	1310	1220	627	767	1150	1450	1770
16	1400	1460	800	859	890	1320	1240	554	786	1150	1480	1780
17	1410	1440	833	865	955	1350	1310	582	1220	1190	1410	1740
18	1420	1420	873	883	868	1330	1320	563	181	1230	1380	1710
19	1430	1240	890	908	897	1220	1330	300	163	1250	1300	1690
20	1450	1080	907	965	850	1210	1390	382	137	1290	1290	1680
21	1470	266	951	957	880	1240	1400	363	128	1310	1230	1690
22	1460	142	997	1100	923	1300	1360	336	122	1310	882	1660
23	1800	230	1020	931	956	1610	1420	327	142	1240	732	1630
24	1520	218	1010	873	973	1200	1540	373	191	1230	900	1630
25	1460	285	902	680	992	940	1510	409	250	1250	936	1580
26	1370	403	1000	775	990	1010	408	463	310	1250	1040	1540
27	1380	423	1030	728	997	1210	357	536	364	1290	1150	1770
28	1440	441	1050	699	1050	1280	747	582	448	1320	1280	1610
29	1530	468	1040	689	1040	1210	511	627	499	1350	1350	1400
30	1490	482	1090	703	---	1090	560	491	551	1400	1410	1200
31	1430	---	1120	723	---	1210	---	354	---	1450	1460	---
MEAN	1380	1020	813	847	909	1250	1100	478	406	1100	1280	1640

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	15.0	14.0	9.0	3.0	7.0	14.0	21.0	25.0	28.0	34.0	31.0
2	22.0	26.0	9.0	9.0	5.0	6.0	17.0	19.0	27.0	34.0	35.0	28.0
3	23.0	15.0	7.0	8.0	6.0	7.0	16.0	21.0	26.0	34.0	32.0	28.0
4	19.0	14.0	13.0	8.0	6.0	11.0	17.0	21.0	28.0	34.0	32.0	31.0
5	20.0	14.0	10.0	8.0	9.0	9.0	19.0	24.0	27.0	34.0	33.0	31.0
6	21.0	12.0	9.0	8.0	5.0	12.0	29.0	24.0	28.0	34.0	33.0	32.0
7	23.0	11.0	9.0	6.0	5.0	15.0	19.0	23.0	29.0	34.0	33.0	32.0
8	24.0	13.0	9.0	8.0	3.0	13.0	18.0	22.0	27.0	34.0	34.0	31.0
9	19.0	12.0	10.0	7.0	4.0	14.0	19.0	20.0	27.0	35.0	32.0	33.0
10	17.0	10.0	12.0	---	4.0	14.0	20.0	24.0	27.0	34.0	33.0	30.0
11	21.0	12.0	12.0	7.0	6.0	11.0	21.0	27.0	28.0	35.0	33.0	30.0
12	21.0	11.0	10.0	7.0	5.0	14.0	16.0	27.0	27.0	35.0	33.0	30.0
13	17.0	11.0	8.0	8.0	7.0	12.0	13.0	24.0	28.0	34.0	33.0	31.0
14	17.0	11.0	9.0	10.0	7.0	13.0	14.0	24.0	28.0	35.0	32.0	31.0
15	17.0	12.0	9.0	11.0	6.0	13.0	17.0	22.0	29.0	34.0	33.0	29.0
16	19.0	13.0	7.0	12.0	5.0	15.0	18.0	22.0	27.0	24.0	32.0	31.0
17	21.0	12.0	6.0	9.0	6.0	15.0	17.0	23.0	25.0	35.0	30.0	27.0
18	22.0	13.0	8.0	12.0	5.0	14.0	19.0	22.0	28.0	34.0	31.0	28.0
19	22.0	16.0	9.0	10.0	9.0	16.0	21.0	21.0	26.0	34.0	31.0	28.0
20	26.0	19.0	10.0	9.0	11.0	13.0	23.0	20.0	27.0	34.0	33.0	28.0
21	25.0	16.0	11.0	11.0	12.0	14.0	24.0	21.0	27.0	33.0	31.0	30.0
22	19.0	12.0	13.0	9.0	11.0	16.0	24.0	21.0	27.0	32.0	30.0	27.0
23	19.0	12.0	11.0	9.0	12.0	14.0	25.0	23.0	28.0	23.0	31.0	24.0
24	19.0	12.0	10.0	9.0	11.0	14.0	25.0	23.0	29.0	31.0	30.0	25.0
25	19.0	13.0	11.0	10.0	11.0	12.0	---	26.0	30.0	32.0	31.0	24.0
26	19.0	12.0	12.0	7.0	9.0	13.0	15.0	26.0	30.0	32.0	30.0	23.0
27	18.0	14.0	10.0	5.0	12.0	13.0	16.0	27.0	33.0	32.0	30.0	20.0
28	19.0	9.0	11.0	6.0	13.0	16.0	17.0	28.0	36.0	33.0	30.0	21.0
29	19.0	9.0	10.0	4.0	10.0	13.0	18.0	27.0	33.0	34.0	31.0	19.0
30	17.0	15.0	9.0	4.0	---	12.0	18.0	28.0	33.0	34.0	32.0	21.0
31	14.0	---	10.0	3.0	---	14.0	---	27.0	---	35.0	32.0	---
MEAN	20.0	13.0	10.0	8.0	7.5	12.5	19.0	23.5	28.5	33.0	32.0	28.0

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 14,79 1030	MAR 6,80 1430	MAY 9,80 1200	JUN 17,80 1000
TOTAL CELLS/ML	43000	78000	110000	14000
DIVERSITY: DIVISION	1.0	1.4	0.5	2.0
..CLASS	1.0	1.4	0.5	2.0
...ORDER	1.2	1.5	0.6	2.6
....FAMILY	1.8	1.7	1.2	2.7
....GENUS	2.7	1.9	1.4	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	* 0		83	1
....COELASTRACEAE								
....COELASTRUM	1000	2	1000	1	--	-	--	-
....MICRACTINIACEAE								
....GOLENKINIA	--	-	1000	1	--	-	--	-
....MICRACTINIUM	--	-	1000	1	1300	1	--	-
....OOCYSTACEAE								
....ANKISTRODESMUS	2100	5	1000	1	770	1	83	1
....CHLORELLA	260	1	5200	7	--	-	--	-
....CHODATELLA	520	1	* 0		* 0		--	-
....DICTYOSPHAERIUM	--	-	510	1	* 0		500	4
....KIRCHNERIELLA	--	-	--	-	* 0		170	1
....OOCYSTIS	3300	8	--	-	--	-	170	1
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	* 0		--	-
....TREUBARIA	--	-	* 0		--	-	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	1000	1	* 0		--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-
....SCENEDESMUS	15000#	35	510	1	1100	1	170	1
....TETRASTRUM	1000	2	--	-	* 0		--	-
..ULOTRICHIALES								
...CHAETOPHORACEAE								
....STIGEOCLONIUM	--	-	--	-	--	-	1200	9
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	1300	3	* 0		* 0		580	4
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
....CYCLOTELLA	2600	6	45000#	57	1200	1	4500#	33
....MELOSIRA	--	-	--	-	* 0		170	1
....SKELETONEMA	4100	10	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	170	1
....THALASSIOSIRA	11000#	26	--	-	--	-	--	-
..PENNALES								
...NAVICULACEAE								
....ENTOMONEIS	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-
....NAVICULA	--	-	--	-	--	-	--	-
....NITZSCHIA	520	1	* 0		1700	2	1100	8
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	250	2
....CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

ARKANSAS RIVER BASIN

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07243500 DEEP FORK NEAR BEGGS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 14,79 1030	MAR 6,80 1430	MAY 9,80 1200	JUN 17,80 1000				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	1500	1	2300#	17
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-
...HORMOGONALES								
...NOSTOCAEAE								
....ANABAENA	--	-	21000#	26	--	-	--	-
....APHANIZOMENON	--	-	--	-	84000#	78	--	-
...OSCILLATORIAEAE								
....LYNGBYA	--	-	--	-	2600	2	--	-
....OSCILLATORIA	--	-	--	-	10000	10	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	510	1	*	0	830	6
....PHACUS	--	-	--	-	--	-	170	1
....TRACHELOMONAS	--	-	*	0	*	0	1200	9
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

DATE TIME	JUL 17,80 1511	AUG 22,80 1230	SEP 26,80 1230
TOTAL CELLS/ML	110000	850000	10000
DIVERSITY: DIVISION	1.2	0.1	1.8
..CLASS	1.2	0.1	1.8
...ORDER	2.0	0.1	1.9
....FAMILY	2.1	0.1	2.6
....GENUS	2.6	0.1	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	460	4
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	93	1
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	93	1
....CHLORELLA	--	-	--	-	--	-
....CHODATELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	600	6
....KIRCHNERIELLA	2100	2	--	-	--	-
....OOCYSTIS	--	-	--	-	*	0
....SELENASTRUM	--	-	*	0	--	-
....TETRAEDRON	--	-	--	-	*	0
....TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
....CRUCIGENIA	3900	4	*	0	190	2
....SCENEDESMUS	2600	2	*	0	650	6
....TETRASTRUM	--	-	--	-	--	-
...ULOTRICHIALES						
...CHAETOPHORACEAE						
...STIGEOCLONIUM	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	*	0	--	-	--	-
....CHLAMYDOMONAS	*	0	--	-	--	-

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	JUL 17,80 1511		AUG 22,80 1230		SEP 26,80 1230	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCEAE						
....CYCLOTELLA	16000	15	*	0	280	3
....MELOSIRA	--	--	--	--	--	--
....SKELETONEMA	--	--	--	--	--	--
....STEPHANODISCUS	--	--	--	--	--	--
....THALASSIOSIRA	--	--	--	--	--	--
..PENNALES						
...NAVICULACEAE						
....ENTOMONEIS	--	--	--	--	2000#	19
....GYROSIGMA	--	--	--	--	140	1
....NAVICULA	*	0	--	--	*	0
...NITZSCHIACEAE						
....NITZSCHIA	2800	3	--	--	1100	10
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHROOMONAS	*	0	--	--	--	--
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	--	--	--	140	1
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....AGMENELLUM	12000	12	--	--	--	--
....ANACYSTIS	24000#	23	*	0	4200#	40
....GOMPHOSPHAERIA	2600	2	--	--	--	--
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	--	--	--	--	--
....APHANIZOMENON	--	--	--	--	--	--
...OSCILLATORIA						
....LYNGBYA	--	--	--	--	--	--
....OSCILLATORIA	38000#	36	840000#	99	--	--
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	*	0	*	0	330	3
....PHACUS	*	0	--	--	--	--
....TRACHELOMONAS	*	0	--	--	93	1
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
....GLENODINIAEAE						
....GLENODINIUM	--	--	*	0	--	--

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07244800 EUFAULA LAKE NEAR BROOKEN, OK

LOCATION.--Lat 35°18'25", long 95°21'45", in SW¼ 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 (6.4 km) northeast of Brooken, and at mile 27.0 (43.4 km).

DRAINAGE AREA.--47,522 mi² (123,082 km²), of which 9,700 mi² (25,123 km²) 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 (12.2 m) 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, 3,798,000 acre-ft (4.68 km³) at elevation 597.0 ft (181.966 m), top of flood control pool, 2,329,000 acre-ft (2.87 km³) at elevation 585.0 ft (178.308 m), top of power pool, and 864,800 acre-ft (1.07 km³) at elevation 565.0 ft (172.212 m), 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 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,791,000 acre-ft (4.67 km³) Apr. 25, 1973, elevation, 596.95 ft (181.950 m); minimum since power pool first filled, 1,182,000 acre-ft (1.46 km³) Nov. 4, 1964, elevation, 570.23 ft (173.806 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,482,000 acre-ft (3.06 km³) June 3, elevation 586.46 ft (178.752 m); minimum, 1,792,000 acre-ft (2.21 km³) Sept. 23, elevation, 579.23 ft (176.549 m).

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

579	1,772,000	586	2,434,000
582	2,036,000	588	2,649,000
584	2,228,000	590	2,880,000

CONTENTS, IN ACRE-FeET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2252000	2110000	2230000	2223000	2025000	1925000	1924000	2041000	2469000	2459000	2072000	1860000
2	2246000	2108000	2232000	2221000	2022000	1926000	1929000	2087000	2474000	2449000	2065000	1864000
3	2240000	2106000	2232000	2219000	2017000	1920000	1929000	2118000	2476000	2437000	2061000	1858000
4	2228000	2105000	2234000	2215000	2007000	1910000	1932000	2141000	2469000	2417000	2051000	1856000
5	2217000	2101000	2232000	2215000	2002000	1900000	1937000	2154000	2458000	2406000	2040000	1850000
6	2215000	2094000	2234000	2213000	1988000	1892000	1943000	2163000	2449000	2393000	2029000	1847000
7	2210000	2091000	2232000	2212000	1979000	1886000	1943000	2166000	2455000	2378000	2019000	1843000
8	2199000	2083000	2234000	2203000	1974000	1880000	1949000	2172000	2444000	2366000	2009000	1837000
9	2189000	2090000	2236000	2191000	1977000	1881000	1946000	2174000	2445000	2352000	2002000	1832000
10	2182000	2088000	2238000	2184000	1977000	1872000	1944000	2182000	2436000	2338000	1996000	1830000
11	2172000	2087000	2236000	2168000	1970000	1872000	1942000	2185000	2415000	2322000	1985000	1828000
12	2159000	2087000	2242000	2165000	1964000	1874000	1943000	2185000	2391000	2311000	1979000	1824000
13	2161000	2085000	2238000	2159000	1956000	1870000	1949000	2186000	2366000	2301000	1970000	1822000
14	2158000	2087000	2240000	2149000	1950000	1867000	1946000	2185000	2346000	2285000	1965000	1820000
15	2147000	2086000	2242000	2146000	1951000	1866000	1946000	2194000	2336000	2271000	1959000	1817000
16	2141000	2081000	2238000	2139000	1943000	1885000	1946000	2210000	2317000	2258000	1955000	1812000
17	2139000	2082000	2238000	2127000	1943000	1880000	1955000	2222000	2314000	2240000	1953000	1809000
18	2131000	2084000	2232000	2120000	1931000	1880000	1951000	2272000	2324000	2232000	1946000	1806000
19	2130000	2081000	2221000	2117000	1924000	1882000	1952000	2311000	2362000	2227000	1935000	1804000
20	2128000	2088000	2219000	2114000	1924000	1886000	1954000	2338000	2384000	2220000	1926000	1801000
21	2155000	2129000	2216000	2107000	1922000	1884000	1955000	2357000	2402000	2214000	1915000	1800000
22	2130000	2172000	2218000	2102000	1926000	1885000	1953000	2373000	2422000	2200000	1912000	1796000
23	2126000	2194000	2228000	2094000	1924000	1913000	1954000	2386000	2436000	2188000	1908000	1800000
24	2121000	2207000	2227000	2087000	1927000	1900000	1956000	2395000	2441000	2177000	1907000	1800000
25	2114000	2223000	2225000	2079000	1927000	1901000	1973000	2403000	2456000	2165000	1897000	1804000
26	2108000	2224000	2221000	2078000	1931000	1905000	1992000	2403000	2465000	2158000	1894000	1800000
27	2107000	2228000	2219000	2074000	1932000	1906000	2004000	2400000	2469000	2150000	1886000	1806000
28	2107000	2234000	2221000	2064000	1930000	1914000	2013000	2393000	2476000	2136000	1880000	1809000
29	2095000	2232000	2223000	2061000	1924000	1924000	2018000	2402000	2474000	2119000	1878000	1810000
30	2109000	2232000	2223000	2050000	---	1923000	2026000	2416000	2470000	2102000	1870000	1808000
31	2112000	---	2223000	2040000	---	1918000	---	2444000	---	2085000	1868000	---
MAX	2252000	2234000	2242000	2223000	2025000	1926000	2026000	2444000	2476000	2459000	2072000	1864000
MIN	2095000	2081000	2215000	2040000	1922000	1866000	1924000	2041000	2314000	2085000	1868000	1796000
†	582.81	584.03	583.94	582.04	580.76	580.69	581.89	586.10	586.35	582.52	580.12	579.42
‡	-150,000	+120,000	-9,000	-183,000	-116,000	-6,000	+108	+418,000	+26,000	-385,000	-217,000	-60,000
CAL YR 1979	MAX	2803000	MIN	1794000	‡	+404,000						
WTR YR 1980	MAX	2476000	MIN	1796000	‡	-454,000						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'45", long 95°14'19", in SE¼SE¼ sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, near right bank on downstream side of pier of bridge on State Highway 2, 0.8 mi (1.3 km) north of Whitefield, 5.5 mi (8.8 km) upstream from Taleka (Snake) Creek, 8.2 mi (13.2 km) downstream from Eufaula Dam, and at mile 18.8 (30.2 km).

DRAINAGE AREA.--47,576 mi² (123,222 km²), of which 9,700 mi² (25,123 km²) 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 (144.219 m) 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 (3.4 km) downstream at datum 2.20 ft (0.671 m) higher. Dec. 11, 1941, to June 11, 1947, and Oct. 1, 1948, to Sept. 30, 1978, water-stage recorder at present site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi² (140 km²) of intervening area, completely regulated thereafter by Eufaula Lake (station 07244800).

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Eufaula Dam) 25 years (water years 1939-63), 6,005 ft³/s (170.1 m³/s), 4,347,000 acre-ft/yr (5.36 km³/yr); (since regulation by Eufaula Dam) 13 years (water years 1968-80), 5,109 ft³/s (144.7 m³/s), 3,701,000 acre-ft/yr (4.56 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 281,000 ft³/s (7,960 m³/s) May 10, 1943, gage height, 25.5 ft (7.77 m) datum then in use; minimum daily, 0.4 ft³/s (0.011 m³/s) Oct. 8, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1898, that of May 10, 1943, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) July 30, gage height, 12.54 ft (3.822 m); minimum daily, 42 ft³/s (1.19 m³/s) Apr. 9, May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3450	233	49	345	8650	833	49	114	6560	5590	5930	71
2	3330	709	48	1700	4710	611	143	263	9690	6860	2940	849
3	2550	132	114	1690	2270	3320	83	176	9780	6510	395	1210
4	3990	167	199	2740	5330	5810	51	85	14000	6810	3420	2030
5	3750	2010	50	991	5850	4490	168	67	13800	6600	4710	2310
6	2150	1550	76	101	5470	4760	52	59	14000	6890	4640	2840
7	1530	2220	164	2600	5910	4620	63	55	8440	7750	4480	661
8	4160	2940	83	3820	6820	2780	155	91	7280	7300	9430	2420
9	4060	1440	84	5270	4030	670	42	116	7700	7350	3390	1900
10	4130	144	81	7410	2580	3990	943	48	9650	7380	1710	1100
11	3120	106	109	5900	3530	1960	145	45	11200	8070	4600	287
12	3970	263	168	3820	6080	1460	65	42	13700	6070	3150	876
13	1150	396	159	2670	5850	1320	62	104	13800	3990	2630	589
14	265	250	226	5070	6180	371	55	826	14000	7020	2630	80
15	2930	428	90	4150	6060	277	111	155	6710	6380	2640	725
16	3990	251	91	4400	1180	77	102	76	9430	6050	1510	854
17	2820	309	2380	5790	1510	2270	70	47	10200	6220	1050	243
18	2950	84	2420	5750	5970	421	162	229	2150	5890	3500	184
19	2740	172	4260	3810	6520	96	112	610	1170	4180	3820	714
20	825	293	2970	2680	2710	118	52	2170	441	1630	4360	233
21	379	96	1950	4940	1630	266	46	4600	417	4520	4490	71
22	1310	64	652	5190	205	62	83	6100	288	4360	1210	318
23	194	51	117	4650	123	73	122	6840	3230	5070	687	201
24	2640	50	726	4850	108	305	86	5090	5570	4390	390	73
25	2790	50	391	4470	104	80	295	4510	4590	6290	3210	161
26	2930	49	2710	2850	520	62	183	4780	4720	4520	2280	189
27	725	48	821	2420	122	58	77	7150	5100	3460	2220	77
28	498	72	104	5280	594	56	62	7240	4180	7020	3220	76
29	1640	135	91	3020	1790	54	53	7010	3470	7350	2050	63
30	3520	50	83	6440	---	55	120	6760	3900	7410	637	61
31	1160	---	207	5520	---	50	---	7220	---	6930	81	---
TOTAL	75646	14762	21673	120337	102406	41375	3812	72678	219166	185860	87410	21466
MEAN	2440	492	699	3882	3531	1335	127	2344	7306	5995	2820	716
MAX	4160	2940	4260	7410	8650	5810	943	7240	14000	8070	5930	2840
MIN	194	48	48	101	104	50	42	42	288	1630	81	61
AC=FT	150000	29280	42990	238700	203100	82070	7560	144200	434700	368700	173400	42580
CAL YR 1979 TOTAL	1353562			MEAN 3709	MAX 36100	MIN 48	AC=FT 2685000					
WTR YR 1980 TOTAL	966591			MEAN 2641	MAX 14000	MIN 42	AC=FT 1917000					

ARKANSAS RIVER BASIN

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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. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for October and November. An additional sample was collected 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 micromhos Nov. 11, 1956; minimum daily, 36 micromhos May 19, 1980.

WATER TEMPERATURE: Maximum daily, 31.0°C Sept. 4, 1944, Aug. 11, 19, 1973; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 649 micromhos Sept. 2; minimum daily, 36 micromhos May 19.

WATER TEMPERATURE: Maximum daily, 30.0°C June 8; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT												
05...	0835	487	435	8.0	18.0	--	--	--	--	--	110	30
11...	1030	378	--	7.5	17.5	--	--	9.7	119	54	110	30
15...	0830	134	469	7.9	16.0	--	--	--	--	--	140	40
25...	0835	333	444	7.9	16.0	--	--	--	--	--	120	29
NOV												
05...	0835	2010	485	8.0	13.0	--	--	--	--	--	130	24
15...	0835	270	450	8.0	12.0	--	--	--	--	--	120	29
25...	0830	72	489	7.9	18.0	--	--	--	--	--	150	28
29...	1000	100	485	7.4	5.0	11	--	--	41	297	120	29
DEC												
17...	1545	5280	475	8.1	8.5	6.6	14.9	126	K30	120	120	30
JAN												
21...	1530	6800	460	8.2	8.5	8.4	4.0	40	182	K4	110	32
FEB												
26...	0815	90	520	8.3	2.5	3.4	10.5	78	K810	K1	160	32
MAR												
11...	1430	4020	--	8.5	7.0	4.6	14.6	122	43	K15	120	40
APR												
15...	1400	42	510	7.9	16.0	4.9	9.9	101	K10	K14	150	33
MAY												
20...	1500	98	330	7.6	22.5	58	9.4	109	48	72	88	30
JUN												
09...	1400	7700	520	7.9	22.0	5.4	9.1	104	K5	K13	140	29
JUL												
07...	1100	520	590	7.9	26.0	1.7	7.0	86	40	24	150	31
AUG												
05...	1330	256	620	7.9	27.0	1.1	--	--	120	27	160	63
SEP												
09...	1230	212	--	7.8	27.0	1.3	7.1	90	240	83	160	54

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	ALKA- LITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
05...	30	9.5	39	51	1.6	4.4	84	39	56	--	--	237
11...	29	9.1	36	41	1.5	4.1	80	36	60	.3	2.9	229
15...	38	11	40	37	1.5	4.3	100	41	75	--	--	259
25...	30	10	39	51	1.6	4.3	87	38	56	--	--	245
NOV												
05...	37	10	36	45	1.4	4.2	110	37	59	--	--	274
15...	31	9.6	38	50	1.5	4.3	88	38	61	--	--	248
25...	41	11	36	42	1.3	3.7	120	37	53	--	--	277
29...	32	9.9	39	50	1.5	4.5	92	33	60	.2	2.6	268
DEC												
17...	31	9.8	44	53	1.8	5.2	88	39	63	.3	2.6	261
JAN												
21...	30	9.7	42	43	1.7	4.7	83	40	65	.3	3.1	250
FEB												
26...	45	12	39	34	1.3	4.1	130	41	56	.3	4.9	296
MAR												
11...	33	10	45	43	1.8	4.8	84	39	67	.3	3.0	274
APR												
15...	43	11	46	39	1.6	5.0	120	41	66	.3	2.7	255
MAY												
20...	23	7.3	28	40	1.3	3.8	58	28	39	.2	5.5	195
JUN												
09...	36	12	50	43	1.8	4.6	110	43	79	.3	2.5	296
JUL												
07...	39	13	55	43	1.9	4.6	120	54	89	.6	3.2	330
AUG												
05...	42	14	58	43	2.0	4.9	100	60	90	.4	4.2	348
SEP												
09...	41	15	59	43	2.0	5.6	110	57	97	.4	4.8	350

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	--	.32	312	--	--	--	--	--	--	--	--	--
11...	227	.31	234	.25	.23	.060	.050	.07	.06	.68	.59	.74
15...	--	.35	93.7	--	--	--	--	--	--	--	--	--
25...	--	.33	220	--	--	--	--	--	--	--	--	--
NOV												
05...	--	.37	1490	--	--	--	--	--	--	--	--	--
15...	--	.34	181	--	--	--	--	--	--	--	--	--
25...	--	.38	53.8	--	--	--	--	--	--	--	--	--
29...	239	.36	72.4	.55	.44	.040	.020	.05	.03	.63	.63	.67
DEC												
17...	249	.36	3720	.29	.33	.260	.280	.31	.36	1.2	1.3	1.50
JAN												
21...	246	.34	4590	.43	.39	.080	.070	.10	.09	.43	.29	.51
FEB												
26...	282	.40	71.9	.14	.19	.100	.100	.12	.13	.52	.33	.62
MAR												
11...	254	.37	2970	.28	.26	.200	.230	.24	.30	.90	.97	1.10
APR												
15...	287	.35	28.9	.02	.02	.380	.280	.46	.36	1.1	1.3	1.50
MAY												
20...	170	.27	51.6	.12	.05	.140	.060	.17	.08	1.2	.48	1.30
JUN												
09...	295	.40	6150	.25	.24	.310	.300	.38	.39	.35	1.4	.66
JUL												
07...	332	.45	463	.15	.23	.020	.060	.02	.08	.83	.93	.85
AUG												
05...	334	.47	241	.00	.03	.060	.090	.07	.12	1.2	.62	1.30
SEP												
09...	346	.48	200	.00	.00	.130	.130	.16	.17	.87	.87	1.00

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	5.7	--	--	--	33	34	97
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
29...	0	40	40	4	5.6	--	--	--	20	5.4	93
DEC											
17...	--	--	--	--	7.1	--	--	--	38	542	90
JAN											
21...	--	--	--	--	5.7	--	--	--	45	826	95
FEB											
26...	0	30	30	<3	--	8.2	.1	--	10	2.4	61
MAR											
11...	--	--	--	--	5.7	--	--	3600	7	76	90
APR											
15...	--	--	--	--	7.5	--	--	--	6	.68	59
MAY											
20...	0	10	0	20	--	11	--	2800	63	17	77
JUN											
09...	--	--	--	--	6.0	--	--	2900	32	665	64
JUL											
07...	--	--	--	--	4.6	--	--	3600	8	11	85
AUG											
05...	0	80	80	5	--	12	.3	--	4	2.8	57
SEP											
09...	--	--	--	--	6.7	--	--	31000	6	3.4	74

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	436	442	437	411	423	442	449	427	473	553	507	645
2	438	478	442	430	420	482	464	418	480	556	506	649
3	437	454	443	408	423	457	448	127	484	559	507	632
4	436	467	407	408	419	452	461	209	495	558	511	631
5	435	485	426	409	422	449	450	282	499	555	507	631
6	439	446	434	430	422	450	483	345	501	559	506	632
7	439	448	411	448	421	448	489	373	500	563	509	631
8	440	444	424	414	410	450	482	400	500	566	510	637
9	439	430	428	410	419	452	491	427	512	565	512	628
10	437	455	426	411	420	477	513	445	512	569	513	629
11	440	487	426	411	418	454	484	454	514	570	513	632
12	441	498	409	412	406	451	503	454	532	574	516	636
13	443	449	414	413	367	456	510	454	535	573	516	632
14	458	477	405	422	400	456	513	454	538	573	517	636
15	469	450	418	414	397	458	516	454	536	576	517	639
16	444	457	425	412	425	482	489	409	532	576	517	633
17	438	453	440	412	431	426	493	291	541	576	518	635
18	442	477	406	414	427	394	499	345	437	579	518	640
19	441	489	404	415	423	433	483	36	218	580	514	638
20	441	449	405	414	403	452	498	336	229	583	517	635
21	446	444	406	416	424	441	502	373	456	584	516	643
22	438	401	406	416	431	453	504	173	363	587	518	646
23	448	453	423	417	450	467	489	363	463	588	521	611
24	447	474	430	416	462	358	496	418	539	589	520	606
25	444	489	406	417	467	396	454	436	543	588	523	554
26	445	496	603	417	472	392	395	454	548	588	518	625
27	443	498	405	420	435	407	322	463	554	587	520	618
28	438	501	424	415	452	428	357	463	556	586	522	585
29	469	465	440	419	427	434	410	454	554	589	520	582
30	468	479	449	418	---	432	440	454	556	591	522	603
31	362	---	452	416	---	440	---	463	---	591	529	---
MEAN	441	465	428	416	425	441	470	376	490	575	515	626

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	14.0	5.0	7.0	.0	2.0	12.0	16.0	20.0	24.0	25.0	25.0
2	20.0	14.0	4.0	7.0	.0	1.0	14.0	18.0	19.0	23.0	25.0	25.0
3	20.0	13.0	4.0	7.0	.0	3.0	13.0	16.0	18.0	24.0	25.0	25.0
4	20.0	14.0	8.0	6.0	.0	11.0	12.0	18.0	18.0	24.0	25.0	25.0
5	18.0	13.0	9.0	7.0	.5	4.0	12.0	18.0	18.0	24.0	24.0	25.0
6	20.0	13.0	8.0	7.0	.0	5.0	12.0	20.0	20.0	24.0	27.0	25.0
7	19.0	13.0	9.0	4.0	.0	10.0	15.0	21.0	20.0	24.0	25.0	25.0
8	22.0	15.0	7.0	5.0	.0	6.0	11.0	18.0	30.0	24.0	25.0	25.0
9	20.0	15.0	7.0	5.0	.0	6.0	11.0	14.0	17.0	24.0	25.0	25.0
10	18.0	10.0	10.0	7.0	.0	10.0	12.0	17.0	16.0	24.0	24.0	25.0
11	18.0	9.0	14.0	9.0	.0	7.0	14.0	21.0	18.0	25.0	22.0	25.0
12	20.0	10.0	7.0	6.0	.0	8.0	11.0	24.0	20.0	24.0	25.0	25.0
13	18.0	12.0	5.0	6.0	.0	7.0	9.0	22.0	20.0	24.0	25.0	25.0
14	17.0	10.0	7.0	7.0	.5	6.0	7.0	17.0	20.0	24.0	25.0	25.0
15	16.0	12.0	6.0	10.0	1.0	7.0	9.0	16.0	21.0	25.0	25.0	25.0
16	18.0	12.0	6.0	9.0	4.0	13.0	12.0	15.0	20.0	25.0	25.0	25.0
17	20.0	12.0	2.0	8.0	1.0	11.0	15.0	19.0	22.0	25.0	25.0	21.0
18	20.0	15.0	6.0	8.0	3.0	7.0	15.0	20.0	22.0	25.0	25.0	22.0
19	20.0	16.0	8.0	9.0	6.0	10.0	21.0	18.0	22.0	25.0	25.0	24.0
20	20.0	16.0	9.0	10.0	6.0	14.0	16.0	16.0	24.0	24.0	25.0	24.0
21	21.0	16.0	11.0	10.0	8.0	8.0	18.0	16.0	23.0	25.0	25.0	25.0
22	16.0	9.0	12.0	8.0	7.0	11.0	18.0	18.0	24.0	25.0	24.0	25.0
23	20.0	11.0	13.0	5.0	8.0	12.0	17.0	16.0	25.0	22.0	24.0	22.0
24	15.0	18.0	10.0	7.0	8.0	8.0	20.0	17.0	23.0	23.0	23.0	21.0
25	16.0	18.0	7.0	9.0	5.0	8.0	16.0	17.0	23.0	23.0	25.0	22.0
26	17.0	8.0	9.0	1.0	4.0	8.0	14.0	18.0	23.0	24.0	25.0	20.0
27	17.0	11.0	10.0	.5	6.0	11.0	13.0	17.0	23.0	25.0	25.0	18.0
28	18.0	8.0	10.0	.5	10.0	12.0	13.0	17.0	23.0	24.0	25.0	17.0
29	18.0	6.0	9.0	.5	6.0	13.0	16.0	17.0	25.0	25.0	24.0	17.0
30	19.0	4.0	9.0	.5	---	10.0	18.0	19.0	23.0	25.0	25.0	18.0
31	15.0	---	5.0	.0	---	8.0	---	18.0	---	25.0	25.0	---
MEAN	18.5	12.0	8.0	6.0	3.0	8.0	14.0	18.0	21.5	24.0	24.5	23.0

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 29,79 1000	MAR 11,80 1430	MAY 20,80 1500	JUN 9,80 1400	JUL 7,80 1100	SEP 9,80 1230
TOTAL CELLS/ML	18000	3600	2800	2900	3600	31000
DIVERSITY: DIVISION	1.2	0.9	0.8	1.6	0.6	0.5
..CLASS	1.2	0.9	0.8	1.6	0.6	0.5
...ORDER	1.7	1.1	1.2	2.1	1.5	0.9
....FAMILY	1.8	1.2	1.2	2.4	1.8	1.1
.....GENUS	1.9	1.6	1.2	2.9	2.2	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
....COELASTRACEAE												
.....COELASTRUM	--	-	--	-	--	-	440#	15	--	-	250	1
....OOCYSTACEAE												
.....ANKISTRODESMUS	340	2	130	4	50	2	26	1	--	-	*	0
....CHLORELLA	--	-	--	-	--	-	*	0	--	-	--	-
....CHODATELLA	--	-	--	-	--	-	*	0	*	0	--	-
....DICTYOSPHAERIUM	--	-	100	3	--	-	--	-	--	-	400	1
....KIRCHNERIELLA	*	0	67	2	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	33	1	--	-	52	2	--	-	*	0
....SELENASTRUM	--	-	--	-	--	-	26	1	52	1	180	1
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	*	0
....SCENEDESMACEAE												
.....SCENEDESMUS	340	2	200	6	50	2	26	1	310	9	300	1
....TETRASTRUM	--	-	--	-	--	-	52	2	--	-	--	-
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	200	7	77	3	--	-	--	-
..VOLVOCALES												
....CHLAMYDOMONADACEAE												
.....CHLAMYDOMONAS	--	-	33	1	50	2	*	0	26	1	*	0
....CHLOROGONIUM	--	-	33	1	--	-	--	-	--	-	--	-
....PHACOTACEAE												
.....PHACOTUS	--	-	33	1	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
....COSCINODISCEACEAE												
.....CYCLOTELLA	7900#	45	2700#	76	2200#	80	1200#	43	39	1	330	1
....MELOSIRA	--	-	33	1	--	-	150	5	--	-	630	2
....SKELETONEMA	170	1	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	33	1	--	-	--	-	--	-	--	-
..PENNALES												
....ACHNANTHACEAE												
.....ACHNANTHES	--	-	--	-	--	-	--	-	*	0	--	-
....NAVICULACEAE												
.....NAVICULA	170	1	--	-	--	-	--	-	--	-	--	-
....NITZSCHACEAE												
.....NITZSCHIA	170	1	33	1	75	3	52	2	--	-	180	1
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
....CRYPTOCHRYSIDACEAE												
.....CHROOMONAS	--	-	--	-	--	-	26	1	--	-	--	-
....CRYPTOMONADACEAE												
.....CRYPTOMONAS	--	-	--	-	--	-	39	1	--	-	*	0

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 to SEPTEMBER 1980

DATE TIME	NOV 29,79 1000		MAR 11,80 1430		MAY 20,80 1500		JUN 9,80 1400		JUL 7,80 1100		SEP 9,80 1230	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	6200#	35	--	-	--	-	210	7	130	4	600	2
....ANACYSTIS	--	-	130	4	--	-	180	6	1900#	52	1500	5
....COCCOCHLORIS	--	-	--	-	25	1	--	-	--	-	--	-
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	350	10	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-	--	-	630	2
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	570#	16	10000#	32
....OSCILLATORIA	2200	12	--	-	--	-	230	8	230	6	16000#	51
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	75	3	--	-	--	-	--	-
....TRACHELUMONAS	--	-	--	-	25	1	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	*	0	--	-	*	0

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ARKANSAS RIVER BASIN

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07245020 TALOKA CREEK AT STIGLER, OK

LOCATION.--Lat 35°16'09", long 95°05'49", SW¼NW¼, sec.9, T.9 N., T.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 0.6 mi (1.0 km) north of State Highway 9, 1.6 mi (2.6 km) northeast of Stigler, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--3.98 mi² (10.31 km²).

PERIOD OF RECORD.--December 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMMOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
FEB 20...	1040	.08	135	7.0	7.0	--	--	--	--	--	--	--
MAR 20...	1000	.15	124	6.9	14.0	30	17	9.0	89	.54	30	9
APR 22...	0845	.12	175	6.9	18.0	30	--	5.1	54	1.6	43	14
MAY 29...	0845	.79	122	7.1	22.0	80	78	6.2	72	.68	32	10
JUN 24...	1430	1.6	106	7.4	29.0	40	8.4	7.1	95	.60	30	9
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- SURP- 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	7.0	3.1	12	44	1.0	2.1	21	15	12	.1	5.6	83
APR 22...	9.5	4.8	14	39	.9	2.7	29	17	14	.2	5.8	96
MAY 29...	7.3	3.3	8.1	34	.6	2.3	22	13	14	.1	6.6	54
JUN 24...	6.8	3.1	8.0	35	.6	2.2	21	8.5	10	.1	12	76
DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	70	.11	.03	.02	.03	--	.060	.000	--	.07	.00	.46
APR 22...	86	.13	.03	.03	.21	--	.020	.350	--	.02	.45	.71
MAY 29...	68	.07	.12	.11	.07	--	.170	.060	--	.21	.08	.93
JUN 24...	64	.10	.33	.15	.17	60	.000	.060	20	.00	.08	.77

ARKANSAS RIVER BASIN

07245020 TALOKA CREEK AT STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	.51	.52	.01	.51	--	.54	2.4	--	.050	.15	.010	--
APR 22...	1.1	.73	.00	1.4	--	.76	3.4	--	.030	.09	.010	--
MAY 29...	.55	1.10	.49	.61	--	1.2	5.4	--	.050	.15	.010	--
JUN 24...	.37	.77	.34	.43	100	.92	4.1	160	.050	.15	.030	120

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
FEB 20...	1040	370	350	20	--	1	1	0	--	40	20
MAR 20...	1000	490	460	30	--	1	0	1	--	70	40
APR 22...	0845	180	180	0	--	1	0	1	--	40	0
MAY 29...	0845	1400	1300	70	--	2	1	1	--	50	30
JUN 24...	1430	240	200	40	450	1	0	1	30	60	20

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
FEB 20...	20	0	--	<1	0	0	0	--	--	0	0
MAR 20...	30	0	--	<1	10	10	0	--	--	25	24
APR 22...	40	0	--	<1	0	0	0	--	--	0	0
MAY 29...	20	0	--	<1	0	0	0	--	--	0	0
JUN 24...	40	0	1	2	0	0	0	12	30	0	0

ARKANSAS RIVER BASIN

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07245020 TALOKA CREEK AT STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
FEB 20...	0	--	780	630	150	--	0	0	0	--	70
MAR 20...	1	--	880	840	40	--	0	0	0	--	80
APR 22...	3	--	760	560	200	--	0	0	3	--	370
MAY 29...	4	--	3300	3000	280	--	0	0	0	--	370
JUN 24...	0	5	910	490	420	10000	100	100	0	40	80

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. X FINER THAN .062 MM
FEB 20...	0	0	0	30	20	10	--	17	.00	78
MAR 20...	0	0	0	20	--	<3	--	39	.02	82
APR 22...	0	0	0	30	--	<3	--	26	.01	100
MAY 29...	0	0	0	40	40	3	--	87	.19	93
JUN 24...	0	0	0	30	20	10	21	13	.06	85

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
FEB 20...	20	50	--	.0	.0	.0	--	0	<10	--
MAR 20...	20	60	--	.1	.0	.1	--	1	<10	--
APR 22...	160	210	--	.0	.0	.1	--	0	<10	--
MAY 29...	140	230	--	.1	.1	.0	--	0	<10	--
JUN 24...	10	70	2100	.0	.0	.0	.0	1	<10	0

ARKANSAS RIVER BASIN

07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK

LOCATION.--Lat 35°17'13", long 95°07'00", on west line NW¼, sec.5, T.9 N., R.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 1.8 mi (2.9 km) north of Stigler.

DRAINAGE AREA.--2.04 mi² (5.82 km²)

PERIOD OF RECORD.--November 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	
OCT													
10...	1320	.60	2500	8.5	16.0	--	--	10.0	101	--	--	--	
24...	0945	.94	2600	7.8	11.5	10	16	10.2	94	9.8	280	0	
NOV													
13...	1330	.75	--	8.0	10.0	--	--	12.0	118	--	--	--	
28...	1330	.01	1700	7.3	7.5	50	7.6	--	--	9.2	160	0	
DEC													
10...	1235	.01	1500	8.0	9.5	--	--	11.0	98	--	--	--	
19...	1000	.06	2250	8.4	10.0	20	18	14.0	126	16	240	0	
JAN													
14...	1245	3.8	2100	8.6	7.5	--	--	11.8	100	--	--	--	
22...	1415	.02	2300	8.1	9.5	40	51	12.2	73	9.4	230	0	
FEB													
20...	1340	.03	2650	8.4	13.0	--	--	--	--	--	--	--	
MAR													
21...	1500	.90	2800	8.2	15.0	15	19	12.0	121	11	250	0	
APR													
22...	1130	.02	3200	8.6	20.0	160	170	8.5	95	2.1	--	--	
MAY													
29...	1350	.02	550	8.0	22.0	160	140	5.7	66	1.3	130	0	
JUN													
25...	0730	.26	768	8.9	27.0	140	66	2.0	26	1.8	140	0	
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)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	54	35	620	83	16	3.0	700	810	28	.4	9.5	1940	
NOV													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	34	18	330	89	11	3.6	420	410	17	.3	5.1	1130	
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	42	32	600	84	17	2.8	630	710	27	.5	9.0	1810	
JAN													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	44	28	570	84	17	2.9	630	750	28	.4	5.6	1910	
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
21...	46	34	600	83	16	3.4	640	740	72	.3	6.9	1910	
APR													
22...	--	30	640	--	--	3.5	690	710	99	.6	2.2	1940	
MAY													
29...	33	12	66	51	2.5	5.8	210	64	12	.2	8.6	318	
JUN													
25...	37	12	110	61	4.0	7.5	250	110	16	.3	12	481	

ARKANSAS RIVER BASIN

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07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
10...	--	--	--	--	--	--	--	--	--	--	--	--
24...	2020	2.6	4.9	11	9.0	--	.400	.390	--	.48	.50	.48
NOV												
13...	--	--	--	--	--	--	--	--	--	--	--	--
28...	1110	1.5	.04	8.0	7.8	--	.120	.080	--	.15	.10	1.1
DEC												
10...	--	--	--	--	--	--	--	--	--	--	--	--
19...	1870	2.4	.29	16	15	--	.160	.160	--	.19	.21	1.4
JAN												
14...	--	--	--	--	--	3.6	--	--	5.4	--	--	--
22...	1850	2.6	.10	9.3	9.2	--	.060	.030	--	.07	.04	.37
FEB												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
21...	1930	2.6	4.6	10	10	--	.000	.000	--	.00	.00	1.2
APR												
22...	--	2.6	.10	.59	.65	--	.130	.230	--	.16	.30	3.0
MAY												
29...	328	.43	.02	.11	.07	--	.430	.030	--	.52	.04	2.5
JUN												
25...	455	.65	.34	.06	.05	20	.250	.200	16	.30	.26	1.9
DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT												
10...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.37	.88	.12	.76	--	12	53	--	.070	.21	.010	--
NOV												
13...	--	--	--	--	--	--	--	--	--	--	--	--
28...	1.3	1.20	.00	1.4	--	9.2	41	--	.040	.12	.010	--
DEC												
10...	--	--	--	--	--	--	--	--	--	--	--	--
19...	.54	1.60	.90	.70	--	18	78	--	.030	.09	.010	--
JAN												
14...	--	--	--	--	432	--	--	436	--	--	--	180
22...	.12	.43	.28	.15	--	9.7	43	--	.050	.15	.020	--
FEB												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
21...	.78	1.20	.42	.78	--	11	50	--	.040	.12	.020	--
APR												
22...	1.2	3.10	1.7	1.4	--	3.7	16	--	.110	.34	.010	--
MAY												
29...	1.2	2.90	1.7	1.2	--	3.0	13	--	.140	.43	.010	--
JUN												
25...	1.5	2.10	.40	1.7	260	2.2	9.6	280	.110	.34	.080	440

ARKANSAS RIVER BASIN

07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
OCT												
10...	1320	300	120	180	--	10	4	6	--	640	0	
24...	0945	480	460	20	--	6	0	6	--	710	50	
NOV												
13...	1330	550	550	0	--	5	0	5	--	560	60	
28...	1330	2500	2400	80	--	2	1	1	--	340	0	
DEC												
10...	1235	140	40	100	--	2	1	1	--	370	0	
19...	1000	0	0	50	--	5	1	4	--	560	0	
JAN												
14...	1245	500	470	30	300	3	0	3	8	680	60	
22...	1415	1800	1800	50	--	2	0	2	--	610	0	
FEB												
20...	1340	400	390	10	--	1	0	2	--	690	60	
MAR												
21...	1500	580	560	20	--	1	0	1	--	660	20	
APR												
22...	1130	2900	2900	40	--	4	1	3	--	670	30	
MAY												
29...	1350	2300	2200	70	--	5	3	2	--	110	0	
JUN												
25...	0730	640	620	20	710	5	1	4	9	180	0-	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
10...	640	0	0	0	--	0	0	0	--	--	--	20
24...	660	0	0	0	--	0	0	0	--	--	--	0
NOV												
13...	500	0	0	1	--	0	0	0	--	--	--	50
28...	340	1	0	<1	--	0	0	0	--	--	--	2
DEC												
10...	370	0	0	<1	--	0	0	0	--	--	--	63
19...	560	0	0	1	--	12	12	0	--	--	--	0
JAN												
14...	620	0	0	0	50	0	0	0	5	25	50	30
22...	610	0	0	1	--	0	0	0	--	--	--	0
FEB												
20...	630	10	10	0	--	0	0	0	--	--	--	0
MAR												
21...	640	0	0	0	--	10	0	10	--	--	--	0
APR												
22...	640	20	19	1	--	10	10	0	--	--	--	30
MAY												
29...	130	10	--	<1	--	0	0	0	--	--	--	0
JUN												
25...	190	10	--	<1	1	10	10	0	7	20	0	

ARKANSAS RIVER BASIN

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07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
10...	20	0	--	350	--	30	--	0	0	0	--
24...	0	0	--	700	--	30	--	0	0	0	--
NOV											
13...	50	0	--	400	380	20	--	100	100	0	--
28...	0	9	--	2100	--	50	--	3	0	9	--
DEC											
10...	62	1	--	2400	2400	20	--	0	0	0	--
19...	0	0	--	740	710	30	--	100	100	0	--
JAN											
14...	50	0	600	270	250	20	9300	0	0	1	2000
22...	30	0	--	1500	1400	130	--	0	0	2	--
FEB											
20...	0	0	--	590	540	50	--	100	100	0	--
MAR											
21...	0	3	--	650	610	40	--	100	100	0	--
APR											
22...	25	5	--	5200	5100	120	--	0	0	3	--
MAY											
29...	0	5	--	4800	4700	80	--	0	0	0	--
JUN											
25...	0	3	5	2200	2100	70	8000	0	0	0	10

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT											
10...	50	20	30	--	1.4	.1	1.3	--	3	0	3
24...	100	30	70	--	.3	.2	.1	--	8	0	10
NOV											
13...	270	40	230	--	.1	.1	.0	--	12	0	12
28...	100	70	30	--	.1	.1	.0	--	0	0	<10
DEC											
10...	280	210	70	--	.1	.1	.0	--	0	0	<10
19...	70	30	40	--	.1	.1	.0	--	0	0	3
JAN											
14...	100	40	60	1200	.1	.0	.1	.0	12	0	12
22...	120	40	80	--	.1	.0	.1	--	14	2	12
FEB											
20...	120	60	60	--	.2	.2	.0	--	5	0	6
MAR											
21...	90	60	30	--	.1	.1	.0	--	4	0	4
APR											
22...	560	450	110	--	.2	.2	.0	--	4	0	5
MAY											
29...	630	390	240	--	.1	.1	.0	--	0	--	<10
JUN											
25...	750	220	530	930	.1	.1	.0	.0	1	--	<10

ARKANSAS RIVER BASIN

07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
10...	--	2	0	2	10	0	10	--	287	.46	98
24...	--	5	0	5	50	40	10	--	360	.91	100
NOV											
13...	--	3	3	0	80	20	60	--	157	.32	99
28...	--	3	1	2	20	20	<3	--	176	.01	100
DEC											
10...	--	0	0	1	50	50	5	--	231	.01	96
19...	--	9	8	1	20	0	40	--	561	.09	99
JAN											
14...	3	6	0	6	10	0	10	28	223	2.3	99
22...	--	4	0	5	30	0	40	--	--	--	--
FEB											
20...	--	4	0	4	60	40	20	--	196	.02	98
MAR											
21...	--	3	0	3	20	0	20	--	54	.13	70
APR											
22...	--	3	1	2	130	120	10	--	189	.01	93
MAY											
29...	--	0	0	1	50	--	<3	--	187	.01	98
JUN											
25...	0	1	0	1	40	--	<3	14	96	.07	96

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

								OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)		
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)					
OCT													
10...	1510	.77	2300	8.3	14.5	--	--	9.1	89	--	--		
24...	1245	.84	2500	8.1	15.0	40	28	9.2	92	4.3	290		
NOV													
14...	1020	.76	--	7.8	6.0	--	--	11.8	95	--	--		
28...	0920	.05	2450	8.0	7.0	60	--	--	--	14	260		
DEC													
10...	1450	.06	1900	7.6	10.0	--	--	11.0	99	--	--		
19...	1200	.04	1850	8.2	8.0	40	10	12.9	110	5.0	250		
JAN													
15...	1050	.84	2500	--	8.0	--	--	11.2	96	--	--		
23...	0945	.08	2350	8.4	5.0	40	22	13.5	107	8.1	230		
FEB													
21...	1050	.03	2850	8.4	11.0	--	--	--	--	--	--		
MAR													
20...	1500	.04	2600	8.5	14.0	30	46	8.9	90	8.1	220		
21...	1150	2.0	2200	8.1	11.0	--	--	8.0	75	--	--		
APR													
21...	1640	.04	1210	8.2	23.0	60	29	8.5	103	1.1	150		
MAY													
29...	1930	.93	240	7.2	25.0	80	34	--	--	.85	64		
JUN													
21...	1145	22	132	6.9	24.0	100	46	7.3	89	1.5	40		
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)	ALKA- LITY 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	55	38	570	90	14	4.1	680	760	32	.4	7.9	2010	
NOV													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	53	31	520	89	14	4.1	640	590	29	.4	8.1	1690	
DEC													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	49	31	440	88	12	3.6	570	560	39	.3	5.5	1470	
JAN													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	44	28	570	84	17	3.7	710	690	30	.4	6.2	1820	
FEB													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
20...	39	30	540	84	16	4.1	610	620	84	.3	5.5	1690	
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
21...	32	16	200	74	7.2	3.4	290	220	48	.3	6.0	721	
MAY													
29...	17	5.2	18	36	1.0	3.6	61	22	15	.1	11	139	
JUN													
21...	9.4	4.0	12	37	.8	3.9	28	19	11	.1	12	104	

ARKANSAS RIVER BASIN

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07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT												
10...	--	--	--	--	--	--	--	--	--	--	--	--
24...	1890	2.7	4.5	4.1	3.8	--	.130	.000	--	.16	.00	.79
NOV												
14...	--	--	--	--	--	--	--	--	--	--	--	--
28...	1680	2.3	.23	11	13	--	.100	.040	--	.12	.05	1.3
DEC												
10...	--	--	--	--	--	--	--	--	--	--	--	--
19...	1490	2.0	.16	4.1	4.2	--	.020	.040	--	.02	.05	.88
JAN												
15...	--	--	--	--	--	1.5	--	--	11	--	--	--
23...	1830	2.4	.39	8.0	7.9	--	.070	.030	--	.08	.04	.23
FEB												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
20...	1720	2.3	.18	6.8	6.9	--	.220	.170	--	.27	.22	1.8
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
21...	701	.98	.08	.11	.13	--	.170	.170	--	.21	.22	1.0
MAY												
29...	129	.19	.35	.18	.18	--	.230	.110	--	.28	.14	.45
JUN												
21...	90	.14	6.1	.21	.29	230	.090	.140	100	.11	.18	1.1
DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT												
10...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.50	.92	.42	.50	--	5.0	22	--	.060	.18	.000	--
NOV												
14...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.76	1.40	.60	.80	--	12	55	--	.050	.15	.010	--
DEC												
10...	--	--	--	--	--	--	--	--	--	--	--	--
19...	.76	.90	.10	.80	--	5.0	22	--	.040	.12	.010	--
JAN												
15...	--	--	--	--	215	--	--	217	--	--	--	110
23...	.16	.30	.11	.19	--	8.3	37	--	.040	.12	.010	--
FEB												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
20...	1.0	2.00	.80	1.2	--	8.8	39	--	.560	1.7	.010	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
21...	.77	1.20	.26	.94	--	1.3	5.8	--	.050	.15	.010	--
MAY												
29...	.56	.68	.01	.67	--	.86	3.8	--	.110	.34	.020	--
JUN												
21...	1.1	1.20	.00	1.2	1200	1.4	6.2	1430	.110	.34	.060	340

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
OCT												
10...	1510	370	360	10	--	4	2	2	--	500	10	
24...	1245	640	620	20	--	5	1	4	--	640	20	
NOV												
14...	1020	2500	2400	100	--	3	1	2	--	520	20	
28...	0920	730	690	40	--	2	0	2	--	500	0	
DEC												
10...	1450	60	40	20	--	2	1	1	--	470	40	
19...	1200	0	0	30	--	1	0	1	--	420	40	
JAN												
15...	1050	970	940	30	120	3	1	2	3	620	30	
23...	0945	630	630	0	--	2	0	2	--	590	10	
FEB												
21...	1050	690	680	10	--	2	1	1	--	660	50	
MAR												
20...	1500	1400	1400	20	--	3	1	2	--	580	0	
21...	1150	--	--	--	--	--	--	--	--	--	--	
APR												
21...	1640	80	60	20	--	2	0	2	--	270	30	
MAY												
29...	1930	1100	100	1000	--	2	0	2	--	60	20	
JUN												
21...	1145	460	410	50	600	2	1	1	39	60	30	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
10...	490	0	0	0	--	0	0	0	--	--	--	0
24...	620	0	0	0	--	0	0	0	--	--	--	0
NOV												
14...	500	0	0	1	--	0	0	0	--	--	--	50
28...	500	0	0	2	--	0	0	0	--	--	--	83
DEC												
10...	430	0	0	1	--	0	0	0	--	--	--	63
19...	380	0	0	5	--	16	16	0	--	--	--	0
JAN												
15...	590	0	0	0	0	0	0	0	4	10	50	
23...	580	8	7	1	--	0	0	0	--	--	--	30
FEB												
21...	610	0	0	0	--	0	0	0	--	--	--	0
MAR												
20...	590	0	0	0	--	10	10	0	--	--	--	25
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
21...	240	30	29	1	--	0	0	0	--	--	--	20
MAY												
29...	40	10	9	1	--	10	0	10	--	--	--	0
JUN												
21...	30	10	8	2	1	0	0	0	--	50	0	

ARKANSAS RIVER BASIN

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07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
10...	0	0	--	610	--	30	--	0	0	0	--
24...	0	0	--	1100	--	60	--	0	0	0	--
NOV											
14...	50	0	--	2200	2100	130	--	0	0	1	--
28...	80	3	--	1100	--	30	--	100	95	5	--
DEC											
10...	63	0	--	1900	1800	80	--	100	100	0	--
19...	0	0	--	620	590	30	--	200	200	0	--
JAN											
15...	50	0	400	1200	1200	30	2800	100	92	8	1000
23...	28	2	--	720	650	70	--	0	0	2	--
FEB											
21...	0	0	--	1600	1600	50	--	100	100	0	--
MAR											
20...	21	4	--	2100	2100	40	--	100	100	0	--
21...	--	--	--	--	--	--	--	--	--	--	--
APR											
21...	14	6	--	1600	1600	40	--	0	0	3	--
MAY											
29...	0	4	--	2500	2300	170	--	100	98	2	--
JUN											
21...	0	3	10	1700	1100	610	1600	100	100	0	60
	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MU)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT											
10...	100	70	30	--	1.5	1.4	.1	--	1	1	0
24...	130	100	30	--	2.4	2.1	.3	--	5	0	6
NOV											
14...	110	40	70	--	.1	.1	.0	--	14	0	14
28...	100	40	60	--	.1	.1	.0	--	2	2	0
DEC											
10...	690	90	600	--	.1	.1	.0	--	0	0	0
19...	90	20	70	--	.1	.1	.0	--	0	0	<10
JAN											
15...	190	70	120	180	.0	.0	.0	.0	10	0	10
23...	150	40	110	--	.1	.0	.1	--	11	1	10
FEB											
21...	320	120	200	--	.0	.0	.0	--	5	0	6
MAR											
20...	270	140	130	--	.3	.2	.1	--	4	0	4
21...	--	--	--	--	--	--	--	--	--	--	--
APR											
21...	940	160	780	--	.3	.2	.1	--	2	--	<10
MAY											
29...	610	150	460	--	.1	.1	.0	--	0	--	<10
JUN											
21...	180	40	140	2200	.2	.2	.0	.0	1	0	1

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
10...	--	1	0	1	60	50	10	--	238	.49 99
24...	--	3	0	3	60	50	10	--	428	.97 99
NOV										
14...	--	11	1	10	90	60	30	--	202	.41 99
28...	--	5	0	5	10	0	10	--	197	.03 99
DEC										
10...	--	4	1	3	0	0	10	--	179	.03 94
19...	--	2	2	0	10	2	8	--	429	.05 99
JAN										
15...	5	5	1	4	10	0	20	5	236	.54 99
23...	--	4	0	4	10	0	10	--	--	--
FEB										
21...	--	4	0	4	30	0	30	--	206	.02 99
MAR										
20...	--	2	0	2	60	50	10	--	--	--
21...	--	--	--	--	--	--	--	--	61	.33 88
APR										
21...	--	1	0	1	90	--	<3	--	38	.00 95
MAY										
29...	--	0	0	0	40	20	20	--	60	.15 82
JUN										
21...	0	0	0	0	40	20	20	--	68	4.0 87

ARKANSAS RIVER BASIN

07245040 JACKSON CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
MAY 29...	1830	360	300	60	--	1	0	1	--	50	30	
JUN 20...	1745	580	520	60	720	1	0	1	17	40	10	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
MAY 29...	20	10	<1	--	0	0	0	--	--	0	0	0
JUN 20...	30	0	<1	1	10	10	0	16	30	0	0	0
		COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 29...	2	--	810	750	60	--	0	0	0	--	120	120
JUN 20...	3	10	1700	1500	240	14000	0	0	0	10	100	100
		MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, FM BOT- TOM MA- TERIAL (UG/G AS MO)
MAY 29...	30	90	--	.0	.0	.0	.0	--	0	<10	--	--
JUN 20...	50	50	920	.2	.2	.0	.0	1	<10	1	1	1
		SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 29...	0	0	0	0	50	--	<3	--	49	.17	81	81
JUN 20...	0	0	0	0	20	10	7	33	44	3.1	89	89

ARKANSAS RIVER BASIN

353

07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK

LOCATION.--Lat 35°20'57", long 94°46'43", in SW¼SW¼ sec.9, T.10 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, from lock wall at dam, 0.5 mi (0.8 km) upstream from gage on bridge on U.S. Highway 59, 3.5 mi (5.6 km) downstream from Sans Bois Creek, 7.5 mi (12.1 km) south of Sallisaw, and at mile 395.4 (636.2 km).

DRAINAGE AREA.--147,756 mi² (382,688 km²) of which 22,241 mi² (57,604 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1970 to current year.

REVISED RECORDS.--WRD, OK-77-1: Drainage area.

REMARKS.--Some samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
OCT 10...	1320	1010	8.3	18.5	--	11.2	130	22	--	--	--
NOV 28...	1610	830	--	9.0	68	8.0	86	--	130	43	40
DEC 18...	1130	--	7.7	9.0	37	15.8	136	--	120	31	37
JAN 22...	1130	775	--	7.5	11	--	--	--	140	46	43
FEB 26...	1115	--	7.2	5.0	5.6	10.0	79	--	180	69	52
MAR 12...	1330	710	8.9	8.0	15	13.5	117	--	140	43	42
APR 17...	1000	--	8.0	16.0	35	10.4	106	20	--	--	--
MAY 22...	1500	990	7.8	21.0	39	10.6	119	22	160	63	44
JUN 11...	1030	990	8.5	27.0	13	7.3	91	23	160	79	45
JUL 09...	0930	1100	8.4	29.0	5.4	6.3	83	20	180	66	49
AUG 07...	1045	740	8.2	31.0	11	--	--	18	160	64	45
SEP 11...	1100	848	8.3	28.0	3.9	8.4	108	30	160	54	46

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT 10...	--	--	--	--	--	100	73	250	620	.84
NOV 28...	8.1	100	61	3.8	5.6	90	53	140	430	.58
DEC 18...	6.6	63	58	2.5	4.0	89	40	99	320	.44
JAN 22...	8.9	100	59	3.6	4.3	98	45	160	413	.56
FEB 26...	12	200	70	6.5	5.5	110	69	320	730	.99
MAR 12...	8.2	84	56	3.1	4.0	96	45	130	386	.53
APR 17...	10	85	--	--	4.0	100	53	150	458	.62
MAY 22...	11	140	65	4.9	4.5	92	61	220	560	.76
JUN 11...	12	140	64	4.8	4.9	83	77	220	568	.77
JUL 09...	13	140	63	4.6	5.4	110	82	220	597	.81
AUG 07...	12	91	54	3.1	5.6	98	63	140	414	.56
SEP 11...	12	93	54	3.2	6.0	110	62	150	442	.60

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK

LOCATION.--Lat 35°15'11", long 94°45'17", on south edge of NW¼ sec.15, T.9 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, on right downstream side of bridge on U.S. Highway 59 and State Highway 9, 0.4 mi (0.6 km) south-east of junction of U.S. Highway 59 and State Highway 9, 7.1 mi (11.4 km) west of Spiro, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--18.1 mi² (46.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 446.80 ft (136.185 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s (112 m³/s) June 2, 1979, gage height, 11.95 ft (3.642 m); no flow at times in 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 538 ft³/s (15.2 m³/s) May 16, gage height, 6.15 ft (1.875 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Sept. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	2.4	1.0	1.8	2.0	1.5	8.8	4.0	2.7	.77	.35	.05
2	1.2	1.3	1.0	1.7	1.9	1.4	6.7	29	2.3	.72	.34	.19
3	1.3	1.2	.96	1.8	1.8	1.4	5.9	29	2.0	.67	.29	.20
4	1.4	1.0	.96	2.0	1.7	1.5	4.5	9.1	1.9	.62	.29	.18
5	1.6	.99	.96	1.9	1.6	2.6	3.7	5.5	1.7	.50	.28	.23
6	1.7	.96	.96	1.8	1.5	1.5	3.5	3.6	1.7	.40	.28	.22
7	1.7	.96	1.6	1.7	1.4	1.3	3.2	3.4	1.5	.52	.24	.20
8	1.7	.97	1.0	1.7	3.6	1.3	3.0	3.2	1.4	.51	.24	17
9	1.8	1.5	1.1	1.7	8.2	1.2	2.6	2.6	1.3	.45	.22	.94
10	1.7	1.4	.93	1.7	7.3	.99	2.4	2.3	1.3	.41	.22	.21
11	1.7	1.2	.93	1.7	8.4	1.1	2.4	2.2	1.3	.38	.22	.15
12	1.7	.98	2.7	1.7	6.0	2.0	2.2	2.0	1.3	.38	.22	.12
13	1.7	.83	7.2	1.7	4.6	1.9	2.1	2.0	1.1	.39	.21	.10
14	1.5	.81	3.2	1.6	4.2	1.6	2.1	1.8	1.0	.42	.29	.08
15	1.5	.93	2.7	1.6	3.8	1.2	2.1	6.0	.90	.42	.29	.07
16	1.6	.98	1.8	1.9	3.3	1.2	2.1	154	1.0	.92	.27	.05
17	1.9	.76	1.4	2.1	2.5	4.3	2.8	20	.94	.79	.27	.02
18	2.2	.82	1.1	2.2	2.3	3.2	3.0	14	1.7	.48	.24	.02
19	2.7	.86	1.1	3.0	2.4	2.4	2.5	14	24	.33	.25	.02
20	3.9	1.0	1.3	3.9	2.4	2.1	2.0	7.0	5.1	.37	.28	.02
21	4.7	14	1.3	5.3	2.2	1.9	1.7	5.4	2.9	.42	.30	.05
22	5.8	4.6	1.2	5.0	1.9	1.7	1.7	15	2.2	.46	.20	.05
23	4.7	2.4	8.0	3.6	1.9	41	2.1	10	1.8	.42	.17	.18
24	4.0	1.5	16	2.7	1.7	72	1.8	5.6	1.6	.38	.15	.17
25	3.7	1.3	5.7	2.4	1.7	15	2.2	3.8	1.4	.33	.12	.37
26	3.5	1.3	3.8	2.2	1.6	9.8	2.4	3.0	1.3	.45	.12	.20
27	3.3	1.2	3.1	2.0	1.6	7.2	2.5	2.7	1.2	.70	.09	.23
28	4.8	2.1	2.6	1.9	1.6	11	2.4	2.7	1.0	.55	.08	.58
29	3.5	1.1	2.3	2.6	1.6	43	1.8	9.5	.89	.46	.07	.24
30	27	1.0	2.0	2.4	---	34	1.6	7.5	.79	.42	.07	.17
31	17	---	1.9	2.2	---	14	---	4.0	---	.37	.07	---
TOTAL	117.46	52.35	81.80	71.5	86.7	286.29	87.8	383.9	71.22	15.41	6.73	22.31
MEAN	3.79	1.75	2.64	2.31	2.99	9.24	2.93	12.4	2.37	.50	.22	.74
MAX	27	14	16	5.3	8.4	72	8.8	154	24	.92	.35	17
MIN	.96	.76	.93	1.6	1.4	.99	1.6	1.8	.79	.33	.07	.02
CF8M	.25	.11	.17	.15	.19	.60	.19	.81	.15	.03	.01	.05
IN.	.28	.13	.20	.17	.21	.69	.21	.93	.17	.04	.02	.05
AC=FT	233	104	162	142	172	568	174	761	141	31	13	44
CAL YR 1979 TOTAL	9193.07			MEAN 25.2	MAX 1640	MIN .76	CF8M 1.64	IN 22.21	AC=FT 18230			
WTR YR 1980 TOTAL	1283.47			MEAN 3.51	MAX 154	MIN .02	CF8M .23	IN 3.10	AC=FT 2550			

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1978 to current year.

pH: November 1978 to current year.

WATER TEMPERATURE: November 1978 to current year.

DISSOLVED OXYGEN: November 1978 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler, complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
01...	1006	.90	770	7.7	23.0	7.6	89	--	--	--	--
05...	0820	1.5	790	7.9	16.0	9.4	97	--	--	--	--
16...	0955	1.6	830	7.8	17.0	7.5	78	340	200	55	49
25...	1000	3.7	800	7.7	14.0	7.3	71	--	--	--	--
NOV											
05...	1355	1.0	730	7.7	13.0	7.9	75	--	--	--	--
13...	0815	.77	700	7.8	8.0	9.8	82	--	--	--	--
19...	1620	1.0	800	7.9	16.0	9.3	93	--	--	--	--
26...	1330	1.3	650	7.8	10.0	10.6	94	--	--	--	--
DEC											
03...	1445	.96	770	7.9	6.0	11.9	94	--	--	--	--
10...	1330	.90	750	7.8	9.0	15.8	135	--	--	--	--
11...	1015	.90	693	7.8	10.5	9.6	86	--	--	--	--
17...	1255	1.4	590	7.8	3.0	15.7	114	--	--	--	--
31...	0845	1.9	520	7.7	6.0	13.2	105	--	--	--	--
JAN											
07...	1215	1.7	560	8.2	5.0	13.2	102	220	120	35	31
14...	1015	1.7	800	7.7	5.0	13.5	105	--	--	--	--
24...	1315	2.5	510	7.9	7.0	11.8	97	--	--	--	--
31...	1030	2.1	600	8.1	1.0	12.4	86	--	--	--	--
FEB											
07...	1145	1.4	590	8.0	3.0	13.4	98	--	--	--	--
14...	1310	4.1	340	7.6	6.0	13.4	106	--	--	--	--
21...	0925	2.2	430	7.7	9.0	10.8	94	--	--	--	--
28...	1235	1.5	550	7.8	11.0	12.0	108	--	--	--	--
MAR											
06...	1415	1.4	590	8.0	9.7	12.4	109	--	--	--	--
14...	0700	1.6	539	7.8	8.0	10.6	88	--	--	--	--
21...	1256	1.9	558	7.8	14.0	10.7	102	--	--	--	--
28...	1255	12	300	7.5	13.0	10.6	100	--	--	--	--
APR											
07...	1445	3.2	437	7.8	21.0	9.5	107	--	--	--	--
14...	1030	2.1	560	7.9	9.0	10.6	91	210	120	35	30
21...	1210	1.9	583	7.9	20.5	9.7	105	--	--	--	--
28...	1420	2.5	615	8.0	17.5	10.1	105	--	--	--	--
MAY											
05...	1015	5.2	320	7.4	19.0	7.7	83	110	67	19	16
12...	1007	2.0	580	7.5	23.5	6.5	76	--	--	--	--
19...	1358	12	325	7.5	22.0	8.4	95	--	--	--	--
23...	1135	9.6	340	7.5	20.0	8.6	93	--	--	--	--
JUN											
02...	1305	2.4	515	7.5	25.5	6.8	82	--	--	--	--
10...	1240	1.3	720	7.8	24.0	7.2	84	260	150	42	38
17...	1245	.83	745	7.5	24.0	6.0	70	--	--	--	--
24...	1115	1.5	610	7.6	28.0	5.7	72	--	--	--	--
JUL											
01...	0740	.77	750	7.4	28.5	4.6	58	--	--	--	--
14...	0850	.42	955	7.7	28.0	5.5	88	380	230	61	55
21...	0845	.42	805	7.6	28.0	5.4	68	--	--	--	--
28...	0830	.53	920	7.7	26.0	4.8	59	--	--	--	--
AUG											
04...	0825	.29	980	7.7	27.0	5.4	67	--	--	--	--
11...	0923	.22	1070	7.7	27.0	5.7	70	--	--	--	--
18...	0855	.24	1060	7.8	27.0	5.6	69	--	--	--	--
25...	0850	.12	1050	7.8	25.0	6.1	73	--	--	--	--
SEP											
02...	0855	.15	1040	7.7	25.0	5.3	63	420	250	66	63
18...	0935	.02	950	7.7	23.0	5.7	66	380	220	59	56

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
01...	--	--	--	--	160	0	131	5.1	--	--	--
05...	--	--	--	--	170	0	139	3.4	--	--	--
16...	54	26	1.3	2.4	170	0	140	4.3	290	2.3	.3
25...	--	--	--	--	170	0	139	5.4	--	--	--
NOV											
05...	--	--	--	--	150	0	123	4.8	--	--	--
13...	--	--	--	--	140	0	115	3.6	--	--	--
19...	--	--	--	--	160	0	131	3.2	--	--	--
26...	--	--	--	--	130	0	107	3.3	--	--	--
DEC											
03...	--	--	--	--	140	0	115	2.8	--	--	--
10...	--	--	--	--	150	0	123	3.8	--	--	--
11...	--	--	--	--	140	0	115	3.6	--	--	--
17...	--	--	--	--	110	0	90	2.8	--	--	--
31...	--	--	--	--	120	0	98	3.8	--	--	--
JAN											
07...	34	45	1.0	2.0	110	0	90	1.1	170	8.7	.2
14...	--	--	--	--	--	--	100	--	--	--	--
24...	--	--	--	--	--	--	74	--	--	--	--
31...	--	--	--	--	--	--	61	--	--	--	--
FEB											
07...	--	--	--	--	--	--	83	--	--	--	--
14...	--	--	--	--	--	--	43	--	--	--	--
21...	--	--	--	--	--	--	65	--	--	--	--
28...	--	--	--	--	--	--	83	--	--	--	--
MAR											
06...	--	--	--	--	--	--	76	--	--	--	--
14...	--	--	--	--	--	--	95	--	--	--	--
21...	--	--	--	--	--	--	77	--	--	--	--
28...	--	--	--	--	--	--	43	--	--	--	--
APR											
07...	--	--	--	--	--	--	73	--	--	--	--
14...	32	25	1.0	1.9	--	--	99	--	160	7.5	.3
21...	--	--	--	--	--	--	100	--	--	--	--
28...	--	--	--	--	--	--	110	--	--	--	--
MAY											
05...	20	27	.8	1.8	--	--	52	--	87	6.9	.2
12...	--	--	--	--	--	--	100	--	--	--	--
19...	--	--	--	--	--	--	53	--	--	--	--
23...	--	--	--	--	--	--	52	--	--	--	--
JUN											
02...	--	--	--	--	--	--	79	--	--	--	--
10...	42	26	1.1	2.4	--	--	120	--	230	4.5	.3
17...	--	--	--	--	--	--	120	--	--	--	--
24...	--	--	--	--	--	--	90	--	--	--	--
JUL											
01...	--	--	--	--	--	--	130	--	--	--	--
14...	62	26	1.4	2.9	--	--	150	--	350	3.2	.5
21...	--	--	--	--	--	--	160	--	--	--	--
28...	--	--	--	--	--	--	150	--	--	--	--
AUG											
04...	--	--	--	--	--	--	160	--	--	--	--
11...	--	--	--	--	--	--	150	--	--	--	--
18...	--	--	--	--	--	--	160	--	--	--	--
25...	--	--	--	--	--	--	170	--	--	--	--
SEP											
02...	69	26	1.5	2.9	--	--	160	--	390	3.9	.3
18...	60	25	1.3	3.4	--	--	140	--	350	3.6	.4

ARKANSAS RIVER BASIN

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07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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											
01...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
16...	4.2	561	542	.76	2.2	.04	.18	.010	.03	.05	.010
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
DEC											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
JAN											
07...	3.4	358	339	.49	1.6	.04	.18	.010	.03	.05	.030
14...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
06...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	2.5	356	326	.48	2.1	.03	.13	.000	.00	.03	.040
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	6.4	202	186	.27	2.9	.07	.31	.010	.03	.08	.060
12...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
02...	--	--	--	--	--	--	--	--	--	--	--
10...	2.7	425	429	.58	1.6	.03	<.13	.020	.07	.05	.040
17...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
14...	4.0	674	629	.92	--	.03	<.13	.000	.00	.03	.040
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
02...	4.0	736	702	1.0	.29	--	--	--	--	--	--
18...	3.0	786	632	1.1	--	.00	.00	.000	.00	.00	.020

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	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)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--
16...	.01	.010	.03	430	1	180	1	10	0	20
25...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	20	0	--	2	0	0	--
DEC										
03...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	20	1	--	1	0	0	--
JAN										
07...	.04	.030	.09	4	0	90	<1	0	0	40
14...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	30	0	--	0	0	0	--
14...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	10	0	--	0	0	2	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
07...	--	--	--	--	--	--	--	--	--	--
14...	.05	.030	.09	20	0	100	<1	0	0	50
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	.08	.050	.15	60	0	50	<1	0	1	270
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	--	--	--	--	--	--	--	--	--	--
10...	.05	.010	.03	30	1	160	<1	0	0	<10
17...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
JUL										
01...	--	--	--	--	--	--	--	--	--	--
14...	.05	.030	.09	0	1	240	2	0	2	<10
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	10	1	--	0	20	0	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
SEP										
02...	--	.030	.09	0	1	250	<1	0	3	10
18...	.03	.020	.06	10	1	260	<1	0	1	<10

ARKANSAS RIVER BASIN

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07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
01...	--	--	--	--	--	--	--	105	.26	99
05...	--	--	--	--	--	--	--	130	.53	99
16...	0	60	.0	<10	3	1.7	--	106	.43	99
25...	--	--	--	--	--	--	--	110	1.1	99
NOV										
05...	--	--	--	--	--	--	--	107	.29	94
13...	--	--	--	--	--	--	--	57	.12	98
19...	--	--	--	--	--	--	--	84	.23	99
26...	0	--	.0	0	--	--	--	65	.23	98
DEC										
03...	--	--	--	--	--	--	--	110	.29	100
10...	--	--	--	--	--	--	--	75	.18	100
11...	--	--	--	--	--	--	--	112	.27	100
17...	--	--	--	--	--	--	--	98	.37	100
31...	0	--	.0	2	--	--	--	78	.40	100
JAN										
07...	0	40	.0	<10	<3	3.0	.2	62	.28	99
14...	--	--	--	--	--	--	--	55	.25	100
24...	--	--	--	--	--	--	--	55	.37	100
31...	--	--	--	--	--	--	--	62	.35	100
FEB										
07...	0	--	.0	0	--	--	--	69	.26	100
14...	--	--	--	--	--	--	--	6	.07	97
21...	--	--	--	--	--	--	--	6	.04	88
28...	--	--	--	--	--	--	--	1	.00	92
MAR										
06...	--	--	--	--	--	--	--	2	.01	71
14...	0	--	.0	0	--	--	--	8	.03	80
21...	--	--	--	--	--	--	--	10	.05	95
28...	--	--	--	--	--	--	--	36	1.2	83
APR										
07...	--	--	--	--	--	--	--	16	.14	98
14...	0	60	.0	<10	<3	7.5	.2	3	.02	98
21...	--	--	--	--	--	--	--	12	.06	98
28...	--	--	--	--	--	--	--	8	.05	94
MAY										
05...	1	110	.1	<10	4	7.4	.4	--	--	--
12...	--	--	--	--	--	--	--	11	.06	89
19...	--	--	--	--	--	--	--	30	.97	80
23...	--	--	--	--	--	--	--	29	.75	91
JUN										
02...	--	--	--	--	--	--	--	13	.08	84
10...	0	130	.0	<10	5	7.7	1.1	11	.04	79
17...	--	--	--	--	--	--	--	11	.02	79
24...	--	--	--	--	--	--	--	48	.19	94
JUL										
01...	--	--	--	--	--	--	--	21	.04	93
14...	3	180	.0	13	20	3.7	.1	11	--	93
21...	--	--	--	--	--	--	--	12	.01	91
28...	--	--	--	--	--	--	--	10	.01	91
AUG										
04...	--	--	--	--	--	--	--	6	.00	82
11...	3	--	.1	0	--	--	--	10	.01	87
18...	--	--	--	--	--	--	--	5	.00	63
25...	--	--	--	--	--	--	--	8	.00	74
SEP										
02...	19	100	.0	<10	30	--	--	9	.00	77
18...	1	130	.0	<10	20	4.4	.2	--	--	--

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	794	---	705	503	601	535	262	574	---	779	1050	
2	785	---	719	539	621	535	294	400	531	797	1040	
3	797	---	753	552	622	559	321	199	606	807	1030	
4	806	---	759	511	604	636	332	269	644	828	998	
5	787	732	765	507	615	614	348	392	689	848	1060	
6	761	732	768	557	611	568	384	484	738	864	1090	
7	779	726	723	555	592	700	415	513	768	872	---	
8	794	726	615	584	536	808	436	508	762	872	---	
9	784	747	698	627	407	804	448	487	757	869	---	
10	787	641	742	688	402	783	---	516	747	913	---	
11	784	615	695	760	360	741	---	575	744	945	---	
12	804	661	675	754	343	680	---	591	746	971	---	
13	824	719	438	778	333	610	---	592	758	986	---	
14	778	747	492	815	332	557	570	596	782	976	---	
15	849	636	484	835	349	---	579	553	810	965	---	
16	840	751	562	822	350	---	588	202	850	978	---	
17	884	757	586	722	355	---	564	358	758	1030	---	
18	913	769	610	690	374	---	501	366	727	990	---	
19	954	799	637	676	396	---	545	313	346	1040	---	
20	944	791	650	686	409	---	575	---	253	1020	---	
21	921	562	649	520	436	547	576	---	371	897	---	
22	855	436	675	441	452	554	596	---	461	882	---	
23	803	468	612	452	481	500	587	342	543	881	---	
24	792	513	426	492	464	200	642	428	620	908	---	
25	836	561	444	552	480	236	625	512	661	946	---	
26	895	632	455	585	477	274	578	586	703	952	---	
27	905	689	481	594	508	316	560	643	729	926	---	
28	904	584	491	603	535	295	593	678	733	992	---	
29	---	535	517	624	548	228	637	588	752	1050	---	
30	---	641	524	615	---	153	659	545	777	1070	---	
31	---	---	513	597	---	202	---	---	---	1070	---	
MEAN	834	660	608	621	469	505	508	474	668	933	1040	

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	---	7.9	7.9	8.0	7.8	7.4	7.7	---	7.5	7.7	
2	7.8	---	7.9	7.9	8.0	7.9	7.5	7.5	7.5	7.5	7.8	
3	7.9	---	7.8	7.9	8.0	8.0	7.5	7.2	7.5	7.6	7.7	
4	7.9	---	7.9	7.9	8.0	7.9	7.6	7.4	7.6	7.6	7.8	
5	7.9	7.7	7.8	8.0	8.0	7.9	7.7	7.4	7.6	7.6	8.1	
6	7.8	7.7	7.7	8.0	8.0	7.8	7.7	7.4	7.6	7.6	---	
7	7.8	7.7	7.7	8.0	8.0	7.8	7.6	7.5	7.6	7.6	---	
8	7.7	7.7	7.7	8.0	7.9	7.8	7.6	7.6	7.7	7.6	---	
9	7.7	7.7	7.6	8.1	7.7	7.8	7.6	7.6	7.8	7.7	---	
10	7.8	7.8	7.7	7.9	7.6	7.8	---	7.7	7.7	7.7	---	
11	7.9	7.8	7.9	7.9	7.5	7.8	---	7.6	7.7	7.7	---	
12	7.8	7.8	7.8	7.8	7.5	7.9	---	7.6	7.7	7.7	---	
13	7.8	7.9	7.6	7.8	7.5	7.9	---	7.6	7.7	7.7	---	
14	7.9	7.9	7.6	7.8	7.5	7.8	8.0	7.7	7.7	7.8	---	
15	7.9	7.9	7.6	7.7	7.4	---	7.9	7.6	7.7	7.8	---	
16	7.8	7.9	7.6	7.7	7.5	---	7.8	7.2	7.6	7.8	---	
17	7.8	7.9	7.7	7.7	7.7	---	7.7	7.5	7.5	7.8	---	
18	7.7	7.8	7.8	7.8	7.8	---	7.8	7.5	7.5	7.8	---	
19	7.7	7.8	7.8	7.8	7.9	---	7.8	7.4	7.2	7.7	---	
20	7.6	7.7	7.8	7.7	7.8	---	7.8	---	7.2	7.7	---	
21	7.6	7.6	7.7	7.6	7.8	7.7	7.7	---	7.4	7.6	---	
22	7.6	7.6	7.7	7.6	7.8	7.7	7.7	---	7.4	7.7	---	
23	7.6	7.6	7.5	7.7	7.8	7.5	7.7	7.5	7.6	7.8	---	
24	7.7	7.6	7.4	7.8	7.6	7.1	7.6	7.5	7.7	7.8	---	
25	7.7	7.7	7.4	7.8	7.8	7.3	7.6	7.4	7.7	7.8	---	
26	7.7	7.7	7.5	7.8	7.9	7.4	7.7	7.4	7.6	7.7	---	
27	7.7	7.8	7.6	7.8	7.8	7.4	7.8	7.5	7.6	7.7	---	
28	7.7	7.7	7.6	7.9	7.7	7.4	7.8	7.5	7.6	7.8	---	
29	---	7.8	7.7	7.9	7.7	7.3	7.8	7.5	7.6	7.8	---	
30	---	7.9	7.7	8.0	---	7.3	7.7	7.5	7.5	7.7	---	
31	---	---	7.8	8.0	---	7.4	---	---	---	7.7	---	
MEAN	7.8	7.8	7.7	7.9	7.8	7.7	7.7	7.5	7.6	7.7	7.8	

ARKANSAS RIVER BASIN

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07246615 COAL CREEK NEAR SPIRO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.5	---	4.5	6.0	1.0	5.5	13.5	18.0	---	30.5	28.5	
2	22.0	---	5.0	6.0	1.5	4.0	16.0	17.5	26.0	31.0	28.5	
3	21.0	---	5.0	6.5	2.5	4.5	17.0	17.5	26.0	30.5	28.5	
4	19.5	---	6.0	5.0	2.5	8.5	15.5	19.5	26.5	30.5	28.0	
5	18.0	13.5	7.0	5.5	4.5	8.0	15.5	20.5	26.5	31.0	29.0	
6	19.0	12.5	8.0	6.0	4.5	8.5	17.5	21.5	27.5	30.5	---	
7	19.0	11.0	7.5	5.5	3.0	11.5	19.0	21.5	28.0	30.5	---	
8	21.5	12.0	6.5	4.0	1.5	11.0	17.0	19.5	26.0	30.0	---	
9	20.5	12.5	7.0	4.0	1.0	10.5	15.0	18.5	25.0	29.5	---	
10	16.0	11.0	8.5	5.5	1.5	11.5	---	20.0	24.5	30.5	---	
11	17.0	9.5	11.0	7.5	2.0	10.5	---	23.0	25.0	30.5	---	
12	19.5	9.5	8.5	6.5	2.5	9.0	---	24.0	25.0	30.0	---	
13	19.0	9.5	6.5	6.0	3.0	10.0	---	23.0	25.5	30.5	---	
14	17.0	9.0	6.0	7.0	5.5	8.5	11.0	22.0	25.5	29.5	---	
15	17.0	10.0	5.5	8.5	7.5	---	12.5	20.0	26.0	29.5	---	
16	18.0	10.5	5.0	10.0	4.5	---	15.5	18.5	26.5	30.0	---	
17	20.0	11.5	2.5	9.0	2.5	---	17.0	21.5	24.0	30.5	---	
18	21.0	13.0	3.0	8.0	2.5	---	16.5	21.5	25.0	30.0	---	
19	21.5	15.0	4.0	9.0	5.0	---	18.0	20.5	25.0	30.5	---	
20	22.5	16.0	6.5	9.5	7.5	---	19.0	---	25.5	29.5	---	
21	22.5	16.0	8.5	9.0	10.5	13.5	20.0	---	26.0	28.5	---	
22	19.5	12.0	11.0	8.0	10.5	12.5	20.5	---	26.0	28.0	---	
23	16.0	9.5	10.5	6.0	10.0	11.5	20.5	22.5	27.0	26.5	---	
24	15.0	8.5	8.5	6.5	8.0	8.0	20.0	23.0	29.5	26.5	---	
25	15.5	8.5	6.5	7.5	6.5	8.0	18.5	25.5	30.5	27.0	---	
26	15.5	9.5	6.5	7.0	6.0	9.5	15.5	27.5	31.0	27.0	---	
27	17.0	10.5	8.0	5.5	7.5	11.0	14.5	27.0	31.5	27.0	---	
28	18.5	8.0	8.5	3.5	10.5	12.5	16.0	26.0	31.0	27.5	---	
29	---	5.5	8.0	2.5	9.0	12.0	18.0	24.5	31.0	28.5	---	
30	---	4.5	7.5	2.5	---	9.0	18.0	24.5	30.5	29.0	---	
31	---	---	6.5	1.5	---	10.5	---	---	---	29.0	---	
MEAN	19.0	10.5	7.0	6.5	5.0	9.5	17.0	22.0	27.0	29.5	28.5	

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	---	11.0	13.0	12.6	11.5	9.6	7.7	---	5.2	5.9	
2	7.9	---	11.0	12.6	12.7	12.4	9.0	7.8	6.4	5.3	5.9	
3	8.6	---	11.1	12.3	12.7	12.6	8.9	8.4	6.3	5.5	6.2	
4	9.1	---	10.8	12.8	12.9	11.7	9.3	8.2	6.3	5.7	6.3	
5	9.4	8.0	10.5	12.9	12.9	11.3	9.4	7.6	6.2	6.1	6.2	
6	8.9	8.3	10.3	12.5	12.9	11.4	8.9	7.1	6.2	6.2	---	
7	8.7	8.6	10.6	12.4	12.7	10.5	8.5	6.9	6.0	5.6	---	
8	8.1	8.3	11.4	13.0	12.6	10.0	8.6	7.6	6.1	5.7	---	
9	7.8	8.2	11.5	13.2	13.1	10.3	8.6	8.1	6.6	5.7	---	
10	8.7	9.1	11.4	12.5	13.2	10.2	---	7.9	6.6	5.9	---	
11	8.5	10.0	9.9	11.9	13.2	10.0	---	7.4	6.5	6.2	---	
12	7.8	10.1	10.4	12.2	13.3	10.6	---	6.8	6.5	5.8	---	
13	7.7	10.0	12.0	12.4	13.3	11.0	---	6.9	6.5	5.5	---	
14	8.1	10.1	12.5	12.6	12.7	10.5	10.4	7.4	6.5	6.8	---	
15	8.1	10.2	13.5	11.6	11.2	---	10.0	7.3	6.4	7.4	---	
16	7.7	9.7	14.0	11.1	12.1	---	9.2	8.3	6.1	6.8	---	
17	7.2	9.5	15.0	11.3	13.1	---	8.4	7.9	5.8	6.5	---	
18	7.0	9.0	15.0	11.5	13.2	---	8.7	7.8	6.3	6.4	---	
19	6.8	8.4	14.7	11.0	12.7	---	8.7	8.1	6.3	6.6	---	
20	6.5	7.8	14.2	10.3	11.8	---	8.5	---	6.2	6.0	---	
21	6.1	7.6	13.3	10.1	10.4	9.7	8.2	---	6.0	5.5	---	
22	6.7	8.7	12.4	10.4	9.9	9.7	8.1	---	5.9	5.6	---	
23	7.4	9.5	11.7	10.9	10.0	9.3	8.1	8.4	6.0	6.0	---	
24	7.9	9.8	12.6	11.0	10.3	10.6	7.7	7.7	5.5	6.6	---	
25	7.9	10.0	13.3	10.8	11.4	10.9	7.5	7.0	5.3	6.6	---	
26	7.9	9.7	13.0	10.5	12.0	10.8	8.4	6.7	5.2	6.1	---	
27	7.7	9.3	12.9	10.7	12.0	10.3	9.6	6.6	5.2	5.3	---	
28	7.1	9.8	12.6	11.2	11.1	10.6	9.3	6.7	5.1	5.3	---	
29	---	10.7	12.7	11.8	10.4	10.3	8.3	7.0	5.2	5.4	---	
30	---	10.9	12.6	11.9	---	10.2	7.7	7.0	5.3	5.4	---	
31	---	---	13.0	12.3	---	10.3	---	---	---	5.5	---	
MEAN	7.8	9.3	12.3	11.8	12.2	10.7	8.8	7.5	6.0	5.9	6.1	

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK

LOCATION.--Lat 34°55'25", long 95°15'10", on east line of NW¼ sec.12, T.5 N., R.19 E., Latimer County, Hydrologic Unit 11110105, on right downstream end of bridge on U.S. Highway 270, 2.5 mi (4 km) east of water tower in Wilburton, and at mile 53.1 (85.4 km).

DRAINAGE AREA.--56.2 mi² (145.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.73 ft (173.349 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by several flood-retarding structures.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) June 2, 1979, gage height, 18.50 ft (5.639 m); no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) at 2045 May 2, gage height, 14.75 ft (4.496 m); no peak above base of 1,500 ft³/s (42.5 m³/s); no flow Sept. 4-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	35	4.4	9.6	6.9	4.0	8.1	352	12	2.7	.62	.01
2	.61	17	4.4	9.0	6.1	4.2	7.1	547	9.0	2.8	.46	.01
3	.55	12	4.2	8.4	4.4	4.7	6.6	527	7.4	2.2	.35	.01
4	.50	9.0	4.0	9.0	3.1	4.4	6.0	205	6.2	2.4	.26	.00
5	.46	7.2	4.0	7.8	2.7	4.1	5.5	104	5.4	1.9	.20	.00
6	.42	6.3	4.4	7.4	2.4	3.0	4.9	73	4.8	1.5	.16	.00
7	.34	5.0	5.0	7.0	2.2	3.0	4.6	56	4.3	1.2	.12	.00
8	.38	3.9	5.0	7.0	65	3.1	4.4	46	3.6	.94	.09	.00
9	.31	3.8	5.0	6.4	56	3.1	4.3	38	3.1	.74	.09	.00
10	.25	4.4	5.7	5.8	27	3.0	4.1	32	2.7	.60	.09	.00
11	.22	4.7	5.4	6.0	21	3.0	4.0	29	2.3	.44	.10	.00
12	.19	3.5	8.5	6.0	19	3.2	3.8	25	2.0	.33	.10	.00
13	.14	3.3	14	5.6	20	3.4	3.6	20	1.7	.27	.10	.00
14	.10	3.1	28	5.2	18	3.5	3.7	16	1.5	.22	.10	.00
15	.09	2.6	18	5.0	17	3.6	3.4	50	1.3	.19	.10	.00
16	.08	2.8	14	5.0	15	4.2	3.1	280	1.2	.16	.10	.00
17	.10	2.5	12	5.2	12	9.8	2.9	90	1.0	.10	.09	.00
18	.09	2.8	11	4.7	9.9	11	2.7	59	.90	.09	.09	.00
19	.10	2.2	8.1	4.3	9.5	11	2.5	117	100	.08	.09	.00
20	.12	3.3	7.5	4.0	9.0	7.6	2.3	62	60	.07	.08	.00
21	.14	27	8.0	5.0	8.2	6.7	2.2	68	31	.06	.08	.00
22	.24	17	12	7.1	7.4	7.6	2.1	108	14	.05	.07	.00
23	.18	13	18	6.9	6.5	8.8	2.0	78	9.8	.04	.06	.00
24	.19	8.1	42	7.2	6.0	30	1.9	50	8.2	.03	.05	.00
25	.16	5.9	29	5.0	5.3	20	2.1	35	7.0	.02	.05	.00
26	.15	4.8	21	4.4	5.4	12	1.2	27	6.0	1.5	.04	.00
27	.12	3.9	16	5.3	5.4	9.5	62	19	5.0	2.6	.04	.00
28	.23	4.8	14	6.2	4.4	9.2	36	15	4.3	2.5	.03	.00
29	.20	3.9	12	6.2	3.8	10	25	17	3.7	1.6	.03	.00
30	.63	4.4	11	5.7	---	10	20	25	3.5	1.1	.02	.00
31	208	---	10	6.1	---	8.8	---	18	---	.82	.02	---
TOTAL	278.33	227.2	365.6	193.5	378.6	229.5	352.9	3188	322.90	29.25	3.88	.03
MEAN	8.98	7.37	11.8	6.24	13.1	7.40	11.8	103	10.8	.94	.13	.001
MAX	208	35	42	9.6	65	30	112	547	100	2.8	.62	.01
MIN	.08	2.2	4.0	4.0	2.2	3.0	1.9	15	.90	.02	.02	.00
CF8M	.16	.14	.21	.11	.23	.13	.21	1.83	.19	.02	.002	.000
IN	.18	.15	.24	.13	.25	.15	.23	2.11	.21	.02	.00	.00
AC=FT	552	451	725	384	791	495	700	6320	640	58	7.7	.06

CAL YR 1979 TOTAL 27938.92 MEAN 76.5 MAX 1310 MIN .08 CF8M 1.36 IN 18.49 AC=FT 55420
WTR YR 1980 TOTAL 5569.69 MEAN 15.2 MAX 547 MIN .00 CF8M .27 IN 3.69 AC=FT 11050

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1978 to current year.

pH: November 1978 to current year.

WATER TEMPERATURE: November 1978 to current year.

DISSOLVED OXYGEN: November 1978 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT											
02...	1300	.61	165	6.8	19.5	2.7	30	32	0	6.3	4.0
09...	1019	.34	153	6.6	18.0	4.0	43	--	--	--	--
18...	1010	.12	196	6.8	17.0	1.2	13	--	--	--	--
24...	0930	.19	220	6.9	13.5	.8	8	--	--	--	--
NOV											
07...	1400	5.2	94	6.9	10.0	8.2	73	--	--	--	--
14...	1000	3.3	103	6.9	7.0	9.2	76	--	--	--	--
20...	1125	3.8	109	6.8	14.0	5.7	55	--	--	--	--
28...	1345	5.9	134	7.2	7.5	10.6	87	--	--	--	--
DEC											
07...	0915	5.2	136	7.0	5.0	11.0	86	--	--	--	--
14...	1235	19	140	7.1	5.0	10.8	83	--	--	--	--
19...	1045	8.1	195	7.3	2.5	11.5	84	--	--	--	--
27...	1030	16	220	7.1	8.0	10.3	86	--	--	--	--
JAN											
02...	0840	9.2	133	7.2	5.0	11.0	86	--	--	--	--
10...	1230	5.9	190	7.2	6.0	10.9	88	--	--	--	--
16...	1050	5.2	170	7.0	9.0	9.0	78	33	3	6.6	4.1
22...	1030	7.4	165	7.0	7.0	10.2	84	--	--	--	--
FEB											
04...	1120	3.3	205	7.2	3.0	13.2	97	--	--	--	--
12...	1015	18	148	6.9	1.0	13.4	94	--	--	--	--
19...	0953	9.4	130	6.9	5.0	12.0	94	--	--	--	--
25...	1135	5.4	128	6.8	6.5	11.2	90	--	--	--	--
MAR											
03...	1300	4.8	156	7.1	4.5	12.3	95	--	--	--	--
13...	1135	3.5	175	7.0	11.5	9.6	87	--	--	--	--
20...	1020	7.9	155	7.0	13.0	8.9	85	--	--	--	--
26...	0912	12	235	7.0	10.0	9.6	85	--	--	--	--
APR											
03...	1200	4.6	187	7.2	17.0	9.0	93	39	5	7.1	5.1
11...	1020	4.0	180	6.9	17.0	6.9	72	--	--	--	--
17...	0945	2.8	178	6.8	17.0	6.9	71	--	--	--	--
24...	1147	1.9	181	6.7	19.5	4.7	51	--	--	--	--
29...	1115	25	134	6.8	16.0	8.1	82	--	--	--	--
MAY											
09...	1130	38	97	6.7	18.5	8.2	87	--	--	--	--
16...	1300	288	126	6.8	18.0	8.4	89	27	6	5.2	3.3
22...	1112	112	89	6.8	19.0	8.0	86	21	0	4.0	2.6
30...	1100	25	142	6.7	23.0	6.5	75	--	--	--	--
JUN											
09...	1045	3.3	144	6.6	23.0	4.3	49	--	--	--	--
16...	1045	1.2	163	6.8	26.0	4.4	54	34	0	6.5	4.4
23...	1415	9.2	113	6.7	26.0	5.8	71	--	--	--	--
30...	1205	3.5	146	6.8	29.0	3.0	38	--	--	--	--
JUL											
10...	1255	.55	170	6.9	30.0	4.9	64	38	0	7.3	4.8
17...	1000	.10	195	6.9	27.5	4.0	50	--	--	--	--
24...	0950	.03	250	7.0	23.0	5.2	60	--	--	--	--
30...	0940	1.1	155	6.7	26.0	3.8	46	--	--	--	--
AUG											
08...	1135	.09	188	6.7	28.5	4.7	59	--	--	--	--
13...	0955	.10	242	6.9	26.0	4.5	55	--	--	--	--
21...	1110	.08	465	7.0	27.0	4.2	52	--	--	--	--
27...	1606	.04	218	6.7	28.0	4.0	51	--	--	--	--

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
02...	18	52	1.4	2.8	56	0	46	14	15	13	.1
09...	--	--	--	--	62	0	51	25	--	--	--
18...	--	--	--	--	75	0	62	19	--	--	--
24...	--	--	--	--	90	0	74	18	--	--	--
NOV											
07...	--	--	--	--	26	0	21	5.2	--	--	--
14...	--	--	--	--	31	0	25	6.2	--	--	--
20...	--	--	--	--	31	0	25	7.9	--	--	--
28...	--	--	--	--	36	0	30	3.6	--	--	--
DEC											
07...	--	--	--	--	41	0	34	6.6	--	--	--
14...	--	--	--	--	39	0	32	5.0	--	--	--
19...	--	--	--	--	57	0	47	4.6	--	--	--
27...	--	--	--	--	24	0	20	3.1	--	--	--
JAN											
02...	--	--	--	--	34	0	28	3.4	--	--	--
10...	--	--	--	--	--	--	36	--	--	--	--
16...	18	52	1.4	2.0	--	--	36	--	18	14	.1
22...	--	--	--	--	--	--	35	--	--	--	--
FEB											
04...	--	--	--	--	--	--	44	--	--	--	--
12...	--	--	--	--	--	--	27	--	--	--	--
19...	--	--	--	--	--	--	22	--	--	--	--
25...	--	--	--	--	--	--	23	--	--	--	--
MAR											
03...	--	--	--	--	--	--	28	--	--	--	--
13...	--	--	--	--	--	--	32	--	--	--	--
20...	--	--	--	--	--	--	28	--	--	--	--
26...	--	--	--	--	--	--	42	--	--	--	--
APR											
03...	19	50	1.3	1.8	--	--	33	--	23	17	.1
11...	--	--	--	--	--	--	35	--	--	--	--
17...	--	--	--	--	--	--	35	--	--	--	--
24...	--	--	--	--	--	--	37	--	--	--	--
29...	--	--	--	--	--	--	26	--	--	--	--
MAY											
09...	--	--	--	--	--	--	18	--	--	--	--
16...	13	49	1.1	2.4	--	--	27	--	16	12	.1
22...	7.9	43	.8	1.5	--	--	19	--	2.3	6.8	.2
30...	--	--	--	--	--	--	26	--	--	--	--
JUN											
09...	--	--	--	--	--	--	34	--	--	--	--
16...	15	47	1.1	1.8	--	--	38	--	10	15	.0
23...	--	--	--	--	--	--	24	--	--	--	--
30...	--	--	--	--	--	--	32	--	--	--	--
JUL											
10...	17	47	1.2	2.4	--	--	40	--	13	12	.2
17...	--	--	--	--	--	--	50	--	--	--	--
24...	--	--	--	--	--	--	58	--	--	--	--
30...	--	--	--	--	--	--	47	--	--	--	--
AUG											
08...	--	--	--	--	--	--	52	--	--	--	--
13...	--	--	--	--	--	--	60	--	--	--	--
21...	--	--	--	--	--	--	86	--	--	--	--
27...	--	--	--	--	--	--	62	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

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07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
02...	0	280	--	<10	6	7.7	.6	24	.02	96
09...	--	--	--	--	--	--	--	55	.05	96
18...	--	--	--	--	--	--	--	51	.02	96
24...	--	--	--	--	--	--	--	43	.02	98
NOV										
07...	--	--	--	--	--	--	--	28	.39	99
14...	--	--	--	--	--	--	--	36	.32	99
20...	--	--	--	--	--	--	--	37	.38	91
28...	0	--	.0	0	--	--	--	19	.87	100
DEC										
07...	--	--	--	--	--	--	--	17	.24	98
14...	0	--	.0	1	--	--	--	25	2.5	99
19...	--	--	--	--	--	--	--	27	.59	99
27...	--	--	--	--	--	--	--	47	2.0	98
JAN										
02...	--	--	--	--	--	--	--	28	.70	100
10...	--	--	--	--	--	--	--	27	.43	96
16...	0	150	.0	<10	10	7.0	--	35	.68	92
22...	--	--	--	--	--	--	--	32	.64	94
FEB										
04...	0	--	.1	0	--	--	--	28	.23	93
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	16	.41	82
25...	--	--	--	--	--	--	--	17	.25	81
MAR										
03...	--	--	--	--	--	--	--	15	.19	83
13...	0	--	.0	0	--	--	--	12	.11	94
20...	--	--	--	--	--	--	--	20	.43	82
26...	--	--	--	--	--	--	--	20	.65	99
APR										
03...	0	130	.0	<10	5	4.5	1.0	25	--	99
11...	--	--	--	--	--	--	--	20	.22	99
17...	--	--	--	--	--	--	--	30	.23	100
24...	--	--	--	--	--	--	--	30	.15	99
29...	--	--	--	--	--	--	--	22	1.5	99
MAY										
09...	--	--	--	--	--	--	--	29	3.0	95
16...	0	130	.1	<10	<3	11	--	68	53	86
22...	1	80	.0	<10	9	--	--	47	14	92
30...	--	--	--	--	--	--	--	31	2.1	91
JUN										
09...	--	--	--	--	--	--	--	30	.27	94
16...	1	340	.0	<10	10	6.6	1.4	24	.08	95
23...	--	--	--	--	--	--	--	44	1.1	93
30...	--	--	--	--	--	--	--	26	.25	88
JUL										
10...	2	430	.0	<10	20	7.7	--	15	.02	87
17...	--	--	--	--	--	--	--	14	.00	86
24...	--	--	--	--	--	--	--	7	.00	87
30...	--	--	--	--	--	--	--	16	.05	92
AUG										
08...	3	--	.1	0	--	--	--	11	.00	49
13...	--	--	--	--	--	--	--	7	.00	77
21...	--	--	--	--	--	--	--	5	.00	59
27...	--	--	--	--	--	--	--	16	.00	89

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	84	137	144	185	153	---	135				
2	170	87	142	134	198	154	---	112				
3	180	88	136	141	207	153	193	97				
4	171	91	133	154	203	151	191	104				
5	158	92	134	160	203	152	193	115				
6	156	96	125	164	199	153	204	123				
7	154	91	133	161	197	174	205	124				
8	156	93	140	171	187	175	203	119				
9	155	102	148	177	215	169	185	104				
10	155	96	156	189	198	---	191	121				
11	157	97	171	191	160	---	184	148				
12	163	103	176	189	148	---	147	171				
13	171	103	165	187	144	---	141	185				
14	174	103	154	183	143	---	154	192				
15	178	102	186	176	141	---	187	---				
16	183	109	204	175	143	---	182	---				
17	189	108	195	170	125	---	172	---				
18	201	107	198	167	121	---	166	---				
19	217	112	203	170	138	---	164	---				
20	231	109	217	173	155	164	171	---				
21	242	94	223	181	170	172	177	---				
22	244	91	229	165	165	188	189	---				
23	234	92	224	163	156	216	175	---				
24	218	103	198	172	144	208	173	---				
25	232	113	205	178	127	234	178	---				
26	243	120	204	182	122	234	240	---				
27	249	131	220	187	133	---	181	---				
28	214	132	218	188	155	---	132	---				
29	189	128	175	192	158	---	143	---				
30	155	137	162	198	---	---	154	---				
31	110	---	151	190	---	---	---	---				
MEAN	187	104	176	173	163	178	178	132				

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	6.7	7.2	7.2	7.2	7.1	---	6.7				
2	6.8	6.7	7.1	7.2	7.2	7.2	---	6.5				
3	6.8	6.8	7.1	7.2	7.2	7.1	7.2	6.4				
4	6.8	6.8	7.1	7.3	7.2	7.0	7.3	6.5				
5	6.8	6.8	6.9	7.3	7.1	7.0	7.2	6.6				
6	6.6	7.0	6.9	7.2	7.1	7.0	7.2	6.7				
7	6.6	6.9	6.9	7.2	7.1	6.9	7.0	6.6				
8	6.6	6.8	7.1	7.2	6.9	6.9	7.1	6.7				
9	6.7	6.8	7.1	7.2	7.0	7.1	7.1	6.7				
10	6.7	6.8	7.1	7.2	7.0	---	7.0	6.7				
11	6.7	6.8	7.0	7.1	6.9	---	6.9	6.7				
12	6.6	6.8	7.0	7.2	6.9	---	7.1	6.7				
13	6.6	6.8	7.1	7.2	6.9	---	7.1	6.7				
14	6.6	6.8	7.1	7.2	6.9	---	7.1	6.8				
15	6.6	6.8	7.2	7.1	6.9	---	7.1	---				
16	6.5	6.8	7.2	7.1	6.9	---	7.0	---				
17	6.5	6.9	7.3	7.1	7.0	---	6.8	---				
18	6.4	6.9	7.3	7.2	6.9	---	6.9	---				
19	6.5	6.8	7.3	7.1	7.0	---	6.9	---				
20	6.5	6.8	7.2	7.0	6.9	7.1	6.9	---				
21	6.6	6.8	7.2	7.0	6.8	7.1	6.9	---				
22	6.9	6.9	7.2	7.1	6.8	7.1	6.9	---				
23	6.9	7.0	7.1	7.2	6.7	7.0	6.8	---				
24	6.8	7.1	7.0	7.2	6.7	7.1	6.8	---				
25	6.7	7.1	7.1	7.2	6.9	7.2	6.8	---				
26	6.7	7.1	7.1	7.2	6.9	7.1	7.2	---				
27	6.6	7.1	7.2	7.2	6.9	---	7.1	---				
28	6.7	7.1	7.1	7.1	6.9	---	6.9	---				
29	6.8	7.1	7.1	7.2	6.9	---	6.8	---				
30	6.7	7.2	7.1	7.2	---	---	6.9	---				
31	6.8	---	7.1	7.2	---	---	---	---				
MEAN	6.7	6.9	7.1	7.2	7.0	7.1	7.0	6.6				

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	15.0	4.0	5.5	1.5	5.0	---	16.0				
2	19.5	14.0	4.0	5.5	2.5	4.0	---	16.5				
3	18.5	13.0	4.0	5.5	3.5	4.5	16.5	16.5				
4	17.5	12.0	5.0	4.5	3.5	8.0	15.5	17.5				
5	16.0	12.0	6.0	5.0	4.5	7.5	15.5	18.0				
6	16.0	11.5	6.5	6.5	5.5	7.5	16.5	19.0				
7	16.5	10.5	6.0	5.0	3.5	11.0	18.0	20.0				
8	18.5	11.0	6.0	4.5	2.0	11.0	17.0	19.5				
9	18.0	11.5	5.5	4.5	2.5	10.0	16.0	19.0				
10	15.0	9.5	7.0	6.0	1.5	---	16.5	19.5				
11	15.0	8.5	9.5	7.5	1.5	---	17.0	21.0				
12	15.5	9.0	7.5	6.0	1.5	---	14.5	22.0				
13	16.0	8.5	5.5	5.5	2.5	---	12.0	22.5				
14	15.0	8.0	5.0	6.0	4.5	---	12.0	21.5				
15	15.5	8.5	5.0	8.0	5.5	---	13.5	---				
16	15.5	8.5	4.5	9.5	4.0	---	16.0	---				
17	17.0	9.0	2.5	8.0	3.5	---	17.5	---				
18	17.5	11.0	7.5	7.5	3.5	---	17.5	---				
19	19.0	13.0	3.5	8.0	6.0	---	17.5	---				
20	20.5	14.5	5.5	8.0	7.5	14.0	18.5	---				
21	21.5	15.5	7.0	8.0	9.5	12.5	19.0	---				
22	19.0	11.5	9.0	7.0	9.5	12.5	19.5	---				
23	15.5	10.0	9.5	6.0	9.0	13.0	19.5	---				
24	14.5	8.5	8.0	6.0	8.0	11.0	19.5	---				
25	14.5	8.0	7.0	6.5	7.0	10.5	19.0	---				
26	15.0	8.0	7.0	6.0	6.5	10.0	16.5	---				
27	16.0	9.0	8.0	4.5	7.0	---	15.5	---				
28	17.0	7.5	8.5	3.5	9.0	---	16.0	---				
29	16.5	5.5	8.0	3.0	8.5	---	16.0	---				
30	17.0	4.0	7.5	3.0	---	---	16.0	---				
31	16.0	---	6.5	2.0	---	---	---	---				
MEAN	17.0	10.0	6.0	6.0	5.0	9.5	16.5	19.0				

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	6.6	11.6	11.1	13.2	11.3	---	8.4				
2	2.6	7.0	11.7	11.0	13.2	12.1	---	8.7				
3	2.7	7.5	11.9	10.8	13.1	12.1	8.7	9.5				
4	3.3	7.8	11.8	10.9	13.4	11.0	8.1	9.2				
5	3.5	7.9	11.4	10.9	13.1	10.6	8.2	8.8				
6	3.4	8.0	11.1	10.7	12.6	10.6	8.1	8.4				
7	3.5	8.1	11.1	10.7	12.6	9.4	7.5	8.0				
8	3.9	7.7	11.0	11.1	13.0	9.0	7.7	8.1				
9	4.1	7.5	11.0	11.1	12.7	8.4	7.7	8.1				
10	4.2	8.2	10.7	10.8	13.1	---	7.5	7.8				
11	4.3	8.8	9.7	10.4	13.2	---	7.0	7.4				
12	3.5	8.9	9.6	10.6	13.2	---	7.2	7.0				
13	3.1	8.9	10.5	10.6	13.0	---	7.4	6.6				
14	2.7	9.1	10.6	10.5	12.5	---	8.0	6.6				
15	2.4	9.1	10.8	9.8	12.1	---	8.0	---				
16	1.9	9.0	11.0	9.4	12.6	---	6.9	---				
17	1.5	8.9	11.6	9.9	13.2	---	6.3	---				
18	1.4	7.9	11.6	10.2	13.1	---	6.9	---				
19	1.4	6.5	11.5	10.2	11.8	---	7.3	---				
20	1.2	5.5	11.2	9.6	11.0	8.6	7.1	---				
21	.9	6.3	10.7	9.8	10.3	8.6	6.5	---				
22	.8	6.5	10.0	10.1	10.3	8.6	6.1	---				
23	.8	7.4	9.3	10.5	10.3	7.7	5.4	---				
24	.7	8.3	10.0	10.6	10.5	8.6	4.7	---				
25	.6	9.1	10.7	10.5	10.9	9.4	4.2	---				
26	.7	9.6	10.6	10.8	11.0	9.4	6.7	---				
27	.9	9.8	10.6	11.2	11.0	---	7.7	---				
28	1.1	10.5	10.6	11.7	10.6	---	7.9	---				
29	1.3	10.9	10.6	12.0	10.3	---	7.8	---				
30	2.6	11.3	10.5	12.2	---	---	7.7	---				
31	5.8	---	10.9	12.8	---	---	---	---				
MEAN	2.4	8.3	10.8	10.7	12.1	9.7	7.2	8.0				

ARKANSAS RIVER BASIN

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'44", long 95°09'20", in NW¼NW¼ 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 (0.2 km) downstream from Little Fourche Maline, 5.0 mi (8.0 km) southwest of Red Oak, and at mile 41.2 (66.3 km).

DRAINAGE AREA.--122 mi² (316 km²).

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 (164.836 m), National Geodetic Vertical Datum of 1929. Prior to April 25, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for period of no gage-height record Oct. 1 to Feb. 20, which is poor. Some regulation by several flood-retarding structures.

AVERAGE DISCHARGE.--42 years, 126 ft³/s (3.568 m³/s), 14.02 in/yr (356 mm/yr), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,175 m³/s) May 19, 1960, gage height, 24.79 ft (7.556 m), from floodmarks, from rating curve extended above 25,000 ft³/s (709 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft (7.742 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s (38.8 m³/s) at 0645 May 3, gage height, 10.81 ft (3.295 m). No peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	100	5.2	13	12	12	31	478	46	7.2	.84	.00
2	2.2	40	5.4	12	10	10	27	854	38	7.4	.65	.00
3	2.0	22	5.5	11	8.8	8.3	34	1190	29	5.3	.48	.00
4	1.8	15	5.4	10	7.2	8.9	30	586	24	6.6	.44	.00
5	1.6	12	5.3	10	6.7	7.7	24	287	52	4.3	.38	.00
6	1.4	9.5	5.2	8.8	6.0	6.8	20	160	19	3.5	.26	.00
7	1.2	7.8	5.4	8.2	5.6	6.4	17	99	17	2.8	.20	.00
8	1.4	6.4	5.6	7.8	150	5.9	15	74	15	2.2	.17	.00
9	1.2	5.6	5.9	7.4	110	5.9	13	63	13	1.8	.00	.00
10	1.1	5.8	6.3	7.0	70	5.8	12	55	12	1.4	.00	.00
11	.94	6.6	7.0	6.9	50	5.8	10	47	10	1.1	.00	.00
12	.82	5.8	8.0	7.2	42	6.0	9.2	42	8.4	.84	.00	.00
13	.70	5.2	15	6.6	60	5.8	9.2	35	7.0	.73	.06	.00
14	.62	4.7	30	6.2	53	5.9	9.2	30	6.1	.60	.04	.00
15	.56	4.4	32	5.9	47	5.5	8.2	38	4.6	.50	.02	.00
16	.50	4.1	23	5.7	42	5.1	7.8	490	3.6	.42	.01	.00
17	.45	3.8	17	6.0	38	9.9	8.2	284	2.9	.30	.00	.00
18	.41	3.6	13	5.6	35	18	9.2	124	2.8	.22	.00	.00
19	.37	3.5	11	5.2	32	20	9.8	192	248	.16	.00	.00
20	.33	6.0	10	5.3	30	17	9.2	155	147	.10	.00	.00
21	.30	30	9.6	5.6	27	13	8.6	118	83	.07	.00	.00
22	.40	26	15	6.8	23	11	8.3	232	45	.02	.00	.00
23	.35	21	25	12	21	21	7.2	197	34	.00	.00	.00
24	.32	13	45	10	20	103	6.5	126	23	.00	.00	.00
25	.29	9.0	49	8.5	18	76	6.7	84	18	.00	.00	.00
26	.26	5.8	35	8.2	16	54	52	63	15	.05	.00	.00
27	.25	5.4	29	9.2	15	42	106	49	13	.28	.00	.00
28	.24	5.6	23	12	15	40	70	45	11	.41	.00	2.3
29	.50	5.2	19	11	14	42	92	46	10	1.2	.00	6.4
30	60	5.0	16	10	---	46	42	58	8.0	1.4	.00	6.0
31	250	---	14	11	---	38	---	56	---	1.1	.00	---
TOTAL	335.01	397.8	500.8	260.1	984.3	662.7	672.3	6357	965.4	52.00	3.55	14.70
MEAN	10.8	13.3	16.2	8.39	33.9	21.4	22.4	205	32.2	1.68	.11	.49
MAX	250	100	49	13	150	103	106	1190	248	7.4	.84	6.4
MIN	.24	3.5	5.2	5.2	5.6	5.1	6.5	30	2.8	.00	.00	.00
AC=FT	664	789	993	516	1950	1310	1330	12610	1910	103	7.0	29

CAL YR 1979 TOTAL 64986.31 MEAN 178 MAX 2720 MIN .24 AC=FT 128900
WTR YR 1980 TOTAL 11205.66 MEAN 30.6 MAX 1190 MIN .00 AC=FT 22230

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LOCATION.--Lat 34°56'23", long 95°01'58", on east line in NE¼ sec.1, T.5 N., R.22 E., Latimer County, Hydrologic Unit 11110105, on right downstream side of bridge on county road, 0.9 mi (1.4 km) south of intersection with U.S. Highway 270, and 2.5 mi (4.0 km) southeast of Red Oak.

WATER-DISCHARGE RECORDS

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) at 0800 June 19, gage height, 10.78 ft (3.286 m), no other peak above base of 900 ft³/s (25.5 m³/s); no flow at times.

	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.00	.29	.04	.05	.20	.17	3.1	79	.07	.25	.00	.00
2		.00	.15	.03	.04	.17	.17	1.5	236	.04	.17	.00	.00
3		.00	.05	.02	.10	.17	.09	7.7	64	.03	.06	.00	.00
4		.00	.03	.02	.06	.17	.07	1.6	26	.02	.02	.00	.00
5		.00	.03	.02	.08	.16	.08	.65	15	.02	.00	.00	.00
6		.00	.02	.04	.06	.17	.08	.45	9.3	.02	.00	.00	.00
7		.00	.01	.01	.03	.18	.09	.38	5.4	.02	.00	.00	.00
8		.00	.01	.01	.03	62	.10	.30	2.9	.02	.00	.00	.00
9		.00	.27	.01	.03	29	.06	.15	1.4	.01	.00	.00	.00
10		.00	.33	.00	.03	15	.06	.10	1.1	.01	.00	.00	.00
11		.00	.14	.00	.05	17	.07	.08	1.0	.00	.00	.00	.00
12		.00	.10	5.3	.04	13	.20	.06	.81	.00	.00	.00	.00
13		.00	.06	14	.04	9.8	.34	.16	.64	.00	.00	.00	.00
14		.00	.05	4.5	.04	7.5	.38	.19	.50	.00	.00	.00	.00
15		.00	.05	1.2	.04	6.1	.23	.10	62	.00	.00	.00	.00
16		.00	.03	.56	.10	4.2	.17	.06	129	.00	.00	.00	.00
17		.00	.03	.21	.17	1.8	16	.13	14	.00	.00	.00	.00
18		.00	.02	.10	.17	1.5	5.9	.22	3.5	.00	.00	.00	.00
19		.00	.01	.06	.17	1.5	1.9	.14	9.3	445	.00	.00	.00
20		.00	.01	.06	.25	1.3	.97	.09	1.0	48	.00	.00	.00
21		.00	12	.06	2.8	.87	.56	.04	13	26	.00	.00	.00
22		.00	5.0	.08	3.3	.55	.46	.04	26	14	.00	.00	.00
23		.00	1.1	12	1.2	.41	50	.03	10	10	.00	.00	.00
24		.00	.26	17	.52	.31	42	.02	1.4	6.6	.00	.00	.00
25		.00	.25	3.9	.39	.27	14	.04	.32	4.5	.00	.00	.00
26		.00	.19	1.0	.25	.21	7.5	1.2	.10	2.8	.00	.00	.00
27		.00	.13	.38	.23	.13	3.1	.68	.05	1.9	.00	.00	.00
28		.00	.09	.21	.17	.15	9.3	.21	.03	1.2	.00	.00	13
29		.00	.06	.10	.17	.17	16	.11	.09	.82	.00	.00	5.5
30	52	.04	.08	.17	.17	---	18	.05	.83	.46	.00	.00	.64
31	14	---	.05	.19	.19	---	7.7	---	.27	---	.00	.00	---
TOTAL	66.00	20.81	61.05	10.99	173.99	195.75	19.58	713.94	561.54	.50	.00	19.14	
MEAN	2.13	.69	1.97	.35	6.00	6.31	.65	23.0	18.7	.016	.000	.64	
MAX	52	12	17	3.3	62	50	7.7	236	445	.25	.000	13	
MIN	.00	.01	.00	.03	.13	.06	.02	.03	.00	.00	.00	.00	
CFSM	.17	.05	.15	.03	.47	.49	.05	1.80	1.46	.001	.000	.05	
IN	.19	.06	.18	.03	.51	.57	.06	2.07	1.63	.00	.00	.06	
AC=FT	131	41	121	22	345	388	39	1420	1110	1.0	.00	38	
CAL YR 1979	TOTAL	7178.60			MEAN 19.7	MAX 710	MIN .00	CFSM 1.54	IN				

ARKANSAS RIVER BASIN

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since March 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	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)
NOV											
07...	1655	.01	107	6.7	9.5	3.4	30	--	--	--	--
14...	0840	.05	124	7.0	5.0	8.9	70	--	--	--	--
20...	0930	.01	134	6.9	14.0	4.2	40	--	--	--	--
27...	0912	.13	220	7.4	9.0	9.5	82	--	--	--	--
DEC											
07...	1145	.01	197	7.0	9.0	10.3	88	--	--	--	--
13...	0940	14	156	7.0	5.0	12.0	92	--	--	--	--
19...	0930	.06	325	7.0	3.0	11.5	85	--	--	--	--
26...	0915	1.0	136	--	5.0	10.1	78	--	--	--	--
JAN											
03...	1350	.08	175	7.1	5.0	9.8	76	--	--	--	--
09...	0930	.03	210	7.3	3.0	12.0	88	--	--	--	--
16...	0905	.13	240	7.1	10.0	11.0	97	46	12	10	5.2
22...	0900	3.9	245	8.0	7.0	10.8	88	--	--	--	--
FEB											
04...	0910	.17	225	7.8	.5	14.2	97	--	--	--	--
12...	0915	14	144	7.1	1.0	14.2	99	--	--	--	--
19...	0840	1.6	173	7.1	4.5	12.1	94	--	--	--	--
25...	1005	.32	200	7.1	6.0	12.2	96	--	--	--	--
MAR											
03...	0950	.10	220	7.7	4.0	13.3	100	--	--	--	--
13...	0835	.32	237	7.3	10.5	9.5	85	--	--	--	--
18...	0855	6.6	260	7.2	7.0	9.0	73	--	--	--	--
26...	1100	8.1	120	7.0	9.0	9.6	83	--	--	--	--
APR											
03...	0945	12	142	7.0	16.5	8.7	89	35	9	7.5	4.0
11...	0850	.08	183	7.2	16.5	8.1	84	--	--	--	--
17...	0840	.10	205	7.4	16.5	8.3	84	--	--	--	--
24...	0920	.02	243	7.0	19.5	6.7	73	--	--	--	--
29...	0945	.13	280	7.3	16.5	7.3	74	--	--	--	--
MAY											
09...	0950	1.2	144	6.9	16.5	8.2	83	--	--	--	--
16...	0915	129	52	6.5	17.5	8.7	91	15	2	3.2	1.7
22...	0915	30	111	6.9	19.0	8.1	87	--	--	--	--
30...	1310	1.6	158	7.1	24.0	8.0	94	--	--	--	--
JUN											
09...	1215	.01	195	7.0	23.0	6.7	76	--	--	--	--
23...	0935	10	130	6.7	25.0	6.2	74	32	4	7.0	3.5
30...	0940	.46	155	6.8	28.0	5.0	63	--	--	--	--

ARKANSAS RIVER BASIN

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07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
NOV											
07...	--	--	--	--	35	0	29	11	--	--	--
14...	--	--	--	--	42	0	34	6.7	--	--	--
20...	--	--	--	--	47	0	39	9.5	--	--	--
27...	--	--	--	--	72	0	59	4.6	--	--	--
DEC											
07...	--	--	--	--	70	0	57	11	--	--	--
13...	--	--	--	--	56	0	46	9.0	--	--	--
19...	--	--	--	--	100	0	82	16	--	--	--
26...	--	--	--	--	55	0	45	--	--	--	--
JAN											
03...	--	--	--	--	50	0	41	6.4	--	--	--
09...	--	--	--	--	--	--	43	--	--	--	--
16...	16	40	1.0	4.0	--	--	43	--	27	11	.1
22...	--	--	--	--	--	--	64	--	--	--	--
FEB											
04...	--	--	--	--	--	--	54	--	--	--	--
12...	--	--	--	--	--	--	24	--	--	--	--
19...	--	--	--	--	--	--	29	--	--	--	--
25...	--	--	--	--	--	--	36	--	--	--	--
MAR											
03...	--	--	--	--	--	--	41	--	--	--	--
13...	--	--	--	--	--	--	46	--	--	--	--
18...	--	--	--	--	--	--	51	--	--	--	--
26...	--	--	--	--	--	--	22	--	--	--	--
APR											
03...	14	44	1.0	2.5	--	--	29	--	25	7.3	.1
11...	--	--	--	--	--	--	42	--	--	--	--
17...	--	--	--	--	--	--	46	--	--	--	--
24...	--	--	--	--	--	--	55	--	--	--	--
29...	--	--	--	--	--	--	68	--	--	--	--
MAY											
09...	--	--	--	--	--	--	30	--	--	--	--
16...	3.4	29	.4	2.2	--	--	13	--	4.9	2.3	.1
22...	--	--	--	--	--	--	29	--	--	--	--
30...	--	--	--	--	--	--	43	--	--	--	--
JUN											
09...	--	--	--	--	--	--	53	--	--	--	--
23...	12	42	.9	3.3	--	--	28	--	21	10	.5
30...	--	--	--	--	--	--	37	--	--	--	--

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYS- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
07...	--	--	--	--	--	--	--	55	.00	97
14...	--	--	--	--	--	--	--	--	--	--
20...	0	--	.0	3	--	--	--	40	.00	96
27...	--	--	--	--	--	--	--	43	.02	95
DEC										
07...	--	--	--	--	--	--	--	51	.00	94
13...	--	--	--	--	--	--	--	81	3.1	96
19...	2	--	.5	1	--	--	--	49	.07	96
26...	--	--	--	--	--	--	--	85	.23	100
JAN										
03...	--	--	--	--	--	--	--	41	.01	99
09...	--	--	--	--	--	--	--	45	.00	97
16...	2	30	.4	<10	6	59	1.2	41	.01	82
22...	--	--	--	--	--	--	--	41	.43	99
FEB										
04...	0	--	.1	0	--	--	--	52	.02	83
12...	--	--	--	--	--	--	--	34	1.3	90
19...	--	--	--	--	--	--	--	21	.09	81
25...	--	--	--	--	--	--	--	19	.02	82
MAR										
03...	--	--	--	--	--	--	--	16	.00	79
13...	0	--	1.2	0	--	--	--	10	.01	93
18...	--	--	--	--	--	--	--	74	1.3	86
26...	--	--	--	--	--	--	--	153	3.3	97
APR										
03...	0	50	.0	<10	5	6.1	1.2	49	1.6	100
11...	--	--	--	--	--	--	--	12	.00	99
17...	--	--	--	--	--	--	--	10	.00	98
24...	--	--	--	--	--	--	--	6	.00	97
29...	--	--	--	--	--	--	--	7	.00	98
MAY										
09...	--	--	--	--	--	--	--	25	.08	87
16...	3	80	.1	<10	<3	11	3.5	153	45	92
22...	--	--	--	--	--	--	--	60	4.9	90
30...	--	--	--	--	--	--	--	20	.09	92
JUN										
09...	--	--	--	--	--	--	--	13	.00	80
23...	2	20	.8	<10	8	10	--	22	--	91
30...	--	--	--	--	--	--	--	9	.01	99

ARKANSAS RIVER BASIN

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07248000 WISTER LAKE NEAR WISTER, OK

LOCATION.--Lat 34°56'10", long 94°43'10", in SE¼NE¼ sec.1, T.5 N., R.24 E., LeFlore County, Hydrologic Unit 11110105, in control tower near right end of Wister Dam on Poteau River, 2.0 mi (3.2 km) south of Wister, 2.7 mi (4.3 km) upstream from Caston Creek, and at mile 60.9 (98.0 km).

DRAINAGE AREA.--993 mi² (2,572 km²).

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 a uncontrolled concrete chute-type spillway and six 7.0 ft (2.13 m) x 12.0 ft (3.66 m) vertical liftgates. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 429,600 acre-ft (530 hm³) at elevation 502.5 ft (153.16 m) crest of spillway and 29,950 acre-ft (36.9 hm³) at elevation 471.6 ft (143.74 m) 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 507,400 acre-ft (626 hm³) May 27, 1957, elevation, 505.73 ft (154.147 m); minimum since conservation pool was first filled, 4,020 acre-ft (5.0 hm³) Oct. 16, 1961, elevation, 456.97 ft (139.284 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 69,040 acre-ft (85.1 hm³) May 5, elevation, 478.88 (145.963 m); minimum, 26,270 acre-ft (32.4 hm³) Feb. 1, elevation, 471.40 ft (143.683 m).

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

471	24,720	483	106,500
475	43,240	487	152,400
479	69,990	491	208,400

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60260	63090	56090	39840	26470	27180	32210	34770	33730	57660	51410	45730
2	60190	63690	53910	35390	26740	27260	31710	47120	34240	57530	51220	45610
3	60050	63990	51730	31050	27020	27470	32330	60190	34620	57390	50970	45380
4	59830	64140	49620	28940	27260	27510	33990	67100	34960	57180	50730	45320
5	59760	64360	47290	28360	27550	27430	33540	68490	35200	57050	50540	45210
6	59620	64440	45270	27790	27670	27340	32980	66180	35440	56840	50360	45040
7	59480	64510	43190	27180	27990	27300	32430	60400	35500	56570	50170	44980
8	59340	64590	41060	26860	30130	27260	32160	54690	35730	56370	50090	44870
9	59270	64810	39000	27020	33540	27180	32430	49200	35930	56160	49800	44760
10	59130	64660	36970	27380	35880	27020	31940	43910	35930	56030	49620	44640
11	59060	64360	35010	27340	35980	27060	31000	38330	36030	55830	49440	44530
12	58780	64210	33630	27510	34670	27300	30130	33350	36030	55560	49200	44360
13	58780	63990	33590	27670	33260	27340	30390	29280	36030	55360	49080	44190
14	58640	63690	33590	27750	31580	27630	34620	27670	36030	55090	48900	44020
15	58570	63390	32660	27990	30610	27830	37930	28280	35930	54830	48660	43910
16	58640	63240	31400	28120	30560	28280	37870	45270	35880	54560	48480	43910
17	58710	63020	30480	28240	30430	28820	36520	54760	36130	54300	48240	43570
18	58710	62800	30000	28320	29960	29110	34420	57250	36180	54100	48180	43570
19	58640	62580	29360	28360	29410	29360	32800	59760	31100	53840	47940	43460
20	58640	62730	28780	28320	28780	29490	30480	60760	35160	53580	47770	43300
21	58640	63090	28360	28530	27910	29190	29110	60330	56570	53520	47590	43240
22	58780	63240	28490	29110	27830	28610	28900	57730	57390	53260	47410	43020
23	58640	63690	35350	30220	27830	30090	28930	53000	57730	53000	47240	43070
24	58500	64060	55620	30700	27790	30780	28160	47530	57870	52870	47120	43070
25	58430	64210	63840	30350	27590	31130	28320	41440	58080	52550	46880	43460
26	58430	63470	65040	29280	27470	30740	29490	35060	58080	52740	46770	43240
27	58290	62430	61630	27870	27260	30050	30430	30390	58080	52610	46500	43630
28	58360	61190	57460	27180	27060	29490	31130	28990	58080	52360	46480	43970
29	58080	60120	52870	26860	26980	29870	31530	29750	57940	52170	46360	43970
30	59480	58360	48540	26620	---	31180	31800	31090	57870	51910	46190	43910
31	61700	---	44420	26350	---	32030	---	32660	---	51730	46010	---
MAX	61700	64810	65040	39840	35980	32030	37930	68490	58080	57660	51410	45730
MIN	58080	58360	28360	26350	26470	27020	28160	27670	33730	51730	46010	43020
†	477.91	477.44	475.21	471.42	471.58	472.77	472.72	472.91	477.37	476.44	475.49	475.12
‡	+1,230	-3,340	-13,940	-18,070	+630	+5,050	-230	+860	+25,210	-6,140	-5,720	-2,100

CAL YR 1979 MAX 424700 MIN 25640 † +11,850
WTR YR 1980 MAX 68490 MIN 26350 ‡ -16,560

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07248500 POTEAU RIVER NEAR WISTER, OK

LOCATION.--Lat 34°56'15", long 94°42'54", in NW¼NW¼ sec.6, T.5 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left bank of outflow channel 700 ft (213.4 m) downstream from Wister Dam, 2.2 mi (3.5 km) southeast of Wister, 2.6 mi (4.2 km) upstream from Caston Creek, and at mile 60.8 (97.8 km).

DRAINAGE AREA.--993 mi² (2,572 km²).

PERIOD OF RECORD.--May 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to May 21, 1951, records below about 500 ft³/s (14.2 m³/s) include flow from Caston Creek, drainage area, 70 mi² (181 km²).

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939, 1943 (M), 1945 (M).

GAGE.--Water-stage recorder. Datum of gage is 445.43 ft (135.767 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to June 28, 1953.

REMARKS.--Records fair. Flow completely regulated by Wister Lake (station 07248000) since 1949.

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Wister Dam) 11 years (water years 1939-49), 1,325 ft³/s (37.52 m³/s), 960,000 acre-ft/yr (1.18 km³/yr), (since regulation by Wister Dam) 31 years (water years 1950-80), 1,044 ft³/s (29.57 m³/s), 756,400 acre-ft/yr (934 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,600 ft³/s (2,230 m³/s) May 16, 1945, gage height, 37.16 ft (11.326 m), site and datum then in use; no flow at times in 1938-39, 1943, 1947, 1953-54, 1961, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 43.0 ft (13.11 m) at site 0.1 mi (0.2 km) upstream at datum 13.11 ft (3.996 m) lower, estimated as 38.5 ft (11.73 m) at site 1.6 mi (2.6 km) downstream at datum 12.41 ft (3.783 m) lower, on basis of fall determined for flood in 1943, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,310 ft³/s (122 m³/s) May 22, gage height, 6.27 ft (1.911 m); minimum daily discharge, 8.4 ft³/s (0.24 m³/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.8	1150	2670	277	109	991	364	62	27	26	15
2	11	9.8	1140	2590	130	109	989	938	62	27	26	14
3	11	9.8	1130	2530	127	107	993	178	62	27	24	14
4	11	9.8	1120	1570	127	107	1000	175	62	27	24	13
5	11	9.8	1110	621	127	134	1010	1220	40	28	23	13
6	10	9.8	1100	610	124	157	1010	2420	13	28	23	13
7	10	9.8	1090	605	127	159	1010	3190	13	28	22	13
8	10	9.8	1090	394	127	158	1000	3150	12	28	23	13
9	9.9	95	1080	130	88	156	1000	3100	12	28	23	14
10	9.8	156	1060	127	67	156	995	3030	13	28	23	14
11	9.8	156	1060	127	394	112	989	2960	13	28	24	13
12	9.4	156	1050	124	910	84	984	2880	13	28	24	13
13	9.3	156	1040	122	900	83	981	2320	13	28	25	13
14	9.3	156	1040	122	898	81	991	1140	13	28	26	13
15	9.3	156	1040	122	896	78	1010	658	12	28	30	13
16	9.8	156	1040	122	891	78	1440	344	11	28	17	13
17	9.8	155	854	122	888	78	1400	1320	11	28	15	12
18	9.8	153	545	162	831	144	1770	1950	11	27	15	14
19	9.8	153	540	210	825	255	1750	1970	13	26	15	12
20	9.0	153	536	207	824	251	1730	1980	17	27	15	12
21	8.8	153	402	207	817	389	1320	1980	26	27	14	12
22	8.4	154	221	210	526	475	552	3040	26	26	14	11
23	8.4	154	222	330	335	472	546	4220	26	26	14	11
24	8.6	154	234	491	329	769	543	4150	25	26	14	11
25	8.8	154	243	745	326	1010	481	4050	25	26	14	11
26	8.8	412	1320	1070	323	1000	361	3920	25	25	14	11
27	9.3	617	2880	1070	319	999	354	3040	25	25	15	11
28	9.3	616	2840	737	317	996	355	1530	25	25	13	9.5
29	9.3	614	2810	486	190	993	361	814	26	25	21	9.1
30	10	851	2770	486	---	991	366	372	27	25	14	9.7
31	9.8	---	2720	486	---	989	---	62	---	26	14	---
TOTAL	299.7	5758.5	36477	19605	13060	11679	28682	62465	734	834	604	370.3
MEAN	9.67	192	1177	632	450	377	956	2015	24.5	26.9	19.5	12.3
MAX	11	851	2880	2670	910	1010	1800	4220	62	28	30	15
MIN	8.4	9.8	221	122	67	78	354	62	11	25	13	9.1
AC=FT	594	11420	72350	38890	25900	23170	56890	123900	1460	1650	1200	734

CAL YR 1979 TOTAL 714892.2 MEAN 1959 MAX 7030 MIN 8.4 AC=FT 1418000
WTR YR 1980 TOTAL 180568.5 MEAN 493 MAX 4220 MIN 8.4 AC=FT 358200

ARKANSAS RIVER BASIN

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07248600 CASTON CREEK AT WISTER, OK

LOCATION.--Lat 34°57'27", long 94°44'18", on SW¼SE¼ sec. 26, T.6 N., T.24 E., LeFlore County, Hydrologic Unit 11110105, at pier on left downstream side of county road bridge 0.15 mi (0.24 km) downstream from Mountain Creek, and 0.8 mi (1.3 km) along county road southwest of intersection with U.S. Highway 270 at Wister, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--72.9 mi² (188.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 447.35 ft (136.352 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189.0 m³/s) May 21, 1979, gage height, 14.11 ft (4.301 m). No flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 2	1715	*3,610 102	*11.63 3.545	June 19	0900	2,230 63.1	10.16 3.097

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	36	4.3	19	12	10	134	275	15	2.3	.00	.00
2	1.1	24	3.2	18	11	8.8	98	1010	11	1.8	.00	.00
3	.96	19	3.4	18	11	8.0	78	635	9.6	1.3	.00	.00
4	.91	16	3.3	16	11	8.0	59	378	8.1	1.0	.00	.00
5	1.1	14	3.2	14	10	7.8	47	158	6.7	.86	.00	.00
6	1.4	12	3.0	12	9.9	7.2	41	96	5.0	.72	.00	.00
7	1.5	11	2.6	12	9.0	7.2	36	63	4.0	.61	.00	.00
8	1.5	10	2.4	11	125	6.9	33	45	3.0	.55	.00	.00
9	1.2	9.0	2.1	9.4	153	6.2	28	33	2.3	.44	.00	.00
10	1.3	7.7	2.0	9.3	102	6.4	22	25	1.6	.37	.00	.00
11	1.0	6.8	2.2	9.1	101	6.4	20	21	1.4	.32	.00	.00
12	.70	6.1	5.5	7.5	98	8.7	18	17	1.5	.29	.00	.00
13	1.3	5.6	33	7.0	85	9.1	33	15	1.6	.24	.00	.00
14	2.3	5.1	42	6.7	68	7.3	36	12	1.3	.15	.00	.00
15	3.3	4.6	37	6.7	60	6.2	30	46	1.1	.10	.00	.00
16	3.6	4.2	28	9.4	47	6.0	24	679	1.1	.07	.00	.00
17	4.2	3.8	20	9.6	36	29	26	238	1.5	.03	.00	.00
18	5.0	3.6	16	8.6	32	20	26	137	2.1	.00	3.8	.00
19	5.4	3.6	14	7.7	30	16	22	100	643	.00	3.9	.00
20	5.9	4.6	14	9.2	28	15	19	60	360	.00	3.8	.00
21	6.9	28	13	14	25	13	17	70	214	.00	3.5	.00
22	12	32	13	20	21	12	15	160	160	.00	3.0	.00
23	10	20	78	19	19	151	14	145	65	.00	2.5	.00
24	10	14	216	17	17	342	13	83	30	.00	1.1	.00
25	10	11	106	17	15	167	14	53	17	.00	.60	.00
26	12	9.2	68	16	13	114	18	37	10	.00	.39	.00
27	12	7.3	50	14	12	80	16	26	7.0	.00	.29	.00
28	13	5.8	38	13	12	95	14	20	4.9	.00	.23	.00
29	13	5.0	31	13	11	211	13	29	3.6	.00	.18	.00
30	33	4.2	26	13	---	344	11	32	2.8	.00	.11	.00
31	114	---	23	14	---	177	---	22	---	.00	.05	---
TOTAL	291.07	343.2	903.2	390.2	1183.9	1906.2	975	4720	1595.2	11.15	23.45	.00
MEAN	9.39	11.4	29.1	12.6	40.8	61.5	32.5	152	53.2	.36	.76	.000
MAX	114	36	216	20	153	344	134	1010	643	2.3	3.9	.00
MIN	.70	3.6	2.0	6.7	9.0	6.0	11	12	1.1	.00	.00	.00
CFBM	.13	.16	.40	.17	.56	.84	.45	2.09	.73	.005	.01	.000
IN	.15	.18	.46	.20	.60	.97	.50	2.41	.81	.01	.01	.00
AC-FT	977	681	1790	774	2350	3780	1930	9360	3160	22	47	.00
CAL YR 1979 TOTAL	42084.75			115	MAX 2030	MIN .70	CFBM 1.58	IN 21.48	AC-FT 83480			
WTR YR 1980 TOTAL	12342.57			33.7	MAX 1010	MIN .00	CFBM .46	IN 6.30	AC-FT 24480			

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	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)
OCT											
02...	1015	1.1	125	6.9	21.0	7.3	83	--	--	--	--
11...	1340	1.1	131	7.2	19.0	9.0	99	--	--	--	--
23...	0955	9.3	124	7.1	16.0	7.8	80	36	0	6.9	4.5
NOV											
09...	1010	12	98	7.1	11.5	9.4	89	--	--	--	--
13...	1415	4.2	101	7.3	10.5	12.2	109	--	--	--	--
19...	1210	3.6	107	7.1	14.0	9.4	90	--	--	--	--
29...	1010	5.0	100	7.8	5.0	13.3	102	--	--	--	--
DEC											
05...	0940	3.2	84	7.6	5.0	14.6	114	--	--	--	--
12...	1240	4.2	107	7.2	8.0	12.0	100	--	--	--	--
18...	1225	17	106	7.3	3.0	13.0	95	--	--	--	--
28...	0840	39	97	6.3	8.0	12.3	102	--	--	--	--
JAN											
04...	0940	16	103	7.0	4.5	13.2	101	--	--	--	--
15...	1145	6.6	123	7.2	9.0	12.4	107	31	6	5.7	4.0
21...	0840	13	126	7.1	9.0	10.8	92	--	--	--	--
28...	1040	13	140	6.9	4.0	12.7	95	--	--	--	--
FEB											
11...	1200	95	140	6.6	2.0	13.4	98	--	--	--	--
15...	1315	60	110	6.8	8.0	11.2	94	--	--	--	--
22...	1300	21	111	6.8	11.0	11.1	100	--	--	--	--
29...	1320	11	117	7.1	10.0	10.4	92	--	--	--	--
MAR											
07...	1315	7.2	134	7.2	13.0	11.6	110	--	--	--	--
17...	1221	31	189	7.1	13.0	8.7	81	--	--	--	--
24...	1215	419	80	6.8	10.0	10.7	95	--	--	--	--
31...	1225	160	86	7.0	11.5	10.8	97	--	--	--	--
APR											
10...	1455	22	108	7.2	18.0	10.3	108	27	11	4.9	3.7
18...	1220	26	112	7.0	18.0	10.1	105	--	--	--	--
25...	1045	26	114	6.7	20.5	6.9	76	--	--	--	--
MAY											
01...	1530	294	78	6.7	18.0	8.9	94	--	--	--	--
08...	1300	44	86	6.9	20.5	8.8	97	23	9	4.3	3.0
15...	1240	28	100	6.7	21.0	6.8	76	--	--	--	--
21...	1000	44	82	6.9	20.0	8.4	91	--	--	--	--
29...	0855	20	96	6.5	24.0	6.3	74	--	--	--	--
JUN											
05...	1220	6.6	115	6.9	28.0	6.6	84	--	--	--	--
12...	1150	1.7	135	7.0	26.0	6.2	75	45	0	9.0	5.4
19...	1410	664	55	6.7	23.0	7.7	89	14	0	3.0	1.6
26...	1155	10	74	6.7	29.5	5.7	73	--	--	--	--
JUL											
07...	1000	.62	118	6.7	29.0	3.0	38	35	0	6.8	4.4
15...	1120	.11	148	6.7	30.5	5.6	74	--	--	--	--
AUG											
19...	1045	4.2	152	6.9	28.5	4.6	58	--	--	--	--
26...	1020	.41	161	6.9	26.0	5.0	61	--	--	--	--

ARKANSAS RIVER BASIN

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07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
02...	--	--	--	--	45	0	37	--	--	--	--
11...	--	--	--	--	42	0	34	--	--	--	--
23...	8.4	47	.6	2.9	43	0	35	5.5	15	7.4	.1
NOV											
09...	--	--	--	--	28	0	23	--	--	--	--
13...	--	--	--	--	26	0	21	--	--	--	--
19...	--	--	--	--	29	0	24	3.7	--	--	--
29...	--	--	--	--	28	0	23	--	--	--	--
DEC											
05...	--	--	--	--	27	0	22	--	--	--	--
12...	--	--	--	--	29	0	24	--	--	--	--
18...	--	--	--	--	26	0	21	2.1	--	--	--
28...	--	--	--	--	18	0	15	--	--	--	--
JAN											
04...	--	--	--	--	21	0	17	--	--	--	--
15...	8.5	36	.7	1.6	--	--	22	--	23	7.0	.1
21...	--	--	--	--	--	--	22	--	--	--	--
28...	--	--	--	--	--	--	20	--	--	--	--
FEB											
11...	--	--	--	--	--	--	14	--	--	--	--
15...	--	--	--	--	--	--	54	--	--	--	--
22...	--	--	--	--	--	--	14	--	--	--	--
29...	--	--	--	--	--	--	17	--	--	--	--
MAR											
07...	--	--	--	--	--	--	19	--	--	--	--
17...	--	--	--	--	--	--	26	--	--	--	--
24...	--	--	--	--	--	--	9	--	--	--	--
31...	--	--	--	--	--	--	11	--	--	--	--
APR											
10...	7.9	37	.7	1.6	--	--	18	--	20	5.6	.0
18...	--	--	--	--	--	--	19	--	--	--	--
25...	--	--	--	--	--	--	24	--	--	--	--
MAY											
01...	--	--	--	--	--	--	16	--	--	--	--
08...	6.5	36	.6	1.6	--	--	17	--	15	3.8	.1
15...	--	--	--	--	--	--	24	--	--	--	--
21...	--	--	--	--	--	--	16	--	--	--	--
29...	--	--	--	--	--	--	21	--	--	--	--
JUN											
05...	--	--	--	--	--	--	29	--	--	--	--
12...	9.9	31	.6	1.9	--	--	34	--	16	5.9	.0
19...	3.1	27	.4	3.2	--	--	11	--	8.7	2.8	.1
26...	--	--	--	--	--	--	18	--	--	--	--
JUL											
07...	6.6	27	.5	3.0	--	--	36	--	10	4.4	.2
15...	--	--	--	--	--	--	51	--	--	--	--
AUG											
19...	--	--	--	--	--	--	50	--	--	--	--
26...	--	--	--	--	--	--	46	--	--	--	--

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
02...	--	--	--	--	--	--	--	22	.07	95
11...	--	--	--	--	--	--	--	19	.04	91
23...	0	60	.0	<10	5	3.9	.3	17	.35	90
NOV										
09...	--	--	--	--	--	--	--	10	.25	97
13...	--	--	--	--	--	--	--	4	.01	93
19...	0	--	.0	0	--	--	--	6	.01	92
29...	--	--	--	--	--	--	--	4	.05	92
DEC										
05...	--	--	--	--	--	--	--	20	.16	94
12...	--	--	--	--	--	--	--	23	.26	94
18...	0	--	.0	0	--	--	--	16	.52	95
28...	--	--	--	--	--	--	--	28	2.9	96
JAN										
04...	--	--	--	--	--	--	--	19	.78	95
15...	2	40	.0	<10	5	2.6	.4	--	--	--
21...	--	--	--	--	--	--	--	28	1.1	90
28...	--	--	--	--	--	--	--	24	1.0	92
FEB										
11...	0	--	.0	0	--	--	--	76	20	94
15...	--	--	--	--	--	--	--	17	2.7	89
22...	--	--	--	--	--	--	--	13	.77	93
29...	--	--	--	--	--	--	--	13	.42	93
MAR										
07...	--	--	--	--	--	--	--	12	.22	91
17...	0	--	.0	0	--	--	--	36	3.1	98
24...	--	--	--	--	--	--	--	--	--	--
31...	0	--	.0	0	--	--	--	30	15	95
APR										
10...	2	50	1.0	<10	8	3.8	.4	23	1.3	79
18...	--	--	--	--	--	--	--	11	.71	98
25...	--	--	--	--	--	--	--	11	.23	98
MAY										
01...	--	--	--	--	--	--	--	115	78	91
08...	0	50	.1	<10	8	4.1	.9	22	2.7	91
15...	--	--	--	--	--	--	--	21	1.6	92
21...	--	--	--	--	--	--	--	24	2.9	93
29...	--	--	--	--	--	--	--	18	.97	90
JUN										
05...	--	--	--	--	--	--	--	--	--	--
12...	5	90	.0	<10	10	4.1	1.3	12	.05	86
19...	4	120	.0	<10	<3	10	1.7	214	--	88
26...	--	--	--	--	--	--	--	63	1.7	94
JUL										
07...	0	200	.7	<10	20	6.5	1.1	12	--	81
15...	--	--	--	--	--	--	--	8	.00	90
AUG										
19...	0	--	.1	0	--	--	--	9	.10	95
26...	--	--	--	--	--	--	--	3	.00	88

ARKANSAS RIVER BASIN

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07248620 MORRIS CREEK AT HOWE, OK

LOCATION.--Lat 34°57'34", long 94°37'45", in NE¼SE¼, sec.26, T.6 N., R.25 E., LeFlore County Hydrologic Unit 11110105, at bridge on old U. S. Highway 59, 0.8 mi. (1.3 km) northeast of Howe.

DRAINAGE AREA.-- 19.4 mi² (50.3 km²)

PERIOD OF RECORD.--October 1979 to September 1980.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT											
01...	1510	.50	78	7.0	24.0	7.5	90	--	--	--	--
11...	1505	--	90	6.9	19.0	7.0	77	--	--	--	--
19...	1050	--	98	6.9	19.5	6.7	74	--	--	--	--
23...	1150	--	105	6.9	15.0	5.6	55	31	0	6.0	3.9
NOV											
09...	0730	--	71	6.9	11.0	8.4	78	--	--	--	--
13...	1525	--	71	7.0	10.0	10.2	91	--	--	--	--
19...	1035	--	83	6.9	13.5	8.2	77	--	--	--	--
29...	1222	1.4	88	6.8	5.0	9.6	73	--	--	--	--
DEC											
05...	1200	--	75	6.9	6.0	11.3	91	--	--	--	--
12...	1005	--	72	6.9	8.0	11.2	93	--	--	--	--
18...	1025	--	66	6.9	2.0	14.0	99	--	--	--	--
28...	1005	8.5	54	6.8	9.0	13.1	111	--	--	--	--
JAN											
04...	1118	--	66	6.8	5.0	12.4	96	--	--	--	--
15...	1045	--	68	6.8	9.0	11.6	100	--	--	--	--
21...	1030	4.9	79	6.7	9.0	12.2	104	--	--	--	--
28...	0925	--	68	6.7	4.5	12.2	93	--	--	--	--
FEB											
11...	1040	--	85	6.4	2.0	13.8	99	--	--	--	--
15...	1100	16	62	6.4	9.5	11.0	96	--	--	--	--
22...	1135	--	60	6.6	11.5	10.1	93	--	--	--	--
29...	1130	--	65	6.7	9.8	10.4	92	--	--	--	--
MAR											
07...	1120	2.6	69	6.9	12.0	10.7	96	--	--	--	--
17...	1010	--	83	6.8	13.0	8.4	78	--	--	--	--
24...	0955	--	77	6.6	10.0	10.1	89	--	--	--	--
31...	0950	--	63	6.8	9.5	11.0	96	--	--	--	--
APR											
10...	1200	8.2	60	6.8	16.0	8.9	90	13	0	2.1	1.8
18...	1030	--	52	6.7	15.5	10.0	98	--	--	--	--
25...	0925	--	55	6.6	19.5	7.5	82	--	--	--	--
MAY											
01...	1230	74	71	6.9	18.0	8.6	91	18	0	3.5	2.2
08...	1040	--	53	6.7	18.5	8.7	93	--	--	--	--
15...	1100	--	61	6.7	20.5	7.1	78	--	--	--	--
21...	1155	--	53	6.6	19.5	8.1	87	--	--	--	--
29...	0955	--	58	6.5	23.0	7.5	86	--	--	--	--
JUN											
05...	0955	3.5	63	6.6	25.0	6.4	76	16	1	2.6	2.3
12...	1000	--	69	6.7	23.0	6.5	74	--	--	--	--
19...	1145	--	80	6.7	25.0	6.4	76	--	--	--	--
26...	1015	.27	87	6.7	28.5	5.4	68	--	--	--	--

ARKANSAS RIVER BASIN

07248620 MORRIS CREEK AT HOWE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
01...	--	--	--	--	25	0	21	4.0	--	--	--
11...	--	--	--	--	32	0	26	--	--	--	--
19...	--	--	--	--	38	0	31	--	--	--	--
23...	6.9	45	.5	2.8	44	0	36	8.9	10	5.2	.1
NOV											
09...	--	--	--	--	25	0	21	--	--	--	--
13...	--	--	--	--	25	0	21	4.0	--	--	--
19...	--	--	--	--	28	0	23	--	--	--	--
29...	--	--	--	--	29	0	24	--	--	--	--
DEC											
05...	--	--	--	--	21	0	17	--	--	--	--
12...	--	--	--	--	23	0	19	--	--	--	--
18...	--	--	--	--	20	0	16	4.0	--	--	--
28...	--	--	--	--	12	0	10	--	--	--	--
JAN											
04...	--	--	--	--	17	0	14	--	--	--	--
15...	--	--	--	--	--	--	12	--	--	--	--
21...	--	--	--	--	--	--	16	--	--	--	--
28...	--	--	--	--	--	--	13	--	--	--	--
FEB											
11...	--	--	--	--	--	--	10	--	--	--	--
15...	--	--	--	--	--	--	9	--	--	--	--
22...	--	--	--	--	--	--	11	--	--	--	--
29...	--	--	--	--	--	--	15	--	--	--	--
MAR											
07...	--	--	--	--	--	--	14	--	--	--	--
17...	--	--	--	--	--	--	16	--	--	--	--
24...	--	--	--	--	--	--	14	--	--	--	--
31...	--	--	--	--	--	--	12	--	--	--	--
APR											
10...	4.7	42	.6	1.0	--	--	11	--	9.2	4.1	.0
18...	--	--	--	--	--	--	11	--	--	--	--
25...	--	--	--	--	--	--	14	--	--	--	--
MAY											
01...	5.9	39	.6	2.0	--	--	17	--	9.2	3.9	.1
08...	--	--	--	--	--	--	13	--	--	--	--
15...	--	--	--	--	--	--	17	--	--	--	--
21...	--	--	--	--	--	--	14	--	--	--	--
29...	--	--	--	--	--	--	16	--	--	--	--
JUN											
05...	5.0	38	.5	1.3	--	--	18	--	4.3	3.9	.0
12...	--	--	--	--	--	--	19	--	--	--	--
19...	--	--	--	--	--	--	23	--	--	--	--
26...	--	--	--	--	--	--	26	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07248620 MORRIS CREEK AT HOWE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
01...	--	--	--	--	--	--	--	24	.03	97
11...	--	--	--	--	--	--	--	23	--	96
19...	--	--	--	--	--	--	--	19	--	96
23...	0	90	.0	<10	3	3.9	.3	19	--	96
NOV										
09...	--	--	--	--	--	--	--	22	--	95
13...	0	--	.0	0	--	--	--	20	--	91
19...	--	--	--	--	--	--	--	19	--	93
29...	--	--	--	--	--	--	--	24	.09	93
DEC										
05...	--	--	--	--	--	--	--	12	--	99
12...	--	--	--	--	--	--	--	17	--	99
18...	0	--	.0	0	--	--	--	18	--	96
28...	--	--	--	--	--	--	--	23	3.3	99
JAN										
04...	--	--	--	--	--	--	--	19	--	99
15...	--	--	--	--	--	--	--	27	--	89
21...	--	--	--	--	--	--	--	23	.31	90
28...	--	--	--	--	--	--	--	22	--	90
FEB										
11...	0	--	.0	0	--	--	--	12	--	98
15...	--	--	--	--	--	--	--	14	.60	96
22...	--	--	--	--	--	--	--	20	--	90
29...	--	--	--	--	--	--	--	21	--	85
MAR										
07...	--	--	--	--	--	--	--	18	.13	80
17...	0	--	1.0	0	--	--	--	31	--	90
24...	--	--	--	--	--	--	--	51	--	92
31...	--	--	--	--	--	--	--	17	--	80
APR										
10...	1	30	.4	<10	4	1.4	.3	22	.49	63
18...	--	--	--	--	--	--	--	16	--	97
25...	--	--	--	--	--	--	--	21	--	69
MAY										
01...	3	100	.1	<10	20	11	3.2	153	31	96
08...	--	--	--	--	--	--	--	17	--	97
15...	--	--	--	--	--	--	--	15	--	95
21...	--	--	--	--	--	--	--	23	--	89
29...	--	--	--	--	--	--	--	20	--	92
JUN										
05...	2	40	.8	<10	6	3.0	.4	15	.14	98
12...	--	--	--	--	--	--	--	16	--	75
19...	--	--	--	--	--	--	--	11	--	98
26...	--	--	--	--	--	--	--	8	.01	98

ARKANSAS RIVER BASIN

07248700 SUGARLOAF CREEK NEAR MONROE, OK

LOCATION.--Lat 35°00'00", long 94°31'21", on east line of SE¼ sec.11, T.6 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, on left downstream end of bridge on State Highway 112, and 1 mi (1.6 km) northwest of Monroe.

DRAINAGE AREA.--53.6 mi² (138.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 464.94 ft (141.714 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for period Oct. 1 to Dec. 26, 1978, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,330 ft³/s (208 m³/s) May 21, 1979, gage height, 16.27 ft (4.959 m); no flow at times.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*) for year:

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 1, 1979	1000	4,780 135	14.86 4.529	June 7, 1979	0745	5,820 165	15.51 4.727
May 21, 1979	2045	*7,330 208	*16.27 4.959	May 2, 1980	1830	*4,790 136	*14.87 4.532
May 27, 1979	0930	5,770 163	15.48 4.718				

No flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	3.8	79	20	478	2820	36	80	3.8	21	78
2	.00	.00	2.7	40	18	296	553	42	961	2.9	13	20
3	.00	.00	1.4	25	19	362	232	218	385	2.5	10	11
4	.00	.00	3.4	18	18	189	180	458	185	2.2	8.9	8.7
5	.00	.00	4.1	14	18	134	129	245	118	1.9	7.0	7.3
6	.00	.00	3.4	11	18	103	97	139	90	4.6	6.0	11
7	.00	.00	38	9.6	20	84	78	91	1540	2.3	5.1	12
8	.00	.00	35	8.8	19	67	74	62	248	1.8	4.6	6.3
9	.00	.00	19	8.0	15	56	80	46	129	1.5	4.1	5.4
10	.00	.00	13	9.8	16	47	75	40	91	1.2	3.7	4.8
11	.00	.00	9.0	10	38	41	956	384	64	1.2	11	4.5
12	.00	.00	7.7	11	179	37	320	305	47	.98	5.4	4.0
13	.00	.00	6.8	12	143	33	174	136	38	1.1	3.9	3.9
14	.00	.00	6.0	10	117	28	117	85	29	.94	3.2	3.2
15	.00	3.6	5.3	8.8	89	24	88	59	23	1.0	2.9	2.6
16	.00	5.8	4.9	8.4	56	22	67	44	19	2.8	3.7	2.3
17	.00	5.7	4.2	12	45	20	54	34	16	166	3.9	2.2
18	.00	3.4	3.8	18	39	19	48	27	14	55	2.8	2.0
19	.00	2.2	3.4	150	34	105	51	22	11	7.8	2.0	2.0
20	.00	1.4	3.6	254	32	1260	47	23	10	5.8	1.7	2.5
21	.00	1.2	4.1	130	30	238	95	3600	8.9	4.4	1.5	4.9
22	.00	1.2	4.6	35	1050	248	58	1580	8.4	3.4	1.4	3.2
23	.00	1.1	4.6	76	912	216	466	413	7.3	2.7	1.4	2.4
24	.00	.52	3.4	49	450	133	411	190	6.7	2.5	1.2	2.3
25	.00	.07	2.5	41	541	96	181	112	6.4	2.2	1.0	1.9
26	.00	15	2.1	60	379	77	109	87	6.0	2.1	.95	1.6
27	.00	18	1.9	70	546	102	78	1770	5.1	342	2.5	1.3
28	.00	5.9	1.9	43	1320	81	64	479	4.5	195	60	1.2
29	.00	4.1	1.9	35	---	76	53	291	5.2	46	10	1.1
30	.00	4.0	2.0	32	---	1190	42	161	3.9	21	5.0	.94
31	.00	---	120	25	---	310	---	105	---	15	110	---
TOTAL	.00	73.19	327.5	1313.4	6181	6172	7797	11284	4160.4	903.62	318.85	214.54
MEAN	.000	2.44	10.6	42.4	221	199	260	364	139	29.1	10.3	7.15
MAX	.00	18	120	254	1320	1260	2820	3600	1540	342	110	78
MIN	.00	.00	1.4	8.0	15	19	42	22	3.9	.94	.95	.94
AC-FT	.00	145	650	2610	12260	12240	15470	22380	8250	1790	632	426
WTR YR 1979	TOTAL	38745.50	MEAN	106	MAX	3600	MIN	.00	AC-FT	76850		

ARKANSAS RIVER BASIN

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07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	7.8	4.0	21	14	14	48	76	17	.22	.00	.00
2	.76	3.8	4.0	18	14	13	39	986	13	.21	.00	.00
3	.90	2.3	3.9	31	14	13	43	381	11	.18	.00	.00
4	.73	1.6	4.0	33	14	13	38	133	9.3	.15	.00	.00
5	.75	.95	3.7	28	13	12	31	76	7.9	.13	.00	.00
6	.98	1.0	3.8	24	13	11	28	50	6.8	.13	.00	.00
7	.84	1.0	3.4	22	12	11	26	38	5.5	.10	.00	.00
8	1.2	.93	3.1	19	75	10	29	28	5.0	.09	.00	.00
9	2.9	2.4	2.9	17	82	9.7	23	23	4.5	.08	.00	.00
10	2.8	2.3	2.7	16	56	9.4	19	20	4.0	.07	.00	.00
11	2.0	1.7	2.5	16	63	9.1	17	18	3.4	.05	.00	.00
12	2.4	1.8	7.8	14	72	13	17	17	3.0	.03	.00	.00
13	2.9	2.0	25	14	63	13	192	16	2.5	.03	.00	.00
14	3.6	2.0	14	13	67	10	211	14	2.3	.03	.00	.00
15	3.3	2.0	14	13	75	9.6	106	14	1.7	.02	.00	.00
16	3.6	1.9	13	16	56	9.8	72	419	1.3	.01	.00	.00
17	4.0	1.6	11	14	43	41	65	90	1.6	.00	.00	.00
18	4.5	1.7	9.8	13	39	33	55	51	1.8	.00	.00	.00
19	4.5	1.6	10	12	36	25	44	141	1.4	.00	.00	.00
20	4.2	2.7	11	15	31	22	37	69	1.3	.00	.00	.00
21	4.5	25	10	20	28	19	31	54	1.1	.00	.00	.00
22	4.5	14	13	25	24	18	26	87	1.0	.00	.00	.00
23	3.6	8.0	268	28	21	56	22	73	.78	.00	.00	.00
24	2.9	5.9	200	27	19	107	20	48	.67	.00	.00	.00
25	2.5	4.8	84	24	18	58	20	35	.57	.00	.00	.00
26	2.3	3.6	52	21	16	45	23	27	.50	.00	.00	.00
27	2.1	2.9	40	18	16	37	21	21	.42	.00	.00	.00
28	2.4	4.2	36	17	15	48	18	86	.38	.00	.00	.00
29	3.0	3.8	30	18	14	53	16	83	.31	.00	.00	.00
30	14	3.8	26	17	---	91	14	46	.27	.00	.00	.00
31	48	---	23	16	---	61	---	26	---	.00	.00	---
TOTAL	137.40	119.08	935.6	600	1023	894.6	1351	3246	110.30	1.53	.00	.00
MEAN	4.43	3.97	30.2	19.4	35.3	28.9	45.0	105	3.68	.049	.000	.000
MAX	48	25	268	33	82	107	211	986	17	.22	.00	.00
MIN	.73	.93	2.5	12	12	9.1	14	14	.27	.00	.00	.00
AC-FT	273	236	1860	1190	2030	1770	2680	6440	219	3.0	.00	.00
CAL YR 1979	TOTAL	39536.89	MEAN	108	MAX	3600	MIN	.73	AC-FT	78420		
WTR YR 1980	TOTAL	8418.51	MEAN	23.0	MAX	986	MIN	.00	AC-FT	16700		

ARKANSAS RIVER BASIN

07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
OCT											
01...	1640	.61	77	6.8	22.0	6.7	78	--	--	--	--
11...	1620	2.3	83	6.8	17.0	7.2	77	--	--	--	--
19...	0915	4.7	79	6.8	19.0	5.3	58	--	--	--	--
23...	1405	3.6	84	6.8	18.0	5.6	60	24	0	4.4	3.2
NOV											
09...	1415	3.8	72	6.7	11.5	7.2	68	--	--	--	--
13...	1640	2.0	73	6.9	9.0	8.4	73	--	--	--	--
19...	0855	1.5	73	6.7	12.5	8.0	74	--	--	--	--
29...	1400	3.8	71	6.8	7.0	10.1	81	--	--	--	--
DEC											
05...	1345	3.8	71	6.9	7.0	10.7	88	--	--	--	--
12...	0945	3.3	65	6.9	8.5	12.3	103	--	--	--	--
18...	0855	9.6	72	7.0	2.0	13.0	92	--	--	--	--
28...	1220	35	58	6.7	9.5	12.0	104	--	--	--	--
JAN											
04...	1230	33	72	6.7	5.0	13.1	102	--	--	--	--
15...	0930	13	57	6.9	10.0	11.8	104	15	9	2.4	2.2
21...	1215	19	66	6.6	10.0	11.2	98	--	--	--	--
28...	0840	17	56	6.6	5.5	12.4	97	--	--	--	--
FEB											
11...	0950	57	--	6.8	2.0	14.0	100	--	--	--	--
15...	0900	81	57	6.5	9.0	11.0	95	--	--	--	--
22...	0900	24	51	6.6	10.0	10.6	94	--	--	--	--
29...	0930	14	55	6.6	11.0	10.2	92	--	--	--	--
MAR											
07...	0920	11	57	6.5	10.8	11.1	100	--	--	--	--
17...	0840	53	62	6.8	13.5	9.4	89	--	--	--	--
24...	0850	116	60	6.6	10.0	10.2	90	--	--	--	--
31...	0855	61	52	6.6	9.5	11.0	96	--	--	--	--
APR											
10...	0935	19	63	6.6	14.0	10.1	97	15	7	2.5	2.1
18...	0920	56	53	6.5	15.0	9.9	96	--	--	--	--
25...	0845	20	54	6.5	19.0	8.3	89	--	--	--	--
MAY											
01...	0908	132	64	6.9	17.0	8.6	89	16	1	2.9	2.2
08...	0920	31	53	6.6	18.0	8.6	90	--	--	--	--
15...	0855	14	55	6.7	19.5	7.5	81	--	--	--	--
21...	1325	52	51	6.5	19.5	8.4	90	--	--	--	--
29...	1125	64	62	6.5	22.0	7.1	81	--	--	--	--
JUN											
05...	0835	8.0	66	6.4	25.5	6.4	77	18	0	3.1	2.4
12...	0855	2.9	67	6.4	24.0	6.2	72	--	--	--	--
19...	1000	1.6	71	6.5	24.0	6.2	73	--	--	--	--
26...	0820	.52	77	6.5	28.0	4.9	62	--	--	--	--
JUL											
07...	1210	.10	98	6.9	29.0	5.3	68	27	0	5.0	3.5
15...	0900	.02	98	6.7	28.0	4.4	56	--	--	--	--

ARKANSAS RIVER BASIN

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07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
01...	--	--	--	--	26	0	21	--	--	--	--
11...	--	--	--	--	30	0	25	--	--	--	--
19...	--	--	--	--	31	0	25	--	--	--	--
23...	5.2	44	.5	2.6	34	0	28	8.6	9.5	3.8	.1
NOV											
09...	--	--	--	--	27	0	22	--	--	--	--
13...	--	--	--	--	26	0	21	--	--	--	--
19...	--	--	--	--	25	0	21	8.0	--	--	--
29...	--	--	--	--	24	0	20	--	--	--	--
DEC											
05...	--	--	--	--	22	0	18	--	--	--	--
12...	--	--	--	--	20	0	16	--	--	--	--
18...	--	--	--	--	20	0	16	3.2	--	--	--
28...	--	--	--	--	14	0	11	--	--	--	--
JAN											
04...	--	--	--	--	28	0	23	8.9	--	--	--
15...	4.9	39	.6	1.4	--	--	16	--	12	5.6	.1
21...	--	--	--	--	--	--	3	--	--	--	--
28...	--	--	--	--	--	--	10	--	--	--	--
FEB											
11...	--	--	--	--	--	--	14	--	--	--	--
15...	--	--	--	--	--	--	33	--	--	--	--
22...	--	--	--	--	--	--	9	--	--	--	--
29...	--	--	--	--	--	--	9	--	--	--	--
MAR											
07...	--	--	--	--	--	--	10	--	--	--	--
17...	--	--	--	--	--	--	12	--	--	--	--
24...	--	--	--	--	--	--	10	--	--	--	--
31...	--	--	--	--	--	--	9	--	--	--	--
APR											
10...	4.5	38	.5	1.1	--	--	11	--	8.8	3.5	.0
18...	--	--	--	--	--	--	11	--	--	--	--
25...	--	--	--	--	--	--	13	--	--	--	--
MAY											
01...	5.2	38	.6	1.6	--	--	15	--	8.0	3.8	.1
08...	--	--	--	--	--	--	13	--	--	--	--
15...	--	--	--	--	--	--	15	--	--	--	--
21...	--	--	--	--	--	--	12	--	--	--	--
29...	--	--	--	--	--	--	14	--	--	--	--
JUN											
05...	4.8	35	.5	1.4	--	--	18	--	6.5	3.0	.1
12...	--	--	--	--	--	--	19	--	--	--	--
19...	--	--	--	--	--	--	22	--	--	--	--
26...	--	--	--	--	--	--	24	--	--	--	--
JUL											
07...	5.8	31	.5	1.2	--	--	33	--	4.7	2.6	.1
15...	--	--	--	--	--	--	35	--	--	--	--

07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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[illegible]

ARKANSAS RIVER BASIN

07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
01...	--	--	--	--	--	--	--	23	.05	91
11...	--	--	--	--	--	--	--	15	.08	94
19...	--	--	--	--	--	--	--	18	.18	96
23...	0	80	.0	<10	<3	3.3	.2	19	.16	85
NOV										
09...	--	--	--	--	--	--	--	26	.19	94
13...	--	--	--	--	--	--	--	19	.10	96
19...	1	--	.0	0	--	--	--	18	.08	94
29...	--	--	--	--	--	--	--	22	.23	97
DEC										
05...	--	--	--	--	--	--	--	20	.20	96
12...	--	--	--	--	--	--	--	17	.14	93
18...	0	--	.0	3	--	--	--	28	.76	96
28...	--	--	--	--	--	--	--	24	2.2	96
JAN										
04...	--	--	--	--	--	--	--	21	1.9	88
15...	1	30	.7	<10	8	1.1	--	21	.79	89
21...	--	--	--	--	--	--	--	24	1.2	89
28...	--	--	--	--	--	--	--	20	.92	90
FEB										
11...	0	--	.1	0	--	--	--	12	1.9	95
15...	--	--	--	--	--	--	--	15	3.1	94
22...	--	--	--	--	--	--	--	15	.97	88
29...	--	--	--	--	--	--	--	13	.49	89
MAR										
07...	--	--	--	--	--	--	--	10	.28	93
17...	0	--	1.5	0	--	--	--	33	5.0	90
24...	--	--	--	--	--	--	--	51	16	95
31...	--	--	--	--	--	--	--	13	2.2	92
APR										
10...	0	30	.0	<10	20	2.1	.3	17	.85	93
18...	--	--	--	--	--	--	--	20	3.1	84
25...	--	--	--	--	--	--	--	20	1.1	82
MAY										
01...	1	40	.1	<10	60	5.4	1.4	61	22	93
08...	--	--	--	--	--	--	--	15	1.3	98
15...	--	--	--	--	--	--	--	17	.64	94
21...	--	--	--	--	--	--	--	15	2.1	95
29...	--	--	--	--	--	--	--	112	19	98
JUN										
05...	0	60	.0	<10	6	2.6	.5	20	.43	99
12...	--	--	--	--	--	--	--	14	.11	99
19...	--	--	--	--	--	--	--	11	.05	98
26...	--	--	--	--	--	--	--	7	.01	97
JUL										
07...	0	170	.0	<10	10	3.5	--	8	.00	96
15...	--	--	--	--	--	--	--	7	.00	87

07249060 BRAZIL CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'03", long 95°07'06", on north line SW¼ sec.17, T.6 N., R.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 3.3 mi (5.3 km) northwest of Red Oak, and at mile 49.2 (79.2 km).

DRAINAGE AREA.--2.74 mi² (7.10 km²).

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHQS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV												
08...	0930	.08	82	6.5	14.0	--	--	9.0	89	--	--	--
29...	1500	7.3	100	7.3	6.0	80	32	--	--	.60	20	9
DEC												
06...	1340	.08	77	7.4	12.0	--	--	11.2	107	--	--	--
20...	1230	.54	95	6.9	10.0	40	25	12.6	113	.37	24	16
JAN												
10...	1230	.12	78	7.3	9.0	--	--	12.3	108	--	--	--
24...	1515	.12	105	7.3	10.0	60	1.4	9.9	121	.10	28	20
FEB												
14...	1330	1.8	60	6.9	12.0	--	--	10.7	101	--	--	--
MAR												
25...	1450	2.2	60	6.6	11.0	100	72	11.0	102	.64	16	9
APR												
17...	1300	.01	90	9.7	17.0	40	32	10.0	98	.60	21	8
MAY												
23...	0950	3.8	56	6.7	17.5	80	41	--	--	.37	15	0
JUN												
18...	1215	.01	104	6.8	27.0	30	16	6.8	87	.25	27	7

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)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV												
08...	--	--	--	--	--	--	--	--	--	--	--	--
29...	3.8	2.5	7.1	58	.7	1.2	11	13	13	.0	8.6	59
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	4.3	3.2	7.7	57	.7	1.3	8	10	18	.0	8.3	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
24...	4.7	4.0	13	49	1.1	1.2	8	19	16	.1	7.6	63
FEB												
14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
25...	2.8	2.2	6.9	46	.8	1.2	7	9.7	8.7	.1	8.5	46
APR												
17...	3.7	2.8	7.4	42	.7	1.4	13	13	11	.1	7.3	55
MAY												
23...	2.4	2.1	5.6	43	.6	1.3	25	8.1	5.1	.0	19	63
JUN												
18...	5.0	3.6	8.5	38	.7	1.8	20	9.4	8.6	.0	10	62

DATE	SOLIDS, SUM OF CONSTITU- ENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
NOV												
08...	--	--	--	--	--	--	--	--	--	--	--	--
29...	56	.08	1.1	.12	.07	--	.060	.050	--	.07	.06	.41
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	.04	.02	--	.000	.010	--	.00	.01	.35
JAN												
10...	--	--	--	--	--	4.9	--	--	4.9	--	--	--
24...	71	.09	.02	.05	.04	--	.030	.000	--	.04	.00	.16
FEB												
14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
25...	45	.06	.27	.08	.11	--	.040	.000	--	.05	.00	.50
APR												
17...	55	.07	.00	.07	.09	--	.130	.080	--	.16	.10	.38
MAY												
23...	59	.09	.65	.03	.01	--	.060	.010	--	.07	.01	.47
JUN												
18...	59	.08	.00	.06	.06	720	.060	.030	1100	.07	.04	.81

ARKANSAS RIVER BASIN

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4- + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4- + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV 08...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.48	.47	.00	.53	--	.59	2.6	--	.030	.09	.010	--
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.34	.35	.00	.35	--	.39	1.7	--	.020	.06	.010	--
JAN 10...	--	--	--	--	269	--	--	274	--	--	--	250
24...	.06	.19	.13	.06	--	.24	1.1	--	.030	.09	.020	--
FEB 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	.53	.54	.01	.53	--	.62	2.7	--	.050	.15	.010	--
APR 17...	.43	.51	.00	.51	--	.58	2.6	--	.010	.03	.010	--
MAY 23...	.35	.53	.17	.36	--	.56	2.5	--	.050	.15	.020	--
JUN 18...	.16	.87	.68	.19	560	.93	4.1	1280	.310	.95	.010	280

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV 08...	0930	1400	1200	180	--	1	1	0	--	30	20
29...	1500	1000	980	20	--	0	0	0	--	60	20
DEC 06...	1340	680	480	200	--	0	0	0	--	40	0
20...	1230	1000	860	140	--	0	0	1	--	30	10
JAN 10...	1230	800	660	140	560	0	0	0	16	30	10
24...	1515	840	770	70	--	1	0	1	--	30	20
FEB 14...	1330	70	0	90	--	1	1	0	--	50	30
MAR 25...	1450	2000	2000	50	--	1	0	1	--	60	40
APR 17...	1300	400	350	50	--	1	1	0	--	20	0
MAY 23...	0950	1200	1000	160	--	2	2	0	--	40	40
JUN 18...	1215	330	290	40	770	2	1	1	21	30	10

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV- FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV- FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 08...	10	0	0	0	--	10	10	0	--	--	50
29...	40	0	0	<1	--	0	0	0	--	--	92
DEC 06...	120	0	0	<1	--	0	0	0	--	--	50
20...	20	0	0	2	--	24	24	0	--	--	0
JAN 10...	20	0	0	2	0	0	0	0	10	25	40
24...	10	0	0	<1	--	0	0	0	--	--	20
FEB 14...	20	0	--	<1	--	0	0	0	--	--	0
MAR 25...	20	0	--	<1	--	0	0	0	--	--	0
APR 17...	20	0	0	1	--	0	0	0	--	--	20
MAY 23...	2	10	--	<1	--	0	0	0	--	--	0
JUN 18...	20	0	--	<1	1	10	10	0	9	20	0

ARKANSAS RIVER BASIN

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07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE- RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE- RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV											
08...	50	0	--	2300	2200	120	--	0	0	2	--
29...	90	2	--	1700	--	270	--	0	0	5	--
DEC											
06...	50	0	--	800	410	390	--	100	90	10	--
20...	0	0	--	1100	1000	80	--	0	0	0	--
JAN											
10...	40	0	750	770	150	620	24000	0	0	2	3000
24...	20	0	--	1000	870	130	--	0	0	1	--
FEB											
14...	0	0	--	2100	1800	260	--	0	0	0	--
MAR											
25...	0	1	--	2500	2400	60	--	0	0	0	--
APR											
17...	16	4	--	1000	900	100	--	0	0	2	--
MAY											
23...	0	3	--	1900	1600	320	--	0	0	0	--
JUN											
18...	0	1	4	680	630	50	5600	100	100	0	10
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE- RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE- RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
08...	30	30	0	--	.1	.0	.1	--	0	0	0
29...	30	10	20	--	1.0	1.0	.0	--	2	0	<10
DEC											
06...	20	20	4	--	.1	.1	.0	--	0	0	<10
20...	10	0	10	--	.2	.2	.0	--	0	0	<10
JAN											
10...	20	10	10	370	2.2	2.2	.0	.0	0	0	<10
24...	30	10	20	--	.0	.0	.0	--	0	0	<10
FEB											
14...	0	0	6	--	.0	.0	.0	--	0	--	<10
MAR											
25...	30	30	5	--	.0	.0	.0	--	0	0	13
APR											
17...	30	20	10	--	.1	.1	.0	--	0	--	<10
MAY											
23...	20	10	8	--	.2	.2	.0	--	0	--	<10
JUN											
18...	40	30	9	1300	.2	.2	.0	.0	1	--	<10
DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE- TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE- TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE- RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE- (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
08...	--	0	0	0	70	60	10	--	31	.01	96
29...	--	0	0	0	60	50	10	--	21	.41	96
DEC											
06...	--	0	0	0	0	0	10	--	20	.00	94
20...	--	0	0	0	40	30	10	--	25	.04	92
JAN											
10...	2	0	0	0	10	0	10	32	18	.01	92
24...	--	0	0	0	10	1	9	--	32	.01	99
FEB											
14...	--	0	0	0	20	20	4	--	18	.09	91
MAR											
25...	--	0	0	0	20	--	<3	--	21	.12	91
APR											
17...	--	0	0	0	20	--	<3	--	10	.00	99
MAY											
23...	--	0	0	0	50	50	3	--	19	.19	94
JUN											
18...	2	0	0	0	50	50	4	20	21	.00	85

ARKANSAS RIVER BASIN

07249070 ROCK CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'30", long 95°04'56", NE¼SW¼ sec.15, T.6 N., R.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 2.8 mi (4.5 km) north of Red Rock, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--12.0 mi² (31.08 km²).

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)
NOV										
07...	1600	.57	75	6.5	8.5	--	--	9.7	84	--
29...	1600	.98	95	7.4	6.5	280	7.6	--	--	1.1
DEC										
06...	0945	.49	64	7.8	7.0	--	--	12.4	104	--
20...	1350	5.5	83	7.0	7.0	100	48	12.9	106	.32
JAN										
10...	0930	7.2	68	7.3	6.0	--	--	12.8	105	--
24...	1400	2.2	100	7.2	8.5	50	23	14.0	122	.11
FEB										
14...	0930	6.3	78	6.5	5.0	--	--	12.2	97	--
MAR										
25...	1710	13	54	6.8	11.0	120	120	11.0	102	.50
APR										
17...	1100	.81	80	6.9	18.0	40	32	9.0	97	.43
MAY										
22...	1600	28	57	6.5	19.0	120	41	--	--	.55
JUN										
18...	0940	.28	82	7.2	23.0	20	13	7.0	83	--
19...	0845	773	34	6.9	21.0	400	470	7.8	90	.45

DATE	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)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV										
07...	--	--	--	--	--	--	--	--	--	--
29...	20	9	3.4	2.7	6.4	40	.6	1.3	11	11
DEC										
06...	--	--	--	--	--	--	--	--	--	--
20...	19	12	3.3	2.7	7.0	62	.7	1.0	7	13
JAN										
10...	--	--	--	--	--	--	--	--	--	--
24...	27	16	4.8	3.7	13	50	1.1	1.2	11	20
FEB										
14...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	16	9	2.5	2.3	5.9	43	.6	1.0	7	11
APR										
17...	19	6	3.1	2.7	7.0	43	.7	1.3	13	14
MAY										
22...	16	0	2.9	2.2	5.0	37	.5	1.6	17	9.0
JUN										
18...	23	2	4.6	2.8	7.2	38	.7	1.6	21	7.4
19...	8	0	1.4	1.2	2.8	37	.4	1.6	15	3.5

ARKANSAS RIVER BASIN

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07249070 ROCK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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, NITRATE (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV										
07...	--	--	--	--	--	--	--	--	--	--
29...	10	.0	10	58	52	.08	.15	--	--	.03
DEC										
06...	--	--	--	--	--	--	--	--	--	--
20...	13	.0	7.9	71	53	.10	1.0	--	--	.12
JAN										
10...	--	--	--	--	--	--	--	--	--	--
24...	12	.1	7.1	52	69	.07	.31	--	--	.07
FEB										
14...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	7.1	.1	11	50	45	.07	1.7	--	--	.08
APR										
17...	8.2	.1	7.3	55	52	.07	.12	--	--	.07
MAY										
22...	4.1	.0	10	47	45	.06	3.5	--	--	.05
JUN										
18...	6.2	.1	7.0	56	50	.08	.04	.13	.010	.14
19...	2.7	.0	5.1	39	28	.05	81.4	--	--	.11
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
NOV										
07...	--	--	--	--	--	--	--	--	--	--
29...	.08	--	.110	.180	--	.13	.23	.89	.82	1.00
DEC										
06...	--	--	--	--	--	--	--	--	--	--
20...	.11	--	.020	.030	--	.02	.04	.40	.18	.42
JAN										
10...	--	3.4	--	--	3.4	--	--	--	--	--
24...	.06	--	.030	.010	--	.04	.01	.16	.04	.19
FEB										
14...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	.05	--	.080	.000	--	.10	.00	.45	.45	.53
APR										
17...	.07	--	.100	.080	--	.12	.10	.46	.28	.56
MAY										
22...	.01	--	.060	.010	--	.07	.01	.48	.53	.54
JUN										
18...	--	560	.090	--	190	.11	--	.59	--	.68
19...	.08	--	.210	.000	--	.25	.00	1.6	.37	1.80
DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV										
07...	--	--	--	--	--	--	--	--	--	--
29...	.00	1.0	--	1.0	4.6	--	.060	.18	.030	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
20...	.21	.21	--	.54	2.4	--	.040	.12	.010	--
JAN										
10...	--	--	263	--	--	266	--	--	--	550
24...	.14	.05	--	.26	1.2	--	.030	.09	.010	--
FEB										
14...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	.08	.45	--	.61	2.7	--	.150	.46	.020	--
APR										
17...	.20	.36	--	.63	2.8	--	.030	.09	.000	--
MAY										
22...	.00	.54	--	.59	2.6	--	.030	.09	.010	--
JUN										
18...	--	--	4500	.82	3.6	5060	.060	.18	--	230
19...	1.4	.37	--	1.9	8.5	--	.240	.74	.020	--

ARKANSAS RIVER BASIN

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
NOV												
07...	1600	0	0	100	--	1	1	0	--	60	30	
29...	1600	2700	2500	200	--	1	1	0	--	70	50	
DEC												
06...	0945	2200	2000	220	--	0	0	0	--	--	--	
20...	1350	1500	1400	130	--	1	0	1	--	50	20	
JAN												
10...	0930	1100	950	150	160	1	0	1	37	20	0	
24...	1400	600	530	70	--	1	1	0	--	30	20	
FEB												
14...	0930	520	500	20	--	1	1	0	--	30	10	
MAR												
25...	1710	2400	2300	80	--	1	1	0	--	70	40	
APR												
17...	1100	310	300	10	--	1	0	1	--	20	10	
MAY												
22...	1600	950	770	180	--	1	0	1	--	0	0	
JUN												
18...	0940	230	220	10	470	2	1	1	27	50	20	
19...	0845	6600	6400	180	--	4	3	1	--	50	30	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV												
07...	30	0	0	<1	--	20	20	0	--	--	--	50
29...	20	0	0	<1	--	10	10	0	--	--	--	130
DEC												
06...	--	0	0	<1	--	0	0	0	--	--	--	75
20...	30	0	0	3	--	16	16	0	--	--	--	100
JAN												
10...	20	0	0	2	0	0	0	0	8	15	40	
24...	10	0	0	<1	--	0	0	0	--	--	--	30
FEB												
14...	20	0	--	<1	--	10	10	0	--	--	--	0
MAR												
25...	30	0	--	<1	--	10	10	0	--	--	--	25
APR												
17...	8	10	8	2	--	10	10	0	--	--	--	0
MAY												
22...	10	0	--	<1	--	0	0	0	--	--	--	0
JUN												
18...	30	0	--	<1	1	0	0	10	18	10	30	
19...	20	0	--	<1	--	30	30	0	--	--	--	50
		COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV												
07...	50	0	--	7700	7500	200	--	0	0	0	--	--
29...	130	5	--	5600	--	330	--	0	0	0	--	--
DEC												
06...	75	0	--	3000	1300	1700	--	0	0	0	--	--
20...	98	2	--	1800	1700	120	--	0	0	0	--	--
JAN												
10...	40	0	250	1500	1400	150	6900	0	0	1	1500	
24...	29	1	--	1000	910	90	--	0	0	2	--	
FEB												
14...	0	0	--	1700	1600	120	--	100	100	0	--	--
MAR												
25...	25	0	--	3700	3500	250	--	100	100	0	--	--
APR												
17...	0	4	--	1900	1800	90	--	0	0	3	--	--
MAY												
22...	0	4	--	1900	1400	530	--	0	0	0	--	--
JUN												
18...	30	0	4	770	650	120	6900	0	0	0	10	--
19...	47	3	--	2600	2300	320	--	0	0	2	--	--

ARKANSAS RIVER BASIN

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07249070 ROCK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
07...	40	30	10	--	.1	.1	.0	--	0	0	<10
29...	40	30	10	--	.2	.2	.0	--	0	0	<10
DEC											
06...	50	20	30	--	.1	.1	.0	--	0	0	<10
20...	10	0	10	--	.1	.1	.0	--	0	0	<10
JAN											
10...	40	30	10	270	.1	.0	.1	.0	0	0	<10
24...	30	10	20	--	.2	.2	.0	--	0	0	<10
FEB											
14...	20	10	7	--	.1	.1	.0	--	0	--	<10
MAR											
25...	40	30	10	--	.1	.1	.0	--	0	--	<10
APR											
17...	90	50	40	--	.1	.0	.1	--	0	--	<10
MAY											
22...	40	20	20	--	.2	.1	.1	--	0	--	<10
JUN											
18...	70	50	20	250	.2	.1	.1	.0	0	--	<10
19...	530	440	90	--	.2	.2	.0	--	0	--	<10
DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
07...	--	0	0	0	90	70	20	--	58	.09	98
29...	--	0	0	0	40	30	8	--	--	--	--
DEC											
06...	--	0	0	0	40	30	7	--	33	.04	98
20...	--	0	0	0	30	20	8	--	--	--	--
JAN											
10...	3	0	0	0	20	20	3	21	23	.45	94
24...	--	0	0	0	30	30	<3	--	27	.16	80
FEB											
14...	--	0	0	0	20	--	<3	--	12	.20	96
MAR											
25...	--	0	0	0	20	--	<3	--	38	1.3	90
APR											
17...	--	0	0	0	30	30	4	--	17	.04	95
MAY											
22...	--	0	0	0	20	10	6	--	19	1.4	90
JUN											
18...	0	0	0	0	60	--	<3	23	19	.01	79
19...	--	1	1	0	130	110	20	--	1590	3320	98

ARKANSAS RIVER BASIN

07249073 BRAZIL CREEK NEAR LODI,OK

LOCATION.--Lat 34°59'28", long 95°00'24", in NE¼SW¼, sec.17, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at gas well 1.5 mi. (2.42 km) east and 1.25 mi (2.01) south of Lodi.

PERIOD OF RECORD.-- June to September 1980.

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	
DATE	TIME										
JUN											
18...	1530	.51	127	7.0	27.0	30	6.0	6.1	78	.96	
19...	1200	--	43	6.8	22.0	280	460	7.7	90	.48	
20...	1210	47	91	6.9	25.0	200	130	6.6	81	--	
		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)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
DATE											
JUN											
18...	40	1	7.8	5.1	9.6	33	.7	2.1	39	12	
19...	14	0	2.6	1.8	3.2	29	.4	2.3	16	5.1	
20...	31	10	5.7	4.0	5.6	27	.4	2.2	21	15	
		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 CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	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)
DATE											
JUN											
18...	7.3	.1	7.1	84	75	.11	.12	--	--	.03	
19...	2.6	.0	4.8	51	32	.07	--	--	--	.12	
20...	3.1	.0	5.9	67	54	.09	8.5	.04	.050	.09	
		NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
DATE											
JUN											
18...	.05	330	.090	.040	110	.11	.05	1.6	.87	1.70	
19...	.10	--	.110	.000	--	.13	.00	1.9	.38	2.00	
20...	--	--	.120	--	--	.15	--	1.1	--	1.20	
		NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
DATE											
JUN											
18...	.79	.91	5800	1.7	7.7	6130	.050	.15	.030	130	
19...	1.6	.38	--	2.1	9.4	--	.040	.12	.010	--	
20...	--	--	--	1.3	5.7	--	.000	.00	--	--	

ARKANSAS RIVER BASIN

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07249073 BRAZIL CREEK NEAR LODI, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV, (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
JUN												
18...	1530	160	150	10	1000	3	1	2	24	60	40	
19...	1200	6300	6200	90	--	3	2	1	--	50	20	
20...	1210	810	670	140	--	3	2	1	--	60	40	
DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV, (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
JUN												
18...	20	0	<1	1	10	10	0	14	20	30	28	
19...	30	10	<1	--	20	20	0	--	--	0	0	
20...	20	10	<1	--	10	10	0	--	--	0	0	
DATE	TIME	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
JUN												
18...	2	12	1200	670	530	14000	0	0	0	20	310	
19...	3	--	17000	17000	300	--	100	100	0	--	510	
20...	3	--	4300	4100	230	--	100	97	3	--	150	
DATE	TIME	MANGA- NESE, SUS- PENDE RECOV, (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, FM BOT- TOM MA- TERIAL (UG/G AS MO)	
JUN												
18...	10	300	1100	.4	.4	.0	.0	1	<10	0		
19...	380	130	--	.3	.3	.0	--	0	<10	--		
20...	70	80	--	.2	.2	.0	--	1	<10	--		
DATE	TIME	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV, (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
JUN												
18...	0	0	0	50	50	3	54	14	.02	71		
19...	1	1	0	80	80	4	--	--	--	--		
20...	0	0	0	50	40	10	--	123	16	96		

ARKANSAS RIVER BASIN

07249080 BRAZIL CREEK NEAR WALLS, OK

LOCATION.--Lat 35°01'21", long 94°56'39", in SW¼NW¼ sec.1, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at county road bridge, 2.2 mi (3.5 km) southwest of Walls, and at mile 32.2 (51.8 km).

DRAINAGE AREA.--69.1 mi² (179 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 642 ft (196 m) from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,610 ft³/s (102 m³/s) May 27, 1979, gage height, 17.70 ft (5.395 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 2	2300	2,330 66.0	15.38 4.688	June 19	1300	*2,580 73.1	*15.89 4.843

No flow July 24-26, Aug. 11 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	31	2.1	5.4	5.2	3.6	35	237	10	.86	.04	.00
2	1.4	12	2.0	5.0	4.9	3.6	26	933	7.2	.60	.04	.00
3	1.5	7.7	2.0	4.2	3.8	3.2	25	662	5.5	.82	.32	.00
4	2.1	7.7	1.9	3.7	3.5	3.0	20	113	4.5	1.3	.25	.00
5	1.9	4.6	1.9	3.1	3.7	2.7	17	62	4.6	.46	.17	.00
6	1.5	1.8	1.7	3.2	3.2	3.0	12	42	3.3	.33	.12	.00
7	1.3	1.7	1.7	3.0	3.4	3.0	11	28	3.0	.25	.09	.00
8	1.1	1.8	1.7	2.6	59	2.5	11	18	2.6	.18	.09	.00
9	1.0	1.8	2.0	2.7	86	2.5	9.8	14	2.3	.19	.05	.00
10	1.0	2.2	2.5	3.0	40	3.1	7.3	11	2.0	.20	.03	.00
11	1.0	1.8	2.3	3.3	37	2.1	7.7	8.4	1.9	.23	.00	.00
12	1.0	1.6	2.2	2.9	32	5.2	6.9	7.0	1.7	.16	.00	.00
13	1.0	1.6	20	3.1	30	5.1	5.5	7.3	1.5	.12	.00	.00
14	1.0	1.6	15	3.1	27	4.3	5.4	6.2	1.5	.11	.00	.00
15	.98	1.6	11	2.7	26	3.2	5.8	53	1.5	.11	.00	.00
16	.96	1.5	9.4	2.8	23	1.9	5.5	638	1.4	.09	.00	.00
17	.92	1.5	8.0	2.9	17	7.1	5.9	99	1.5	.08	.00	.00
18	.90	1.5	6.6	2.6	14	9.6	5.5	56	2.7	.07	.00	.00
19	.88	1.7	5.7	2.4	13	8.3	6.8	81	1570	.05	.00	.00
20	.86	1.8	4.9	2.9	12	6.6	5.0	52	193	.04	.00	.00
21	.86	7.4	4.1	4.0	11	5.1	3.3	56	82	.04	.00	.00
22	.84	25	3.6	6.1	8.4	5.0	4.5	134	34	.03	.00	.00
23	.84	5.0	6.6	5.4	7.9	53	3.3	82	18	.02	.00	.00
24	.84	3.5	38	6.6	7.3	311	2.6	52	13	.00	.00	.00
25	.84	3.0	30	6.2	6.1	91	3.2	33	7.9	.00	.00	.00
26	.84	2.7	19	5.3	5.3	54	5.5	23	5.6	.00	.00	.00
27	.84	2.6	14	4.6	4.6	37	6.2	16	5.1	.04	.00	.00
28	.84	2.5	11	4.2	4.1	35	5.5	12	3.1	.05	.00	.00
29	.84	2.4	8.6	5.6	3.6	60	4.8	12	2.2	.05	.00	.00
30	41	2.2	7.0	5.7	---	91	8.7	13	1.1	.05	.00	.00
31	124	---	5.8	5.6	---	53	---	13	---	.04	.00	---
TOTAL	196.28	144.8	252.3	123.9	502.0	878.7	281.7	3573.9	1993.7	6.57	1.20	.00
MEAN	6.33	4.83	8.14	4.00	17.3	28.3	9.39	115	66.5	.21	.039	.000
MAX	124	31	38	6.6	86	311	35	933	1570	1.3	.32	.00
MIN	.84	1.5	1.7	2.4	3.2	1.9	2.6	6.2	1.1	.00	.00	.00
AC=FT	389	287	500	246	996	1740	559	7090	3950	13	2.4	.00
CAL YR 1979	TOTAL	39035.38	MEAN	107	MAX	2340	MIN	.84	AC=FT	77430		
WTR YR 1980	TOTAL	7955.05	MEAN	21.7	MAX	1570	MIN	.00	AC=FT	15780		

ARKANSAS RIVER BASIN

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07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	
OCT													
03...	1600	1.8	505	7.2	20.0	--	--	5.2	58	--	--	--	
25...	1015	.81	820	7.6	13.5	30	.80	4.2	41	1.1	220	0	
NOV													
07...	1300	.20	190	6.7	9.0	--	--	6.3	55	--	--	--	
29...	1015	2.4	162	6.8	4.5	240	2.4	--	--	.75	39	0	
DEC													
05...	1200	2.4	156	7.7	5.0	--	--	10.6	85	--	--	--	
20...	0940	2.4	172	7.1	4.0	140	74	11.9	92	.86	40	2	
JAN													
09...	1545	7.1	100	7.4	5.5	--	--	12.8	102	--	--	--	
24...	0915	4.6	135	7.4	5.0	100	57	13.6	117	.15	37	7	
FEB													
13...	1600	31	79	6.9	4.0	--	--	15.7	121	--	--	--	
MAR													
19...	1730	8.0	135	6.9	13.0	300	280	9.4	91	.64	33	10	
APR													
15...	1710	6.6	240	7.6	14.0	50	33	9.8	96	1.7	67	22	
MAY													
30...	1220	13	130	7.2	23.0	45	56	7.8	93	.68	31	2	
JUN													
19...	1945	2300	46	6.9	24.0	280	310	7.3	89	.52	20	2	
JUL													
24...	0945	.01	340	8.1	24.0	90	54	5.6	69	1.1	83	0	
AUG													
13...	1100	6.0	507	7.6	26.0	40	23	4.2	53	--	92	0	
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- SURP- 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	45		26	130	56	3.8	3.6	240	220	18	.3	6.2	596
NOV													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	7.4		4.9	13	56	.9	3.1	39	22	6.7	.1	6.5	98
DEC													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	8.5		4.5	20	65	1.4	2.1	38	24	14	.0	7.1	112
JAN													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	7.0		4.8	12	40	.9	1.9	30	22	10	.1	5.5	83
FEB													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
19...	6.1		4.2	14	47	1.1	1.7	23	24	10	.1	5.8	92
APR													
15...	11		9.6	27	46	1.4	1.3	45	67	8.0	.2	4.9	159
MAY													
30...	5.9		4.0	11	42	.9	1.8	29	20	5.2	.0	8.5	81
JUN													
19...	3.0		3.1	6.2	36	.6	2.8	18	7.8	4.9	.1	2.4	67
JUL													
24...	15		11	40	50	1.9	3.7	110	47	15	.3	5.9	213
AUG													
13...	17		12	59	57	2.7	4.3	140	52	23	.3	6.2	275

ARKANSAS RIVER BASIN

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--	--
25...	595	.81	1.3	.34	.35	--	.100	.030	--	.12	.04	.57
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--
29...	88	.13	.64	.04	.14	--	.060	.050	--	.07	.06	.87
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--
20...	103	.15	.73	.10	.09	--	.040	.030	--	.05	.04	1.1
JAN 09...	--	--	--	--	--	5.9	--	--	9.9	--	--	--
24...	82	.11	1.0	.16	.05	--	.060	.010	--	.07	.01	.25
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	80	.13	1.9	.13	.08	--	.270	.000	--	.33	.00	.93
APR 15...	161	.22	2.8	1.2	1.2	--	.130	.040	--	.16	.05	.68
MAY 30...	75	.11	2.8	.19	.16	--	.120	.010	--	.15	.01	.78
JUN 19...	41	.09	416	.11	.05	--	.130	.010	--	.16	.01	2.7
JUL 24...	204	.29	.01	.05	.05	--	.090	.030	--	.11	.04	1.0
AUG 13...	258	.37	4.4	.00	.00	--	.090	.060	--	.11	.08	1.0
DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4 + ORG. BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.71	.67	.00	.74	--	1.0	4.5	--	.910	2.8	.000	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.56	.93	.32	.61	--	.97	4.3	--	.070	.21	.020	--
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.74	1.10	.33	.77	--	1.2	5.3	--	.060	.18	.010	--
JAN 09...	--	--	--	--	457	--	--	463	--	--	--	700
24...	.09	.31	.21	.10	--	.47	2.1	--	.090	.28	.040	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	.56	1.20	.64	.56	--	1.3	5.9	--	.150	.46	.010	--
APR 15...	.50	.81	.27	.54	--	2.0	8.9	--	.040	.12	.000	--
MAY 30...	.51	.90	.38	.52	--	1.1	4.8	--	.060	.18	.010	--
JUN 19...	.46	2.80	2.3	.47	--	2.9	13	--	.220	.67	.050	--
JUL 24...	.97	1.10	.10	1.0	--	1.2	5.1	--	.100	.31	.030	--
AUG 13...	--	1.10	--	--	--	1.1	4.9	--	.050	.15	.030	--

ARKANSAS RIVER BASIN

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07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
OCT												
03...	1600	450	430	20	--	1	1	0	--	170	0.	
25...	1015	380	380	0	--	1	0	1	--	390	20	
NOV												
07...	1300	3000	2900	110	--	1	0	1	--	140	30	
29...	1015	20	0	100	--	1	1	0	--	80	10	
DEC												
05...	1200	1800	1700	130	--	1	1	0	--	70	20	
20...	0940	1700	1600	100	--	1	0	1	--	110	20	
JAN												
09...	1545	140	70	70	300	1	1	0	36	60	20	
24...	0915	1800	1700	80	--	1	0	1	--	50	10	
FEB												
13...	1600	730	690	40	--	2	0	3	--	50	10	
MAR												
19...	1730	8400	8100	350	--	2	2	0	--	90	50	
APR												
15...	1710	470	410	60	--	2	1	1	--	80	20	
MAY												
30...	1220	710	640	70	--	2	1	1	--	50	20	
JUN												
19...	1945	1300	1200	120	--	3	2	1	--	630	570	
JUL												
24...	0945	570	570	0	--	2	0	2	--	140	40	
AUG												
13...	1100	450	420	30	--	2	0	3	--	110	0	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	CUBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
03...	190	10	2	8	--	0	0	0	--	--	0	
25...	370	0	0	<1	--	0	0	0	--	--	20	
NOV												
07...	110	0	0	<1	--	10	10	0	--	--	50	
29...	70	0	0	<1	--	0	0	0	--	--	75	
DEC												
05...	50	0	0	3	--	16	16	0	--	--	120	
20...	90	0	0	2	--	24	24	0	--	--	75	
JAN												
09...	40	0	0	3	0	0	0	0	20	35	30	
24...	40	0	0	<1	--	0	0	0	--	--	20	
FEB												
13...	40	0	0	16	--	0	0	20	--	--	20	
MAR												
19...	40	0	--	<1	--	10	10	0	--	--	25	
APR												
15...	60	20	19	1	--	0	0	0	--	--	20	
MAY												
30...	30	10	--	<1	--	0	0	0	--	--	80	
JUN												
19...	60	10	10	0	--	20	0	30	--	--	30	
JUL												
24...	100	10	7	3	--	10	0	10	--	--	0	
AUG												
13...	130	60	--	<1	--	10	0	10	--	--	0	

ARKANSAS RIVER BASIN

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE- RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE- RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
03...	0	0	--	1200	--	50	--	0	0	0	--
25...	20	0	--	1100	--	20	--	0	0	0	--
NOV											
07...	50	0	--	6800	6600	240	--	0	0	0	--
29...	69	6	--	3400	--	230	--	0	0	3	--
DEC											
05...	120	0	--	3200	2900	300	--	0	0	0	--
20...	74	1	--	2600	2400	180	--	0	0	0	--
JAN											
09...	30	0	4000	2400	2200	240	20000	100	100	0	4000
24...	17	3	--	3400	3200	200	--	0	0	2	--
FEB											
13...	18	2	--	2100	1900	220	--	100	100	0	--
MAR											
19...	23	2	--	13000	13000	480	--	100	100	0	--
APR											
15...	15	5	--	2100	2000	130	--	0	0	4	--
MAY											
30...	78	2	--	3000	2800	190	--	0	0	0	--
JUN											
19...	27	3	--	10000	9100	930	--	100	100	0	--
JUL											
24...	0	1	--	3900	3800	70	--	0	0	2	--
AUG											
13...	0	1	--	1700	1600	100	--	0	0	1	--
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE- RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE- RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
UCT											
03...	380	80	300	--	1.2	1.2	.0	--	0	0	0
25...	1000	520	480	--	.1	.1	.0	--	0	0	<10
NOV											
07...	170	80	90	--	.2	.2	.0	--	1	0	<10
29...	140	50	90	--	.1	.1	.0	--	0	0	<10
DEC											
05...	130	30	100	--	.0	.0	.0	--	0	0	<10
20...	40	10	30	--	.0	.0	.1	--	0	0	<10
JAN											
09...	80	20	60	850	.1	.0	.1	.0	0	0	<10
24...	90	20	70	--	.1	.0	.1	--	0	0	<10
FEB											
13...	60	30	30	--	.2	.2	.0	--	0	--	<10
MAR											
19...	220	150	70	--	.2	.2	.0	--	1	--	<10
APR											
15...	120	40	80	--	.3	.2	.1	--	0	--	<10
MAY											
30...	170	70	100	--	.0	.0	.0	--	0	--	<10
JUN											
19...	340	260	80	--	.5	.5	.0	--	2	0	3
JUL											
24...	430	290	140	--	.7	.6	.1	--	1	--	<10
AUG											
13...	1300	300	1000	--	.2	.0	.2	--	2	--	<10

ARKANSAS RIVER BASIN

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07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, RECOV, FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
03...	--	0	0	0	20	10	10	--	72	.35	95
25...	--	0	0	0	20	20	4	--	154	.34	98
NOV											
07...	--	0	0	0	100	100	<3	--	86	.05	98
29...	--	0	0	0	60	50	10	--	44	.29	99
DEC											
05...	--	0	0	0	20	10	10	--	36	.23	97
20...	--	0	0	0	30	20	9	--	62	.40	96
JAN											
09...	2	0	0	0	10	7	<3	36	26	.50	98
24...	--	0	0	0	30	30	5	--	50	.62	96
FEB											
13...	--	0	0	0	70	30	40	--	23	1.9	97
MAR											
19...	--	0	0	0	50	--	<3	--	125	2.7	99
APR											
15...	--	0	0	0	20	--	<3	--	28	.50	99
MAY											
30...	--	0	0	0	90	90	4	--	60	2.1	96
JUN											
19...	--	0	0	0	90	60	30	--	402	2500	97
JUL											
24...	--	0	0	0	3900	--	<3	--	71	.00	92
AUG											
13...	--	0	0	0	40	--	<3	--	30	.49	94

ARKANSAS RIVER BASIN

07249100 OWL CREEK NEAR McCURTAIN, OK

LOCATION.--Lat 34°07'40", long 94°53'03", on east line NW¼ sec. 33, T.8 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, on downstream side of bridge, at left pier on county road bridge, 3.4 mi (5.5 km) south from intersection with State Highway 31 at Milton Cemetery, 5.2 mi (8.4 km) southeast of McCurtain, and at mile 3.8 (6.1 km).

DRAINAGE AREA.--27.9 mi² (72.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 474.11 ft (144.509 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period Nov. 15, 1978 to Jan. 31, 1979, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,920 ft³/s (168 m³/s) June 2, 1979, gage height, 19.06 ft (5.809 m); no flow at times each year.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*) for year:

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Apr. 11, 1979	1445	2,920	82.6	15.21	4.636	June 2, 1979	0945	*5,920	168	*19.06	5.809
May 21, 1979	2015	2,590	73.3	14.68	4.474	June 7, 1979	0830	1,720	48.7	13.11	3.996
May 27, 1979	1000	1,950	55.2	13.50	4.115	May 2, 1980	1745	1,650	46.7	12.87	3.923
May 28, 1979	1630	1,520	43.0	12.58	3.834	June 19, 1980	0700	*5,830	165	*18.97	5.782

No flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.00	.00	.00
2										.00	.00	.00
3										.00	.00	.00
4										.00	.00	.00
5										.00	.00	.00
6										.00	.00	.00
7										.00	.00	.00
8										.00	.00	.00
9										.00	.00	.00
10										.00	.00	.00
11										.00	.00	.00
12										.00	.00	.00
13										.00	.00	.00
14										.00	.00	.00
15										.00	.00	.00
16										.00	.00	.00
17										.00	.00	.00
18										.00	.00	.00
19										.00	.00	.00
20										.00	.00	.00
21										.00	.00	.00
22										.00	.00	.00
23										.00	.00	.00
24										.00	.00	.00
25										.00	.00	.00
26										.00	.00	.00
27										.00	.00	.00
28										.00	.00	.00
29										.00	.00	.00
30										.00	.00	.00
31										.00	.00	---
TOTAL										.00	.00	.00
MEAN										.000	.000	.000
MAX										.00	.00	.00
MIN										.00	.00	.00
AC=FT										.00	.00	.00

ARKANSAS RIVER BASIN

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07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.6	35	13	134	138	7.5	45	.15	4.1	.05
2	.00	.00	1.2	12	11	90	73	15	2840	.14	3.5	.12
3	.00	.00	4.6	8.2	10	337	47	72	238	.10	1.3	.12
4	.00	.00	2.4	5.9	8.8	100	42	85	92	.08	2.2	.07
5	.00	.00	1.4	4.3	7.8	56	32	52	53	.07	1.3	.04
6	.00	.00	.78	3.3	6.8	48	25	29	43	4.8	.69	.00
7	.00	.00	50	2.3	7.8	40	19	17	653	.45	.75	.00
8	.00	.00	20	1.6	9.0	27	17	10	89	.26	.37	.00
9	.00	.00	14	1.7	8.0	23	18	5.2	46	29	.21	.00
10	.00	.00	7.0	3.2	11	18	22	16	46	153	.17	.00
11	.00	.00	5.8	6.0	27	16	883	189	27	12	.13	.00
12	.00	.00	3.1	11	106	14	133	83	18	1.8	.10	.00
13	.00	.00	1.9	47	75	11	66	40	14	.56	.07	.00
14	.00	.00	1.2	24	64	10	44	23	12	.48	.06	.00
15	.00	7.0	.76	17	51	9.0	30	13	7.8	.32	.04	.00
16	.00	35	.46	16	30	7.8	21	11	5.1	.20	.02	.00
17	.00	15	.52	17	23	6.8	17	3.6	3.5	141	.00	.00
18	.00	9.0	.64	146	19	9.0	14	1.8	1.7	50	.00	.00
19	.00	4.5	.80	234	16	546	20	1.5	1.2	10	.00	.00
20	.00	3.2	1.5	210	15	607	75	2.7	.80	3.7	.00	.00
21	.00	2.4	1.1	72	13	109	67	829	.63	1.8	.00	.00
22	.00	4.5	.82	40	173	128	30	544	.48	1.3	.00	.00
23	.00	2.5	.60	32	116	94	59	140	.48	.88	.00	.00
24	.00	2.0	.50	23	169	53	62	72	.48	.48	.00	.00
25	.00	1.5	.40	17	245	37	29	46	.48	.37	.00	.00
26	.00	34	.32	27	188	30	30	36	.43	.28	.00	.00
27	.00	12	.60	70	204	48	17	721	.23	95	.09	.00
28	.00	4.5	1.3	50	443	33	16	553	.22	58	.05	.00
29	.00	3.0	3.5	33	---	30	15	171	.16	20	.00	.00
30	.00	2.1	16	22	---	67	10	77	.15	4.6	.00	.00
31	.00	---	124	16	---	50	---	51	---	2.4	.00	---
TOTAL	.00	142.20	268.80	1207.5	2070.2	2788.6	2071	3917.3	4239.84	593.22	15.15	.40
MEAN	.000	4.74	8.67	39.0	73.9	90.0	69.0	126	141	19.1	.49	.013
MAX	.00	35	124	234	443	607	883	829	2840	153	4.1	.12
MIN	.00	.00	.32	1.6	6.8	6.8	10	1.5	.15	.07	.00	.00
AC=FT	.00	282	533	2400	4110	5530	4110	7770	8410	1180	30	.8

WTR YR 1979 TOTAL 17314.21 MEAN 47.4 MAX 2840 MIN .00 AC=FT 34340

ARKANSAS RIVER BASIN

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.11	.75	.93	1.8	1.6	29	50	6.2	2.7	.00	.00
2	.00	.19	.64	.88	1.7	1.1	21	448	2.6	2.0	.00	.00
3	.00	.17	.56	.82	1.7	.90	17	158	2.0	1.2	.00	.00
4	.00	.13	.59	.73	1.7	.97	12	64	2.7	.73	.00	.00
5	.00	.11	.75	.66	1.3	.79	7.8	39	2.1	1.0	.00	.00
6	.00	.08	.90	.58	1.3	.82	6.8	25	1.2	.32	.00	.00
7	.00	.06	2.9	.52	.97	.94	6.0	16	.85	.14	.00	.00
8	.00	.05	.67	.50	12	.80	5.0	12	.64	.17	.00	.00
9	.00	.58	.61	.48	21	.75	4.3	7.7	.42	.72	.00	.00
10	.00	.25	.46	.46	14	.72	2.9	4.7	.32	1.4	.00	.00
11	.00	.19	.34	.44	14	.59	2.3	3.2	.27	1.4	.00	.00
12	.00	.15	12	.43	13	1.1	1.7	4.3	.20	.27	.00	.00
13	.00	.11	9.7	.42	12	.90	1.3	5.9	.17	.15	.00	.00
14	.00	.09	4.0	.40	12	.59	1.3	5.1	.14	.07	.00	.00
15	.00	.08	2.4	.39	11	.56	1.3	13	.11	.02	.00	.00
16	.00	.08	1.8	.37	9.6	.57	1.1	268	.06	.07	.00	.00
17	.00	.07	1.5	.36	8.8	7.8	2.9	62	.11	.19	.00	.00
18	.00	.06	1.2	.35	8.7	7.2	1.3	37	.35	.15	.00	.00
19	.00	.05	1.0	.34	8.5	6.1	.88	36	1850	.10	.00	.00
20	.00	.09	.84	.56	8.3	6.9	1.7	23	104	.06	.00	.00
21	.00	36	.68	.97	8.0	9.1	1.3	66	87	.02	.00	.00
22	.00	17	.56	1.9	9.9	14	1.7	127	52	.00	.00	.00
23	.00	4.3	8.9	1.3	10	71	.75	68	39	.36	.00	.00
24	.00	.75	23	.84	8.4	109	1.7	40	26	.40	.00	.00
25	.00	.88	10	.85	4.5	42	1.7	25	16	.20	.00	.00
26	.00	1.1	9.4	.72	4.5	25	4.3	16	11	.12	.00	.00
27	.00	1.3	6.5	.57	4.1	15	5.9	11	8.9	.21	.00	.00
28	.00	1.2	2.6	.56	4.5	15	5.0	11	6.9	.12	.00	.15
29	.00	1.0	1.9	.67	3.1	66	1.7	20	5.1	.07	.00	.03
30	9.0	.88	1.4	1.8	---	89	1.1	21	3.5	.03	.00	.00
31	6.9	---	1.1	2.9	---	42	---	11	---	.00	.00	---
TOTAL	15.90	67.11	109.65	23.70	218.37	538.80	152.73	1697.9	2229.84	14.39	.00	.18
MEAN	.51	2.24	3.54	.76	7.53	17.4	5.09	54.8	74.3	.46	.000	.006
MAX	9.0	36	23	2.9	21	109	29	448	1850	2.7	.00	.15
MIN	.00	.05	.34	.34	.97	.56	.75	3.2	.06	.00	.00	.00
AC=FT	32	133	217	47	433	1070	303	3370	4420	29	.00	.4
CAL YR 1979 TOTAL	17095.87			MEAN 46.8	MAX 2840	MIN .00	AC=FT 33910					
WTR YR 1980 TOTAL	5068.57			MEAN 13.8	MAX 1850	MIN .00	AC=FT 10050					

ARKANSAS RIVER BASIN

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07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to September 1980.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHDS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	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)
NOV											
05...	1035	.11	114	6.9	10.5	7.6	68	--	--	--	--
13...	1145	.11	121	7.3	11.0	9.8	89	--	--	--	--
19...	1440	.05	140	7.0	20.0	6.3	68	--	--	--	--
26...	1010	1.8	270	7.4	7.5	9.4	78	--	--	--	--
DEC											
03...	1047	.48	310	7.4	3.5	14.8	108	--	--	--	--
10...	1005	.48	350	7.6	7.0	13.2	107	--	--	--	--
11...	1150	.37	352	7.3	11.5	9.6	87	--	--	--	--
17...	1040	.75	410	--	2.0	14.2	99	--	--	--	--
24...	1020	23	520	7.0	8.0	11.4	96	--	--	--	--
JAN											
07...	0915	.48	750	8.0	4.0	13.0	98	140	130	26	19
14...	0840	.37	850	7.5	4.0	13.6	101	--	--	--	--
24...	0910	.88	950	7.4	5.5	12.6	100	--	--	--	--
25...	0905	.88	850	7.6	8.0	10.8	92	--	--	--	--
FEB											
07...	0840	.88	520	7.5	2.5	13.8	99	--	--	--	--
14...	1010	17	240	7.1	4.0	12.8	96	--	--	--	--
21...	1425	8.0	268	7.5	13.0	11.2	107	--	--	--	--
28...	0850	5.0	415	7.4	8.5	10.9	93	--	--	--	--
MAR											
06...	1125	.88	426	7.7	7.0	12.3	100	--	--	--	--
14...	0920	.64	460	7.7	10.0	11.0	95	--	--	--	--
21...	1041	10	660	7.8	12.0	10.1	93	--	--	--	--
28...	0940	15	167	7.1	12.5	10.4	97	--	--	--	--
APR											
07...	0858	5.9	189	7.2	17.0	9.2	95	42	16	7.5	5.6
14...	0835	1.1	267	7.4	8.5	10.7	91	--	--	--	--
21...	0917	1.1	407	7.2	18.5	8.4	88	--	--	--	--
28...	1025	2.9	439	7.5	16.0	9.7	97	--	--	--	--
MAY											
02...	0920	448	154	6.9	18.0	7.8	82	47	20	8.5	6.2
12...	1250	3.7	238	7.3	24.0	8.2	96	--	--	--	--
19...	1210	38	172	7.1	22.0	8.4	95	--	--	--	--
23...	0900	72	120	7.0	19.0	8.4	90	--	--	--	--
JUN											
02...	0930	2.9	265	7.2	24.0	7.2	85	66	32	12	8.7
10...	0945	.32	273	7.1	23.0	7.6	86	--	--	--	--
17...	1023	.03	293	7.0	25.0	6.6	79	--	--	--	--
20...	1518	138	139	6.7	25.0	9.8	117	43	36	7.4	5.9
24...	0925	27	217	6.9	26.5	7.1	88	--	--	--	--
JUL											
01...	1155	2.9	330	7.5	30.5	7.4	97	62	19	11	8.5
14...	1245	.09	475	7.3	30.0	6.7	87	--	--	--	--
21...	1217	.01	460	7.5	30.0	7.7	100	--	--	--	--
28...	1230	9.0	510	7.2	27.0	4.0	49	--	--	--	--

ARKANSAS RIVER BASIN

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (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)
NOV											
05...	--	--	--	--	41	0	34	--	--	--	--
13...	--	--	--	--	42	0	35	3.4	--	--	--
19...	--	--	--	--	47	0	39	--	--	--	--
26...	--	--	--	--	64	0	52	--	--	--	--
DEC											
03...	--	--	--	--	52	0	43	--	--	--	--
10...	--	--	--	--	54	0	44	--	--	--	--
11...	--	--	--	--	52	0	43	4.2	--	--	--
17...	--	--	--	--	46	0	38	--	--	--	--
24...	--	--	--	--	94	0	77	15	--	--	--
JAN											
07...	110	62	4.0	2.6	170	0	140	.2	180	34	.2
14...	--	--	--	--	--	--	150	--	--	--	--
24...	--	--	--	--	--	--	150	--	--	--	--
25...	--	--	--	--	--	--	190	--	--	--	--
FEB											
07...	--	--	--	--	--	--	73	--	--	--	--
14...	--	--	--	--	--	--	26	--	--	--	--
21...	--	--	--	--	--	--	30	--	--	--	--
28...	--	--	--	--	--	--	46	--	--	--	--
MAR											
06...	--	--	--	--	--	--	47	--	--	--	--
14...	--	--	--	--	--	--	55	--	--	--	--
21...	--	--	--	--	--	--	79	--	--	--	--
28...	--	--	--	--	--	--	21	--	--	--	--
APR											
07...	18	47	1.2	1.3	--	--	27	--	36	13	.1
14...	--	--	--	--	--	--	35	--	--	--	--
21...	--	--	--	--	--	--	47	--	--	--	--
28...	--	--	--	--	--	--	58	--	--	--	--
MAY											
02...	13	36	.8	2.2	--	--	28	--	34	9.1	.1
12...	--	--	--	--	--	--	35	--	--	--	--
19...	--	--	--	--	--	--	24	--	--	--	--
23...	--	--	--	--	--	--	23	--	--	--	--
JUN											
02...	24	43	1.3	1.8	--	--	39	--	54	20	.2
10...	--	--	--	--	--	--	46	--	--	--	--
17...	--	--	--	--	--	--	51	--	--	--	--
20...	7.9	28	.5	1.9	--	--	17	--	51	2.6	.2
24...	--	--	--	--	--	--	26	--	--	--	--
JUL											
01...	33	52	1.8	2.3	--	--	37	--	70	16	.1
14...	--	--	--	--	--	--	64	--	--	--	--
21...	--	--	--	--	--	--	74	--	--	--	--
28...	--	--	--	--	--	--	76	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
05...	--	--	--	--	--	--	--	31	.01	94
13...	0	--	.0	1	--	--	--	31	.01	93
19...	--	--	--	--	--	--	--	23	.00	94
26...	--	--	--	--	--	--	--	46	.22	96
DEC										
03...	--	--	--	--	--	--	--	37	.07	99
10...	--	--	--	--	--	--	--	41	.05	99
11...	--	--	--	--	--	--	--	53	.05	100
17...	--	--	--	--	--	--	--	43	.59	100
24...	0	--	.0	0	--	--	--	37	2.5	99
JAN										
07...	0	20	.4	<10	8	4.1	.4	82	.12	100
14...	--	--	--	--	--	--	--	108	.11	100
24...	--	--	--	--	--	--	--	106	.25	100
25...	--	--	--	--	--	--	--	120	.29	100
FEB										
07...	0	--	.0	0	--	--	--	55	.15	100
14...	--	--	--	--	--	--	--	6	.29	92
21...	--	--	--	--	--	--	--	7	.15	98
28...	--	--	--	--	--	--	--	4	.06	93
MAR										
06...	--	--	--	--	--	--	--	6	.02	98
14...	0	--	1.1	0	--	--	--	8	.01	97
21...	--	--	--	--	--	--	--	7	.19	98
28...	--	--	--	--	--	--	--	19	.75	99
APR										
07...	0	70	.0	<10	<3	1.9	.3	23	.37	99
14...	--	--	--	--	--	--	--	9	.02	97
21...	--	--	--	--	--	--	--	9	.02	99
28...	--	--	--	--	--	--	--	56	.44	49
MAY										
02...	2	40	.1	<10	<3	7.7	1.3	69	83	95
12...	--	--	--	--	--	--	--	10	.10	86
19...	--	--	--	--	--	--	--	26	2.7	89
23...	--	--	--	--	--	--	--	31	6.0	77
JUN										
02...	1	30	.1	<10	40	5.1	.7	11	.10	90
10...	--	--	--	--	--	--	--	7	.01	76
17...	--	--	--	--	--	--	--	6	.00	58
20...	0	80	.0	<10	10	8.3	1.5	61	22	91
24...	--	--	--	--	--	--	--	30	2.2	97
JUL										
01...	0	10	.1	<10	10	3.2	.5	15	.13	96
14...	--	--	--	--	--	--	--	6	.00	85
21...	--	--	--	--	--	--	--	6	.00	90
28...	--	--	--	--	--	--	--	9	.22	55

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, AR

LOCATION.--Lat 35°09'45", long 94°24'25", in NW¼NW¼ sec.34, T.6 N., R.32 W., Sebastian County, Hydrologic Unit 11110105, near left bank on downstream side of bridge on State Highway 45, 1.7 mi (2.7 km) south of Hackett, 2.0 mi (3.2 km) downstream from Elder Branch, 2.0 mi (3.2 km) upstream from small tributary, and 3.6 mi (5.8 km) upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 mi² (381 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year.

REVISED RECORDS.--WRD Ark. 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 459.71 ft (140.120 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--22 years, 129 ft³/s (3.65 m³/s), 11.92 in/yr (303 mm/yr) 93,460 acre-ft/yr (115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 14, 1968, gage height, 23.00 ft (7.010 m), from rating curve extended above 20,000 ft³/s (566 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,510 ft³/s (99.4 m³/s) May 16 at 1300 hours, gage height, 17.31 ft (5.276 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	49	7.3	73	54	43	141	83	77	6.7	.13	.00
2	.81	21	7.4	65	50	41	115	375	65	6.5	.10	.00
3	1.0	13	6.9	86	50	40	105	1220	56	6.0	.06	.00
4	.95	8.9	6.9	129	50	41	99	351	50	5.6	.03	.00
5	.84	6.8	7.2	92	49	40	77	209	43	5.2	.00	.00
6	.78	5.5	13	79	50	37	68	149	37	4.8	.00	.00
7	.78	14	29	70	32	36	63	121	35	4.5	.00	.00
8	.72	28	22	62	39	35	156	104	34	4.3	.00	.00
9	.68	51	14	57	166	22	81	90	32	3.8	.00	.00
10	.64	47	13	55	129	15	55	79	32	3.5	.00	.00
11	.64	38	13	57	137	14	68	71	31	3.2	.00	.00
12	.63	33	48	54	191	21	61	64	29	2.6	.00	.00
13	.62	31	187	50	163	46	293	63	28	2.3	.00	.00
14	.61	29	91	48	156	27	516	55	28	1.9	.00	.00
15	.61	22	67	47	160	21	242	71	27	1.8	.00	.00
16	.60	9.8	56	55	140	18	151	2240	26	1.6	.01	.00
17	.66	6.5	46	59	104	52	155	597	31	1.3	.03	.00
18	.80	5.5	41	52	93	85	160	319	32	1.1	.03	.00
19	.73	4.5	31	48	91	49	120	246	22	.91	.00	.00
20	.69	5.3	20	65	86	59	101	178	15	.73	.00	.00
21	.68	32	19	102	78	35	88	126	14	.62	.00	.00
22	1.0	85	26	137	69	28	77	280	13	.43	.00	.00
23	.94	34	291	98	63	107	67	268	12	.31	.00	.00
24	.90	22	799	82	58	425	60	167	12	.25	.00	.00
25	.86	17	211	73	54	145	75	113	11	.17	.00	.00
26	.83	14	137	66	50	95	90	82	9.0	.25	.00	.00
27	.81	11	106	60	49	72	76	65	8.1	.43	.00	.00
28	.90	9.4	87	56	48	94	55	96	7.6	.31	.00	.00
29	1.1	8.4	75	57	46	130	43	234	7.4	.24	.07	.00
30	.68	7.7	90	62	---	339	37	162	7.3	.22	.00	.00
31	244	---	82	61	---	174	---	100	---	.19	.00	---
TOTAL	334.53	669.3	2649.7	2157	2505	2386	3495	8378	831.4	71.76	.46	.00
MEAN	10.8	22.3	85.5	69.6	86.4	77.0	117	270	27.7	2.31	.015	.000
MAX	244	85	799	137	191	425	516	2240	77	6.7	.13	.00
MIN	.60	4.5	6.9	47	32	14	37	55	7.3	.17	.00	.00
AC=FT	664	1330	5260	4280	4970	4730	6930	16620	1650	142	.9	.00
CAL YR 1979	TOTAL	92897.12	MEAN	255	MAX	5630	MIN	.42	AC=FT	184300		
WTR YR 1980	TOTAL	23478.15	MEAN	64.1	MAX	2240	MIN	.00	AC=FT	46570		

ARKANSAS RIVER BASIN

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07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1961, 1969 to current year.

REMARKS.--Some records furnished by Arkansas Department of Pollution Control and Ecology, Little Rock, AR. Discharge records are available from the USGS, Little Rock, AR. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	NITRO- GEN, DISSOLV (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	
OCT													
03...	1230	1.2	525	7.9	20.0	--	--	5.5	61	--	--	--	
23...	0845	36	540	7.5	10.0	15	9.8	5.1	46	.80	160	0	
NOV													
05...	1400	6.7	364	7.4	11.5	--	--	7.0	65	--	--	--	
27...	0755	11	450	7.2	16.0	30	5.4	--	--	.66	170	96	
DEC													
03...	1500	6.9	380	8.1	6.5	--	--	11.6	94	--	--	--	
18...	1000	36	350	7.1	4.0	50	22	11.1	85	.64	160	110	
JAN													
09...	1145	58	240	7.3	5.5	--	--	13.0	104	--	--	--	
22...	0915	146	300	7.7	6.0	50	24	13.0	106	.61	130	84	
FEB													
11...	1445	144	130	6.9	2.0	--	--	14.6	107	--	--	--	
MAR													
19...	1300	46	260	7.2	13.0	1	19	9.0	87	.77	80	58	
APR													
14...	1400	521	125	7.2	9.0	80	68	11.4	101	1.3	36	20	
MAY													
21...	1745	118	220	7.0	19.0	30	18	8.8	97	.78	74	49	
JUN													
24...	0830	12	600	7.9	25.5	5	3.6	6.3	79	.43	250	140	
JUL													
24...	1630	.19	660	8.5	31.0	30	3.4	4.8	66	1.0	180	0	
AUG													
12...	1330	.14	825	8.3	33.0	15	4.0	6.5	90	1.0	170	0	
SEP													
16...	1200	1.3	670	8.0	26.0	28	7.0	5.2	66	.58	180	0	
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)	ALKA- LITY 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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	29		21	71	49	2.5	3.2	190	98	14	.3	7.2	351
NOV													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	31		23	28	43	.9	3.6	76	140	7.3	.1	8.9	301
DEC													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	28		21	19	36	.7	2.4	50	140	6.9	.1	8.4	276
JAN													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	22		17	14	19	.5	1.9	41	100	7.0	.1	7.4	205
FEB													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
19...	14		11	17	31	.8	1.8	22	83	6.5	.1	6.5	157
APR													
14...	6.2		4.9	7.5	30	.5	1.7	16	33	3.9	.2	7.1	88
MAY													
21...	13		10	10	22	.5	1.7	25	60	3.8	.0	8.9	127
JUN													
24...	46		33	28	19	.8	2.4	110	190	5.8	.2	7.5	393
JUL													
24...	33		24	94	53	3.0	3.1	250	120	11	.2	8.4	443
AUG													
12...	32		23	96	54	3.2	3.5	260	110	23	.4	6.9	443
SEP													
16...	31		24	100	54	3.3	4.4	310	70	17	.4	7.2	460

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
03...	--	--	--	--	--	--	--	--	--	--	--	--
23...	358	.48	34.1	.05	.03	--	.160	.000	--	.19	.00	.64
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	288	.41	8.9	.03	.18	--	.040	.090	--	.05	.12	.54
DEC												
03...	--	--	--	--	--	--	--	--	--	--	--	--
18...	257	.38	26.8	.18	.19	--	.000	.010	--	.00	.01	.50
JAN												
09...	--	--	--	--	--	1.6	--	--	7.8	--	--	--
22...	196	.28	80.8	.45	.44	--	.040	.020	--	.05	.03	.21
FEB												
11...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
19...	154	.21	19.5	.26	.26	--	.060	.000	--	.07	.00	.47
APR												
14...	75	.12	124	.17	.18	--	.100	.120	--	.12	.15	.90
MAY												
21...	124	.17	40.5	.26	.26	--	.100	.010	--	.12	.01	.39
JUN												
24...	380	.53	12.7	.19	.19	240	.010	.040	71	.01	.05	1.5
JUL												
24...	444	.60	.23	.02	.02	--	.010	.010	--	.01	.01	1.1
AUG												
12...	451	.60	.17	.00	.00	--	.150	.070	--	.18	.09	1.1
SEP												
16...	440	.63	1.6	.00	.00	--	.040	.000	--	.05	.00	1.4
DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT												
03...	--	--	--	--	--	--	--	--	--	--	--	--
23...	.77	.80	.03	.77	--	.85	3.8	--	.050	.15	.000	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	.39	.58	.10	.48	--	.61	2.7	--	.020	.06	.010	--
DEC												
03...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.44	.50	.05	.45	--	.68	3.0	--	.020	.06	.010	--
JAN												
09...	--	--	--	--	1480	--	--	1480	--	--	--	310
22...	.15	.25	.08	.17	--	.70	3.1	--	.040	.12	.010	--
FEB												
11...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
19...	.51	.53	.02	.51	--	.79	3.5	--	.080	.25	.020	--
APR												
14...	.98	1.00	.00	1.1	--	1.2	5.2	--	.070	.21	.010	--
MAY												
21...	.51	.49	.00	.52	--	.75	3.3	--	.040	.12	.010	--
JUN												
24...	.20	1.50	1.3	.24	1600	1.7	7.5	1840	.030	.09	.020	310
JUL												
24...	.99	1.10	.10	1.0	--	1.1	5.0	--	.030	.09	.010	--
AUG												
12...	.93	1.20	.20	1.0	--	1.2	5.3	--	.050	.15	.020	--
SEP												
16...	.58	1.40	.82	.58	--	1.4	6.2	--	.110	.34	.090	--

ARKANSAS RIVER BASIN

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07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
OCT												
03...	1230	200	190	10	--	1	1	0	--	100	10	
23...	0845	170	170	0	--	1	0	1	--	120	30	
NOV												
05...	1400	600	560	40	--	1	1	0	--	50	0	
27...	0755	260	230	30	--	1	1	0	--	80	30	
DEC												
03...	1500	0	0	40	--	1	1	0	--	80	20	
18...	1000	450	390	60	--	0	0	1	--	10	0	
JAN												
09...	1145	70	0	80	370	1	1	0	40	60	30	
22...	0915	680	630	50	--	1	0	1	--	40	10	
FEB												
11...	1445	610	570	40	--	1	1	0	--	40	10	
MAR												
19...	1300	510	470	40	--	0	0	0	--	80	50	
APR												
14...	1400	590	540	50	--	1	0	1	--	60	20	
MAY												
21...	1745	350	260	90	--	1	0	1	--	50	10	
JUN												
24...	0830	160	160	0	840	1	0	2	27	70	20	
JUL												
24...	1630	10	10	0	--	2	0	2	--	120	10	
AUG												
12...	1330	130	110	20	--	2	0	2	--	0	0	
SEP												
16...	1200	220	210	10	--	3	1	2	--	130	30	
		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
03...	90	0	0	0	--	0	0	0	--	--	--	0
23...	90	0	0	<1	--	0	0	0	--	--	--	0
NOV												
05...	50	0	0	2	--	0	0	0	--	--	--	10
27...	50	0	0	<1	--	0	0	0	--	--	--	92
DEC												
03...	60	0	0	<1	--	12	12	0	--	--	--	0
18...	30	0	0	1	--	20	20	0	--	--	--	75
JAN												
09...	30	0	0	1	100	0	0	0	9	30	30	
22...	30	0	0	<1	--	0	0	0	--	--	--	20
FEB												
11...	30	0	--	<1	--	0	0	0	--	--	--	20
MAR												
19...	30	0	--	<1	--	10	10	0	--	--	--	25
APR												
14...	40	10	9	1	--	0	0	0	--	--	--	20
MAY												
21...	40	10	--	<1	--	0	0	0	--	--	--	0
JUN												
24...	50	10	7	3	1	10	0	10	16	30	30	
JUL												
24...	110	10	9	1	--	10	0	10	--	--	--	0
AUG												
12...	10	20	--	<1	--	0	0	10	--	--	--	0
SEP												
16...	100	20	--	<1	--	10	10	0	--	--	--	380

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
03...	0	0	--	440	--	40	--	0	0	0	--
23...	0	0	--	400	--	30	--	0	0	0	--
NOV											
05...	10	0	--	1200	--	80	--	0	0	0	--
27...	90	2	--	590	--	70	--	100	100	0	--
DEC											
03...	0	0	--	330	250	80	--	0	0	0	--
18...	75	0	--	1300	1200	140	--	100	100	0	--
JAN											
09...	30	0	25000	1400	1300	110	14000	0	0	1	8000
22...	20	0	--	1400	1300	100	--	0	0	1	--
FEB											
11...	20	0	--	1900	1800	150	--	0	0	0	--
MAR											
19...	24	1	--	1100	1000	90	--	0	0	0	--
APR											
14...	15	5	--	3500	3300	240	--	0	0	2	--
MAY											
21...	0	1	--	1200	1000	160	--	0	0	0	--
JUN											
24...	29	1	12	370	360	10	12000	100	100	0	20
JUL											
24...	0	3	--	260	230	30	--	0	0	2	--
AUG											
12...	0	6	--	360	350	10	--	0	0	0	--
SEP											
16...	380	3	--	430	--	<10	--	0	0	2	--
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT											
03...	480	170	310	--	.0	.0	.1	--	0	0	0
23...	880	290	590	--	.1	.0	.1	--	0	0	<10
NOV											
05...	410	30	380	--	.1	.0	.1	--	2	2	0
27...	220	0	220	--	.1	.1	.0	--	0	0	<10
DEC											
03...	170	0	180	--	.1	.1	.0	--	0	0	<10
18...	170	20	150	--	.0	.0	.0	--	0	0	<10
JAN											
09...	220	10	210	1000	.1	.1	.0	.0	0	0	<10
22...	240	20	220	--	.1	.1	.0	--	0	0	<10
FEB											
11...	220	30	190	--	.1	.1	.0	--	0	--	<10
MAR											
19...	250	30	220	--	.5	.4	.1	--	1	--	<10
APR											
14...	380	180	200	--	.2	.0	.2	--	0	--	<10
MAY											
21...	220	20	200	--	.7	.6	.1	--	0	--	<10
JUN											
24...	270	70	200	1400	.0	.0	.0	.0	2	--	<10
JUL											
24...	450	90	360	--	.1	.0	.1	--	1	--	<10
AUG											
12...	530	340	190	--	.1	.1	.0	--	2	--	<10
SEP											
16...	410	360	50	--	.1	.0	.1	--	2	--	<10

ARKANSAS RIVER BASIN

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07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS 7N)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
03...	--	0	0	0	60	60	0	--	58	.19	95
23...	--	0	0	0	10	4	6	--	90	8.7	95
NOV											
05...	--	0	0	0	90	90	0	--	42	.76	96
27...	--	0	0	0	10	0	10	--	48	1.4	99
DEC											
03...	--	0	0	0	20	0	20	--	19	.35	93
18...	--	0	0	0	80	70	10	--	88	8.6	95
JAN											
09...	14	0	0	0	30	20	7	380	29	4.5	96
22...	--	0	0	0	20	10	10	--	63	25	98
FEB											
11...	--	0	0	0	50	30	20	--	23	8.9	83
MAR											
19...	--	0	0	0	30	30	4	--	25	3.1	95
APR											
14...	--	0	0	0	40	20	20	--	92	129	90
MAY											
21...	--	0	0	0	30	30	4	--	30	9.6	73
JUN											
24...	0	0	0	0	40	30	7	68	16	.52	90
JUL											
24...	--	0	0	0	260	260	4	--	10	.01	75
AUG											
12...	--	0	0	0	40	40	4	--	52	.02	72
SEP											
16...	--	0	0	0	20	--	43	--	15	.05	82

ARKANSAS RIVER BASIN

07249410 JAMES FORK NEAR WILLIAMS, OK

LOCATION.--Lat 35°09'30", long 96°36'01", NE¼NW¼ sec. 21, T.8 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, near county road 1.1 miles (1.8 km) southwest of Williams.

DRAINAGE AREA.--198 mi² (512 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		OXYGEN, DIS-SOLVED (PER-CENT SATURATION)											NITRO-GEN, DISSOLV (MG/L AS N)	HARD-NESS (MG/L AS CaCO3)	HARD-NESS, NONCAR-BONATE (MG/L CaCO3)
DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	NITRO-GEN, DISSOLV (MG/L AS N)	HARD-NESS (MG/L AS CaCO3)	HARD-NESS, NONCAR-BONATE (MG/L CaCO3)			
OCT															
02...	1430	1.4	330	7.1	21.0	--	--	7.1	81	--	--	--			
23...	1130	18	410	7.4	12.5	20	16	6.2	59	.50	120	31			
NOV															
07...	0820	22	275	7.1	9.0	--	--	8.4	73	--	--	--			
27...	1015	28	375	6.8	16.0	20	6.3	--	--	.67	150	99			
DEC															
05...	0900	14	298	--	3.0	--	--	12.4	94	--	--	--			
18...	1350	87	235	6.7	2.0	70	29	14.8	107	.61	98	66			
JAN															
09...	0920	112	175	7.0	4.0	--	--	13.8	105	--	--	--			
22...	1100	262	263	7.2	8.0	70	36	11.2	96	.51	110	72			
FEB															
13...	0930	268	130	6.9	3.0	--	--	16.5	123	--	--	--			
MAR															
19...	1020	109	280	7.3	12.0	10	14	14.0	132	.70	89	63			
APR															
15...	0710	444	140	6.8	8.0	100	96	12.1	104	.83	36	20			
MAY															
22...	1020	192	189	7.5	19.0	30	21	8.5	93	.75	67	24			
JUN															
24...	1130	18	500	7.9	27.0	5	8.9	6.9	88	.71	210	130			
JUL															
22...	1500	.01	530	7.8	32.0	20	4.4	6.9	94	.86	240	110			
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)	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, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)		
OCT															
02...	--	--	--	--	--	--	--	--	--	--	--	--	--		
23...	20	17	28	33	1.1	3.2	89	74	6.8	.2	7.1	215			
NOV															
07...	--	--	--	--	--	--	--	--	--	--	--	--	--		
27...	27	19	15	31	.5	2.9	47	130	5.5	.1	7.7	238			
DEC															
05...	--	--	--	--	--	--	--	--	--	--	--	--	--		
18...	18	13	16	42	.7	2.5	32	89	6.7	.0	8.8	179			
JAN															
09...	--	--	--	--	--	--	--	--	--	--	--	--	--		
22...	21	14	14	21	.6	2.0	38	84	7.7	.1	7.1	182			
FEB															
13...	--	--	--	--	--	--	--	--	--	--	--	--	--		
MAR															
19...	16	12	17	29	.8	1.8	26	85	7.7	.1	5.3	171			
APR															
15...	6.3	4.8	7.6	31	.6	1.6	16	31	4.4	.2	6.9	91			
MAY															
22...	12	9.1	11	26	.6	1.7	43	54	4.1	.0	9.0	117			
JUN															
24...	39	28	20	17	.6	2.5	81	150	6.1	.2	7.2	320			
JUL															
22...	40	33	30	21	.9	3.3	130	160	7.8	.3	9.0	379			

ARKANSAS RIVER BASIN

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07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
23...	210	.29	10.4	.01	.00	--	.120	.060	--	.15	.08	.84
NOV												
07...	--	--	--	--	--	--	--	--	--	--	--	--
27...	236	.32	18.0	.09	.08	--	.040	.060	--	.05	.08	.62
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
18...	174	.24	42.0	.21	.19	--	.040	.030	--	.05	.04	.48
JAN												
09...	--	--	--	--	--	4.2	--	--	19	--	--	--
22...	174	.25	129	.34	.34	--	.050	.020	--	.06	.03	.29
FEB												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
19...	161	.23	50.3	.22	.18	--	.130	.060	--	.16	.08	.48
APR												
15...	73	.12	109	.15	.17	--	.080	.060	--	.10	.08	.92
MAY												
22...	128	.16	60.7	--	.25	--	--	.030	--	--	.04	--
JUN												
24...	302	.44	15.6	.20	.17	270	.030	.030	27	.04	.04	.64
JUL												
22...	362	.52	.01	.03	.04	--	.070	.060	--	.08	.08	1.0
DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG 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, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT												
02...	--	--	--	--	--	--	--	--	--	--	--	--
23...	.44	.96	.46	.50	--	.97	4.3	--	.050	.15	.000	--
NOV												
07...	--	--	--	--	--	--	--	--	--	--	--	--
27...	.53	.66	.07	.59	--	.75	3.3	--	.030	.09	.010	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.39	.52	.10	.42	--	.73	3.2	--	.040	.12	.020	--
JAN												
09...	--	--	--	--	168	--	--	172	--	--	--	430
22...	.15	.34	.17	.17	--	.68	3.0	--	.070	.21	.040	--
FEB												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
19...	.46	.61	.09	.52	--	.83	3.7	--	.040	.12	.010	--
APR												
15...	.60	1.00	.34	.66	--	1.2	5.1	--	.080	.25	.010	--
MAY												
22...	.47	--	--	.50	--	--	--	--	--	--	.010	--
JUN												
24...	.51	.67	.13	.54	4700	.87	3.9	4970	.040	.12	.020	120
JUL												
22...	.76	1.10	.28	.82	--	1.1	5.0	--	.020	.06	.010	--

ARKANSAS RIVER BASIN

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	
DATE	TIME											
OCT												
02...	1430	200	180	20	--	0	0	0	--	70	10	
23...	1130	390	390	0	--	1	0	1	--	90	30	
NOV												
07...	0820	290	260	30	--	0	0	0	--	60	10	
27...	1015	250	230	20	--	1	1	0	--	50	10	
DEC												
05...	0900	150	110	40	--	0	0	0	--	60	30	
18...	1350	0	0	60	--	0	0	1	--	60	20	
JAN												
09...	0920	0	0	80	370	1	1	0	9	50	30	
22...	1100	1000	960	40	--	1	0	1	--	40	10	
FEB												
13...	0930	350	290	60	--	1	1	0	--	40	20	
MAR												
19...	1020	330	310	20	--	0	0	0	--	70	0	
APR												
15...	0710	730	670	60	--	2	1	1	--	40	10	
MAY												
22...	1020	610	410	200	--	1	0	1	--	50	20	
JUN												
24...	1130	290	290	0	680	1	0	1	23	70	30	
JUL												
22...	1500	10	10	0	--	2	1	1	--	70	0	
DATE		BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
02...	60	0	0	3	--	0	0	0	--	--	--	0
23...	60	0	0	1	--	0	0	0	--	--	--	10
NOV												
07...	50	0	0	1	--	0	0	0	--	--	--	0
27...	40	0	0	<1	--	0	0	0	--	--	--	83
DEC												
05...	30	0	0	2	--	0	0	0	--	--	--	40
18...	40	0	0	1	--	12	12	0	--	--	--	0
JAN												
09...	20	0	0	<1	0	0	0	0	10	30	40	
22...	30	0	0	<1	--	0	0	0	--	--	--	20
FEB												
13...	20	0	--	<1	--	0	0	0	--	--	--	0
MAR												
19...	120	0	--	<1	--	0	0	0	--	--	--	25
APR												
15...	30	10	8	2	--	10	10	0	--	--	--	0
MAY												
22...	30	0	--	<1	--	0	0	0	--	--	--	0
JUN												
24...	40	10	8	2	1	20	20	0	20	30	0	
JUL												
22...	70	10	8	2	--	20	20	0	--	--	--	0

ARKANSAS RIVER BASIN

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07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
02...	0	0	--	370	--	40	--	0	0	0	--
23...	10	0	--	1000	--	70	--	0	0	0	--
NOV											
07...	0	0	--	1600	--	140	--	0	0	1	--
27...	79	4	--	690	--	70	--	0	0	4	--
DEC											
05...	39	1	--	390	270	120	--	0	0	2	--
18...	0	0	--	1400	1300	130	--	0	0	2	--
JAN											
09...	40	0	750	1200	1100	130	19000	0	0	0	2000
22...	20	0	--	1800	1600	190	--	0	0	1	--
FEB											
13...	0	0	--	1800	1700	130	--	100	100	0	--
MAR											
19...	23	2	--	840	800	40	--	0	0	0	--
APR											
15...	0	1	--	3500	3300	180	--	0	0	3	--
MAY											
22...	0	0	--	1600	1400	190	--	0	0	3	--
JUN											
24...	0	2	15	700	690	10	13000	100	100	0	20
JUL											
22...	0	2	--	340	330	10	--	0	0	2	--
DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
OCT											
02...	210	90	120	--	3.3	1.9	1.4	--	0	0	0
23...	1400	100	1300	--	.1	.1	.0	--	0	0	<10
NOV											
07...	240	10	230	--	.1	.1	.0	--	0	0	<10
27...	100	10	90	--	.1	.1	.0	--	1	0	<10
DEC											
05...	100	10	90	--	.0	.0	.0	--	0	0	<10
18...	130	50	80	--	.0	.0	.0	--	0	0	<10
JAN											
09...	130	10	120	900	.2	.1	.1	.0	0	0	<10
22...	150	40	110	--	.1	.1	.0	--	0	0	<10
FEB											
13...	140	40	100	--	.1	.1	.0	--	0	--	<10
MAR											
19...	150	30	120	--	.1	.1	.0	--	1	0	10
APR											
15...	300	150	150	--	.2	.1	.1	--	0	--	<10
MAY											
22...	170	50	120	--	.2	.0	.3	--	0	--	<10
JUN											
24...	190	80	110	1500	.1	.1	.0	.0	1	--	<10
JUL											
22...	340	90	250	--	.5	.4	.1	--	1	--	<10

ARKANSAS RIVER BASIN

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
02...	--	0	0	0	30	30	0	--	45	.17	97
23...	--	0	0	0	20	10	7	--	80	3.9	92
NOV											
07...	--	0	0	0	0	0	4	--	42	2.5	94
27...	--	0	0	0	0	0	<3	--	33	2.5	99
DEC											
05...	--	0	0	0	20	10	10	--	22	.83	100
18...	--	0	0	0	70	70	5	--	--	--	--
JAN											
09...	4	0	0	0	10	6	4	52	24	7.3	96
22...	--	0	0	0	20	10	8	--	60	42	97
FEB											
13...	--	0	0	0	40	40	4	--	26	19	95
MAR											
19...	--	0	0	0	30	--	<3	--	18	5.3	96
APR											
15...	--	0	0	0	90	--	<3	--	99	119	90
MAY											
22...	--	0	0	0	40	30	9	--	37	19	93
JUN											
24...	0	0	0	0	40	40	3	61	28	1.4	91
JUL											
22...	--	0	0	0	340	320	20	--	4	.00	87

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LOCATION.--Lat 35°12'46", long 94°40'21", on east edge of NE¼ sec. 32, T.9 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left downstream end of culvert on U.S. Highways 59 and 271, and 3.2 mi (5.1 km) north from center of Panama, and at mile 6.2 (10.0 km).

WATER-DISCHARGE RECORDS

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft³/s (3.68 m³/s) May 16, gage height, 6.03 ft (1.83 m); no peak above base of 250 ft³/s (7.08 m³/s): no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.14	.00	.21	.21	.15	5.0	.33	.07	.00	.00	.00
2	.00	.03	.00	.21	.21	.11	3.4	8.6	.04	.00	.00	.00
3	.00	.00	.00	.21	.15	.09	6.2	9.4	.00	.00	.00	.00
4	.00	.00	.00	.21	.15	.09	2.5	2.7	.00	.00	.00	.00
5	.00	.00	.00	.21	.15	.09	1.2	.98	.00	.00	.00	.00
6	.00	.00	.00	.21	.15	.10	1.1	.37	.00	.00	.00	.00
7	.00	.00	.00	.21	.15	.12	.80	.22	.00	.00	.00	.00
8	.00	.00	.00	.21	.52	.15	.57	.16	.00	.00	.00	.00
9	.00	.01	.00	.17	2.0	.11	.49	.10	.00	.00	.00	.00
10	.00	.00	.00	.15	2.5	.09	.21	.09	.00	.00	.00	.00
11	.00	.00	.00	.15	3.6	.09	.21	.09	.00	.00	.00	.00
12	.00	.00	.49	.15	2.5	.18	.21	.04	.00	.00	.00	.00
13	.00	.00	1.4	.15	1.4	.30	.21	.05	.00	.00	.00	.00
14	.00	.00	.39	.15	1.1	.27	.21	.03	.00	.00	.00	.00
15	.00	.00	.21	.15	.98	.21	.21	1.6	.00	.00	.00	.00
16	.00	.00	.17	.15	.78	.21	.17	.49	.00	.00	.00	.00
17	.00	.00	.10	.15	.41	.21	.42	4.7	.00	.00	.00	.00
18	.00	.00	.09	.15	.31	.47	.86	1.9	.00	.00	.00	.00
19	.00	.03	.09	.15	.28	.43	.43	2.5	.03	.00	.00	.00
20	.00	.02	.09	.20	.28	.39	.24	.77	.04	.00	.00	.00
21	.00	.31	.09	.53	.28	.32	.16	.39	.04	.00	.00	.00
22	.00	.16	.09	.72	.28	.28	.15	1.9	.00	.00	.00	.00
23	.00	.09	3.6	.53	.28	12	.09	2.0	.00	.00	.00	.00
24	.00	.08	5.5	.39	.21	21	.09	.66	.00	.00	.00	.00
25	.00	.03	1.6	.28	.21	6.7	.14	.25	.00	.00	.00	.00
26	.00	.02	.78	.21	.10	4.5	.22	.16	.00	.00	.00	.00
27	.00	.02	.59	.21	.09	3.5	.28	.08	.00	.00	.00	.00
28	.00	.01	.50	.15	.12	5.0	.22	.05	.00	.00	.00	.00
29	.00	.01	.39	.15	.15	20	.19	.05	.00	.00	.00	.00
30	3.3	.00	.34	.15	---	16	.10	.05	.00	.00	.00	.00
31	3.6	---	.21	.21	---	7.2	---	.11	---	.00	.00	---
TOTAL	6.90	.96	16.72	7.08	19.55	100.36	26.28	89.33	.22	.00	.00	.00
MEAN	.22	.032	.54	.23	.67	3.24	.88	2.88	.007	.000	.000	.000
MAX	3.6	.31	5.5	.72	3.6	.21	6.2	.49	.07	.00	.00	.00
MIN	.00	.00	.00	.15	.09	.09	.09	.03	.00	.00	.00	.00
CFSM	.05	.007	.12	.05	.15	.74	.20	.66	.002	.000	.000	.000
IN.	.06	.01	.14	.06	.17	.85	.22	.76	.00	.00	.00	.00
AC=FT	14	1.9	33	14	39	199	52	177	.4	.00	.00	.00
WTR YR 1980	TOTAL 267.40	MEAN .73	MAX 49	MIN .00	CFSM .17	IN 2.27	AC=FT 530					

ARKANSAS RIVER BASIN

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

INSTRUMENTATION.--Automatic point sediment sampler since April 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
NOV											
26...	1200	.02	134	6.9	8.0	6.2	52	--	--	--	--
DEC											
17...	0835	.09	126	7.0	2.0	15.1	105	--	--	--	--
31...	1050	.20	114	6.8	6.0	12.6	100	--	--	--	--
JAN											
07...	1110	.20	121	6.9	3.0	12.3	90	--	--	--	--
14...	1200	.15	180	7.4	5.0	12.4	105	32	14	7.1	3.5
24...	1220	.39	155	7.0	7.0	11.8	97	--	--	--	--
31...	0920	.15	180	6.3	.5	12.6	86	--	--	--	--
FEB											
07...	1020	.15	165	7.0	2.0	13.8	98	--	--	--	--
14...	1210	.98	121	6.7	5.5	12.5	98	--	--	--	--
21...	1635	.28	131	7.0	13.5	11.0	106	--	--	--	--
28...	1030	.15	162	7.0	9.0	11.4	98	--	--	--	--
MAR											
06...	0915	.09	148	7.1	4.0	12.2	92	--	--	--	--
14...	0810	.28	160	7.1	6.5	10.5	84	--	--	--	--
21...	0907	.39	163	7.0	9.0	10.2	87	--	--	--	--
28...	0840	4.8	117	6.6	11.0	10.1	91	--	--	--	--
APR											
07...	1130	.72	125	7.0	18.0	9.9	105	32	10	7.4	3.2
14...	0930	.20	142	7.0	7.5	10.8	89	--	--	--	--
21...	1045	.15	142	7.1	18.5	9.0	95	--	--	--	--
28...	1157	.20	163	7.1	16.0	9.3	94	--	--	--	--
MAY											
05...	0845	.98	111	6.8	17.0	8.0	82	31	8	7.5	3.0
12...	0900	.09	139	6.8	23.0	6.3	72	--	--	--	--
19...	0950	3.0	104	6.7	18.5	7.6	80	--	--	--	--
23...	1025	2.0	124	7.0	18.5	8.7	93	--	--	--	--
JUN											
02...	1130	.05	150	7.2	24.0	6.8	80	42	5	9.8	4.2

ARKANSAS RIVER BASIN

433

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET=FLD (MG/L AS HCO3)	CAR- BONATE FET=FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CAC03)	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)
NOV											
26...	--	--	--	--	52	0	43	10	--	--	--
DEC											
17...	--	--	--	--	39	0	32	6.2	--	--	--
31...	--	--	--	--	22	0	18	5.6	--	--	--
JAN											
07...	--	--	--	--	27	0	22	5.4	--	--	--
14...	10	37	.8	3.3	--	--	24	--	22	9.4	.1
24...	--	--	--	--	--	--	24	--	--	--	--
31...	--	--	--	--	--	--	8	--	--	--	--
FEB											
07...	--	--	--	--	--	--	32	--	--	--	--
14...	--	--	--	--	--	--	14	--	--	--	--
21...	--	--	--	--	--	--	18	--	--	--	--
28...	--	--	--	--	--	--	22	--	--	--	--
MAR											
06...	--	--	--	--	--	--	25	--	--	--	--
14...	--	--	--	--	--	--	28	--	--	--	--
21...	--	--	--	--	--	--	28	--	--	--	--
28...	--	--	--	--	--	--	17	--	--	--	--
APR											
07...	9.8	38	.8	2.2	--	--	24	--	22	8.2	.1
14...	--	--	--	--	--	--	32	--	--	--	--
21...	--	--	--	--	--	--	32	--	--	--	--
28...	--	--	--	--	--	--	38	--	--	--	--
MAY											
05...	8.8	36	.7	2.5	--	--	25	--	16	5.8	.1
12...	--	--	--	--	--	--	38	--	--	--	--
19...	--	--	--	--	--	--	20	--	--	--	--
23...	--	--	--	--	--	--	27	--	--	--	--
JUN											
02...	13	39	.9	2.7	--	--	42	--	16	7.9	.2
DATE	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, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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)
NOV											
26...	--	--	--	--	--	--	--	--	--	--	--
DEC											
17...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
JAN											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	7.3	98	74	.13	.04	.02	.09	.010	.03	.03	.020
24...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
06...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	5.9	72	73	.10	.14	.01	.04	.010	.03	.02	.000
14...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	8.8	87	68	.12	.23	.09	.40	.010	.03	.10	.090
12...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
02...	8.7	103	85	.14	.01	.03	.13	.010	.03	.04	.060

ARKANSAS RIVER BASIN

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	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)
NOV										
26...	--	--	--	40	1	--	3	0	0	--
DEC										
17...	--	--	--	80	1	--	2	0	0	--
31...	--	--	--	--	--	--	--	--	--	--
JAN										
07...	--	--	--	--	--	--	--	--	--	--
14...	.03	.040	.12	90	0	30	1	0	0	430
24...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	20	0	--	0	0	1	--
14...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	40	0	--	0	10	3	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
07...	.00	.050	.15	100	1	30	<1	0	1	430
14...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	.12	.060	.18	70	1	60	<1	0	4	750
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	.08	.050	.15	10	1	40	<1	0	1	30
DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	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	--	.0	2	--	--	--	20	.00	95
DEC										
17...	5	--	.0	0	--	--	--	33	.01	96
31...	--	--	--	--	--	--	--	26	.01	96
JAN										
07...	--	--	--	--	--	--	--	25	.01	92
14...	2	30	1.0	<10	9	7.4	--	27	.01	93
24...	--	--	--	--	--	--	--	26	.03	96
31...	--	--	--	--	--	--	--	58	.02	82
FEB										
07...	0	--	.0	0	--	--	--	22	.01	97
14...	--	--	--	--	--	--	--	11	.03	66
21...	--	--	--	--	--	--	--	3	.00	96
28...	--	--	--	--	--	--	--	2	.00	90
MAR										
06...	--	--	--	--	--	--	--	20	.00	78
14...	0	--	.0	0	--	--	--	12	.01	92
21...	--	--	--	--	--	--	--	5	.01	94
28...	--	--	--	--	--	--	--	15	.19	99
APR										
07...	0	50	.0	<10	4	8.7	.3	11	.02	98
14...	--	--	--	--	--	--	--	7	.00	92
21...	--	--	--	--	--	--	--	9	.00	73
28...	--	--	--	--	--	--	--	4	.00	83
MAY										
05...	3	60	.1	<10	10	12	.5	8	.02	89
12...	--	--	--	--	--	--	--	13	.00	83
19...	--	--	--	--	--	--	--	16	.13	86
23...	--	--	--	--	--	--	--	13	.07	82
JUN										
02...	1	6	.1	<10	<3	8.6	.8	20	.00	82

RED RIVER BASIN

435

07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'32", long 99°30'28", in SW¼SE¼ 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 (0.8 km) south of Mangum, 13.0 mi (21 km) downstream from Fish Creek, and at mile 35.5 (57.1 km).

DRAINAGE AREA.--1,566 mi² (4,056 km²), of which 209 mi² (541 km²) 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 (454.417 m) 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 (0.3 km) upstream at different datum. Oct. 1, 1937, to Nov. 8, 1938, nonrecording gage at present site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--43 years (water years 1937-80), 87.7 ft³/s (2.484 m³/s), 63,540 acre-ft/yr (78.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s (2,039 m³/s) May 16, 1957, gage height, 14.55 ft (4.435 m); maximum gage height 14.7 ft (4.48 m) June 16, 1938; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 29, gage height, 12.82 ft (3.908 m), no other peaks above base of 6,000 ft³/s (170 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	39	10	23	16	12	44	42	502	3.4	.00	.00
2	.00	25	11	23	18	9.6	34	55	250	2.7	.00	.00
3	.00	19	13	23	26	13	36	65	170	2.3	.00	.00
4	.00	14	15	23	37	21	32	72	123	2.3	.00	.00
5	.00	11	15	25	37	26	27	53	98	1.9	.00	.00
6	.00	10	14	26	36	24	24	46	78	1.7	.00	.00
7	.00	9.2	14	24	34	21	20	40	63	1.6	.00	.00
8	.00	9.6	13	26	36	22	16	33	51	1.4	.00	.00
9	.00	11	13	25	28	21	13	28	45	1.2	.00	.00
10	.00	11	14	26	29	20	12	27	45	.89	.00	.00
11	.00	11	15	24	45	21	10	25	42	.59	.00	.00
12	.00	12	15	23	46	28	9.2	22	43	.46	.00	.00
13	.00	12	16	23	46	28	9.0	17	41	.31	.00	.00
14	.00	12	15	25	41	31	8.2	15	56	.15	.00	.00
15	.00	12	16	25	35	32	7.7	1930	38	.04	.00	.00
16	.00	12	16	25	29	29	7.9	2260	30	.00	.00	.00
17	.00	13	12	25	24	25	8.1	255	30	.00	.00	.00
18	.00	13	8.4	26	28	21	7.6	84	20	.00	.00	.00
19	.00	13	12	35	34	19	7.7	58	20	.00	.00	.00
20	.00	18	26	50	31	17	7.0	58	24	.00	.00	.00
21	.00	16	27	42	33	15	6.4	54	57	.00	.00	.00
22	.00	13	24	45	33	15	6.3	50	39	.00	.00	.00
23	.00	13	24	42	27	22	6.2	43	29	.00	.00	.00
24	.00	13	23	34	24	21	109	33	20	.00	.00	.00
25	.00	13	21	28	22	21	520	26	16	.00	.00	.00
26	.00	13	21	24	21	22	100	23	10	.00	.00	.00
27	.00	13	20	18	21	25	72	255	7.3	.00	.00	.00
28	.00	13	22	18	21	35	57	78	5.6	.00	.00	.00
29	.00	8.4	21	24	20	92	44	3990	4.7	.00	.00	.00
30	2.5	9.2	22	24	---	72	39	8440	3.9	.00	.00	.00
31	28	---	22	16	---	59	---	1240	---	.00	.00	---
TOTAL	30.50	411.4	530.4	840	878	839.6	1300.3	19417	2001.5	20.94	.00	.00
MEAN	.98	13.7	17.1	27.1	30.3	27.1	43.3	626	66.7	.68	.000	.000
MAX	28	39	27	50	46	92	520	8440	502	3.4	.00	.00
MIN	.00	8.4	8.4	16	16	9.6	6.2	15	3.9	.00	.00	.00
AC-FT	60	816	1050	1670	1740	1670	2580	38510	3970	42	.00	.00

CAL YR 1979 TOTAL 16513.06 MEAN 45.2 MAX 1930 MIN .00 AC-FT 32750
WTR YR 1980 TOTAL 26269.64 MEAN 71.8 MAX 8440 MIN .00 AC-FT 52110

RED RIVER BASIN

07301110 SALT FORK RED RIVER NEAR ELMER, OK

LOCATION.--Lat 34°28'44", long 99°22'55", in NW¼NE¼ 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 (2.7 km) west of Elmer, and at mile 3.5 (5.6 km).

DRAINAGE AREA.--1,878 mi² (4,864 km²), of which 209 mi² (541 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1, 1979, to Sept. 30, 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,258.55 ft (383.606 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 16	0145	25,400 719	14.55 4.435	May 30	1900	*37,900 1,070	*15.11 4.606
May 28	0800	24,500 694	14.50 4.420				

Minimum daily discharge, 8.0 ft³/s (0.23 m³/s) Sept. 23

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	59	19	52	44	39	83	123	1630	77	62	98
2	9.5	40	16	49	40	41	70	193	862	79	77	94
3	10	20	16	45	42	35	59	123	624	88	74	90
4	9.5	24	14	44	49	34	57	144	481	86	68	90
5	8.5	25	14	41	58	28	52	144	407	95	57	88
6	8.5	14	12	39	59	32	49	144	343	91	57	75
7	8.1	14	21	38	56	35	42	104	286	88	63	47
8	8.1	16	31	38	50	33	31	102	260	91	57	31
9	8.5	11	28	35	53	32	26	66	227	89	71	22
10	8.5	19	25	36	50	33	24	57	182	91	86	18
11	8.5	16	24	41	66	33	20	52	196	89	80	21
12	9.0	12	20	52	69	34	17	38	181	84	77	22
13	8.5	10	21	45	71	38	16	30	168	88	76	18
14	8.5	13	35	44	72	41	16	33	172	89	71	16
15	25	14	35	42	69	41	16	4100	172	93	76	13
16	11	13	33	41	52	42	16	16800	146	98	84	11
17	16	14	30	41	56	41	15	3830	140	96	97	9.9
18	11	13	27	35	53	36	14	1580	124	88	97	9.2
19	9.5	14	41	167	52	34	14	1010	116	81	86	9.2
20	9.0	14	40	1170	53	28	12	800	109	82	76	9.2
21	9.0	528	36	180	52	28	13	740	104	88	95	9.0
22	9.5	133	34	100	49	27	9.8	608	121	82	106	8.5
23	9.0	71	45	86	49	30	8.9	600	125	82	78	8.0
24	9.0	50	45	85	44	33	46	601	110	84	81	8.9
25	9.0	45	44	77	42	34	835	535	99	80	62	8.8
26	9.5	40	41	66	41	36	436	479	87	72	64	9.0
27	8.5	38	41	58	40	36	283	2930	82	71	73	13
28	8.1	28	39	55	39	40	193	14700	74	68	83	15
29	8.1	28	38	60	39	40	137	3380	74	66	95	15
30	481	24	36	52	---	104	123	17500	77	64	102	15
31	167	---	42	50	---	97	---	7990	---	62	96	---
TOTAL	932.9	1360	943	2964	1509	1215	2733.7	79536	7779	2582	2427	901.7
MEAN	30.1	45.3	30.4	95.6	52.0	39.2	91.1	2566	259	83.3	78.3	30.1
MAX	481	528	45	1170	72	104	835	17500	1630	98	106	98
MIN	8.1	10	12	35	39	27	8.9	30	74	62	57	8.0
AC=FT	1850	2700	1870	5880	2990	2410	5420	157800	15430	5120	4810	1790
WTR YR 1980	TOTAL	104883.3	MEAN	287	MAX	17500	MIN	8.0	AC=FT	208000		

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

RED RIVER BASIN

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

RED RIVER BASIN

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	.4	.3	.1	14	13	1	5	0	5	0	0
DEC 10...	--	--	--	--	--	--	--	--	--	0	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	.1	.1	.0	0	0	0	5	0	6	0	0
MAR 24...	--	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	.4	.4	.0	75	73	2	1	1	0	0	0
16...	.3	.3	.0	52	50	2	1	1	0	0	0
28...	--	--	--	--	--	--	--	--	--	0	--
JUN 23...	--	--	--	--	--	--	--	--	--	0	--
JUL 24...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--
DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	--	--	--	--	9.6	--	--	--	--	--	--
NOV 28...	0	10	0	20	--	8.3	2.2	86000	46	4.1	80
DEC 10...	--	--	--	--	8.6	--	--	--	36	2.4	77
JAN 14...	--	--	--	--	5.0	--	--	--	20	2.4	54
FEB 19...	1	30	0	30	--	2.1	6.7	--	94	14	91
MAR 24...	--	--	--	--	9.1	--	--	--	34	3.0	79
APR 22...	--	--	--	--	16	--	--	--	41	1.2	75
MAY 15...	0	200	200	0	--	6.5	52	1900	12100	134000	35
16...	0	150	140	10	--	6.2	23	3700	5350	242000	43
28...	--	--	--	--	46	--	--	19000	6140	272000	63
JUN 23...	--	--	--	--	16	--	--	200000	54	18	80
JUL 24...	--	--	--	--	12	--	--	430000	51	12	63
AUG 20...	--	--	--	--	--	--	--	190000	--	--	--

RED RIVER BASIN

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07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5090	1340	3930	3550	3840	4350	3560	2960	1160	3980	3390	2820
2	5140	---	3930	---	3800	---	3550	---	1450	4080	3230	2830
3	5140	3180	3940	3580	---	4440	3650	2530	1850	4070	3180	2910
4	5130	3640	3990	3610	3350	4500	3640	2940	2190	3730	3240	---
5	5100	3690	3940	3620	3310	4310	3640	2990	2470	3580	3190	---
6	5090	3860	3840	3590	3230	4380	3900	3040	2680	3580	3140	2950
7	5070	4260	3880	3570	3180	4210	---	3440	2910	3540	3020	3150
8	---	4250	3850	3620	3180	4260	4160	3130	3010	3440	2990	3360
9	5110	4310	3900	3610	3270	---	4340	3210	3140	3420	3000	3460
10	5180	4290	3880	3600	3360	4260	4420	3440	3310	3240	3020	3740
11	5100	4260	3860	3600	3180	4270	4520	3670	---	3320	3080	4020
12	5030	4280	3670	3620	3090	4200	4610	3850	3740	3280	2980	4400
13	5060	4190	3810	3650	3090	4000	4720	3970	3920	3230	2990	4510
14	5040	4150	3840	3630	3180	---	4720	4140	3930	---	3170	---
15	4930	4140	3790	3620	---	4040	4730	---	3940	3130	3080	4550
16	5000	4190	3730	3570	3380	3980	4850	672	3910	3000	3040	4600
17	4890	4300	3730	3620	3360	4090	5630	991	4100	3380	4040	4680
18	4950	4300	3880	3610	3370	4250	4890	1700	4000	3380	3000	4790
19	4910	4340	3980	3640	---	4390	4770	2210	4180	3200	2910	4750
20	4930	4270	3880	---	3450	4450	4770	2350	4310	3190	2910	---
21	4960	516	3630	1690	3450	4510	4810	2730	4410	3190	2890	4710
22	5040	1860	3540	---	3500	4600	5030	2970	---	3400	---	4740
23	5040	2560	3510	2660	3470	---	4880	3250	3940	3310	2750	4750
24	5030	2880	3610	3060	3600	4320	4600	3220	4000	3210	2800	4810
25	5010	---	3530	3210	3650	4120	3150	3500	4540	3040	2920	4850
26	4980	3680	3560	3280	3680	4210	2210	3510	4550	3100	3020	4720
27	5000	3840	3480	3310	3720	4050	1980	545	5110	3240	2930	---
28	5080	3950	3470	3370	3720	4050	2180	363	4320	3420	3000	4620
29	4990	3980	3410	3620	3760	3920	2420	809	4340	3450	2950	---
30	1800	4460	3550	3750	---	3530	2710	491	3970	3570	2860	4750
31	1190	---	3410	4050	---	---	---	754	---	3620	2900	---
MEAN	4790	3660	3740	3460	3430	4220	4040	2530	3550	3410	3050	4140

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	11.5	7.0	7.0	.5	3.5	18.5	20.5	26.0	34.0	33.0	28.5
2	24.0	---	7.0	---	8.5	---	16.0	---	26.0	34.0	31.5	31.5
3	22.0	15.0	8.0	6.0	---	6.0	18.5	24.0	26.0	33.0	29.5	31.5
4	23.0	15.0	9.0	3.0	11.0	14.5	20.0	25.5	27.5	32.5	30.5	---
5	25.0	15.0	10.0	3.0	11.5	11.0	17.5	27.5	29.0	33.0	30.0	---
6	25.0	12.0	9.0	4.0	10.5	15.0	21.5	26.5	31.0	33.0	30.5	31.5
7	22.5	18.0	10.0	4.0	9.0	16.5	---	27.0	31.0	33.0	31.5	30.0
8	---	15.0	9.0	6.0	7.5	17.5	19.0	24.0	26.5	33.0	32.5	29.0
9	17.0	12.0	10.0	6.0	.0	---	21.5	22.0	26.5	34.0	33.5	29.5
10	16.0	8.0	13.0	10.5	1.0	17.5	22.0	29.0	29.0	33.5	31.0	31.5
11	14.5	10.0	10.0	8.5	6.5	14.0	19.5	30.5	---	---	29.5	29.0
12	24.0	12.0	4.0	8.5	5.0	19.5	12.0	25.0	30.0	---	30.5	32.0
13	15.5	12.0	4.0	9.5	10.5	17.0	14.0	26.0	30.0	---	31.0	32.0
14	19.5	12.0	7.0	11.5	12.0	---	18.5	23.0	28.5	---	31.0	---
15	22.0	13.0	9.0	11.0	---	19.0	22.5	---	30.5	---	31.0	29.5
16	24.5	13.0	1.0	12.0	3.5	19.5	18.0	17.0	32.0	---	33.5	27.0
17	24.0	15.0	2.0	11.5	4.5	15.0	20.0	20.5	32.5	---	33.0	22.5
18	24.0	17.0	4.0	12.0	7.0	14.5	23.0	23.0	33.0	32.5	31.5	25.0
19	22.5	15.0	7.0	10.0	---	16.5	23.5	23.0	32.5	32.5	31.5	28.5
20	23.0	17.0	8.0	---	11.5	16.0	29.0	22.0	33.5	32.0	31.5	---
21	22.5	10.0	9.0	6.5	14.0	17.0	21.0	24.0	32.5	30.0	32.0	28.5
22	18.0	10.0	12.0	---	14.5	15.0	25.5	26.0	---	33.0	---	26.5
23	18.5	10.0	10.0	8.5	11.0	---	28.5	26.5	31.0	33.0	33.0	22.5
24	19.5	10.0	10.0	10.5	11.0	14.5	26.0	26.5	32.0	32.0	34.5	25.5
25	19.0	---	9.0	10.0	12.5	16.5	14.0	28.0	31.5	32.0	33.0	22.5
26	18.0	11.0	10.0	3.5	14.0	20.0	17.5	29.0	33.0	33.0	34.5	18.0
27	20.0	10.0	9.0	3.5	16.0	18.0	19.5	19.5	31.5	33.0	31.0	---
28	19.0	6.0	8.0	.0	14.5	20.5	23.0	25.0	32.0	34.5	28.0	18.0
29	19.5	5.0	7.0	.0	6.0	14.5	24.5	25.0	32.5	31.0	29.0	---
30	14.0	7.0	7.0	.0	---	15.5	21.0	24.5	33.0	32.0	30.5	27.0
31	12.5	---	7.0	.5	---	---	---	25.0	---	33.0	30.5	---
MEAN	20.5	12.0	8.0	6.5	9.0	15.5	20.5	24.5	30.5	33.0	31.5	27.5

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE TIME	NOV 28,79 1000	MAY 15,80 2045	MAY 16,80 1320	MAY 28,80 1430
TOTAL CELLS/ML	86000	1900	3700	19000
DIVERSITY: DIVISION	1.4	0.7	1.2	1.4
..CLASS	1.4	0.7	1.2	1.4
..ORDER	1.5	0.7	1.3	2.1
...FAMILY	1.6	0.7	1.7	2.4
....GENUS	1.9	0.7	2.0	2.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHLORACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	*	0
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	370	2
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
...MICRACTINIUM	--	-	--	-	--	-	180	1
...OOCYSTACEAE								
...ANKISTRODESMUS	1800	2	--	-	--	-	270	1
...CHLORELLA	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	*	0
...OOCYSTIS	--	-	--	-	--	-	640	3
...SELENASTRUM	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	180	1
...CRUCIGENIA	--	-	--	-	--	-	*	0
...SCENEDESMUS	19000#	22	--	-	--	-	1000	5
...TETRASTRUM	--	-	--	-	--	-	180	1
...TETRASPORALES								
...PALMELLACEAE								
...SPHAEROCYSTIS	--	-	--	-	2200#	59	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	1300	1	--	-	--	-	--	-
...CHLOROGONIUM	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	12000	14	--	-	140	4	2400	13
...MELOSIRA	--	-	--	-	--	-	370	2
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	--	-	--	-	140	4	--	-
...COCONEIS	--	-	--	-	140	4	--	-
...CYMBELLACEAE								
...CYMBELLA	*	0	--	-	140	4	--	-
...FRAGILARIACEAE								
...SYNEDRA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
...ENTOMONEIS	--	-	--	-	--	-	--	-
...NAVICULA	*	0	--	-	690#	19	--	-
...PLEUROSIGMA	--	-	--	-	140	4	--	-
...NITZSCHACEAE								
...NITZSCHIA	630	1	140	7	--	-	270	1
..CHRYSTOPHYCEAE								
...CHRYSDOMONADALES								
...MALLONADACEAE								
...MALLONAS	--	-	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE TIME	NOV 28,79 1000		MAY 15,80 2045		MAY 16,80 1320		MAY 28,80 1430	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	--	-	--	-	--	-	--	-
...ANACYSTIS	--	-	--	-	--	-	8200#	43
...HORMOGONALES								
...NOSTOCAEAE								
...ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIAEAE								
...LYNGBYA	--	-	--	-	--	-	4100#	22
...OSCILLATORIA	46000#	53	1600#	86	--	-	--	-
...SCHIZOTHRIX	5600	6	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	--	-	--	-	320	2
...PHACUS	*	0	--	-	140	4	--	-
...TRACHELOMONAS	--	-	140	7	--	-	230	1
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIAEAE								
...GYMNODINIUM	--	-	--	-	--	-	--	-
...PERIDINIALES								
...GLENODINIAEAE								
...GLENODINIUM	--	-	--	-	--	-	--	-

DATE TIME	JUN 23,80 1445	JUL 24,80 0800	AUG 20,80 1000
TOTAL CELLS/ML	200000	430000	190000
DIVERSITY: DIVISION	1.2	0.2	0.5
..CLASS	1.2	0.2	0.5
...ORDER	1.5	0.8	1.3
...FAMILY	1.8	0.9	1.5
...GENUS	2.2	1.2	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHRUEDERIA	*	0	--	-	--	-
...COELASTRACEAE						
...COELASTRUM	--	-	*	0	--	-
...MICRACTINIAEAE						
...GOLENKINIA	2200	1	*	0	--	-
...MICRACTINIUM	3100	2	--	-	--	-
...OOCYSTACEAE						
...ANKISTRODESMUS	1500	1	--	-	--	-
...CHLORELLA	1200	1	--	-	--	-
...CHODATELLA	*	0	--	-	--	-
...DICTYOSPHAERIUM	8000	4	--	-	980	1
...KIRCHNERIELLA	--	-	--	-	--	-
...DUCYSTIS	2500	1	*	0	*	0
...SELENASTRUM	2200	1	--	-	--	-
...TREUBARIA	*	0	--	-	*	0
...SCENEDESMACEAE						
...ACTINASTRUM	9900	5	--	-	--	-
...CRUCIGENIA	1200	1	--	-	--	-
...SCENEDESMUS	7400	4	*	0	980	1
...TETRASTRUM	1200	1	--	-	--	-
..TETRASPORALES						
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	*	0	--	-	--	-
...CHLAMYDOMONAS	1500	1	--	-	*	0
...CHLOROGONIUM	*	0	--	-	--	-

RED RIVER BASIN

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

DATE TIME	JUN 23,80 1445		JUL 24,80 0800		AUG 20,80 1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	15000	8	2600	1	9300	5
...MELOSIRA	--	-	*	0	*	0
..PENNALES						
...ACHNANTHACEAE						
...ACHNANTHES	--	-	--	-	--	-
...COCONEIS	--	-	*	0	--	-
...CYMBELLACEAE						
...CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
...SYNEDRA	--	-	*	0	*	0
...NAVICULACEAE						
...ENTOMONEIS	--	-	--	-	*	0
...NAVICULA	--	-	--	-	*	0
...PLEUROSIGMA	--	-	--	-	--	-
...NITZSCHIA	2500	1	3700	1	3400	2
..CHRYSTOPHYCEAE						
..CHRYSONOMADACEAE						
..MALLONADACEAE						
...MALLONAS	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
..CRYPTOMONADACEAE						
...CRYPTOMONAS	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	--	-	20000	5	25000	13
...ANACYSTIS	7700	4	48000	11	8600	5
..HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	--	-	5700	1	4900	3
...OSCILLATORIACEAE						
...LYNGBYA	--	-	3800	1	27000	14
...OSCILLATORIA	130000#	65	340000#	79	100000#	56
...SCHIZOTHRIX	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
...EUGLENA	--	-	--	-	--	-
...PHACUS	--	-	--	-	--	-
...TRACHELOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
...GYMNODINIUM	--	-	--	-	*	0
..PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

445

LOCATION.--Lat 35°17'05", long 99°37'18", in SE¼NW¼ sec.3, T.9 N., R.23 W., Beckham County, Hydrologic Unit 11120302, on left bank at end of downstream bridge of Interstate 40, 1.2 mi (1.9 km) upstream from Deep Fork Creek, 1.8 mi (2.9 km) southeast of Sayre, and at mile 124.7 (200.6 km).

PERIOD OF RECORD.--May 1978 to current year.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge observed, 1,180 ft³/s (33.4 m³/s) May 17, gage height, 6.85 ft (2.088 m); no flow July 5-18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	80	31	37	98	40	127	86	28	.42	.24	.19
2	3.0	56	37	36	98	40	105	84	25	.20	.24	.19
3	2.4	49	39	36	96	44	93	190	26	.11	.24	.19
4	2.2	35	39	45	86	46	98	170	30	.06	.24	.19
5	2.2	33	39	50	78	43	56	140	28	.00	.23	.18
6	2.2	31	40	49	100	46	58	120	28	.00	.23	.18
7	1.8	24	42	45	105	46	78	170	28	.00	.23	.18
8	1.8	17	42	49	105	46	38	120	26	.00	.23	.18
9	2.2	16	48	45	100	51	25	100	26	.00	.22	.18
10	2.4	15	49	39	108	66	26	85	26	.00	.22	.50
11	2.8	16	50	45	112	80	25	70	24	.00	.22	2.0
12	2.4	16	52	51	128	86	25	62	22	.00	.22	1.4
13	2.4	16	52	42	85	54	35	54	18	.00	.22	1.0
14	2.4	15	46	35	72	53	35	48	15	.00	.22	.85
15	2.6	16	48	33	66	53	28	45	12	.00	.22	.70
16	2.8	16	52	46	64	49	26	700	11	.00	.22	.64
17	3.3	18	44	44	60	46	26	880	10	.00	.21	.60
18	3.3	18	43	71	60	46	18	105	9.0	.00	.21	.54
19	3.5	19	34	150	58	42	37	105	8.4	.13	.21	.52
20	3.5	27	32	170	58	41	31	99	7.6	.35	.21	.50
21	3.5	27	31	165	59	34	33	78	7.0	1.0	.20	.47
22	2.4	31	31	150	60	36	33	74	6.3	.45	.20	.45
23	2.4	32	33	84	54	50	43	135	5.5	.35	.20	.43
24	3.3	32	33	84	38	50	38	60	4.8	.30	.20	.40
25	3.5	29	36	85	33	45	196	66	4.5	.28	.20	.37
26	3.3	28	37	88	31	50	100	58	4.4	.27	.20	.35
27	3.3	26	40	83	30	100	120	48	3.5	.26	.20	.33
28	3.5	22	34	89	32	330	150	44	1.9	.26	.20	.32
29	3.5	23	36	96	40	390	105	39	1.0	.25	.20	.31
30	38	25	36	98	---	405	90	42	.80	.25	.20	.30
31	150	---	37	98	---	150	---	26	---	.24	.19	---
TOTAL	268.9	808	1243	2238	2114	2658	1898	4103	447.70	5.18	6.67	14.64
MEAN	8.67	26.9	40.1	72.2	72.9	85.7	63.3	132	14.9	.17	.22	.49
MAX	150	80	52	170	128	405	196	880	30	1.0	.24	2.0
MIN	1.8	15	31	33	30	34	18	26	.80	.00	.19	.18
AC=FT	533	1600	2470	4440	4190	5270	3760	8140	888	10	13	29
CAL YR 1979	TOTAL	30847.30	MEAN	84.5	MAX	1880	MIN	1.8	AC=FT	61190		
WTR YR 1980	TOTAL	15805.09	MEAN	43.2	MAX	880	MIN	.00	AC=FT	31350		

RED RIVER BASIN

07301500 NORTH FORK RED RIVER NEAR CARTER, OK

LOCATION.--Lat 35°10'05", long 99°30'25", in NW¼SE¼ 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 (4.8 km) south of Carter, 10.8 mi (17.4 km) downstream from Timber Creek, and at mile 110.5 (177.8 km).

DRAINAGE AREA.--2,337 mi² (6,053 km²), of which 399 mi² (1,033 km²) 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 (510.147 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except for period of no gage-height record May 16, which is poor.

AVERAGE DISCHARGE.--34 years (1944-62, 1964-80), 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,400 ft³/s (1,510 m³/s) May 26, 1959; maximum gage height, 14.98 ft (4.566 m) May 17, 1977; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) May 16, gage height unknown; no peaks above base of 3,200 ft³/s (90.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	127	20	41	62	50	113	83	235	.07	.00	.00
2	.00	94	22	42	67	50	113	175	161	.00	.00	.00
3	.00	64	23	40	80	47	120	197	141	.00	.00	.00
4	.00	45	25	41	87	53	91	140	120	.00	.00	.00
5	.00	35	27	44	90	58	98	120	93	.00	.00	.00
6	.00	29	26	48	96	55	93	165	75	.00	.00	.00
7	.00	24	28	45	83	55	78	132	65	.00	.00	.00
8	.00	21	29	44	85	58	67	105	57	.00	.00	.00
9	.00	21	30	40	80	53	52	87	50	.00	.00	.00
10	.00	20	30	36	80	50	47	75	43	.00	.00	.00
11	.00	20	31	40	75	55	44	63	38	.00	.00	.00
12	.00	20	29	42	108	65	40	55	36	.00	.00	.00
13	.00	21	30	41	129	65	36	49	34	.00	.00	.00
14	.00	23	29	49	107	67	36	44	25	.00	.00	.00
15	.00	24	31	47	95	69	35	398	21	.00	.00	.00
16	.00	25	28	45	93	69	34	1720	17	3.7	.00	.00
17	.00	25	27	45	83	60	33	280	16	.00	.00	.00
18	.00	24	27	47	62	55	30	266	16	.00	.00	.00
19	.00	24	29	58	76	50	30	232	15	.00	.00	.00
20	.00	27	33	64	75	49	30	257	12	.00	.00	.00
21	.00	26	40	70	89	43	28	257	12	.00	.00	.00
22	.00	51	43	101	76	43	26	182	9.9	.00	.00	.00
23	.00	32	49	108	65	58	25	159	8.0	.00	.00	.00
24	.00	24	45	92	60	71	53	149	5.7	.00	.00	.00
25	.00	22	41	89	55	67	87	118	4.5	.00	.00	.00
26	.00	20	39	71	53	65	80	91	3.0	.00	.00	.00
27	.00	20	38	67	55	65	200	87	1.8	.00	.00	.00
28	.00	19	38	64	55	78	115	75	1.1	.00	.00	.00
29	.00	15	38	62	52	232	93	105	.66	.00	.00	.00
30	.50	17	39	64	---	190	83	448	.34	.00	.00	.00
31	14	---	40	58	---	156	---	874	---	.00	.00	---
TOTAL	14.50	959	1004	1745	2273	2201	2010	7188	1317.00	3.77	.00	.00
MEAN	.47	32.0	32.4	56.3	78.4	71.0	67.0	232	43.9	.12	.000	.000
MAX	14	127	49	108	129	232	200	1720	235	3.7	.00	.00
MIN	.00	15	20	36	52	43	25	44	.34	.00	.00	.00
AC-FT	29	1900	1990	3460	4510	4370	3990	14260	2610	7.5	.00	.00
CAL YR 1979 TOTAL	41891.34			115		2890		.00	AC-FT 83090			
WTR YR 1980 TOTAL	18715.27			51.1		1720		.00	AC-FT 37120			

07302500 LAKE ALTUS AT LUGERT, OK

LOCATION.--Lat 34°53'15", long 99°17'47", in SW¼ SE¼ sec.22, T.5 N., R.20 W., Kiowa County, Hydrologic Unit 11120303, on upstream face of Altus Dam on North Fork Red River, 1.0 mi (1.6 km) west of Lugert, 2.6 mi (4.2 km) upstream from Elm Fork of North Fork, and at mile 73.5 (118.3 km).

DRAINAGE AREA.--2,515 mi² (6,514 km²), of which 399 mi² (1,033 km²) 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 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 (166 hm³) at elevation 1,559.0 ft (475.18 m) crest of uncontrolled spillway and 72,500 acre-ft (89.4 hm³) at elevation 1,547.0 ft (471.53 m) crest of controlled spillway. Dead storage, 1,660 acre-ft (2.05 hm³) below elevation 1,517.5 ft (462.53 m) 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 (194 km²). 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 (461.56 m).

COOPERATION.--Data on diversions furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 170,600 acre-ft (210 hm³) May 19, 1951, elevation, 1,562.10 ft (476.128 m); minimum after initial storage, 4,690 acre-ft (5.78 hm³) Aug. 25, 1944, elevation, 1,520.2 ft (463.357 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 127,900 acre-ft (158 hm³) June 8, elevation, 1,557.92 ft (474.854 m); minimum, 30,250 acre-ft (37.3 hm³) Sept. 26, elevation, 1,534.33 ft (467.664 m).

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

1534	29,420	1547	72,500
1538	40,360	1553	100,300
1542	53,240	1559	134,500

CONTENTS, IN ACRE-Feet, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87710	85330	85240	86030	88870	92440	95980	99700	125800	120400	73000	35100
2	87660	85240	85010	86120	89010	92320	96430	100200	126400	118700	71570	33710
3	87450	85380	85290	86170	89150	92410	96500	100600	126800	117100	70270	32670
4	87100	85380	85150	86210	89290	92510	96650	101000	127300	115200	68710	31820
5	86910	85330	85200	86170	89430	92410	96730	101400	127000	113200	67200	31230
6	86890	85200	85110	86350	89380	92560	96910	101600	127000	111400	65940	31150
7	86770	85160	85110	86310	89700	92660	97110	102100	127500	109400	64010	31130
8	86770	85250	85010	86350	90190	92760	97010	102000	127500	107600	62620	31130
9	86590	85200	85160	86400	90140	92800	97010	102100	127500	105700	61380	31210
10	86630	85200	84960	86630	90230	92900	96890	102200	127400	104000	60260	31150
11	86350	85110	85250	86540	90380	93100	97090	102000	127300	102400	59270	31100
12	86260	85110	85200	86350	90570	93300	97010	102100	127000	100800	58070	31000
13	86120	85110	85160	86730	90820	93400	96990	102200	126900	99340	56870	30980
14	85890	85070	85340	86730	91160	93350	97010	102200	126700	97720	55550	30980
15	86120	85110	85290	86890	91250	93400	96840	106100	126700	96040	54330	30900
16	86210	85110	85240	87030	91260	93590	97210	108600	126800	94840	53030	30870
17	86120	84920	85200	86980	91260	93710	97010	109900	126800	93070	51850	30750
18	86070	85110	85150	86870	91460	93490	97060	110400	126800	91600	50750	30750
19	86070	84930	85240	87660	91650	93540	96910	110900	126700	90090	49900	30570
20	85940	85470	85200	87970	91700	93660	97060	111500	126700	88580	48980	30460
21	85700	85660	85240	88060	91950	93640	96960	112300	126500	86890	48120	30440
22	85610	85290	85290	88160	92070	93640	96990	112800	126300	85380	47300	30520
23	85610	85330	85430	88350	92190	94140	97160	112900	126200	83890	46560	30390
24	85470	85200	85470	88720	92240	94280	97460	113100	126100	82240	46020	30390
25	85290	85380	85610	88820	92340	94180	97870	113500	125600	80940	45280	30360
26	85100	85290	85660	88770	92440	94330	98130	113700	124900	80030	44270	30360
27	85200	85380	85800	88820	92440	94630	98480	119500	124200	79200	42820	30410
28	85100	85330	85890	89010	92610	94830	98840	120600	123700	78070	40990	30440
29	84920	85200	85890	88820	92510	95130	99040	123300	122900	77020	39400	30440
30	85240	85200	86030	88940	---	95580	99290	124100	121600	75740	37620	30410
31	85380	---	85980	88870	---	95930	---	125200	---	74380	36270	---
MAX	87710	85660	86030	89010	92610	95930	99290	125200	127500	120400	73000	35100
MIN	84920	84920	84960	86030	88870	92320	95980	99700	121600	74380	36270	30360
†	1550.10	1549.20	1550.63	1550.70	1551.62	1552.15	1552.81	1557.43	1556.86	1547.45	1536.58	1534.39
‡	-2,430	-180	+780	+2,890	+3,640	+3,420	+3,360	+25,910	-3,600	-47,220	-38,110	-5,860
††	0	0	0	0	0	0	0	0	3,090	40,485	35,389	5,055
CAL YR 1979	MAX 129200	MIN 61380	† +24,330	†† 41,751								
WTR YR 1980	MAX 127500	MIN 30360	‡ -57,400	†† 84,019								

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet

†† Total diversions, in acre-feet.

LOCATION.--Lat 34°53'26", long 99°18'22", in SW¼ sec.22, T.5 N., R.20 W., Greer County, Hydrologic Unit 11120303, on right bank at State Highway 44A bridge, 3,500 ft (1,067 m) downstream from Altus Dam, 1.9 mi (3.1 km) upstream from Elm Fork of North Fork, 2.0 mi (3.2 km) west of Lugert, and at mile 72.8 (117.1 km).

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66 ft³/s (1.87 m³/s) May 27, gage height, 6.13 ft (1.868 m); no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	2.7	3.0	2.2	.71	.58	.00	2.0	.01	.66	.00
2	.00	.03	3.2	3.0	2.2	.83	.58	.00	2.0	.02	.28	.00
3	.00	.04	2.8	3.0	2.2	.95	.55	.00	2.0	.03	.14	.00
4	.00	.06	3.0	2.8	2.2	1.0	.54	.00	1.8	.08	.12	.00
5	.00	.09	3.0	3.0	2.1	1.1	.55	.00	1.5	.12	.12	.00
6	.00	.10	3.0	2.8	2.0	1.1	.39	.00	1.1	.37	.12	.00
7	.00	.11	3.1	2.7	2.0	1.3	.39	.00	.89	.66	.11	.00
8	.00	.14	3.1	2.7	2.6	1.5	.34	.00	.77	.95	.09	.00
9	.00	.28	3.1	2.7	2.7	1.6	.31	.00	.89	1.1	.08	.00
10	.00	.37	3.1	2.7	2.8	1.5	.15	.00	.71	1.8	.08	.00
11	.00	.51	3.1	2.7	2.8	1.1	.06	.00	.46	1.5	.07	.00
12	.00	.60	3.1	2.7	2.7	1.1	.04	.00	.23	.95	.08	.00
13	.00	.77	3.3	2.6	2.7	1.1	.04	.00	.11	.71	.09	.00
14	.00	.95	3.3	2.6	2.6	.83	.04	.00	.10	.32	.09	.00
15	.00	1.1	3.3	2.5	2.6	.71	.03	7.2	.08	.11	.08	.00
16	.00	1.0	3.3	2.5	2.5	.61	.02	3.3	.06	.10	.10	.00
17	.00	.89	3.3	2.5	2.5	.54	.01	2.3	.03	.11	.10	.00
18	.00	.77	3.4	2.1	2.5	.51	.01	1.7	.03	.12	.10	.00
19	.00	.71	3.3	2.3	2.5	.48	.01	1.4	.03	.18	.10	.00
20	.00	1.1	3.3	2.3	2.3	.40	.00	1.1	.02	.28	.03	.00
21	.00	1.4	3.3	2.3	2.2	.29	.00	1.5	.02	.37	.06	.00
22	.00	1.5	3.3	2.3	2.1	.20	.00	1.3	.01	.46	.06	.00
23	.00	1.6	3.3	2.3	1.9	.47	.00	1.1	.01	.55	.04	.00
24	.00	1.5	3.3	2.5	1.9	.55	.01	1.0	.00	.60	.03	.00
25	.00	1.5	3.3	2.1	1.5	.54	.01	.66	.00	.66	.03	.00
26	.00	1.8	3.3	1.9	1.1	.53	.01	.46	.00	.71	.02	.00
27	.00	1.9	3.1	1.8	1.1	.59	.01	5.0	.00	.83	.01	.00
28	.00	2.1	3.4	1.8	.95	.64	.00	3.6	.00	.95	.01	.00
29	.00	2.3	3.1	2.0	.83	.64	.00	5.9	.00	.95	.00	.00
30	.01	2.5	3.1	2.1	---	.63	.00	3.6	.00	.89	.00	.00
31	.02	---	3.1	2.2	---	.63	---	2.3	---	.83	.00	---
TOTAL	.03	27.75	98.4	76.5	62.28	24.68	4.68	43.42	14.85	17.32	2.90	.00
MEAN	.001	.93	3.17	2.47	2.15	.80	.16	1.40	.50	.56	.094	.000
MAX	.02	2.5	3.4	3.0	2.8	1.6	.58	7.2	2.0	1.8	.66	.000
MIN	.00	.03	2.7	1.8	.83	.20	.00	.00	.00	.01	.00	.000
AC-FT	.06	55	195	152	124	49	9.3	86	29	34	5.8	.00
CAL YR 1979	TOTAL	690.93	MEAN	1.89	MAX	13	MIN	.00	AC-FT	1370		
WTR YR 1980	TOTAL	372.81	MEAN	1.02	MAX	7.2	MIN	.00	AC-FT	739		

RED RIVER BASIN

449

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK

LOCATION.--Lat 35°00'42", long 99°54'12", in SW¼NW¼ sec.12,T.6 N., R.26 W., Harmon County, Hydrologic Unit 11120304, near left bank on downstream side of pier of bridge on State Highway 30, 4.0 mi (6.4 km) northeast of Carl, and at mile 54.0 (86.9 km).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1968 to September 1979.

WATER TEMPERATURE: July 1968 to September 1979

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 23...	1130	6.4	40000	7.8	11.0	10.2	115	2300	560
NOV 27...	1500	15	21000	8.0	11.0	12.0	124	1800	440
DEC 11...	1230	9.0	22000	7.9	8.5	14.2	139	2000	480
JAN 15...	1430	17	22400	7.8	11.0	11.3	119	2000	520
FEB 20...	1030	8.1	21500	7.5	16.0	9.4	109	2400	630
MAR 25...	1300	16	22000	8.1	7.0	12.1	115	2400	630
APR 23...	1130	12	29000	7.9	28.0	6.2	94	2700	720
MAY 29...	1030	28	17000	8.0	22.5	9.8	127	1800	500
JUN 24...	1200	4.6	50000	8.2	30.0	5.2	87	3400	830
JUL 23...	1100	.51	<100000	7.5	34.0	2.5	51	11000	1900
AUG 19...	1315	.50	127000	7.2	34.0	5.9	131	12000	1900
SEP 24...	1200	1.0	102000	7.2	27.0	6.5	120	11000	1800

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 23...	220	9600	93	87	47	28800	39.2	499
NOV 27...	160	4400	90	46	13	14500	19.7	599
DEC 11...	200	5300	90	51	18	16000	21.8	389
JAN 15...	170	4300	88	42	15	14900	20.3	692
FEB 20...	200	4700	81	42	17	15800	21.5	347
MAR 25...	190	4600	81	41	23	15800	21.5	717
APR 23...	230	6600	84	55	28	21000	28.6	703
MAY 29...	130	3200	79	33	17	11300	15.4	854
JUN 24...	330	12000	88	89	57	38700	52.6	481
JUL 23...	1600	85000	94	348	280	239000	325	329
AUG 19...	1700	94000	94	378	380	266000	362	359
SEP 24...	1600	93000	95	384	320	135000	184	364

RED RIVER BASIN

07303402 FISH CREEK NEAR VINSON, OK

LOCATION.--Lat 35°01'08", long 99°52'48", in the NW¼SE¼SE¼ sec. 1, T. 6 N., R. 26 W., Harmon County, Hydrologic Unit 11120304, at bridge on county road, 7.0 mi (11.3 km) north of Vinson, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--31.5 mi² (81.6 km²).

PERIOD OF RECORD.--Water years 1978 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1978 to September 1979.

WATER TEMPERATURE: February 1978 to September 1979.

pH: February 1978 to September 1979.

REMARKS.--Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3570	10600	---		---	6310	4890	---	3310	6510	5950	4280
2	5010	9540	---		---	6120	5000	---	3280	6840	---	4280
3	5050	9580	---		---	6130	5040	5690	3290	6780	---	4280
4	5010	9560	---		---	6120	5020	5700	6120	6770	---	4280
5	6300	9560	---		---	6140	5040	5720	5950	---	---	4280
6	6300	---	---		---	5710	5010	5740	6170	---	---	---
7	6290	---	---		---	---	5040	6630	3410	---	---	---
8	6270	---	6150		---	---	5250	6690	3390	8100	---	---
9	7060	---	6090		---	---	5250	6700	---	8740	6900	---
10	7060	---	6120		---	---	5260	7260	---	8720	6880	---
11	7080	---	6120		---	---	5270	7230	3380	8030	6880	---
12	---	---	---		---	---	5700	7220	3350	---	6880	---
13	---	---	---		---	---	5740	7220	3380	---	6960	---
14	---	---	6230		---	---	5710	7800	5490	---	6960	---
15	---	---	6210		---	---	5710	7780	5470	---	6940	---
16	---	---	6240		---	---	---	7800	5480	---	---	---
17	---	---	6220		---	---	---	4100	5480	---	---	---
18	---	---	6110		---	---	---	4080	5740	---	---	---
19	---	4640	6040		---	---	---	4080	5450	---	---	---
20	---	4630	6090		---	---	---	4070	5720	---	---	---
21	---	4620	6240		---	---	---	---	---	---	---	---
22	---	4590	6250		5640	4150	---	---	---	5450	---	---
23	9170	5430	6260		5680	4140	---	---	---	4980	3270	---
24	9150	5430	6220		5680	4140	---	6430	---	5390	3240	---
25	9150	5430	6550		5700	4130	---	6460	---	5380	3240	---
26	10100	5460	6570		6310	4270	5990	6450	---	4560	3250	---
27	10200	5580	---		6300	4260	5990	6450	---	4550	---	---
28	10100	5570	---		6310	4260	6000	3310	6640	4550	---	---
29	10100	5600	---		---	4910	6010	3310	6450	4540	---	---
30	10600	---	---		---	4910	---	3320	6730	5900	4260	---
31	10700	---	---		---	4900	---	3310	---	5920	4260	---
MEAN	7710	6610	6220		5950	5040	5420	5790	4940	6210	5420	4280

07303402 FISH CREEK NEAR VINSON, OK--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	7.8	---	---	---	7.6	8.0	---	7.3	7.7	---	7.3
2	7.5	7.9	---	---	---	7.8	7.9	---	7.4	7.4	---	7.2
3	7.6	7.6	---	---	---	7.8	7.9	7.9	7.8	7.6	---	7.2
4	7.5	8.0	---	---	---	7.7	7.8	7.9	7.5	7.5	---	7.2
5	7.6	8.0	---	---	---	7.6	7.9	7.9	8.0	---	---	7.5
6	7.7	---	---	---	---	7.7	7.9	7.0	7.8	---	---	---
7	7.7	---	---	---	---	7.9	7.9	8.1	7.8	---	---	---
8	7.7	---	7.7	---	---	7.9	7.9	8.0	7.8	7.1	---	---
9	7.6	---	7.7	---	---	7.9	7.9	7.8	---	7.6	7.4	---
10	7.7	---	7.8	---	---	---	7.9	7.8	---	7.8	---	---
11	7.8	---	7.8	---	---	---	8.1	7.8	7.8	7.6	---	---
12	---	---	---	---	---	---	7.8	7.8	7.8	---	---	---
13	---	---	---	---	---	---	7.8	7.8	7.8	---	---	---
14	---	---	7.7	---	---	---	7.9	7.6	7.7	---	---	---
15	---	---	7.7	---	---	---	8.2	7.7	7.7	---	---	---
16	---	---	7.7	---	---	---	---	7.7	7.7	---	---	---
17	---	---	7.8	---	---	---	---	7.5	7.6	---	---	---
18	---	---	7.6	---	---	---	---	7.9	7.6	---	---	---
19	---	8.0	7.6	---	---	---	---	7.6	7.8	---	---	---
20	---	7.9	7.7	---	---	---	---	7.5	7.7	---	---	---
21	---	8.1	7.8	---	---	---	---	---	---	---	---	---
22	---	8.0	7.8	---	8.2	7.8	---	---	---	7.4	---	---
23	7.9	7.9	7.8	---	8.2	7.9	---	---	---	7.5	---	---
24	7.8	7.9	7.9	---	8.1	7.9	---	8.0	---	7.3	---	---
25	7.9	7.9	7.8	---	8.1	7.9	---	7.9	---	7.1	---	---
26	7.9	7.8	7.7	---	8.1	7.8	7.7	7.9	---	7.6	---	---
27	7.9	7.9	---	---	8.1	7.8	7.9	7.8	---	7.5	---	---
28	8.0	8.0	---	---	8.0	7.8	7.9	7.5	7.7	7.7	---	---
29	7.9	7.9	---	---	---	7.9	7.5	7.5	7.6	7.7	---	---
30	7.9	---	---	---	---	7.9	---	7.6	7.8	7.8	---	---
31	7.9	---	---	---	---	7.9	---	7.5	---	7.7	---	---
MEAN	7.7	7.9	7.7	---	8.1	7.4	7.9	7.7	7.7	7.5	7.4	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	19.0	---	---	---	7.5	14.0	---	27.0	29.0	26.0	26.0
2	24.0	16.0	---	---	---	8.0	13.0	---	27.0	28.0	---	26.0
3	24.0	16.5	---	---	---	8.0	10.5	18.0	27.0	28.5	---	26.0
4	25.0	17.0	---	---	---	7.5	14.0	18.5	25.5	26.0	---	27.0
5	23.0	17.0	---	---	---	7.5	11.0	18.5	25.0	---	---	26.0
6	23.0	---	---	---	---	7.5	16.0	17.5	24.0	---	---	---
7	23.0	---	---	---	---	---	16.5	25.5	26.5	---	---	---
8	22.5	---	5	---	---	---	13.0	24.0	26.0	29.0	---	---
9	23.0	---	1.5	---	---	---	14.5	24.0	---	28.5	26.0	---
10	24.0	---	2.0	---	---	---	11.0	25.0	---	27.5	26.0	---
11	23.5	---	2.0	---	---	---	12.0	25.0	26.0	31.0	26.5	---
12	---	---	---	---	---	---	---	25.5	26.0	---	28.0	---
13	---	---	---	---	---	---	---	23.0	26.5	---	23.0	---
14	---	---	1.0	---	---	---	---	25.0	26.5	---	26.0	---
15	---	---	2.0	---	---	---	---	21.0	28.0	---	25.5	---
16	---	---	2.0	---	---	---	---	25.0	28.0	---	---	---
17	---	---	1.0	---	---	---	---	24.0	29.0	---	---	---
18	---	---	11.0	---	---	---	---	25.0	27.0	---	---	---
19	---	15.5	10.5	---	---	---	---	25.0	27.0	---	---	---
20	---	15.5	9.0	---	---	---	---	25.0	28.0	---	---	---
21	---	14.0	1.5	---	---	---	---	---	---	---	---	---
22	---	14.0	2.0	---	6.5	12.0	---	---	---	27.0	---	---
23	17.0	12.0	2.0	---	5.0	12.5	---	---	---	26.5	24.0	---
24	18.0	11.0	2.5	---	3.5	13.0	---	26.0	---	29.0	25.0	---
25	19.0	10.0	2.5	---	5.5	14.0	---	26.5	---	26.0	24.5	---
26	15.0	10.0	3.0	---	7.0	16.0	18.0	27.0	---	26.0	26.0	---
27	17.0	12.0	---	---	6.0	16.0	17.0	26.0	---	26.5	---	---
28	16.0	12.5	---	---	9.5	16.0	18.0	26.0	26.5	28.0	---	---
29	10.0	13.0	---	---	---	17.5	16.0	26.0	28.5	28.5	---	---
30	17.0	---	---	---	---	16.0	---	26.0	28.0	28.0	28.0	---
31	18.0	---	---	---	---	16.5	---	26.5	---	26.0	26.0	---
MEAN	20.5	14.0	3.5	---	6.0	12.0	14.5	24.0	27.0	27.5	26.0	26.0

RED RIVER BASIN

07303404 SALT CREEK NEAR VINSON, OK

LOCATION.--Lat 34°59'45", long 99°50'31", in SE¼SW¼NE¼ sec. 16, T. 6 N., R. 25 W., Greer County, Hydrologic Unit 11120303, at low-water crossing on county road, 6.7 mi (10.8 km) north of Vinson, and at mile 1.2 (1.9 km).

DRAINAGE AREA.--5.64 mi² (14.61 km²).

PERIOD OF RECORD.--Water years 1978 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1978 to September 1979.

WATER TEMPERATURE: February 1978 to September 1979.

pH: February 1978 to September 1979.

REMARKS.--Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91300	134000	---		---	134000	76300	---	57500	83200	68900	
2	112000	133000	---		---	134000	77200	---	58900	91800	---	
3	112000	131000	---		---	135000	77400	54200	57800	93000	---	
4	112000	131000	---		---	134000	77200	54700	81200	92800	---	
5	111000	132000	---		---	134000	78300	54200	81900	---	---	
6	111000	---	---		---	135000	78200	54200	75800	---	---	
7	112000	---	---		---	134000	78000	69400	22600	---	---	
8	111000	---	130000		---	---	96400	69500	21900	95400	---	
9	115000	---	129000		---	---	96400	69500	---	95700	17000	
10	114000	---	128000		---	---	96100	79300	---	93500	106000	
11	114000	---	128000		---	---	96400	79100	21400	95100	107000	
12	---	---	---		---	---	95100	79000	22800	---	106000	
13	---	---	---		---	---	96400	79400	21600	---	106000	
14	---	---	124000		---	---	96600	93300	61900	---	105000	
15	---	---	124000		134000	---	96700	92600	62400	---	106000	
16	---	---	124000		135000	---	---	93000	63200	---	---	
17	---	---	124000		134000	---	---	62000	62700	---	---	
18	---	---	120000		134000	---	---	61500	69200	---	---	
19	---	128000	120000		137000	---	---	61600	71500	---	---	
20	---	127000	120000		137000	---	---	61700	70900	---	---	
21	---	128000	120000		137000	---	---	---	---	---	---	
22	---	128000	121000		133000	35900	---	---	---	16600	---	
23	117000	134000	119000		133000	35900	---	---	---	16300	45400	
24	117000	134000	121000		133000	35900	---	94300	---	16300	45400	
25	117000	134000	---		132000	36000	---	93800	---	16300	44300	
26	113000	133000	121000		130000	47300	105000	94300	---	59300	44300	
27	112000	131000	121000		129000	47500	105000	94300	---	60700	---	
28	113000	131000	---		129000	47500	105000	58500	81400	61000	---	
29	112000	132000	---		---	76400	105000	58600	82400	60000	---	
30	119000	---	---		---	76300	---	58600	82800	67200	---	
31	118000	---	---		---	76700	---	58600	---	68100	---	
MEAN	113000	131000	123000		133000	85600	91200	72300	58700	65700	75100	

RED RIVER BASIN

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07303404 SALT CREEK NEAR VINSON, OK--Continued

PM (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	7.6	---		---	7.5	7.6	---	7.1	7.6	---	
2	7.7	7.5	---		---	7.4	7.6	---	7.3	7.3	---	
3	7.8	7.7	---		---	7.5	7.6	7.7	7.6	7.5	---	
4	7.8	7.8	---		---	7.5	7.5	7.7	7.6	7.3	---	
5	7.7	7.8	---		---	7.8	7.7	7.8	7.6	---	---	
6	7.7	---	---		---	7.8	7.7	7.7	7.6	---	---	
7	7.6	---	---		---	7.7	7.6	7.9	7.9	---	---	
8	7.6	---	7.4		---	---	7.8	8.0	7.9	7.6	---	
9	7.8	---	7.5		---	---	7.9	8.0	---	7.6	7.5	
10	7.7	---	7.5		---	---	7.8	7.7	---	7.6	---	
11	7.8	---	7.5		---	---	7.8	7.7	8.0	7.6	---	
12	---	---	---		---	---	7.8	7.6	7.8	---	---	
13	---	---	---		---	---	7.7	7.7	7.9	---	---	
14	---	---	7.5		---	---	7.8	7.6	7.7	---	---	
15	---	---	7.6		7.3	---	7.9	7.7	7.6	---	---	
16	---	---	7.6		7.5	---	---	7.5	7.7	---	---	
17	---	---	7.6		7.6	---	---	7.9	7.7	---	---	
18	---	---	7.5		7.6	---	---	7.9	7.7	---	---	
19	---	7.4	7.6		7.5	---	---	7.9	7.7	---	---	
20	---	7.5	7.6		7.4	---	---	7.9	7.8	---	---	
21	---	7.6	7.5		7.4	---	---	---	---	---	---	
22	---	7.6	7.6		7.6	7.8	---	---	---	7.4	---	
23	7.8	7.6	7.7		7.7	7.6	---	---	---	7.0	---	
24	7.8	7.6	7.7		7.7	7.6	---	7.9	---	7.0	---	
25	7.8	7.5	---		7.7	7.7	---	7.9	---	7.1	---	
26	7.5	7.6	7.6		7.7	7.7	7.6	7.9	---	7.7	---	
27	7.5	7.8	7.6		7.6	7.6	7.6	7.9	---	7.8	---	
28	7.6	7.7	---		7.7	7.7	7.5	8.0	7.7	7.8	---	
29	7.6	7.7	---		---	7.9	7.6	7.9	7.7	7.6	---	
30	7.7	---	---		---	7.9	---	7.9	7.7	7.8	---	
31	---	---	---		---	7.9	---	7.9	---	7.6	---	
MEAN	7.7	7.6	7.6		7.6	7.7	7.7	7.8	7.7	7.5	7.5	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.5	19.0	---		---	9.0	14.5	---	28.0	30.0	27.0	
2	24.0	16.0	---		---	8.0	13.0	---	27.0	29.0	---	
3	24.5	17.0	---		---	6.5	10.0	18.0	27.0	29.0	---	
4	25.0	17.0	---		---	7.5	14.0	19.0	27.0	27.0	---	
5	23.0	17.5	---		---	9.0	11.0	18.0	26.0	---	---	
6	23.5	---	---		---	9.5	16.0	20.0	25.0	---	---	
7	22.0	---	---		---	11.0	15.0	28.0	28.0	---	---	
8	22.0	---	2.0		---	---	13.0	25.5	27.5	31.0	---	
9	24.0	---	2.5		---	---	14.0	25.0	---	30.0	27.0	
10	23.5	---	2.0		---	---	11.5	26.5	---	29.0	28.0	
11	23.5	---	2.0		---	---	12.0	26.0	27.0	33.0	28.0	
12	---	---	---		---	---	---	27.0	28.0	---	29.0	
13	---	---	---		---	---	---	24.0	28.0	---	25.0	
14	---	---	.0		---	---	---	27.0	28.0	---	27.5	
15	---	---	1.5		1.5	---	---	22.0	29.5	---	27.0	
16	---	---	1.0		1.5	---	---	26.0	29.0	---	---	
17	---	---	.0		.5	---	---	25.0	31.0	---	---	
18	---	---	10.0		.0	---	---	26.0	31.0	---	---	
19	---	15.0	10.0		.0	---	---	26.0	29.5	---	---	
20	---	15.5	9.0		3.0	---	---	26.5	31.5	---	---	
21	---	13.5	1.5		4.0	---	---	---	---	---	---	
22	---	13.5	2.0		7.0	11.5	---	---	---	29.0	---	
23	17.5	12.0	2.5		5.0	12.0	---	---	---	27.5	25.0	
24	18.5	11.5	3.0		3.5	12.0	---	26.5	---	30.0	26.0	
25	18.5	10.0	---		5.5	13.0	---	27.5	---	28.0	26.5	
26	14.5	10.5	2.5		7.5	15.5	18.0	28.0	---	28.5	27.0	
27	16.0	12.0	3.0		6.5	15.0	17.5	27.0	---	27.0	---	
28	15.5	12.0	---		9.5	16.0	18.5	27.5	30.0	29.0	---	
29	10.5	12.0	---		---	17.0	16.5	28.0	31.0	30.0	---	
30	17.5	---	---		---	16.5	---	28.0	29.0	29.5	---	
31	18.5	---	---		---	16.5	---	28.5	---	27.0	---	
MEAN	20.5	14.0	3.0		4.0	12.0	14.5	25.5	28.5	29.0	27.0	

RED RIVER BASIN

07303406 ELM FORK OF NORTH FORK RED RIVER NEAR VINSON, OK

LOCATION.--Lat 34°59'15", long 99°50'31", in NE¼NE¼SW¼ sec. 21, T. 6 N., R. 25 W., Greer County, Hydrologic Unit 11120304, 1.1 mi (1.8 km) southwest of county road, 5.3 mi (8.5 km) north of Vinson, and at mile 48.7 (78.4 km).

DRAINAGE AREA.--428 mi² (1,108 km²).

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1978 to September 1979.

WATER TEMPERATURE: February 1978 to September 1979.

pH: February 1978 to September 1979.

REMARKS.--Periods of no flow were observed on July 23, Aug. 19, and Sept. 24. Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACU3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 23...	1330	41500	8.2	19.5	11.3	151	--	550
NOV 27...	1200	25000	7.8	10.5	12.4	129	1800	440
DEC 11...	1400	25000	8.1	9.5	11.4	116	2000	480
JAN 15...	1630	22400	7.9	11.0	11.3	119	2000	520
FEB 20...	1300	21000	7.9	17.0	8.8	107	2200	590
MAR 25...	1400	22000	8.0	7.0	11.8	112	2300	620
APR 23...	0930	26000	8.0	21.5	8.1	106	2800	740
MAY 29...	0900	17000	7.9	22.5	9.2	119	1900	540
JUN 24...	0945	45000	8.0	28.0	5.8	92	3500	870

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 23...	--	10000	--	--	--	30000	40.8
NOV 27...	170	5200	91	53	13	16300	22.2
DEC 11...	190	5600	91	55	19	16800	22.8
JAN 15...	180	4400	88	42	15	15000	20.4
FEB 20...	170	3200	76	30	16	14800	20.1
MAR 25...	190	4600	81	41	23	16600	22.6
APR 23...	220	5800	82	48	25	18600	25.3
MAY 29...	130	3500	80	35	11	11800	16.0
JUN 24...	310	11000	87	82	49	33600	45.7

07303406 ELM FORK OF THE NORTH FORK RED RIVER NEAR VINSON, OK--Continued
 SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21700	23800	---	---	---	21200	17000	---	11200	29900	29000	31600
2	25100	24200	---	---	---	21200	17200	---	11000	33400	---	32100
3	25100	24400	---	---	---	21400	17100	24100	11100	32900	---	32200
4	25100	24100	---	---	---	21200	17100	24200	6940	33000	---	31600
5	24800	24100	---	---	---	21100	17000	24200	6770	---	---	31400
6	24900	---	---	---	---	21100	17000	24200	6670	---	---	---
7	24800	---	---	---	---	21200	17000	25200	6560	---	---	---
8	24700	---	24600	---	---	---	17900	25200	6650	34100	---	---
9	24000	---	24600	---	---	---	18000	25100	---	33700	10200	---
10	23800	---	24400	---	---	---	17900	24200	---	34400	10100	---
11	24100	---	24300	---	---	---	17900	24300	6580	33700	10100	---
12	---	---	---	---	---	---	19200	24200	6690	---	10000	---
13	---	---	---	---	---	---	19100	24300	6720	---	15200	---
14	---	---	19700	---	---	---	19200	27200	17600	---	15200	---
15	---	---	19700	---	18400	---	19200	27300	17900	---	15200	---
16	---	---	19700	---	18600	---	---	27500	18200	---	---	---
17	---	---	19700	---	18600	---	---	10500	18000	---	---	---
18	---	---	20600	---	18600	---	---	10500	20900	---	---	---
19	---	20000	20500	---	18700	---	---	10500	20900	---	---	---
20	---	19900	20600	---	18600	---	---	10500	20200	---	---	---
21	---	19900	20600	---	18800	---	---	---	---	---	---	---
22	---	20000	20600	---	19800	15000	---	---	---	20100	---	---
23	26200	23700	20600	---	19800	15000	---	---	---	20000	15900	---
24	26500	24200	20500	---	19800	15000	---	25600	---	20400	16000	---
25	26200	24100	---	---	19900	15000	---	25700	---	19500	15900	---
26	23700	24200	20800	---	21200	15000	21100	25700	---	28500	15900	---
27	24000	23400	20800	---	21200	15000	21300	25500	---	28400	---	---
28	24000	23700	---	---	21200	15000	21300	11400	29400	28500	---	---
29	23700	22800	---	---	---	16900	21400	11300	29800	28300	---	---
30	23600	---	---	---	---	16900	---	11400	30500	28300	31500	---
31	23700	---	---	---	---	16800	---	11300	---	28800	31500	---
MEAN	24500	22900	21300	---	19500	17900	18600	20800	14800	28700	17300	31800

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	7.8	---	---	---	7.9	7.9	---	7.4	7.4	7.9	7.4
2	7.6	8.0	---	---	---	7.8	7.9	---	7.4	7.3	---	7.8
3	7.9	8.0	---	---	---	7.8	7.8	7.8	7.5	7.5	---	8.0
4	7.9	7.8	---	---	---	7.8	7.8	7.7	7.3	7.4	---	7.9
5	8.0	7.9	---	---	---	7.8	7.8	7.7	7.3	---	---	8.1
6	8.0	---	---	---	---	7.7	7.8	7.7	7.3	---	---	---
7	8.0	---	---	---	---	7.6	7.7	7.9	7.5	---	---	---
8	8.0	---	7.8	---	---	---	7.9	7.8	7.5	7.4	---	---
9	7.7	---	7.9	---	---	---	7.6	7.7	---	7.4	8.0	---
10	7.8	---	7.8	---	---	---	7.8	8.1	---	7.5	7.8	---
11	8.0	---	7.8	---	---	---	8.0	7.5	7.6	7.5	7.8	---
12	---	---	---	---	---	---	8.0	8.0	7.6	---	7.7	---
13	---	---	---	---	---	---	8.1	7.4	7.8	---	7.8	---
14	---	---	7.6	---	---	---	7.9	7.7	7.6	---	7.9	---
15	---	---	7.8	---	7.4	---	8.0	7.7	7.6	---	7.8	---
16	---	---	7.7	---	7.4	---	---	7.7	7.7	---	---	---
17	---	---	7.6	---	7.7	---	---	7.5	7.8	---	---	---
18	---	---	7.7	---	7.8	---	---	7.4	7.8	---	---	---
19	---	7.9	7.7	---	7.6	---	---	7.4	7.8	---	---	---
20	---	7.9	7.6	---	7.8	---	---	7.5	7.7	---	---	---
21	---	8.1	7.8	---	7.8	---	---	---	---	---	---	---
22	---	8.0	7.7	---	7.9	7.9	---	---	---	7.3	---	---
23	8.0	8.1	7.7	---	7.8	7.8	---	---	---	7.4	7.6	---
24	8.0	8.1	7.9	---	7.9	7.9	---	7.9	---	7.3	7.6	---
25	8.1	8.0	---	---	7.9	7.9	---	8.0	---	7.5	7.7	---
26	7.9	7.9	7.7	---	7.9	8.0	7.5	8.0	---	7.9	7.7	---
27	8.0	8.1	7.7	---	8.0	7.9	---	8.0	---	8.0	---	---
28	7.9	8.0	---	---	8.0	8.0	---	7.7	7.9	7.9	---	---
29	7.9	8.0	---	---	---	7.9	---	7.7	7.9	8.0	---	---
30	8.0	---	---	---	---	7.9	---	7.7	7.9	8.0	8.2	---
31	8.0	---	---	---	---	7.9	---	7.8	---	7.9	8.2	---
MEAN	7.9	8.0	7.7	---	7.8	7.9	7.8	7.7	7.6	7.6	7.8	7.8

RED RIVER BASIN

07303406 ELM FORK OF THE NORTH FORK RED RIVER NEAR VINSON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	20.0	---	---	---	9.5	15.5	---	27.0	29.0	26.0	26.5
2	25.0	17.0	---	---	---	9.0	13.5	---	26.0	28.0	---	27.5
3	24.0	18.5	---	---	---	7.5	10.0	19.0	26.5	28.5	---	27.0
4	25.5	17.5	---	---	---	8.5	14.5	20.0	26.5	27.0	---	28.0
5	24.0	18.0	---	---	---	10.5	11.5	19.5	25.0	---	---	26.5
6	24.5	---	---	---	---	10.5	17.5	21.0	24.0	---	---	---
7	23.0	---	---	---	---	12.0	16.0	27.5	27.0	---	---	---
8	23.5	---	.5	---	---	---	14.0	25.0	26.0	30.0	---	---
9	24.5	---	1.5	---	---	---	15.5	24.5	---	29.0	26.0	---
10	24.5	---	2.5	---	---	---	12.0	26.0	---	28.0	27.0	---
11	24.0	---	2.5	---	---	---	13.5	25.0	25.5	32.0	27.5	---
12	---	---	---	---	---	---	---	26.5	26.5	---	28.5	---
13	---	---	---	---	---	---	---	23.5	27.5	---	24.5	---
14	---	---	1.0	---	---	---	---	26.0	27.5	---	27.0	---
15	---	---	2.5	---	1.0	---	---	21.5	29.0	---	26.5	---
16	---	---	1.5	---	1.5	---	---	25.0	28.0	---	---	---
17	---	---	.5	---	.5	---	---	24.0	30.0	---	---	---
18	---	---	11.0	---	1.0	---	---	25.0	30.0	---	---	---
19	---	16.0	12.0	---	.0	---	---	25.5	28.0	---	---	---
20	---	16.5	10.5	---	4.5	---	---	26.0	31.0	---	---	---
21	---	14.0	2.0	---	4.0	---	---	---	---	---	---	---
22	---	14.5	2.5	---	8.0	13.5	---	---	---	28.0	---	---
23	18.0	13.0	3.0	---	6.5	14.0	---	---	---	28.0	24.5	---
24	17.0	12.5	3.5	---	4.0	14.0	---	26.0	---	29.0	25.0	---
25	19.0	10.0	---	---	7.0	15.0	---	27.0	---	27.5	25.5	---
26	15.0	11.0	3.0	---	8.0	17.0	19.0	27.5	---	27.0	26.0	---
27	16.5	13.0	3.5	---	7.5	16.5	18.5	26.5	---	26.5	---	---
28	16.0	13.0	---	---	10.0	17.0	19.5	26.5	29.0	28.0	---	---
29	12.5	14.0	---	---	---	18.0	17.0	27.0	30.0	29.0	---	---
30	18.0	---	---	---	---	18.5	---	27.5	28.5	29.0	29.0	---
31	19.5	---	---	---	---	17.0	---	28.0	---	26.5	27.0	---

RED RIVER BASIN

457

07304500 ELK CREEK NEAR HOBART, OK

LOCATION.--Lat 34°54'51", long 99°06'49", in NE¼NE¼ 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 (11.3 km) downstream from Little Elk Creek, 7.5 mi (12 km) south of Hobart, and at mile 10.9 (17.5 km).

DRAINAGE AREA.--549 mi² (1,422 km²).

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 (435.68 m) National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to Apr. 28, 1954.

REMARKS.--Records poor. Part of high flows are diverted into West Otter Creek above station.

AVERAGE DISCHARGE.--34 years (water years 1905-07, 1950-80), 72.6 ft³/s (2.056 m³/s), 52,600 acre-ft/yr (64.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Oct. 4, 1955, gage height, 30.75 ft (9.373 m), from floodmarks, from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of field estimate of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,940 ft³/s (197 m³/s) May 15, gage height, 28.47 ft (8.678 m), minimum daily discharge, 0.67 ft³/s (0.019 m³/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	32	7.7	8.4	12	9.2	16	14	647	7.8	1.3	1.5
2	2.2	25	7.9	8.1	11	11	15	494	250	7.1	1.3	1.6
3	2.2	24	7.7	8.1	10	13	14	22	120	6.1	1.3	2.0
4	2.5	24	7.9	8.4	11	11	48	16	41	4.7	1.3	2.2
5	2.6	22	8.8	8.6	12	8.7	29	120	20	4.1	1.3	2.4
6	2.5	19	8.6	8.4	12	9.4	18	40	12	4.0	1.2	2.3
7	2.4	15	7.6	7.8	12	12	15	31	10	3.9	1.2	1.9
8	2.2	13	7.8	7.8	14	10	13	4.6	250	3.7	1.1	2.1
9	2.0	10	7.6	7.8	10	9.2	12	3.8	130	3.5	1.0	2.4
10	1.8	8.1	7.6	8.1	8.0	9.2	11	3.8	80	3.2	1.0	45
11	1.6	7.2	8.1	8.1	14	12	9.9	3.5	35	3.2	1.1	36
12	1.5	6.7	7.8	7.8	15	13	8.5	3.5	16	3.2	.94	5.3
13	1.4	6.2	7.6	8.6	13	13	7.5	3.3	8.5	2.9	.83	3.1
14	1.5	5.7	7.6	8.6	13	12	7.8	3.5	5.0	2.9	.81	2.5
15	2.1	5.4	7.6	8.4	12	12	7.9	2540	3.5	2.8	.79	2.8
16	18	5.0	7.4	8.4	11	11	7.4	3810	3.3	2.9	.76	2.2
17	9.1	4.4	6.6	8.6	9.9	9.0	7.3	153	3.2	2.7	.70	2.0
18	6.2	4.4	7.6	8.6	10	8.3	7.8	107	10	2.6	.71	1.7
19	3.8	4.8	7.4	13	10	8.3	7.3	66	30	2.5	.67	1.8
20	3.5	242	7.8	36	11	7.9	8.7	178	20	2.5	.72	1.5
21	3.2	148	7.6	37	11	7.8	7.5	1010	15	2.4	1.4	1.7
22	2.9	34	8.9	29	10	10	6.7	213	20	2.2	1.4	1.6
23	2.9	65	9.2	20	9.9	35	7.4	203	18	2.4	1.0	1.4
24	3.2	27	8.4	16	11	11	9.1	172	16	2.4	.92	1.3
25	3.1	25	8.1	15	9.9	8.6	9.2	148	14	2.5	.82	1.3
26	2.8	215	8.1	12	9.6	8.9	25	119	12	2.7	.78	1.7
27	3.2	12	8.4	9.6	9.6	9.2	37	580	11	2.4	1.0	2.0
28	3.3	9.0	9.9	9.2	9.9	9.2	28	1640	9.5	2.2	1.1	2.2
29	3.2	8.2	9.2	8.6	9.6	9.2	17	1760	9.0	2.2	1.2	2.1
30	37	7.9	8.6	11	---	94	16	2460	8.7	2.0	.98	2.1
31	44	---	8.4	9.6	---	40	---	1620	---	1.7	1.2	---
TOTAL	180.2	1035.0	249.5	374.6	321.4	452.1	434.0	17542.0	1827.7	101.4	31.83	139.7
MEAN	5.81	34.5	8.05	12.1	11.1	14.6	14.5	566	60.9	3.27	1.03	4.66
MAX	44	242	9.9	37	15	94	48	3810	647	7.8	1.4	45
MIN	1.4	4.4	6.6	7.8	8.0	7.8	6.7	3.3	3.2	1.7	.67	1.3
AC-FT	357	2050	495	743	637	897	861	34790	3630	201	63	277
CAL YR 1979	TOTAL	8863.70	MEAN	24.3	MAX	1300	MIN	1.4	AC-FT	17580		
WTR YR 1980	TOTAL	22689.43	MEAN	62.0	MAX	3810	MIN	.67	AC-FT	45000		

RED RIVER BASIN

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. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,100 micromhos Nov. 27, 1958; minimum daily, 136 micromhos May 15, 1980.

WATER TEMPERATURE: Maximum daily, 35.0°C July 8, 1951; minimum daily, -0.5°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,330 micromhos July 31, minimum daily, 136 micromhos May 15.

WATER TEMPERATURE: Maximum daily, 30.0°C July 27; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (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)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT										
01...	0820	2.3	1790	8.2	20.0	--	--	--	680	370
23...	1700	3.3	1620	8.1	13.0	8.9	88	--	700	460
27...	0755	3.1	2190	8.0	14.5	--	--	--	1000	720
31...	0740	45	451	7.3	11.0	--	--	--	170	58
NOV										
16...	0850	5.1	1860	8.2	7.0	--	--	--	740	400
23...	0835	31	268	7.7	7.0	--	--	--	97	20
28...	0810	9.6	1340	7.6	5.0	--	--	--	530	230
28...	1430	8.6	1500	7.7	6.0	16.2	134	--	580	240
DEC										
11...	1715	8.1	2000	8.1	8.5	13.8	122	--	710	370
JAN										
16...	1000	8.4	2000	8.0	6.5	--	--	--	720	380
FEB										
20...	1630	11	1700	8.4	13.0	11.2	113	--	--	--
MAR										
26...	0900	8.9	2000	8.0	10.0	12.6	119	--	690	420
APR										
23...	1700	8.6	1800	7.9	25.0	8.1	103	--	740	510
MAY										
30...	1100	2830	260	7.6	21.0	7.9	93	120	91	32
JUN										
24...	1545	16	1700	8.2	30.0	6.0	83	--	480	280
JUL										
23...	1500	2.3	2300	8.4	29.0	7.6	104	34	800	520
AUG										
19...	1415	.72	2310	8.1	29.6	6.6	92	--	760	510
SEP										
24...	1615	1.3	1190	8.6	23.0	9.4	115	36	450	210

RED RIVER BASIN

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07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (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)
OCT										
01...	150	75	150	46	2.5	8.2	310	490	140	--
23...	170	66	110	25	1.8	9.8	240	520	120	.5
27...	250	92	140	32	1.9	10	280	760	160	--
31...	44	14	28	34	.9	6.7	110	96	27	--
NOV										
16...	170	77	130	39	2.1	8.3	340	500	130	--
23...	27	7.2	15	24	.7	5.5	77	30	19	--
28...	120	55	94	40	1.8	7.4	300	310	88	--
28...	130	61	110	29	2.0	7.1	340	310	96	.3
DEC										
11...	160	76	130	28	2.1	7.1	340	520	130	.4
JAN										
16...	160	79	120	26	1.9	5.9	340	510	120	.4
FEB										
20...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	150	76	160	33	2.7	6.8	270	480	170	.4
APR										
23...	150	89	140	29	2.2	7.0	230	640	150	.4
MAY										
30...	25	7.0	13	22	.6	6.4	59	32	21	.2
JUN										
24...	130	37	160	42	3.2	7.7	200	460	130	.4
JUL										
23...	140	110	220	37	3.4	6.9	280	590	240	.4
AUG										
19...	140	100	220	38	3.5	6.8	250	600	250	.3
SEP										
24...	96	52	120	36	2.5	8.4	240	290	120	.5
DATE	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
OCT										
01...	--	1290	--	1.75	8.01	--	--	--	--	--
23...	9.1	1190	1150	1.62	10.6	--	--	--	--	--
27...	--	1710	--	2.33	14.3	--	--	--	--	--
31...	--	302	--	.41	36.7	--	--	--	--	--
NOV										
16...	--	1340	--	1.82	18.5	--	--	--	--	--
23...	--	174	--	.24	14.6	--	--	--	--	--
28...	--	922	--	1.25	23.9	--	--	--	--	--
28...	15	967	<934	1.32	22.5	0	4	320	<1	0
DEC										
11...	12	1290	1240	1.75	28.2	--	--	--	--	--
JAN										
16...	4.1	1370	1200	1.86	31.1	--	--	--	--	--
FEB										
20...	--	--	--	--	--	100	5	380	2	0
MAR										
26...	4.8	1260	1210	1.71	30.3	--	--	--	--	--
APR										
23...	.2	1420	1310	1.93	33.0	--	--	--	--	--
MAY										
30...	9.7	178	151	.24	1360	300	4	90	1	0
JUN										
24...	.3	1270	1050	1.73	54.9	--	--	--	--	--
JUL										
23...	9.1	1590	1480	2.16	9.87	--	--	--	--	--
AUG										
19...	.8	1490	1470	2.03	2.90	--	--	--	--	--
SEP										
24...	2.0	853	833	1.16	2.99	--	--	--	--	--

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07304500 ELK CREEK NEAR HOBART, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790	682	1490	1670	1860	1900	1720	1460	410	2040	2010	2320
2	1830	534	1520	1650	1860	1960	1900	291	816	2080	2000	2300
3	1860	538	1540	1640	1810	1880	1910	327	1040	2050	2020	2290
4	1860	564	1540	1610	1820	1880	1900	554	1040	2050	2020	2300
5	1840	579	1590	1650	1880	1920	1820	563	1090	2050	2040	2300
6	1890	569	1550	1660	1920	1910	1800	918	1130	2010	2050	2290
7	1950	745	1620	1640	1880	1910	1540	1120	1150	2080	2050	2290
8	1970	1480	1700	1610	1810	1920	1640	1150	1190	2050	2040	2290
9	1980	1660	1720	1640	1790	1960	1540	1260	767	2010	2040	2290
10	1970	1660	1740	1670	1840	1960	1400	1420	972	2060	2010	2280
11	2020	1680	1730	1660	1760	1930	1470	1600	1240	2070	1990	817
12	2050	1690	1750	1670	1750	1890	1480	1660	1430	2060	1960	1950
13	2000	1710	1740	1680	1750	1900	1560	1660	1640	2070	1950	1100
14	1820	1720	1760	1660	1730	1980	1610	1750	1850	2080	1930	1120
15	1890	1810	1770	1670	1770	1880	1670	136	1960	2080	1940	1080
16	1380	1860	1790	1670	1770	1970	1760	154	1880	2070	1940	1030
17	1920	1850	1810	1680	1760	1930	1860	300	1930	2060	1930	1050
18	1260	1820	1830	1650	1790	1940	1900	427	1950	2070	1950	1050
19	1360	1790	1820	1680	1750	1980	1850	500	1980	2100	1950	1060
20	1350	1750	1820	1260	1810	1960	1830	872	1980	2140	1970	1080
21	1350	315	1810	1120	1840	1920	1900	791	1960	2180	1870	1110
22	1680	300	1800	1330	1880	1890	1810	391	1890	2200	1890	1120
23	1990	268	1780	1380	1910	1800	1900	500	1830	2210	1930	1150
24	1640	332	1780	1310	1930	1710	1950	754	1840	2250	1950	1160
25	1420	346	1810	1310	1850	2130	1820	1050	1910	2270	1930	1180
26	1870	330	1880	1540	1910	1720	1900	1230	1980	2290	1940	1200
27	2190	1430	1880	1510	1810	1580	1920	1450	1980	2290	1930	1200
28	2120	1340	1760	1490	1850	1760	2250	309	2020	2310	1940	1230
29	1980	1410	1760	1520	1910	1680	1600	273	2020	2310	1970	1290
30	542	1480	1770	1540	---	1850	1780	245	2000	2320	2020	1360
31	451	---	1770	1630	---	1610	---	509	---	2330	2050	---
MEAN	1720	1140	1730	1560	1830	1870	1760	827	1560	2140	1970	1540

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	10.0	2.0	3.5	.5	1.0	11.0	16.0	23.5	26.0	24.0	24.0
2	17.0	10.0	2.0	4.0	1.0	.5	12.5	19.0	23.0	27.0	24.0	24.0
3	17.0	10.0	2.0	4.0	1.5	1.5	10.5	12.0	23.0	27.0	25.0	23.0
4	15.0	10.5	4.0	5.0	3.0	4.0	11.0	15.0	22.5	26.5	24.0	23.5
5	15.0	11.0	6.0	4.0	4.5	4.0	13.0	17.5	23.5	26.0	25.0	24.5
6	16.0	9.0	5.0	4.0	4.0	4.5	14.0	18.0	24.0	26.0	25.0	24.5
7	16.5	9.0	5.0	2.0	6.0	8.0	14.0	19.0	25.0	26.5	25.0	24.5
8	18.0	9.0	5.0	2.0	2.0	8.0	12.0	18.0	24.0	26.0	24.5	24.0
9	16.0	11.0	6.0	1.0	.5	8.5	12.0	15.0	19.0	26.5	25.0	23.5
10	16.5	8.0	7.0	5.0	.5	9.0	15.5	17.0	21.0	26.5	24.5	23.5
11	13.5	5.5	11.0	6.0	1.0	11.0	14.5	20.0	22.5	26.5	24.0	23.5
12	16.0	6.0	4.0	5.0	1.5	9.5	12.0	22.5	23.0	26.5	23.0	23.5
13	13.5	5.0	4.0	4.5	3.0	9.0	9.5	22.0	23.5	26.5	24.5	24.5
14	14.5	6.0	4.0	5.5	6.0	9.0	9.0	17.0	23.5	26.0	24.0	24.0
15	16.5	7.0	5.0	8.0	7.0	10.5	10.5	15.5	23.5	26.5	24.0	24.0
16	17.5	7.0	3.0	7.5	2.0	14.0	14.0	15.5	25.0	25.5	25.0	23.0
17	19.0	8.0	1.0	8.0	.5	10.5	13.0	16.0	25.0	25.5	25.0	17.5
18	19.0	11.0	.5	8.0	2.0	9.0	14.0	18.0	25.0	25.0	25.0	19.0
19	19.0	11.0	3.0	10.0	4.5	9.5	13.5	17.5	25.5	26.0	24.5	21.5
20	19.5	15.0	2.0	6.5	8.0	12.0	16.0	18.0	25.5	26.0	24.5	22.0
21	19.0	14.0	4.0	5.5	9.0	9.5	17.5	15.5	26.0	25.5	24.0	22.0
22	14.5	7.0	8.0	6.0	9.5	11.0	18.0	17.0	24.5	25.0	24.0	23.5
23	11.5	7.0	8.0	4.0	9.5	13.0	18.5	18.5	25.0	24.5	25.0	24.0
24	12.5	8.0	6.0	4.5	8.0	8.0	19.5	20.0	26.0	25.0	25.5	18.0
25	12.5	8.0	5.0	6.0	6.0	9.0	19.0	21.0	26.0	24.5	25.0	18.0
26	13.0	8.0	6.0	4.5	5.5	11.5	15.0	23.0	26.0	25.5	24.0	16.0
27	14.5	6.0	7.0	1.0	6.0	14.5	14.0	23.5	26.0	30.0	24.0	16.0
28	13.0	5.0	8.5	.5	9.0	16.0	15.0	19.5	25.5	25.5	24.5	16.0
29	13.5	3.0	6.5	.0	8.5	12.0	17.0	21.5	26.5	25.5	23.5	16.0
30	15.0	2.0	6.0	.5	---	8.5	18.5	21.5	26.5	25.0	23.5	17.0
31	11.0	---	4.0	.5	---	10.0	---	23.0	---	25.0	24.0	---
MEAN	15.5	8.0	5.0	4.5	4.5	9.0	14.0	18.5	24.5	26.0	24.5	21.5

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK

LOCATION.--Lat 34°38'04", long 99°05'47", in NW¼NE¼ 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 (4.0 km) east of Headrick, 12.9 mi (20.8 km) upstream from Otter Creek, and at mile 33.0 (53.1 km).

DRAINAGE AREA.--4,244 mi² (10,992 km²), of which 399 mi² (1,033 km²) 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: 1905-7.

GAGE.--Water-stage recorder. Datum of gage is 1,294.83 ft (394.664 m), National Geodetic Vertical Datum of 1929.

Prior to July 18, 1905, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum. July 18, 1905, to Mar. 30, 1908, nonrecording gage at Navajo damsite 10.4 mi (16.7 km) upstream at different datum. Oct. 1, 1937, to Jan. 29, 1969, water-stage recorder at present site at datum 5.0 ft (1.52 m) higher.

REMARKS.--Records fair. Flow regulated since December 1943 by storage and diversion at Lake Altus, 39.5 mi (63.6 km) above station (station 07302500). Diversions for irrigation of about 48,000 acres (194 km²) above station; some return flow may re-enter at Stinking Creek, 16 mi (26 km) below station.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Altus) 8 years (1906-07, 1938-43), 455 ft³/s (12.89 m³/s), 329,600 acre-ft/yr (406 hm³/yr); (since regulation by Lake Altus) 36 years (water years 1945-80), 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) May 28, 1977, gage height, 17.26 ft (5.261 m) present datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 21.1 ft (6.43 m) present datum occurred sometime prior to 1927, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,200 ft³/s (399 m³/s) May 30, gage height, 13.97 ft (4.258 m); minimum daily, 3.3 ft³/s (0.093 m³/s) Sept. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	65	39	38	43	39	49	59	2830	53	13	4.1
2	15	76	39	39	45	38	69	62	999	49	12	4.5
3	15	69	37	38	47	43	52	413	633	46	12	4.1
4	15	59	38	38	50	46	48	158	496	44	11	3.7
5	15	54	38	39	52	41	52	131	413	41	11	3.3
6	15	51	37	39	54	41	61	156	353	40	9.5	3.3
7	15	49	37	40	54	41	59	112	309	38	9.5	3.3
8	15	48	37	40	56	41	50	109	279	36	9.1	3.7
9	15	46	36	40	50	41	42	99	285	35	9.1	5.3
10	15	42	37	39	44	41	41	82	333	33	8.4	8.4
11	15	40	37	39	50	41	38	73	235	32	8.4	7.0
12	15	38	37	39	56	41	36	62	194	29	8.4	14
13	15	38	38	39	52	43	36	55	171	27	8.4	20
14	16	37	38	38	50	43	36	53	162	26	7.7	16
15	18	37	38	38	48	43	35	3160	148	24	7.3	14
16	33	37	38	38	52	43	34	11500	134	24	7.3	13
17	23	37	35	38	55	43	34	4860	127	23	7.7	11
18	27	37	50	39	54	42	33	1320	118	22	7.0	10
19	24	36	43	66	52	41	33	717	110	21	6.6	9.2
20	22	81	41	68	50	41	31	481	104	20	6.3	7.6
21	19	649	40	72	52	40	31	642	97	19	11	6.6
22	18	207	39	79	47	39	31	981	92	20	15	5.9
23	18	87	39	78	46	42	30	463	89	19	11	5.3
24	17	81	39	71	44	43	34	405	81	18	8.4	6.3
25	17	62	40	63	42	46	40	364	77	17	6.6	6.6
26	17	54	40	58	40	51	67	337	72	17	5.6	6.3
27	17	109	39	54	41	46	123	393	66	16	5.3	9.6
28	17	62	53	50	41	46	100	7520	62	16	5.3	11
29	17	43	42	52	40	43	76	5270	59	15	4.9	12
30	27	40	40	48	---	44	64	12700	56	14	4.5	12
31	125	---	38	45	---	44	---	5150	---	13	4.1	---
TOTAL	667	2391	1219	1502	1407	1317	1465	57887	9184	847	261.4	247.1
MEAN	21.5	79.7	39.3	48.5	48.5	42.5	48.8	1867	306	27.3	8.43	8.24
MAX	125	649	53	79	56	51	123	12700	2830	53	15	20
MIN	15	36	35	38	40	38	30	53	56	13	4.1	3.3
AC-FT	1320	4740	2420	2980	2790	2610	2910	114800	18220	1680	518	490
CAL YR 1979	TOTAL	46478.0	MEAN	127	MAX	3250	MIN	15	AC-FT	92190		
WTR YR 1980	TOTAL	78394.5	MEAN	214	MAX	12700	MIN	3.3	AC-FT	155500		

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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 since August 1969.

REMARKS.-In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or about the 5th, 15th, and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 23,300 micromhos June 8, 1974; minimum daily, 325 micromhos May 30, 1980.

WATER TEMPERATURE: Maximum, 38°C July 19, 1969, Aug. 4, 1977; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 15,300 micromhos Apr. 1; minimum daily, 325 micromhos May 30.

WATER TEMPERATURE: Maximum daily, 33.0°C July 10; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-HF (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)
OCT												
22...	1600	18	11500	8.2	19.0	4.5	9.6	107	44	100	1300	1200
NOV												
05...	0955	54	8370	8.0	12.0	--	--	--	--	--	1200	1100
15...	1419	37	13000	8.1	14.0	--	--	--	--	--	1500	1300
25...	0830	62	5340	7.8	5.0	--	--	--	--	--	560	450
26...	1500	54	8450	7.9	11.5	39	12.3	118	K10000	4800	950	820
DEC												
05...	1010	38	11200	8.2	6.0	--	--	--	--	--	1300	1100
12...	1030	37	12000	8.1	1.0	3.6	19.2	139	370	300	1300	1200
15...	1100	38	10500	7.9	6.0	--	--	--	--	--	1400	1200
25...	0834	40	11800	8.0	7.0	--	--	--	--	--	1400	1200
JAN												
05...	0915	39	10700	7.8	3.0	--	--	--	--	--	1300	1200
14...	1300	38	12000	8.2	6.0	2.8	13.9	116	K16	K18	1300	1100
15...	0950	38	10700	8.0	10.0	--	--	--	--	--	1300	1200
25...	0852	64	8820	7.8	6.0	--	--	--	--	--	1100	910
FEB												
05...	0912	52	10200	7.8	.5	--	--	--	--	--	1200	1000
15...	0900	48	10600	8.2	.5	--	--	--	--	--	1200	1100
21...	0900	52	9800	8.0	8.5	2.4	13.6	121	K21	110	1200	1000
25...	0927	42	11500	7.8	.5	--	--	--	--	--	1300	1200
MAR												
05...	0923	41	12600	7.8	2.0	--	--	--	--	--	1400	1200
15...	0850	43	11200	8.2	9.0	--	--	--	--	--	1400	1200
25...	1020	43	11800	8.1	10.0	--	--	--	--	--	1400	1200
26...	1130	53	9350	8.2	13.0	5.3	10.9	110	27	--	1300	1100
APR												
05...	0850	52	12400	7.8	12.0	--	--	--	--	--	1400	1200
15...	0756	36	11600	8.0	9.0	--	--	--	--	--	1400	1200
24...	1030	35	10000	8.1	22.0	16	10.1	122	280	328	1500	1300
25...	0830	37	10700	7.4	18.0	--	--	--	--	--	1200	1000
MAY												
05...	0849	131	9520	7.2	22.0	--	--	--	--	--	1000	890
15...	1037	248	6470	7.4	17.0	--	--	--	--	--	670	550
16...	1800	11800	545	8.0	17.5	1200	7.9	87	K12400	K2142	92	28
25...	0700	369	3680	7.9	23.0	--	--	--	--	--	540	380
31...	0915	4750	700	7.9	23.0	530	8.1	98	2700	6500	160	83
JUN												
05...	0835	419	3190	8.1	24.0	--	--	--	--	--	610	420
15...	0930	150	5500	8.0	25.0	--	--	--	--	--	780	610
25...	0745	77	7340	8.0	25.0	--	--	--	--	--	950	770
25...	0915	77	6250	7.9	25.0	9.4	7.1	91	92	300	970	790
JUL												
05...	1100	41	6975	7.8	27.0	--	--	--	--	--	920	730
15...	0830	24	7990	7.9	26.0	--	--	--	--	--	920	740
22...	1100	19	6950	7.9	24.0	3.4	6.9	85	42	69	920	760
25...	0953	18	7220	7.6	24.0	--	--	--	--	--	900	730

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-HF (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)	
AUG													
05...	0930	10	7960	7.4	25.0	--	--	--	--	--	880	740	
15...	0916	7.3	7960	7.4	25.0	--	--	--	--	--	770	640	
18...	1400	7.0	7180	8.0	26.5	4.4	8.4	109	69	160	850	730	
25...	1045	6.6	6940	7.6	27.0	--	--	--	--	--	690	570	
SEP													
05...	0845	3.3	6690	7.9	27.0	--	--	--	--	--	820	700	
15...	0900	14	3900	7.6	25.0	--	--	--	--	--	680	510	
25...	1000	6.6	6000	7.4	21.0	--	--	--	--	--	800	660	
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)	ALKA- LITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT													
22...	330	120	2100	84	25	12	130	1100	3400	.4	1.5	6910	
NOV													
05...	330	94	1400	78	18	14	130	970	2200	--	--	5370	
15...	370	130	2400	85	27	14	130	860	4000	--	--	8320	
25...	150	45	850	83	16	10	110	390	1400	--	--	3120	
26...	260	74	1400	82	20	11	130	440	2500	.3	6.2	5100	
DEC													
05...	350	100	1900	76	23	12	220	860	3300	--	--	7040	
12...	340	110	2100	78	25	12	130	960	3300	.3	1.0	6800	
15...	360	110	2100	77	25	12	170	860	3300	--	--	7240	
25...	360	110	2000	76	24	12	160	830	3400	--	--	7320	
JAN													
05...	320	120	2100	78	25	11	140	1100	3300	--	--	7230	
14...	330	110	2200	79	27	11	180	1000	3300	.3	.6	7540	
15...	320	120	2200	79	27	11	140	1100	3300	--	--	7340	
25...	270	97	1300	72	17	10	160	880	2100	--	--	4910	
FEB													
05...	320	100	1900	77	24	11	180	990	2800	--	--	6450	
15...	310	100	2000	78	25	11	130	970	3300	--	--	6520	
21...	290	110	2000	79	25	10	140	1000	3200	.3	1.0	6460	
25...	340	120	2100	77	25	12	160	1100	3500	--	--	7130	
MAR													
05...	370	120	2200	77	25	11	190	1100	3700	--	--	7650	
15...	350	120	2000	76	24	11	160	1100	3500	--	--	7020	
25...	350	120	2100	77	25	11	170	1100	3700	--	--	7610	
26...	310	120	1700	74	21	13	170	960	2800	.4	.3	5970	
APR													
05...	360	120	2300	78	27	12	170	1100	3900	--	--	7990	
15...	360	110	2100	77	25	12	200	1100	3600	--	--	7330	
24...	370	130	2000	75	23	14	130	1000	3500	.4	1.8	7220	
25...	280	110	1900	78	24	12	130	990	3300	--	--	6750	
MAY													
05...	280	77	1700	78	23	7.2	130	680	2800	--	--	5520	
15...	180	54	1000	76	17	7.2	120	490	1700	--	--	3420	
16...	27	5.9	58	56	2.6	5.0	64	46	89	.2	5.9	293	
25...	150	41	560	69	10	8.0	160	380	870	--	--	2150	
31...	45	11	79	51	2.7	6.8	75	78	130	.2	9.3	408	
JUN													
05...	170	45	420	60	7.4	10	190	420	700	--	--	962	
15...	200	68	850	70	13	11	170	630	1400	--	--	3250	
25...	240	85	1100	71	16	11	180	790	1800	--	--	3900	
25...	250	85	1000	69	14	11	180	600	1700	.5	5.6	4000	
JUL													
05...	230	84	1100	72	16	8.5	190	730	1800	--	--	4171	
15...	230	83	1200	74	17	9.6	180	720	2000	--	--	4300	
22...	240	78	1200	74	17	10	160	800	1900	.4	7.8	4370	
25...	230	79	1200	74	17	8.7	170	730	2000	--	--	4340	
AUG													
05...	220	80	1300	76	19	15	140	760	2000	--	--	4370	
15...	200	66	1300	78	20	15	130	760	1900	--	--	4220	
18...	210	79	1200	75	18	11	120	690	1900	.5	7.4	4270	
25...	190	53	1100	77	18	14	120	710	1600	--	--	3700	
SEP													
05...	200	77	1200	76	18	8.9	120	770	1900	--	--	4080	
15...	140	80	630	67	11	9.1	170	610	890	--	--	2460	
25...	190	80	1100	75	17	8.8	140	790	1600	--	2.4	3680	

RED RIVER BASIN

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07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
22...	7140	9.4	336	.25	.03	.120	.070	.15	.09	.53	.42	.65
NOV												
05...	--	7.3	783	--	--	--	--	--	--	--	--	--
15...	--	11.3	831	--	--	--	--	--	--	--	--	--
25...	--	4.2	522	--	--	--	--	--	--	--	--	--
26...	4770	6.9	744	.29	.31	.340	.360	.41	.46	1.4	1.0	1.70
DEC												
05...	--	9.5	722	--	--	--	--	--	--	--	--	--
12...	6900	9.2	679	.18	.13	.370	.330	.45	.43	.83	.60	1.20
15...	--	9.8	743	--	--	--	--	--	--	--	--	--
25...	--	9.9	791	--	--	--	--	--	--	--	--	--
JAN												
05...	--	9.8	761	--	--	--	--	--	--	--	--	--
14...	7060	10.3	774	.05	.02	.070	.070	.08	.09	.30	.11	.37
15...	--	9.9	753	--	--	--	--	--	--	--	--	--
25...	--	6.6	848	--	--	--	--	--	--	--	--	--
FEB												
05...	--	8.7	906	--	--	--	--	--	--	--	--	--
15...	--	8.8	845	--	--	--	--	--	--	--	--	--
21...	6700	8.7	907	.23	.24	.180	.120	.22	.15	1.2	.37	1.40
25...	--	9.7	809	--	--	--	--	--	--	--	--	--
MAR												
05...	--	10.4	847	--	--	--	--	--	--	--	--	--
15...	--	9.5	815	--	--	--	--	--	--	--	--	--
25...	--	10.4	884	--	--	--	--	--	--	--	--	--
26...	6010	8.1	854	.03	.03	.210	.180	.25	.23	1.2	.82	1.40
APR												
05...	--	10.9	1120	--	--	--	--	--	--	--	--	--
15...	--	9.9	712	--	--	--	--	--	--	--	--	--
24...	7090	9.8	682	.00	.05	.000	.200	.00	.26	2.5	1.3	2.50
25...	--	9.1	674	--	--	--	--	--	--	--	--	--
MAY												
05...	--	7.5	1950	--	--	--	--	--	--	--	--	--
15...	--	4.6	2290	--	--	--	--	--	--	--	--	--
16...	277	.40	9340	.43	.29	.130	.000	.16	.00	3.5	.71	3.60
25...	--	2.9	2140	--	--	--	--	--	--	--	--	--
31...	405	.55	5230	.25	.22	.090	.030	.11	.04	2.7	.80	2.80
JUN												
05...	--	1.3	1090	--	--	--	--	--	--	--	--	--
15...	--	4.4	1320	--	--	--	--	--	--	--	--	--
25...	--	5.3	811	--	--	--	--	--	--	--	--	--
25...	3760	5.4	832	.02	.05	.000	.090	.00	.12	1.9	1.0	1.90
JUL												
05...	--	5.6	462	--	--	--	--	--	--	--	--	--
15...	--	5.8	279	--	--	--	--	--	--	--	--	--
22...	4330	5.9	224	.05	.08	.240	.180	.29	.23	1.5	1.2	1.70
25...	--	5.9	211	--	--	--	--	--	--	--	--	--
AUG												
05...	--	5.9	118	--	--	--	--	--	--	--	--	--
15...	--	5.7	83.2	--	--	--	--	--	--	--	--	--
18...	4170	5.8	80.7	.00	.00	.140	.110	.17	.14	1.2	.84	1.30
25...	--	5.0	65.9	--	--	--	--	--	--	--	--	--
SEP												
05...	--	5.5	36.4	--	--	--	--	--	--	--	--	--
15...	--	3.3	93.0	--	--	--	--	--	--	--	--	--
25...	--	5.0	65.6	.28	.24	--	--	--	--	--	--	1.40

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, NH ₄ + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO ₃)	NITRO- GEN, DISSOLV (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO ₄)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	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)
OCT												
22...	.16	.49	.90	4.0	.52	.020	.06	.010	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	.30	1.4	2.0	8.8	1.7	.150	.46	.070	4	2	2	600
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
12...	.27	.93	1.4	6.1	1.1	.020	.06	.020	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.19	.18	.42	1.9	.20	.030	.09	.010	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
21...	.91	.49	1.6	7.2	.73	.040	.12	.010	2	0	2	400
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	.40	1.0	1.4	6.3	1.0	.190	.58	.100	--	--	--	--
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
24...	1.0	1.5	2.5	11	1.6	.240	.74	.020	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	2.9	.71	4.0	18	1.0	1.30	4.0	.110	11	7	4	600
25...	--	--	--	--	--	--	--	--	--	--	--	--
31...	2.0	.83	3.1	14	1.1	.670	2.1	.090	--	--	--	--
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.80	1.1	1.9	8.5	1.2	.070	.21	.040	--	--	--	--
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	.30	1.4	1.8	7.7	1.5	.060	.18	.020	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.35	.95	1.3	5.8	.95	.060	.18	.010	5	0	5	200
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	1.0	1.7	7.4	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT												
22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	100	500	3	0	3	10	0	10	3	3	0	30
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
21...	0	400	1	0	1	0	0	0	0	0	0	5
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	600	0	1	0	1	60	60	0	17	16	1	50
25...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
18...	0	200	4	1	3	0	0	10	0	0	1	

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	MERCURY			NICKEL,			SELE-			SILVER,		
	TOTAL RECOV= ERABLE (UG/L AS HG)	SUS= PENDE RECOV= ERABLE (UG/L AS HG)	MERCURY DIS= SOLVED (UG/L AS HG)	TOTAL RECOV= ERABLE (UG/L AS NI)	SUS= PENDE RECOV= ERABLE (UG/L AS NI)	NICKEL, DIS= SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS= SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV= ERABLE (UG/L AS AG)	SUS= PENDE RECOV= ERABLE (UG/L AS AG)	
OCT												
22...	--	--	--	--	--	--	--	--	--	--	--	
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
26...	.2	.1	.1	13	11	2	1	0	1	0	0	
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	--	--	0	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
21...	.0	.0	.1	0	0	0	2	0	3	0	0	
25...	--	--	--	--	--	--	--	--	--	--	--	
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	--	--	--	--	
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
24...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
16...	.3	.2	.1	52	50	2	1	1	0	0	0	
25...	--	--	--	--	--	--	--	--	--	--	--	
31...	--	--	--	--	--	--	--	--	--	0	--	
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	0	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
22...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
18...	.1	.1	.0	4	0	4	1	0	1	0	0	
25...	--	--	--	--	--	--	--	--	--	--	--	
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	
15...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUB- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUB- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUB- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUB- PENDE (T/DAY)	SED. SUBP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
22...	--	--	--	--	9.0	--	--	--	598	29	99
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	0	100	70	30	--	11	.7	1700	106	15	98
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	8.0	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	6.7	--	--	--	14	1.4	69
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
21...	1	40	10	30	--	6.8	3.2	--	12	1.7	52
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	9.4	--	--	23000	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	15	--	--	--	58	5.5	83
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
16...	0	170	160	10	--	5.8	--	870	5520	176000	36
25...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	23	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	30000	20	4.2	91
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	9.8	--	--	23000	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
18...	0	40	10	30	--	6.4	1.8	--	14	.26	91
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	10200	12100	13000	15300	6360	---			
2		---	---	10400	10600	12100	3590	7030	---			
3		---	---	10400	9560	11000	9280	1780	2580			
4		---	11100	10500	9720	11400	11400	4170	3410			
5		---	11300	10700	10200	12100	12300	8870	4060			
6		7820	11300	10700	10000	11800	13300	9180	3520			
7		9970	11400	10800	11800	11800	7720	4640	4090			
8		10000	11500	12300	11500	11900	7360	7730	4260			
9		9890	11700	10800	11400	11900	9150	5900	4540			
10		9970	12100	10900	11500	11800	10500	6910	3830			
11		10200	10700	10900	9600	12600	10600	7610	3890			
12		11400	9930	11000	10400	11300	10800	8040	3900			
13		12200	10900	10700	10400	11600	10900	9460	---			
14		---	11100	10000	10500	11800	10700	10200	---			
15		---	10800	10600	10500	11200	11400	7230	---			
16		---	11400	10800	10900	11600	11400	---	---			
17		---	13100	10800	11200	12100	11500	---	---			
18		---	11900	10800	11100	12100	10900	---	---			
19		---	11500	10100	10700	12200	10800	2900	---			
20		---	11700	7450	10600	12100	10400	3720	---			
21		---	11600	8520	10900	11900	10500	3420	---			
22		---	11500	7680	---	12100	10400	2010	---			
23		---	11200	8520	---	11100	10500	2330	---			
24		---	11700	8420	---	12700	10100	3320	---			
25		---	12000	6750	---	12700	10900	3740	---			
26		---	12400	7830	9830	10200	10200	4160	---			
27		---	12900	8800	10600	10200	9310	4140	---			
28		---	10600	9090	8800	12000	7190	---	---			
29		---	10200	9950	9210	13500	8460	---	---			
30		---	10400	10100	---	13500	6220	---	---			
31		---	11200	11100	---	13300	---	---	---			
MEAN		10200	11400	9920	10500	12000	10100	5620	3810			

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	4550	9750	10200	11900	13700	14300	6430	854	6970	7390	6720
2	---	5390	10200	10400	10600	12800	5220	7060	1630	7010	7360	6660
3	---	12000	10700	10400	9470	11600	9540	1040	2260	7010	7430	6630
4	---	11400	11100	10500	9760	11100	11400	3530	2750	6980	7330	6670
5	---	8370	11200	10700	10200	12000	12400	900	3200	6870	7390	6690
6	---	7330	11200	10600	10000	11800	13700	872	3670	6830	7440	6640
7	---	10100	11500	10800	11800	11500	9590	3660	4050	6860	7430	6290
8	---	10100	11500	10900	11500	11900	7400	7150	4200	6860	7460	6600
9	---	9910	11800	10800	11400	11900	9320	5700	4460	6950	7450	6520
10	---	9910	12000	10900	11600	12000	10600	7130	2940	6960	7460	5020
11	---	10100	10600	11000	9680	12200	10700	7460	5840	6920	7380	6220
12	---	11400	9680	11000	9730	11400	10900	8200	3940	6910	7240	6170
13	---	12300	10800	10700	10400	11600	11300	9220	5520	6890	7180	5660
14	---	12800	11000	10800	10700	11600	11200	10000	5010	6890	7180	3880
15	---	13000	10500	10700	10600	11200	11600	5830	5490	7210	7180	3900
16	---	13200	11500	10800	11100	11500	12000	413	5670	7390	7140	3970
17	---	13200	12900	10800	11500	11900	12100	743	5940	7350	7180	4170
18	---	13200	12300	10800	11200	12000	11100	2230	4960	7340	7190	4440
19	---	13200	11600	10600	10900	11900	11200	2190	5970	7420	7210	5000
20	---	13300	11700	7290	11100	12000	10700	3150	5990	7410	7140	5430
21	---	2100	11600	8420	10900	12300	11400	3690	6100	7350	6690	5620
22	---	1240	11500	7680	11300	12300	11400	1120	6230	7240	6620	5840
23	---	2440	11200	8630	11200	10600	11100	2130	6240	7240	6370	5990
24	---	6430	11700	8640	11300	11800	10900	3380	6260	7240	6060	6000
25	---	5340	11800	6820	11500	11800	10700	3650	6620	7240	6250	6000
26	---	8090	12300	7820	9970	10000	10100	4090	6730	7160	6550	5960
27	11900	8710	12800	8780	10500	10000	9490	4460	6840	7170	6720	5740
28	11800	3830	10800	9070	8970	11400	6860	672	6980	7140	6840	5480
29	---	6950	10300	10000	8780	12600	8220	529	7040	7140	6830	5460
30	9170	9590	10400	9890	---	13900	6410	325	6870	7200	6880	5460
31	3300	---	11200	11100	---	12700	---	712	---	7310	7000	---
MEAN	9040	8980	11300	9920	10700	11800	10400	3800	5050	7110	7060	5690

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	---	---	6.0	1.0	2.5	16.5	20.0	25.0			
2	19.0	---	---	7.0	4.0	2.0	15.0	21.5	25.5			
3	18.5	---	---	4.5	6.0	3.5	15.5	20.0	---			
4	18.5	---	11.0	3.5	8.0	9.5	16.5	23.5	---			
5	19.0	---	8.5	3.5	8.5	7.5	17.0	23.0	---			
6	19.5	12.0	7.0	5.5	8.5	10.0	18.0	22.5	---			
7	19.5	9.0	8.0	2.0	5.5	14.0	18.5	24.5	29.5			
8	20.5	12.5	7.5	3.5	2.5	13.0	15.5	21.0	26.0			
9	16.5	11.0	8.5	4.0	.5	14.0	17.0	19.5	25.0			
10	17.0	5.5	11.5	8.5	1.0	15.0	17.5	23.5	25.0			
11	19.5	7.0	11.0	7.0	3.5	13.5	17.5	25.5	---			
12	20.0	9.0	3.0	6.0	3.0	14.0	11.0	25.0	---			
13	17.5	---	2.5	8.0	7.5	14.0	10.5	21.0	---			
14	18.0	---	5.5	9.5	10.5	13.5	13.5	21.0	---			
15	19.0	---	7.0	11.0	7.0	14.0	16.0	18.0	---			
16	18.5	---	2.0	10.5	1.5	17.0	16.5	17.5	---			
17	---	---	.5	10.0	2.0	13.0	17.0	19.0	---			
18	---	---	2.5	10.5	4.0	11.5	17.5	21.0	---			
19	---	---	4.0	10.5	10.5	12.5	19.0	22.5	---			
20	---	---	6.0	5.5	13.0	14.0	21.0	22.5	---			
21	---	---	8.0	6.5	15.0	13.0	21.5	22.0	---			
22	---	---	11.0	6.0	14.5	12.5	21.0	21.5	---			
23	---	---	9.5	5.5	9.0	14.5	22.5	23.5	---			
24	---	---	8.5	8.0	8.5	11.5	23.5	26.0	---			
25	---	---	7.5	8.5	7.5	13.5	20.0	28.0	---			
26	---	---	9.0	4.0	8.5	16.0	16.0	28.5	---			
27	---	---	10.5	1.5	12.5	15.5	17.5	24.0	---			
28	---	---	9.0	1.0	15.5	18.0	20.0	22.5	---			
29	---	---	7.0	.5	7.5	12.5	22.5	24.0	---			
30	---	---	5.5	1.0	---	13.5	20.0	24.0	---			
31	---	---	5.0	.5	---	15.0	---	25.5	---			
MEAN	19.0	9.5	7.0	6.0	7.0	12.5	17.5	22.5	26.0			

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8.0	.0	1.0	.0	.0	12.0	15.0	23.0	25.0	26.0	25.0
2	---	10.0	2.0	5.0	.0	.0	12.0	17.0	25.0	26.0	25.0	27.0
3	---	7.0	2.0	4.0	.0	.0	10.0	15.0	23.0	27.0	26.0	26.0
4	---	14.0	4.0	3.0	.5	6.0	10.0	18.0	23.0	27.0	24.0	26.0
5	---	12.0	6.0	3.0	.5	2.0	12.0	22.0	24.0	27.0	25.0	27.0
6	---	6.0	4.0	4.0	.5	14.0	14.0	21.0	24.0	25.0	25.0	27.0
7	---	8.0	6.0	.0	.5	17.0	15.0	20.0	25.0	26.0	25.0	25.0
8	---	16.0	5.0	3.0	.0	7.0	8.0	17.0	22.0	30.0	25.0	25.0
9	---	10.0	6.0	---	.0	8.0	15.0	14.0	22.0	25.0	26.0	25.0
10	---	5.0	7.0	5.0	.0	13.0	16.0	17.0	23.0	33.0	25.0	23.0
11	---	4.0	12.0	4.0	.0	10.0	14.0	20.0	23.0	31.0	25.0	29.0
12	---	7.0	12.0	4.0	.0	---	9.0	22.0	24.0	25.0	24.0	25.0
13	---	5.0	4.0	3.0	.0	8.0	8.0	15.0	22.0	25.0	26.0	24.0
14	---	12.0	5.0	6.0	.5	13.0	8.0	15.0	22.0	25.0	25.0	24.0
15	---	14.0	6.0	10.0	.5	9.0	9.0	17.0	25.0	26.0	25.0	25.0
16	---	8.0	.0	7.0	.0	15.0	12.0	15.0	---	25.0	26.0	23.0
17	---	9.0	.0	5.0	.0	6.0	13.0	17.0	---	25.0	26.0	23.0
18	---	13.0	.0	5.0	.0	7.0	17.0	18.0	---	24.0	26.0	24.0
19	---	11.0	2.0	6.0	.5	7.0	13.0	19.0	---	31.0	26.0	24.0
20	---	17.0	4.0	4.0	1.0	10.0	15.0	22.0	---	30.0	26.0	24.0
21	---	13.0	7.0	4.0	1.0	12.0	17.0	18.0	30.0	---	25.0	23.0
22	---	7.0	8.0	5.0	1.0	9.0	16.0	18.0	25.0	25.0	25.0	25.0
23	---	5.0	10.0	3.0	.5	10.0	17.0	20.0	30.0	30.0	26.0	21.0
24	---	7.0	6.0	4.0	.5	9.0	18.0	27.0	25.0	32.0	26.0	20.0
25	---	5.0	7.0	6.0	.5	10.0	18.0	23.0	25.0	24.0	27.0	21.0
26	---	6.0	6.0	4.0	.0	11.0	11.0	24.0	25.0	26.0	26.0	19.0
27	14.0	7.0	4.0	.0	.5	14.0	12.0	23.0	26.0	25.0	26.0	17.0
28	12.0	4.0	9.0	2.0	1.0	12.0	13.0	20.0	25.0	27.0	27.0	16.0
29	---	.0	6.0	.0	.5	11.0	18.0	23.0	26.0	27.0	24.0	17.0
30	15.0	.0	4.0	.0	---	6.0	18.0	22.0	25.0	25.0	25.0	19.0
31	8.0	---	1.0	.0	---	10.0	---	24.0	---	25.0	26.0	---
MEAN	12.5	8.5	5.0	3.5	.5	9.0	13.5	19.5	24.5	27.0	25.5	23.5

RED RIVER BASIN

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07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	930	1100	1100	1300	630	---			
2		---	---	940	960	1100	420	690	---			
3		---	---	940	880	990	860	280	350			
4		---	1000	950	890	1000	1000	470	410			
5		---	1000	970	930	1100	1100	830	460			
6		750	1000	970	910	1100	1200	850	420			
7		910	1000	970	1100	1100	740	500	460			
8		910	1000	1100	1000	1100	710	740	470			
9		900	1000	970	1000	1100	850	600	500			
10		910	1100	980	1000	1100	950	680	440			
11		930	970	980	880	1100	960	730	450			
12		1000	910	990	940	1000	970	760	450			
13		1100	980	970	940	1000	980	870	---			
14		---	1000	910	950	1100	970	930	---			
15		---	970	960	950	1000	1000	700	---			
16		---	1000	970	980	1000	1000	---	---			
17		---	1100	970	1000	1100	1000	---	---			
18		---	1100	970	1000	1100	980	---	---			
19		---	1000	920	970	1100	970	370	---			
20		---	1000	720	960	1100	940	430	---			
21		---	1000	800	980	1100	950	410	---			
22		---	1000	740	---	1100	940	300	---			
23		---	1000	800	---	1000	950	330	---			
24		---	1000	790	---	1100	920	400	---			
25		---	1100	660	---	1100	980	430	---			
26		---	1100	750	900	930	930	470	---			
27		---	1100	820	960	930	860	460	---			
28		---	960	840	820	1100	700	---	---			
29		---	930	910	850	1200	790	---	---			
30		---	940	920	---	1200	620	---	---			
31		---	1000	1000	---	1200	---	---	---			
MEAN		930	1000	910	950	1100	920	580	440			

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	95.4	128	116	172	100.0	---			
2		---	---	99.0	117	113	78.2	116	---			
3		---	---	96.4	112	115	121	312	598			
4		---	103	97.5	120	124	130	201	549			
5		---	103	102	131	122	150	294	513			
6		103	99.9	102	133	122	198	358	400			
7		120	99.9	105	160	122	118	151	384			
8		118	99.9	119	151	122	98.8	218	354			
9		112	97.2	105	135	122	96.4	160	385			
10		103	110	103	119	122	105	151	396			
11		100.0	96.9	103	119	122	98.5	144	286			
12		103	90.9	104	142	111	94.3	127	236			
13		113	101	102	132	116	95.3	129	---			
14		---	103	93.4	128	128	94.3	133	---			
15		---	99.5	98.5	123	116	94.5	5970	---			
16		---	103	99.5	138	116	91.8	---	---			
17		---	104	99.5	148	128	91.8	---	---			
18		---	148	102	146	125	87.3	---	---			
19		---	116	164	136	122	86.4	716	---			
20		---	111	132	130	122	78.7	558	---			
21		---	108	156	138	119	79.5	711	---			
22		---	105	158	---	116	78.7	795	---			
23		---	105	168	---	113	76.9	413	---			
24		---	105	151	---	128	84.5	437	---			
25		---	119	112	---	137	106	423	---			
26		---	119	117	97.2	128	168	428	---			
27		---	116	120	106	116	286	488	---			
28		---	137	113	90.8	137	189	---	---			
29		---	105	128	91.8	139	162	---	---			
30		---	102	119	---	143	107	---	---			
31		---	103	121	---	143	---	---	---			
MEAN		109	108	116	127	123	117	564	410			

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	3000	3600	3900	4700	1700	---			
2		---	---	3100	3100	3600	430	2000	---			
3		---	---	3100	2800	3300	2700	240	500			
4		---	3300	3100	2800	3400	3400	1000	770			
5		---	3400	3200	3000	3600	3700	2600	990			
6		2200	3400	3200	2900	3500	4000	2700	810			
7		2900	3400	3200	3500	3500	2700	1200	1000			
8		2900	3400	3700	3400	3600	2100	2200	1100			
9		2900	3500	3200	3400	3600	2700	1600	1100			
10		2900	3600	3200	3400	3500	3100	1900	910			
11		3000	3200	3200	2800	3800	3100	2200	930			
12		3400	2900	3300	3100	3400	3200	2300	930			
13		3700	3200	3200	3100	3500	3200	2800	---			
14		---	3300	2900	3100	3500	3200	3000	---			
15		---	3200	3100	3100	3300	3400	2000	---			
16		---	3400	3200	3200	3500	3400	---	---			
17		---	4000	3200	3300	3600	3400	---	---			
18		---	3600	3200	3300	3600	3200	---	---			
19		---	3400	3000	3200	3700	3200	610	---			
20		---	3500	2100	3100	3600	3100	880	---			
21		---	3500	2500	3200	3600	3100	780	---			
22		---	3400	2200	---	3600	3100	310	---			
23		---	3300	2500	---	3300	3100	420	---			
24		---	3500	2400	---	3800	3000	740	---			
25		---	3600	1900	---	3800	3200	880	---			
26		---	3700	2200	2900	3000	3000	1000	---			
27		---	3900	2500	3100	3000	2700	1000	---			
28		---	3100	2600	2500	3600	2000	---	---			
29		---	3000	2900	2700	4100	2800	---	---			
30		---	3100	3000	---	4100	1700	---	---			
31		---	3300	3300	---	4000	---	---	---			
MEAN		3000	3400	2900	3100	3600	3000	1500	900			

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	308	418	411	622	271	---			
2		---	---	326	377	369	155	335	---			
3		---	---	318	355	383	379	268	855			
4		---	339	318	378	422	441	427	1030			
5		---	349	337	421	399	519	920	1100			
6		303	340	337	423	387	659	1140	772			
7		384	340	346	510	387	750	363	834			
8		376	340	400	514	399	283	647	829			
9		360	340	346	459	399	306	428	846			
10		329	360	337	404	387	343	421	818			
11		324	320	337	378	421	318	434	590			
12		349	290	347	469	376	311	385	487			
13		380	328	337	435	406	311	416	---			
14		---	339	298	418	406	311	429	---			
15		---	328	318	402	383	321	17100	---			
16		---	349	328	449	406	312	---	---			
17		---	378	328	490	418	312	---	---			
18		---	486	337	481	408	285	---	---			
19		---	395	535	449	410	285	1180	---			
20		---	387	386	418	399	259	1140	---			
21		---	378	486	449	389	259	1350	---			
22		---	358	469	---	379	259	821	---			
23		---	347	526	---	374	251	525	---			
24		---	369	460	---	441	275	809	---			
25		---	389	323	---	472	346	865	---			
26		---	400	345	313	413	543	910	---			
27		---	411	364	343	373	897	1060	---			
28		---	444	351	277	447	540	---	---			
29		---	340	407	292	476	492	---	---			
30		---	335	389	---	487	294	---	---			
31		---	339	401	---	475	---	---	---			
MEAN		351	361	369	413	410	375	1360	816			

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	6400	7650	8240	9750	3880	---			
2		---	---	6530	6660	7650	2060	4320	---			
3		---	---	6530	5980	6930	5800	874	1400			
4		---	6990	6600	6090	7190	7190	2440	1940			
5		---	7120	6730	6400	7650	7780	5530	2370			
6		4840	7120	6730	6270	7450	8440	5730	2020			
7		6250	7190	6800	7450	7450	4770	2750	2390			
8		6270	7250	7780	7250	7520	4540	4780	2500			
9		6200	7390	6800	7190	7520	5710	3580	2690			
10		6250	7650	6860	7250	7450	6600	4240	2220			
11		6400	6730	6860	6010	7980	6460	4700	2260			
12		7190	6220	6930	6530	7120	6800	4980	2270			
13		7710	6460	6730	6530	7320	6860	5920	---			
14		---	6990	6270	6600	7450	6730	6400	---			
15		---	6800	6660	6600	7060	7190	4450	---			
16		---	7190	6800	6860	7320	7190	---	---			
17		---	8310	6800	7060	7650	7250	---	---			
18		---	7520	6800	6990	7650	6860	---	---			
19		---	7250	6340	6730	7710	6800	1610	---			
20		---	7390	4600	6660	7650	6930	2150	---			
21		---	7320	5300	6860	7520	6600	1950	---			
22		---	7250	4750	---	7650	6530	1020	---			
23		---	7060	5300	---	6990	6600	1230	---			
24		---	7390	5230	---	8040	6340	1880	---			
25		---	7580	4140	---	8040	6860	2160	---			
26		---	7650	4850	6160	6400	6400	2440	---			
27		---	8170	5480	6660	6400	5820	2420	---			
28		---	6660	5670	5480	7580	4030	---	---			
29		---	6400	6240	5750	8570	5260	---	---			
30		---	6530	6340	---	8570	3790	---	---			
31		---	7060	6990	---	8440	---	---	---			
MEAN		6390	7190	6220	6630	7550	6340	3390	2210			

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	657	888	868	1290	618	---			
2		---	---	688	809	785	384	723	---			
3		---	---	670	759	805	814	975	2390			
4		---	717	677	822	893	932	1040	2600			
5		---	731	709	899	847	1090	1960	2640			
6		666	711	709	914	825	1190	2410	1930			
7		827	718	734	1090	825	760	832	1990			
8		813	724	840	1100	832	613	1410	1880			
9		770	718	734	971	832	648	957	2070			
10		709	764	722	861	825	731	939	2000			
11		691	672	722	811	883	683	926	1430			
12		738	621	730	987	788	661	834	1190			
13		791	704	709	917	850	667	879	---			
14		---	717	643	891	865	654	916	---			
15		---	698	683	855	820	679	38000	---			
16		---	738	698	963	850	660	---	---			
17		---	785	698	1050	888	666	---	---			
18		---	1020	716	1020	868	611	---	---			
19		---	842	1130	945	853	606	3120	---			
20		---	818	845	899	847	547	2790	---			
21		---	791	1030	963	812	552	3380	---			
22		---	763	1010	---	806	547	2700	---			
23		---	743	1120	---	793	535	1540	---			
24		---	778	1000	---	933	582	2060	---			
25		---	819	704	---	999	741	2120	---			
26		---	848	760	665	881	1160	2220	---			
27		---	860	799	737	795	1030	2570	---			
28		---	953	765	607	941	1200	---	---			
29		---	726	876	621	995	1080	---	---			
30		---	705	822	---	1020	655	---	---			
31		---	724	849	---	1000	---	---	---			
MEAN		751	765	789	882	865	802	3160	2010			

RED RIVER BASIN

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

DATE TIME	NOV 26,79 1500	MAR 26,80 1130	MAY 16,80 1800	JUN 25,80 0915	JUL 22,80 1100
TOTAL CELLS/ML	1700	23000	870	30000	23000
DIVERSITY: DIVISION	1.1	1.0	0.0	1.4	1.3
..CLASS	1.1	1.0	0.0	1.4	1.3
..ORDER	1.4	1.2	0.9	2.3	1.9
...FAMILY	2.0	1.2	0.9	3.0	2.1
....GENUS	2.0	1.3	1.8	3.5	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
...SCHROEDERIA	--	-	420	2	--	-	--	-	--	-
...COELASTRACEAE										
...COELASTRUM	--	-	--	-	--	-	1800	6	--	-
...MICRACTINIACEAE										
...MICRACTINIUM	--	-	--	-	--	-	500	2	--	-
...OOCYSTACEAE										
...ANKISTRUDESUS	44	3	420	2	--	-	900	3	510	2
...CHLORELLA	--	-	620	3	--	-	300	1	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	1900	6	1700	7
...OOCYSTIS	--	-	210	1	--	-	2200	7	170	1
...SELENASTRUM	--	-	--	-	--	-	400	1	*	0
...TREUBARIA	--	-	--	-	--	-	--	-	170	1
...SCENEDESMACEAE										
...SCENEDESMUS	44	3	--	-	--	-	4400	15	1500	7
...TETRASPORALES										
...PALMELLACEAE										
...SPHAEROCYSTIS	--	-	--	-	--	-	700	2	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CARTERIA	--	-	--	-	--	-	500	2	--	-
...CHLAMYDOMONAS	--	-	2100	9	--	-	1200	4	340	1
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCEACEAE										
...CYCLOTELLA	89	5	18000#	77	430#	50	1600	5	2600	12
...MELOSIRA	--	-	--	-	140#	17	200	1	--	-
...PENNALES										
...EUNOTIACEAE										
...EUNOTIA	11	1	--	-	--	-	--	-	--	-
...NAVICULACEAE										
...DIPLONEIS	--	-	--	-	140#	17	--	-	--	-
...NAVICULA	250#	15	--	-	140#	17	200	1	--	-
...NITZSCHIA	760#	45	--	-	--	-	2000	7	170	1
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	--	-	--	-	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	--	-	--	-	--	-	--	-	3400	15
...ANACYSTIS	--	-	--	-	--	-	3800	13	8400#	37
...HORMOGONALES										
...OSCILLATORIACEAE										
...LYNGBYA	--	-	--	-	--	-	--	-	3400	15
...OSCILLATORIA	490#	29	--	-	--	-	6800#	23	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	--	-	1700	7	--	-	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
...GLENODINIACEAE										
...GLENODINIUM	--	-	--	-	--	-	--	-	*	0

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RED RIVER BASIN

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07305500 WEST OTTER CREEK AT SNYDER LAKE, NEAR MOUNTAIN PARK, OK

LOCATION.--Lat 34°44'02", long 98°59'10", in NE¼SE¼ sec.16, T.3 N., R.17 W., Kiowa County, Hydrologic Unit 11120303, near east end of Snyder Dam, 0.8 mi (1.3 km) upstream from small tributary, 3 mi (5 km) northwest of Mountain Park, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--132 mi² (342 km²).

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. WRD OK-78-2: 1977.

GAGE.--Water-stage recorder and broad-crested masonry spillway. Datum of gage is 1,361.06 ft (414.851 m), National Geodetic Vertical Datum of 1929. April 1903 to March 1908, nonrecording gage at site 1.8 mi (2.9 km) downstream at different datum. October 1951 to September 1971 at intake tower at same site and datum. July 1972 to August 1976, 700 ft (213.4 m) downstream at datum 1,344.00 ft (409.651 m).

REMARKS.--Records fair. The city of Snyder diverted about 130 acre-ft (160,000 m³) 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, 1911, 1973-75) 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 hm³/yr); (since regulation by Tom Steed Reservoir) 5 years (water years 1976-80) 3.0 ft³/s (0.085 m³/s) 2,170 acre-ft/yr (2.68 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 6, 1953, gage height, 19.50 ft, (5.944 m), from floodmarks, from rating curve extended above 1,600 ft³/s (45.3 m³/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, 878 ft³/s (24.9 m³/s) June 6, gage height, 13.76 ft (4.194 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00	.20	.50
2	.00	.00	.00	.00	.00	.00	.00	.00	34	.00	.20	.50
3	.00	.00	.00	.00	.00	.00	.00	.00	423	.00	.50	1.1
4	.00	.00	.00	.00	.00	.00	.00	.00	705	.00	.20	1.1
5	.00	.00	.00	.00	.00	.00	.00	.00	876	.00	.20	1.1
6	.00	.00	.00	.00	.00	.00	.00	.00	530	.00	.10	1.1
7	.00	.00	.00	.00	.00	.00	.00	.00	273	.00	.10	1.1
8	.00	.00	.00	.00	.00	.00	.00	.00	273	.00	.20	1.1
9	.00	.00	.00	.00	.00	.00	.00	.00	273	.00	.50	1.1
10	.00	.00	.00	.00	.00	.00	.00	.00	273	.50	.50	.50
11	.00	.00	.00	.00	.00	.00	.00	.00	273	2.2	.50	.50
12	.00	.00	.00	.00	.00	.00	.00	.00	175	2.2	.50	1.1
13	.00	.00	.00	.00	.00	.00	.00	.00	175	2.2	.20	1.1
14	.00	.00	.00	.00	.00	.00	.00	.00	175	1.1	.50	1.1
15	.00	.00	.00	.00	.00	.00	.00	32	175	2.2	.50	1.1
16	.00	.00	.00	.00	.00	.00	.00	2.2	175	2.2	.50	.20
17	.00	.00	.00	.00	.00	.00	.00	.20	160	1.1	.50	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	30	.20	.50	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.10	.20	.50	.20
20	.00	.50	.00	.00	.00	.00	.00	.00	.00	.10	.50	.50
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.5	1.1
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	.20
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00
24	.00	.00	.00	.00	.00	.00	.00	.10	.00	.10	1.1	.50
25	.00	.00	.00	.00	.00	.00	.00	.50	.00	.00	1.1	.20
26	.00	.00	.00	.00	.00	.00	.00	.50	.00	.00	.50	.10
27	.00	.00	.00	.00	.00	.00	.00	2.2	.00	.00	.50	1.1
28	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.10	.50	.50
29	.00	.00	.00	.00	.00	.00	.00	27	.00	.10	.50	.50
30	.10	.00	.00	.00	---	.00	.00	13	.00	.10	.50	.50
31	.00	---	.00	.00	---	.00	---	1.1	---	.20	.50	---
TOTAL	.10	.50	.00	.00	.00	.00	.00	79.90	4998.60	14.80	17.10	19.70
MEAN	.003	.017	.000	.000	.000	.000	.000	2.58	167	.48	.55	.66
MAX	.10	.50	.00	.00	.00	.00	.00	32	876	2.2	3.5	1.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00
AC-FT	.2	1.0	.00	.00	.00	.00	.00	158	9910	29	34	39
CAL YR 1979 TOTAL	104.82							208				
WTR YR 1980 TOTAL	5130.70							10180				

RED RIVER BASIN

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 (4.0 km) northeast of Burkburnett, and at mile 933 (1,501 km).

DRAINAGE AREA.--20,570 mi² (53,280 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

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 (290.343 m) National Geodetic Vertical Datum of 1929. July 11, 1924, to Aug. 31, 1925, nonrecording gage at site 1,000 ft (305 m) downstream at same datum. Dec. 16, 1959, to Jan. 11, 1960, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--20 years (water years 1961-80), 884 ft³/s (25.03 m³/s), 640,500 acre-ft/yr (790 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,800 ft³/s (1,780 m³/s) Oct. 19, 1965, gage height, 11.46 ft (3.493 m); maximum gage height, 12.64 ft (3.853 m) July 27, 1975; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 3, 1957, reached a stage of 13.54 ft (4.127 m), from levels to floodmarks. According to local residents, higher stages occurred in 1891 and June 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 18	0930	38,100 1,080	11.79 3.594	June 1	1300	*42,200 1,200	*12.11 3.691

Minimum discharge, 18.0 ft³/s (0.51 m³/s) Sept. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	342	235	247	208	203	159	370	37700	376	104	122
2	91	563	207	213	190	203	257	309	14400	357	98	139
3	79	496	198	195	204	204	355	236	4850	338	92	165
4	76	401	190	190	217	212	315	346	3370	325	98	170
5	79	309	178	186	227	207	242	354	2980	313	107	148
6	79	248	172	165	222	203	211	472	2850	344	119	130
7	72	208	173	154	214	197	164	322	2810	363	116	120
8	63	186	169	158	241	186	145	301	3030	363	104	117
9	61	170	165	158	257	181	132	309	3930	350	119	117
10	66	146	166	154	257	172	135	260	3610	338	119	103
11	80	138	155	150	279	164	116	212	2980	325	113	95
12	76	143	165	158	290	152	106	177	2760	307	122	89
13	60	128	174	154	313	154	101	130	2350	284	132	72
14	62	124	186	154	340	154	105	131	3970	273	129	58
15	81	120	204	154	352	158	113	1340	2860	262	116	53
16	94	119	204	154	315	159	111	12800	2300	247	110	45
17	137	117	213	158	317	144	105	27900	1970	227	110	42
18	214	115	217	154	307	147	111	33400	1660	204	116	40
19	226	111	195	158	284	139	116	10600	1510	190	136	37
20	169	162	186	162	269	130	116	4750	1380	178	174	33
21	129	331	182	1110	276	121	113	3820	1200	174	150	27
22	98	1320	182	1060	272	120	104	3000	1030	165	146	22
23	100	1590	195	915	246	133	98	2410	915	169	146	25
24	93	889	204	556	247	113	100	2510	854	174	174	25
25	87	534	208	449	241	110	119	1900	752	174	178	22
26	83	442	199	383	229	126	435	1470	659	168	143	19
27	82	353	195	313	229	147	1900	1150	574	165	126	51
28	78	277	247	279	228	190	1050	6430	496	178	110	79
29	76	245	370	257	208	200	669	17200	434	158	107	91
30	90	235	376	227	---	177	488	20400	404	132	107	91
31	75	---	296	213	---	167	---	27500	---	116	107	---
TOTAL	2961	10562	6406	9138	7479	5073	8291	182509	110588	7737	3828	2347
MEAN	95.5	352	207	295	258	164	276	5887	3686	250	123	78.2
MAX	226	1590	376	1110	352	212	1900	33400	37700	376	178	170
MIN	60	111	155	150	190	110	98	130	404	116	92	19
AC-FT	5870	20950	12710	18130	14830	10060	16450	362000	219400	15350	7590	4660
CAL YR 1979	TOTAL	293772	MEAN 805	MAX 19400	MIN 49	AC-FT 582700						
WTR YR 1980	TOTAL	356919	MEAN 975	MAX 37700	MIN 19	AC-FT 707900						

RED RIVER BASIN

479

07311000 EAST CACHE CREEK NEAR WALTERS, OK

LOCATION.--Lat 34°21'44", long 98°16'56", on south line of SE4SE4 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 (2.9 km) east of Walters, 12.2 mi (19.6 km) upstream from West Cache Creek, and at mile 19.7 (31.7 km).

DRAINAGE AREA.--675 mi² (1,748 km²).

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 (285.963 m) Oklahoma State Highway Department datum. Prior to Jan. 8, 1939, nonrecording gage at same site and datum.

REMARKS.--Records poor. Flow partly regulated by Lake Lawtonka, capacity, 42,300 acre-ft (52.2 hm³) on Medicine Creek prior to late 1953, and 63,000 acre-ft (77.7 hm³) thereafter, by Lake Thomas, capacity, 8,300 acre-ft (10.2 hm³) on Little Medicine Creek, and since March 1961 by Lake Ellsworth, capacity, 94,500 acre-ft (117 hm³) on East Cache Creek. Low flow sustained by sewage from cities of Lawton and Walters.

AVERAGE DISCHARGE.--36 years, 163 ft³/s (4.616 m³/s), 118,100 acre-ft/yr (146 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s (799 m³/s) May 18, 1951, gage height, 29.72 ft (9.059 m); no flow at times in 1939-40.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1906 reached a stage about the same as on May 18, 1951, and on May 17, 1947, gage height, 29.62 ft (9.028 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,530 ft³/s (43.3 m³/s) May 31, gage height, 17.18 ft (5.236 m); minimum daily discharge, 4.2 ft³/s (0.12 m³/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	15	26	40	25	33	25	29	1160	17	9.8	16
2	15	17	20	33	28	32	28	66	648	17	14	15
3	20	16	17	32	36	33	78	192	580	16	14	15
4	20	16	17	24	35	34	32	57	455	16	9.5	15
5	47	17	20	21	35	30	25	30	367	15	6.0	12
6	37	17	21	22	34	23	24	24	310	15	4.2	11
7	21	18	18	23	35	25	24	22	648	14	6.8	8.0
8	13	27	21	23	30	27	23	22	647	14	6.6	9.3
9	9.5	29	25	23	80	29	25	20	796	14	7.4	9.9
10	11	28	27	32	68	29	24	19	773	13	16	13
11	12	22	27	35	38	26	22	22	730	12	13	12
12	6.9	17	29	27	44	33	28	23	351	9.1	13	11
13	6.8	16	33	29	42	36	33	23	81	11	12	11
14	4.3	27	62	31	54	75	32	17	57	12	9.9	10
15	7.7	26	44	31	47	32	33	31	44	11	9.5	9.7
16	9.7	26	47	31	51	29	33	270	36	9.9	16	9.1
17	12	30	37	27	43	27	31	293	35	11	15	12
18	10	27	34	26	40	28	27	92	34	9.6	15	12
19	11	30	34	27	40	23	26	54	41	8.9	17	9.3
20	7.4	115	36	32	39	22	27	42	63	9.2	14	8.0
21	9.5	478	36	238	38	24	27	52	43	9.9	11	8.8
22	7.0	103	36	144	36	24	27	214	36	9.7	9.9	9.5
23	6.2	44	36	75	35	24	26	296	36	9.4	14	16
24	8.8	31	35	55	37	26	30	289	33	11	13	16
25	8.4	27	43	47	34	46	30	285	30	14	11	16
26	11	26	42	36	33	34	43	283	24	17	9.9	16
27	12	27	35	33	29	28	44	285	21	16	8.8	15
28	12	26	46	32	29	26	46	289	20	11	7.6	15
29	12	33	187	30	33	33	39	293	19	9.5	6.8	30
30	14	34	139	28	---	36	29	761	18	9.7	5.2	25
31	14	---	61	26	---	27	---	1380	---	9.9	15	---
TOTAL	414.2	1365	1291	1313	1148	954	941	5775	8336	381.8	340.9	395.6
MEAN	13.4	45.5	41.6	42.4	39.6	30.8	31.4	186	278	12.3	11.0	13.2
MAX	47	478	187	238	80	75	78	1380	1160	17	17	30
MIN	4.3	15	17	21	25	22	22	17	18	8.9	4.2	8.0
AC-FT	822	2710	2560	2600	2280	1890	1870	11450	16530	757	676	785

CAL YR 1979 TOTAL 55957.2 MEAN 153 MAX 4080 MIN 4.3 AC-FT 111000
WTR YR 1980 TOTAL 22655.5 MEAN 61.9 MAX 1380 MIN 4.2 AC-FT 44940

RED RIVER BASIN

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT											
16...	1300	9.9	645	7.9	18.0	--	--	--	210	20	66
24...	1500	8.8	790	7.6	16.0	5.9	7.2	75	190	9	56
NOV											
08...	1330	29	840	8.5	10.0	8.3	8.6	80	190	3	56
29...	0900	33	665	7.4	4.0	1.3	18.1	139	190	34	58
DEC											
07...	1615	18	520	7.7	6.0	3.2	9.7	80	190	18	57
12...	1400	29	830	7.8	4.0	12	16.4	127	200	23	60
JAN											
16...	1330	32	725	7.6	9.0	21	--	--	200	28	58
FEB											
14...	1130	57	728	7.0	4.0	20	--	--	200	51	59
22...	1000	37	690	7.7	10.5	12	12.2	113	180	30	54
MAR											
12...	1330	33	769	6.9	20.0	5.9	6.9	78	200	49	60
26...	1545	31	710	8.2	15.0	14	11.4	120	200	31	59
APR											
17...	1230	31	730	6.9	19.0	32	6.8	73	240	75	71
24...	1500	32	760	7.5	21.0	48	8.8	105	220	27	67
MAY											
07...	1730	22	459	7.8	20.0	84	5.4	61	--	--	--
28...	1000	284	520	7.6	23.0	28	9.9	118	180	52	53
JUN											
12...	0930	291	545	6.0	25.0	130	6.3	78	170	97	49
25...	1330	30	710	7.6	28.0	38	7.5	97	200	22	61
JUL											
09...	1430	22	898	7.7	28.0	--	5.1	66	220	0	68
24...	1515	11	780	7.6	27.0	--	8.1	107	220	21	67
AUG											
06...	1300	33	998	7.8	28.0	--	4.0	52	200	0	58
20...	1310	13	868	7.9	26.0	28	7.3	94	190	13	56
SEP											
10...	1245	13	828	7.4	26.0	44	--	--	180	15	52
25...	1030	16	700	7.5	22.0	52	9.8	114	170	12	49

RED RIVER BASIN

481

07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
16...	11	77	43	2.3	12	190	76	75	464	.63	12.4
24...	12	68	42	2.2	11	180	78	74	442	.60	10.5
NOV											
08...	13	75	51	2.3	12	190	93	73	446	.61	35.4
29...	12	48	33	1.5	11	160	65	57	392	.53	34.9
DEC											
07...	11	46	34	1.5	7.3	170	66	45	349	.47	17.0
12...	13	74	50	2.3	8.7	180	80	78	446	.61	34.9
JAN											
16...	13	61	39	1.9	8.1	170	68	58	407	.55	35.2
FEB											
14...	13	71	42	2.2	8.3	150	73	76	415	.56	63.9
22...	11	60	41	1.9	8.2	150	74	65	406	.55	40.6
MAR											
12...	12	60	38	1.9	7.6	150	74	59	392	.53	35.7
26...	13	64	40	2.0	7.6	170	76	66	401	.55	33.6
APR											
17...	14	82	42	2.3	11	160	81	89	477	.65	39.9
24...	12	64	38	1.9	8.9	190	87	70	449	.61	38.8
MAY											
07...	--	--	--	--	--	120	--	--	249	.34	14.8
28...	12	28	24	.9	7.1	130	67	36	305	.41	234
JUN											
12...	11	22	21	.7	6.0	71	55	65	--	--	--
25...	12	56	36	1.7	8.7	180	65	59	407	.55	33.0
JUL											
09...	13	67	38	2.0	8.8	230	74	65	440	.60	26.1
24...	13	83	44	2.4	10	200	80	88	465	.63	13.8
AUG											
06...	13	96	49	3.0	12	200	88	98	503	.68	45.8
20...	13	86	47	2.7	12	180	83	93	478	.65	16.8
SEP											
10...	11	72	45	2.4	12	160	67	82	435	.59	15.3
25...	12	72	46	2.4	11	160	70	72	400	.54	17.3

RED RIVER BASIN

483

07311200 BLUE BEAVER CREEK NEAR CACHE, OK.--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)	
FEB 21...	1400	2.7	150	7.2	14.0	11.2	113	K21	51	--	42	
MAY 27...	1400	5.4	140	7.1	22.0	10.8	128	70	160	318	43	
DATE	TIME	HARD- NESS, NONCAR- BONATE (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (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)
FEB 21...	7	12	2.8	11	35	.7	1.6	35	23	7.5	.3	
MAY 27...	0	12	3.2	9.9	32	.7	1.8	47	14	6.2	.4	
DATE	TIME	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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
FEB 21...	9.1	85.0	89.0	.12	.62	.15	.18	.02	.06	.03	.09	
MAY 27...	14	92.0	90.0	.13	1.34	.00	.00	.04	.12	--	--	

RED RIVER BASIN

07311500 DEEP RED RUN NEAR RANDLETT, OK

LOCATION.--Lat 34°13'15", long 98°27'10", in SW¼SW¼ 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 (4.5 km) north of Randlett, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--617 mi² (1,598 km²).

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 (281.785 m) Oklahoma State Highway Department datum. Prior to Nov. 10, 1949, nonrecording gage at same site and datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--31 years, 111 ft³/s (3.144 m³/s), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft³/s (1,370 m³/s) Sept. 22, 1969, gage height, 27.51 ft (8.385 m), from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage somewhat exceeding 27 ft (8.2 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,630 ft³/s (273 m³/s) at 0500 May 31, gage height, 23.88 ft (7.279 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.00	.33	16	2.8	.35	.06	2.2	4040	1.6	.00	.00
2	.00	.00	.31	10	2.7	.30	3.8	.50	1720	1.1	.00	.00
3	.00	.00	.30	8.1	2.5	.24	36	.02	148	.70	.00	.00
4	.00	.00	.29	6.3	2.5	.21	16	.00	58	.40	.00	.00
5	.00	.00	.31	4.4	2.4	.18	3.9	.00	47	.20	.00	.00
6	.00	.00	.30	3.4	2.2	.15	1.7	.01	37	.10	.00	.00
7	.00	.00	.29	2.4	2.2	.13	.56	.01	32	.04	.00	.00
8	.00	.00	.29	2.3	4.0	.11	.21	.01	31	.02	.00	.00
9	.00	.00	.29	2.2	4.1	.09	.10	.00	29	.01	.00	.00
10	.00	.00	.29	2.1	3.7	.07	.08	.00	30	.02	.00	.00
11	.00	.00	.34	2.1	3.6	.05	.08	.00	24	.04	.00	.00
12	.00	.00	.29	1.8	3.8	.04	.03	.00	21	.06	.00	.00
13	.00	.00	.39	1.9	5.1	.04	.02	.00	18	.06	.00	.00
14	.00	.00	.34	2.0	5.2	.04	.02	.44	15	.06	.00	.00
15	.00	.00	.34	2.0	4.3	.05	.02	217	14	.06	.00	.00
16	.00	.00	.34	2.0	3.5	.08	.02	232	10	.00	.00	.00
17	.00	.00	.29	1.9	3.0	.10	.00	489	15	.00	.00	.00
18	.00	.00	.29	1.7	2.5	.08	.00	340	11	.00	.00	.00
19	.00	.00	.29	1.6	2.0	.08	.00	42	8.7	.00	.00	.00
20	.00	1.0	.29	2.5	1.5	.10	.00	24	20	.00	.00	.00
21	.00	10	.39	14	1.3	.09	.00	25	68	.00	.00	.00
22	.00	5.0	.63	148	1.1	.08	.00	63	29	.00	.00	.00
23	.00	2.0	.94	89	.90	.09	.00	29	19	.00	.00	.00
24	.00	1.3	.94	48	.80	.09	.00	17	14	.00	.00	.00
25	.00	.90	.83	23	.70	.08	.00	9.7	10	.00	.00	.00
26	.00	.70	.72	15	.60	.06	.00	7.5	7.2	.00	.00	.00
27	.00	.50	.72	11	.52	.06	.00	7.0	5.8	.00	.00	.00
28	.00	.45	10	8.3	.42	.04	21	6.4	4.5	.00	.00	.00
29	.00	.40	20	6.4	.38	.01	19	6.6	3.5	.00	.00	.00
30	.00	.35	23	6.3	---	.00	6.8	1200	2.5	.00	.00	.00
31	.00	---	29	3.8	---	.04	---	7190	---	.00	.00	---
TOTAL	.03	22.60	93.37	449.5	70.32	3.13	109.40	9908.39	6492.2	4.47	.00	.00
MEAN	.001	.75	3.01	14.5	2.42	.10	3.65	320	216	.14	.000	.000
MAX	.03	10	29	148	5.2	.35	36	7190	4040	1.6	.00	.00
MIN	.00	.00	.29	1.6	.38	.00	.00	.00	2.5	.00	.00	.00
AC-FT	.06	45	185	892	139	6.2	217	19650	12880	8.9	.00	.00
CAL YR 1979 TOTAL	26683.65			MEAN 73.1	MAX 2940	MIN .00	AC-FT 52930					
WTR YR 1980 TOTAL	17153.41			MEAN 46.9	MAX 7190	MIN .00	AC-FT 34020					

07313400 WAURIKA LAKE NEAR WAURIKA, OK

LOCATION.--Lat 34°13'57", long 98°02'51", in SW¼SW¼ sec.4, T.4 S., R.8 W., Jefferson County, Hydrologic Unit 11130208, 3,050 ft (930 m) east of outlet works on Beaver Creek, 5.5 mi (8.8 km) north of Waurika and at mile 27.0 (43.4 km).

DRAINAGE AREA.--562 mi² (1,456 km²).

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 (579 hm³) at elevation 970.0 ft (295.66 m), crest of uncontrolled spillway and 203,100 acre-ft (250 hm³) at elevation 951.4 ft (289.99 m), top of conservation pool. Dead storage, 3,400 acre-ft (4.19 hm³) below elevation 910.0 ft (277.3 m). Reservoir is used for flood control, irrigation, water supply, water quality, fish and wildlife, and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 135,900 acre-ft (168 hm³) June 8, 1980, elevation, 944.11 ft (287.765 m); minimum since first major filling, 59,170 acre-ft (73.0 hm³) Dec. 4-5, 1978, elevation, 931.56 ft (283.939 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 135,900 acre-ft (168 hm³) June 8, elevation, 944.11 ft (287.765 m); minimum, 115,500 acre-ft (142 hm³) Sept. 27, elevation, 941.35 ft (286.923 m).

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

931	56,610	940	106,200
934	71,100	943	127,500
937	87,670	946	151,300

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126100	122200	125800	126600	127000	127400	127300	126100	135100	132700	125900	119200
2	125800	122000	125800	126900	127000	127300	127700	126300	135200	132400	125600	118800
3	125500	121900	125800	126900	127000	127300	127900	126300	135200	132200	125200	119000
4	125400	121500	125700	126900	127100	127700	127800	126300	135200	132100	124900	119000
5	125200	121600	126400	126900	127100	127300	127700	126300	135200	131900	124600	118900
6	125100	121400	126400	126900	127000	127300	127800	126300	135100	131700	124400	118700
7	124700	121100	126400	126800	127300	127400	127900	126100	135200	131300	124300	118300
8	124700	121200	126400	126800	127600	127400	127600	126000	135600	131200	124200	118300
9	124500	121500	126400	126800	127600	127300	127400	125700	135600	130900	124000	118400
10	124300	121300	126400	126800	127500	127300	127000	125700	135600	130700	123700	118200
11	124100	121000	126400	126700	127600	127300	127500	125700	135400	130500	123700	118100
12	124000	121000	126400	126700	127500	127600	127000	125700	135100	130300	123500	117900
13	123700	120900	126400	126700	127600	127500	126800	125500	134800	130000	123100	117700
14	123400	120900	126400	126600	127600	127300	126700	125500	134800	129700	123000	117600
15	123500	120900	126400	126600	128100	127000	126700	126700	134700	129500	122500	117400
16	123500	120800	126600	126700	127700	127400	126800	127200	134600	129300	122500	117200
17	123400	120700	126600	126700	127600	127400	126700	127000	134700	129100	122300	116900
18	123200	120700	126600	126700	127500	127200	126600	127000	134700	128800	122200	116700
19	123100	120700	126600	126900	127900	127200	126500	127000	134400	128400	122000	116500
20	123100	121800	126600	127100	127900	127200	126400	127300	134200	128400	121800	116100
21	123300	126100	126600	127300	127900	127100	126400	127400	134300	128200	121600	115900
22	123100	126400	126600	127600	128200	126800	126400	127400	134400	128100	121300	116000
23	123000	126400	126600	127500	127900	127500	126500	127300	134300	127900	121200	116000
24	122900	126400	126600	127500	127900	127300	126500	127300	134200	127500	121000	116000
25	122800	126400	126600	127500	127600	127000	126500	127300	134200	127300	120700	116000
26	122400	126200	126600	127600	127600	127000	126700	127200	133900	127000	120600	115700
27	122300	126400	126600	127400	127600	127100	126400	126900	133700	127000	120000	117000
28	122200	126200	126600	127300	127700	127100	126300	127000	133400	126800	120000	117400
29	121700	126000	126600	127100	128300	127800	126100	127200	133300	126700	119900	117400
30	122400	126000	126600	127400	---	127400	126100	131700	133000	126400	119600	117500
31	122300	---	126600	127200	---	127300	---	134500	---	126100	119300	---
MAX	126100	126400	126600	127600	128300	127800	127900	134500	135600	132700	125900	119200
MIN	121700	120700	125700	126600	127000	126800	126100	125500	133000	126100	119300	115700
†	942.31	942.80	942.88	942.96	943.11	942.98	942.82	943.94	943.74	942.82	941.90	941.64
‡	-3,800	+3,700	+600	+600	-1,100	-1,000	-1,200	+8,400	-1,500	-6,900	-6,800	-1,800

CAL YR 1979 MAX 132200 MIN 59860 ‡ +66,790
WTR YR 1980 MAX 135600 MIN 115700 ‡ -8,600

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RED RIVER BASIN

07313500 BEAVER CREEK NEAR WAURIKA, OK

LOCATION.--Lat 34°13'00", long 98°02'57", on north line of NW¼NW¼ 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 (7.2 km) north-west of Waurika, 6.2 mi (10.0 km) upstream from Cow Creek, and at mile 25.8 (45.1 km).

DRAINAGE AREA.--563 mi² (1,458 km²).

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 (266.447 m) Oklahoma State Highway Department datum. Prior to Apr. 5, 1966, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good. Flow regulated by Waurika Lake (07313400) 1.2 mi (1.9 km) upstream beginning August 1977.

AVERAGE DISCHARGE.--(Prior to regulation by Waurika Lake) 23 years, (water years 1954-76) 107 ft³/s (3.030 m³/s), 77,520 acre-ft/yr (95.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s (912 m³/s) May 20, 1955, gage height, 27.42 ft (8.358 m), 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 (8.44 m), present datum, from floodmark, discharge 65,300 ft³/s (1,850 m³/s) by contracted-opening measurement of peak flow. A similiar stage was reached prior to 1889, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft³/s (0.396 m³/s) Sept. 27, gage height, 5.90 ft (1.798 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	7.8
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0	7.8
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.9	5.6
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.9	2.5
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.1	8.4
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.1	8.4
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.1	8.7
8	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	6.2	8.9
9	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	6.2	9.2
10	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	6.4	9.4
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.4	9.2
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.4	9.2
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.4	9.4
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.4	9.2
15	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	6.4	9.2
16	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	6.8	9.4
17	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	6.8	10
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	10
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.9	10
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	10
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	10
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	10
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	11
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	10
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	10
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	10
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	12
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.4	12
29	.00	.00	.00	.00	.00	.18	.00	.00	.00	.00	7.4	10
30	.00	.00	.00	.00	---	.24	.00	1.1	.00	.00	7.4	8.4
31	.00	---	.00	.00	---	.02	---	.26	---	.00	7.4	---
TOTAL	.00	.00	.00	.00	.00	.44	.00	3.22	.30	.00	198.60	275.7
MEAN	.000	.000	.000	.000	.000	.014	.000	.10	.010	.000	6.41	9.19
MAX	.00	.00	.00	.00	.00	.24	.00	1.4	.24	.00	7.4	12
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5
AC-FT	.00	.00	.00	.00	.00	.9	.00	6.4	.6	.00	394	547

CAL YR 1979 TOTAL 6.58 MEAN .018 MAX 4.3 MIN .00 AC-FT 13
WTR YR 1980 TOTAL 478.26 MEAN 1.31 MAX 12 MIN .00 AC-FT 949

07315500 RED RIVER NEAR TERRAL, OK

LOCATION.--Lat 33°52'43", long 97°56'03, Jefferson County, Hydrologic Unit 11130201, near left bank on downstream side of pier of bridge on U. S. Highway 81, 0.5 mi (0.8 km) downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 1.2 mi (1.9 km) south of Terral, 3.6 mi (5.8 km) downstream from Little Wichita River, and at mile 872 (1,403 km).

DRAINAGE AREA.--28,723 mi² (74,393 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

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 (234.790 m) National Geodetic Vertical Datum of 1929. Prior to Jan 12, 1939, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Many small diversions for irrigation, oilfield, and municipal uses upstream from station.

AVERAGE DISCHARGE.--42 years (water years 1939-80), 2,144 ft³/s (60.72 m³/s), 1,553,000 acre-ft/yr (1.91 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s (5,580 m³/s) June 8, 1941, gage height, 28.12 ft (8.571 m); minimum, 43 ft³/s (1.22 m³/s) Mar. 15, 1939.

Maximum stage since at least 1891, that of June 8, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1935, reached a stage of 27.2 ft (8.29 m); floods in 1891 and May 1, 1908, are reported to have reached about the same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 21,000 ft³/s (595 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 19	1400	35,500 1,010	18.34 5.590	June 2	2300	*40,100 1,140	19.06 5.809

Minimum discharge, 143 ft³/s (4.05 m³/s) Sept. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	184	375	899	461	303	328	779	31500	482	255	196
2	233	177	379	666	447	283	323	675	38000	447	237	206
3	221	223	371	540	414	289	336	577	20600	426	226	223
4	205	379	349	455	404	294	415	544	7030	410	211	261
5	205	373	333	429	397	275	630	575	5320	402	204	308
6	212	340	314	415	397	290	478	572	4580	385	197	312
7	214	294	308	383	389	293	386	539	4100	373	196	301
8	216	278	302	364	440	291	321	588	3920	377	207	278
9	216	269	294	359	434	291	280	501	4800	382	216	273
10	199	249	298	353	440	276	264	483	4630	387	207	277
11	195	236	294	349	494	275	247	474	4800	387	211	298
12	193	236	301	340	494	276	235	429	3610	378	224	286
13	191	226	303	338	472	281	228	387	2960	367	225	283
14	187	218	304	338	465	281	223	362	2230	346	227	249
15	192	212	324	331	467	289	220	1340	2640	333	228	229
16	194	204	327	325	466	309	218	6660	3670	312	224	206
17	204	197	333	319	470	322	216	20000	1860	304	214	196
18	380	197	317	319	465	294	212	27500	1480	296	213	179
19	535	194	340	320	444	293	207	32000	1230	285	219	176
20	377	190	348	324	417	279	208	8230	1090	281	209	160
21	311	637	333	385	392	270	199	5010	1040	281	219	153
22	296	3220	335	847	378	269	193	5010	1110	277	251	149
23	249	1750	348	1810	380	264	186	5630	1030	267	253	177
24	229	1820	363	1630	384	269	193	4750	868	276	222	160
25	216	1100	368	1130	371	260	188	4900	772	273	211	172
26	208	738	396	824	355	262	181	3640	711	279	208	219
27	201	570	378	705	348	275	196	3000	653	309	226	381
28	196	484	404	623	339	302	829	2460	596	303	215	3530
29	188	416	442	570	324	325	1350	9920	558	290	206	6390
30	182	393	546	533	---	363	950	20700	519	292	203	7940
31	175	---	837	489	---	345	---	25400	---	279	195	---
TOTAL	7265	16004	11264	17712	12148	8988	10440	193635	157907	10486	6759	24168
MEAN	234	533	363	571	419	290	348	6246	5264	338	218	806
MAX	535	3220	837	1810	494	363	1350	32000	38000	482	255	7940
MIN	175	177	294	319	324	260	181	362	519	267	195	149
AC-FT	14410	31740	22340	35130	24100	17830	20710	384100	313200	20800	13410	47940
CAL YR 1979	TOTAL	581575	MEAN	1593	MAX	29800	MIN	121	AC-FT	1154000		
WTR YR 1980	TOTAL	476776	MEAN	1303	MAX	38000	MIN	149	AC-FT	945700		

RED RIVER BASIN

07315700 MUD CREEK NEAR COURTNEY, OK

LOCATION.--Lat 34°00'20", long 97°34'00", in NW¼SE¼ 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 (6.4 km) downstream from North Mud Creek, 6.0 mi (9.7 km) northwest of Courtney, and at mile 11.5 (18.5 km).

DRAINAGE AREA.--572 mi² (1,481 km²).

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

CORRECTIONS.--The maximum gage height for the water year 1977 has been corrected to 24.65 ft (7.513 m), superseding figure published in the report for 1977.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 727.72 ft (221.809 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, auxiliary water-stage recorder 2.0 mi (3.2 km) downstream from base gage.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--20 years, 108 ft³/s (3.059 m³/s), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) May 1, 1974, gage height, 31.37 ft (9.562 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957, reached a stage of 30.6 ft (9.33 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 16	1530	*3,330 94.3	*25.14 7.663	Sept. 29	0730	1,780 50.4	23.52 7.169
May 31	1015	1,420 40.2	22.66 6.907				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.45	.28	.63	.02	.00	.00	754	.41	.00	.00
2	.00	.00	.31	.23	.52	.00	3.3	.00	102	.33	.00	.00
3	.00	.00	.22	.16	.41	.00	1.3	.00	40	.26	.00	.00
4	.00	.00	.16	.10	.31	.00	.13	.00	31	.17	.00	.00
5	.00	.00	.13	.40	.27	.00	.03	.00	22	.05	.00	.00
6	.00	.00	.08	.91	.22	.00	.00	.00	15	.00	.00	.00
7	.00	.00	.07	.65	.17	.00	.00	.00	11	.00	.00	.00
8	.00	.00	.05	.49	1.8	.00	.00	.00	58	.00	.00	.00
9	.00	.00	.00	.39	2.5	.00	.00	.00	384	.00	.00	.00
10	.00	.00	.00	.33	2.2	.00	.00	.00	75	.00	.00	.00
11	.00	.00	.01	.26	1.5	.00	.00	.00	37	.00	.00	.00
12	.00	.00	.06	.21	1.7	.00	.00	.00	23	.00	.00	.00
13	.00	.00	.01	.15	1.7	.00	.00	.00	9.6	.00	.00	.00
14	.00	.00	.00	.11	1.6	.00	.00	3.1	5.3	.00	.00	.00
15	.00	.00	.00	.10	2.2	.00	.00	917	3.4	.00	.00	.00
16	.00	.00	.00	.08	2.1	.00	.00	2280	2.8	.00	.00	.00
17	.00	.00	.00	.06	1.5	.00	.00	2310	2.4	.00	.00	.00
18	.00	.00	.00	.03	1.1	.00	.00	1750	2.2	.00	.00	.00
19	.00	.00	.00	.05	.85	.00	.00	362	2.1	.00	.00	.00
20	.00	.00	.00	.57	.70	.00	.00	72	83	.00	.00	.00
21	.00	.00	.00	1.7	.57	.00	.00	119	16	.00	.00	.00
22	.00	.00	.00	.95	.39	.00	.00	208	5.3	.00	.00	.00
23	.00	70	.04	8.2	.31	.00	.00	111	2.4	.00	.00	.00
24	.00	38	.00	40	.28	.00	.00	56	1.7	.00	.00	.00
25	.00	12	.00	19	.21	.00	.00	20	1.4	.00	.00	.00
26	.00	6.8	.00	8.9	.14	.00	.00	7.9	1.0	.00	.00	.00
27	.00	3.7	.00	6.0	.11	.00	.00	4.7	.74	.00	.00	23
28	.00	2.0	.26	3.4	.10	.00	.00	3.0	.66	.00	.00	1150
29	.00	1.1	.29	1.9	.07	.00	.00	2.0	.57	.00	.00	1630
30	.00	.72	.72	1.3	---	.00	.00	452	.49	.00	.00	692
31	.00	---	.43	.89	---	.00	---	1310	---	.00	.00	---
TOTAL	.00	134.32	3.29	97.80	26.16	.02	4.76	9987.70	1693.06	1.22	.00	3495.00
MEAN	.000	4.48	.11	3.15	.90	.001	.16	322	56.4	.039	.000	117
MAX	.00	70	.72	40	2.5	.02	3.3	2310	754	.41	.00	1630
MIN	.00	.00	.00	.03	.07	.00	.00	.00	.49	.00	.00	.00
AC-FT	.00	266	6.5	194	52	.04	9.4	19810	3360	2.4	.00	6930
CAL YR 1979 TOTAL	9394.19			MEAN 25.7	MAX 1050	MIN .00	AC-FT 18630					
WTR YR 1980 TOTAL	15443.33			MEAN 42.2	MAX 2310	MIN .00	AC-FT 30630					

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW¼ sec.36, T.9 S., R.1 E., Love County, Okla., Hydrologic Unit 11130201, near center of span on downstream side of bridge on U.S. Highway 77, 0.2 mi (0.3 km) downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 5.0 mi (8.0 km) downstream from Fish Creek, 7.0 mi (11.0 km) north of Gainesville, and at mile 791.5 (1,273.5 km).

DRAINAGE AREA.--30,782 mi² (79,725 km²) of which 5,936 mi² (15,374 km²) is probably noncontributing.

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 (191.387 m) 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.--Records fair. Flow slightly regulated by Lake Kemp, in Texas, since 1943 by Lake Altus (station 07302500), since 1946 by Lake Kickapoo, and since 1967 by Lake Arrowhead and Moss Lake, also in Texas.

COOPERATION.--Gage-height record and 19 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--44 years, 2,677 ft³/s (75.81 m³/s), 1,939,000 acre-ft/yr (2.39 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 168,000 ft³/s (4,758 m³/s) June 9, 1941, gage height, 24.15 ft (7.361 m); maximum gage height, 26.53 ft (8.086 m) May 21, 1951; minimum discharge, 48 ft³/s (1.36 m³/s) Jan. 27, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 24,000 ft³/s (680 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 20	0715	34,400 974	17.37 5.294	June 3	1730	*41,500 1,180	*18.20 5.547

Minimum daily discharge, 182 ft³/s (5.15 m³/s) Sept 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	220	519	362	524	330	316	979	31800	597	260	199
2	285	210	469	548	485	323	352	1050	35800	559	252	196
3	281	205	429	727	454	311	418	778	39900	519	246	193
4	263	200	398	636	433	320	544	668	19000	490	232	185
5	260	200	388	521	414	298	460	588	8830	466	223	185
6	249	262	367	435	395	291	367	533	6860	445	220	190
7	238	386	347	390	376	289	473	522	5680	430	214	208
8	229	405	329	367	407	289	512	532	4810	414	202	260
9	229	420	313	346	481	291	422	527	4760	390	193	274
10	217	389	297	330	508	289	364	529	5410	384	185	281
11	217	343	296	318	477	295	340	500	5430	371	188	278
12	223	328	293	300	451	300	325	458	5280	369	193	274
13	217	314	304	292	442	300	319	484	3910	365	196	263
14	205	300	304	289	469	292	308	436	3040	356	196	263
15	204	292	302	280	476	288	293	558	2490	351	196	263
16	212	275	295	289	452	287	279	6170	1890	341	193	259
17	218	260	281	288	441	299	263	14800	2140	330	193	248
18	220	249	282	279	444	292	253	26800	1990	320	196	233
19	213	245	289	270	460	296	242	31800	1600	309	196	221
20	210	245	292	272	456	318	235	26900	1640	298	196	208
21	422	254	290	308	440	301	229	9360	1540	290	200	193
22	527	246	294	334	423	292	222	7210	1230	292	200	187
23	438	971	316	339	398	284	217	6000	1090	285	205	182
24	362	2300	323	474	385	274	208	5500	1070	285	205	190
25	335	1950	312	1390	361	274	215	5010	1040	278	210	190
26	299	1840	309	1480	362	274	219	4500	921	266	210	200
27	271	1250	308	1140	367	284	221	3950	829	274	211	300
28	247	898	324	882	358	300	210	3240	756	263	208	500
29	226	701	365	737	348	300	195	2820	690	260	208	1700
30	246	593	369	653	---	298	258	11600	634	263	208	9500
31	244	---	360	578	---	304	---	28600	---	266	208	---
TOTAL	8301	16751	10364	15854	12487	9183	9279	203402	202060	11126	6443	17823
MEAN	268	558	334	511	431	296	309	6561	6735	359	208	594
MAX	527	2300	519	1480	524	330	544	31800	39900	597	260	9500
MIN	204	200	281	270	348	274	195	436	634	260	185	182
AC-FT	16470	33230	20560	31450	24770	18210	18400	403400	400800	22070	12780	35350
CAL YR 1979	TOTAL	662910	MEAN	1816	MAX	33600	MIN	200	AC-FT	1315000		
WTR YR 1980	TOTAL	523073	MEAN	1429	MAX	39900	MIN	182	AC-FT	1038000		

RED RIVER BASIN

07316500 WASHITA RIVER NEAR CHEYENNE, OK

LOCATION.--Lat 35°37'35", long 99°40'05", in SE¼ sec.5, T.13 N., R.23 W., Roger Mills County, Hydrologic Unit 11130301, near left bank on downstream side of pier of bridge on U.S. Highway 283, 0.5 mi (0.8 km) downstream from Sergeant Major Creek, 1.0 mi (1.6 km) north of Cheyenne, 5.2 mi (8.4 km) upstream from Dead Indian Creek, and at mile 543.9 (875.1 km).

DRAINAGE AREA.--794 mi² (2,056 km²).

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 (579.419 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). May 1, 1938, to Nov. 16, 1946, and Oct. 1, 1947, to Jan. 11, 1948, nonrecording gage at same site and datum. Jan. 12, 1948, to Feb. 3, 1977, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records poor. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--43 years, 29.2 ft³/s (0.827 m³/s), 21,160 acre-ft/yr (26.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s (1,980 m³/s) Apr. 29, 1954, gage height, 15.24 ft (4.645 m); from rating curve extended above 27,000 ft³/s (765 m³/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 (0.30 m) lower than that in 1954 at site on upstream side of highway fill.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 560 ft³/s (15.9 m³/s) May 28, gage height, unknown; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	78	2.2	9.0	11	13	13	30	110	21	1.5	.00
2	.00	40	3.3	9.4	12	12	13	30	105	18	1.4	.00
3	.00	30	4.7	9.4	13	12	12	30	100	16	1.2	.00
4	.00	24	5.2	9.4	14	16	11	34	98	15	1.1	.00
5	.00	18	5.2	9.4	16	16	12	38	92	13	.87	.00
6	.00	14	5.0	10	18	15	12	44	90	11	.66	.00
7	.00	10	5.0	9.7	18	15	12	46	88	10	.52	.00
8	.00	8.0	4.7	9.0	20	15	12	48	85	8.4	.46	.00
9	.00	6.4	4.7	7.6	19	16	12	49	82	7.2	.43	.00
10	.07	5.0	4.7	7.5	18	15	12	44	82	6.0	.40	.00
11	.14	4.5	5.0	8.6	17	16	12	45	82	5.0	.35	.00
12	.00	5.0	5.0	10	15	16	13	44	82	4.5	.31	.00
13	.00	5.0	4.7	9.7	15	17	13	41	80	3.7	.28	.00
14	.00	5.0	5.4	9.7	16	18	13	39	75	3.2	.26	.00
15	.00	4.9	6.0	9.7	18	18	12	60	71	2.7	.21	.00
16	.00	4.7	6.0	10	17	18	12	165	67	2.4	.18	.00
17	.00	4.5	5.7	9.7	18	18	12	89	63	2.3	.15	.00
18	.00	4.5	6.0	9.7	16	17	10	120	60	2.2	.13	.00
19	.00	4.5	6.6	10	15	16	10	120	55	2.1	.12	.00
20	.00	7.0	7.4	13	18	16	10	105	52	2.0	.10	.00
21	.00	8.0	8.0	18	16	15	11	160	50	1.9	.08	.00
22	.00	7.0	8.0	18	15	16	9.7	110	47	1.9	.06	.00
23	.00	5.0	8.0	18	14	16	12	90	43	1.9	.04	.00
24	.00	5.0	7.7	17	14	15	24	77	40	1.9	.02	.00
25	.00	4.9	7.7	16	14	14	30	60	38	2.0	.01	.00
26	.00	4.2	8.0	16	14	15	30	52	34	1.9	.00	.00
27	.00	4.2	8.0	15	14	15	30	50	32	1.7	.00	.00
28	.00	3.7	8.4	14	14	15	28	560	29	1.7	.00	.00
29	.00	2.8	8.4	13	14	14	29	160	26	1.6	.00	.00
30	108	2.2	8.7	12	---	14	30	140	24	1.5	.00	.00
31	82	---	8.7	11	---	13	---	120	---	1.5	.00	---
TOTAL	190.21	330.0	192.1	358.5	453	477	471.7	2800	1982	175.2	10.84	.00
MEAN	6.14	11.0	6.20	11.6	15.6	15.4	15.7	90.3	66.1	5.65	.35	.000
MAX	108	78	8.7	18	20	18	30	560	110	21	1.5	.00
MIN	.00	2.2	2.2	7.5	11	12	9.7	30	24	1.5	.00	.00
AC-FT	377	655	381	711	899	946	936	5550	3930	348	22	.00
CAL YR 1979 TOTAL	5246.37		MEAN 14.4	MAX 146	MIN .00	AC-FT 10410						
WTR YR 1980 TOTAL	7440.55		MEAN 20.3	MAX 560	MIN .00	AC-FT 14760						

RED RIVER BASIN

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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 (3.5 km) downstream from Quartermaster Creek, 4.7 mi (7.6 km) northeast of Hammon, and at mile 494.5 (795.7 km).

DRAINAGE AREA.--1,387 mi² (3,592 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,643.22 ft (500.853 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--11 years, 29.9 ft³/s (0.847 m³/s), 21,660 acre-ft/yr (26.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft³/s (71.9 m³/s) Apr. 18, 1970, gage height, 19.23 ft (5.861 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) May 31, gage height, 17.80 ft (5.425 m), no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily discharge, 0.47 ft³/s (0.013 m³/s) Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	20	7.4	10	17	20	29	40	789	28	6.1	1.3
2	5.0	23	8.0	10	17	18	30	62	496	26	5.7	1.5
3	4.3	16	10	10	19	24	33	62	359	22	5.0	1.2
4	4.0	14	9.7	10	20	23	31	61	294	22	3.9	1.1
5	3.5	11	10	11	22	22	29	60	253	22	2.8	1.1
6	3.2	9.4	11	11	22	22	28	56	227	21	1.8	.88
7	3.1	8.0	11	10	23	22	26	52	193	20	1.9	.82
8	2.9	7.2	11	9.0	24	22	25	51	174	19	2.8	.64
9	2.9	7.7	10	12	23	21	24	46	170	16	1.9	.53
10	2.8	8.0	10	18	22	21	24	43	161	12	1.4	2.2
11	2.8	8.3	10	17	22	21	23	39	127	12	2.1	1.1
12	2.8	7.7	11	17	25	22	21	37	110	12	2.5	1.0
13	2.8	8.0	10	17	25	23	20	35	110	12	2.3	.65
14	2.8	8.5	11	17	26	23	19	33	102	11	1.9	.88
15	3.0	8.0	11	17	26	23	19	69	96	11	1.9	.66
16	4.6	8.3	10	17	25	23	19	260	86	11	1.9	.57
17	6.7	7.4	9.4	17	24	22	19	136	79	11	1.9	1.1
18	10	10	9.1	19	23	22	18	187	73	11	1.9	1.1
19	8.8	9.7	5.1	18	23	21	18	183	69	9.4	1.9	1.0
20	9.1	11	12	18	27	21	17	159	64	9.4	2.1	.77
21	10	13	12	20	26	21	17	246	61	9.1	2.2	.59
22	10	13	11	22	25	21	17	155	80	9.4	2.2	.47
23	9.4	12	11	23	24	21	17	135	75	9.4	2.2	.47
24	9.1	11	10	23	23	23	17	115	60	9.7	2.9	.47
25	8.8	9.7	10	23	22	23	30	96	48	8.7	3.2	.63
26	8.8	9.7	10	22	22	23	150	81	39	8.1	3.0	.48
27	10	9.7	10	21	22	23	50	72	34	7.8	3.0	1.7
28	9.4	9.1	10	20	22	24	40	72	31	8.0	2.8	3.3
29	10	8.6	10	19	22	26	35	460	29	7.1	2.7	2.8
30	12	7.6	10	18	---	28	32	1060	29	7.4	2.6	2.9
31	16	---	10	18	---	29	---	1600	---	6.9	1.6	---
TOTAL	204.5	314.6	310.7	514.0	663	698	877	5763	4518	409.4	82.1	33.91
MEAN	6.60	10.5	10.0	16.6	22.9	22.5	29.2	186	151	13.2	2.65	1.13
MAX	16	23	12	23	27	29	150	1600	789	28	6.1	3.3
MIN	2.8	7.2	5.1	9.0	17	18	17	33	29	6.9	1.4	.47
AC-FT	406	624	616	1020	1320	1380	1740	11430	8960	812	163	67
CAL YR 1979	TOTAL	10731.10	MEAN	29.4	MAX	326	MIN	2.8	AC-FT	21290		
WTR YR 1980	TOTAL	14388.21	MEAN	39.3	MAX	1600	MIN	.47	AC-FT	28540		

RED RIVER BASIN

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 semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV											
13...	1630	8.0	2180	7.9	10.0	--	--	--	--	--	--
14...	1000	8.5	2150	8.2	7.5	15.2	132	1200	890	260	130
JAN											
06...	1625	12	1910	7.9	6.0	--	--	--	--	--	--
MAR											
15...	1445	23	2050	7.9	17.0	--	--	--	--	--	--
APR											
27...	1614	24	1880	8.2	17.0	--	--	--	--	--	--
MAY											
08...	1150	51	1400	8.0	17.0	9.4	102	560	330	130	56
JUN											
17...	1630	65	1920	7.8	26.0	--	--	--	--	--	--

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV										
13...	--	--	--	--	270	1000	48	--	--	1860
14...	95	15	1.2	7.1	290	1000	46	.5	22	1900
JAN										
06...	--	--	--	--	--	990	58	--	--	1750
MAR										
15...	--	--	--	--	--	840	61	--	--	1430
APR										
27...	--	--	--	--	--	620	48	--	--	1340
MAY										
08...	76	23	1.4	6.2	230	400	44	.5	15	964
JUN										
17...	--	--	--	--	--	830	55	--	--	1580

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
NOV 13...	--	2.53	40.2	--	--	--	--	--	--	--
14...	1740	2.58	43.6	.10	.44	.01	.03	.11	0	4
JAN 06...	--	2.38	56.7	--	--	--	--	--	--	--
MAR 15...	--	1.94	88.8	--	--	--	--	--	--	--
APR 27...	--	1.82	86.8	--	--	--	--	--	--	--
MAY 08...	867	1.31	133	.14	.62	.03	.10	.17	0	4
JUN 17...	--	2.15	277	--	--	--	--	--	--	--

[illegible]

RED RIVER BASIN

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	1900	---	---	2000	---	891	---		
2	---	---	2050	---	---	---	---	---	---	---		
3	---	---	---	---	2170	---	---	---	---	---		
4	---	---	---	---	---	---	---	1450	---	---		
5	---	---	---	---	---	---	---	---	---	---		
6	---	---	---	1910	---	---	---	---	---	---		
7	---	---	---	---	---	---	2010	---	---	---		
8	---	2000	---	---	---	---	---	---	---	---		
9	---	---	---	---	---	2060	---	---	---	---		
10	---	---	---	---	2160	---	---	---	---	---		
11	---	---	---	---	---	---	---	1750	---	---		
12	---	---	---	---	---	---	---	---	---	---		
13	---	2180	---	1890	---	---	---	---	---	---		
14	---	---	---	---	---	---	---	---	---	---		
15	---	---	---	---	---	2050	---	---	---	---		
16	---	---	---	---	---	---	---	---	---	---		
17	---	---	---	---	1760	---	---	---	1920	---		
18	---	---	---	---	---	---	---	---	---	---		
19	---	2250	2110	---	---	---	---	1020	---	---		
20	---	---	---	---	---	---	2370	---	---	2400		
21	2230	---	---	---	---	---	---	---	---	---		
22	---	---	---	---	---	---	---	---	1650	---		
23	---	---	---	1790	---	2100	---	---	---	---		
24	---	---	---	---	1970	---	---	---	---	---		
25	---	---	---	---	---	---	---	---	---	---		
26	---	---	---	1690	---	---	---	1580	---	---		
27	---	2240	1930	---	---	---	1880	---	---	---		
28	---	---	---	---	---	---	---	---	---	---		
29	---	---	---	---	---	---	---	---	2150	---		
30	---	---	---	---	---	---	---	---	---	---		
31	2200	---	---	---	---	---	---	---	---	---		
MEAN	2220	2170	2030	1840	2020	2070	2070	1450	1650	2400		

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	5.5	.0	---	16.0	---	25.0	---		
2	---	---	10.0	---	---	---	---	---	---	---		
3	---	---	---	---	---	---	---	---	---	---		
4	---	---	---	---	---	---	---	21.0	---	---		
5	---	---	---	---	---	---	---	---	---	---		
6	---	---	---	6.0	---	---	---	---	---	---		
7	---	---	---	---	---	---	18.5	---	---	---		
8	---	12.0	---	---	---	---	---	---	---	---		
9	---	---	---	---	---	12.5	---	---	---	---		
10	---	---	---	---	4.5	---	---	---	---	---		
11	---	---	---	---	---	---	---	24.0	---	---		
12	---	---	---	---	---	---	---	---	---	---		
13	---	10.0	---	7.0	---	---	---	---	---	---		
14	---	---	---	---	---	---	---	---	---	---		
15	---	---	---	---	---	17.0	---	---	---	---		
16	---	---	---	---	---	---	---	---	---	---		
17	---	---	---	---	2.0	---	---	---	26.0	---		
18	---	---	---	---	---	---	---	---	---	---		
19	---	14.0	6.0	---	---	---	---	19.5	---	---		
20	---	---	---	---	---	---	22.0	---	---	30.0		
21	23.0	---	---	---	---	---	---	---	---	---		
22	---	---	---	---	---	---	---	---	21.0	---		
23	---	---	---	.5	---	11.0	---	---	---	---		
24	---	---	---	---	1.0	---	---	---	---	---		
25	---	---	---	---	---	---	---	---	---	---		
26	---	---	---	---	---	---	---	26.5	---	---		
27	---	7.0	8.0	1.5	---	---	17.0	---	---	---		
28	---	---	---	---	---	---	---	---	---	---		
29	---	---	---	---	---	---	---	---	30.0	---		
30	---	---	---	---	---	---	---	---	---	---		
31	13.0	---	---	---	---	---	---	---	---	---		
MEAN	18.0	11.0	8.0	4.0	2.0	13.5	18.5	23.0	25.5	30.0		

RED RIVER BASIN

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07324300 FOSS RESERVOIR NEAR FOSS, OK

LOCATION.--Lat 35°32'18", long 99°10'40", in S½ sec.2, T.12 N., R.19 W., Custer County, Hydrologic Unit 11130301, near right end of dam on Washita River, 0.5 mi (0.8 km) upstream from Oak Creek, 3.5 mi (5.6 km) west of Stafford, 6.0 mi (9.7 km) north of Foss, and at mile 474.4 (763.3 km).

DRAINAGE AREA.--1,496 mi² (3,875 km²).

PERIOD OF RECORD.--February 1961 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 October 1961, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Outlet consists of four 6.0 ft x 7.5 ft high pressure gates and one uncontrolled spillway. Storage began Feb. 13, 1961. Capacity, 436,500 acre-ft (538 hm³) at elevation 1,668.6 ft (508.59 m) crest of drop inlet and 256,100 acre-ft (316 hm³) at elevation 1,652.0 ft (503.530 m) conservation pool. Dead storage, 12,420 acre-ft (15.3 hm³) below elevation 1,597.2 ft (486.83 m) 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 - see partial-record stations 353325099111001, 353405099132501, and 353615099135001.

COOPERATION.--Elevations and data on diversions furnished by Foss Reservoir Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 195,800 acre-ft (241 hm³) June 29, 1977, elevation, 1,644.53 ft (501.253 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 187,700 acre-ft (231 hm³) June 3, elevation, 1,643.40 ft (500.908 m); minimum, 160,300 acre-ft (198 hm³) Sept. 30, elevation, 1,639.30 ft (499.659 m).

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,641.20	172,600	--	--
Oct. 31	1,640.70	169,300	-3,300	106
Nov. 30	1,640.60	168,600	-700	97
Dec. 31	1,640.40	167,300	-1,300	112
CAL YR 79	--	--	+1,900	7,164
Jan. 31	1,640.50	168,000	+700	119
Feb. 29	1,640.60	168,600	+600	105
Mar. 31	1,640.70	169,300	+700	102
Apr. 30	1,641.00	171,200	+1,900	102
May 31	1,643.20	186,300	+15,100	84
June 30	1,642.00	177,900	-8,400	164
July 31	1,641.00	171,200	-6,700	318
Aug. 31	1,639.90	164,100	-7,100	550
Sept. 30	1,639.30	160,300	-3,800	194
WTR YR 80	--	--	-12,300	2,053

† Elevation at 0800 on following day.

RED RIVER BASIN

07324400 WASHITA RIVER NEAR FOSS, OK

LOCATION.--Lat 35°32'20", long 99°10'10", in SW¼SW¼ 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 (0.6 km) downstream from Oak Creek, 0.9 mi (1.4 km) downstream from Foss Dam, 2.5 mi (4.0 km) west of Stafford, 6.0 mi (9.7 km) north of Foss, and at mile 473.5 (761.9 km).

DRAINAGE AREA.--1,551 mi² (4,017 km²).

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 (475.5 m) from preliminary survey by Topographic Division.

REMARKS.--Records fair except period June to August, which is poor. Except for 55 mi² (142.4 km²) intervening area, flow completely regulated since 1961 by Foss Reservoir (station 07324300).

AVERAGE DISCHARGE.--19 years (water years 1962-80), 17.6 ft³/s (0.498 m³/s), 12,750 acre-ft/yr (15.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Apr. 19, 1957, gage height, 20.40 ft (6.218 m), from rating curve extended above 3,600 ft³/s (102 m³/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 (7.13 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) May 29, gage height, 17.67 ft (5.386 m); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Feb. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.5	7.5	8.0	7.7	8.6	7.6	7.6	246	7.8	31	8.8
2	5.0	6.0	7.6	7.8	8.2	8.6	59	7.4	180	20	31	8.8
3	5.5	5.6	7.5	7.3	8.3	9.1	19	7.2	290	34	31	8.8
4	5.4	5.8	7.6	7.2	8.3	9.7	11	7.1	520	35	31	8.7
5	5.1	6.0	7.5	7.4	8.3	9.4	10	6.8	750	36	31	8.5
6	4.9	5.6	7.6	7.5	8.4	9.4	10	6.9	907	34	30	8.4
7	4.7	5.5	7.6	7.4	8.7	9.7	10	6.6	902	34	30	8.4
8	4.7	5.5	7.4	7.7	9.8	9.4	9.7	6.4	892	34	30	8.4
9	5.9	5.5	7.2	7.9	8.3	10	9.1	6.4	891	35	30	8.4
10	6.1	5.5	7.4	8.1	8.6	10	9.1	6.6	885	34	30	11
11	5.9	5.7	7.4	7.3	9.3	10	9.1	6.5	835	34	30	10
12	6.1	6.0	7.3	7.2	9.1	10	8.9	6.3	648	35	15	9.8
13	6.4	5.9	7.1	7.0	8.9	9.7	8.9	6.2	257	34	8.9	9.7
14	6.5	5.8	7.1	7.2	8.5	9.7	8.6	6.6	152	34	8.7	9.4
15	5.8	5.9	7.3	7.1	8.4	10	8.6	322	73	35	8.4	9.0
16	6.0	6.1	8.2	7.1	8.3	10	8.6	139	9.7	35	8.4	8.9
17	28	6.2	7.2	7.1	8.7	9.4	8.3	72	9.7	35	8.6	8.8
18	8.5	6.2	7.6	7.1	8.6	9.1	8.2	120	8.6	36	8.4	8.6
19	6.5	6.2	7.7	7.8	8.9	9.4	8.2	347	8.1	33	8.6	8.4
20	6.0	28	7.5	8.5	8.6	9.4	8.2	523	7.8	33	8.6	8.7
21	6.0	7.1	7.4	8.4	9.4	8.7	8.1	252	7.8	32	8.5	8.9
22	6.0	6.7	7.4	7.4	9.5	9.0	8.0	120	7.6	32	8.7	8.5
23	6.0	6.9	7.2	7.6	9.2	9.1	7.9	273	8.4	32	8.5	9.1
24	6.0	6.9	7.5	7.7	9.4	9.1	10	270	8.0	32	8.6	9.1
25	6.0	6.9	7.8	7.9	9.2	8.2	16	266	8.2	32	8.5	8.6
26	6.0	6.8	7.4	8.0	9.6	8.1	8.2	263	8.0	32	8.7	8.4
27	6.0	6.9	7.1	7.8	9.6	8.1	7.8	260	7.8	32	8.4	8.5
28	5.5	6.9	7.4	7.8	6.7	9.1	7.4	156	7.8	32	8.4	8.3
29	5.5	6.9	7.1	7.7	2.8	8.8	7.3	623	7.8	31	10	8.0
30	5.5	7.1	7.3	8.9	---	8.3	7.4	371	7.8	31	9.5	8.3
31	5.5	---	8.7	7.7	---	7.8	---	324	---	31	9.2	---
TOTAL	201.5	207.6	231.6	236.6	247.3	284.9	328.2	4795.6	8551.1	996.8	515.6	265.2
MEAN	6.50	6.92	7.47	7.63	8.53	9.19	10.9	155	285	32.2	16.6	8.84
MAX	28	28	8.7	8.9	9.8	10	59	623	907	36	31	11
MIN	4.5	5.5	7.1	7.0	2.8	7.8	7.3	6.2	7.6	7.8	8.4	8.0
AC=FT	400	412	459	469	491	565	651	9510	16960	1980	1020	526

CAL YR 1979 TOTAL 6959.1 MEAN 19.1 MAX 350 MIN 2.9 AC=FT 13800
WTR YR 1980 TOTAL 16862.0 MEAN 46.1 MAX 907 MIN 2.8 AC=FT 33450

RED RIVER BASIN

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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 bi-monthly on one of these samples. Additional samples were collected semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 22...	1600	6.0	2160	7.7	16.0	--	--	--	--	--	--
NOV 14...	1230	5.7	2100	7.6	11.0	12.8	121	1200	1000	220	150
JAN 14...	0900	7.2	1900	8.1	3.5	--	--	--	--	--	--
FEB 18...	0900	8.9	2070	8.1	1.5	--	--	--	--	--	--
APR 28...	0900	7.4	2330	7.8	13.0	--	--	--	--	--	--
MAY 08...	0840	6.4	2050	7.6	13.0	8.3	85	1100	980	220	140
JUN 23...	0900	8.4	1800	7.7	22.0	--	--	--	--	--	--
AUG 18...	0900	8.4	1920	7.3	24.0	--	--	--	--	--	--

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 22...	--	--	--	--	--	1100	59	--	--	1860
NOV 14...	100	28	1.3	15	140	1100	53	.4	15	1820
JAN 14...	--	--	--	--	--	1000	54	--	--	1780
FEB 18...	--	--	--	--	--	1000	52	--	--	1810
APR 28...	--	--	--	--	--	870	50	--	--	1590
MAY 08...	84	14	1.1	12	150	980	52	.4	15	1800
JUN 23...	--	--	--	--	--	820	41	--	--	1460
AUG 18...	--	--	--	--	--	900	180	--	--	1910

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
OCT 22...	--	2.53	30.1	--	--	--	--	--	--	--
NOV 14...	1740	2.48	28.0	.05	.22	.01	.03	.06	0	4
JAN 14...	--	2.42	34.6	--	--	--	--	--	--	--
FEB 18...	--	2.46	43.5	--	--	--	--	--	--	--
APR 28...	--	2.16	31.8	--	--	--	--	--	--	--
MAY 08...	1590	2.45	31.1	.07	.31	.01	.03	.08	0	2
JUN 23...	--	1.99	33.1	--	--	--	--	--	--	--
AUG 18...	--	2.60	43.3	--	--	--	--	--	--	--

[illegible]

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2290	---	---	---	---	---	---	---	---	---	---	1960
2	---	---	---	---	---	---	---	---	1380	---	---	---
3	---	---	1910	---	---	2090	---	---	---	---	---	---
4	---	---	---	---	2030	---	---	---	---	---	1670	---
5	---	2120	---	---	---	---	---	2150	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	1920	---	---	2380	---	---	1950	---	---
8	2190	---	---	---	---	---	---	---	---	---	---	2190
9	---	---	---	---	---	---	---	---	1950	---	---	---
10	---	---	1900	---	---	2090	---	---	---	---	---	---
11	---	---	---	---	2140	---	---	---	---	---	1740	---
12	---	2100	---	---	---	---	---	2120	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	2360	---	---	---	---	---
15	2190	---	---	1900	---	---	---	---	---	1990	---	2140
16	---	---	---	---	---	---	---	---	1710	---	---	---
17	---	---	1840	---	---	2100	---	---	---	---	---	---
18	---	---	---	---	2070	---	---	---	---	---	1920	---
19	---	2160	---	---	---	---	---	1540	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	1830	---	---	2390	---	---	1960	---	---
22	---	---	---	---	---	---	---	---	---	---	---	1970
23	2160	---	---	---	---	---	---	---	1800	---	---	---
24	---	---	1920	---	---	2050	---	---	---	---	---	---
25	---	---	---	---	2060	---	---	---	---	---	1940	---
26	---	2080	---	---	---	---	---	1950	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	1900	---	---	2330	---	---	1980	---	---
29	2190	---	---	---	---	---	---	---	---	---	---	2140
30	---	---	---	---	---	---	---	---	1750	---	---	---
31	---	---	1790	---	---	2060	---	---	---	---	---	---
MEAN	2200	2120	1870	1890	2080	2080	2370	1940	1720	1970	1820	2080

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	---	---	---	---	---	---	---	---	---	---	23.0
2	---	---	---	---	---	---	---	---	21.0	---	---	---
3	---	---	5.0	---	---	2.0	---	---	---	---	---	---
4	---	---	---	---	2.0	---	---	---	---	---	24.0	---
5	---	12.0	---	---	---	---	---	14.0	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	2.0	---	---	10.0	---	---	23.0	---	---
8	18.0	---	---	---	---	---	---	---	---	---	---	24.0
9	---	---	---	---	---	---	---	---	23.0	---	---	---
10	---	---	6.0	---	---	4.5	---	---	---	---	---	---
11	---	---	---	---	1.0	---	---	---	---	---	25.0	---
12	---	9.5	---	---	---	---	---	15.0	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	3.5	---	---	9.0	---	---	---	---	---
15	22.0	---	---	---	---	---	---	---	---	22.0	---	24.0
16	---	---	---	---	---	---	---	---	21.0	---	---	---
17	---	---	2.0	---	---	5.0	---	---	---	---	---	---
18	---	---	---	---	1.5	---	---	---	---	---	24.0	---
19	---	10.0	---	---	---	---	---	16.0	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	4.0	---	---	13.0	---	---	25.0	---	---
22	16.0	---	---	---	---	---	---	---	---	---	---	22.0
23	---	---	---	---	---	---	---	---	22.0	---	---	---
24	---	---	4.0	---	---	6.0	---	---	---	---	---	---
25	---	---	---	---	3.0	---	---	---	---	---	25.0	---
26	---	7.0	---	---	---	---	---	18.0	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	2.0	---	---	13.0	---	---	23.0	---	---
29	14.0	---	---	---	---	---	---	---	---	---	---	20.0
30	---	---	---	---	---	---	---	---	24.0	---	---	---
31	---	---	3.0	---	---	7.0	---	---	---	---	---	---
MEAN	18.0	9.5	4.0	3.0	2.0	5.0	11.5	16.0	22.0	23.5	24.5	22.5

LOCATION.--Lat 34°31'52", long 98°57'57", in SW¼NE¼ 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 (0.8 km) north of Clinton, 0.8 mi (1.3 km) upstream from Beaver Creek, 4.8 mi (7.7 km) downstream from Barnitz Creek, and at mile 447.4 (719.9 km).

REVISED RECORDS.--WSP 1221: Drainage area.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 25 years (water years 1936-60), 146 ft³/s (4.135 m³/s), 105,700 acre-ft/yr (130 hm³/yr); (since regulation by Foss Reservoir) 20 years (water years 1961-80), 55.8 ft³/s (1.580 m³/s), 40,430 acre-ft/yr (49.9 hm³/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3-4, 1934, reached a stage of 33.9 ft (10.33 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft³/s (49.8 m³/s) May 16, gage height, 16.81 ft (5.124 m); minimum daily discharge, 7.0 ft³/s (0.198 m³/s) Oct. 10.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	16	18	17	16	18	27	26	412	47	29	9.0
2	8.1	14	19	17	18	20	28	27	309	46	29	9.0
3	8.1	14	19	17	18	21	173	28	344	45	29	8.8
4	8.0	14	19	17	21	22	56	23	517	45	29	8.8
5	8.0	13	20	17	21	21	38	22	719	45	29	8.5
6	7.8	13	19	18	21	22	32	20	839	44	29	8.6
7	7.8	13	19	18	21	22	30	18	841	43	29	8.6
8	7.8	13	18	17	24	22	28	17	836	43	29	8.5
9	7.5	14	18	17	20	23	27	17	836	42	29	8.5
10	7.0	14	18	18	21	22	25	16	831	42	29	11
11	8.1	14	18	18	26	23	24	16	835	41	29	12
12	8.5	14	18	20	23	24	23	16	721	40	20	11
13	8.0	14	17	20	22	27	22	16	280	40	13	9.6
14	7.9	14	17	19	23	24	21	16	204	39	12	8.8
15	8.7	14	17	19	22	23	21	263	196	39	12	8.8
16	10	15	16	19	21	22	21	1360	175	37	11	8.9
17	33	15	15	19	18	21	20	375	125	36	11	8.8
18	45	14	16	19	23	21	20	600	66	35	11	9.3
19	15	14	19	21	22	22	20	359	49	34	11	8.6
20	13	18	19	23	21	22	20	504	61	32	11	8.2
21	12	181	20	26	20	22	20	1060	60	31	11	8.1
22	11	60	19	26	20	22	20	494	473	31	11	8.3
23	10	34	18	24	20	22	20	389	377	31	11	8.2
24	10	27	17	23	19	27	22	353	209	30	11	8.8
25	9.9	23	16	22	19	28	100	320	100	30	10	8.9
26	9.9	21	16	20	19	26	58	309	78	30	10	8.8
27	9.8	19	16	18	19	25	41	306	60	30	10	11
28	11	18	17	18	19	28	35	307	54	30	10	11
29	11	17	17	16	19	30	29	637	49	30	9.6	11
30	19	17	17	15	---	29	26	967	48	30	9.4	10
31	18	---	17	14	---	29	---	535	---	30	9.0	---
TOTAL	367.1	701	549	592	596	732	1047	9416	10704	1148	543.0	277.4
MEAN	11.8	23.4	17.7	19.1	20.6	23.6	34.9	304	357	37.0	17.5	9.25
MAX	45	181	20	26	26	30	173	1360	841	47	29	12
MIN	7.0	13	15	14	16	18	20	16	48	30	9.0	8.1
AC=FT	728	1390	1090	1170	1180	1450	2080	18680	21230	2280	1080	550
CAL YR 1979	TOTAL	17599.6	MEAN	48.2	MAX	1240	MIN	7.0	AC=FT	34910		
WTR YR 1980	TOTAL	26672.5	MEAN	72.9	MAX	1360	MIN	7.0	AC=FT	52900		

LOCATION.--Lat 35°07'02", long 98°33'49", in NW¼NW¼ 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 (396.2 m) upstream from Running Creek, 2.7 mi (4.3 km) east of Carnegie, and at mile 353.9 (569.4 km). Records include flow of Running Creek.

WATER-DISCHARGE RECORDS

REMARKS.--Records fair. Some diversion above station for irrigation. October 1942 to May 1949, occasional fluctuation caused by powerplant at Carnegie, 7.5 mi (12.1 km) above station. Some regulation by Foss Reservoir since February 1961 (station 07324300), and by numerous flood-retarding structures.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1903, reached a stage of about 29 ft (8.8 m) at former site and datum, from information by local resident; flood of May 18, 1949, reached a stage of 20.9 ft (6.37 m), from floodmark, at that site and datum.

Minimum daily discharge, 19 ft³/s (0.538 m³/s) Aug. 20, Sept. 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	430	67	66	61	62	103	91	4300	197	48	25
2	31	153	65	63	69	59	101	143	2390	170	44	23
3	30	96	64	62	76	53	98	382	1830	156	46	29
4	30	74	63	61	75	57	95	263	1530	142	47	28
5	30	69	61	61	71	59	134	165	1310	131	45	30
6	31	62	63	61	64	63	153	128	1270	132	40	27
7	32	61	62	59	69	66	110	109	1260	130	38	27
8	31	58	62	59	77	63	92	93	1220	121	37	27
9	31	57	61	59	80	62	83	80	1180	115	36	26
10	29	55	61	59	78	62	79	70	1130	108	41	42
11	32	53	61	59	79	62	76	66	1100	103	41	55
12	34	53	61	59	81	66	73	63	1060	99	37	35
13	26	52	60	59	75	65	70	59	1020	93	34	55
14	26	51	59	59	79	69	69	55	831	89	33	45
15	31	51	60	60	77	68	68	768	538	79	32	36
16	61	52	58	61	75	65	65	3990	450	72	31	28
17	38	52	56	60	72	62	64	5740	424	67	25	29
18	59	51	46	59	68	86	63	4060	359	63	25	25
19	141	48	54	62	68	87	62	1950	302	62	23	25
20	81	59	61	77	68	82	59	2170	305	60	19	24
21	57	541	66	99	71	82	58	5460	288	62	63	21
22	50	808	63	123	69	80	58	5240	682	58	45	23
23	46	384	64	115	67	87	56	3170	1750	58	65	19
24	46	260	62	96	65	100	60	1930	1170	58	45	22
25	41	177	61	85	63	122	100	1740	649	53	37	22
26	38	132	60	79	62	133	365	1440	462	54	30	23
27	38	104	58	73	62	119	166	1200	365	56	27	28
28	38	86	65	68	62	110	171	1090	295	57	27	33
29	38	78	70	53	62	101	129	3470	259	53	26	34
30	61	71	73	49	---	99	103	5460	223	54	26	37
31	845	---	72	48	---	99	---	5960	---	51	26	---
TOTAL	2135	4278	1919	2113	2045	2450	2983	56605	29952	2803	1139	903
MEAN	68.9	143	61.9	68.2	70.5	79.0	99.4	1826	998	90.4	36.7	30.1
MAX	845	808	73	123	81	133	365	5960	4300	197	65	55
MIN	26	48	46	48	61	53	56	55	223	51	19	19
AC=FT	4230	8490	3810	4190	4060	4860	5920	112300	59410	5560	2260	1790
CAL YR 1979	TOTAL	75926	MEAN 208	MAX 3980	MIN 26	AC=FT 150600						
WTR YR 1980	TOTAL	109325	MEAN 299	MAX 5960	MIN 19	AC=FT 216800						

RED RIVER BASIN

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. Additional samples were collected semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 30...	1400	38	2210	7.8	6.0	--	--	--	--	--	--
NOV 29...	1300	76	1625	8.0	4.0	16.4	127	770	600	210	59
DEC 31...	1300	72	2140	8.1	7.0	--	--	--	--	--	--
FEB 22...	1400	69	2250	7.9	13.0	11.6	115	1300	1000	310	120
25...	1300	63	2470	8.0	10.0	--	--	--	--	--	--
APR 28...	1000	181	2000	7.6	15.0	--	--	--	--	--	--
MAY 31...	1400	5977	510	7.8	24.0	8.3	102	200	120	54	15
JUN 09...	0900	1196	1570	7.6	24.0	--	--	--	--	--	--
AUG 25...	1400	35	2130	7.5	30.0	--	--	--	--	--	--

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 30...	--	--	--	--	230	880	130	--	--	1810
NOV 29...	63	20	1.0	8.8	170	600	62	.3	13	1220
DEC 31...	--	--	--	--	--	1100	110	--	--	1980
FEB 22...	120	17	1.5	4.7	220	1100	120	.4	10	2120
25...	--	--	--	--	--	1100	110	--	--	2000
APR 28...	--	--	--	--	--	660	79	--	--	1370
MAY 31...	17	15	.5	8.9	75	140	18	.1	11	328
JUN 09...	--	--	--	--	--	710	47	--	--	1390
AUG 25...	--	--	--	--	--	1100	60	--	--	1860

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

RED RIVER BASIN

07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	1650	---	2270
2	2380	---	---	---	---	---	---	---	611	---	---	---
3	---	---	1940	---	2550	2490	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	1910	---
5	---	---	---	---	---	---	---	1380	---	---	---	---
6	---	1520	---	2210	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	2360	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	1840	---	2460
9	---	---	---	---	---	---	---	---	1570	---	---	---
10	2550	---	2210	---	---	2470	---	---	---	---	---	---
11	---	---	---	---	2350	---	---	---	---	---	1990	---
12	---	2240	---	---	---	---	---	2490	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	2060	---	---	2000	---	---
15	2520	---	---	---	---	---	---	---	---	---	---	2460
16	---	---	---	---	---	---	---	---	1750	---	---	---
17	---	---	---	2230	---	2420	---	---	---	---	---	---
18	---	---	---	---	---	---	---	703	---	---	1880	---
19	---	2380	---	---	2440	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	1290	---	---	2100	---	---	---	---	---	2100	---	---
22	---	---	---	---	---	---	2880	---	---	---	---	2280
23	---	---	---	---	---	---	---	---	918	---	---	---
24	---	---	---	---	---	2470	---	---	---	---	---	---
25	---	---	---	---	2470	---	---	---	---	---	2130	---
26	---	1020	---	---	---	---	---	811	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	2070	---	---	2000	---	---	2160	---	---
29	---	---	---	---	---	---	---	---	---	---	---	2460
30	2210	---	---	---	---	---	---	---	---	---	---	---
31	---	---	2140	---	---	2460	---	---	---	---	---	---
MEAN	2190	1790	2100	2150	2450	2460	2530	1350	1210	1950	1980	2390

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	32.0	---	26.0
2	20.0	---	---	---	---	---	---	---	25.0	---	---	---
3	---	---	7.0	---	6.0	6.0	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	30.0	---
5	---	---	---	---	---	---	---	22.0	---	---	---	---
6	---	5.0	---	4.0	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	20.0	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	27.0	---	26.0
9	---	---	---	---	---	---	---	---	24.0	---	---	---
10	15.0	---	7.0	---	---	10.0	---	---	---	---	---	---
11	---	---	---	---	5.0	---	---	---	---	---	27.0	---
12	---	6.0	---	---	---	---	---	26.0	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	16.0	---	---	30.0	---	---
15	19.0	---	---	---	---	---	---	---	---	---	---	27.0
16	---	---	---	---	---	---	---	---	26.0	---	---	---
17	---	---	1.0	8.0	---	12.0	---	---	---	---	---	---
18	---	---	---	---	---	---	---	22.0	---	---	30.0	---
19	---	12.0	---	---	5.0	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	17.0	---	---	8.0	---	---	---	---	---	29.0	---	---
22	---	---	---	---	---	---	20.0	---	---	---	---	26.0
23	---	---	---	---	---	---	---	---	25.0	---	---	---
24	---	---	10.0	---	---	10.0	---	---	---	---	---	---
25	---	---	---	---	10.0	---	---	---	---	---	30.0	---
26	---	10.0	---	---	---	---	---	24.0	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	15.0	---	---	32.0	---	---
29	---	---	---	---	---	---	---	---	---	---	---	19.0
30	6.0	---	---	---	---	---	---	---	---	---	---	---
31	---	---	7.0	---	---	11.0	---	---	---	---	---	---
MEAN	15.5	8.5	6.5	5.0	6.5	10.0	14.0	23.5	25.0	30.0	29.5	25.0

505

LOCATION.--Lat 35°17'26", long 98°35'38", in NW¼E¼ sec.5, T.9 N., R.13 W., Caddo County, Hydrologic Unit 11130302, near right abutment of bridge on downstream side of State Highway 152, 0.5 mi (0.8 km) downstream from Fivemile Creek, 2.4 mi (3.9 km) southwest of Eakly, 2.5 mi (4.0 km) upstream from Fort Cobb Reservoir, and at mile 22.9 (36.8 km).

PERIOD OF RECORD.--October 1968 to current year.

REMARKS.-Records good. Some regulation by three small reservoirs having combined surface-area of 262 acres (1.06 km²) and capacity of 3,100 acre-ft (3.82 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 20.43 ft (6.227 m) June 24, 1975 (discharge not determined); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s (113 m³/s) June 22, gage height, 19.65 ft (5.989 m); minimum daily, 2.5 ft³/s (0.071 m³/s) Sept. 22, 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	25	9.0	11	9.0	9.5	9.6	12	26	14	3.8	3.0
2	3.0	16	8.9	11	10	10	9.8	46	21	13	3.5	3.2
3	3.1	12	8.9	10	10	9.8	10	22	19	12	3.6	3.3
4	3.2	10	8.8	10	10	10	9.8	15	17	11	4.4	3.1
5	3.3	9.8	8.7	10	10	9.8	9.4	13	16	10	3.6	2.8
6	3.3	8.9	8.8	10	10	9.7	9.8	12	14	10	3.4	2.8
7	3.3	7.7	8.4	10	11	9.6	8.5	11	13	10	3.3	2.8
8	3.3	7.7	8.3	9.7	18	9.6	8.5	10	12	9.9	3.2	3.0
9	3.2	7.8	8.3	9.6	13	9.6	8.9	9.7	12	9.8	3.2	3.3
10	3.3	7.7	8.5	10	12	9.6	8.9	9.1	11	9.5	3.2	4.0
11	3.7	7.3	8.8	10	13	9.7	8.0	8.4	11	9.4	3.1	3.5
12	3.8	7.2	9.3	10	12	12	8.2	7.7	9.9	9.5	3.0	3.2
13	3.6	7.3	8.6	9.8	12	11	8.0	7.0	9.3	9.3	3.3	2.9
14	3.5	7.4	8.5	10	12	10	7.8	7.2	8.6	8.9	3.1	2.8
15	5.5	7.4	8.6	11	12	10	7.6	266	8.3	8.5	2.9	2.7
16	5.6	7.4	8.4	11	11	10	7.4	136	8.4	7.9	2.8	2.6
17	5.2	7.7	8.9	10	10	10	7.4	29	11	7.5	2.6	2.5
18	5.6	7.8	8.5	11	10	9.9	8.0	202	9.0	7.1	2.7	2.8
19	5.0	7.8	8.9	14	11	9.0	7.6	41	8.2	7.0	2.9	3.1
20	4.6	40	9.1	22	11	8.7	7.4	26	31	6.6	3.0	3.1
21	4.6	56	9.5	19	10	9.7	7.6	46	15	6.5	6.7	2.7
22	4.9	25	9.6	14	10	9.0	7.8	22	1820	6.5	3.6	2.5
23	4.9	18	9.6	12	10	12	7.8	17	464	6.2	3.2	2.5
24	5.2	14	9.4	11	10	16	75	15	246	6.0	3.5	3.2
25	5.1	13	9.3	10	10	12	105	13	87	5.9	3.3	3.1
26	5.0	12	9.1	9.5	11	10	25	12	40	5.6	3.2	3.1
27	5.0	11	9.2	8.8	11	10	18	11	23	5.3	3.2	3.8
28	5.1	10	14	8.6	10	11	14	11	17	5.1	3.1	4.5
29	5.2	9.9	14	8.3	10	11	13	562	16	4.6	3.2	4.5
30	29	9.5	12	8.5	---	11	12	79	15	4.2	3.1	4.5
31	50	---	11	8.4	---	11	---	37	---	3.8	3.1	---
TOTAL	202.2	398.3	290.9	338.2	319.0	320.2	455.8	1715.1	3018.7	250.6	103.8	94.9
MEAN	6.52	13.3	9.38	10.9	11.0	10.3	15.2	55.3	101	8.08	3.35	3.16
MAX	50	56	14	22	18	16	105	562	1820	14	6.7	4.5
MIN	3.0	7.2	8.3	8.3	9.0	8.7	7.4	7.0	8.2	3.8	2.6	2.5
AC=FT	401	790	577	671	633	635	904	3400	5990	497	206	188
CAL YR 1979	TOTAL	4116.3	MEAN	11.3	MAX	184	MIN	3.0	AC=FT	8160		
WTR YR 1980	TOTAL	7507.7	MEAN	20.5	MAX	1820	MIN	2.5	AC=FT	14890		

RED RIVER BASIN

07325900 FORT COBB RESERVOIR NEAR FORT COBB, OK

LOCATION.--Lat 35°09'30", long 98°27'40", in SE¼ sec.21, T.8 N., R.12 W., Caddo County, Hydrologic Unit 11130302, in control house at right center of dam on Cobb Creek, 4.0 mi (6.4 km) northwest of Fort Cobb, and at mile 7.5 (12.1 km).

DRAINAGE AREA.--304 mi² (787 km²).

PERIOD OF RECORD.--March 1959 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 October 1961, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by earth dam. The outlet consists of two sets of controlled 5 ft x 5 ft steel gates and a uncontrolled concrete spillway. Storage began Mar. 30, 1959. Conservation pool was first filled in June 1962. Capacity, 143,700 acre-ft (177 hm³) at elevation 1,354.8 ft (412.94 m) crest of drop inlet, 80,010 acre-ft (98.7 hm³) at elevation 1,342.0 ft (409.04 m) conservation pool, and 1,664 acre-ft (2.05 hm³) at elevation 1,300.0 ft (396.24 m) 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, 102,600 acre-ft (127 hm³) Sept. 26, 1965, elevation, 1,347.10 ft (410.596 m); minimum since conservation pool was first filled, 54,650 acre-ft (67.4 hm³) Oct. 19, 1972, elevation 1,335.06 ft (406.926 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 87,340 acre-ft (108 hm³) June 24, elevation, 1,343.74 ft (409.572 m); minimum, 69,840 acre-ft (86.1 hm³) Sept. 30, elevation, 1,339.41 ft (408.252 m).

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,339.32	69,500	--	--
Oct. 31	1,338.61	66,860	-2,640	867
Nov. 30	1,338.53	66,570	-290	868
Dec. 31	1,338.43	66,210	-360	862
CAL YR 79	--	--	-1,720	10,153
Jan. 31	1,338.47	66,350	+140	761
Feb. 29	1,338.52	66,530	+180	849
Mar. 31	1,338.56	66,680	+150	871
Apr. 30	1,338.74	67,340	+660	804
May 31	1,341.64	78,540	+11,200	823
June 30	1,342.14	80,580	+2,040	929
July 31	1,340.98	75,900	-4,680	1,117
Aug. 31	1,340.19	72,810	-3,090	715
Sept. 30	1,339.41	69,840	-2,970	1,031
WTR YR 80	--	--	+340	10,497

† Elevation at 0800 on following day.

RED RIVER BASIN

507

07326000 COBB CREEK NEAR FORT COBB, OK

LOCATION.--Lat 35°08'37", long 98°26'33", in NE¼NE¼ sec.27, T.8 N., R.12 W., Caddo County, Hydrologic Unit 11130302, on left bank 10 ft (3.0 m) upstream from county road bridge, 0.3 mi (0.5 km) upstream from Punjo Creek, 1.2 mi (1.9 km) downstream from Fort Cobb Dam, 3.0 mi (4.8 km) north of Fort Cobb, and at mile 5.8 (9.3 km).

DRAINAGE AREA.--313 mi² (811 km²). Area at site used prior to Oct. 1, 1969, 319 mi² (826 km²).

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 1,259.49 ft (383.893 m), U.S. Bureau of Reclamation datum. 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 (1.3 km) downstream at datum 6.92 ft (2.109 m) lower.

REMARKS.--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 ft³/s (1.42 m³/s) 36,340 acre-ft/yr (44.8 hm³/yr); (since regulation by Fort Cobb Reservoir) 22 years (water years 1959-80), 16.8 ft³/s (0.476 m³/s), 12,170 acre-ft/yr (15.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) May 17, 1949, gage height, 18.72 ft (5.706 m), from floodmark in gage well at former site and datum, from rating curve extended above 4,300 ft³/s (122 m³/s) on basis of contracted-opening measurements at gage heights 16.62 ft (5.066 m), 17.58 ft (5.358 m) and 18.72 ft (5.706 m), at former site and datum; minimum daily, 0.2 ft³/s (0.006 m³/s) Sept. 20, 24-28, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1937, reached a stage of 19.3 ft (5.88 m), site and datum used in 1939, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 918 ft³/s (26.0 m³/s) May 29, gage height, 11.65 ft (3.55 m); minimum daily, 0.54 ft³/s (0.015 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.1	2.7	2.4	3.7	3.3	2.9	4.4	4.6	6.8	1.9	2.1
2	1.8	3.1	2.7	2.4	3.7	3.3	2.4	8.7	4.4	3.6	1.6	2.0
3	1.9	3.0	2.7	2.4	3.7	3.1	1.6	4.3	4.2	2.7	1.5	1.9
4	1.9	2.6	2.7	2.4	3.6	3.0	1.4	3.6	5.7	2.1	1.7	1.8
5	1.8	2.6	2.7	2.4	3.6	2.9	1.5	3.7	4.2	1.9	2.4	1.8
6	1.6	2.7	2.7	2.6	3.7	2.7	1.7	4.1	3.5	1.6	2.2	1.8
7	1.7	2.7	2.7	2.6	4.2	2.7	1.7	4.2	3.0	1.6	2.1	2.2
8	1.9	2.4	2.7	2.6	4.8	2.7	1.7	4.4	2.8	1.9	1.7	1.8
9	2.0	2.3	2.6	2.6	4.0	2.4	1.7	4.7	4.1	1.6	1.7	1.6
10	2.2	2.3	2.7	2.6	4.0	2.4	1.9	5.1	3.2	1.5	1.7	1.9
11	2.6	2.2	2.7	2.6	4.0	2.3	2.3	5.3	2.9	1.3	1.4	1.9
12	2.2	2.2	2.6	2.6	4.0	3.1	2.1	5.5	2.9	.87	.85	2.0
13	1.7	2.1	2.6	2.7	3.7	2.5	2.1	5.6	2.5	.81	.92	2.2
14	1.7	2.3	2.6	2.7	3.9	2.1	1.9	6.8	2.4	.70	.77	2.0
15	1.7	2.3	2.6	2.7	3.7	2.2	2.1	51	2.3	.54	3.0	1.9
16	1.8	2.3	2.6	3.6	3.7	2.3	1.7	12	2.0	1.0	2.4	2.1
17	1.6	2.7	2.6	3.6	3.6	2.3	1.9	7.2	1.9	.70	2.8	2.0
18	2.0	3.0	2.6	4.6	3.6	2.3	1.6	21	1.6	2.6	1.3	2.1
19	1.6	2.9	2.6	6.2	3.4	2.4	1.4	7.4	1.5	3.4	1.1	2.0
20	1.6	8.6	2.6	5.6	3.4	2.4	1.7	12	6.8	3.3	1.9	1.9
21	2.2	4.0	2.6	5.1	3.4	2.4	2.0	14	1.6	1.3	2.6	2.0
22	2.7	3.4	2.6	4.6	3.3	2.6	2.3	6.3	118	.93	1.8	1.4
23	3.0	3.0	2.6	4.6	3.3	3.8	1.8	5.8	4.4	1.1	1.7	.71
24	2.1	3.1	2.6	4.6	3.1	3.6	2.7	6.0	220	.75	1.8	.60
25	2.3	3.1	2.6	4.6	3.1	3.3	3.6	6.2	531	.75	1.4	.74
26	2.3	3.1	2.4	4.0	3.1	3.3	3.4	6.0	523	.66	1.0	.80
27	2.4	3.1	2.4	3.9	3.1	3.3	3.4	6.4	520	1.3	1.1	1.9
28	2.6	2.7	3.7	3.9	3.1	3.4	3.3	6.5	515	1.1	1.4	2.2
29	2.7	2.7	2.9	3.9	3.1	3.3	3.4	150	448	.61	1.6	2.0
30	3.1	2.7	2.6	3.9	---	3.3	3.8	6.6	283	.67	2.3	1.9
31	3.0	---	2.4	3.7	---	3.2	---	5.0	---	1.9	2.7	---
TOTAL	65.8	88.3	82.4	108.7	104.6	87.9	67.0	399.8	3230.5	51.79	54.34	53.25
MEAN	2.12	2.94	2.66	3.51	3.61	2.84	2.23	12.9	108	1.67	1.75	1.78
MAX	3.1	8.6	3.7	6.2	4.8	3.8	3.8	150	531	6.8	3.0	2.2
MIN	1.6	2.1	2.4	2.4	3.1	2.1	1.4	3.6	1.5	.54	.77	.60
AC-FT	131	175	163	216	207	174	133	793	6410	103	108	106

CAL YR 1979 TOTAL 1004.20 MEAN 2.75 MAX 34 MIN 1.4 AC-FT 1990
WTR YR 1980 TOTAL 4394.38 MEAN 12.0 MAX 531 MIN .54 AC-FT 8720

LOCATION.--Lat 35°05'06", long 98°14'35", in NW¼ sec.15, T.7 N., R.10 W., Caddo County, Hydrologic Unit 11130302, at left bank 35 ft (10.7 m) upstream from bridge on U.S. Highway 281 at north edge of Anadarko, 8.1 mi (13.0 km) upstream from Sugar Creek, and at mile 305.2 (491.1 km).

PERIOD OF RECORD.--October 1902 to September 1908; June 1924 to June 1925, published as "near Anadarko", October 1935 to February 1938; October 1963 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,150.00 ft (350.520 m) National Geodetic Vertical Datum of 1929. October 26, 1902, to June 30, 1908, nonrecording gage at former bridge 125 ft (38.1 m) downstream at datum estimated to be 2.8 ft (0.85 m) higher. May 25, 1924, to June 30, 1925, nonrecording gage at county road bridge 14 mi (22.5 km) downstream at different datum. Jan. 10, 1936, to Mar. 7, 1938, nonrecording gage on upstream side of bridge on U.S. Highway 281 at datum 1.88 ft (0.573 m) higher.

AVERAGE DISCHARGE.--25 years (water years 1903-08, 1936-37, 1964-80), 371 ft³/s (10.51 m³/s), 268,800 acre-ft/yr (331 hm³/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1949, reached an elevation of 1,176.7 ft (358.66 m), from flood-mark, at right bank on downstream side of bridge on U.S. Highway 281.

DATE	TIME	DISCHARGE		GAGE	HEIGHT	DATE	TIME	DISCHARGE		GAGE	HEIGHT
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 19	0430	4,410	125	16.65	5.075	June 2	1200	*5,170	146	*18.24	5.560
May 23	1245	4,750	135	17.38	5.297						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	458	98	100	72	87	151	148	4810	390	76	40
2	49	411	94	96	76	85	156	153	5040	339	75	40
3	44	186	90	92	87	85	155	201	3510	265	72	39
4	43	125	89	89	97	81	147	377	2040	247	70	38
5	41	101	89	88	97	80	139	292	1590	234	68	38
6	43	88	88	88	94	81	157	183	1320	215	67	38
7	43	81	87	87	92	85	215	165	1280	196	65	38
8	43	79	86	89	97	88	166	122	1260	186	63	38
9	43	78	85	89	100	90	145	123	1230	170	62	37
10	43	76	86	92	97	90	135	110	1160	164	60	41
11	43	74	86	93	102	92	129	101	1130	150	58	46
12	43	74	87	92	97	96	125	94	1090	142	57	45
13	43	74	86	92	100	102	122	89	1060	140	57	55
14	42	73	87	93	97	103	120	85	998	136	56	51
15	41	73	85	95	97	106	119	131	817	130	53	79
16	43	73	84	95	97	113	117	734	557	120	52	63
17	47	79	83	95	92	118	116	2890	501	115	50	52
18	51	75	81	96	92	118	116	4190	487	111	50	48
19	53	74	82	102	90	122	113	3980	424	101	49	47
20	97	80	76	112	80	129	113	2020	365	94	47	45
21	105	122	84	123	60	127	111	3330	350	92	47	43
22	83	462	86	129	91	129	106	4360	400	90	46	42
23	74	667	91	152	93	140	101	4680	1000	89	57	40
24	64	373	91	157	92	146	106	4030	1800	87	50	40
25	58	262	90	144	90	158	104	2080	1400	85	55	35
26	55	185	89	129	74	168	108	1700	1000	83	54	34
27	53	139	86	120	52	190	388	1350	700	82	48	34
28	51	125	112	113	86	185	203	1110	540	80	44	37
29	50	114	111	107	87	174	185	2490	480	80	43	42
30	50	103	104	100	---	161	173	4410	420	78	42	46
31	50	---	99	80	---	157	---	4550	---	77	42	---
TOTAL	1635	4984	2774	3229	2578	3686	4341	50278	38759	4568	1735	1311
MEAN	52.7	166	89.5	104	88.9	119	145	1622	1292	147	56.0	43.7
MAX	105	667	112	157	102	190	388	4680	5040	390	76	79
MIN	41	73	76	80	52	80	101	85	350	77	42	34
AC=FT	3240	9890	5500	6400	5110	7310	8610	99730	76880	9060	3440	2600
CAL YR 1979	TOTAL	85399	MEAN 234	MAX 3940	MIN 41	AC=FT 169400						
WTR YR 1980	TOTAL	119878	MEAN 328	MAX 5040	MIN 34	AC=FT 237800						

RED RIVER BASIN

509

07327490 LITTLE WASHITA RIVER NEAR NINNEKAH, OK

LOCATION.--Lat 34°56'41", long 97°57'08", in SE¼SE¼ 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 (1.6 km) upstream from Rock Creek, 1.5 mi (2.4 km) west of Ninneka, 5.5 mi (8.8 km) south of Chickasha, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--208 mi² (539 km²).

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

REVISED RECORDS.--WRD Okla. 1971, 1964-65 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,065.94 ft (324.899 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Small diversions above station for irrigation.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--17 years, 29.0 ft³/s (0.821 m³/s), 21,010 acre-ft/yr (25.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,560 ft³/s (214 m³/s) May 10, 1964, gage height, 20.65 ft (6.294 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,060 ft³/s (115 m³/s) May 29, gage height, 22.30 ft (6.79 m), no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 0.30 ft³/s (0.008 m³/s) Sept. 22.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	9.2	12	23	21	16	16	25	367	9.5	1.6	.50
2	4.7	8.6	12	20	21	17	18	46	223	8.2	1.6	.50
3	4.7	9.2	12	19	22	20	22	33	140	7.8	1.5	1.0
4	4.7	9.2	12	17	22	18	17	30	97	7.4	1.3	1.1
5	4.3	9.2	12	16	21	17	14	26	74	7.1	1.3	1.0
6	4.3	9.2	13	17	21	17	13	22	60	7.1	1.3	1.0
7	3.8	9.8	13	17	25	16	12	20	48	6.3	1.3	.90
8	3.4	9.8	13	17	57	16	11	18	55	5.6	1.3	.90
9	2.9	9.8	13	17	48	15	11	15	55	5.0	1.5	.90
10	3.8	9.8	13	17	25	14	12	14	44	5.0	1.5	.90
11	3.8	9.8	15	19	39	14	12	12	36	5.0	1.5	.90
12	4.3	10	17	17	38	16	12	11	32	9.1	1.5	.90
13	3.8	10	20	16	32	17	12	9.9	28	11	1.5	.80
14	3.8	11	20	15	30	16	12	9.9	23	11	1.3	.50
15	4.3	13	15	15	30	16	12	68	19	14	1.3	.50
16	5.2	13	15	16	29	16	11	101	18	12	1.1	.50
17	5.2	13	13	16	23	16	11	45	20	8.6	1.0	.50
18	5.2	14	13	17	25	15	11	36	19	6.7	.90	.50
19	5.2	14	16	51	25	14	20	32	20	6.3	.90	.90
20	5.7	19	22	154	25	14	28	39	49	6.3	.90	.80
21	6.3	46	19	69	23	16	28	151	38	6.0	.90	.50
22	11	28	18	40	20	15	25	68	72	6.7	.90	.30
23	6.8	18	22	32	19	28	22	42	37	3.3	.90	.50
24	5.7	15	28	25	17	32	21	29	31	2.2	.80	1.0
25	5.7	13	23	25	19	24	28	22	27	2.0	.80	1.6
26	6.3	13	22	25	19	18	39	18	19	2.0	.80	2.2
27	5.7	12	22	25	19	19	36	17	17	1.8	.70	3.3
28	6.3	11	84	23	16	21	28	16	14	1.8	.80	5.6
29	6.8	9.8	59	24	18	22	25	2400	12	2.0	1.3	6.0
30	12	9.2	37	21	---	20	24	1710	11	2.0	1.3	6.3
31	10	---	27	21	---	18	---	818	---	1.8	.90	---
TOTAL	170.4	395.6	652	846	749	553	563	5903.8	1705	190.6	36.20	42.80
MEAN	5.50	13.2	21.0	27.3	25.8	17.8	18.8	190	56.8	6.15	1.17	1.43
MAX	12	46	84	154	57	32	39	2400	367	14	1.6	6.3
MIN	2.9	8.6	12	15	16	14	11	9.9	11	1.8	.70	.30
AC-FT	338	785	1290	1680	1490	1100	1120	11710	3380	378	72	85

CAL YR 1979 TOTAL 14255.80 MEAN 39.1 MAX 1420 MIN 2.9 AC-FT 28280
WTR YR 1980 TOTAL 11807.40 MEAN 32.3 MAX 2400 MIN .30 AC-FT 23420

RED RIVER BASIN

07328070 WINTER CREEK NEAR ALEX, OK

LOCATION.--Lat 34°59'35", long 97°45'40", in NE¼ sec.18, T.6 N., R.5 W., Grady County, Hydrologic Unit 11130303, at left bank 1,000 ft (304.8 m) downstream from county road bridge, 0.7 mi (1.1 km) downstream from East Winter Creek, 3.2 mi (5.2 km) upstream from mouth, and 5.5 mi (8.9 km) north of Alex.

DRAINAGE AREA.--33 mi² (86 km²).

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 (316.992 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 8.20 ft (2.499 m) higher.

REMARKS.--Records fair. Flow regulated by 16 flood-retarding structures, combined capacity, 1,050 acre-ft (1.29 hm³). Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years, 8.83 ft³/s (0.250 m³/s), 6,400 acre-ft/yr (7.89 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,080 ft³/s (172 m³/s) May 27, 1978 gage height, 17.35 ft (5.288 m); no flow in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 634 ft³/s (18.0 m³/s) at 1900 Nov. 20, gage height, 13.28 ft (4.048 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily discharge, 0.03 ft³/s (0.001 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	5.5	5.1	10	7.2	6.8	5.1	8.8	24	3.1	.12	.03
2	1.2	5.2	4.9	8.8	7.5	6.6	7.0	23	20	2.2	.11	.05
3	1.0	4.7	4.7	7.6	7.4	6.5	7.2	21	15	2.0	.12	.06
4	1.5	4.3	4.6	6.9	7.4	6.5	6.1	9.5	14	2.5	.11	.04
5	1.1	4.2	4.7	6.6	7.2	6.3	5.8	7.3	11	2.2	.09	.03
6	1.4	3.8	4.6	6.2	7.0	6.1	5.6	6.5	9.8	2.2	.08	.04
7	1.7	3.6	4.6	5.6	8.7	6.0	5.4	6.0	8.8	2.3	.06	.03
8	2.0	3.9	4.5	5.4	14	5.9	5.1	5.8	13	2.3	.07	.04
9	1.8	3.9	4.4	5.2	11	5.8	4.6	5.3	13	2.1	.06	.03
10	1.7	3.6	4.2	5.4	10	5.8	3.9	4.9	11	1.1	.06	1.8
11	1.7	3.5	4.1	5.3	9.6	5.9	3.3	4.4	10	1.1	.07	.15
12	1.7	3.5	5.0	4.9	9.0	7.2	3.3	4.2	8.2	.89	.07	.12
13	1.7	3.5	5.0	4.9	8.1	6.7	3.1	4.0	7.3	.89	.15	.12
14	1.7	3.5	4.4	4.9	7.9	6.0	4.0	3.5	6.5	.73	.13	.08
15	1.8	3.5	4.4	4.9	8.4	5.9	4.3	87	6.0	.62	.11	.06
16	1.9	3.5	4.1	4.9	8.3	6.6	4.4	71	6.5	.53	.06	.11
17	13	3.5	3.4	4.9	8.1	6.7	4.3	51	6.0	.55	.05	.14
18	8.4	3.6	4.3	5.3	8.1	5.4	4.6	81	6.0	.44	.05	.10
19	6.4	3.7	3.9	19	8.3	5.2	4.6	49	4.9	.39	.04	.08
20	5.2	74	3.9	29	8.0	6.1	4.4	35	31	.33	.04	.06
21	9.0	55	3.9	20	7.4	5.7	4.2	34	16	.35	.06	.05
22	10	31	3.9	15	7.1	5.3	4.2	26	26	.35	.05	.05
23	5.7	20	5.3	12	7.0	10	5.3	21	18	.28	.03	.08
24	5.0	14	4.9	11	6.9	8.8	10	18	13	.27	.03	.10
25	5.0	11	4.3	10	6.7	7.4	36	14	9.7	.26	.03	.09
26	5.1	8.9	4.2	9.0	6.5	6.5	46	13	7.8	.24	.03	.09
27	4.5	7.7	4.3	7.8	6.5	7.1	13	11	6.5	.22	.04	.27
28	3.9	6.5	32	7.3	6.6	8.0	8.8	48	5.3	.19	.05	.94
29	3.4	5.3	22	7.2	6.8	7.7	7.9	134	4.7	.18	.05	1.5
30	18	4.9	16	7.5	---	6.9	6.8	82	4.0	.15	.04	1.4
31	7.0	---	12	7.2	---	6.0	---	34	---	.13	.03	---
TOTAL	134.9	312.8	201.6	269.7	232.7	203.4	238.3	923.2	343.0	31.09	2.09	8.07
MEAN	4.35	10.4	6.50	8.70	8.02	6.56	7.94	29.8	11.4	1.00	.067	.27
MAX	18	74	32	29	14	10	46	134	31	3.1	.15	1.8
MIN	1.0	3.5	3.4	4.9	6.5	5.2	3.1	3.5	4.0	.13	.03	.03
AC-FT	268	620	400	535	462	403	473	1830	680	62	4.1	16
CAL YR 1979	TOTAL	6418.26	MEAN	17.6	MAX	757	MIN	.16	AC-FT	12730		
WTR YR 1980	TOTAL	2900.85	MEAN	7.93	MAX	134	MIN	.03	AC-FT	5750		

RED RIVER BASIN

511

07328100 WASHITA RIVER AT ALEX, OK

LOCATION.--Lat 34°55'35", long 97°46'30", in NW¼ 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 mile (1.6 km) north of Alex, 3.8 miles (6.1 km) downstream from Winter Creek, and at mile 226.5 (362.4 km).

DRAINAGE AREA.--4,787 mi² (12,398 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft (304.800 m) above mean sea level.

REMARKS.--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.--16 years, 386 ft³/s (10.93 m³/s), 279,700 acre-ft/yr (345 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,350 ft³/s (265 m³/s) May 7, 1969, gage height, 17.83 ft (5.435 m); maximum gage height 18.34 ft (5.590 m); June 2, 1973; no flow Aug. 13-18, 1970, Aug. 30 to Sept. 1, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft³/s (108 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 19	0600	4,420 125	12.47 3.801	May 30	1130	*6,940 197	*15.63 4.764
May 25	1345	4,090 116	12.01 3.661				

Minimum daily discharge, 32 ft³/s (0.91 m³/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	379	140	185	118	124	182	348	4830	909	73	37
2	79	816	132	177	140	134	174	548	4620	735	72	35
3	72	496	130	153	143	153	172	461	4600	552	72	36
4	72	345	127	153	147	161	178	410	4470	454	72	38
5	74	226	126	149	152	150	184	362	2950	389	71	35
6	71	183	125	144	155	147	180	458	2120	348	70	34
7	71	154	124	141	156	147	169	377	1680	308	68	32
8	69	140	123	139	218	144	159	277	1490	275	67	37
9	71	131	122	137	220	144	203	240	1450	253	66	44
10	65	124	121	140	210	144	196	197	1380	244	64	52
11	65	122	129	134	203	144	170	190	1290	232	62	43
12	65	118	135	132	190	146	147	182	1230	220	60	40
13	64	118	140	132	187	148	140	144	1180	210	59	46
14	63	112	133	131	185	152	137	138	1140	200	58	45
15	71	112	139	131	185	155	135	220	1090	192	56	49
16	74	112	142	130	177	156	132	756	897	175	54	51
17	101	110	121	126	172	156	131	1520	726	150	52	58
18	103	120	117	126	171	153	130	3440	615	138	50	68
19	89	110	128	147	170	152	130	4240	607	130	48	56
20	83	120	134	480	164	150	129	3840	830	119	47	48
21	83	160	125	510	212	150	129	2660	934	115	45	43
22	133	260	126	323	169	148	131	3210	897	110	45	42
23	159	500	127	259	121	158	119	3730	1270	108	47	41
24	131	1100	140	216	121	190	129	3950	1400	105	45	39
25	120	700	140	218	131	192	226	3980	1680	102	42	38
26	119	450	136	216	133	189	362	2760	1600	100	39	38
27	113	300	133	195	177	196	399	2100	1370	98	47	46
28	121	230	255	178	175	206	627	1840	1190	97	45	56
29	112	190	548	167	134	220	489	3660	1070	90	45	59
30	120	160	356	152	---	234	320	6480	1010	86	40	61
31	159	---	234	143	---	194	---	5390	---	80	37	---
TOTAL	2876	8198	4908	5764	4836	5037	6109	58108	51616	7324	1718	1347
MEAN	92.8	273	158	186	167	162	204	1874	1721	236	55.4	44.9
MAX	159	1100	548	510	220	234	627	6480	4830	909	73	68
MIN	63	110	117	126	118	124	119	138	607	80	37	32
AC-FT	5700	16260	9740	11430	9590	9990	12120	115300	102400	14530	3410	2670
CAL YR 1979	TOTAL	149950	MEAN 411	MAX 7430	MIN 63	AC-FT 297400						
WTR YR 1980	TOTAL	157841	MEAN 431	MAX 6480	MIN 32	AC-FT 313100						

RED RIVER BASIN

07328500 WASHITA RIVER NEAR PAULS VALLEY, OK

LOCATION.--Lat 34°45'17", long 97°15'04", in SE $\frac{1}{4}$ sec.1, T.3 N., R.1 W., Garvin County, Hydrologic Unit 11130303, on right bank 200 ft (61.0 m) upstream from bridge on U.S. Highway 77, 2 mi (3 km) northwest of Pauls Valley, 6 mi (10 km) downstream from Owl Creek, 7 mi (11 km) upstream from Washington Creek, and at mile 146.5 (235.7 km).

DRAINAGE AREA.--5,330 mi² (13,805 km²).

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 (260.485 m) National Geodetic Vertical Datum of 1929. During 1899, nonrecording gage at site 9 mi (14 km) 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 (1.1 km) upstream at datum 1.53 ft (0.466 m) higher.

REMARKS.--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.--43 years, 688 ft³/s (19.48 m³/s), 498,500 acre-ft/yr (615 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,800 ft³/s (1,010 m³/s) May 18, 1957, gage height, 27.34 ft (8.333 m); maximum gage height, 29.88 ft (9.107 m) May 11, 1950; no flow at times 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 discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Nov. 21	0315	6,580	186	13.56	4.133	May 30	0645	*12,200	346	*18.71	5.703
May 20	0200	5,100	144	11.72	3.572						

Minimum daily discharge, 24 ft³/s (0.68 m³/s) Sept. 6, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	138	242	321	230	210	247	400	7090	1190	100	30
2	76	142	223	254	220	180	358	776	6070	1130	106	26
3	72	122	210	238	215	169	417	492	5730	942	104	25
4	72	99	198	215	208	184	318	485	5580	822	91	28
5	72	264	194	203	218	194	289	444	4930	768	84	26
6	70	228	184	194	213	198	257	398	3410	727	76	24
7	72	220	175	189	201	182	242	395	2690	667	89	25
8	68	187	167	182	485	180	225	395	2290	614	82	26
9	63	167	162	182	287	175	203	324	2130	532	80	24
10	60	175	160	178	289	173	191	279	2010	471	80	29
11	55	138	160	175	292	173	201	274	1870	411	77	35
12	53	133	162	171	269	173	194	237	1710	364	73	31
13	55	127	167	171	264	175	184	238	1520	313	70	42
14	55	131	165	171	238	173	180	223	1450	271	67	29
15	55	104	165	167	235	171	178	811	1390	230	61	25
16	56	102	165	167	228	178	173	3350	1330	215	60	35
17	136	106	162	162	220	189	167	2160	1210	203	56	39
18	142	114	162	162	210	196	162	2570	1080	189	55	56
19	118	110	156	162	198	178	158	4320	962	171	52	61
20	108	431	152	189	196	171	156	4830	1240	156	48	72
21	93	2520	158	385	196	171	156	4510	1320	142	45	68
22	133	606	160	450	191	169	154	3390	1580	136	44	61
23	97	513	165	379	240	175	138	3940	1480	131	42	53
24	131	467	162	334	187	218	154	4430	1710	133	36	52
25	142	725	152	300	158	215	165	4580	1730	133	30	56
26	131	540	162	279	169	238	424	4270	2060	122	34	55
27	106	457	160	274	162	225	367	2810	1880	125	35	74
28	112	385	173	267	167	228	326	2280	1620	110	36	63
29	108	318	274	254	203	230	318	5790	1340	131	41	78
30	118	276	434	242	---	276	340	11800	1250	116	38	78
31	154	---	401	230	---	264	---	9800	---	108	34	---
TOTAL	2867	10045	5932	7247	6589	6031	7042	81001	71662	11773	1926	1326
MEAN	92.5	335	191	234	227	195	235	2613	2389	380	62.1	44.2
MAX	154	2520	434	450	485	276	424	11800	7090	1190	106	78
MIN	53	99	152	162	158	169	138	223	962	108	30	24
AC-FT	5690	19920	11770	14370	13070	11960	13970	160700	142100	23350	3820	2630
CAL YR 1979 TOTAL	201854		MEAN 553	MAX 10200	MIN 53	AC-FT 400400						
WTR YR 1980 TOTAL	213441		MEAN 583	MAX 11800	MIN 24	AC-FT 423400						

RED RIVER BASIN

513

07329700 WILDHORSE CREEK NEAR HOOVER, OK

LOCATION.--Lat 34°32'29", long 97°14'49", on west line of SW¼ 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 (2.4 km) north of Hoover, 1.8 mi (2.9 km) downstream from Sandy Creek, and at mile 7.9 (12.7 km).

DRAINAGE AREA.--604 mi² (1,564 km²).

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 (244.85 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Duncan, Clear Creek, Humphries and Fuqua Lakes, combined surface-area, 3,340 acres (13.5 km²), and capacity, 44,800 acre-ft (55.2 hm³), and numerous flood-retarding structures.

AVERAGE DISCHARGE.--11 years, 170 ft³/s (4.814 m³/s), 123,200 acre-ft/yr (152 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft³/s (530 m³/s) May 20, 1977, gage height, 24.70 ft (7.529 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 15	2230	4,420 125	14.96 4.56	May 30	0830	*15,900 450	*23.84 7.266

No flow Sept. 8-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	5.0	13	25	19	17	17	98	1300	1.2	.38	.13
2	1.0	4.5	12	22	18	15	14	56	1080	1.2	.38	7.2
3	1.1	4.4	12	20	16	16	37	37	895	1.2	.38	15
4	1.1	4.5	11	19	17	17	33	28	734	1.1	.38	2.1
5	1.0	4.4	11	18	15	16	26	23	654	1.1	.38	.80
6	1.1	4.4	12	16	12	16	23	20	565	1.1	.38	.38
7	1.1	4.4	12	15	9.6	16	18	19	491	1.1	.38	.13
8	1.0	4.4	11	15	9.0	16	13	18	457	1.0	.38	.00
9	1.1	4.4	10	14	7.0	15	9.4	16	373	1.0	.38	.00
10	1.2	4.3	9.6	14	6.0	15	8.5	14	324	1.0	.38	.00
11	1.1	4.2	11	14	7.0	15	8.6	11	293	1.0	.38	.00
12	1.1	4.2	13	13	10	15	8.9	9.2	249	.90	.38	.00
13	1.0	4.1	11	13	20	15	8.6	8.3	206	.90	.38	.00
14	1.1	4.1	10	13	34	13	8.1	7.4	172	.90	.38	.00
15	1.1	4.0	9.6	13	30	12	8.1	7.4	139	.90	.25	.00
16	1.2	4.2	9.1	13	27	12	8.5	1880	108	.90	.25	.00
17	5.2	4.9	6.4	13	23	15	8.1	520	92	.90	.25	.00
18	2.5	5.2	8.2	13	23	13	8.1	235	117	.80	.25	.00
19	2.2	5.2	9.6	13	23	12	7.6	159	99	1.1	.25	.00
20	2.0	5.6	9.6	28	23	11	7.6	113	76	1.0	.25	.00
21	2.8	1700	9.6	185	21	11	8.1	129	45	.90	.25	.00
22	7.0	315	9.9	93	21	11	8.0	161	30	.90	.38	.00
23	6.0	126	12	47	20	14	7.6	97	21	.80	.38	.25
24	5.0	75	14	35	20	19	9.6	76	14	.80	.25	1.2
25	4.5	50	14	29	19	17	15	62	7.6	.80	.25	6.0
26	4.3	40	13	25	18	15	26	51	4.8	.80	.13	1.9
27	4.2	31	12	23	18	16	16	43	2.5	.80	.13	45
28	4.1	24	16	20	18	19	12	38	1.4	.80	.13	220
29	4.0	20	72	21	18	20	11	992	1.4	.63	.13	127
30	4.1	16	48	21	---	20	12	8550	1.4	.50	.13	63
31	6.0	---	31	20	---	20	---	2120	---	.38	.13	---
TOTAL	81.9	2487.4	462.6	843	521.6	474	406.4	16334.9	8553.1	28.41	9.11	490.09
MEAN	2.64	82.9	14.9	27.2	18.0	15.3	13.5	527	285	.92	.29	16.3
MAX	7.0	1700	72	185	34	20	37	8550	1300	1.2	.38	220
MIN	1.0	4.0	6.4	13	6.0	11	7.6	7.4	1.4	.38	.13	.00
AC=FT	162	4930	918	1670	1030	940	806	32400	16970	56	18	972

CAL YR 1979 TOTAL 40479.40 MEAN 111 MAX 7390 MIN 1.0 AC=FT 80290
WTR YR 1980 TOTAL 30692.51 MEAN 83.9 MAX 8550 MIN .00 AC=FT 60880

LOCATION.--Lat 34°13'59", long 96°58'38", in SE¼SW¼ sec.3, T.4 S., R.3 E., Carter County, Hydrologic Unit 11130303, on right bank 500 ft (152.4 m) upstream from bridge on U.S. Highway 177, 1.2 mi (1.9 km) downstream from Caddo Creek, 3.2 mi (5.1 km) north of Dickson, 12.0 mi (19.3 km) northeast of Ardmore, and at mile 63.5 (102.2 km).

DRAINAGE AREA.--7,202 mi² (18,653 km²).

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1281: 1935 (m).

REMARKS.--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.--52 years, 1,368 ft³/s (38.74 m³/s), 991,100 acre-ft/yr (1.22 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,000 ft³/s (2,780 m³/s) May 19, 1957, gage height, 42.30 ft (12.893 m), from flood mark; maximum gage height, 44.37 ft (13.524 m) Oct. 31, 1941; no flow Aug. 28, Sept. 14 to Oct. 1, Oct. 7-12, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,200 ft³/s (997 m³/s), 1200 May 31, gage height 29.40 ft (8.961 m), no other peak above base of 10,000 ft³/s (283 m³/s); minimum daily discharge, 26 ft³/s (0.74 m³/s) Sept. 14, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	231	374	472	237	261	331	501	16200	1320	130	34
2	141	202	332	430	249	278	334	992	11400	1310	124	28
3	132	169	299	354	247	271	327	1370	9620	1160	118	36
4	131	169	285	315	247	247	700	918	8480	993	104	51
5	125	169	278	294	233	239	522	825	7680	827	113	60
6	119	211	267	278	233	245	460	729	6490	714	107	42
7	113	331	259	269	233	265	415	654	4960	658	102	35
8	112	306	252	261	271	272	350	572	4110	605	97	33
9	108	276	245	250	446	255	331	550	3750	633	97	31
10	109	239	240	250	597	244	296	532	3290	506	98	34
11	107	202	238	250	490	244	261	447	2930	471	97	30
12	105	188	238	247	486	244	253	382	2590	434	95	27
13	105	178	242	239	479	237	264	347	2320	408	93	27
14	99	171	242	239	451	232	264	315	2150	380	93	26
15	99	167	241	239	434	231	250	365	1990	357	82	29
16	101	158	236	239	412	231	242	4350	1840	331	76	35
17	105	153	232	239	383	233	239	4380	1720	312	74	30
18	169	153	223	234	360	236	234	2690	1550	296	68	28
19	258	153	220	233	350	238	228	3310	1350	270	61	26
20	195	162	223	238	346	242	218	4430	1420	247	58	29
21	153	3520	225	317	338	238	212	4450	1700	231	57	33
22	171	3500	225	714	327	228	210	4640	1670	218	53	42
23	351	1530	229	833	320	223	205	3740	1900	197	48	59
24	226	1020	239	623	309	242	212	4070	1730	185	42	83
25	151	738	239	503	316	258	224	4140	1910	173	39	82
26	140	689	239	431	295	280	235	4240	1850	173	40	80
27	169	772	239	376	264	293	510	3770	2020	178	38	387
28	176	592	240	337	258	302	553	2840	1850	171	37	2290
29	167	565	258	322	258	302	503	4760	1590	162	34	1050
30	160	429	359	290	---	302	462	23700	1400	149	34	421
31	176	---	388	270	---	306	---	32100	---	147	34	---
TOTAL	4620	17343	8046	10586	9869	7919	9845	121109	113460	14146	2343	5198
MEAN	149	578	260	341	340	255	328	3907	3782	456	75.6	173
MAX	351	3520	388	833	597	306	700	32100	16200	1320	130	2290
MIN	99	153	220	233	233	223	205	315	1350	147	34	26
AC=FT	9160	34400	15960	21000	19580	15710	19530	240200	225000	28060	4650	10310
CAL YR 1979	TOTAL	393458	MEAN	1078	MAX	30500	MIN 99	AC=FT	780400			
WTR YR 1980	TOTAL	324484	MEAN	887	MAX	32100	MIN 26	AC=FT	643600			

RED RIVER BASIN

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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 current year.

WATER TEMPERATURE: April 1947 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. An additional sample was collected 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, 2,120 micromhos Nov. 15, 1963; minimum daily, 95 micromhos Nov. 2, 1951.

WATER TEMPERATURE: Maximum daily, 37.0°C July 18, 1964; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,850 micromhos Apr. 19; minimum daily, 209 micromhos May 30.

WATER TEMPERATURE: Maximum daily, 35.0°C on several days during summer months; minimum daily, 1.5°C on Jan. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	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)
OCT												
25...	1430	151	830	8.2	17.0	82	9.8	102	K2000	K1000	270	140
NOV												
19...	1600	162	1200	8.3	17.5	--	11.0	117	--	--	--	--
21...	1700	3520	398	7.7	16.0	200	--	--	--	--	190	60
DEC												
19...	1300	220	1460	8.3	9.0	23	--	--	270	590	650	400
JAN												
24...	1500	592	980	8.3	8.5	230	--	--	440	540	530	330
FEB												
22...	1730	327	1340	8.0	15.0	12	10.5	105	49	85	630	420
MAR												
26...	1230	287	1660	8.4	16.5	7.2	10.9	114	--	--	700	480
APR												
11...	1500	258	1550	--	21.0	32	9.2	104	K28	91	650	440
MAY												
21...	1100	4390	440	7.2	20.0	1200	8.9	102	--	--	160	52
JUN												
24...	1245	1730	801	8.0	28.0	620	7.8	101	--	--	350	210
JUL												
10...	1400	658	1022	8.1	34.0	28	--	--	--	--	410	240
AUG												
21...	1430	61	1460	8.2	35.0	12	3.7	53	K30	--	540	390
SEP												
16...	1200	35	1390	8.0	30.0	18	8.0	107	358	108	510	330

RED RIVER BASIN

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACU3)	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 25...	63	27	48	28	1.3	5.4	130	180	59	.4	5.3	492
NOV 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	15	37	30	25	.9	3.7	130	71	24	.2	6.2	231
DEC 19...	160	62	84	22	1.4	5.3	250	440	94	.4	11	1060
JAN 24...	130	49	63	20	1.2	4.7	200	330	78	.4	7.6	795
FEB 22...	150	62	82	22	1.4	4.1	210	480	100	.4	4.1	1150
MAR 26...	160	72	100	24	1.7	4.6	220	510	120	.4	2.0	1160
APR 11...	150	67	84	22	1.4	5.0	210	500	94	.4	3.1	1100
MAY 21...	40	15	18	19	.6	4.2	110	76	16	.2	7.0	269
JUN 24...	82	35	34	17	.8	6.7	140	220	36	.5	6.2	554
JUL 10...	99	40	45	19	1.0	7.5	170	310	40	.5	7.0	697
AUG 21...	98	71	97	28	1.8	6.6	150	460	120	.3	8.2	997
SEP 16...	84	73	100	29	1.9	8.4	180	360	130	.4	16	1000
DATE	SOLIDS, SUM OF CONSTITUENTS, 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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 25...	467	.67	189	.29	.23	.130	.020	.16	.03	1.3	.50	1.40
NOV 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	267	.31	--	.70	.33	.050	117	.06	150	18	.00	18.0
DEC 19...	1010	1.4	630	.13	.17	.290	.120	.35	.15	1.0	.74	1.30
JAN 24...	786	1.0	1310	.80	.66	.270	.270	.33	.35	.52	.17	.79
FEB 22...	1010	1.5	1010	.11	.11	.030	.020	.04	.03	.42	.13	.45
MAR 26...	1100	1.5	--	.03	.13	.130	.350	.16	.45	.76	1.1	.89
APR 11...	1030	1.5	--	.03	.05	.000	.000	.00	.00	1.3	.67	1.30
MAY 21...	246	.37	--	.90	.76	.010	.000	.01	.00	4.7	.29	4.70
JUN 24...	507	.75	--	.66	.60	.030	.000	.04	.00	2.3	2.3	2.30
JUL 10...	651	.95	--	.00	.00	.000	.000	.00	.00	1.1	1.0	1.10
AUG 21...	952	1.3	--	.00	.00	--	--	--	--	--	--	--
SEP 16...	880	1.3	--	.00	.00	.000	.000	.00	.00	1.8	.76	1.80

RED RIVER BASIN

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07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER .062 MM
OCT 25...	--	--	--	--	13	--	--	--	271	104	96
NOV 19...	--	--	--	--	--	--	--	--	136	--	84
21...	0	1000	980	20	--	--	--	650	--	--	--
DEC 19...	--	--	--	--	13	--	--	--	123	73	94
JAN 24...	--	--	--	--	15	--	--	--	72	119	58
FEB 22...	0	20	20	<3	--	7.5	5.7	--	179	157	72
MAR 26...	--	--	--	--	13	--	--	--	62	--	45
APR 11...	--	--	--	--	15	--	--	--	34	--	85
MAY 21...	0	230	230	0	--	--	--	3600	5090	--	99
JUN 24...	--	--	--	--	32	--	--	7900	1660	--	93
JUL 10...	--	--	--	--	11	--	--	29000	69	--	92
AUG 21...	0	20	0	20	--	--	--	--	37	--	46
SEP 16...	--	--	--	--	38	--	--	2500000	358	--	6

RED RIVER BASIN

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	1630	951	1290	1570	1570	1600	954	550	834	1280	1450
2	1320	---	846	1270	1520	1610	1590	1200	478	840	1300	1420
3	1340	---	806	1220	1620	1660	1460	1070	462	882	1310	1390
4	1370	---	842	1240	1640	1650	1560	600	433	954	1310	1410
5	1400	1680	919	1110	1630	1620	756	954	466	---	1340	1470
6	1480	1670	1020	1140	1650	1550	1020	1110	483	972	1340	1490
7	1470	1310	1130	1260	1570	1610	1270	809	523	982	---	1480
8	1470	1430	1220	1400	1480	1620	1340	1170	551	1030	1340	1460
9	1520	1640	1110	1380	---	1560	1430	1290	556	991	1380	1410
10	1490	1730	1200	1410	1250	1560	1540	1310	618	1040	1380	1450
11	1490	1260	1210	1440	1060	1570	1520	1300	698	1100	1380	1370
12	1480	1110	---	1420	1280	1650	1570	1250	872	1290	1400	1360
13	1510	1080	1190	1460	1310	1490	1650	1550	1170	1310	1390	1380
14	1530	1070	1270	1500	1310	1630	1700	1420	1170	1330	1400	1400
15	1510	1110	1290	1480	1320	1620	1740	1050	1240	1350	1420	1400
16	1530	1180	1350	1480	1420	1620	1780	518	1310	1340	1420	1390
17	1520	1210	1410	1450	1520	1650	1800	536	1390	1370	1410	1400
18	1490	1240	1460	1460	1540	1610	1840	427	1440	1380	1420	1380
19	1400	1260	1500	1440	1520	1650	1850	482	1450	1360	1450	1350
20	1130	1260	1520	1400	1500	1750	1800	818	1210	1360	1470	1390
21	1220	473	1540	1140	1470	1700	1820	636	1050	1260	1450	1440
22	1120	344	1550	1270	1480	1560	1820	454	963	1250	1450	1460
23	1320	459	1560	973	1550	1760	1650	573	1130	1300	1460	1430
24	729	545	---	1060	1550	1720	1500	782	918	1300	1460	1470
25	789	440	1600	998	1560	1690	1910	473	1070	1300	1450	1420
26	1040	562	1580	1060	1570	1650	1560	391	918	1340	1460	1350
27	1220	929	1570	1070	1570	1700	1630	636	1070	1340	1450	952
28	1400	1260	1530	1090	1620	1570	1570	672	1230	1350	1450	390
29	1750	1360	1530	1240	---	1630	918	691	810	1330	1460	543
30	1440	1440	1570	1330	---	1540	1130	209	900	1350	1450	634
31	1560	---	1380	1380	---	1560	---	382	---	1330	1450	---
MEAN	1370	1140	1300	1290	1480	1620	1920	830	904	1210	1400	1310

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.0	15.0	7.0	8.0	5.5	---	19.0	23.0	25.0	34.0	34.0	28.0
2	27.0	---	8.0	9.0	6.0	---	18.0	24.0	25.0	35.0	32.0	27.0
3	25.0	---	7.0	6.0	9.5	6.0	18.0	22.0	27.0	30.0	32.0	32.0
4	23.5	---	11.0	5.0	10.0	14.0	18.0	25.0	27.0	33.0	32.0	33.0
5	23.0	19.0	11.0	9.0	11.0	11.0	20.0	25.0	27.0	---	30.0	32.0
6	25.0	15.0	10.0	9.0	9.0	14.0	22.0	25.0	27.0	33.0	34.0	32.0
7	22.5	18.0	12.0	6.0	6.0	9.0	23.0	27.0	30.0	34.0	---	28.0
8	28.0	15.0	10.0	7.0	3.5	18.0	19.0	23.0	25.0	33.0	31.0	28.0
9	18.0	14.0	12.0	6.0	---	15.0	19.0	25.0	25.0	33.0	32.0	32.5
10	19.0	11.0	18.0	6.0	4.0	19.0	21.5	27.0	27.0	33.0	33.0	23.0
11	27.0	12.0	8.0	8.0	5.0	14.0	22.0	29.0	29.0	29.0	30.0	32.0
12	29.0	18.0	---	11.0	7.0	17.0	13.0	29.0	30.0	33.0	33.0	30.0
13	23.5	13.0	13.0	10.0	7.0	17.0	12.0	26.0	29.0	32.0	32.0	33.5
14	19.0	14.0	8.0	10.5	9.0	17.0	16.0	26.0	29.0	33.0	33.0	33.0
15	21.0	14.0	13.0	13.5	9.0	16.0	18.0	21.0	31.0	34.0	34.0	27.0
16	20.0	15.0	5.0	13.0	4.0	17.0	19.0	22.0	33.0	33.0	33.0	30.0
17	22.0	16.0	4.0	14.0	8.5	15.5	20.0	21.0	32.0	35.0	34.0	28.0
18	25.0	17.0	9.0	14.0	6.5	16.0	20.0	24.0	30.0	34.0	33.0	30.0
19	24.0	20.0	10.0	12.0	12.0	17.0	22.0	22.0	32.0	35.0	32.0	32.0
20	27.0	20.0	10.0	9.5	16.0	17.0	25.0	25.0	30.0	32.0	34.0	---
21	26.0	17.0	12.5	10.0	16.0	18.0	---	22.0	30.0	28.0	32.0	30.0
22	21.0	14.0	15.0	7.0	17.0	18.0	25.0	20.0	30.0	31.0	33.0	30.0
23	22.0	13.0	12.0	7.0	14.0	15.0	25.0	22.0	33.0	33.0	35.0	24.0
24	23.0	15.0	---	10.0	12.0	14.0	20.0	26.0	35.0	33.0	32.0	26.5
25	20.5	11.5	12.0	11.0	13.0	15.0	18.0	26.0	31.0	33.0	34.0	26.0
26	20.0	13.0	15.0	7.0	9.0	17.0	16.0	26.0	35.0	33.0	34.0	22.0
27	20.0	12.0	12.0	5.5	11.0	14.5	16.0	26.0	34.0	32.0	33.0	15.0
28	21.0	8.0	12.0	4.0	16.0	15.0	22.0	30.0	35.0	34.0	32.0	16.0
29	18.0	7.0	11.0	1.5	---	17.0	23.0	26.0	34.0	34.0	29.0	19.0
30	18.0	7.0	10.0	4.0	---	14.0	22.0	24.0	34.0	35.0	33.0	20.0
31	15.5	---	9.0	3.0	---	19.0	---	25.0	---	35.0	33.0	---
MEAN	22.5	14.0	10.5	8.5	9.5	15.5	19.5	24.5	30.0	33.0	32.5	27.5

07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

DATE TIME	NOV 21,79 1700	MAY 21,80 1100	JUN 24,80 1245	JUL 10,80 1400	SEP 16,80 1200
TOTAL CELLS/ML	650	3600	7900	29000	2500000
DIVERSITY: DIVISION	1.0	0.9	1.6	1.6	0.0
..CLASS	1.0	0.9	1.6	1.6	0.0
...ORDER	1.0	1.0	2.2	1.7	0.5
....FAMILY	1.3	1.1	2.3	2.2	0.5
.....GENUS	1.4	1.1	2.7	2.8	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	150	1	--	-
....MICRACTINIACEAE										
.....GOLENKINIA	--	-	--	-	--	-	150	1	--	-
....MICRACTINIUM	--	-	--	-	--	-	150	1	--	-
....OOCYSTACEAE										
.....ANKISTRODESMUS	--	-	--	-	140	2	890	3	*	0
....CLOSTERIOPSIS	14	2	--	-	--	-	300	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	600	2	--	-
....OOCYSTIS	--	-	--	-	--	-	890	3	*	0
....SELENASTRUM	--	-	--	-	--	-	150	1	*	0
....TETRAEDRON	--	-	--	-	--	-	--	-	*	0
....SCENEDESMACEAE										
.....ACTINASTRUM	--	-	--	-	1200	15	6000#	20	--	-
....CRUCIGENIA	--	-	--	-	--	-	1200	4	*	0
....SCENEDESMUS	--	-	--	-	290	4	3000	10	*	0
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	140	4	290	4	300	1	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCAEAE										
.....CYCLOTELLA	--	-	140	4	580	7	9100#	31	*	0
....MELOSIRA	--	-	--	-	2600#	33	--	-	--	-
..PENNALES										
....FRAGILARIACEAE										
.....SYNEDRA	--	-	140	4	--	-	--	-	--	-
....NAVICULACEAE										
.....CALONEIS	41	6	--	-	--	-	--	-	--	-
....NAVICULA	14	2	290	8	--	-	--	-	*	0
....PINNULARIA	14	2	--	-	--	-	--	-	--	-
....NITZSCHIAEAE										
.....NITZSCHIA	83	13	--	-	290	4	300	1	*	0
....SURIRELLACEAE										
.....SURIRELLA	14	2	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
.....CRYPTOMONAS	--	-	--	-	--	-	150	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....AGMENELLUM	--	-	--	-	--	-	--	-	650000#	26
....ANACYSTIS	--	-	--	-	720	9	6100#	21	1500000#	63
....HORMOGONALES										
....OSCILLATORIACEAE										
.....LYNGBYA	--	-	--	-	--	-	--	-	220000	9
....OSCILLATORIA	470#	72	--	-	1700#	22	--	-	23000	1
....PHORMIDIUM	--	-	2900#	80	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....TRACHELOMONAS	--	-	--	-	140	2	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
.....GLENODINIUM	--	-	--	-	--	-	150	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RED RIVER BASIN

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05". long 96°34'20", in NE¼ sec.33, T.8 S., R.7 E., Bryan County, Okla., Hydrologic Unit 11130210, in control tower of Denison Dam on Red River, 1.2 mi (1.9 km) upstream from Shawnee Creek, 1.8 mi (2.9 km) upstream from Sand Creek, 4.0 mi (6.4 km) northwest of Denison, and at mile 725.9 (1,168.0 km).

DRAINAGE AREA.--39,719 mi² (102,872 km²), of which 5,936 mi² (15,374 km²) 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-fill earth dam. The controlled outlet consists of eight 20-ft (6 m) 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 (6.55 km³) at elevation 640.0 ft (195.07 m), crest of spillway, 2,643,000 acre-ft (3.26 km³) at elevation 617.0 ft (188.06 m), maximum power pool, 1,031,000 acre-ft (1.27 km³) at elevation 590.0 ft (179.83 m), minimum power pool, in Denison pool. Dead storage, 11,000 acre-ft (13.6 km³) at elevation 610.0 ft (185.93 m) in Cumberland pool. When contents are below 2,105,000 acre-ft (2.60 km³), the reservoir is divided into two pools by protective levees around the Cumberland oilfield on the Washita River arm with bottom of outlet channel for the upper pool (known as Cumberland pool) at elevation 610 ft (185.9 m). 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,991,300 acre-ft (7.39 km³) June 5, 1957, elevation, 643.18 ft (196.041 m). Minimum contents since power pool was first filled, 1,565,100 acre-ft (1.93 km³) Sept. 16, 1964; minimum elevation, 599.96 ft (182.868 m) Mar. 1, 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,843,000 acre-ft (3.51 km³) June 6, elevation, 619.29 ft (188.760 m). Minimum, 2,183,000 acre-ft (2.69 km³) Sept. 26, elevation, 611.10 ft (186.263 m).

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

609	2,037,000	614	2,399,000
610	2,105,000	617	2,643,000
612	2,248,000	621	3,018,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2550000	2438000	2422000	2412000	2373000	2309000	2274000	2240000	2138000	2678000	2468000	2293000
2	2542000	2435000	2419000	2417000	2374000	2298000	2276000	2236000	2805000	2671000	2485000	2293000
3	2534000	2432000	2418000	2414000	2375000	2290000	2276000	2239000	2843000	2666000	2482000	2290000
4	2526000	2428000	2419000	2414000	2375000	2296000	2275000	2241000	2847000	2664000	2477000	2282000
5	2521000	2431000	2419000	2413000	2375000	2293000	2276000	2245000	2823000	2661000	2467000	2276000
6	2517000	2426000	2415000	2416000	2374000	2291000	2277000	2244000	2809000	2660000	2462000	2271000
7	2511000	2419000	2416000	2417000	2377000	2290000	2275000	2242000	2803000	2656000	2456000	2267000
8	2504000	2420000	2414000	2410000	2391000	2292000	2274000	2243000	2793000	2648000	2446000	2260000
9	2500000	2420000	2415000	2407000	2391000	2293000	2274000	2242000	2781000	2634000	2438000	2258000
10	2493000	2418000	2415000	2407000	2389000	2294000	2270000	2245000	2765000	2624000	2435000	2248000
11	2485000	2417000	2420000	2409000	2390000	2290000	2278000	2247000	2748000	2611000	2427000	2241000
12	2480000	2412000	2426000	2403000	2388000	2296000	2277000	2247000	2732000	2603000	2418000	2231000
13	2475000	2411000	2421000	2406000	2390000	2296000	2272000	2248000	2725000	2595000	2408000	2226000
14	2471000	2406000	2420000	2406000	2393000	2291000	2267000	2246000	2722000	2588000	2398000	2226000
15	2474000	2404000	2419000	2409000	2398000	2290000	2265000	2259000	2721000	2580000	2390000	2218000
16	2473000	2397000	2422000	2410000	2388000	2294000	2264000	2262000	2716000	2571000	2385000	2214000
17	2472000	2396000	2412000	2410000	2376000	2291000	2260000	2285000	2709000	2566000	2383000	2209000
18	2464000	2395000	2410000	2406000	2369000	2287000	2257000	2335000	2705000	2558000	2377000	2205000
19	2452000	2395000	2410000	2410000	2368000	2286000	2255000	2386000	2698000	2557000	2366000	2200000
20	2447000	2393000	2409000	2414000	2361000	2289000	2254000	2445000	2703000	2556000	2357000	2198000
21	2448000	2403000	2409000	2414000	2360000	2286000	2253000	2476000	2699000	2554000	2349000	2194000
22	2450000	2407000	2410000	2412000	2354000	2285000	2252000	2493000	2696000	2549000	2343000	2192000
23	2447000	2408000	2417000	2404000	2351000	2290000	2251000	2505000	2692000	2545000	2340000	2187000
24	2445000	2411000	2414000	2397000	2349000	2286000	2250000	2515000	2691000	2543000	2337000	2187000
25	2442000	2419000	2413000	2400000	2338000	2282000	2249000	2523000	2688000	2537000	232000	2186000
26	2438000	2416000	2412000	2403000	2329000	2280000	2247000	2531000	2683000	2537000	2327000	2183000
27	2441000	2424000	2409000	2398000	2324000	2276000	2247000	2546000	2681000	2534000	2317000	2215000
28	2441000	2427000	2409000	2393000	2320000	2278000	2245000	2550000	2685000	2525000	2309000	2264000
29	2430000	2425000	2411000	2379000	2320000	2280000	2242000	2556000	2688000	2516000	2300000	2295000
30	2443000	2420000	2412000	2386000	---	2276000	2241000	2596000	2680000	2505000	2298000	2312000
31	2442000	---	2412000	2380000	---	2271000	---	2662000	---	2494000	2296000	---
MAX	2550000	2438000	2426000	2417000	2398000	2309000	2278000	2662000	2847000	2678000	2488000	2312000
MIN	2430000	2393000	2409000	2379000	2320000	2271000	2241000	2236000	2680000	2494000	2296000	2183000
†	614.56	614.28	614.17	613.76	612.97	612.31	611.90	617.21	617.42	615.22	612.64	612.86
‡	-116,000	-22,000	-8,000	-32,000	-60,000	-49,000	-30,000	+421,000	+18,000	-186,000	-198,000	+16,000
CAL YR 1979	MAX	2952000	MIN	2104000	‡	+258,000						
WTR YR 1980	MAX	2847000	MIN	2183000	‡	-246,000						

† 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 (548.6 m) downstream from Denison Dam powerhouse, 0.4 mi (0.6 km) upstream from Shawnee Creek (spillway flow return), 4.5 mi (7.2 km) north of Denison, and at mile 725.5 (1,167.3 km).

DRAINAGE AREA.--39,720 mi² (102,875 km²), of which 5,936 mi² (15,374 km²) is probably noncontributing. At site used prior to October 1961, drainage area 39,777 mi² (103,022 km²), of which 5,936 mi² (15,374 km²) was probably noncontributing.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, Tex.", and October 1934 to September 1961, published as "near Colbert, Okla." Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of U.S. Weather Bureau.

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 (152.400 m) National Geodetic Vertical Datum of 1929. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder at county road bridge 2.5 miles (4.0 km) downstream at datum 6.85 ft (2.088 m) higher prior to Oct. 1, 1931, at datum 7.07 ft (2.155 m) higher Oct. 1, 1931, to Sept. 24, 1934, and at datum 2.64 ft (0.805 m) lower July 29, 1942, to Sept. 30, 1961. Sept. 25, 1934, to July 28, 1942, water-stage recorder at railway bridge 1.9 miles (3.1 km) downstream at datum 7.36 ft (2.243 m) higher.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500).

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

AVERAGE DISCHARGE.--(Prior to regulation by Denison Dam) 20 years, 1924-43, 5,684 ft³/s (161 m³/s), 4,118,000 acre-ft/yr (5.08 km³/yr); (since regulation by Denison Dam) 36 years (water years 1945-80), 4,245 ft³/s (120.2 m³/s), 3,076,000 acre-ft/yr (3.79 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft³/s (5,690 m³/s) May 21, 1935, gage height, 31.8 ft (9.69 m) at site and datum then in use; maximum gage height, 32.0 ft (9.75 m) Apr. 25, 1942 (at site and datum used in 1943); minimum daily discharge, 12 ft³/s (0.340 m³/s) Jan. 10, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 26, 1908, reached a stage of 45.5 ft (13.87 m) at site and datum used July 29, 1942, to Sept. 30, 1961, from records of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,100 ft³/s (937 m³/s) June 4, gage height, 14.99 ft (4.569 m); minimum daily, 78 ft³/s (2.21 m³/s) Mar. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4650	1170	156	87	3130	3560	133	1350	1050	2970	2020	259
2	2690	795	670	475	195	2720	492	3360	7320	4420	1180	213
3	3810	906	1510	1150	115	3570	1570	110	22800	2580	902	1390
4	2640	847	474	536	1040	125	89	96	32900	1780	1750	3480
5	2570	627	1490	126	804	348	83	473	31400	2020	2460	2600
6	1520	812	730	96	126	108	84	1350	22400	893	3200	2410
7	1530	2600	149	258	412	1630	2840	1680	15100	2380	2240	1730
8	3770	1830	94	2550	1350	112	211	271	15100	3450	4320	3050
9	1810	901	93	1260	1170	105	83	93	15200	6050	3500	2380
10	2130	235	94	856	1380	101	81	93	15200	5550	1420	3530
11	3830	424	92	601	914	107	83	258	15200	5110	4130	3570
12	2560	2610	109	1190	1190	82	955	807	12600	3810	3810	4170
13	823	452	2150	117	118	94	2640	242	10500	2660	3880	2150
14	416	2330	112	115	113	2190	1580	107	5590	3200	4780	330
15	80	1590	512	113	614	107	1000	116	5400	4040	2240	3290
16	1370	3420	921	443	4780	470	748	116	6590	3480	2350	2380
17	1210	483	2030	131	4010	1060	1820	1220	6480	2220	428	1330
18	3510	127	1210	2070	3040	1700	1900	205	6380	3770	2190	2250
19	4870	1100	1050	1210	2730	156	1330	122	5480	253	4240	804
20	2130	745	842	136	3700	78	555	904	5600	129	3600	803
21	1280	136	1000	2620	1110	1060	1020	1450	5650	2360	3830	855
22	1030	96	169	2760	4280	89	183	1480	4480	1400	2100	1140
23	736	96	97	3380	1370	96	655	2250	6100	1300	849	1710
24	1410	96	917	2560	1870	1380	408	2970	3570	608	616	193
25	1190	483	747	169	4570	1630	2500	3690	4340	2170	1820	120
26	607	2190	1030	1790	4800	561	1430	2840	4340	226	1960	124
27	132	195	1560	2290	2570	3550	132	286	3320	2560	2600	168
28	93	97	1310	4900	1620	824	651	2800	545	3770	3000	368
29	1510	879	94	5380	3250	839	2210	3350	197	3760	3630	184
30	2580	2270	87	222	---	423	1110	3350	4870	4340	382	1620
31	133	---	86	2090	---	1680	---	714	---	3790	251	---
TOTAL	58620	30542	21585	41681	56371	30555	28576	38153	295702	87049	75678	48601
MEAN	1891	1018	696	1345	1944	986	953	1231	9857	2808	2441	1620
MAX	4870	3420	2150	5380	4800	3570	2840	3690	32900	6050	4780	4170
MIN	80	96	86	87	113	78	81	93	197	129	251	120
AC-FT	116300	60580	42810	82670	111800	60610	56680	75680	586500	172700	150100	96400
CAL YR 1979	TOTAL	1084459	MEAN	2971	MAX	30700	MIN	50	AC-FT	2151000		
WTR YR 1980	TOTAL	813113	MEAN	2222	MAX	32900	MIN	78	AC-FT	1613000		

LOCATION.--Lat 34°15'04", long 96°33'05", in SW¼SW¼ 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 (0.8 km) north of Milburn, and at mile 84.9 (136.6 km).

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.

REMARKS. --Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft³/s (994 m³/s) Oct. 8, 1970, gage height, 27.87 ft (8.495 m); minimum daily, 15 ft³/s (0.42 m³/s) Aug. 22, 24, 25, Sept. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,390 ft³/s (181 m³/s) at 0845 May 30, gage height, 21.98 ft (6.700 m), no other peak above base of 2,200 ft³/s (62.3 m³/s); minimum daily, 15 ft³/s (0.42 m³/s) Aug. 22, 24, 25, Sept. 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	32	29	31	27	26	28	39	133	24	17	15
2	32	31	29	31	27	26	29	49	90	23	18	16
3	32	31	30	30	27	26	63	36	70	22	19	29
4	32	31	30	30	27	26	31	31	57	21	18	25
5	32	31	30	30	27	26	29	30	49	21	18	18
6	32	31	30	29	26	26	28	29	45	21	17	17
7	32	30	29	29	28	26	29	29	42	21	16	17
8	32	31	29	29	89	26	27	28	54	21	16	17
9	33	35	30	29	49	26	26	27	48	21	17	18
10	32	32	31	29	31	26	26	28	41	21	18	19
11	32	30	29	30	28	26	27	29	39	21	18	17
12	33	31	30	29	27	26	27	28	36	21	18	16
13	32	31	30	29	26	26	28	27	35	21	18	16
14	31	30	30	29	26	26	27	27	34	20	18	16
15	32	31	34	30	27	26	27	46	33	20	17	17
16	33	31	29	31	27	26	27	59	33	20	17	17
17	42	31	30	30	26	27	27	34	32	21	17	16
18	36	31	29	30	26	27	27	44	31	19	18	17
19	32	31	29	31	26	27	27	54	29	19	17	17
20	31	32	29	37	26	27	27	32	34	19	16	17
21	32	35	29	71	26	27	27	38	33	19	16	17
22	38	32	29	45	26	27	27	37	30	24	15	17
23	33	30	50	33	26	28	27	32	30	19	16	17
24	31	30	35	31	26	29	28	30	28	19	15	19
25	31	31	33	30	26	27	33	29	28	19	15	21
26	31	31	33	29	26	28	39	28	28	20	16	24
27	31	31	32	28	26	28	29	27	26	20	16	342
28	31	29	31	28	26	30	28	26	26	20	16	992
29	31	29	31	28	26	29	27	33	25	20	18	214
30	44	29	33	29	---	28	28	4220	25	19	17	88
31	42	---	32	28	---	28	---	664	---	17	16	---
TOTAL	1031	931	964	983	857	833	880	5870	1244	633	524	2108
MEAN	33.3	31.0	31.1	31.7	29.6	26.9	29.3	189	41.5	20.4	16.9	70.3
MAX	44	35	50	71	89	30	63	4220	133	24	19	992
MIN	31	29	29	28	26	26	26	26	25	17	15	15
CFSM	.16	.15	.15	.16	.15	.13	.14	.93	.20	.10	.08	.35
IN.	.19	.17	.18	.18	.16	.15	.16	1.08	.23	.12	.10	.39
AC-FT	2040	1850	1910	1950	1700	1650	1750	11640	2470	1260	1040	4180
CAL YR 1979	TOTAL	30827	MEAN 84.5	MAX	1920	MIN 28	CFSM .42	IN 5.65	AC-FT	61150		
WTR YR 1980	TOTAL	16858	MEAN 46.1	MAX	4220	MIN 15	CFSM .23	IN 3.09	AC-FT	33440		

RED RIVER BASIN

525

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 (1.6 km) west of Blue, 7.0 mi (11.3 km) east of Durant, 7.7 mi (12.4 km) upstream from Caddo Creek, and at mile 38.8 (62.1 km).

DRAINAGE AREA.--476 mi² (1,233 km²).

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 (153.424 m) 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 (1.9 km) downstream at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair. Some regulation at low flow by State Fish Hatchery, 16.0 miles (25.7 km) above station. Small diversion above station for municipal water supply of city of Durant.

COOPERATION.--Gage-height record and 23 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--44 years, 292 ft³/s (8.269 m³/s), 8.33 in/yr (212 mm/yr), 211,600 acre-ft/yr (261 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,400 ft³/s (974 m³/s) Feb. 17, 1938, gage height, 31.81 ft (9.696 m), site and datum then in use; no flow (estimated) Aug. 3, 4, 1936, result of regulation at fish hatchery, and no flow Sept. 19 to Oct. 16, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,410 ft³/s (125 m³/s) at 0145 Sept. 29, gage height, 20.82 ft (6.346 m), no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily discharge, 0.15 ft³/s (0.004 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	58	32	33	40	39	28	27	1960	15	5.8	1.2
2	28	45	31	33	39	37	26	29	253	14	5.2	1.1
3	28	36	31	32	40	37	558	38	163	11	4.4	1.0
4	26	33	31	32	39	31	114	55	121	8.0	3.7	1.0
5	26	32	31	33	39	28	73	37	98	11	3.1	.93
6	27	32	31	34	39	28	49	31	82	10	2.6	16
7	28	31	31	33	39	29	44	28	71	11	2.2	14
8	28	32	31	32	310	31	35	26	609	10	1.9	7.0
9	29	40	29	32	998	33	30	26	964	11	1.6	5.4
10	28	41	30	33	217	33	25	24	136	9.7	1.4	3.8
11	29	38	30	33	113	30	22	23	85	7.9	1.1	3.2
12	29	34	32	33	96	28	22	22	67	6.9	.92	3.0
13	29	32	43	33	85	29	37	21	56	7.2	.79	2.8
14	29	34	37	33	73	28	35	20	50	7.2	.64	2.6
15	30	33	35	33	64	29	35	28	45	5.9	.57	2.7
16	32	33	32	34	58	31	33	84	42	5.0	.50	2.7
17	36	33	30	34	53	33	32	68	42	4.5	.45	2.8
18	54	34	28	34	49	35	31	53	40	4.0	.57	2.9
19	48	34	30	34	48	34	30	39	37	3.7	.41	3.0
20	41	34	30	36	47	32	30	112	42	3.4	.36	3.4
21	37	37	30	61	47	31	29	57	40	3.1	.28	3.3
22	40	39	31	114	45	31	25	69	39	2.9	.15	3.3
23	42	37	34	115	43	31	24	57	38	2.7	.23	3.2
24	44	36	55	64	41	47	27	43	31	2.6	.18	3.9
25	40	34	43	50	41	40	31	35	28	2.5	.16	5.3
26	36	33	40	45	40	37	38	31	24	2.5	.60	5.1
27	36	35	37	42	40	35	41	28	23	10	.33	51
28	36	34	35	41	39	45	39	26	22	11	1.2	2770
29	35	33	34	41	37	44	30	25	18	6.9	1.6	3280
30	39	32	34	41	---	37	27	1840	16	5.8	2.1	468
31	64	---	34	41	---	31	---	3230	---	6.8	1.5	---
TOTAL	1083	1069	1042	1319	2859	1044	1600	6232	5242	223.2	46.54	6673.63
MEAN	34.9	33.6	33.6	42.5	98.6	33.7	53.3	201	175	7.20	1.50	222
MAX	64	58	55	115	998	47	558	3230	1960	15	5.8	3280
MIN	26	31	28	32	37	28	22	20	16	2.5	.15	.93
CFSM	.07	.08	.07	.09	.21	.07	.11	.42	.37	.02	.003	.47
IN.	.08	.08	.08	.10	.22	.08	.13	.49	.41	.02	.00	.52
AC-FT	2150	2120	2070	2620	5670	2070	3170	12360	10400	443	92	13240

CAL YR 1979 TOTAL 91147.00 MEAN 250 MAX 7350 MIN 24 CFSM .53 IN 7.12 AC-FT 180800
WTR YR 1980 TOTAL 28433.37 MEAN 77.7 MAX 3280 MIN .15 CFSM .16 IN 2.22 AC-FT 56400

RED RIVER BASIN

07332900 COAL CREEK NEAR LEHIGH, OK

LOCATION.--Lat 34°27'06", long 96°13'56", on west line of sec.23, T.1 S., R.10 E., Coal County, Hydrologic Unit 11140103, on downstream side of county road bridge, 1.5 mi (2.4 km) southwest of intersection of county road and U.S. Highway 75 in Lehigh, 2.4 mi (3.9 km) upstream from French Henry Creek and at mile 6.4 (10.3 km).

DRAINAGE AREA.--8.50 mi² (22.02 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water stage recorder. Datum of gage is 572.53 ft (174.507 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,450 ft³/s (69.4 m³/s) Mar. 19, 1979, gage height, 11.45 ft (3.490 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 18	2115	335	9.49	9.32	2.841	Sept. 28	0015	210	5.95	7.87	2.399
May 29	2330	*1,030	29.2	*10.79	3.289						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.02	.02	.01	9.3	2.0	.00	.00	.00
2	.00	.00	.00	.00	.02	.01	.20	27	.93	.00	.00	.00
3	.00	.00	.00	.00	.02	.01	7.2	2.5	.53	.00	.00	.00
4	.00	.00	.00	.00	.02	.01	.60	.56	.33	.00	.00	.00
5	.00	.00	.00	.00	.01	.01	.18	.21	.24	.00	.00	.00
6	.00	.00	.00	.00	.02	.01	.10	.16	.17	.00	.00	.00
7	.00	.00	.00	.00	.02	.01	.05	.13	.12	.00	.00	.00
8	.00	.00	.00	.00	.20	.01	.04	.09	.09	.00	.00	.00
9	.00	.00	.00	.00	5.6	.01	.04	.08	.09	.00	.00	.00
10	.00	.00	.00	.00	1.5	.01	.03	.08	.07	.00	.00	.00
11	.00	.00	.00	.00	1.5	.01	.02	.07	.06	.00	.00	.00
12	.00	.00	.00	.00	1.6	.01	.02	.06	.04	.00	.00	.00
13	.00	.00	.00	.00	.37	.01	.02	.06	.03	.00	.00	.00
14	.00	.00	.00	.00	.27	.01	.02	.04	.02	.00	.00	.00
15	.00	.00	.00	.00	.20	.01	.03	8.6	.01	.00	.00	.00
16	.00	.00	.00	.00	.14	.01	.05	5.0	.00	.00	.00	.00
17	.00	.00	.00	.00	.12	.01	.05	1.3	.00	.00	.00	.00
18	.00	.00	.00	.00	.09	.00	.04	66	.00	.00	.00	.00
19	.00	.00	.00	.00	.09	.00	.03	25	.00	.00	.00	.00
20	.00	.00	.00	.02	.10	.00	.02	2.5	18	.00	.00	.00
21	.00	.00	.00	5.6	.10	.00	.02	2.4	1.2	.00	.00	.00
22	.00	.00	.00	1.2	.09	.00	.01	3.0	.37	.00	.00	.00
23	.00	.00	.00	.22	.08	.00	.01	1.5	.15	.00	.00	.00
24	.00	.00	.00	.11	.07	.00	.00	.94	.07	.00	.00	.00
25	.00	.00	.00	.09	.05	.00	.54	.65	.05	.00	.00	.00
26	.00	.00	.00	.07	.03	.00	2.2	.50	.04	.00	.00	.00
27	.00	.00	.00	.04	.02	.00	1.3	.33	.03	.00	.00	.33
28	.00	.00	.00	.04	.02	.00	.60	.20	.00	.00	.00	137
29	.00	.00	.00	.04	.02	.00	.42	83	.00	.00	.00	11
30	.08	.00	.00	.03	---	.00	1.1	293	.00	.00	.00	.79
31	.00	---	.00	.03	---	.00	---	10	---	.00	.00	---
TOTAL	.08	.00	.00	7.49	32.19	.18	14.95	544.26	24.64	.00	.00	181.79
MEAN	.003	.000	.000	.24	1.11	.006	.50	17.6	.82	.000	.000	6.06
MAX	.08	.00	.00	5.6	20	.02	7.2	293	18	.00	.00	137
MIN	.00	.00	.00	.00	.01	.00	.00	.04	.00	.00	.00	.00
AC-FT	.2	.00	.00	15	64	.4	30	1080	49	.00	.00	361
CAL YR 1979	TOTAL	1543.28	MEAN 4.23	MAX 436	MIN .00	AC-FT 3060						
WTR YR 1980	TOTAL	805.58	MEAN 2.20	MAX 293	MIN .00	AC-FT 1600						

WATER-QUALITY RECORDS

DISSOLVED OXYGEN: November 1978 to current year.

DISSOLVED OXYGEN: Maximum 15.3 mg/L Jan. 28, 1979; minimum, 1.7 mg/L June 7, 1980.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L Feb. 8; minimum, 1.7 mg/L June 7.

[illegible]

RED RIVER BASIN

07332900 COAL CREEK NEAR LEHIGH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)
FEB 08...	55.0	43.0	.07	5.49	.36	.33	--	.16	.03	--	.19
09...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	131	102	.18	8.49	.96	.17	--	.41	.17	--	.50
MAY 15...	123	85.0	.17	10.3	.15	.13	--	.89	.65	--	1.1
19...	--	--	--	--	.23	--	--	.19	--	--	.23
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
SEP 28...	51.0	37.0	.07	21.6	.69	.67	--	.04	.00	--	.05
28...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	.0	--	--	6.6	--
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)
FEB 08...	.04	2.4	.83	2.60	1.7	.86	--	3.0	13	1.2	--
09...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	.22	1.7	1.8	2.10	.10	2.0	--	3.1	14	2.2	--
MAY 15...	.84	1.6	.45	2.50	1.4	1.1	--	2.7	12	1.2	--
19...	--	1.6	--	1.80	--	--	--	2.0	9.0	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
SEP 28...	.00	1.1	1.1	1.10	.00	1.1	--	1.8	7.9	1.8	--
28...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	441	--	--	--	441
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)
FEB 08...	.22	.67	.09	3800	3600	170	--	3	1	2	--
09...	--	--	--	2300	2200	100	--	3	1	2	--
APR 03...	.19	.58	.06	5700	5600	70	--	4	2	2	--
MAY 15...	.26	.80	.07	4800	4800	50	--	5	1	4	--
19...	.26	.80	--	5100	--	--	--	3	--	--	--
30...	--	--	--	1400	920	480	--	2	0	2	--
30...	--	--	--	2900	2900	10	--	1	0	1	--
SEP 28...	.15	.46	.17	420	370	50	--	3	1	2	--
28...	--	--	--	400	220	180	--	4	2	2	--
29...	--	--	--	320	140	180	--	3	1	2	--
29...	--	--	--	--	--	--	10000	--	--	--	1

RED RIVER BASIN

529

07332900 COAL CREEK NEAR LEHIGH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
FEB											
08...	80	30	50	0	0	0	--	20	0	20	--
09...	80	10	70	0	0	<1	--	20	0	20	--
APR											
03...	110	20	90	0	0	1	--	20	0	20	--
MAY											
15...	100	20	80	10	8	2	--	20	10	10	--
19...	60	--	--	10	--	--	--	30	--	--	--
30...	70	30	40	0	0	4	--	20	10	10	--
30...	100	40	60	0	0	3	--	0	0	0	--
SEP											
28...	60	10	50	0	0	1	--	20	10	10	--
28...	40	0	40	0	0	1	--	10	0	10	--
29...	50	10	40	0	0	3	--	10	0	10	--
29...	--	--	--	--	--	--	0	--	--	--	18

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB											
08...	10	10	0	--	4500	4300	200	--	0	0	0
09...	0	0	2	--	2600	2300	290	--	0	0	0
APR											
03...	0	0	3	--	10000	9600	400	--	0	0	0
MAY											
15...	0	0	4	--	7900	6700	1200	--	0	0	4
19...	0	--	--	--	5800	--	--	--	0	--	--
30...	1	0	5	--	6200	5800	420	--	0	0	2
30...	0	0	6	--	4200	3800	420	--	0	0	0
SEP											
28...	30	25	5	--	4800	4600	220	--	0	0	2
28...	30	22	8	--	3600	2900	660	--	100	94	6
29...	30	22	8	--	2000	1300	670	--	100	96	4
29...	--	--	--	8	--	--	--	11000	--	--	--

DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)
FEB										
08...	--	200	130	70	--	.2	.1	.1	--	1
09...	--	90	50	40	--	.1	.1	.0	--	2
APR										
03...	--	560	380	180	--	.1	.0	.2	--	1
MAY										
15...	--	930	310	620	--	.2	.2	.0	--	0
19...	--	350	--	--	--	.2	--	--	--	0
30...	--	300	200	100	--	.1	.1	.0	--	0
30...	--	250	180	70	--	.1	.1	.0	--	0
SEP										
28...	--	110	100	10	--	.1	.1	.0	--	1
28...	--	90	80	10	--	.2	.1	.1	--	1
29...	--	50	40	10	--	.1	.0	.1	--	1
29...	10	--	--	--	350	--	--	--	.1	--

RED RIVER BASIN

07332900 COAL CREEK NEAR LEHIGH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BUT- TOM MA- TERIAL (UG/G AS ZN)
FEB									
08...	1	0	--	0	0	60	0	60	--
09...	0	<10	--	0	0	40	10	30	--
APR									
03...	--	<10	--	0	0	30	10	20	--
MAY									
15...	0	0	--	0	0	70	0	70	--
19...	--	--	--	0	--	70	--	--	--
30...	--	<10	--	0	0	40	0	150	--
30...	--	<10	--	0	0	70	60	10	--
SEP									
28...	--	<10	--	0	0	50	40	9	--
28...	--	<10	--	0	0	40	20	20	--
29...	--	<10	--	0	0	60	10	50	--
29...	--	--	3	--	--	--	--	--	29

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DISH- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB					
09...	--	--	71	1.1	98
APR					
03...	--	--	322	21	96
MAY					
15...	20	4.3	231	19	95
SEP					
28...	--	--	199	84	90
28...	--	--	139	32	91
29...	--	--	58	1.9	84

RED RIVER BASIN

531

07332950 MUDDY BOGGY CREEK AT ATOKA, OK

LOCATION.--Lat 34°23'23", long 96°07'12", in SE¼SW¼ sec.11, T.2 S., R.11 E., Atoka County, Hydrologic Unit 11140103, on right downstream side of MKT railroad bridge in northeast Atoka and at mile 80.1 (128.9 km).

DRAINAGE AREA.--445 mi² (1,153 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 509.12 ft (155.180 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good above 10 ft³/s (0.28 m³/s) and fair below.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,860 ft³/s (251 m³/s) June 9, 1979, gage height 25.30 ft (7.711 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s (145 m³/s) at 1215 May 30, gage height, 18.01 ft (5.489 m), no other peak above base of 4,000 ft³/s (113 m³/s); no flow Aug. 8 - Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	126	4.1	7.5	8.1	5.1	9.1	40	1270	7.6	.45	.00
2	1.4	77	3.5	6.9	7.1	4.7	8.0	1480	279	6.4	.38	.00
3	1.1	31	3.0	6.7	6.5	4.4	25	3660	144	5.4	.30	.00
4	1.0	16	2.7	6.1	6.1	4.0	23	922	96	4.5	.22	.00
5	.99	12	2.5	5.9	5.7	3.9	12	159	64	3.7	.15	.00
6	.95	9.3	2.3	5.7	5.5	3.8	8.9	89	43	3.0	.07	.00
7	1.0	7.4	2.3	6.0	5.3	3.8	7.3	52	30	2.6	.04	.00
8	1.2	5.8	2.2	5.8	197	3.9	6.1	31	21	2.3	.00	.00
9	1.3	5.0	2.2	5.6	312	3.9	5.3	21	17	2.0	.00	.00
10	1.2	4.1	2.3	5.5	218	3.9	4.7	16	14	1.7	.00	.00
11	1.3	3.5	2.4	5.6	120	3.9	4.3	12	11	1.5	.00	.00
12	1.4	3.3	2.7	5.5	77	3.9	3.9	10	9.0	1.5	.00	.00
13	1.3	3.2	3.1	5.3	50	4.1	3.8	8.7	7.7	1.5	.00	.00
14	1.3	2.8	3.0	5.1	33	4.2	3.5	6.9	6.6	1.5	.00	.00
15	1.3	2.7	3.4	5.0	25	4.2	3.4	58	5.6	1.5	.00	.00
16	1.3	2.8	3.9	4.9	20	4.2	3.1	310	4.7	1.6	.00	.00
17	2.0	2.7	3.9	4.8	16	4.5	3.0	127	4.0	1.5	.00	.00
18	2.4	2.9	5.1	4.8	13	4.6	2.8	113	3.6	1.2	.00	.00
19	2.3	3.4	6.6	5.0	12	24	2.7	769	3.3	1.0	.00	.00
20	2.4	3.6	7.3	5.4	11	59	2.6	267	1850	.64	.00	.00
21	2.5	4.8	7.3	25	10	30	2.5	173	2140	.49	.00	.00
22	5.7	4.6	6.9	52	9.3	18	2.5	106	573	.45	.00	.00
23	7.6	4.2	7.4	53	8.0	13	2.5	75	146	.38	.00	.00
24	7.4	21	7.9	60	7.6	10	2.4	43	77	.34	.00	.00
25	8.1	27	8.1	40	7.3	8.5	3.2	43	46	.30	.00	.00
26	8.9	16	8.2	26	6.8	7.3	33	25	29	.26	.00	.00
27	10	11	10	18	6.4	7.2	25	17	19	.30	.00	192
28	13	7.9	12	14	6.0	13	39	13	15	.34	.00	2970
29	13	6.2	10	11	5.4	15	38	80	11	.41	.00	936
30	14	5.1	8.7	9.7	---	12	26	4650	9.2	.45	.00	151
31	18	---	8.2	8.9	---	11	---	4700	---	.48	.00	---
TOTAL	136.94	432.3	163.2	430.7	1215.1	303.0	316.6	18076.6	6948.7	56.84	1.61	4249.00
MEAN	4.42	14.4	5.26	13.9	41.9	9.77	10.6	583	232	1.83	.052	142
MAX	18	126	12	60	312	59	39	4700	2140	7.6	.45	2970
MIN	.95	2.7	2.2	4.8	5.3	3.8	2.4	6.9	3.3	.26	.00	.00
CFSM	.01	.03	.01	.03	.09	.02	.02	1.31	.52	.004	.000	.32
IN.	.01	.04	.01	.04	.10	.03	.03	1.51	.58	.00	.00	.36
AC=FT	272	857	324	854	2410	601	628	35850	13780	113	3.2	8430
CAL YR 1979 TOTAL	121298.24			332		8480		.75	10.14		240600	
WTR YR 1980 TOTAL	32330.59			88.3		4700		.20	2.70		64130	

RED RIVER BASIN

07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler, complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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											
04...	.98	260	7.4	20.5	6.7	74	--	--	--	--	--
09...	1.3	282	7.4	18.0	7.5	80	--	--	--	--	--
17...	3.5	360	7.3	18.0	67.0	72	--	--	--	--	--
24...	7.6	278	7.5	19.0	5.4	59	78	0	19	7.5	20
NOV											
07...	8.4	315	7.2	10.0	6.7	60	--	--	--	--	--
15...	2.8	355	7.4	7.0	7.5	62	--	--	--	--	--
21...	4.8	342	7.5	15.0	8.0	78	--	--	--	--	--
28...	11	670	7.7	7.5	9.4	77	--	--	--	--	--
DEC											
06...	2.3	430	7.6	7.0	8.8	72	--	--	--	--	--
13...	3.4	430	7.8	8.0	12.4	103	--	--	--	--	--
20...	7.6	390	7.5	4.5	9.8	75	--	--	--	--	--
27...	9.7	600	7.6	8.0	11.2	93	--	--	--	--	--
JAN											
03...	6.9	860	8.3	4.0	13.8	104	--	--	--	--	--
10...	5.5	1000	7.1	5.0	13.2	103	240	140	55	25	120
18...	4.8	850	7.6	6.0	13.6	108	--	--	--	--	--
22...	5.3	740	7.5	8.0	10.0	84	--	--	--	--	--
FEB											
06...	5.5	470	7.4	4.5	11.2	85	--	--	--	--	--
13...	51	375	7.4	3.0	13.2	97	--	--	--	--	--
20...	11	385	7.2	6.5	10.0	81	--	--	--	--	--
MAR											
04...	4.0	580	7.7	10.0	12.0	107	--	--	--	--	--
11...	3.9	620	7.5	12.0	9.5	88	--	--	--	--	--
19...	5.0	675	7.6	12.0	10.1	94	--	--	--	--	--
25...	8.4	670	7.7	14.0	10.6	102	--	--	--	--	--
APR											
01...	9.6	845	7.5	15.5	8.1	81	160	78	41	15	72
08...	5.9	440	7.3	20.0	6.3	68	--	--	--	--	--
15...	3.4	460	7.5	19.0	8.5	91	120	51	29	11	43
22...	2.6	480	8.4	22.0	12.7	144	--	--	--	--	--
30...	26	805	7.2	18.0	5.6	60	--	--	--	--	--
MAY											
03...	3900	71	6.8	16.5	6.5	66	--	--	--	--	--
13...	8.7	268	7.4	25.0	7.6	90	77	24	20	6.6	19
20...	221	255	7.0	22.0	6.7	76	--	--	--	--	--
28...	13	242	6.9	26.0	4.1	50	--	--	--	--	--
JUN											
03...	140	169	7.1	25.5	6.4	77	50	--	13	4.3	--
11...	11	187	7.0	27.0	4.5	55	--	--	--	--	--
18...	3.6	220	7.2	29.0	4.9	63	--	--	--	--	--
25...	36	250	7.0	29.5	4.4	57	--	--	--	--	--
JUL											
02...	6.8	245	7.1	33.0	4.9	67	63	1	16	5.6	16
09...	2.0	264	7.3	34.5	4.1	58	--	--	--	--	--
16...	1.6	300	7.5	31.0	6.4	85	--	--	--	--	--
23...	3.8	310	7.4	32.0	4.6	62	--	--	--	--	--

RED RIVER BASIN

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07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM PERCENT	SODIUM+ AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY FIELD (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)
OCT											
04...	--	--	--	--	92	0	75	5.9	--	--	--
09...	--	--	--	--	97	0	80	6.2	--	--	--
17...	--	--	--	--	88	0	73	7.1	--	--	--
24...	45	1.0	24	4.3	99	0	81	5.0	32	14	.2
NOV											
07...	--	--	--	--	90	0	74	9.1	--	--	--
15...	--	--	--	--	104	0	85	6.6	--	--	--
21...	--	--	--	--	101	0	83	5.1	--	--	--
28...	--	--	--	--	155	0	130	4.9	--	--	--
DEC											
06...	--	--	--	--	140	0	115	5.6	--	--	--
13...	--	--	--	--	138	0	113	3.5	--	--	--
20...	--	--	--	--	--	--	123	--	--	--	--
27...	--	--	--	--	136	0	112	5.5	--	--	--
JAN											
03...	--	--	--	--	174	0	143	1.4	--	--	--
10...	52	3.4	120	3.8	125	0	103	16	130	180	.2
18...	--	--	--	--	--	0	113	--	--	--	--
22...	--	--	--	--	--	0	101	--	--	--	--
FEB											
06...	--	--	--	--	--	--	89	--	--	--	--
13...	--	--	--	--	--	--	38	--	--	--	--
20...	--	--	--	--	--	0	53	--	--	--	--
MAR											
04...	--	--	--	--	--	--	73	--	--	--	--
11...	--	--	--	--	--	--	81	--	--	--	--
19...	--	--	--	--	--	--	88	--	--	--	--
25...	--	--	--	--	--	--	116	--	--	--	--
APR											
01...	48	2.4	--	4.1	--	--	93	--	49	130	.3
08...	--	--	--	--	--	--	69	--	--	--	--
15...	43	1.7	--	4.6	--	--	73	--	72	42	.1
22...	--	--	--	--	--	--	89	--	--	--	--
30...	--	--	--	--	--	--	115	--	--	--	--
MAY											
03...	--	--	--	--	--	--	19	--	--	--	--
13...	33	.9	--	4.1	--	--	58	--	46	16	.2
20...	--	--	--	--	--	--	51	--	--	--	--
28...	--	--	--	--	--	--	54	--	--	--	--
JUN											
03...	--	--	--	--	--	--	39	--	--	--	--
11...	--	--	--	--	--	--	45	--	--	--	--
18...	--	--	--	--	--	--	56	--	--	--	--
25...	--	--	--	--	--	--	44	--	--	--	--
JUL											
02...	33	.9	--	4.9	--	--	57	--	22	19	.3
09...	--	--	--	--	--	--	69	--	--	--	--
16...	--	--	--	--	--	--	81	--	--	--	--
23...	--	--	--	--	--	--	88	--	--	--	--

07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

RED RIVER BASIN

07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DISH- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
04...	--	--	--	--	--	--	--	98	.26	96
09...	--	--	--	--	--	--	--	119	.42	98
17...	--	--	--	--	--	--	--	158	1.5	96
24...	0	330	.0	<10	4	6.2	.5	133	2.7	98
NOV										
07...	--	--	--	--	--	--	--	173	4.0	98
15...	--	--	--	--	--	--	--	98	.74	99
21...	--	--	--	--	--	--	--	163	2.1	96
28...	0	--	.0	0	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	63	.39	99
13...	0	--	.0	2	--	--	--	77	.71	100
20...	--	--	--	--	--	--	--	87	1.8	99
27...	--	--	--	--	--	--	--	105	2.7	99
JAN										
03...	--	--	--	--	--	--	--	91	1.7	97
10...	2	200	.0	<10	4	8.5	.4	106	1.6	99
18...	--	--	--	--	--	--	--	88	1.1	100
22...	--	--	--	--	--	--	--	130	1.9	98
FEB										
06...	0	--	.0	0	--	--	--	107	1.6	98
13...	--	--	--	--	--	--	--	114	16	98
20...	--	--	--	--	--	--	--	111	3.3	90
MAR										
04...	--	--	--	--	--	--	--	--	--	--
11...	0	--	1.1	0	--	--	--	60	.63	94
19...	--	--	--	--	--	--	--	89	1.2	82
25...	--	--	--	--	--	--	--	68	1.5	93
APR										
01...	0	490	.0	<10	8	7.2	.7	69	1.8	92
08...	--	--	--	--	--	--	--	179	2.9	96
15...	0	340	.0	<10	<3	6.9	3.2	106	.97	95
22...	--	--	--	--	--	--	--	62	.44	94
30...	--	--	--	--	--	--	--	82	5.8	94
MAY										
03...	--	--	--	--	--	--	--	1470	15500	95
13...	0	160	.1	<10	<3	9.3	3.7	129	3.0	98
20...	--	--	--	--	--	--	--	524	313	99
28...	--	--	--	--	--	--	--	134	4.7	98
JUN										
03...	--	--	--	0	--	13	1.7	181	68	99
11...	--	--	--	--	--	--	--	120	3.6	98
18...	--	--	--	--	--	--	--	120	1.2	98
25...	--	--	--	--	--	--	--	266	26	99
JUL										
02...	0	100	1.7	<10	7	11	1.5	110	2.0	98
09...	--	--	--	--	--	--	--	52	.28	94
16...	--	--	--	--	--	--	--	39	.17	82
23...	--	--	--	--	--	--	--	32	.33	92

RED RIVER BASIN

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07333910 MCGEE CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°18'54", long 95°52'30", NW¼NE¼ sec.7, T.3 S., R.14 E., Atoka County, Hydrologic Unit 11140103, on left bank 0.1 mi (0.2 km) downstream from Crooked Creek, 1.1 mi (1.8 km) downstream from Potapo Creek, 3.7 mi (6.0 km) northwest of Farris and at mile 3.5 (5.6 km).

DRAINAGE AREA.--176 mi² (456 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 463 ft (141 m) from topographic map.

REMARKS.--Records fair except for period of no gage-height record Jan. 19 to Feb. 20, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s (430 m³/s) May 21, 1979, gage height 33.08 ft (10.083 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,840 ft³/s (222 m³/s) Sept. 28, gage height, 18.02 ft (5.492 m), backwater from Muddy Boggy Creek; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	44	.53	4.0	3.0	10	13	617	254	.95	.00	.00
2	.06	17	.53	3.4	2.5	8.6	12	2250	120	.67	.00	.00
3	.05	9.1	.53	3.2	2.0	6.6	34	609	68	.50	.00	.00
4	.04	5.5	.53	3.0	1.8	6.0	20	217	44	.38	.00	.00
5	.03	3.8	.47	2.6	1.7	5.7	45	112	30	.30	.00	.00
6	.03	2.7	.47	2.2	1.6	5.3	30	66	21	.23	.00	.00
7	.02	1.8	.42	2.1	1.6	4.8	21	44	16	.15	.00	.00
8	.01	1.4	.42	1.8	5.0	4.5	16	29	14	.12	.00	.00
9	.01	1.2	.42	1.7	20	4.0	12	21	13	.11	.00	.00
10	.00	1.0	.42	1.5	200	3.5	9.4	16	9.6	.10	.00	.00
11	.00	.86	.66	1.5	100	3.0	7.7	12	7.3	.08	.00	.00
12	.00	.72	.66	1.3	80	4.0	7.0	10	5.8	.07	.00	.00
13	.00	.70	.72	1.2	70	5.0	20	8.6	4.7	.06	.00	.00
14	.00	.68	.72	1.1	60	3.5	87	7.1	3.7	.04	.00	.00
15	.00	.68	.72	1.1	50	3.0	63	541	3.0	.02	.00	.00
16	.00	.68	.72	1.0	43	2.5	40	2740	2.5	.00	.00	.00
17	.01	.68	1.0	.91	36	3.0	35	494	2.1	.00	.00	.00
18	.06	.67	1.2	.86	31	2.5	40	172	1.9	.00	.00	.00
19	.07	.67	1.2	.80	27	2.3	33	935	1.6	.00	.00	.00
20	.08	.67	1.1	10	23	2.1	25	318	331	.00	.00	.00
21	.08	.89	1.1	50	21	2.1	19	237	40	.00	.00	.00
22	.13	.82	1.1	30	19	2.1	16	441	17	.03	.00	.00
23	.12	.79	1.6	20	16	2.1	13	198	11	.02	.00	.00
24	.10	.79	13	10	14	10	11	107	7.1	.00	.00	.00
25	.09	.79	35	8.0	13	7.6	10	65	5.6	.00	.00	.00
26	.08	.75	17	7.0	13	6.0	357	43	4.5	.00	.00	.00
27	.08	.67	13	6.0	12	5.0	200	30	3.3	.00	.00	97
28	.08	.64	9.5	5.0	11	13	102	22	2.4	.00	.00	5120
29	.08	.60	9.1	4.0	10	16	61	24	1.7	.00	.00	1890
30	2.7	.53	5.8	3.5	---	17	41	1800	1.3	.00	.00	391
31	78	---	5.1	4.0	---	14	---	266	---	.00	.00	---
TOTAL	82.08	101.78	124.74	192.77	888.2	184.8	1400.1	12451.7	1047.1	3.83	.00	7498.00
MEAN	2.65	3.39	4.02	6.22	30.6	5.96	46.7	402	34.9	.12	.000	250
MAX	78	44	35	50	200	17	357	2740	331	.95	.00	5120
MIN	.00	.53	.42	.80	1.6	2.1	7.0	7.1	1.3	.00	.00	.00
AC-FT	163	202	247	382	1760	367	2780	24700	2080	7.6	.00	14870
CAL YR 1979 TOTAL	51662.29			142	MAX 5770	MIN .00	AC-FT 102500					
WTR YR 1980 TOTAL	23975.10			65.5	MAX 5120	MIN .00	AC-FT 47550					

RED RIVER BASIN

07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1976 to current year.

pH: September 1976 to September 1979.

WATER TEMPERATURE: September 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1976.

REMARKS.--In addition to water-quality monitor, samples were collected on a monthly basis. Specific conductance, temperature, and pH daily values omitted from the 1979 Annual Report are included here.

COOPERATION.--Samples were collected by the U.S. Geological Survey and some analyses were furnished by the Oklahoma Water Resources Board.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHUS)	PH (UNITS)	TEMPER- ATURE (DFG C)	OXYGEN, DIS- SOLVED (MG/L)	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)
UCT											
24...	0900	--	80020	.10	140	7.8	11.0	9.4	85	K35	190
24...	0931	1028	9740	.10	--	--	11.0	--	--	--	--
NOV											
28...	1000	1028	9740	.60	--	--	--	--	--	--	--
28...	1300	--	80020	.60	104	7.2	9.0	10.4	87	K14	K29
DEC											
03...	1000	1028	9740	.53	--	--	--	--	--	--	--
18...	1300	--	80020	1.2	134	7.6	5.0	8.6	68	325	520
18...	1301	1028	9740	1.2	--	--	5.0	--	--	--	--
JAN											
15...	1400	--	80020	1.1	142	7.2	10.0	11.1	100	28	K25
15...	1501	1028	9740	1.1	--	--	--	--	--	--	--
FEB											
21...	1500	--	80020	21	150	7.0	15.0	10.4	103	K34	57
21...	1501	1028	9740	21	--	--	--	--	--	--	--
MAR											
25...	1000	--	80020	7.6	124	8.0	13.0	10.5	99	K23	51
25...	1001	1028	9740	7.6	--	--	--	--	--	--	--
APR											
10...	1400	--	80020	9.1	133	--	18.5	9.8	109	K36	71
10...	1401	1028	9740	9.1	--	--	--	--	--	--	--
MAY											
29...	1645	--	80020	24	93	6.9	27.0	6.9	91	225	525
29...	1646	1028	9740	24	--	--	27.0	--	--	--	--
JUN											
25...	0925	--	80020	5.8	115	7.2	27.5	6.3	81	--	--
25...	1000	1028	9740	5.5	--	--	--	--	--	--	--
JUL											
09...	1000	1028	9740	.11	--	--	--	--	--	--	--
09...	1030	--	80020	.11	150	6.9	31.5	--	--	K11	244
SEP											
29...	1400	--	80020	1890	135	7.2	21.0	9.0	101	--	3100
29...	1401	1028	9740	1890	--	--	21.0	--	--	--	--

RED RIVER BASIN

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07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	MAGNE- SIUM, RECOV. FM BOT- TOM MA- TERIAL (MG/KG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SURP- TION RATIO
OCT											
24...	--	--	--	--	--	--	--	--	--	--	--
24...	38	--	9.0	8.0	<20	4.4	4.4	<10	<10	--	--
NOV											
28...	81	52	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
03...	43	--	6.0	7.0	4.2	6.1	--	13	12	36	.8
18...	--	--	--	--	--	--	--	--	--	--	--
18...	37	--	8.0	8.0	4.2	4.2	--	11	12	39	.9
JAN											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	31	--	7.0	6.0	4.1	4.0	--	<10	10	39	.8
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
21...	56	44	5.0	5.0	2.9	2.8	--	<10	<10	--	--
MAR											
25...	--	--	--	--	--	--	--	--	--	--	--
25...	33	--	8.0	8.0	3.2	3.2	--	13	13	45	1.0
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
10...	25	--	5.0	5.0	3.1	3.0	--	10	10	44	.9
MAY											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	44	38	5.0	6.0	2.8	2.9	--	<10	<10	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--
25...	24	--	4.0	5.0	2.5	2.7	--	<10	<10	--	--
JUL											
09...	33	--	7.0	7.0	3.7	3.7	--	<10	<10	37	.8
09...	--	--	--	--	--	--	--	--	--	--	--
SEP											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	29	19	--	6.7	--	3.1	--	<10	--	--	--

DATE	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIU2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
UCT											
24...	--	--	28	11	12	--	.2	1.6	89	.12	.02
24...	2.5	2.4	--	--	--	--	--	--	--	--	--
NOV											
28...	--	--	29	10	22	.4	--	--	--	--	--
28...	--	--	30	15	10	--	.1	3.4	57	.08	.09
DEC											
03...	2.6	2.5	--	--	--	--	--	--	--	--	--
18...	--	--	30	13	13	--	.0	2.8	74	.10	.24
18...	2.4	2.2	--	--	--	--	--	--	--	--	--
JAN											
15...	--	--	38	15	13	--	.1	4.8	94	.13	.28
15...	2.1	2.2	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	11	15	11	--	.1	8.7	76	.10	4.3
21...	2.1	1.3	11	16	28	.1	--	--	--	--	--
MAR											
25...	--	--	16	18	13	--	.1	2.7	76	.10	1.5
25...	1.6	1.6	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
10...	2.0	2.3	--	--	--	--	--	--	--	--	--
MAY											
29...	--	--	20	9.9	5.3	--	.1	6.4	67	.09	4.3
29...	2.4	2.1	6.0	20	4.0	.2	--	--	--	--	--
JUN											
25...	--	--	35	8.1	5.7	--	.1	3.9	60	.08	.94
25...	2.4	2.6	--	--	--	--	--	--	--	--	--
JUL											
09...	2.8	2.9	--	--	--	--	--	--	--	--	--
09...	--	--	60	11	8.7	--	.2	4.1	75	.10	.02
SEP											
29...	--	--	20	6.5	4.3	--	.1	6.9	80	.11	408
29...	--	2.9	10	10	4.0	1.5	--	--	--	--	--

RED RIVER BASIN

07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
OCT											
24...	--	.06	.27	.000	.00	--	.06	--	.000	.00	.37
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
28...	95	--	--	--	--	<.50	--	.170	--	--	--
28...	--	.06	.27	.010	.03	--	.07	--	.030	.04	.45
DEC											
03...	--	--	--	--	--	--	--	--	--	--	--
18...	--	.21	.93	.010	.03	--	.22	--	68.0	88	.00
18...	--	--	--	--	--	--	--	--	--	--	--
JAN											
15...	--	.03	.13	.010	.03	--	.04	--	99.0	130	.00
15...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	.23	1.0	.010	.03	--	.24	--	103	130	--
21...	98	--	--	--	--	24	--	.150	--	--	--
MAR											
25...	--	.02	.09	.010	.03	--	.03	--	.000	.00	.94
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
MAY											
29...	--	.09	.40	.000	.00	--	.09	--	.030	.04	.55
29...	93	--	--	--	--	<.50	--	.025	--	--	--
JUN											
25...	--	.16	<.71	.010	.03	--	.17	--	.110	.14	.32
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	.10	<.44	.000	.00	--	.10	--	.010	.01	1.2
SEP											
29...	--	4.70	21	.010	.03	--	4.7	--	.020	.03	1.1
29...	133	--	--	--	--	6.0	--	.100	--	--	--
DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS- (MG/L AS N)	NITRO- GEN, DISSOLV (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	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 DIS- SOLVED (UG/L AS AS)
OCT											
24...	.37	.43	--	.010	.000	.00	--	--	--	<10	<10
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
28...	--	--	.070	--	--	--	--	--	--	--	--
28...	.48	.55	--	.010	.000	.00	70	30	40	--	--
DEC											
03...	--	--	--	--	--	--	--	--	--	<10	<10
18...	.46	.68	--	.000	.010	.03	--	--	--	<10	<10
18...	--	--	--	--	--	--	--	--	--	--	--
JAN											
15...	.46	.50	--	.010	.050	.15	--	--	--	<10	<10
15...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	.030	.09	1900	100	1800	--	--
21...	--	--	.060	--	--	--	--	--	--	<10	<10
MAR											
25...	.94	.97	--	.020	.030	.09	--	--	--	<10	<10
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	750	650	100	--	--
10...	--	--	--	--	--	--	--	--	--	<10	<10
MAY											
29...	.58	.67	--	.020	.010	.03	1400	1000	400	--	--
29...	--	--	.090	--	--	--	--	--	--	<10	<10
JUN											
25...	.43	.60	--	.040	.010	.03	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	<10	<10
JUL											
09...	--	--	--	--	--	--	--	--	--	<10	<10
09...	1.2	1.3	--	.030	.000	.00	--	--	--	--	--
SEP											
29...	1.1	5.8	--	.030	.000	.00	700	300	400	--	--
29...	--	--	--	--	--	.10	--	--	--	--	<10

07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
24...	3	4	<10	<10	<4	52	88000	530	<20	<20
NOV										
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
DEC										
03...	<2	<2	<10	<10	5	14	690	230	<20	<20
18...	--	--	--	--	--	--	--	--	--	--
18...	<2	<2	53	<10	<4	<4	1100	430	<20	<20
JAN										
15...	--	--	--	--	--	--	--	--	--	--
15...	<2	<2	<10	<10	9	4	1000	490	<20	<20
FEB										
21...	--	--	--	--	--	--	--	--	--	--
21...	<2	<2	28	<10	5	<4	3800	200	26	34
MAR										
25...	--	--	--	--	--	--	--	--	--	--
25...	2	<2	25	25	4	4	270	820	<20	<20
APR										
10...	--	--	--	--	--	--	--	--	--	--
10...	<2	<2	<10	<10	<4	5	710	320	<20	<20
MAY										
29...	--	--	--	--	--	--	--	--	--	--
29...	<2	<2	<10	<10	4	4	810	460	<20	<20
JUN										
25...	--	--	--	--	--	--	--	--	--	--
25...	<2	<2	<10	<10	<4	4	560	590	<20	<20
JUL										
09...	<2	<2	<10	<10	<4	<4	970	<100	<20	<20
09...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	--	--	--	--	--	--	--	--	--	--
29...	--	3	--	<10	--	<4	--	<100	--	<20

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT										
24...	--	--	--	--	--	--	0	0	0	--
24...	160	50	.5	<.5	<10	<10	--	--	--	--
NOV										
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	0	0	0	0
DEC										
03...	20	<20	<.5	<.5	<10	<10	--	--	--	--
18...	--	--	--	--	--	--	0	0	0	--
18...	60	140	<.5	<.5	34	<10	--	--	--	--
JAN										
15...	--	--	--	--	--	--	0	0	0	--
15...	50	20	1.0	<.5	<10	<10	--	--	--	--
FEB										
21...	--	--	--	--	--	--	0	0	0	--
21...	50	20	<.5	<.5	12	10	--	--	--	--
MAR										
25...	--	--	--	--	--	--	0	0	0	--
25...	70	40	<.5	<.5	<10	10	--	--	--	--
APR										
10...	--	--	--	--	--	--	--	--	--	--
10...	70	20	<.6	<.5	<10	<10	--	--	--	--
MAY										
29...	--	--	--	--	--	--	0	0	1	0
29...	80	40	<.5	<.5	17	20	--	--	--	--
JUN										
25...	--	--	--	--	--	--	0	0	0	--
25...	70	20	<.5	<.5	<10	<10	--	--	--	--
JUL										
09...	110	50	<.5	<.5	<10	<10	--	--	--	--
09...	--	--	--	--	--	--	0	0	0	--
SEP										
29...	--	--	--	--	--	--	0	0	0	0
29...	20	--	--	<.5	--	<10	--	--	--	--

RED RIVER BASIN

07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
24...	--	--	--	--	--	8.7	--	128	.03	97
24...	--	--	14	7	--	--	--	--	--	--
NOV										
28...	--	--	--	--	13	--	--	--	--	--
28...	0	0	--	--	--	6.5	.1	8	.01	90
DEC										
03...	--	--	<4	12	--	--	--	--	--	--
18...	--	--	--	--	--	6.1	.6	12	.04	96
18...	--	--	4	<4	--	--	--	--	--	--
JAN										
15...	--	--	--	--	--	5.3	1.1	35	.10	77
15...	--	--	4	17	--	--	--	--	--	--
FEB										
21...	--	--	--	--	--	6.5	.9	18	1.0	93
21...	--	--	4	<4	23	--	--	--	--	--
MAR										
25...	--	--	--	--	--	11	.7	62	1.3	98
25...	--	--	6	<4	--	--	--	--	--	--
APR										
10...	--	--	--	--	5.6	--	--	14	.34	77
10...	--	--	7	11	--	--	--	--	--	--
MAY										
29...	0	0	--	--	--	13	--	--	--	--
29...	--	--	10	10	14	--	--	--	--	--
JUN										
25...	--	--	--	--	--	9.6	--	44	.69	94
25...	--	--	10	9	--	--	--	--	--	--
JUL										
09...	--	--	<4	<4	--	--	--	--	--	--
09...	--	--	--	--	--	5.7	.8	12	.00	68
SEP										
29...	0	0	--	--	--	10	--	113	577	48
29...	--	--	--	11	10	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				112				118				111
2				107				118				113
3				121				130				114
4				124				129				117
5				120				107				119
6				113				104				120
7				125				108				119
8				128				113				121
9				100	133			102				125
10				102	129			97				126
11				105	122			102				126
12				106	120							128
13				107	120							127
14				110	119							133
15				110	133							134
16				107	130							137
17				112	125							139
18				109	115							137
19				107	95		81					138
20				107	72		74					137
21				112	63		74					130
22				117	65		75					118
23				116			83				105	113
24				116			91				107	116
25				123			111				107	116
26				121			107				107	120
27				128			123				108	112
28				129			120				106	
29				128			115				105	
30				127			115				107	
31				130							110	
MEAN			114	113			97	112			107	124

RED RIVER BASIN

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07333910 MCGEE CREEK NEAR FARRIS, OK--Continued
 PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	6.8						---	7.6	6.5
2			---	6.8						---	7.6	6.3
3			---	6.9						6.7	7.6	6.3
4			---	6.9						6.6	7.6	6.4
5			---	6.8						8.0	7.6	6.7
6			---	6.8						6.2	7.5	6.7
7			7.1	6.8						6.3	---	6.7
8			6.9	6.8						6.3	---	6.7
9			6.8	6.8						6.3	---	6.7
10			6.8	6.8						7.0	---	6.7
11			6.8	6.8						7.2	---	6.7
12			6.7	6.8						7.6	---	6.4
13			6.7	6.8						7.5	---	6.9
14			6.7	6.9						7.5	---	6.8
15			6.7	6.9						7.6	7.5	6.8
16			6.8	7.0						7.6	7.1	6.8
17			6.7	7.0						7.6	7.2	6.9
18			6.7	7.1						7.5	7.3	6.9
19			6.8	7.8						7.5	7.2	7.5
20			6.8	7.7						7.7	6.9	7.5
21			6.8	7.5						7.7	7.0	8.1
22			6.7	---						7.9	6.8	8.1
23			6.7	---						8.0	7.2	---
24			6.7	---						7.9	6.8	8.4
25			6.7	---						7.8	6.7	7.6
26			6.8	---						7.7	6.8	---
27			6.6	---						7.5	6.4	---
28			6.8	---						7.5	6.5	---
29			6.7	---						7.6	6.5	---
30			6.8	---						7.7	6.4	---
31			6.8	---						7.7	6.4	---
MEAN			6.8	7.0						7.4	7.1	7.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	3.0			---	19.5			---	24.0
2			---	2.5			---	19.0			---	28.5
3			---	2.5			---	19.0			---	24.5
4			---	3.0			---	18.5			---	25.5
5			---	2.5			---	17.5			---	25.0
6			---	2.5			---	18.0			---	25.5
7			7.0	2.5			---	19.0			---	24.5
8			5.5	2.0			---	21.5			---	23.5
9			4.5	2.5			---	22.5			---	23.5
10			4.0	2.5			---	23.5			---	23.5
11			4.0	3.0			---	24.5			---	23.0
12			4.0	3.0			---	---			---	21.5
13			4.5	3.5			---	---			---	23.0
14			4.5	3.0			---	---			---	23.0
15			4.5	3.0			---	---			---	21.5
16			5.5	2.0			---	---			---	21.5
17			5.0	2.5			---	---			---	22.0
18			5.5	3.5			20.5	---			---	22.5
19			7.0	4.0			18.5	---			---	22.5
20			9.0	6.0			19.5	---			---	22.5
21			10.0	7.0			19.5	---			---	22.0
22			7.0	6.0			19.0	---			---	21.5
23			6.5	5.5			18.5	---			29.5	21.5
24			7.5	1.5			19.0	---			23.0	23.0
25			5.5	1.0			21.0	---			24.0	22.5
26			6.0	.0			21.0	---			24.0	22.5
27			5.5	---			20.0	---			25.5	22.5
28			5.5	---			18.5	---			27.0	23.0
29			6.0	---			18.0	---			27.0	25.0
30			6.5	---			18.5	---			28.5	24.0
31			4.5	---			---	---			28.5	---
MEAN			6.0	3.0			19.5	20.0			26.5	23.5

RED RIVER BASIN

07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	114	---	---	123	112	139					
2	145	111	---	---	127	112	142					
3	148	101	---	---	130	115	123					
4	149	91	---	---	129	118	122					
5	152	91	---	---	132	118	133					
6	151	90	---	---	132	119	134					
7	155	---	---	---	134	122	130					
8	151	---	---	---	111	125	134					
9	154	91	---	---	83	125	130					
10	---	93	---	---	80	127	113					
11	---	---	---	---	82	130	111					
12	---	---	---	---	82	129	119					
13	---	---	---	---	84	131	113					
14	---	---	---	---	88	131	121					
15	---	---	---	142	93	132	133					
16	---	---	---	141	91	133	127					
17	159	---	---	142	90	134	119					
18	193	---	---	143	94	135	124					
19	140	---	---	143	100	137	---					
20	134	---	---	141	101	138	---					
21	135	---	---	134	102	141	---					
22	138	---	---	119	104	143	---					
23	135	---	---	131	106	142	---					
24	129	---	---	129	107	127	---					
25	128	---	---	128	108	120	---					
26	130	---	---	126	108	136	---					
27	133	---	---	123	111	141	---					
28	136	---	---	123	113	133	---					
29	139	---	---	123	115	136	---					
30	117	---	---	123	---	141	---					
31	123	---	---	123	---	139	---					
MEAN	141	98		131	106	130	126					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.5	15.0	7.5	---	3.0	8.0	15.5	18.0	24.0	30.5		
2	24.5	14.5	9.0	---	3.5	6.5	17.0	16.0	25.0	30.5		
3	21.5	13.5	---	---	4.0	7.0	18.0	17.5	25.5	30.5		
4	20.5	12.5	---	---	4.5	9.0	18.0	19.0	26.0	31.0		
5	20.0	12.5	---	---	5.5	9.0	17.0	20.0	27.0	31.0		
6	19.5	---	---	---	6.0	9.5	16.5	21.0	27.5	31.0		
7	19.5	---	---	---	5.5	11.5	19.0	21.5	28.0	31.0		
8	21.0	---	---	---	4.5	13.5	18.5	21.0	27.5	31.0		
9	23.0	---	---	---	3.5	12.5	18.0	19.5	26.0	31.0		
10	---	---	---	---	2.0	12.5	18.0	20.5	26.0	31.0		
11	---	---	---	---	2.0	12.5	18.5	22.5	26.0	30.5		
12	---	16.0	---	---	3.0	12.0	16.0	24.0	26.5	31.0		
13	---	15.5	---	---	4.0	14.0	13.5	24.0	27.0	31.0		
14	---	15.0	---	---	5.5	13.0	13.0	23.5	27.0	31.0		
15	---	13.5	---	10.0	7.0	13.0	18.0	21.0	27.0	31.0		
16	---	12.0	---	10.0	6.5	14.0	15.5	18.5	27.5	---		
17	19.5	10.0	---	10.0	4.5	15.0	17.0	19.5	27.5	---		
18	19.5	9.0	---	9.5	4.5	13.5	17.0	20.5	27.5	---		
19	21.5	8.5	---	10.0	5.5	14.0	18.0	20.0	28.5	---		
20	21.5	8.0	---	9.5	7.5	15.5	18.5	19.5	25.5	---		
21	23.5	8.0	---	9.5	10.5	14.5	20.0	20.0	26.5	---		
22	22.5	8.5	---	9.5	11.5	15.5	21.0	19.5	26.5	30.5		
23	18.0	9.0	---	8.0	12.0	15.0	21.5	20.0	26.5	30.0		
24	16.5	10.0	---	7.5	11.0	13.0	21.0	21.5	28.5	---		
25	15.5	8.5	---	7.5	9.5	13.5	20.0	23.0	29.5	---		
26	15.5	8.0	---	7.5	8.5	13.0	18.0	24.5	30.0	---		
27	16.5	6.5	---	6.5	8.5	14.5	16.5	26.0	30.0	---		
28	19.0	---	---	5.0	10.5	15.5	16.0	26.0	30.0	---		
29	16.5	---	---	4.5	11.0	15.5	17.0	25.5	30.0	---		
30	17.0	6.5	---	4.0	---	14.0	17.5	23.0	30.5	---		
31	16.0	---	---	3.5	---	13.5	---	23.0	---	---		
MEAN	19.5	11.0	8.5	8.0	6.5	12.5	17.5	21.5	27.5	31.0		

07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°16'17", long 95°54'43", in NE¼NW¼ 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 miles (2.1 km) downstream from McGee Creek, 2.8 miles (4.5 km) northwest of Farris, and at mile 57.7 (92.8 km).

DRAINAGE AREA.--1,087 mi² (2,815 km²).

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 (135.508 m) 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 (0.610 m) higher.

REMARKS.--Records fair below 100 ft³/s (2.83 m³/s) and poor above. Some regulation since June 1959 by Atoka Reservoir, capacity, 125,000 acre-ft (154 hm³), on North Boggy Creek, drainage area, 176 mi² (456 km²); pipeline diversions to Oklahoma City since November 1963, normal capacity, 60 million gallons per day (227,100 m³/d).

COOPERATION.--Gage-height records and 11 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--43 years, 878 ft³/s (24.86 m³/s), 636,100 acre-ft/yr (784 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,900 ft³/s (1,750 m³/s) June 17, 1945, gage height, 44.94 ft (13.698 m), datum then in use, from rating curve extended above 37,000 ft³/s (1,050 m³/s); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,550 ft³/s (270 m³/s) May 30, gage height, 27.20 ft (8.291 m), no peak above base of 10,000 ft³/s (283 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	80	12	20	33	18	36	575	4210	9.9	.14	.00
2	2.3	96	9.9	18	29	17	31	2200	816	8.2	.00	.00
3	2.0	97	8.9	16	27	16	67	3780	336	6.9	.00	.00
4	1.5	54	8.0	15	25	15	86	2990	211	5.7	.00	.00
5	1.3	34	7.2	14	23	14	104	597	146	5.0	.00	.00
6	1.3	21	6.8	13	21	14	76	263	106	4.3	.00	.00
7	1.3	15	6.1	12	19	13	54	172	78	3.8	.00	.00
8	1.2	13	6.0	11	69	12	40	119	76	3.3	.00	.00
9	1.1	12	5.9	11	54	12	30	85	65	2.8	.00	.00
10	1.0	11	5.9	11	138	12	24	65	43	2.5	.00	.00
11	1.0	9.8	5.8	10	503	11	19	51	31	2.3	.00	.00
12	1.1	8.8	6.0	9.7	354	11	17	42	23	2.0	.00	.00
13	1.2	7.9	7.0	9.1	256	11	29	34	18	1.9	.00	.00
14	1.2	7.1	10	9.1	193	10	80	27	15	1.6	.00	.00
15	1.2	6.5	12	9.3	153	9.9	79	324	13	1.4	.00	.00
16	1.2	5.7	10	9.6	122	9.5	59	3080	11	1.2	.00	.00
17	1.6	5.1	9.0	9.7	97	9.6	46	1020	9.4	1.0	.00	.00
18	1.7	5.2	8.6	9.7	84	9.7	50	363	8.5	.97	.00	.00
19	1.2	5.0	8.0	9.5	69	9.7	45	1770	6.7	.77	.00	.00
20	1.3	4.9	7.9	10	61	9.5	35	934	1530	.59	.00	.00
21	1.2	5.7	8.0	52	53	34	28	474	2750	.57	.00	.00
22	1.9	5.7	8.7	474	46	51	22	947	1240	1.0	.00	.00
23	1.9	5.3	12	270	39	40	18	441	349	1.0	.00	.00
24	1.9	5.2	19	164	34	45	15	249	152	.80	.00	.00
25	1.9	6.7	45	134	29	33	15	156	87	.57	.00	.00
26	2.1	15	53	102	26	26	243	124	54	.78	.00	.00
27	2.1	30	36	76	23	22	317	111	35	1.4	.00	.00
28	2.0	23	26	54	21	25	176	100	23	1.1	.00	50
29	2.0	17	22	49	20	32	123	91	16	.80	.00	5500
30	35	14	20	42	---	41	103	5410	12	.51	.00	1700
31	111	---	21	36	---	41	---	7920	---	.27	.00	---
TOTAL	191.1	626.6	431.7	1689.7	2621	633.9	2067	34514	12470.6	74.93	.14	8750.00
MEAN	6.16	20.9	13.9	54.5	90.4	20.4	68.9	1113	416	2.42	.005	292
MAX	111	97	53	474	503	51	317	7920	4210	9.9	.14	5500
MIN	1.0	4.9	5.8	9.1	19	9.5	15	27	6.7	.27	.00	.00
AC=FT	379	1240	856	3350	5200	1260	4100	68460	24740	149	.3	17360

CAL YR 1979 TOTAL 263022.00 MEAN 721 MAX 14600 MIN 1.0 AC=FT 521700
WTR YR 1980 TOTAL 64070.67 MEAN 175 MAX 7920 MIN .00 AC=FT 127100

RED RIVER BASIN

07334200 BYRD'S MILL SPRING NEAR FITTSTOWN, OK

LOCATION.--Lat 34°35'45", long 96°39'55", in SW¼SW¼ sec.34, T.2 N., R.6 E., Pontotoc County, Hydrologic Unit 11140104, upstream from weir outlet of spring, 0.5 mi (0.8 km) upstream from Big Spring Creek, 2.0 mi (3.2 km) west of Fittstown, and 12.0 mi (19.3 km) 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 (311.253 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of no gage-height record Jan. 11 to Mar. 17 and Mar. 21 to Apr. 23, which are poor. Records do not include diversion of about 6 to 10 ft³/s (0.17 to 0.28 m³/s) by city of Ada for municipal water supply, a part of which is discharge as effluent to Sandy Creek, tributary to Canadian River. Records of zero flow do not include seepage of up to 0.10 ft³/s (0.003 m³/s).

AVERAGE DISCHARGE.--21 years, 7.22 ft³/s (0.204 m³/s), 5,230 acre-ft/yr (6.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30 ft³/s (0.85 m³/s) May 30, 1960, gage height, 3.22 ft (0.981 m); no flow at times in 1959, 1964-67, 1977, 1978, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.1 ft³/s (0.14 m³/s) Oct. 4-6, gage height, 2.87 ft (0.874 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	3.5	2.2	.79	.45	.36	.00	.81	1.8	.00	.00	.00
2	4.9	3.4	2.2	.78	.44	.36	.00	.84	.99	.00	.00	.00
3	4.9	3.4	2.2	.71	.44	.36	.00	.86	.47	.00	.00	.00
4	5.1	3.4	2.2	.65	.44	.36	.00	.88	.52	.00	.00	.00
5	5.1	3.3	2.2	.62	.43	.35	.00	.89	.58	.00	.00	.00
6	4.9	3.2	2.0	.60	.43	.35	.00	.89	.61	.00	.00	.00
7	4.9	3.2	2.0	.60	.43	.35	.00	.89	.64	.00	.93	.00
8	4.9	3.2	1.9	.58	.42	.35	.00	.85	.62	.00	2.5	.00
9	4.8	3.1	1.8	.55	.42	.35	.00	.88	.65	.00	4.1	.00
10	4.9	3.0	2.0	.53	.42	.34	.00	.89	.66	.00	4.5	.00
11	4.6	3.0	1.9	.52	.42	.34	.00	.82	.66	.00	4.5	.00
12	4.6	2.8	1.8	.52	.41	.34	.00	.65	.67	.00	4.4	.00
13	4.4	2.8	1.7	.51	.41	.34	.00	.55	.68	.00	4.5	.00
14	4.5	2.6	1.7	.51	.41	.33	.00	.51	.38	.00	3.4	.00
15	4.5	2.6	1.6	.51	.40	.33	.10	.48	.11	.00	2.6	.00
16	4.4	2.6	1.4	.50	.40	.33	.15	.38	.03	.00	2.3	.20
17	4.3	2.6	1.2	.50	.40	.33	.22	.34	1.5	.00	3.0	.00
18	4.3	2.5	1.2	.49	.39	.33	.30	.41	2.7	.00	3.9	.00
19	4.3	2.5	1.2	.49	.39	.25	.41	.47	1.7	.00	3.3	.00
20	4.2	2.4	1.3	.49	.39	.19	.56	.48	.89	.00	.30	.00
21	4.1	2.4	1.3	.48	.39	.14	.60	.54	.00	.00	.00	.00
22	4.0	2.3	1.3	.48	.38	.10	.64	.89	.00	.00	.00	.00
23	4.0	2.4	1.2	.48	.38	.00	.70	1.0	.31	.00	.00	.00
24	4.0	2.3	1.1	.47	.38	.00	.76	.99	1.1	.00	.00	.00
25	3.9	2.5	1.1	.47	.38	.00	.83	1.0	1.2	.00	.00	.00
26	3.9	2.5	1.0	.46	.37	.00	.96	.59	1.2	.00	.00	.00
27	3.8	2.3	.97	.46	.37	.00	.83	.71	1.7	.04	.00	.00
28	3.7	2.1	.93	.46	.37	.00	.84	1.2	1.2	.00	.00	.00
29	3.7	2.1	.88	.45	.37	.00	.76	.78	1.2	.00	.00	.00
30	3.7	2.1	.85	.45	---	.00	.75	1.7	.65	.00	.00	.00
31	3.6	---	.81	.45	---	.00	---	1.7	---	.00	.00	---
TOTAL	135.8	82.1	47.14	16.56	11.73	6.88	9.41	24.87	25.42	.04	44.23	.20
MEAN	4.38	2.74	1.52	.53	.40	.22	.31	.80	.85	.001	1.43	.007
MAX	5.1	3.5	2.2	.79	.45	.36	.96	1.7	2.7	.04	4.5	.20
MIN	3.6	2.1	.81	.45	.37	.00	.00	.34	.00	.00	.00	.00
AC=FT	269	163	94	33	23	14	19	49	50	.08	88	.4
CAL YR 1979	TOTAL	1987.98	MEAN	5.45	MAX	14	MIN	.01	AC=FT	3940		
WTR YR 1980	TOTAL	404.38	MEAN	1.10	MAX	5.1	MIN	.00	AC=FT	802		

RED RIVER BASIN

547

07335000 CLEAR BOGGY CREEK NEAR CANEY, OK

LOCATION.--Lat 34°15'09", long 96°12'19", in NW¼SE¼ 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 (0.8 km) downstream from Caney Creek, 1.5 mi (2.4 km) north of Caney, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--720 mi² (1,865 km²).

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 (147.843 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage at same site and datum.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 476 ft³/s (13.48 m³/s), 8.98 in/yr (228 mm/yr), 344,900 acre-ft/yr (425 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft³/s (1,500 m³/s) Dec. 11, 1946, gage height, 26.77 ft (8.159 m); no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 26.9 ft (8.20 m) occurred in February 1938, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,090 ft³/s (229 m³/s) at 1400 May 30, gage height, 21.87 ft (6.666 m), no other peak above base of 4,500 ft³/s (127 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	20	13	15	18	18	17	24	6000	14	.00	.00
2	9.2	15	13	15	18	17	16	23	2230	11	.00	.00
3	7.7	15	13	15	16	17	134	30	1260	10	.00	.00
4	6.6	15	13	15	16	17	69	28	995	8.9	.00	.00
5	6.2	16	13	15	16	17	29	50	795	7.4	.00	.00
6	6.2	16	12	14	16	15	21	29	525	6.3	.00	.00
7	5.6	15	11	17	16	15	17	17	363	5.5	.00	.00
8	5.3	14	10	20	185	14	15	14	234	4.8	.00	.00
9	5.3	13	10	20	298	14	13	12	182	4.2	.00	.00
10	5.0	13	11	20	122	14	11	9.7	132	3.0	.00	.00
11	5.2	13	12	20	96	14	11	7.8	103	2.5	.00	.00
12	5.3	13	14	20	78	14	11	6.5	81	2.4	.00	.00
13	5.3	13	17	20	66	14	14	5.5	65	1.9	.00	.00
14	6.1	18	17	20	57	14	14	4.5	53	1.2	.00	.00
15	6.4	17	16	22	49	14	12	15	46	1.1	.00	.00
16	5.7	15	16	21	43	14	11	45	40	.92	.00	.00
17	8.3	13	18	21	35	14	9.9	35	35	.74	.00	.00
18	9.5	12	15	21	32	14	9.2	24	31	.56	.00	.00
19	9.2	11	16	22	30	20	7.1	127	28	.36	.00	.00
20	8.1	11	15	26	30	40	6.8	130	37	.31	.00	.00
21	8.6	13	15	50	28	25	7.9	67	246	.08	.00	.00
22	12	14	14	70	27	21	9.2	46	226	.00	.00	.00
23	12	15	17	60	26	21	8.5	32	119	.00	.00	.00
24	11	50	20	50	25	18	7.6	23	79	.00	.00	.00
25	12	24	17	34	24	16	9.4	19	58	.00	.00	.00
26	20	19	17	24	22	16	24	13	46	.37	.00	.00
27	16	17	17	23	21	18	24	9.2	37	1.6	.00	17
28	14	16	17	21	20	27	21	7.5	29	1.4	.00	2780
29	12	14	17	20	18	23	21	44	23	.91	.00	3290
30	11	14	16	20	---	20	21	5750	18	.43	.00	976
31	23	---	15	20	---	17	---	6280	---	.15	.00	---
TOTAL	287.3	484	457	771	1448	552	601.6	12927.7	14116	92.03	.00	7063.00
MEAN	9.27	16.1	14.7	24.9	49.9	17.8	20.1	417	471	2.97	.000	235
MAX	23	50	20	70	298	40	134	6280	6000	14	.00	3290
MIN	5.0	11	10	14	16	14	6.8	4.5	18	.00	.00	.00
CFSM	.01	.02	.02	.04	.07	.03	.03	.58	.65	.004	.000	.33
IN.	.01	.03	.02	.04	.07	.03	.03	.67	.73	.00	.00	.36
AC-FT	570	960	906	1530	2870	1090	1190	25640	28000	183	.00	14010
CAL YR 1979 TOTAL	139257.20			MEAN 382	MAX 8560	MIN 5.0	CFSM .53	IN 7.19	AC-FT 276200			
WTR YR 1980 TOTAL	38799.63			MEAN 106	MAX 6280	MIN .00	CFSM .15	IN 2.00	AC-FT 76960			

RED RIVER BASIN

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW¼ sec.11, T.8 S., R.17 E., Choctaw County, Okla., Hydrologic Unit 11140101, near right bank on downstream side of pier of bridge on U.S Highway 271 at Arthur City, 10.6 mi (17.1 km) downstream from Muddy Boggy River, 26.0 mi (41.8 km) upstream from Kiamichi River, and at mile 633.1 (1,018.7 km).

DRAINAGE AREA.--44,531 mi² (115,335 km²), of which 5,936 mi² (15,374 km²) is probably noncontributing.

PERIOD OF RECORD.--January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft (115.845 m) National Geodetic Vertical Datum of 1929; 1905-11, nonrecording gage at St. Louis-San Francisco Railway Co. bridge 200 ft (61.0 m) upstream at same datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 miles (149.3 km) above station.

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Dension Dam) 13 years, (water years 1906-11, 1937-43), 9,266 ft³/s (262.4 m³/s) 6,713,000 acre-ft/yr (8.28 km³/yr); (since regulation of Dension Dam) 36 years, (water years 1945-80), 7,671 ft³/s (217.2 m³/s), 5,558,000 acre-ft/yr (6.85 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 400,000 ft³/s (11,300 m³/s) May 28, 1908, gage height, 43.2 ft (13.17 m), from rating curve extended about 41,000 ft³/s (1,160 m³/s) on basis of records for later years; minimum, 130 ft³/s Dec. 11, 12, 1956, gage height, 4.49 ft (1.369 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,200 ft³/s (1,110 m³/s) June 5, gage height, 16.85 ft (5.136 m); minimum daily, 364 ft³/s (10.3 m³/s) Nov. 27.

DISCHARGE, IN CURTIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3040	2600	501	733	2910	2600	1370	930	15000	1260	4320	2740
2	2730	2150	1040	512	1730	3110	1210	1970	12800	2590	4040	1020
3	4330	1100	1610	456	3000	4300	1640	2680	10800	3490	3170	708
4	3510	1230	774	424	2250	4210	1500	5830	26900	3940	2040	596
5	3300	1200	862	506	1100	4220	2370	5650	37500	3300	1560	528
6	3210	1180	1230	894	770	2190	1960	2780	31500	2340	1350	1270
7	2660	1190	851	843	1200	1030	961	1130	21600	1970	1850	2800
8	2200	1010	1250	648	1610	878	643	879	21500	1940	2680	2500
9	1730	2240	903	445	1550	941	774	1350	19700	1700	2670	2400
10	2710	3130	689	602	1600	1470	2100	1380	17600	3020	3200	2390
11	2780	1850	435	2060	1800	798	924	956	16300	5200	3720	2550
12	2140	1320	461	1620	1600	607	530	560	16200	5200	2910	2760
13	2950	789	566	1220	1800	527	497	453	12700	4770	2590	3390
14	3180	1070	478	1090	1750	484	546	410	10200	4160	3860	3970
15	2220	1990	750	1290	1600	460	1760	829	6610	3370	3760	3080
16	1290	1310	1700	720	1430	589	2700	2730	5780	3210	4570	1930
17	1040	1950	835	506	1100	747	2240	2960	5600	3550	3270	1360
18	829	2350	567	445	2000	664	1490	2980	6400	3540	2580	2650
19	1420	2310	1180	480	6500	584	1320	2280	6510	2960	2130	2070
20	2310	990	1690	679	4260	1390	2170	2290	9200	3130	1270	1590
21	4770	684	1360	1990	3360	1640	2200	2610	9460	2540	3120	1740
22	3280	939	1300	2580	3810	808	1570	1870	9100	1060	3780	1020
23	2050	936	1810	2610	3040	585	999	2420	8040	943	3860	880
24	1610	649	3040	3500	3880	780	1180	2690	5860	1940	3320	872
25	1270	445	2000	4000	3150	603	821	2450	5950	1570	1840	1160
26	1010	395	1400	4500	2440	554	798	2850	4460	1460	1280	1550
27	1320	364	1420	2560	4330	1720	1130	3590	4490	1260	1150	1010
28	1290	615	1210	1630	5420	1600	2690	3320	4610	2060	1860	3790
29	920	1510	1320	2910	4120	2160	1800	3000	3910	1220	2410	13600
30	712	810	1750	4500	---	2710	885	8620	2430	3020	3060	20700
31	1090	---	1440	6000	---	1510	---	13500	---	3750	3910	---
TOTAL	68901	40306	36422	52953	75110	46469	42778	87947	368710	85463	87130	88624
MEAN	2223	1344	1175	1708	2590	1499	1426	2837	12290	2757	2811	2954
MAX	4770	3130	3040	6000	6500	4300	2700	13500	37500	5200	4570	20700
MIN	712	364	435	424	770	460	497	410	2430	943	1150	528
AC=FT	136700	79950	72240	105000	149000	92170	84850	174400	731300	169500	172800	175800
CAL YR 1979 TOTAL	2230289			6110	52900	MIN 364	AC=FT	4424000				
WTR YR 1980 TOTAL	1080813			2953	37500	MIN 364	AC=FT	2144000				

RED RIVER BASIN

549

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK
(Hydrologic bench-mark station)

LOCATION.--Lat 34°38'18", long 94°36'45", in SW¼SE¼ sec.18, T.2 N., R.26 E., LeFlore County, Hydrologic Unit 11140105, in Ouachita National Forest, on downstream side of right bank pier of bridge on State Highway 63, 0.2 mi (0.3 km) upstream from Rattlesnake Creek, 1.1 mi (1.8 km) upstream from Big Branch, 2.1 mi (3.4 km) east of Big Cedar, and at mile 157.6 (253.6 km).

DRAINAGE AREA.--40.1 mi² (103.9 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 886.97 ft (270.348 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 74.6 ft³/s (2.113 m³/s), 25.26 in/yr (642 mm/yr), 54,050 acre-ft/yr (66.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) Dec. 10, 1971, gage height, 17.08 ft (5.206 m), from rating curve extended above 9,000 ft³/s (255 m³/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 23	1430	*3,620 103	*10.87 3.313	Apr. 25	0300	2,800 79.3	10.15 3.094

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1.3	44	14	46	29	16	65	164	53	2.8	.24	.00	
2	1.1	31	12	40	26	14	56	275	44	2.2	.18	.00	
3	.96	23	11	36	24	13	102	303	36	1.8	.14	.00	
4	.55	18	10	32	22	13	81	194	30	1.3	.10	.00	
5	.47	14	9.7	28	21	12	74	143	24	1.0	.08	.00	
6	.44	11	9.1	26	19	11	66	113	20	.80	.02	.00	
7	.45	9.4	8.5	26	17	11	58	91	16	.60	.00	.00	
8	.37	9.2	7.8	23	132	10	49	74	13	.45	.00	.00	
9	.36	12	7.4	21	138	9.2	39	61	12	.36	.00	.00	
10	.31	9.4	7.2	20	106	8.7	33	50	9.1	.30	.00	.00	
11	.30	8.7	7.6	29	96	8.2	30	43	7.5	.23	.00	.00	
12	.30	8.2	133	24	100	15	27	55	6.0	.18	.00	.00	
13	.28	7.6	175	23	97	13	113	47	5.3	.14	.00	.00	
14	.27	7.1	121	22	91	11	207	36	4.8	.10	.00	.00	
15	.25	6.8	95	23	96	9.4	176	49	4.0	.08	.00	.00	
16	.27	6.6	75	30	85	10	145	652	3.8	.06	.00	.00	
17	.56	6.4	60	25	73	22	125	234	3.4	.05	.00	.00	
18	1.1	7.6	50	23	63	24	109	155	4.2	.04	.00	.00	
19	.69	8.2	44	25	57	26	91	214	124	.03	.00	.00	
20	.52	10	38	35	49	28	78	148	44	.03	.00	.00	
21	.47	43	33	104	42	26	68	125	28	.02	.00	.00	
22	1.2	52	417	196	36	23	58	128	21	.02	.00	.00	
23	.94	44	1190	162	31	37	50	126	15	.01	.00	.00	
24	.70	40	521	122	27	78	48	100	10	.00	.00	.00	
25	.54	35	221	95	23	68	928	82	7.9	.00	.00	.00	
26	.45	30	149	75	20	60	330	67	6.6	.10	.00	.00	
27	.45	26	113	59	19	53	216	54	5.3	.08	.00	.46	
28	.53	21	90	50	17	60	162	45	5.5	.74	.00	189	
29	.60	18	75	46	16	64	129	49	4.5	.80	.00	89	
30	19	14	63	40	---	86	104	84	3.5	.57	.00	39	
31	95	---	54	34	---	76	---	69	---	.34	.00	---	
TOTAL	130.73	581.2	3821.3	1540	1572	915.5	3817	4030	571.8	16.13	.76	363.00	
MEAN	4.22	19.4	123	49.7	54.2	29.5	127	130	19.1	.52	.025	12.1	
MAX	95	52	1190	196	138	86	928	652	124	2.8	.24	189	
MIN	.25	6.4	7.2	20	16	8.2	27	36	3.5	.00	.00	.00	
CFSM	.11	.48	3.07	1.24	1.35	.74	3.17	3.24	.48	.01	.001	.30	
IN.	.12	.54	3.54	1.43	1.46	.85	3.54	3.74	.53	.01	.00	.34	
AC=FT	259	1150	7580	3050	3120	1820	7570	7990	1130	32	1.5	720	
CAL YR 1979 TOTAL	42084.32	MEAN	115	MAX	2790	MIN	.25	CFSM	2.87	IN	39.04	AC=FT	83470
WTR YR 1980 TOTAL	17359.42	MEAN	47.4	MAX	1190	MIN	.00	CFSM	1.18	IN	16.10	AC=FT	34430

RED RIVER BASIN

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	ATION)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT												
09...	1530	.52	40	6.9	18.0	7.6	83	--	--	--	--	7
NOV												
06...	0930	11	28	6.5	10.5	11.0	100	99	98	180	5	
DEC												
04...	1000	9.9	17	7.5	3.0	14.4	109	--	--	--	--	4
JAN												
08...	1200	23	16	6.8	4.0	14.0	109	38	26	71	5	
FEB												
12...	1030	99	12	6.9	3.0	16.0	121	26	K5	29	4	
MAR												
18...	1430	25	19	6.7	12.0	12.2	116	0	K3	K3	5	
APR												
16...	0840	138	17	6.9	10.5	12.0	109	30	K19	76	6	
MAY												
21...	1020	130	18	7.2	16.5	9.4	98	23	48	207	5	
JUN												
23...	1430	14	21	7.8	25.0	8.8	110	K18	--	K18	6	
JUL												
23...	1030	.02	37	6.6	25.0	4.5	56	90	K12	328	18	
SEP												
29...	1805	65	20	6.7	19.0	10.4	116	460	190	440	6	
DATE		HARD- NESS, NONCAR- BONATE (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (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)
OCT												
09...	0	1.5	.8	2.5	37	.4	1.6	7.0	5.0	2.2	.1	
NOV												
06...	0	1.0	.7	2.4	43	.5	1.2	6.0	4.0	1.8	.0	
DEC												
04...	0	.9	.5	2.4	62	.5	.8	7.0	5.0	2.5	.0	
JAN												
08...	2	1.0	.5	1.3	35	.3	.6	3.0	5.4	2.2	.0	
FEB												
12...	1	.7	.5	1.7	45	.4	.5	3.0	1.5	2.2	.1	
MAR												
18...	0	.9	.6	1.9	43	.4	.6	7.0	2.3	2.1	.0	
APR												
16...	2	1.3	.7	1.8	36	.3	.7	4.0	3.5	1.3	.1	
MAY												
21...	1	.7	.7	1.6	39	.3	.7	4.0	3.3	1.5	.0	
JUN												
23...	1	1.0	.8	2.0	39	.4	.7	5.0	2.9	1.6	.0	
JUL												
23...	6	4.4	1.7	3.3	27	.3	1.4	12	3.0	3.4	.0	
SEP												
29...	0	1.0	.8	2.0	38	.4	1.0	7.0	2.5	2.2	.1	

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible][illegible]

[illegible][illegible]

[illegible][illegible]

RED RIVER BASIN

555

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATERIAL, (UG/KG)	METHYL PAPA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TUX- APHENE, TOTAL (UG/L)
OCT 09...	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--
FEB 12...	--	--	--	--	--	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--	--
APR 16...	--	--	--	--	--	--	--	--	--
MAY 21...	--	--	--	--	--	--	--	--	--
JUN 23...	.0	.00	.00	.0	.00	.00	.00	.00	0
JUL 23...	--	--	--	--	--	--	--	--	--
SEP 29...	--	--	--	--	--	--	--	--	--

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DISH- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 09...	--	--	--	--	--	5	.01	80
NOV 06...	--	--	--	--	--	10	.30	85
DEC 04...	--	--	--	--	--	3	.08	88
JAN 08...	--	--	--	--	--	5	.31	91
FEB 12...	--	--	--	--	--	5	1.3	53
MAR 18...	--	--	--	--	--	3	.20	81
APR 16...	--	--	--	--	--	2	.75	84
MAY 21...	--	--	--	--	--	7	2.5	61
JUN 23...	0	.00	.00	.00	.00	6	.23	79
JUL 23...	--	--	--	--	--	13	.00	79
SEP 29...	--	--	--	--	--	4	.70	86

LOCATION.--Lat 34°14'55", long 95°36'18", in SW¼ sec.35, T.3 S., R.16 E., Pushmataha County, Hydrologic Unit 11140105, on right bank, 50 ft (15.240 m) downstream from bridge on U.S. Highway 271 and State Highway 2, 2.0 mi (3.2 km) northeast of Antlers, 7.7 mi (12.4 km) downstream from Tenmile Creek, 5.4 mi (8.7 km) upstream from Cedar Creek and at mile 59.6 (95.9 km).

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

GAGE.--Water-stage recorder. Datum of gage is 419.82 ft (127.961 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Small diversion above station for municipal water supply of city of Antlers.

COOPERATION.--Gage-height record, 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--8 years, 1,508 ft³/s (42.71 m³/s), 17.99 in/yr (457 mm/yr), 1,093,000 acre-ft/yr (1.35 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s (1,420 m³/s) Mar. 28, 1977, gage height, 34.33 ft (11.683 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) May 17, gage height, 17.85 ft (5.441 m); no peak above base of 18,000 ft³/s (510 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	27	1240	98	323	362	197	500	2100	2430	96	1.0	.00		
2	27	833	78	283	345	188	400	4550	1330	82	.82	.00		
3	21	411	72	229	293	174	1030	7970	857	68	.59	.00		
4	18	252	67	218	260	165	2810	5140	623	59	.41	.00		
5	15	168	60	208	242	160	1530	2450	482	51	.33	.00		
6	13	143	55	192	231	151	975	1530	383	45	.21	.00		
7	11	114	50	181	216	138	750	1070	315	38	.12	.00		
8	10	92	44	170	1460	128	406	794	265	30	.00	.00		
9	8.2	82	41	156	7380	122	501	618	234	26	.00	.00		
10	7.1	80	39	142	4380	120	415	502	204	23	.00	.00		
11	6.6	66	39	129	2270	115	344	419	180	20	.00	.00		
12	6.0	61	61	123	1690	113	325	358	157	17	.00	.00		
13	4.7	54	69	118	1360	113	960	302	132	15	.00	.00		
14	4.2	49	174	111	1150	111	2140	261	112	14	.00	.00		
15	4.0	45	536	106	987	109	1950	411	100	12	.00	.00		
16	4.0	40	367	106	869	115	1270	8050	90	10	.00	.00		
17	5.0	35	272	106	775	122	975	10600	80	8.3	.00	.00		
18	22	31	220	103	669	120	872	3200	71	6.8	.00	.00		
19	52	28	214	99	584	113	852	3820	89	6.0	.00	.00		
20	29	25	183	102	522	146	709	4630	2500	5.1	.00	.00		
21	17	24	162	260	480	168	579	2140	1900	6.0	.00	.00		
22	14	50	155	1570	430	157	478	2700	1200	9.8	.00	.00		
23	11	119	175	1930	374	148	406	2560	850	7.3	.00	.00		
24	9.4	327	1470	1460	326	231	351	1740	580	5.1	.00	.00		
25	8.8	249	4100	1040	289	727	513	1250	350	4.0	.00	.00		
26	8.5	187	1670	777	269	672	6580	904	261	2.9	.00	.00		
27	7.5	150	983	606	246	550	6980	675	214	2.3	.00	7.2		
28	6.8	133	722	493	225	495	3030	533	174	2.3	.00	5810		
29	6.1	106	562	424	211	558	1830	563	143	2.3	.00	5140		
30	20	100	453	381	---	663	1230	5000	116	2.0	.00	2260		
31	623	---	376	363	---	763	---	5400	---	1.7	.00	---		
TOTAL	1026.9	5314	13567	12509	28895	7852	41871	82240	16422	677.9	3.48	13217.20		
MEAN	33.1	177	438	404	996	253	1396	2653	547	21.9	.11	441		
MAX	623	1240	4100	1930	7380	763	6980	10600	2500	96	1.0	5810		
MIN	4.0	24	39	99	211	109	325	261	71	1.7	.00	.00		
CFSM	.03	.16	.39	.36	.88	.22	1.23	2.33	.48	.02	.000	.39		
IN.	.03	.17	.44	.41	.94	.26	1.37	2.69	.54	.02	.00	.43		
AC=FT	2040	10540	26910	24810	57310	15570	83050	163100	32570	1340	6.9	26220		
CAL YR 1979	TOTAL	705657.90	MEAN	1933	MAX	39100	MIN	4.0	CFSM	1.70	IN	23.07	AC=FT	1400000
NTR YR 1980	TOTAL	223595.48	MEAN	611	MAX	10600	MIN	.00	CFSM	.54	IN	7.31	AC=FT	443500

07336600 HUGO LAKE NEAR HUGO, OK

LOCATION.--Lat 34°00'42", long 95°22'49", in NW¼NW¼ sec.25, T.6 S., R.18 E., Choctaw County, Hydrologic Unit 11140105, on upstream face of Hugo Dam on Kiamichi River, 700 ft (213 m) to left of spillway, 7.0 mi (11.3 km) east of Hugo, and at mile 17.6 (28.3 km).

DRAINAGE AREA.--1,709 mi² (4,426 km²).

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 weir with six 40-ft (12.2 m) by 50-ft (15.2 m) gates. Regulated storage began Jan. 18, 1974; conservation pool was first filled Mar. 12, 1974. Total capacity, 1,561,500 acre-ft (1.93 km³) at elevation 452.5 ft (137.92 m), top of dam, 966,700 acre-ft (1.19 km³) at elevation 437.5 ft (133.35 m), top of flood control pool. Dead storage 21,080 acre-ft (26.0 hm³) at elevation 387.5 ft (118.11 m), 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 539,700 acre-ft (665 hm³) Mar. 31, 1977, elevation, 423.60 ft (129.113 m); minimum since conservation pool was first filled, 88,860 acre-ft (110 hm³) Nov. 15, 1978, elevation, 398.47 ft (121.454 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 198,200 acre-ft (244 hm³) Feb. 11, elevation, 407.37 ft (124.166 m); minimum, 103,900 acre-ft (128 hm³) Sept. 26, elevation, 400.00 ft (121.920 m).

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

398	84,240	407	192,700
401	115,000	410	239,900
404	150,800	413	294,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156200	159900	158900	163000	159500	158300	160000	179400	178000	162500	139700	117100
2	155700	162200	158400	159700	159500	157600	160300	178600	170300	162000	138800	116600
3	155800	163000	158000	159000	159700	157600	163000	184900	165400	161200	138300	116100
4	155100	163000	158000	159300	159300	159600	162600	189300	160000	160700	137300	115600
5	154500	164800	158900	159300	159600	158700	162600	183500	157200	160100	136700	114800
6	154300	164200	158000	160700	159300	158500	162600	172900	157400	159500	136000	114200
7	153600	164200	157800	159600	159300	159100	160000	163900	157600	158900	135200	113700
8	153400	164600	157700	159200	169400	159300	157600	159100	158500	158000	134500	113300
9	153600	165700	157700	159100	166200	159500	156500	156900	158500	157300	133800	112800
10	153000	164800	157700	159300	195900	159600	156400	157400	158500	156500	133100	112200
11	153000	164300	159100	159700	197200	160000	158700	157700	158400	155700	132500	111400
12	152700	163800	161200	159100	192500	161400	158700	158100	157800	155000	131800	110700
13	152400	163700	161900	159200	187400	161000	163700	158800	157400	154200	131000	110300
14	151900	163100	162300	159100	181800	161500	167900	157700	157000	153200	130400	109900
15	152000	162600	163500	159300	179400	161600	167700	161000	156400	152200	129300	109100
16	152000	163500	166400	159200	176300	161900	163800	177500	156200	151600	128600	108500
17	154100	161500	168800	159200	173700	162600	160700	193000	155900	150800	128000	107800
18	153800	161100	166100	159200	170900	162300	159700	192500	155400	150100	127200	107500
19	153800	160700	166400	159300	168800	162300	159700	188600	154700	149300	126200	106900
20	153800	160000	166400	159900	165700	163100	160300	188700	163100	148600	125400	106300
21	154200	161100	166500	164300	162300	163000	160400	184400	170300	148000	125000	105700
22	155000	160100	167500	166900	160800	162700	160300	180100	172100	147500	124100	105200
23	154900	159100	173800	167200	160700	164300	160100	176400	172900	146700	123300	105000
24	154600	158900	176700	167100	160100	162900	159300	172500	171900	145900	122500	104700
25	154500	159100	185600	165800	159200	162200	159600	167200	171000	146400	121900	104100
26	153800	158900	188400	163700	158000	161600	174500	160600	169600	144000	121300	104100
27	153800	159700	185200	160600	157300	161500	190500	157000	168000	143400	120500	108500
28	153900	159200	181200	157700	157000	161500	194500	159200	166500	143100	119900	117900
29	153000	159200	177400	156800	158300	161200	190200	160800	164800	142200	119100	163100
30	155500	158900	172900	158900	---	161000	184300	183500	163300	141400	118600	169800
31	158000	---	168400	159500	---	160100	---	185200	---	140500	117800	---
MAX	158000	165700	188400	167200	197200	164300	194500	193000	178000	162500	139700	169800
MIN	151900	158900	157700	156800	157000	157600	156400	156900	154700	140500	117800	104100
†	404.53	404.60	405.30	404.64	404.55	404.69	406.43	406.49	404.92	403.17	401.25	405.40
‡	+1,500	+900	+9,500	-8,900	-1,200	+1,800	+24,200	+900	-21,900	-22,800	-22,700	+52,000
CAL YR 1979	MAX	460700	MIN	151900	‡	-4,800						
WTR YR 1980	MAX	197200	MIN	104100	‡	+13,300						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RED RIVER BASIN

07336820 RED RIVER NEAR DE KALB, TX

LOCATION.--Lat 33°41'15", long 94°41'39", Bowie County, TX-McCurtain County, OK State line, Hydrologic Unit 11140106, near left bank at downstream side of bridge on U.S. Highway 259, 4.8 mi (7.7 km) upstream from North Mill Creek, 13 mi (21 km) north of De Kalb, and at mile 556.9 (896.1 km).

DRAINAGE AREA.--47,348 mi² (122,631 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft (92.330 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. At times, flood peaks may be affected by storage in Lake Texoma (station 07331500) located approximately 169 mi (272 km) upstream, and low flows may be affected by releases for generation of electric power. National Weather Bureau gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years (water years 1969-80), 11,080 ft³/s (313.8 m³/s), 8,027,000 acre-ft/yr (9.90 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft³/s (5,350 m³/s) Dec. 11, 1971, gage height, 31.55 ft (9.616 m), from graph based on gage readings; minimum, 213 ft³/s (6.03 m³/s) Nov. 30, 1979, from graph based on gage readings.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1957, 205,000 ft³/s (5,800 m³/s) June 1957, gage height, 32.2 ft (9.81 m), from rating curve extended above 186,500 ft³/s (5,280 m³/s). The greatest flood since 1936 occurred in February 1938, stage unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,300 ft³/s (1,080 m³/s) June 6 at 2130 hours, gage height, 19.54 ft (5.956 m); minimum, 213 ft³/s (6.03 m³/s) Nov. 30, gage height, 6.92 ft (2.109 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4420	1610	1630	5370	5360	5830	4190	6730	19900	4610	2960	3030
2	4600	1690	1300	5040	5890	4500	3410	6040	23800	3300	3790	3850
3	3260	2790	431	4440	4360	3680	3150	6330	22000	2500	4260	3100
4	2950	2670	796	2950	3750	4120	3010	7100	17500	3490	3960	1740
5	4040	1560	1900	2170	4290	4730	3280	8450	20900	3880	3320	1230
6	3610	1300	1280	1680	3660	4720	4260	12100	36000	4260	2160	890
7	3360	1280	796	1510	2840	4450	4980	12800	35900	3610	1600	726
8	3230	1370	1430	1750	3100	3190	4650	10100	27800	2920	1490	1390
9	2770	2640	1010	1850	7150	2250	3900	6510	23900	2610	1830	2290
10	2200	4170	1300	1620	9960	1770	3180	4230	23400	2360	2650	2320
11	1720	4330	1010	1380	12700	1710	1980	3320	21100	2290	2840	2140
12	2530	4520	757	1410	14400	2110	2670	3180	18500	3690	3350	2180
13	2750	3250	1980	2560	13400	1690	2370	2480	17400	5320	3800	2480
14	2210	2390	2200	2560	11500	1180	5000	1730	16900	5050	3050	2650
15	2920	1680	1590	2160	9900	856	5800	1360	14500	4830	2860	3320
16	3270	1920	1270	1990	8530	720	6580	2960	11700	4310	3850	3850
17	2500	2620	1230	2100	6070	633	8450	6180	8400	3690	3980	3280
18	1540	2320	1880	1600	5070	1080	8000	10900	6500	3560	4420	2190
19	1010	2760	1410	1180	4930	1860	5730	12500	6340	3800	3620	1770
20	919	3180	776	1200	6870	1250	3650	10400	10300	3730	2840	2420
21	1280	3200	1590	2500	7620	702	3220	8510	14000	3240	2410	2190
22	2360	2310	3200	4900	6740	1710	3530	8590	15400	3350	1900	1820
23	4280	1520	4680	7210	5940	2200	3450	8760	13700	2960	2900	1810
24	3770	1570	11000	8600	5310	1460	2940	8410	11900	1400	3830	1410
25	2590	1610	10800	8800	4610	941	2570	8200	9250	1270	3970	1200
26	1770	1230	8180	8730	5080	2160	2450	8000	7540	1960	3540	1030
27	1200	684	5990	8010	4500	2210	2380	7740	6470	2020	2320	1300
28	941	388	6010	7100	4340	2250	1980	7440	5450	1530	1790	2300
29	1150	254	6020	5620	5390	3390	3030	6530	5520	1360	1650	9510
30	1420	348	5390	4660	---	3660	6310	6330	5310	2140	2010	14900
31	1790	---	5200	4330	---	4240	---	9210	---	1770	2390	---
TOTAL	78360	63164	94036	116980	193260	77252	120500	223120	477280	96810	91340	84316
MEAN	2528	2105	3033	3774	6664	2492	4017	7197	15010	3123	2946	2811
MAX	4600	4520	11000	8800	14400	5830	8450	12800	36000	5320	4420	14900
MIN	919	254	431	1180	2840	633	1980	1360	5310	1270	1490	726
AC-FT	155400	125300	186500	232000	383300	153200	239000	442600	946700	192000	181200	167200

CAL YR 1979 TOTAL 3409930 MEAN 10710 MAX 76100 MIN 254 AC-FT 7755000
WTR YR 1980 TOTAL 1716418 MEAN 4690 MAX 36000 MIN 254 AC-FT 3405000

07337300 PINE CREEK LAKE NEAR WRIGHT CITY, OK

LOCATION.--Lat 34°06'43", long 95°04'46", in NE¼NW¼ 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 (7.6 km) upstream from bridge on State Highway 98, 5.0 mi (8.0 km) northwest of Wright City, and at mile 145.3 (233.8 km).

DRAINAGE AREA.--635 mi² (1,645 km²).

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 (1.40 km³) at elevation 509.0 ft (153.14 m), top of dam, 465,800 acre-ft (574 hm³) at elevation 480.0 ft (146.30 m), crest of spillway, 53,800 acre-ft (66.3 hm³) at elevation 438.0 ft (133.50 m) top of conservation pool, 7,140 acre-ft (8.80 hm³) dead storage at elevation 414.0 ft (126.19 m). Figures given herein represent total contents. Reservoir is designed for flood control, municipal and industrial water supply, and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 348,410 acre-ft (430 hm³) Dec. 16, 1971, elevation, 474.57 ft (144.039 m); minimum since conservation pool was first filled, 28,220 acre-ft (34.8 hm³) Oct. 21, 1972, elevation, 429.34 ft (130.863 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 126,900 acre-ft (156 hm³) Sept. 30, elevation, 451.65 ft (137.663 m); minimum, 59,500 acre-ft (73.4 hm³) Sept. 27, elevation, 439.47 ft (133.950 m).

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

430	29,730	442	70,490
433	37,430	445	85,440
436	46,650	448	102,600
439	57,610	452	129,400

 CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
 INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69520	70910	71890	78090	76900	76650	77900	83900	103800	79450	72080	64400
2	69340	71470	71790	77850	77400	76750	77800	83430	100800	78800	71840	64270
3	69160	71790	71750	77700	77950	76950	78350	83480	94900	78600	71650	64190
4	68970	71840	71790	77650	78300	77150	79860	82740	88700	78450	71420	64010
5	68790	71940	71890	77550	78950	77250	80060	81500	83430	78250	70776	63800
6	68560	71940	71750	77450	79050	77400	80160	79760	80830	78140	70260	63630
7	68430	71890	71650	77300	79660	77800	80010	77700	80010	77950	70030	63370
8	68290	71890	71560	77300	87870	77750	79550	76700	79000	77700	69840	63120
9	68020	72220	71470	77450	97950	77800	78950	76750	77990	77500	69570	63030
10	67840	72080	71470	77700	103000	77900	78300	77200	77400	77250	69340	62730
11	67800	71980	71510	77800	104100	77800	77950	77450	77150	77050	69160	62560
12	67710	71890	73020	77750	99730	78300	78350	77750	76900	76850	68880	62350
13	67440	71940	74940	77900	93980	78350	82120	78140	76950	76610	68700	62190
14	67170	71890	76310	77990	88310	78350	86350	78140	76850	76310	68430	61980
15	66680	71790	77300	78140	84480	78450	86890	80980	76850	76060	68160	61770
16	66590	71750	77900	78350	82900	78600	84910	100500	76800	75870	67930	61510
17	67080	71700	78040	78350	81400	78600	82330	104300	76700	75620	67660	61260
18	67080	71700	77950	78400	79710	78550	80830	103800	76610	75380	67390	60970
19	67040	71750	77800	78550	78140	78600	80060	100100	76850	75140	67170	60930
20	66950	71700	77700	78850	77350	78700	78950	93750	79500	74850	66900	60680
21	66860	71980	77750	81090	77150	78750	78450	87600	80620	74600	66810	60440
22	66680	71790	79400	84270	77050	78850	78600	82690	81340	74410	66640	60270
23	66590	71750	87980	85980	77050	79100	78550	81240	82120	74170	66330	60030
24	66550	71750	95950	86080	77100	79050	78550	81400	82640	73930	66150	59900
25	66410	71890	99850	85010	76900	78950	80570	81340	83010	73690	65930	59820
26	66280	71980	99790	83640	76800	78700	87160	80780	83160	73360	65670	59540
27	66190	72170	95370	81760	76850	78300	91250	79960	83110	73260	65320	65620
28	66060	71980	90690	79810	76900	78300	91870	80730	82170	73020	65230	110500
29	65840	71890	86080	78040	76700	78140	89580	82020	81340	72790	65100	122800
30	67170	71840	81090	77350	---	77990	86620	95530	80370	72600	64840	126900
31	69660	---	78450	77000	---	77850	---	103100	---	72310	64620	---
MAX	69660	72220	99850	86080	104100	79100	91870	104300	103800	79450	72080	126900
MIN	65840	70910	71470	77000	76700	76650	77800	76700	76610	72310	64620	59540
†	441.82	442.29	443.65	443.36	443.30	443.53	445.22	448.07	444.03	442.39	440.69	451.65
‡	-50	+2,180	+6,610	-1,450	-300	+1,150	+8,770	+16,480	-22,730	-8,060	-7,690	+62,280

CAL YR 1979 MAX 205300 MIN 53530 † +8,190
 WTR YR 1980 MAX 126900 MIN 59540 † +57,190

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

LOCATION.--Lat 34°04'10", long 95°02'47", in NE¼NW¼ 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 (2.9 km) upstream from White Oak Creek, 2.0 mi (3.2 km) west of Wright City, 4.7 mi (7.6 km) downstream from Pine Creek Lake, and at mile 140.6 (226.2 km).

PERIOD OF RECORD.--October 1929 to September 1931, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 346.76 ft (105.692 m) National Geodetic Vertical Datum of 1929. Oct. 12, 1929, to Sept. 30, 1931, nonrecording gage at railroad bridge 1.0 mi (1.6 km) downstream at datum 4.15 ft (1.265 m) higher. Dec. 6, 1944, to July 30, 1951, nonrecording gage at present site and datum.

COOPERATION.--Gage height record and 18 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,200 ft³/s (2,210 m³/s) May 6, 1961, gage height, 45.60 ft (13.899 m); maximum gage height, 45.77 ft (13.951 m) Sept. 16, 1950; no flow at times in 1930, 1954, 1956, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,120 ft³/s (117 m³/s) Feb. 13, gage height, 16.53 ft (5.038 m); maximum gage height, 22.57 ft (6.879 m), backwater from Cypress Creek; minimum daily discharge, 21 ft³/s (0.59 m³/s) July 31.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	44	30	433	353	40	338	2280	1900	500	22	30
2	25	36	28	378	45	38	338	1890	2310	450	22	36
3	25	32	29	150	43	34	338	1320	3780	32	22	30
4	27	30	27	150	43	38	357	1270	3790	25	22	33
5	29	31	31	147	40	33	504	1260	3240	22	250	33
6	32	32	33	150	36	31	504	1260	1890	22	270	33
7	31	31	33	135	36	33	504	1260	652	22	30	33
8	30	33	29	75	32	31	504	923	606	22	33	32
9	27	44	29	42	32	30	500	300	597	22	33	33
10	27	37	32	33	32	32	503	45	475	22	30	36
11	30	33	33	33	819	34	469	41	205	22	30	34
12	33	33	33	27	3400	48	277	41	140	22	30	31
13	30	33	33	28	4110	49	260	40	30	22	30	28
14	24	33	33	27	4080	41	381	34	29	22	33	27
15	27	33	33	27	3210	45	1200	42	27	25	36	29
16	33	34	33	27	1420	49	2130	382	26	23	36	28
17	63	35	38	27	1240	43	2130	1260	24	23	30	28
18	66	33	380	24	1220	37	1800	1890	24	22	30	30
19	43	33	380	23	1220	36	967	2510	28	22	30	30
20	39	33	200	29	944	36	926	4070	30	22	30	30
21	36	42	153	114	420	33	757	4090	30	22	30	30
22	38	41	185	366	370	33	255	3810	30	22	30	30
23	36	34	185	630	185	43	251	2200	30	22	30	31
24	36	33	185	1190	180	46	242	620	33	22	33	36
25	37	35	185	1220	177	100	236	613	30	22	33	36
26	37	34	762	1220	166	338	261	601	27	22	33	36
27	36	34	2930	1210	168	338	262	595	100	22	33	36
28	36	32	2940	1200	173	338	521	598	500	22	36	40
29	36	31	2880	1200	120	338	1960	633	500	22	36	45
30	47	31	2840	920	---	338	2280	1340	500	22	36	50
31	70	---	2140	454	---	336	---	2530	---	21	36	---
TOTAL	1113	1030	16882	11689	24314	3039	21955	39748	21583	1605	1415	994
MEAN	35.9	34.3	545	377	838	98.0	732	1262	719	51.8	45.6	33.1
MAX	70	44	2940	1220	4110	338	2280	4090	3790	500	270	50
MIN	24	30	27	23	32	30	236	34	24	21	22	27
AC-FT	2210	2040	33490	23190	48230	6030	43550	78840	42810	3180	2810	1970
CAL YR 1979	TOTAL	392111	MEAN	1074	MAX	7990	MIN 19	AC-FT	777800			
WTR YR 1980	TOTAL	145367	MEAN	397	MAX	4110	MIN 21	AC-FT	288300			

RED RIVER BASIN

561

07337900 GLOVER CREEK NEAR GLOVER, OK

LOCATION.--Lat 34°05'51", long 94°54'07", in NW¼NE¼ 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 (3.2 km) north of Glover, 11.0 mi (17.7 km) northwest of Broken Bow, and at mile 9.2 (14.8 km).

DRAINAGE AREA.--315 mi² (816 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 378.70 ft (115.428 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--19 years, 449 ft³/s (12.72 m³/s), 19.36 in/yr (492 mm/yr), 325,300 acre-ft/yr (401 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,600 ft³/s (2,790 m³/s) Dec. 10, 1971, gage height, 29.72 ft (9.059 m); no flow at times in 1966, 1968, 1970, 1972, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1961 reached a stage of 28.84 ft (8.790 m), 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 ft³/s (227 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Dec. 23	1930	11,700	331	12.02	3.664	Sept. 28	1300	*26,600	753	*16.68	5.084
May 30	1630	13,100	371	11.61	3.539						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	272	45	158	218	67	222	253	1520	26	.60	.40
2	1.8	137	40	139	194	65	190	330	942	22	.40	.40
3	1.3	90	39	122	183	60	168	341	656	18	.40	.40
4	.90	69	36	114	175	59	160	287	462	15	.40	.40
5	.60	56	34	102	165	60	155	231	334	12	.33	.20
6	.30	47	32	95	158	64	152	190	247	10	.40	.00
7	.30	41	31	86	152	64	150	155	185	8.4	.40	.00
8	.00	36	30	82	1800	62	147	128	246	7.0	.40	.00
9	.00	39	29	74	3400	60	139	93	156	6.0	.40	.00
10	.00	39	27	71	1430	59	128	74	115	5.0	.40	.00
11	.00	37	26	69	932	64	125	62	94	4.0	.40	.00
12	.00	36	319	69	640	84	194	64	76	3.4	.40	.00
13	.00	36	1320	67	493	97	1190	186	63	2.9	.40	.00
14	.00	35	566	65	389	102	3190	152	53	2.5	.40	.00
15	.00	34	308	60	324	93	1920	107	45	2.2	.40	.00
16	1.2	31	210	60	282	82	1330	3010	39	1.9	.40	.00
17	7.4	28	158	60	231	76	971	2200	34	1.7	.40	.20
18	7.8	27	125	60	198	72	732	1170	31	1.5	.20	.60
19	5.5	27	104	62	175	69	584	802	37	1.3	.00	.60
20	3.9	26	93	76	155	69	415	570	197	1.2	.00	.20
21	3.3	32	82	754	125	65	313	413	159	1.1	.40	.00
22	4.6	93	1410	1970	109	59	244	391	141	1.0	.60	.00
23	3.6	97	6190	1410	102	60	194	443	112	1.0	.40	.00
24	3.3	102	4300	833	97	80	162	331	85	.98	.40	.16
25	2.7	88	1450	593	88	114	146	251	68	.97	.40	.40
26	2.4	74	765	409	82	146	287	197	56	.95	.20	.33
27	2.4	65	478	330	76	143	732	161	47	.94	.20	265
28	2.4	60	341	287	71	152	540	425	40	.94	.20	16800
29	2.7	54	267	267	67	231	389	1050	34	.94	.40	4750
30	25	50	222	253	---	272	297	7300	30	.93	.40	1570
31	302	---	186	231	---	253	---	3300	---	.92	.40	---
TOTAL	387.80	1858	19263	9028	12511	3003	15566	24667	6304	162.67	11.13	23392.49
MEAN	12.5	61.9	621	291	431	96.9	519	796	210	5.25	.36	780
MAX	302	272	6190	1970	3400	272	3190	7300	1520	26	.60	16800
MIN	.00	26	26	60	67	59	125	62	30	.92	.00	.00
CF8M	.04	.20	1.97	.92	1.37	.31	1.65	2.53	.67	.02	.001	2.48
IN.	.05	.22	2.27	1.07	1.48	.35	1.84	2.91	.74	.02	.00	2.76
AC-FT	769	3690	38210	17910	24820	5960	30880	46930	12500	323	22	46400
CAL YR 1979	TOTAL	238653.28	MEAN 654	MAX 17000	MIN .00	CF8M 2.08	IN 28.18	AC-FT 473400				
WTR YR 1980	TOTAL	116154.09	MEAN 317	MAX 16800	MIN .00	CF8M 1.01	IN 13.72	AC-FT 230400				

RED RIVER BASIN

07338500 LITTLE RIVER BELOW LUKFATA CREEK NEAR IDABEL, OK

LOCATION.--Lat 33°56'28", long 94°45'30", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 (8.0 km) northeast of Idabel, and at mile 103.4 (166.4 km).

DRAINAGE AREA.--1,226 mi² (3,175 km²).

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 (95.122 m) National Geodetic Vertical Datum of 1929.

Oct. 1, 1946 to Oct. 26, 1950, and for stages below 9.0 ft (2.7 m) Oct. 26, 1950, to Oct. 10, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since June 1969 by Pine Creek Lake (station 07337300) 41.9 miles (67.4 km) upstream.

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Pine Creek Lake) 22 years (water years 1947-68), 1,622 ft³/s (45.95 m³/s), 1,174,000 acre-ft/yr (1.45 km³/yr); (since regulation by Pine Creek Lake) 10 years (water years 1971-80), 1,718 ft³/s (48.65 m³/s), 1,245,000 acre-ft/yr (1.54 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) Dec. 10, 1971, gage height, 39.39 ft (12.006 m); minimum, 0.4 ft³/s (0.011 m³/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 (12.10 m), from information by local resident, discharge, 86,000 ft³/s (2,440 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft³/s (348 m³/s) Sept. 30, gage height, 27.77 ft (8.464 m); minimum, 26 ft³/s (0.74 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	797	111	2180	957	356	738	2520	7500	573	27	41
2	42	519	106	905	698	246	682	2480	4700	562	27	41
3	38	318	101	733	448	219	641	2150	3830	500	26	41
4	36	217	97	526	408	207	600	1890	4270	237	27	40
5	34	160	95	484	386	201	777	1840	4190	116	27	41
6	36	129	97	458	363	193	853	1790	2000	79	38	40
7	39	108	95	437	345	187	825	1760	900	68	261	38
8	42	97	93	375	1020	183	797	1730	450	61	128	36
9	42	404	93	265	5290	179	762	990	900	54	58	36
10	39	292	92	223	5470	173	738	481	2000	48	42	36
11	37	207	93	240	2940	166	742	272	783	45	42	37
12	36	145	294	241	3140	224	686	249	458	43	40	40
13	35	117	2110	226	4520	315	1480	253	389	42	38	42
14	34	101	2090	207	4930	290	4090	298	232	41	37	42
15	34	94	1090	200	4850	255	4600	332	168	39	36	41
16	35	88	695	195	3680	245	3590	1680	148	35	35	40
17	395	85	508	202	2220	255	3240	4350	130	32	35	41
18	513	83	443	201	1980	226	2930	4210	115	32	37	37
19	303	85	598	189	1930	201	2140	3310	119	31	37	37
20	146	89	582	270	1890	187	1640	3670	1780	30	36	38
21	95	148	498	995	1270	176	1570	4390	3430	30	34	41
22	80	287	1120	3490	889	165	969	4440	1080	34	35	44
23	69	236	3750	3670	752	167	593	4110	477	35	36	43
24	61	239	8370	2980	541	198	549	2460	311	36	36	40
25	55	218	8800	2660	496	237	534	1240	246	37	37	39
26	53	200	5030	2350	459	289	678	1120	190	34	37	40
27	53	170	2920	2130	437	545	896	1060	141	32	39	65
28	54	146	3680	1990	436	596	940	2000	129	29	41	5060
29	54	129	3610	1960	411	821	1840	5150	489	27	43	11700
30	97	117	3430	1960	---	903	2540	5540	582	27	43	12100
31	827	---	3290	1350	---	825	---	8090	---	27	42	---
TOTAL	3458	6025	53981	34292	53156	9430	44060	75855	42137	3016	1457	29957
MEAN	112	201	1741	1106	1833	304	1469	2447	1405	97.3	47.0	999
MAX	827	797	8800	3670	5470	903	4600	8090	7500	573	261	12100
MIN	34	83	92	189	345	165	534	249	115	27	26	36
AC-FT	6860	11950	107100	68020	105400	18700	87390	150500	83580	5980	2890	59420

CAL YR 1979 TOTAL 807512 MEAN 2212 MAX 13200 MIN 34 AC-FT 1602000
WTR YR 1980 TOTAL 356824 MEAN 975 MAX 12100 MIN 26 AC-FT 707800

07338900 BROKEN BOW LAKE NEAR BROKEN BOW, OK

LOCATION.--Lat 34°08'35", long 94°41'00", in SW¼ 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 (14.5 km) northeast of Broken Bow, and at mile 20.3 (32.7 km).

DRAINAGE AREA.--754 mi² (1,953 km²).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1970 published as Broken Bow Reservoir near Broken Bow.

GAGE.--Water-stage recorder. Datum of gage is at 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 weir controlled by eight 40-ft (12.2 m) by 40-ft (12.2 m) taintor gates. Regulated storage began Oct. 3, 1968; conservation pool was first filled Jan. 30, 1969. Total capacity, 1,368,000 acre-ft (1.69 km³) at elevation 627.5 ft (191.26 m), top of flood pool and spillway gages, 918,100 acre-ft (1.13 km³) at elevation 599.5 ft (182.73 m), top of power pool, and 448,200 acre-ft (553 hm³) at elevation 559.0 ft (170.38 m), 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 Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,178,000 acre-ft (1.45 km³) Dec. 17, 1971, elevation, 616.41 ft (187.882 m); minimum since conservation pool was first filled, 672,000 acre-ft (829 hm³) Oct. 21, 1972, elevation 580.48 ft (176.930 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 967,600 acre-ft (1.19 km³) Dec. 26, elevation, 602.94 ft (183.776 m); minimum, 714,900 acre-ft (881 hm³) Sept. 26, 27, elevation, 584.07 ft (178.025 m).

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

584	714,000	594	842,100
587	751,100	598	897,000
590	789,300	603	968,600

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	894800	866600	868700	923800	854900	808600	792800	863400	945400	863200	786000	743400
2	893000	869200	868700	918900	851800	807300	795400	865600	939200	859700	784700	741800
3	891100	869500	868000	913000	851100	801700	797100	871400	936500	855700	784600	740000
4	888600	869700	867200	907200	847100	795400	798200	875400	932800	854400	782900	737000
5	887000	870300	867600	901800	842100	788300	799200	877400	926300	854100	782900	732900
6	887000	866800	866800	897600	838300	783900	800900	877600	919800	853800	781400	730600
7	886800	865400	866800	888700	835000	777800	802300	878500	917500	848800	778800	730400
8	884700	864200	866400	883000	839100	777600	802100	878600	919800	844100	777400	726300
9	883000	863500	866500	877600	846000	775600	802100	879200	914000	839200	777100	724300
10	881400	863800	865600	874700	848700	769500	802300	881400	911400	833900	776900	723800
11	880700	863800	865700	870900	849600	767400	804000	881100	908200	831000	774900	723700
12	877900	863500	871300	870200	847300	765500	805300	881600	904000	825900	773300	721900
13	877500	863600	878600	870900	844100	764600	810800	881400	899000	824800	771800	721700
14	877000	863600	882100	868400	840900	764500	817300	878700	898400	819400	770700	721700
15	875400	863500	884700	869100	839700	764900	823900	880300	896700	816500	766600	720300
16	874300	863400	886800	868200	840200	766000	828600	902000	892100	813500	767300	718600
17	873900	863800	884600	866800	841900	765600	831500	911600	888400	809500	767000	718300
18	874100	864200	881600	863400	837400	766000	832300	916800	885500	807400	765400	718300
19	872800	864200	879700	863200	834000	766900	834200	916900	889700	807000	763100	717200
20	872800	864300	877900	864300	832000	768400	836700	917100	892100	806600	760000	716700
21	872800	865700	877200	868200	832000	768200	837200	917600	894300	804700	758900	716400
22	871700	866900	889000	874200	831100	768600	838300	918100	895600	804700	756900	715500
23	868600	868200	932300	876000	832200	770900	838700	918400	894200	802100	756500	715600
24	866800	867600	958200	876300	833400	772400	839200	920100	890500	801800	756400	715600
25	863900	869500	966200	875600	829000	775600	844100	921200	885800	800400	753400	715800
26	860800	870500	963900	876400	824200	777100	844500	922300	880100	799800	750500	714900
27	860200	870800	957200	874100	819300	778600	853800	917800	799700	873400	747800	722000
28	860200	870200	948800	871400	816100	780800	857500	916200	873400	798000	745800	761700
29	857800	869400	938800	870500	811500	783300	859500	924000	873900	794900	745200	775200
30	861600	869000	930200	866000	---	787400	860600	939800	868400	789800	745100	779900
31	867500	---	925500	860000	---	791400	---	945300	---	797600	744900	---
MAX	894800	870800	966200	923800	854900	808600	860600	945300	945400	863200	786000	779900
MIN	857800	863400	865600	860000	811500	764500	792800	863400	868400	789800	744900	714900
†	595.87	595.98	600.02	595.32	591.70	590.16	595.37	601.40	595.94	589.87	586.50	589.27
‡	-28,300	+1,500	+56,500	-65,500	-48,500	-20,100	+69,200	+84,700	-76,900	-80,800	+42,700	+35,000

CAL YR 1979 MAX 1089000 MIN 794200 † +75,100
WTR YR 1980 MAX 966200 MIN 714900 ‡ -115,900

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

RED RIVER BASIN

07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK

LOCATION.--Lat 34°02'30", long 94°37'15", in SE¼SE¼ 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 (3.2 km) west of Eagletown, 10.7 mi (17.2 km) downstream from Broken Bow Dam, and at mile 8.9 (14.3 km).

DRAINAGE AREA.--787 mi² (2,040 km²).

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 (101.763 m) National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to July 23, 1950.

REMARKS.--Records good. Except for 33 mi² (85 km²) intervening area, flow completely regulated since October 1968 by Broken Bow Lake (station 07338900).

COOPERATION.--Gage-height record and 8 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--Prior to regulation by Broken Bow Dam, 40 years (water years 1925, 1930-68), 1,291 ft³/s (36.56 m³/s), 934,600 acre-ft/yr (1.15 km³/yr); since regulation by Broken Bow Dam, 11 years (water years 1970-80), 1,370 ft³/s (38.80 m³/s), 992,600 acre-ft/yr (1.22 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft³/s (2,850 m³/s) May 20, 1960, gage height, 26.73 ft (8.147 m), from rating curve extended above 65,000 ft³/s (1,840 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18-19, 1915, reached a stage of 26.4 ft (8.05 m), from information by local resident, discharge, 92,500 ft³/s (2,620 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft³/s (312 m³/s) Sept. 28, gage height, 8.97 ft (2.734 m); minimum daily discharge, 120 ft³/s (3.4 m³/s) Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	345	298	2040	3170	1950	187	390	2170	2520	1060	164
2	267	574	155	2970	2790	1290	313	426	4410	2180	596	641
3	720	282	287	3460	1200	2270	174	311	2980	2130	402	845
4	1120	256	591	3660	2370	3480	196	140	2720	1150	233	1250
5	824	179	397	3500	3120	3910	258	178	3660	321	334	1730
6	561	906	160	3530	2870	2830	142	265	3890	168	330	1730
7	196	1070	248	4310	2710	3330	134	330	2450	1060	1010	732
8	369	831	292	3210	4420	1370	120	464	783	2630	997	830
9	828	1060	151	3340	3030	669	183	494	2150	2320	511	1560
10	592	584	141	3060	2960	2750	427	320	2320	2780	172	764
11	642	183	246	2460	2450	2270	393	139	2060	1910	268	233
12	1000	166	597	1450	3180	2030	513	195	1880	1950	593	197
13	826	222	755	450	3720	959	328	653	2390	1600	733	452
14	194	165	471	1130	3540	372	1050	1700	1760	1870	643	162
15	318	152	364	1070	2840	222	1070	1940	233	1950	641	183
16	870	167	162	429	1190	149	224	1110	870	1410	733	447
17	936	157	650	1270	490	138	165	248	2430	1760	461	465
18	618	148	2000	1750	1840	273	355	160	2230	1530	223	158
19	207	134	2060	1310	3300	276	366	758	2090	766	689	172
20	434	145	1740	617	2360	138	153	1260	2010	185	1300	278
21	194	162	1210	1680	1150	128	319	1560	800	395	1180	152
22	387	177	1200	2750	1090	133	435	1710	176	623	813	163
23	1260	167	774	2600	595	143	144	1210	422	597	679	217
24	1380	200	2610	2910	160	189	130	484	1740	642	173	154
25	1340	169	2480	2590	1450	501	159	153	3080	239	423	141
26	1940	156	3090	1930	2540	399	473	137	2880	417	1400	126
27	968	140	5590	1330	3090	464	151	1120	3510	357	1420	192
28	203	150	5790	2510	2290	251	133	2400	1680	283	1290	5950
29	536	167	6810	1990	2750	197	152	750	215	1120	599	1640
30	917	259	5730	2790	---	203	342	1380	1360	1990	173	356
31	672	---	4100	3840	---	156	---	2210	---	2020	158	---
TOTAL	21495	9473	51149	71936	68665	33440	9189	24595	61349	40873	20197	22084
MEAN	693	316	1650	2321	2368	1079	306	793	2045	1318	652	736
MAX	1940	1070	6810	4310	4420	3910	1070	2400	4410	2780	1420	5950
MIN	176	134	141	429	160	128	120	137	176	168	158	126
AC-FT	42640	18790	101500	142700	136200	66330	18230	48780	121700	81070	40060	43800
CAL YR 1979	TOTAL	693067	MEAN	1899	MAX	7350	MIN	121	AC-FT	1375000		
WTR YR 1980	TOTAL	434445	MEAN	1187	MAX	6810	MIN	120	AC-FT	861700		

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.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations

Station No.	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 SW¼NW¼ sec.11, T.28 N., R.14 N., Woods County, at county road bridge 2.4 mi (3.9 km) south of Winchester and at mile 1.9 (3.1 km).	41.2	1972-80	10-27-76	0.25					
					01-14-77	.26					
					04-08-77	.22					
					07-25-77	0					
					10-06-77	.18					
					01-05-78	1.03					
					05-10-78	1.40					
					08-22-78	0					
					10-11-78	0					
					02-09-79	.58					
					04-22-79	.45					
					08-10-79	.15					
					10-10-79	.15					
					01-24-80	2.04					
					04-22-80	3.03					
					09-11-80	.24					
07165507	Rock Creek at Sapulpa, OK	Lat 35°59'07", long 96°06'48", in NE¼NW¼ sec.2, T.17 N., R.11 E., Creek County, at bridge on U.S. Highway Alt. 75, 0.2 mi (0.3 km) south of junction with State Highway 117, 0.3 mi (0.5 km) downstream from Biren Creek, 2.3 mi (3.7 km) upstream from mouth.	67.3	1979-80	05-16-79	0.88					
					08-13-79	4.73					
					09-10-79	.19					
					10-04-79	.10					
					11-05-79	.50					
					12-11-79	.82					
					01-10-80	1.16					
					02-19-80	4.58					
					03-17-80	2.30					
					04-04-80	6.26					
					05-08-80	5.27					
					06-09-80	.15					
					07-26-80	.20					
					08-25-80	1.49					
					07178500	Dog Creek near Claremore, OK	Lat 36°17'40", long 95°36'05", in SW¼SE¼ sec.16, T.21 N., R.16 E., Rogers County, at bridge on State Highway 88, 0.8 mi (1.3 km) upstream from Cat Creek, 1.5 mi (2.4 km) southeast of junction with U.S. Highway 66 in Claremore, 3.0 mi (4.8 km) downstream from Lake Claremore, 5.9 mi (9.5 km) upstream from Panther Creek.	63.6	1979-80	05-09-79	18.8
										06-15-79	7.22
07-16-79	.74										
08-10-79	.48										
09-14-79	.27										
10-26-79	1.82										
11-13-79	1.17										
12-03-79	.72										
01-15-80	.59										
02-05-80	.69										
03-10-80	.82										
04-16-80	.72										
05-09-80	.68										
06-10-80	.42										
07-23-80	0										
08-25-80	0										

DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drain- age area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Dis- charge (ft ³ /s)
Arkansas River Basin							
07150870	Salt Fork Arkansas River tributary near Eddy, Okla.	Lat 36°41'42", long 97°25'30", in SW¼ SW¼ sec.28, T.26 N., R.2 W., Kay County, at culvert on U.S. Highway 60, 3.0 mi (4.8 km) southeast of Eddy.	2.35	1964-80	11-20-79	15.78	824
07154650	Tesequite Creek near Kenton, Okla.	Lat 36°53'52", long 102°54'04", in NE¼ SE¼ sec.13, T.5 N., R.1 E., Cimarron County, at county road bridge, 3.9 mi (6.3 km) east of Kenton.	25.4	1964-80	-----	<12.36	<212
07155100	Cold Springs Creek near Wheelless, Okla.	Lat 36°46'20", long 102°48'16", in SE¼ NE¼ sec.35, T.4 N., R.2 E., Cimarron County, at county road multi-barrel culvert, 6.0 mi (9.7 km) northeast of Wheelless.	11.0	1964-80	-----	<10.32	<7
07157550	West Fork Creek near Knowles, Okla.	Lat 36°52'30", long 100°07'20", in SE¼ SE¼ sec.22, T.5 N., R.27 E., Beaver County, at county road culvert, 4.2 mi (6.8 km) east of Knowles.	4.22	1964-80	08-15-80	12.12	53
07158500	Preacher Creek near Dover, Okla.	Lat 36°02'37", long 98°00'48", in NW¼ NW¼ sec.13, T.18 N., R.8 W., Kingfisher County, at county road bridge, 7.1 mi (11.4 km) northwest of Dover.	14.5	1952-57† 1964-80	05-15-80	4.10	140
07158550	Turkey Creek tributary near Goltry, Okla.	Lat 36°28'40", long 98°08'05", in SE¼ SW¼ sec.11, T.2 N., R.9 W., Alfalfa County, at multi-barrel culvert on State Highway 45, 4.1 mi (6.6 km) south of Goltry.	5.08	1964-80	05-15-80	7.40	358
07159200	Kingfisher Creek near Kingfisher, Okla.	Lat 35°50'03", long 98°03'57", in NW¼ SW¼ sec.28, T.16 N., R.8 W., Kingfisher County, at county road bridge, 7.6 mi (12.2 km) west of Kingfisher.	157	1967-70† 1971-80	05-16-80	26.07	11,700
07160550	West Beaver Creek near Orlando, Okla.	Lat 36°08'45", long 97°28'05", in NW¼ NE¼ sec. 12, T.19 N., R.3 W., Logan County, at county road bridge, 5.0 mi (8.0 km) west of Orlando.	13.9	1964-80	05-27-80	12.02	3,410
07171120	Clear Creek tributary near Hollow, Okla.	Lat 36°52'50", long 95°16'00", in SW¼ NW¼ 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 (1.9 km) southeast of Hollow.	2.19	1966-75 1980	11-20-79	6.77	292
07174720	Hogshooter Creek tributary near Bartlesville, Okla.	Lat 36°43'40", long 95°50'52", in SE¼ SE¼ sec.18, T.26 N., R.14 E., Washington County, at multi-barrel culvert on U.S. Highway 60, 4.9 mi (7.9 km) east of junction with U.S. Highway 75 southeast of Bartlesville.	.94	1965-80	11-20-79	6.54	108
07188140	Flint Branch near Peoria, Okla.	Lat 36°52'25", long 94°41'35", in SW¼ SW¼ sec.26, T.28 N., R.24 E., Ottawa County, at upstream side of dam, 3.2 mi (5.1 km) southwest of Peoria.	4.90	1964-80	08-17-80	5.96	955
07189700	Horse Creek at Afton, Okla.	Lat 36°41'50", long 94°57'20", in NE¼ NW¼ 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	1966-80	08-18-80	10.72	1,440
07190600	Big Cabin Creek near Pyramid Corners, Okla.	Lat 36°48'10", long 96°44'50", in SE¼ SE¼ sec.21, T.27 N., R.20 E., Craig County, on left bank 60 ft (18 m) upstream from county highway bridge on graveled road 1.2 mi (1.9 km) west of Pyramid Corners, about 7 mi (11 km) upstream from West Fork, and at mile 34.4 (55.4 km).	71.1	1964-72† 1973-75 1978-80 (Discontinued)	11-20-79	16.62	5,740

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drain- age area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Dis- charge (ft ³ /s)
Arkansas River Basin--Continued							
07194515	Mill Creek near Park Hill, Okla.	Lat 35°48'08", long 98°47'15", in NW¼ NW¼ sec.3, T.15 N., R.21 E., Chero- kee County, at multi-barrel culvert on U.S. Highway 62, 6.3 mi (10.1 km) southwest of junction with State Highway 82 near Park Hill.	2.57	1965-80	11-20-79	----	194
07228290	Rough Creek near Thomas, Okla.	Lat 35°48'08", long 98°47'15", in NW¼ SW¼ sec.3, T.15 N., R.15 W., Custer County, at county road bridge, 4.7 mi (7.6 km) northwest of Thomas.	10.4	1964-80	05-16-80	12.60	2,300
07228930	Worley Creek near Tuttle, Okla.	Lat 35°17'28", long 97°45'10", in SE¼ SW¼ sec. 32, T.10 N., R.5 W., Grady County, at multi-barrel culvert on State Highway 37, 3.3 mi (5.3 km) east of Tuttle.	11.2	1965-72 1978-80	05-15-80	7.45	448
07229420	Julian Creek trib- utary near Asher, Okla.	Lat 34°59'09", long 96°58'48", in SW¼ SW¼ sec.15, T.6 N., R.3 E., Potta- watomie County, at multi-barrel cul- vert on State Highway 39, 3.4 mi (5.5 km) west of Asher.	2.28	1964-80	05-29-80	12.83	296
07231320	Leader Creek trib- utary near Atwood, Okla.	Lat 34°57'10", long 96°20'21", in NW¼ NW¼ sec.34, T.6 N., R.9 E., Hughes County, at multi-barrel culvert on State Highway 12, 0.7 mi (1.1 km) southwest of Atwood.	.72	1964-80	-----	<7.18	<32
07231950	Pine Creek near Higgins, Okla.	Lat 34°47'40", long 95°20'50", in NW¼ NE¼ sec.30, T.4 N., R.19 E., Latimer County, at bridge on State Highway 63, 5.4 mi (8.7 km) east of Higgins.	9.99	1964-80	05-16-80	7.70	575
07232550	South Fork trib- utary near Guymon, Okla.	Lat 36°40'06", long 101°29'54", in SW¼ NE¼ sec.1, T.2 N., R.14 E., Texas County, at multiple culvert on Chicago, Rock Island, and Pacific Railroad, 1.8 mi (2.9 km) southwest of junction of U.S. Highways 54 and 64 at Guymon.	.26	1964-80	-----	<6.00	<4
07234050	North Fork Clear Creek tributary near Balko, Okla.	Lat 36°37'01", long 100°39'50", in SW¼ SW¼ sec. 23, T.2 N., R.22 E., Beaver County, at multi-barrel culvert on State Highway 3, 1.5 mi (2.4 km) southeast of Balko.	4.22	1964-80	10-30-79	10.55	13
07234290	Clear Creek trib- utary near Catesby, Okla.	Lat 36°29'30", long 99°57'20", in SE¼ SW¼ sec.2, T.23 N., R.26 W., Ellis County, on downstream side of county road bridge, 0.1 mi (0.2 km) east of Catesby.	8.51	1966-80	-----	<3.00	<77
07237750	Cottonwood Creek near Vici, Okla.	Lat 36°08'45", long 99°12'00", in SE¼ SW¼ sec. 2, T.19 N., R.19 W., Dewey County, at bridge on U.S. Highway 60, 5.4 mi (8.7 km) east of Vici.	11.8	1964-80	05-15-80	6.42	235
07237800	Bent Creek near Seiling, Okla.	Lat 36°11'26", long 99°00'36", in NW¼ SE¼ sec.21, T.20 N., R.17 W., Wood- ward County, at bridge on U.S. Highway 183 and 270, 6 mi (10 km) northwest of Seiling.	139	1964-70† 1971-80	05-27-80	18.62	5,540
07241880	Sand Creek near Cromwell, Okla.	Lat 35°20'56", long 96°29'40", in SE¼ SE¼ sec.7, T.10 N., R.8 E., Seminole County, at bridge on State Highway 99A, 2.2 mi (3.5 km) west of Cromwell.	9.48	1964-80	-----	<5.38	<60
07242160	Alabama Creek near Weleetka, Okla.	Lat 35°21'40", long 96°08'55", in NW¼ NE¼ sec.9, T.10 N., R.11 E., Okfuskee County, at county road multi-barrel culvert, 2.0 mi (3.2 km) north of Weleetka.	16.5	1965-74 1976-80	11-20-79	12.25	2,550
07242200	Deep Fork at Portland Ave., Oklahoma City, Okla.	Lat 35°30'06", long 97°34'58", in NW¼ sec.24, T.12 N., R.4 W., Oklahoma County, at NW 31st Street and Port- land Avenue in Oklahoma City.	2.98	1973-80	05-26-80	6.38	un- known

DISCHARGE AT CREST-STAGE PARTIAL RECORD STATIONS

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drain- age area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Dis- charge (ft ³ /s)
Arkansas River Basin--Continued							
07242220	Deep Fork at Eastern Ave., Oklahoma City, Okla.	Lat 35°32'05", long 97°28'35", on west line NW¼ sec.12, T.12 N., R.3 W., Oklahoma County, at bridge on Eastern Ave., 0.2 mi (0.3 km) south of NE 63rd Street in Oklahoma City.	28.2	1975-80	05-26-80	28.94	11,200
07243550	Adams Creek near Beggs, Okla.	Lat 35°44'55", long 96°02'15", in NE¼ SE¼ sec.28, T.15 N., R.12 E., Okmulgee County, at county road bridge, 2.0 mi (3.2 km) northeast of Beggs.	5.90	1965-80	06-18-80	8.00	560
07246630	Big Black Fox Creek near Long, Okla.	Lat 35°31'15", long 94°37'10", in NE¼ NE¼ sec.14, T.12 N., R.25 E., Sequoyah County, at county road bridge, 2.3 mi (3.7 km) northwest of Long.	5.32	1964-80	11-20-79	6.50	180
Red River Basin							
07300150	Bear Creek near Vinson, Okla.	Lat 34°54'10", long 99°58'50", in NW¼ NE¼ sec.19, T.5 N., R.26 W., Harmon County, at bridge on State Highway 9, 6.9 mi (11.1 km) west of Vinson.	7.24	1964-80	05-16-80	12.20	1,860
07301455	Turkey Creek near Erick, Okla.	Lat 35°12'05", long 99°47'55", in NW¼ NW¼ sec.1, T.8 N., R.25 W., Beckham County, at county road multi-barrel culvert, 3.8 mi. (6.1 km) southeast of Erick.	19.8	1964-72 1978-80	05-16-80	5.16	1,280
07301480	Short Creek near Sayre, Okla.	Lat 35°18'20", long 99°39'15", in SW¼ SE¼ sec.29, T.10 N., R.23 W., Beckham County, at county road multi-barrel culvert, 0.9 mi (1.4 km) northwest of Sayre.	9.12	1964-80	05-16-80	14.26	648
07312850	Nine Mile Beaver Creek near Elgin, Okla.	Lat 34°46'40", long 98°15'25", in SE¼ NW¼ sec.33, T.4 N., R.10 W., Comanche County, at multi-barrel culvert on State Highway 17, 2.0 mi (3.2 km) east of Elgin.	6.29	1964-80	05-16-80	8.17	1,270
07313600	Cow Creek at Waurika, Okla.	Lat 34°10'55", long 98°00'05", in SE¼ NE¼ 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† 1971-80	06-09-79* -----	20.99* <12.93	3,090* <570
07315680	Cottonwood Creek tributary near Loco, Okla.	Lat 34°18'40", long 97°34'00", in SE¼ NE¼ sec.12, T.3 S., R.4 W., Stephens County, at multi-barrel culvert on State Highway 53, 6.6 mi (10.6 km) southeast of Loco.	1.74	1964-80	05-16-80	6.83	166
07316140	Brier Creek near Powell, Okla.	Lat 33°59'54", long 96°49'35", in NW¼ NW¼ sec.31, T.6 S., R.5 E., Marshall County, at bridge on State Highway 32, 3.6 mi (5.8 km) northeast of Powell.	12.0	1965-80	-----	<5.63	<177
07329500	Rush Creek near Maysville, Okla.	Lat 34°44'36", long 97°24'18", in SW¼ SW¼ 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 mi. (4.5 km) downstream from Panther Creek, 5.3 mi. (8.5 km) south of Maysville.	206	1953-76† 1977-80	11-21-79	11.88	4,920
07329870	Honey Creek near Davis, Okla.	Lat 34°26'50", long 97°07'40", in NW¼ NE¼ sec.30, T.1 S., R.2 E., Murray County, at bridge on State Highway 77D, 4.0 mi (6.4 km) south of Davis.	18.7	1964-80	03-23-78 05-21-79 05-30-80	12.30* 10.89* 8.70	3,380* 1,540* 264
07335310	Rock Creek near Boswell, Okla.	Lat 33°57'57", long 95°52'02", in NE¼ NE¼ sec.7, T.7 S., R.14 E., Choctaw County, at culvert on State Highway 109, 4.2 mi (6.7 km) south of Boswell.	.94	1965-80	09-28-80	2.82	94

DISCHARGE AT CREST-STAGE PARTIAL RECORD STATIONS

569

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drain- age area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Dis- charge (ft ³ /s)
Red River Basin--Continued							
07336000	Tenmile Creek near Miller, Okla.	Lat 34°17'55", long 95°44'40", in NW¼ sec.16, T.3 S., R.15 E., Pushmataha County, at county road bridge, 1.2 mi (1.9 km) south of Miller.	68	1957-70† 1971-80	-----	<13.53	<1,920
07336520	Frazier Creek near Oleta, Okla.	Lat 34°11'50", long 95°21'00", in NW¼ NE¼ sec.19, T.4 S., R.19 E., Push- mataha County, at bridge on State Highway 3, 0.5 mi (0.8 km) west of Oleta.	19.4	1965-80	05-16-80	9.90	1,230
07338520	Yanubbee Creek near Broken Bow, Okla.	Lat 34°03'35", long 94°44'22", in NW¼ SW¼ sec.6, T.6 S., R.25 E., McCurtain County, at bridge on U.S. Highway 259, 2.3 mi (3.7 km) north of Broken Bow.	9.10	1964-80	09-27-80	14.47	3,830
07338780	Mountain Fork tributary near Smithville, Okla.	Lat 34°29'48", long 94°40'06", in NW¼ SE¼ sec.3, T.1 S., R.25 E., McCurtain County, at multi-barrel culvert on U.S. Highway 259, 2.5 mi (4.0 km) northwest of Smithville.	.68	1965-80	09-27-80	5.73	400

† operated as a continuous-record station

* revised

ARKANSAS RIVER BASIN

351307097132401 LAKE THUNDERBIRD DAMSITE CROSS-SECTION SITE NO. 1

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

351320097131801 LAKE THUNDERBIRD DAMSITE CROSS-SECTION SITE NO.2

LOCATION.--Lat 35°13'20", long 97°13'18", in NE¼SW¼, sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 700 ft (213 m) above the dam and 2500 ft (762 m) from the right edge of the water.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
APR											
30...	0935	56	114000	436	7.7	12.7	40	2.1	20	180	7
30...	0937	50	114000	432	7.9	12.8	--	6.2	61	--	--
30...	0939	40	114000	430	8.1	13.6	--	7.3	73	--	--
30...	0941	30	114000	430	8.1	14.1	--	8.4	85	--	--
30...	0943	20	114000	429	8.2	14.5	10	9.2	94	180	7
30...	0944	10	114000	428	8.2	15.1	--	9.1	94	--	--
30...	0945	1.0	114000	432	8.3	17.3	5.2	9.5	102	180	14
MAY											
23...	0929	60	126000	447	7.3	17.6	220	2.6	27	170	5
23...	0930	55	126000	445	7.3	15.8	--	3.1	32	--	--
23...	0931	45	126000	425	7.4	16.9	--	5.0	54	--	--
23...	0932	35	126000	428	7.6	17.9	8.5	6.7	74	170	8
23...	0933	25	126000	431	7.9	19.0	--	7.8	87	--	--
23...	0934	15	126000	431	7.9	19.2	--	8.2	91	--	--
23...	0935	10	126000	430	7.9	19.3	--	8.6	97	--	--
23...	0936	1.0	126000	430	8.0	19.7	1.5	8.8	100	170	11
APR											
30...	33	23	18	18	.6	5.1	170	7.9	26	235	.32
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	33	23	19	18	.6	5.0	170	6.7	26	235	.32
30...	--	--	--	--	--	--	--	--	--	--	--
30...	34	24	19	18	.6	5.0	170	11	30	248	.34
MAY											
23...	32	23	18	18	.6	5.3	170	9.5	29	239	.33
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	31	22	18	18	.6	5.1	160	9.1	29	232	.32
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	32	22	18	18	.6	5.0	160	9.3	29	227	.31

LOCATION.--Lat 35°13'33", long 97°13'12", in SW¼NE¼, sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 1200 ft (366 m) above the dam and 4100 ft (1250 m) from the right edge of the water.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

[illegible]

ARKANSAS RIVER BASIN

573

351317097145101 LAKE THUNDERBIRD LITTLE RIVER CROSS SECTION

LOCATION.--Lat 35°13'17", long 97°14'51", in SE¼SE¼, sec.25, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 2700 ft (823 m) south of Norman Municipal Water Supply intake structure over the old river channel and just below the confluence with Clear Creek.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

								OXYGEN, DIS-SOLVED (PER-CENT SATURATION)				HARD-NESS (MG/L AS CaCO3)	HARD-NESS, NONCARBONATE (MG/L CaCO3)
DATE	TIME	SAMP-LING DEPTH (FT)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)					
APR													
30...	1122	40	114000	431	8.1	13.8	80	7.4	75	180	6		
30...	1124	30	114000	431	8.1	13.9	--	7.6	77	--	--		
30...	1126	20	114000	430	8.3	14.6	5.6	9.0	92	180	11		
30...	1128	10	114000	431	8.4	15.7	--	9.4	96	--	--		
30...	1130	1.0	114000	431	8.4	15.9	--	--	--	--	--		
MAY													
23...	1217	50	126000	353	7.1	17.2	100	3.2	34	150	7		
23...	1218	40	126000	378	7.2	17.5	--	4.6	50	--	--		
23...	1219	30	126000	410	7.5	18.6	8.2	6.1	68	170	8		
23...	1220	20	126000	428	7.8	19.3	--	8.0	90	--	--		
23...	1221	10	126000	428	7.9	19.5	--	8.9	100	--	--		
23...	1222	1.0	126000	429	8.0	21.1	2.8	9.4	109	170	11		
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)	ALKA-LINITY LAR (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLOR-IDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	
APR													
30...	31	24	19	18	.6	5.0	170	7.1	26	227	.31		
30...	--	--	--	--	--	--	--	--	--	--	--	--	
30...	33	24	19	18	.6	4.9	170	19	26	214	.29		
30...	--	--	--	--	--	--	--	--	--	--	--	--	
30...	--	--	--	--	--	--	--	--	--	--	--	--	
MAY													
23...	29	18	17	20	.6	4.8	140	10	25	204	.28		
23...	--	--	--	--	--	--	--	--	--	--	--	--	
23...	31	22	19	19	.6	5.0	160	8.8	29	226	.31		
23...	--	--	--	--	--	--	--	--	--	--	--	--	
23...	--	--	--	--	--	--	--	--	--	--	--	--	
23...	32	22	18	18	.6	5.0	160	8.6	29	225	.31		

ARKANSAS RIVER BASIN

351255097151001 LAKE THUNDERBIRD CLEAR CREEK CROSS SECTION

LOCATION.--Lat 35°12'55", long 97°15'10", in NW¼NE¼, sec.36, T.9 N., R.1 W., Cleveland County, Hydrologic Unit 11090203, 500 ft (152 m) from the right edge of the water and over the old creek channel at the confluence of Clear Creek and Little River.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
30...	1040	30	114000	431	8.1	14.3	8.5	86
30...	1042	20	114000	429	8.2	14.8	9.0	93
30...	1044	10	114000	431	8.2	15.5	9.2	96
30...	1045	1.0	114000	429	8.4	17.0	10.3	111
MAY								
23...	1252	38	126000	371	7.1	17.8	3.2	35
23...	1253	30	126000	408	7.4	18.6	6.2	69
23...	1254	20	126000	430	7.8	19.4	8.0	90
23...	1255	10	126000	427	7.9	19.5	8.3	93
23...	1256	1.0	126000	423	7.9	21.2	8.5	99

ARKANSAS RIVER BASIN

575

351318097155901 LAKE THUNDERBIRD LITTLE RIVER CROSS SECTION ABOVE CLEAR CREEK

LOCATION.--Lat35°13'18", long 97°15'59", in NE¼SE¼, sec.26, T.2 N., R.1 W., Cleveland County, Hydrologic Unit 11090203, 600 ft (183 m) from the left edge of the water and over the old river channel just above the confluence with Clear Creek.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
30...	1100	27	114000	432	8.1	14.5	8.1	83
30...	1101	20	114000	431	8.2	15.0	9.1	94
30...	1102	10	114000	433	8.3	16.2	9.8	103
30...	1103	1.0	114000	434	8.3	16.4	9.7	103
MAY								
23...	1324	39	126000	387	7.2	17.9	4.6	51
23...	1325	30	126000	417	7.4	18.5	4.9	54
23...	1326	20	126000	428	7.8	19.2	7.2	80
23...	1327	10	126000	431	8.0	19.7	8.3	94
23...	1328	1.0	126000	430	8.1	20.7	9.3	108

ARKANSAS RIVER BASIN

351442097140201 LAKE THUNDERBIRD HOG CREEK CROSS-SECTION

LOCATION.--Lat 35°14'42", long 97°14'02", in NE¼NE¼, sec.19, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 900 ft (274 m) east of the right edge of the water on a bearing of 80° from magnetic north and over the old creek channel.

PERIOD OF RECORD.--April to September 1980.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

								OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS, (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)		
DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)				
APR												
30...	1155	33	114000	430	8.1	14.1	13	8.8	89	180		
30...	1156	30	114000	430	8.1	14.1	--	9.0	91	--		
30...	1158	20	114000	429	8.2	14.8	5.7	9.5	98	180		
30...	1159	10	114000	431	8.3	17.3	--	9.2	108	--		
30...	1200	1.0	114000	431	8.4	17.4	4.1	9.7	105	180		
MAY												
23...	1108	37	126000	413	7.4	18.1	39	5.5	60	160		
23...	1109	30	126000	428	7.6	18.6	--	6.9	77	--		
23...	1110	20	126000	431	7.7	18.8	3.6	7.6	84	170		
23...	1111	10	126000	428	7.9	19.2	--	8.6	97	--		
23...	1112	1.0	126000	425	7.9	20.6	4.0	9.0	103	170		
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- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAR (MG/L AS CaCO3)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
APR												
30...	33	24	19	18	.6	5.1	170	13	29	218	.30	
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	34	24	19	18	.6	4.8	170	9.8	30	212	.29	
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	33	23	17	17	.6	5.0	170	7.2	26	247	.34	
MAY												
23...	31	21	17	18	.6	5.4	160	7.7	27	219	.30	
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	31	22	18	18	.6	5.0	160	8.9	29	223	.30	
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	31	22	18	18	.6	4.9	160	8.6	28	221	.30	

360544098354701 CANTON LAKE CROSS-SECTION NO.1 SITE NO.1

LOCATION.--Lat 36°05'44", long 98°35'47", in SE¼NW¼, sec.28, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 3000 ft (914 m) from Canadian Recreation Area, on a bearing of 55° from magnetic north, and 2800 ft (853 m) above the dam.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

ARKANSAS RIVER BASIN

360558098351501 CANTON LAKE CROSS SECTION NO.1 SITE NO.2

LOCATION.--Lat 36°05'58", long 98°35'15", in NE¼NE¼, sec.28, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 6000 ft (1829m) from Canadian Recreation Area on a bearing of 55° from magnetic north, and 2500 ft (762m) above the dam.

PERIOD OF RECORD.-- April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1014	25	103100	1430	8.6	12.5	9.2	92
23...	1016	20	103100	1440	8.6	13.0	10.0	101
23...	1018	15	103100	1440	8.7	13.4	10.2	104
23...	1020	10	103100	1440	8.7	14.0	10.3	107
23...	1022	5.0	103100	1440	8.7	14.0	10.3	107
23...	1024	1.0	103100	1440	8.7	14.0	10.3	107
JUL								
17...	1142	1.0	105000	1450	8.4	28.5	8.1	111
17...	1143	5.0	105000	1500	8.4	27.5	7.3	97
17...	1144	10	105000	1500	8.3	27.0	6.7	88
17...	1145	20	105000	1550	8.2	27.0	6.0	79
17...	1146	30	105000	1550	8.0	26.5	5.2	68

ARKANSAS RIVER BASIN

579

360612098344001 CANTON LAKE CROSS SECTION NO.1 SITE NO.3

LOCATION.--Lat 36°06'12", long 98°34'40", in SE¼SW¼, sec.22, T.19 N., R.13 W., Blaine County Hydrologic Unit
11100301, 9200 ft (2804m) from Canadian Recreation Area on a bearing of 55° from magnetic north, and 2200 ft (671m)
above the dam.

PERIOD OF RECORD.-- April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1033	24	103100	1440	8.6	12.0	9.3	93
23...	1035	20	103100	1440	8.6	12.5	9.3	93
23...	1037	15	103100	1440	8.7	14.0	10.4	107
23...	1039	10	103100	1440	8.7	14.0	10.3	107
23...	1041	5.0	103100	1440	8.7	14.0	10.4	108
23...	1043	1.0	103100	1440	8.7	14.5	10.3	107
JUL								
17...	1110	1.0	105000	1400	8.4	28.0	7.7	103
17...	1111	5.0	105000	1450	8.4	27.5	7.0	93
17...	1112	10	105000	1450	8.3	27.0	6.9	91
17...	1113	20	105000	1500	8.1	27.0	6.1	80
17...	1114	25	105000	1500	7.9	26.5	4.7	62
17...	1115	27	105000	1550	7.9	26.5	3.0	39

ARKANSAS RIVER BASIN

360744098364101 CANTON LAKE CROSS SECTION NO.2 SITE NO.1

LOCATION.--Lat 36°07'44", long 98°36'41", in NE¼NW¼, sec.17, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 2700 ft (823 m) from Big Bend Recreation Area on a bearing of 25° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	
DATE	TIME											
APR												
23...	1145	18	103100	1440	8.7	14.5	7.5	9.5	100	430	260	
23...	1146	15	103100	1440	8.7	14.5	--	9.9	103	--	--	
23...	1147	10	103100	1440	8.7	15.5	7.0	9.9	105	440	270	
23...	1148	5.0	103100	1450	8.7	16.0	--	9.9	108	--	--	
23...	1149	1.0	103100	1460	8.7	17.0	6.6	9.6	105	430	260	
JUL												
17...	1300	1.0	105000	1550	8.6	28.5	--	7.9	108	380	200	
17...	1301	5.0	105000	1550	8.4	27.5	--	7.6	101	--	--	
17...	1302	10	105000	1600	8.4	27.0	--	6.3	83	390	210	
17...	1303	20	105000	1600	8.3	27.0	--	4.2	55	390	200	
DATE	TIME	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- LITY FIELD AS CACO3	SULFATE DIS- SOLVED (MG/L AS SU4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
APR												
23...	110	37	140	41	2.9	8.1	170	280	210	917	1.2	
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	110	39	160	44	3.3	8.3	170	290	250	915	1.2	
23...	--	--	--	--	--	--	--	--	--	--	--	--
23...	110	37	150	43	3.2	8.1	170	280	220	919	1.2	
JUL												
17...	93	35	150	46	3.4	8.3	180	250	220	863	1.1	
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	95	36	150	45	3.3	8.4	180	240	220	872	1.1	
17...	95	36	150	45	3.3	8.3	190	250	220	833	1.1	

ARKANSAS RIVER BASIN

581

360808098390701 CANTON LAKE CROSS SECTION NO.2 SITE NO.2

LOCATION.--Lat 36°08'08", long 98°36'21", in NW¼SE¼, sec.8, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 5700 ft (1737 m) from Big Bend Recreation Area on a bearing of 25° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1125	12	103100	1440	8.7	16.0	10.1	109
23...	1127	10	103100	1440	8.7	16.0	10.0	108
23...	1129	5.0	103100	1440	8.7	16.0	10.0	107
23...	1131	1.0	103100	1450	8.7	16.5	9.8	106
JUL								
17...	1320	1.0	105000	1550	8.6	28.5	8.0	110
17...	1321	5.0	105000	1550	8.4	27.5	7.4	99
17...	1322	10	105000	1550	8.4	27.5	6.0	80
17...	1323	20	105000	1600	8.2	27.0	3.5	46

ARKANSAS RIVER BASIN

360828098360501 CANTON LAKE CROSS SECTION NO.2 SITE NO.3

LOCATION.--Lat 36°08'28", long 98°36'05", in NE¼NE¼, sec.8, T.19 N., R.14 W., Blaine County, Hydrologic Unit 11100301, 8000 ft (2438m) from Big Bend Recreation Area on a bearing of 25° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1100	17	103100	1440	8.7	15.0	10.3	109
23...	1102	15	103100	1440	8.7	15.0	10.3	109
23...	1104	10	103100	1440	8.7	15.5	10.2	110
23...	1106	5.0	103100	1440	8.6	16.0	10.0	109
23...	1108	1.0	103100	1440	8.6	16.5	9.9	109
JUL								
17...	1335	1.0	105000	1550	8.6	28.5	8.2	112
17...	1336	5.0	105000	1550	8.6	28.0	7.7	104
17...	1337	10	105000	1550	8.4	27.5	6.2	83
17...	1338	15	105000	1550	8.3	27.0	5.5	72

ARKANSAS RIVER BASIN

583

360809098390701 CANTON LAKE CROSS SECTION NO.3 SITE NO.1

LOCATION.--Lat 36°08'09", long 98°39'07", in NE¼SE¼, sec.11, T.19 N., R.14 W1, Dewey County, Hydrologic Unit 11100301, 1400 ft (427m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.-- April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1200	7.0	103100	1460	8.6	16.0	9.4	101
23...	1202	5.0	103100	1470	8.6	16.0	9.5	102
23...	1204	1.0	103100	1470	8.6	17.0	9.6	105
JUL								
17...	1430	1.0	105000	1550	8.5	29.0	7.9	108
17...	1431	5.0	105000	1550	8.5	28.0	7.6	103
17...	1432	10	105000	1600	8.7	27.0	4.3	56
17...	1433	15	105000	1650	8.1	27.0	3.7	49

ARKANSAS RIVER BASIN

360828098390701 CANTON LAKE CROSS SECTION NO.3 SITE NO.2

LOCATION.--Lat 36°08'28", long 98°39'07", in SW¼NW¼, sec.12, T.19 N., R.14 W., Dewey County, Hydrologic Unit 11100301, 3400 ft (1036m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
APR								
23...	1230	7.5	103100	1460	8.8	15.5	8.9	94
23...	1232	5.0	103100	1460	8.8	16.0	9.1	98
23...	1234	1.0	103100	1490	8.8	17.5	9.2	102
JUL								
17...	1415	1.0	105000	1550	8.6	29.0	8.2	112
17...	1416	5.0	105000	1550	8.5	28.5	8.1	111
17...	1417	10	105000	1550	8.4	27.5	7.1	95
17...	1418	15	105000	1600	7.9	27.0	4.1	54

ARKANSAS RIVER BASIN

585

360844098390000 CANTON LAKE CROSS SECTION NO.3 SITE NO.3

LOCATION.--Lat 36°08'44", long 98°39'00", in SW¼SW¼, sec.1, T.19 N., R.14 W., Dewey County, Hydrologic Unit 11100301, 5400 ft (1645 m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

OXYGEN, DIS-SOLVED (PER-CENT SATURATION)												HARD-NESS (MG/L AS CaCO3)	HARD-NESS, NONCARBONATE (MG/L CaCO3)
DATE	TIME	SAMP-LING DEPTH (FT)	RESER-VOIR STORAGE (AC-FT)	SPE-CIFIC CON-DUCT-ANCE (UMHUS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	HARD-NESS (MG/L AS CaCO3)	HARD-NESS, NONCARBONATE (MG/L CaCO3)		
APR													
23...	1215	7.0	103100	1470	8.7	16.5	--	9.2	99	--	--		
23...	1217	5.0	103100	1490	8.7	17.0	--	9.3	101	--	--		
23...	1219	1.0	103100	1560	8.7	18.5	13	9.4	106	430	260		
JUL													
17...	1351	1.0	105000	1600	8.5	29.0	--	8.3	114	390	210		
17...	1352	5.0	105000	1600	8.5	28.5	--	8.3	114	--	--		
17...	1353	10	105000	1550	8.4	27.5	--	7.4	99	370	200		
17...	1354	15	105000	1600	8.2	27.0	--	4.1	54	370	190		
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)	ALKA-LITY LAB (MG/L AS CaCO3)	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)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	
APR													
23...	--	--	--	--	--	--	--	--	--	--	--	--	
23...	--	--	--	--	--	--	--	--	--	--	--	--	
23...	110	38	160	44	3.4	8.0	170	280	240	977	1.3		
JUL													
17...	97	37	150	45	3.3	8.4	180	250	220	875	1.1		
17...	--	--	--	--	--	--	--	--	--	--	--	--	
17...	91	35	150	46	3.4	8.4	170	240	220	859	1.1		
17...	92	35	150	46	3.4	8.3	180	250	220	882	1.2		

RED RIVER BASIN

353325099111001 FOSS RESERVOIR AT SITE NO. 1 NEAR FOSS, OK

WATER-QUALITY RECORDS

LOCATION.--Lat 35°33'25", long 99°11'10", in SW¼ sec.35, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 600 ft (183 m) from left edge of water on a bearing of 250° from concrete structure at north end of dam.

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
25...	1048	60	169000	2000	8.3	16.5	7.8	85	980	64	1640	2.23
25...	1055	55	169000	2000	8.5	16.5	8.2	89	--	--	--	--
25...	1058	50	169000	2000	8.7	17.0	8.6	94	--	--	--	--
25...	1059	45	169000	2000	8.5	17.0	8.4	92	--	--	--	--
25...	1100	40	169000	2000	8.5	17.0	8.8	97	--	--	--	--
25...	1102	35	169000	2000	8.5	17.0	8.8	97	--	--	--	--
25...	1104	30	169000	2000	8.5	17.0	8.8	97	980	59	1620	2.20
25...	1105	25	169000	2000	8.5	17.0	8.8	97	--	--	--	--
25...	1106	20	169000	2000	8.5	17.0	8.8	97	--	--	--	--
25...	1107	15	169000	2000	8.5	17.0	8.8	97	--	--	--	--
25...	1108	12	169000	2000	8.5	17.0	8.9	98	--	--	--	--
25...	1110	7.0	169000	2000	8.5	17.0	8.9	98	--	--	--	--
25...	1113	2.0	169000	2000	8.5	17.5	9.1	101	960	48	1610	2.19
DEC												
06...	1015	55	168000	1940	8.7	7.5	13.0	115	--	--	--	--
06...	1016	43	168000	1940	--	7.5	12.9	114	990	52	1640	2.23
06...	1017	33	168000	1940	--	7.5	12.9	114	990	54	1660	2.26
06...	1018	23	168000	1940	--	7.5	12.9	114	--	--	--	--
06...	1019	13	168000	1940	--	7.5	12.9	114	--	--	--	--
06...	1020	4.0	168000	1930	--	7.5	12.7	112	--	--	--	--
06...	1021	1.0	168000	1930	--	7.5	12.3	109	990	54	1660	2.26
20...	1028	1.0	167000	1940	8.5	5.5	11.3	94	960	48	1640	2.23
20...	1029	5.0	167000	1940	--	5.5	11.3	94	--	--	--	--
20...	1030	10	167000	1940	--	5.5	11.3	94	--	--	--	--
20...	1032	15	167000	1940	--	5.5	11.3	94	--	--	--	--
20...	1038	20	167000	1940	8.5	5.0	11.3	93	970	47	1650	2.24
20...	1040	25	167000	1990	--	5.0	11.3	93	--	--	--	--
20...	1042	30	167000	1990	8.5	5.0	11.3	93	940	47	1640	2.23
20...	1045	35	167000	--	--	5.0	11.3	93	--	--	--	--
20...	1050	40	167000	--	8.5	5.0	11.3	93	--	--	--	--
JAN												
18...	1120	1.0	167000	1920	8.4	5.5	13.2	111	870	47	1650	2.24
18...	1123	5.0	167000	1930	8.4	5.0	13.9	116	--	--	--	--
18...	1125	10	167000	1930	8.5	5.0	14.0	117	--	--	--	--
18...	1127	15	167000	1940	8.5	5.0	14.1	118	--	--	--	--
18...	1129	20	167000	1940	8.4	5.0	14.1	118	--	--	--	--
18...	1130	25	167000	1940	8.4	5.0	14.1	118	890	46	1660	2.26
18...	1132	30	167000	1930	8.4	5.0	14.0	117	--	--	--	--
18...	1140	34	167000	1930	8.4	5.0	14.0	117	--	--	--	--
18...	1142	39	167000	1930	8.4	5.0	14.3	119	--	--	--	--
18...	1143	44	167000	1930	8.4	4.5	14.1	116	--	--	--	--
18...	1146	49	167000	1930	8.4	4.5	14.0	115	--	--	--	--
18...	1150	51	167000	1930	8.4	4.5	13.8	113	820	43	1560	2.12
FEB												
27...	1015	1.0	168000	1900	8.6	4.5	12.0	98	990	49	1650	2.24
27...	1020	12	168000	1900	8.6	4.0	12.0	98	--	--	--	--
27...	1021	21	168000	1900	8.6	4.0	12.1	98	--	--	--	--
27...	1022	31	168000	1900	8.5	4.0	11.4	93	980	50	1650	2.24
27...	1024	41	168000	1900	8.5	4.0	10.5	85	--	--	--	--
27...	1025	51	168000	1900	8.5	4.0	9.7	79	--	--	--	--
27...	1035	56	168000	1900	8.5	4.0	10.6	86	1000	49	1600	2.18
MAR												
21...	1159	1.0	169000	1910	8.5	8.5	12.5	114	960	46	1650	2.24
21...	1200	7.0	169000	1920	8.5	8.0	12.5	113	--	--	--	--
21...	1201	13	169000	1920	8.5	7.8	12.5	111	--	--	--	--
21...	1202	20	169000	1920	8.5	7.5	12.5	112	--	--	--	--
21...	1203	26	169000	1920	8.4	7.5	12.5	110	970	47	1660	2.26
21...	1204	33	169000	1920	8.4	7.5	12.4	109	--	--	--	--
21...	1206	39	169000	1920	8.4	7.0	12.4	109	--	--	--	--
21...	1207	46	169000	1920	8.4	7.0	12.4	109	--	--	--	--
21...	1209	51	169000	1920	8.3	7.0	10.3	90	970	47	1670	2.27

RED RIVER BASIN

587

353325091111000 FOSS RESERVOIR AT SITE NO. 1--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SULFATE DIS- SOLVED (MG/L AS SU4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
APR												
24...	1624	56	170000	1910	8.2	12.0	10.1	101	980	55	1660	2.26
24...	1625	50	170000	1920	8.2	12.0	10.2	101	--	--	--	--
24...	1626	40	170000	1920	8.2	12.0	10.3	102	--	--	--	--
24...	1627	30	170000	1920	8.2	12.0	10.3	103	980	49	1660	2.26
24...	1628	20	170000	1930	8.2	12.5	10.5	106	--	--	--	--
24...	1629	10	170000	1930	8.2	13.5	10.7	110	--	--	--	--
24...	1630	1.0	170000	1940	8.2	15.0	10.6	113	970	49	1670	2.27
MAY												
22...	1100	58	179000	1960	7.9	15.5	6.5	69	990	50	1640	2.23
22...	1101	50	179000	1960	7.9	16.0	7.0	74	--	--	--	--
22...	1102	40	179000	1950	8.0	17.0	8.0	87	--	--	--	--
22...	1103	30	179000	1940	8.0	17.5	8.4	94	1000	49	1630	2.22
22...	1104	20	179000	1940	8.0	18.0	8.8	98	--	--	--	--
22...	1105	10	179000	1940	8.0	18.0	8.9	100	--	--	--	--
22...	1106	1.0	179000	1940	8.0	18.5	8.9	101	960	49	1580	2.15
JUN												
24...	1118	50	179000	1990	7.6	17.5	.6	7	930	50	1660	2.26
24...	1119	40	179000	--	7.6	18.0	1.4	16	--	--	--	--
24...	1120	30	179000	1940	8.0	22.5	3.2	39	860	48	1580	2.15
24...	1121	20	179000	--	8.2	24.0	5.5	70	--	--	--	--
24...	1122	10	179000	1890	8.3	25.5	8.6	112	--	--	--	--
24...	1123	1.0	179000	1880	8.4	26.0	8.6	113	890	48	1560	2.12
JUL												
16...	1350	1.0	175000	1800	8.2	27.5	7.0	94	900	47	1550	2.11
16...	1351	5.0	175000	1800	--	27.5	7.0	94	--	--	--	--
16...	1352	10	175000	1830	--	27.0	6.8	89	--	--	--	--
16...	1353	20	175000	1850	--	26.5	6.7	88	--	--	--	--
16...	1354	30	175000	1850	8.2	25.5	5.7	74	930	47	1550	2.11
16...	1355	40	175000	1850	--	22.5	2.3	28	--	--	--	--
16...	1356	50	175000	1850	--	20.0	1.7	20	--	--	--	--
16...	1357	60	175000	1850	7.7	19.5	1.2	14	970	48	1620	2.20
AUG												
13...	1140	1.0	168000	1860	8.2	--	--	--	950	49	1580	2.15
13...	1153	20	168000	1840	8.1	--	--	--	930	49	1590	2.16
13...	1200	50	168000	--	8.1	--	--	--	910	48	1580	2.15
SEP												
18...	1239	35	162000	1800	8.3	24.5	11.4	142	950	53	1610	2.19
18...	1252	18	162000	1920	8.3	24.0	10.6	132	960	53	--	--
18...	1305	1.0	162000	1920	8.3	25.0	9.8	122	950	55	1590	2.16

RED RIVER BASIN

353405099132500 FOSS RESERVOIR AT SITE NO.2 NEAR FOSS, OK

WATER-QUALITY RECORDS

LOCATION.--Lat 35°34'05", long 99°13'25", in SE¼ sec.28, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 900 ft (274 m) from left edge water on a bearing 155° from campgrounds on north shore.

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

REMARKS.--Samples were collected monthly in a Kemmerer sampler.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
25...	1140	39	169000	2000	8.2	16.5	8.0	87	990	51	1620	2.20
25...	1145	34	169000	2000	8.2	16.5	8.4	91	--	--	--	--
25...	1148	28	169000	2000	8.2	16.5	8.9	97	--	--	--	--
25...	1150	23	169000	2000	8.2	16.5	8.9	97	--	--	--	--
25...	1152	18	169000	2000	8.2	16.5	8.9	97	990	50	1610	2.19
25...	1154	13	169000	2000	8.2	16.5	8.9	97	--	--	--	--
25...	1155	8.0	169000	2000	8.2	16.5	9.0	98	--	--	--	--
25...	1157	3.0	169000	2000	8.2	17.0	9.2	101	--	--	--	--
25...	1158	2.0	169000	2000	8.2	17.0	9.3	102	990	49	1610	2.19
DEC												
06...	1100	37	168000	1930	8.8	7.0	12.6	110	990	53	1630	2.22
06...	1101	33	168000	1940	8.8	7.0	12.8	112	--	--	--	--
06...	1102	25	168000	1940	8.7	7.0	12.9	113	--	--	--	--
06...	1103	16	168000	1940	8.7	7.0	12.7	111	990	51	1620	2.20
06...	1104	8.0	168000	1940	8.7	7.0	12.7	111	--	--	--	--
06...	1105	3.0	168000	1940	8.7	7.0	12.5	110	--	--	--	--
06...	1106	1.0	168000	1940	8.7	7.0	12.2	107	970	52	1650	2.24
20...	1105	45	167000	1935	8.5	5.0	11.1	91	960	48	1650	2.24
20...	1107	40	167000	--	--	5.0	11.1	91	--	--	--	--
20...	1109	35	167000	--	--	5.0	11.3	93	--	--	--	--
20...	1110	30	167000	1920	--	5.0	11.5	94	--	--	--	--
20...	1115	25	167000	1920	8.5	5.0	11.7	96	960	47	1650	2.24
20...	1117	20	167000	1920	--	5.0	11.7	96	--	--	--	--
20...	1118	15	167000	1920	--	5.0	11.8	97	--	--	--	--
20...	1120	10	167000	1920	--	5.0	11.7	96	--	--	--	--
20...	1125	5.0	167000	1920	--	5.0	11.7	96	--	--	--	--
20...	1130	1.0	167000	1920	8.5	5.0	11.7	96	960	48	1650	2.24
JAN												
18...	1245	1.0	167000	1930	8.9	5.0	13.3	111	870	46	1650	2.24
18...	1247	5.0	167000	1930	8.9	5.0	13.7	114	--	--	--	--
18...	1248	10	167000	1930	8.8	5.0	13.9	116	--	--	--	--
18...	1250	15	167000	1940	8.8	5.0	14.0	117	870	46	1680	2.28
18...	1252	20	167000	1940	8.8	5.0	14.0	117	--	--	--	--
18...	1253	25	167000	1940	8.8	5.0	14.0	117	--	--	--	--
18...	1254	30	167000	1940	8.7	5.0	13.9	116	--	--	--	--
18...	1256	34	167000	1940	8.7	5.0	13.8	115	870	46	1670	2.27
FEB												
27...	1122	2.0	168000	1920	8.9	4.5	13.1	107	990	49	1660	2.26
27...	1123	12	168000	1920	8.8	4.5	11.1	91	--	--	--	--
27...	1124	21	168000	1920	8.8	4.5	9.8	80	1000	49	1660	2.26
27...	1125	31	168000	1930	8.8	4.5	9.1	74	--	--	--	--
27...	1126	39	168000	1930	8.8	4.5	8.6	70	1000	49	1650	2.24
MAR												
21...	1247	1.0	169000	1920	8.7	8.0	12.8	110	960	47	1670	2.27
21...	1249	7.0	169000	1920	8.6	8.0	12.3	111	--	--	--	--
21...	1250	13	169000	1920	8.6	8.0	12.6	114	--	--	--	--
21...	1251	20	169000	1920	8.6	8.0	12.7	114	960	47	1680	2.28
21...	1252	26	169000	1920	8.6	8.0	12.6	113	--	--	--	--
21...	1256	29	169000	1920	8.5	8.0	12.2	109	950	47	1670	2.27
APR												
24...	1658	42	170000	1930	8.0	11.5	9.5	94	980	49	1700	2.31
24...	1659	40	170000	1930	8.0	11.5	9.5	94	--	--	--	--
24...	1700	30	170000	1930	8.0	11.5	9.6	96	--	--	--	--
24...	1701	20	170000	1930	8.1	14.0	10.2	105	980	50	1690	2.30
24...	1702	10	170000	1940	8.1	14.5	10.2	107	--	--	--	--
24...	1703	1.0	170000	1950	8.1	16.0	10.2	110	990	50	1700	2.31

RED RIVER BASIN

589

353405099132500 FOSS RESERVOIR AT SITE NO. 2--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SULFATE SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAY												
22...	1141	40	179000	1950	7.9	16.5	7.6	83	1000	50	1630	2.22
22...	1142	30	179000	1940	7.9	17.0	8.3	90	--	--	--	--
22...	1143	20	179000	1930	7.9	17.0	8.9	98	970	49	1600	2.18
22...	1144	10	179000	1920	8.0	18.5	9.2	104	--	--	--	--
22...	1145	1.0	179000	1900	8.0	19.0	9.2	103	990	49	1580	2.15
JUN												
24...	1157	40	179000	1970	7.9	22.0	1.2	14	900	48	1590	2.16
24...	1158	30	179000	--	--	22.5	3.2	39	--	--	--	--
24...	1159	20	179000	1930	8.0	24.0	5.6	70	910	48	1590	2.16
24...	1200	10	179000	1860	--	26.0	8.2	108	--	--	--	--
24...	1201	1.0	179000	1840	8.3	27.0	8.2	108	840	46	1480	2.01
JUL												
16...	1300	1.0	175000	1800	8.3	27.5	8.7	118	920	47	1540	2.09
16...	1301	5.0	175000	1800	--	27.0	8.5	112	--	--	--	--
16...	1302	10	175000	1800	--	27.0	8.1	106	--	--	--	--
16...	1303	20	175000	1800	8.2	27.0	7.7	101	920	47	1540	2.09
16...	1304	30	175000	1800	--	27.0	7.3	96	--	--	--	--
16...	1305	40	175000	1800	--	27.0	5.8	76	--	--	--	--
16...	1306	45	175000	1800	8.2	27.0	5.5	72	930	47	1540	2.09
AUG												
13...	1223	1.0	168000	--	8.1	--	--	--	920	48	1560	2.12
13...	1225	10	168000	1710	8.1	--	--	--	960	49	1490	2.03
13...	1229	30	168000	1840	8.1	--	--	--	950	49	1580	2.15
18...	1320	30	162000	1890	8.3	24.5	11.8	147	970	53	1610	2.19
18...	1325	15	162000	1910	8.4	24.5	10.8	135	970	53	1600	2.18
18...	1330	1.0	162000	1900	8.4	25.0	9.4	118	990	54	1610	2.19

RED RIVER BASIN

353615099135000 FOSS RESERVOIR AT SITE NO.3 NEAR FOSS, OK

WATER-QUALITY RECORDS

LOCATION.--Lat 35°36'15", long 99°13'50", in SE¼ sec.17, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301 over old river channel, 600 ft (183 m) from left edge of water on a bearing of 240° from small tributary on north shore.

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

REMARKS.--Samples were collected monthly in a Kemmerer sampler.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
25...	1223	27	169000	1950	8.3	16.5	8.3	90	1000	52	1630	2.22
25...	1229	22	169000	1950	8.3	16.5	8.6	93	--	--	--	--
25...	1231	17	169000	1950	8.3	16.5	9.1	99	--	--	--	--
25...	1232	12	169000	1950	8.3	16.5	9.1	99	1000	50	1630	2.22
25...	1233	7.0	169000	1960	8.3	16.5	9.4	102	--	--	--	--
25...	1234	6.0	169000	1960	8.3	16.5	9.5	103	--	--	--	--
25...	1235	2.0	169000	1970	8.3	17.0	9.5	104	1000	50	1620	2.20
DEC												
06...	1151	23	168000	1940	9.1	6.0	14.4	123	--	52	1660	2.26
06...	1152	20	168000	1940	9.0	6.0	14.3	122	--	--	--	--
06...	1153	13	168000	1940	9.0	6.0	14.3	122	980	53	1630	2.22
06...	1154	7.0	168000	1940	9.0	6.5	13.9	120	--	--	--	--
06...	1155	3.0	168000	1940	9.0	6.5	13.7	118	--	--	--	--
06...	1156	1.0	168000	1940	8.9	6.0	13.2	113	970	53	1630	2.22
20...	1139	20	167000	1940	--	4.0	11.8	95	--	--	--	--
20...	1140	25	167000	1940	8.5	4.0	11.9	96	950	47	1610	2.19
20...	1141	15	167000	1940	--	4.0	11.8	95	--	--	1660	2.26
20...	1142	10	167000	1940	8.5	4.0	11.9	96	--	--	--	--
20...	1143	5.0	167000	1940	--	4.0	11.9	96	--	--	1650	2.24
20...	1144	1.0	167000	1940	8.5	4.0	12.0	97	--	--	--	--
JAN												
18...	1213	1.0	167000	1940	8.7	5.5	12.9	108	930	45	1660	2.26
18...	1215	5.0	167000	1940	8.7	5.0	13.7	115	--	--	--	--
18...	1217	10	167000	1940	8.7	5.0	13.7	115	--	--	--	--
18...	1219	15	167000	1940	8.7	5.0	13.7	115	930	45	1650	2.24
18...	1220	20	167000	1950	8.7	5.0	13.8	116	--	--	--	--
18...	1221	25	167000	1950	8.7	5.0	13.7	115	--	--	--	--
18...	1222	28	167000	1950	8.6	5.0	13.7	115	930	45	1630	2.22
FEB												
27...	1154	2.0	168000	1930	8.8	5.5	12.3	105	990	49	1650	2.24
27...	1155	12	168000	1930	8.8	5.5	10.7	91	--	--	--	--
27...	1157	21	168000	1930	8.8	5.5	9.9	85	1000	49	1660	2.26
27...	1158	25	168000	1930	8.8	5.0	8.8	73	1000	49	1660	2.26
MAR												
21...	1329	1.0	169000	1930	8.8	9.5	11.7	108	960	47	1690	2.30
21...	1331	7.0	169000	1930	8.7	9.5	11.6	105	--	--	--	--
21...	1334	13	169000	1940	8.6	9.5	11.5	107	950	47	1690	2.30
21...	1337	20	169000	1940	8.6	9.0	11.5	105	--	--	--	--
21...	1340	21	169000	1940	8.5	9.0	11.3	104	940	47	1690	2.30
APR												
24...	1723	24	170000	1940	8.1	14.5	9.0	94	950	50	1670	2.27

RED RIVER BASIN

591

353615099135000 FOSS RESERVOIR AT SITE NO. 3--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMP- LING DEPTH (FT)	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
APR												
24...	1724	20	170000	1940	8.0	15.0	9.8	103	--	--	--	--
24...	1725	15	170000	1940	8.1	15.0	9.8	104	960	49	1710	2.33
24...	1726	10	170000	1940	8.1	15.5	9.7	103	--	--	--	--
24...	1727	5.0	170000	1940	8.1	16.0	9.8	105	--	--	--	--
24...	1728	1.0	170000	1950	8.1	16.5	9.8	108	970	51	1690	2.30
MAY												
22...	1213	25	179000	1920	7.8	17.5	7.6	84	990	49	1600	2.18
22...	1214	20	179000	1930	7.8	17.5	7.9	87	--	--	--	--
22...	1215	10	179000	1870	8.0	18.5	9.4	106	920	47	1490	2.03
22...	1216	1.0	179000	1790	8.1	19.5	9.6	110	890	46	1460	1.99
JUN												
24...	1247	25	179000	1870	8.3	26.0	3.7	48	790	46	1430	1.94
24...	1248	20	179000	--	--	26.0	6.5	84	--	--	--	--
24...	1249	10	179000	1740	8.4	27.0	8.2	108	780	45	1430	1.94
24...	1250	1.0	179000	1780	8.5	27.0	8.3	109	770	45	1420	1.93
JUL												
16...	1200	1.0	125000	1800	8.2	28.5	8.4	115	910	47	1520	2.07
16...	1201	5.0	125000	1800	--	28.5	8.2	112	--	--	--	--
16...	1202	15	125000	1800	8.3	28.5	7.7	105	970	48	--	--
16...	1203	20	125000	1800	--	28.0	7.4	100	--	--	--	--
16...	1204	25	125000	1800	8.1	27.5	6.5	88	920	48	1510	2.05
AUG												
13...	1252	1.0	168000	1880	8.1	--	--	--	960	50	1580	2.15
13...	1254	10	168000	1890	8.0	--	--	--	960	50	1610	2.19
13...	1258	25	168000	1730	7.9	--	--	--	950	51	1600	2.18
SEP												
18...	1405	25	162000	1940	8.6	23.5	8.8	110	990	54	--	--
18...	1410	12	162000	1930	8.6	23.5	8.6	108	990	53	1620	2.20
18...	1413	1.0	162000	1920	8.6	25.5	7.6	95	950	52	1600	2.18

GROUND-WATER LEVELS

ALFALFA COUNTY

365342098175301, LOCAL NUMBER(CORRECTED), 28N-11W-27 DAD 1.
 LOCATION.--LAT 36 53'42", LONG 098 17'53", HYDROLOGIC UNIT 11060004, OWNER: BENNY WAGONER.
 AQUIFER.--TERRACE DEPOSITS.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 36 FT (11.0M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1185 FT (361M). MEASURING POINT: TOP OF CASING 4.00
 FT (1.22M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1967 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 4.80 FT (1.463M) BELOW LAND-SURFACE
 DATUM, MARCH 20, 1975; LOWEST, 16.95 FT (5.166M) BELOW LAND-SURFACE DATUM, JUNE 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	7.18	OCT 25, 1979	7.34	DEC 05, 1979	6.84	MAR 05, 1980	2.36
10	7.31	NOV 20	6.97	10	6.88		
15	7.34	25	6.88	15	6.92		
20	7.37	30	6.94	20	6.90		
WTR YEAR 1980 MAX 2.36 MAR 05, 1980 MIN 7.37 OCT 20, 1979							

BEAVER COUNTY

363853100311001, LOCAL NUMBER, 02N-24E-07 CCD 1.
 LOCATION.--LAT 36 38'53", LONG 100 31'10", HYDROLOGIC UNIT 11100201, OWNER: JAMES W. PARKER.
 AQUIFER.--UGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 94 FT (28.7M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2625 FT (800M). MEASURING POINT: HIGHEST POINT ON
 NORTH SIDE OF CASING 0.50 FT (0.15M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1946, 1967 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.37 (21.754M) BELOW LAND-SURFACE
 DATUM, JAN. 24, 1979; LOWEST, 81.35 FT (24.795M) BELOW LAND-SURFACE DATUM, MARCH 1, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1979	76.63	JAN 14, 1980	76.61	APR 23, 1980	76.64	AUG 06, 1980	76.70
JAN 13, 1980	76.17						
WTR YEAR 1980 MAX 76.17 JAN 13, 1980 MIN 76.70 AUG 06, 1980							

CADD0 COUNTY

351308098341601, LOCAL NUMBER, 09N-13W-28 DDD 1.
 LOCATION.--LAT 35 13'08", LONG 098 34'16", HYDROLOGIC UNIT 11130302, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 335 FT (102M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1405 FT (428M). MEASURING POINT: TOP OF CASING 2.00
 FT (0.61M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1948 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 34.71 FT (10.580M) BELOW LAND-SURFACE
 DATUM, AUG. 13, 1949; LOWEST, 46.86 FT (14.28M) BELOW LAND-SURFACE DATUM, MAY 20, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	46.24	OCT 25, 1979	46.12	DEC 31, 1979	46.56	FEB 20, 1980	46.45
10	46.18	DEC 15	46.49	JAN 05, 1980	46.57	25	46.67
15	46.51	20	46.53	10	46.63	MAY 20	46.86
20	46.09	25	46.60	15	46.57		
WTR YEAR 1980 MAX 46.09 OCT 20, 1979 MIN 46.86 MAY 20, 1980							

GROUND-WATER LEVELS

593

CADDO COUNTY

352423098341701. LOCAL NUMBER, 11N-13W-21 DDD 1.
 LOCATION.--LAT 35 24'23", LONG 098 34'17", HYDROLOGIC UNIT, 11130302,
 OWNER: CADDO ELECTRIC CO-OP.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--UNUSED INDUSTRIAL WELL, DIAMETER 5 IN (0.13M),
 DEPTH 210 FT (64.008M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1640 FT (500M). MEASURING POINT:
 TOP OF CASING 0.77 FT (0.23M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 58.06 FT (17.697M) BELOW
 LAND-SURFACE DATUM, AUG. 2, 1965; LOWEST, 70.07 (21.357M) BELOW LAND-SURFACE
 DATUM, MAY 10, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 20, 1980	70.35	MAR 31, 1980	70.49	JUN 15, 1980	69.29	JUL 31, 1980	70.64
25	70.54	APR 05	70.42	20	70.17	AUG 05	70.79
29	70.59	10	70.34	30	70.05	10	70.86
MAR 05	70.61	MAY 20	70.58	JUL 05	70.14	15	70.96
10	70.46	25	70.59	10	70.34	20	71.06
15	70.38	31	70.48	15	70.43	25	70.88
20	70.60	JUN 05	70.36	20	70.49	31	70.99
25	70.48	10	70.35	25	70.65		
WTR YEAR 1980	MAX	69.29	JUNE 15, 1980	MIN	71.06	AUG 20, 1980	

CIMARRON COUNTY

364450102190001. LOCAL NUMBER, 03N-07E-09 B8H 1.
 LOCATION.--LAT 36 44'50", LONG 102 19'00", HYDROLOGIC UNIT 11100101, OWNER: ELMER J. BEHRENDT.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 61 FT (18.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3960 FT (1207M). MEASURING POINT: TOP OF CASING ON
 SOUTH SIDE 0.50 FT (0.15M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1938 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.50 FT (8.687M) BELOW LAND-SURFACE
 DATUM, JAN. 12, 1977; LOWEST, 32.41 FT (9.879M) BELOW LAND-SURFACE DATUM, FEB. 13 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1979	31.30	JAN 15, 1980	31.14	APR 22, 1980	31.23	AUG 05, 1980	31.45
WTR YEAR 1980	MAX	31.14	JAN 15, 1980	MIN	31.45	AUG 05, 1980	

CLEVELAND COUNTY

350136097203001. LOCAL NUMBER, 06N-01W-06 DAD 1.
 LOCATION.--LAT 35 01'36", LONG 097 20'30", HYDROLOGIC UNIT 11090202, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED WELL DIAMETER 1-1/4 IN (0.03M), DEPTH 23 FT (7.01M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1034 FT (315M). MEASURING POINT: TOP OF CASING 1.40
 FT (0.43M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1947 TO CURRENT YEAR. (DISCONTINUED MAY 5, 1980)
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.77 FT (0.539M) BELOW LAND-SURFACE
 DATUM, JAN. 25 1960; LOWEST, 17.25 FT (5.258M) BELOW LAND-SURFACE DATUM, SEPT. 5, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	16.65	DEC 03, 1979	16.65	FEB 05, 1980	16.66
WTR YEAR 1980	MAX	16.65	OCT 04, 1979	MIN	16.66
				FEB 05, 1980	

GROUND-WATER LEVELS

CLEVELAND COUNTY

350816097233101, LOCAL NUMBER, 08N-02W-27 ACD 1.
 LOCATION.--LAT 35 08'16", LONG 097 23'31", HYDROLOGIC UNIT 11090202,
 OWNER: TOWN OF NOBLE.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 12 IN (0.30M) REDUCED TO
 8 IN (0.20M), DEPTH 461 FT (141M).
 DATUM.--MEASURING POINT: TOP OF 1-IN (0.03M) PIPE CEMENTED OVER CASING 1.40 FT
 (0.43M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--PERFORATIONS 235-245 FT (71.6M-74.7M) AND 415-455 FT (126M-139M).
 PERIOD OF RECORD.--1943 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 165.43 FT (50.423M) BELOW
 LAND-SURFACE DATUM, JULY 7, 1943; LOWEST, 221.74 FT (67.586M) BELOW LAND-SURFACE
 DATUM, DEC. 23, 1948.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	201.99	FEB 05, 1980	203.08	JUL 03, 1980	209.94	SEP 05, 1980	209.56
DEC 03	204.58	MAY 02	201.89				
WTR YEAR 1980 MAX 201.89 MAY 02, 1980 MIN 209.94 JULY 03, 1980							

351222097245901, LOCAL NUMBER, 08N-02W-09 BBA 1.
 LOCATION.--LAT 35 12'35", LONG 097 24'59", HYDROLOGIC UNIT, OWNER: U.S. NAVY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M) REDUCED TO 11 IN (0.28M), DEPTH
 545 FT (166M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1131 FT (345M). MEASURING POINT: TOP OF CASING 0.40
 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1951-52, 1955 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 166.04 FT (50.609M) BELOW LAND-SURFACE
 DATUM, MARCH 25, 1952; LOWEST, 205.90 FT (62.758M) BELOW LAND-SURFACE DATUM FEB. 1, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	183.46	MAY 02, 1980	184.16	JUL 03, 1980	185.96	SEP 05, 1980	196.16
DEC 03	183.17						
WTR YEAR 1980 MAX 183.17 DEC 03, 1979 MIN 196.16 SEP 05, 1980							

COMANCHE COUNTY

343540098342001, LOCAL NUMBER, 01N-13W-04 BAA 1.
 LOCATION.--LAT 34 35'40", LONG 098 34'20", HYDROLOGIC UNIT 11130203, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--LOWER ARBUCKLE GROUP.
 WELL CHARACTERISTICS.--TEST WELL, DIAMETER 6 IN (0.15M), DEPTH 997 FT (304M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1191 FT (363M). MEASURING POINT: TOP OF CASING 1.8 FT
 (0.55M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.03 FT (21.650M) BELOW LAND-SURFACE
 DATUM, SEPT. 25, 1974; LOWEST, 88.62 FT (27.011M) BELOW LAND-SURFACE DATUM,
 MAY 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1979	74.21	JAN 08, 1980	74.66	APR 18, 1980	74.62	JUL 14, 1980	75.26
NOV 06	74.76	FEB 12	74.68	MAY 05	74.74	AUG 18	75.85
DEC 04	74.70	MAR 03	74.43	JUN 04	74.77		
WTR YEAR 1980 MAX 74.21 OCT 02, 1979 MIN 75.85 AUG 18, 1980							

GROUND-WATER LEVELS

595

CREEK COUNTY

355510096293501, LOCAL NUMBER, 17N-08E-30 C8B 1.
 LOCATION.--LAT 35 55'10", LONG 096 29'35", HYDROLOGIC UNIT 11100303, OWNER: EVERETT MATHERLY.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 58 FT (17.7M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 960 FT (293M). MEASURING POINT: BASE OF RECORDER
 SHELTER 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDER SITE.
 PERIOD OF RECORD.--1969 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 34.30 FT (10.455M) BELOW LAND-SURFACE
 DATUM, JUNE 5, 1975; LOWEST, 42.77 FT (13.036M) BELOW LAND-SURFACE DATUM, MAY 12, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	39.18	JAN 05, 1980	39.97	APR 05, 1980	40.25	JUL 10, 1980	38.97
10	39.54	10	39.85	10	40.02	25	38.86
15	39.25	15	39.75	15	40.10	31	38.99
20	39.02	20	40.31	20	40.18	AUG 05	38.98
25	39.45	25	39.85	25	39.88	10	38.97
31	39.60	31	40.50	30	39.94	15	39.00
NOV 05	39.86	FEB 05	40.03	MAY 05	40.05	20	39.04
10	39.71	10	39.95	10	39.61	25	39.25
15	39.71	20	39.65	15	39.86	31	39.18
20	39.35	25	40.45	20	39.84	SEP 05	39.54
25	39.48	29	40.52	25	39.56	10	39.60
30	39.86	MAR 05	40.21	JUN 10	39.45	15	39.46
DEC 05	39.43	10	40.01	15	39.27	20	39.41
15	39.79	15	40.11	20	39.36	25	39.85
20	39.59	20	40.15	25	39.00		
25	39.92	25	40.16	30	39.04		
31	39.87	31	40.11	JUL 05	39.04		
WTR YEAR 1980	MAX	38.86	JULY 25, 1980	MIN	40.52	FEB 29, 1980	

CUSTER COUNTY

354112098430601, LOCAL NUMBER, 14N-14W-17 C8D 1.
 LOCATION.--LAT 35 41'12", LONG 098 43'06", HYDROLOGIC UNIT 11090201, OWNER: MELT HERRONG.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER 16 IN (0.41M), DEPTH 320 FT (97.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1710 FT (521M). MEASURING POINT: TOP OF WOOD
 RECORDER BASE 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1971 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 24.59 FT (7.495M) BELOW LAND-SURFACE
 DATUM, JULY 5, 1975; LOWEST, 30.08 FT (9.168M) BELOW LAND-SURFACE DATUM SEPT, 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	27.93	JAN 05, 1980	27.73	APR 05, 1980	28.33	JUL 05, 1980	27.48
10	27.96	10	27.88	10	28.31	10	27.43
15	27.90	15	28.00	15	28.36	15	27.37
20	27.99	20	28.18	20	28.34	20	27.60
25	27.94	25	28.23	25	28.35	25	27.42
31	27.90	31	28.32	30	28.32	31	27.49
NOV 05	27.76	FEB 05	28.31	MAY 05	28.34	AUG 05	27.52
10	27.66	10	28.33	10	28.32	10	27.46
15	27.66	15	28.39	15	28.37	15	27.47
20	27.62	20	28.23	20	28.24	20	27.54
25	27.60	25	28.34	25	28.08	25	27.60
30	27.62	29	28.33	31	27.94	31	27.65
DEC 05	27.60	MAR 05	28.30	JUN 05	27.84	SEP 05	27.76
10	27.62	10	28.28	10	27.78	10	27.84
15	27.63	15	28.28	15	27.73	20	28.45
20	27.65	20	28.30	20	27.73	25	28.39
25	27.69	25	28.31	25	27.59	30	28.44
31	27.71	31	28.31	30	27.52		
WTR YEAR 1980	MAX	27.37	JULY 15, 1980	MIN	28.45	SEP 20, 1980	

GROUND-WATER LEVELS

ELLIS COUNTY

361536099464601, LOCAL NUMBER, 21N-24W-33 RBD 1.
 LOCATION.--LAT 36 15'36", LONG 099 46'46", HYDROLOGIC UNIT 11100203, OWNER:
 AQUIFER.--UGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 5 IN (0.13M), DEPTH 205 FT (62.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2280 FT (695M). MEASURING POINT: TOP OF WOODEN
 RECORDER BASE 3.10 FT (0.94M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--APR. 1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 80.53 FT (24.546M) BELOW LAND-SURFACE
 DATUM, JUNE 5, 1980; LOWEST, 84.40 FT (25.725M) BELOW LAND-SURFACE DATUM, APR. 15, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	82.07	JAN 10, 1980	81.26	APR 20, 1980	81.09	JUL 20, 1980	81.46
10	82.07	15	81.16	25	80.89	25	81.56
15	81.94	20	81.43	30	80.85	31	81.45
20	81.73	25	81.06	MAY 05	80.90	AUG 05	81.60
25	81.94	31	81.49	10	80.72	10	81.63
31	81.70	FEB 05	81.31	15	80.86	15	81.73
NOV 05	81.86	10	81.27	20	80.85	20	81.55
10	81.60	15	81.23	25	80.62	25	81.60
15	81.73	20	80.95	30	80.60	31	81.67
20	81.35	MAR 05	81.15	JUN 05	80.53	SEP 05	81.65
25	81.41	10	81.08	10	80.74	10	81.65
30	81.74	15	81.15	15	80.63	15	81.86
DEC 05	81.47	20	81.10	20	80.82	20	81.76
10	81.52	25	81.24	25	80.80	25	81.95
15	81.60	31	81.04	30	81.02	30	81.87
20	81.40	APR 05	81.22	JUL 05	81.22		
31	81.34	10	81.20	10	81.37		
JAN 05, 1980	81.29	15	81.06	15	81.42		

WTR YEAR 1980 MAX 80.53 JUNE 05, 1980 MIN 82.07 OCT 05, 1979

363235099592801, LOCAL NUMBER, 24N-26W-21 CAA 1.
 LOCATION.--LAT 36 32'35", LONG 099 59'28", HYDROLOGIC UNIT 11100201, OWNER: HINER.
 AQUIFER.--UGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 5 IN (0.13M), DEPTH 120 FT (36.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2345 FT (715M). MEASURING POINT: TOP EDGE OF
 PLYWOOD SHELTER BASE 1.50 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 30.11 FT (9.178M) BELOW LAND-SURFACE
 DATUM, MAY 10, 1974; LOWEST, 33.25 FT (10.135M) BELOW LAND-SURFACE DATUM, OCT. 25, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	32.37	JAN 15, 1980	32.13	APR 15, 1980	31.94	JUL 15, 1980	32.22
10	32.42	20	32.15	20	32.03	20	32.27
15	32.44	25	32.14	25	32.01	25	32.33
25	32.50	31	32.15	30	32.00	31	32.41
31	32.54	FEB 05	32.13	MAY 05	31.99	AUG 05	32.48
NOV 05	32.42	10	32.12	10	31.96	10	32.53
10	32.35	15	32.12	15	31.96	15	32.58
15	32.31	20	32.11	20	31.95	20	32.60
20	32.28	25	32.14	25	31.93	25	32.60
25	32.26	29	32.13	31	31.93	31	32.61
30	32.26	MAR 05	32.13	JUN 05	31.91	SEP 05	32.65
DEC 05	32.22	10	32.10	10	31.93	10	32.67
10	32.21	15	32.10	15	31.94	15	32.70
15	32.22	20	32.10	20	31.98	20	32.76
20	32.20	25	32.00	25	31.99	25	32.81
31	32.17	31	31.97	30	32.03	30	32.82
JAN 05, 1980	32.16	APR 05	31.98	JUL 05	32.10		
10	32.16	10	31.95	10	32.16		

WTR YEAR 1980 MAX 31.91 JUNE 05, 1980 MIN 32.82 SEP 30, 1980

GROUND-WATER LEVELS

597

GRADY COUNTY

344656098031401. LOCAL NUMBER, 04N-08W-33 BBB 1.
 LOCATION,--LAT 34 46'56", LONG 098 03'14", HYDROLOGIC UNIT 11130208,
 OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER,--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS,--DRILLED TEST WELL, DIAMETER 6 IN (0.15M), DEPTH 254 FT (77.4M).
 DATUM,--MEASURING POINT: TOP OF CASING 4.18 FT (1.27M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD,--1948 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD,-- HIGHEST WATER LEVEL, 78.95 FT (24.064M) BELOW
 LAND-SURFACE DATUM, APR. 10, 1963; LOWEST, 85.67 FT (26.112M) BELOW LAND-SURFACE
 DATUM, FEB. 29, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	81.68	FEB 05, 1980	81.66	APR 30, 1980	81.71	JUL 15, 1980	81.63
NOV 05	81.82	10	81.55	MAY 05	81.74	20	81.62
10	81.74	15	81.67	10	81.61	25	81.66
15	81.70	MAR 05	81.76	15	81.71	31	81.71
20	81.65	10	81.62	20	81.83	AUG 05	81.75
25	81.64	15	81.62	25	81.76	10	81.77
30	81.65	20	81.72	31	81.79	20	81.89
DEC 05	81.64	25	81.66	JUN 05	81.72	25	81.94
10	81.57	31	81.64	10	81.71	31	81.95
15	81.67	APR 10	81.60	15	81.62	SEP 05	82.09
JAN 20, 1980	81.73	15	81.71	20	81.75	10	82.11
25	81.53	20	81.74	25	81.61	15	82.07
31	81.77	25	81.71	30	81.60		
WTR YEAR 1980	MAX	81.53	JAN 25, 1980	MIN	82.11	SEP 10, 1980	

KAY COUNTY

364210097025401. LOCAL NUMBER, 26N-02E-26 RDD 1.
 LOCATION,--LAT 36 42'10", LONG 097 02'54", HYDROLOGIC UNIT 11060001, OWNER: CITY OF PONCA CITY.
 AQUIFER,--ALLUVIUM.
 WELL CHARACTERISTICS,--DUG PUBLIC SUPPLY WELL, NUMBER 5, DIAMETER 30 IN (0.76M), DEPTH 38 FT (11.6M).
 DATUM,--ALTITUDE OF LAND-SURFACE DATUM IS 925 FT (282M). MEASURING POINT: BOTTOM OF NUMBER
 AT PUMP BASE OPENING 6.70 FT (2.04M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD,--1948 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD,--HIGHEST WATER LEVEL, +3.30 FT (+1.006M) ABOVE LAND-SURFACE
 DATUM, AUG. 11, 1976; LOWEST, 29.13 FT (8.879M) BELOW LAND-SURFACE DATUM, FEB. 24, 1955.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	18.60	JAN 09, 1980	19.10	APR 14, 1980	18.30	JUL 16, 1980	18.90
10	19.60	16	19.00	21	18.30	23	19.20
17	19.50	23	18.95	28	17.30	30	19.30
24	21.10	30	18.95	MAY 07	17.80	AUG 06	20.96
NOV 07	18.55	FEB 06	19.10	14	17.05	13	21.00
14	17.50	13	19.10	21	17.05	20	20.50
21	17.30	20	18.70	28	16.55	29	20.88
28	17.05	27	18.65	JUN 04	18.30	SEP 03	23.21
DEC 05	18.00	MAR 05	19.65	11	18.05	10	23.30
12	18.40	12	18.85	18	16.05	17	23.63
19	18.40	19	18.80	25	16.40	24	23.96
26	17.85	26	18.45	JUL 02	19.20		
JAN 02, 1980	19.10	APR 07	18.75	09	18.80		
WTR YEAR 1980	MAX	16.05	JUNE 18, 1980	MIN	23.96	SEP 24, 1980	

GROUND-WATER LEVELS

LINCOLN COUNTY

354442096400801. LOCAL NUMBER, 15N-06E-29 AAA 1.
 LOCATION.--LAT 35 44'42", LONG 096 40'08", HYDROLOGIC UNIT 11100303, OWNER: CITY OF STROUD.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED PUBLIC SUPPLY WELL, DIAMETER 6 IN (0.15M), DEPTH 339 FT (103.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 890 FT (271M). MEASURING POINT: TOP OF CASING
 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 166.32 FT (50.694M) BELOW LAND-SURFACE
 DATUM, APR. 25, 1980; LOWEST, 184.01 FT (56.086M) BELOW LAND-SURFACE DATUM,
 NOV. 10, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	168.38	JAN 05, 1980	168.11	APR 05, 1980	166.74	JUN 30, 1980	166.98
10	168.40	10	167.60	10	166.88	JUL 05	167.52
15	167.88	15	167.55	15	166.81	10	167.47
20	167.96	20	167.83	20	167.10	25	167.26
25	168.15	25	167.07	25	166.32	31	169.12
31	167.80	31	168.87	30	166.37	AUG 05	167.46
NOV 05	167.97	FEB 05	168.25	MAY 05	166.80	10	167.90
10	167.81	10	168.12	10	167.04	15	168.82
15	167.91	20	167.80	15	166.47	20	167.98
20	167.58	25	167.34	20	166.74	25	167.76
25	167.75	29	166.99	25	166.51	31	167.04
30	167.64	MAR 05	167.41	31	166.60	SEP 05	167.39
DEC 05	167.40	10	166.87	JUN 05	166.78	10	166.91
15	167.57	15	166.81	10	167.02	15	166.97
20	167.50	20	166.67	15	166.83	20	166.60
25	167.79	25	166.78	20	166.85	25	167.63
31	167.72	31	166.66	25	166.73		
WTR YEAR 1980 MAX	166.32	APR 25, 1980 MIN	169.12	JULY 31, 1980			

MAJOR COUNTY

361442098092801. LOCAL NUMBER, 20N-09W-04 AAA 1.
 LOCATION.--LAT 36 14'42", LONG 098 09'28", HYDROLOGIC UNIT 11050002, OWNER: ROSS M. STURGEON.
 AQUIFER.--TERRACE DEPOSITS.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 6 IN (0.15M), DEPTH 60 FT (18.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1225 FT (373M). MEASURING POINT: 2.00 FT (0.61M)
 ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.54 FT (1.993M) BELOW LAND-SURFACE
 DATUM, JUNE 20, 1975; LOWEST, 25.97 FT (7.916M) BELOW LAND-SURFACE DATUM, SEPT. 15, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 15, 1980	17.75	MAR 25, 1980	17.70	APR 05, 1980	17.72	MAY 15, 1980	17.38
20	17.72	31	17.68	10	17.68		
WTR YEAR 1980 MAX	17.38	MAY 15, 1980 MIN	17.75	MAR 15, 1980			

GROUND-WATER LEVELS

599

MUSKOGEE COUNTY

354613095161001. LOCAL NUMBER, 15N-19E-15 DDD 1.
 LOCATION.--LAT 35 46'13", LONG 095 16'10", HYDROLOGIC UNIT 11110102, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 1 1/4 IN (0.03M), DEPTH 29 FT (8.84M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 509 FT (155M). MEASURING POINT: TOP OF PIPE
 2.55 FT (0.78M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1958, 1974 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.24 FT (1.902M) BELOW LAND-SURFACE
 DATUM, MAY 26, 1975; LOWEST, 15.84 FT (4.828M) BELOW LAND-SURFACE DATUM, AUG. 19, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11, 1979	15.31	FEB 12, 1980	15.02	MAY 13, 1980	15.19	AUG 19, 1980	15.84
WTR YEAR 1980	MAX	15.02	FEB 12, 1980	MIN	15.84	AUG 19, 1980	

OKLAHOMA COUNTY

352910097232001. LOCAL NUMBER, 12N-02W-26 CBB 1.
 LOCATION.--LAT 35 29'10", LONG 097 23'20", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO.
 51.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 748 FT (228M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE
 SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE, AIRLINE IS SET AT 578 FT (176M) BELOW LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 189.00 FT (57.617M) BELOW LAND-SURFACE
 DATUM, JULY 5, 1979; LOWEST, 360.00 FT (109.728M) BELOW LAND-SURFACE DATUM, JULY 7, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	337.00	JAN 04, 1980	309.00	APR 04, 1980	210.00	JUL 07, 1980	360.00
NOV 05	356.00	FEB 05	194.00	MAY 02	194.00	AUG 04	249.00
DEC 03	312.00	MAR 04	194.00	JUN 05	198.00		
WTR YEAR 1980	MAX	194.00	MAY 02, 1980	MIN	360.00	JULY 07, 1980	

353530097172001. LOCAL NUMBER, 13N-01E-22 ADD 1.
 LOCATION.--LAT 35 35'30", LONG 097 17'20", HYDROLOGIC UNIT 11100303, OWNER: T.E. BOOMER.
 AQUIFER.--GARBER-WELLINGTON FORMATION.
 WELL CHARACTERISTICS.--UNUSED ARTESIAN WELL, DIAMETER 6 IN (0.15M), DEPTH 153 FT (46.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1090 FT (332M). MEASURING POINT: CHISELED ARROW AT
 NORTHEAST SIDE OF CASING 0.10 FT (0.03M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDER INSTALLED 12-18-74.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 109.35 FT (33.330M) BELOW LAND-SURFACE
 DATUM, MAR. 10, 1977; LOWEST, 120.25 FT (36.652M) BELOW LAND-SURFACE DATUM, MAR. 5, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	113.27	DEC 25, 1979	113.64	MAR 20, 1980	119.34	JUL 10, 1980	113.45
10	113.52	31	113.66	25	119.09	15	113.35
15	113.25	JAN 05, 1980	113.68	31	117.80	20	113.29
20	112.84	10	113.49	APR 05	113.84	25	113.32
25	113.37	15	113.25	10	113.58	30	113.31
31	113.37	20	113.94	15	113.66	AUG 05	113.22
NOV 05	113.76	25	113.24	20	113.81	10	113.22
10	113.55	FEB 05	113.72	25	113.42	15	113.18
15	113.68	10	113.70	30	113.40	20	113.25
20	113.36	15	113.62	JUN 05	113.21	25	113.41
25	113.28	20	113.11	10	113.39	30	113.28
30	112.80	25	114.02	15	113.13	SEP 05	113.59
DEC 05	113.30	29	113.76	20	113.23	10	113.66
10	113.51	MAR 05	120.25	25	113.11	15	113.39
15	113.65	10	117.86	30	113.24	20	113.29
20	113.42	15	118.73	JUL 05	113.46		
WTR YEAR 1980	MAX	112.80	NOV 30, 1979	MIN	120.25	MAR 05, 1980	

GROUND-WATER LEVELS

OKLAHOMA COUNTY

352705097281201. LOCAL NUMBER, 11N-03W-01 CDD 1.
 LOCATION.--LAT 35 27'05", LONG 097 28'12", HYDROLOGIC UNIT 11100302, OWNER: OKLAHOMA CITY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 354 FT (108M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1290 FT (393M). MEASURING POINT: TOP OF CASING
 1.3 FT (0.40M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.82 FT (63.648M) BELOW LAND-SURFACE
 DATUM, JUNE 15, 1976; LOWEST, 222.30 FT (67.757M) BELOW LAND-SURFACE DATUM, SEPT. 25, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	214.94	FEB 25, 1980	214.43	MAY 25, 1980	213.97	AUG 05, 1980	219.60
10	215.05	29	214.18	31	214.42	10	220.00
15	215.21	MAR 05	213.96	JUN 05	215.68	15	220.38
DEC 05	216.62	10	213.49	10	215.94	20	220.62
10	216.58	15	213.59	15	215.86	25	221.12
15	216.43	20	213.44	20	215.60	30	221.48
20	215.99	25	213.18	25	215.35	SEP 05	221.90
25	215.88	31	212.93	JUL 05	215.90	10	221.92
31	215.82	APR 05	212.90	10	216.50	15	221.94
JAN 05, 1980	215.90	10	212.55	15	217.22	20	221.76
10	215.72	MAY 10	210.92	20	217.80	25	222.30
20	215.68	15	211.37	25	218.22	30	222.20
FEB 15	214.38	20	213.01	30	219.08		

WTR YEAR 1980 MAX 210.92 MAY 10, 1980 MIN 222.30 SEP 25, 1980

352725097224701. LOCAL NUMBER, 11N-02W-02 BDD 1.
 LOCATION.--LAT 35 27'25", LONG 097 22'47", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO.
 49.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 274 FT (83.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE
 SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE; AIRLINE IS SET AT 562 FT (171M) BELOW LAND-SURFACE DATUM.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 104.00 FT (31.699M) BELOW LAND-SURFACE
 DATUM, FEB. 1, 1979; LOWEST, 273.00 FT (83.210M) BELOW LAND-SURFACE DATUM, OCT. 4, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	273.00	JAN 04, 1980	257.00	MAR 04, 1980	257.00	APR 04, 1980	229.00
DEC 03	239.00	FEB 05	264.00				

WTR YEAR 1980 MAX 229.00 APR 04, 1980 MIN 273.00 OCT 04, 1979

352750097223001. LOCAL NUMBER, 11N-02W-02 ABA 1.
 LOCATION.--LAT 35 27'50", LONG 097 22'30", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO.
 50.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 751 FT (229M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1202 FT (366M). MEASURING POINT: TOP OF CONCRETE
 SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE; AIRLINE IS SET AT 580 FT (177M) BELOW LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.00 FT (63.398M) BELOW LAND-SURFACE
 DATUM, JUNE 4, 1979; LOWEST, 418.00 FT (127.406M) BELOW LAND-SURFACE DATUM, AUG. 4, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1979	395.00	JAN 04, 1980	257.00	APR 04, 1980	217.00	JUL 07, 1980	384.00
NOV 05	414.00	FEB 05	229.00	MAY 02	227.00	AUG 04	418.00
DEC 03	303.00	MAR 04	222.00	JUN 05	367.00	SEP 04	303.00

WTR YEAR 1980 MAX 217.00 APR 04, 1980 MIN 418.00 AUG 04, 1980

GROUND-WATER LEVELS

601

OKLAHOMA COUNTY

352449097293201, LOCAL NUMBER, 11N-03W-23 BCD 1.
 LOCATION.--LAT 35 24'49", LONG 097 29'32", HYDROLOGIC UNIT 11100302, OWNER: CITY OF OKLAHOMA CITY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 26 FT (7.92M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1250 FT (381M). MEASURING POINT: TOP OF CASING
 0.5 FT (0.15M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 110.74 FT (33.754M) BELOW LAND-SURFACE
 DATUM, MAY 10, 1980; LOWEST, 114.59 FT (34.927M) BELOW LAND-SURFACE DATUM, MAR. 10, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	111.29	DEC 25, 1979	111.46	APR 10, 1980	111.20	JUL 15, 1980	111.16
10	111.52	31	111.45	15	111.28	20	111.12
15	111.22	JAN 05, 1980	111.45	20	111.40	25	111.16
20	110.86	10	111.17	30	110.85	30	111.20
25	111.34	15	111.01	MAY 05	111.22	AUG 05	111.30
31	111.35	20	111.63	10	110.74	10	111.28
NOV 05	111.66	25	110.99	15	111.08	15	111.24
10	111.37	31	111.85	25	110.86	20	111.35
15	111.54	FEB 05	111.36	30	111.00	25	111.50
20	111.22	MAR 05	114.53	JUN 05	110.80	30	111.46
25	111.08	10	114.59	10	110.87	SEP 05	111.75
30	111.62	15	114.40	20	110.94	10	111.86
DEC 05	111.14	20	114.58	25	110.80	15	111.67
10	111.37	25	114.48	30	110.89	20	111.70
15	111.49	30	114.47	JUL 05	111.18	25	112.14
20	111.27	APR 05	111.47	10	111.20	30	111.95

WTR YEAR 1980 MAX 110.74 MAY 10, 1980 MIN 114.59 MAR 10, 1980

OSAGE COUNTY

362935096291501, LOCAL NUMBER (REVISED), 23N-09E-10 AAD 1.
 LOCATION.--LAT 36 29'35", LONG 096 29'15", HYDROLOGIC UNIT 11070107, OWNER: LESLIE DRUMMOND.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M), DEPTH 55 FT (16.8M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 835 FT (255M). MEASURING POINT: TOP OF CASING
 2.40 FT (0.73M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1971 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 5.37 FT (1.637M) BELOW LAND-SURFACE
 DATUM, JUNE 10, 1975; LOWEST, 9.26 FT (2.822M) BELOW LAND-SURFACE DATUM, AUG. 20, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	8.85	DEC 31, 1979	8.67	APR 10, 1980	7.59	JUN 30, 1980	7.20
10	9.08	JAN 05, 1980	8.73	15	7.66	JUL 05	7.37
15	8.83	10	8.60	20	7.66	25	7.68
20	8.64	15	8.56	25	7.42	31	8.07
25	8.78	20	8.84	30	7.14	AUG 05	8.20
31	8.90	25	8.48	MAY 05	7.28	10	8.23
NOV 05	8.98	31	8.90	10	7.17	15	8.29
10	8.88	FEB 25	8.62	15	7.22	20	8.21
15	8.77	29	8.51	20	7.03	SEP 05	8.35
20	8.73	MAR 05	8.55	25	6.93	10	8.44
25	8.56	10	8.37	31	7.07	15	8.45
30	8.73	15	8.20	JUN 05	7.09	20	8.47
DEC 05	8.51	20	8.28	10	7.20	25	8.67
15	8.60	25	8.18	15	7.31	30	8.46
20	8.57	31	7.85	20	7.20		
25	8.76	APR 05	7.76	25	7.03		

WTR YEAR 1980 MAX 6.93 MAY 25, 1980 MIN 9.08 OCT 10, 1979

GROUND-WATER LEVELS

PAYNE COUNTY

360615097100501, LOCAL NUMBER, 19N-01E-23 CDC 1.
 LOCATION.--LAT 36 06'15", LONG 097 10'05", HYDROLOGIC UNIT 11050003, OWNER: E.T. POOL.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 47 FT (14.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1030 FT (314M), MEASURING POINT: TOP OF CASING
 1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 18.10 FT (5.517M) BELOW LAND-SURFACE
 DATUM, DEC. 24, 1962; LOWEST, 28.70 FT (8.748M) BELOW LAND-SURFACE DATUM, MAR. 25, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	26.10	JUN 30, 1980	25.80	SEP 29, 1980	25.90
WTR YEAR 1980	MAX	25.80	JUNE 30, 1980	MIN	26.10

360725096521501, LOCAL NUMBER, 19N-04E-15 C88 1.
 LOCATION.--LAT 36 07'25", LONG 096 52'15", HYDROLOGIC UNIT 11050003, OWNER: V.G. PHELPS.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 880 FT (268M), MEASURING POINT: TOP OF CASING
 2.20 FT (0.67M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.00 FT (0.305M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 7.92 FT (2.414M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	6.70	JUN 30, 1980	4.50	SEP 29, 1980	6.60
WTR YEAR 1980	MAX	4.50	JUNE 30, 1980	MIN	6.70

360930096573001, LOCAL NUMBER, 19N-03E-02 B8A 1.
 LOCATION.--LAT 36 09'30", LONG 096 57'30", HYDROLOGIC UNIT 11050003, OWNER: W.D. SNYDER.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 34 FT (10.4M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 920 FT (280M), MEASURING POINT: TOP OF CASING
 0.90 FT (0.27M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 6.73 FT (2.051M) BELOW LAND-SURFACE
 DATUM, APR. 27, 1942; LOWEST, 25.08 FT (7.644M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	23.10	JUN 30, 1980	20.00	SEP 29, 1980	20.80
WTR YEAR 1980	MAX	20.00	JUNE 30, 1980	MIN	23.10

361120097055001, LOCAL NUMBER, 20N-02E-21 CCD 1.
 LOCATION.--LAT 36 11'20", LONG 097 05'50", HYDROLOGIC UNIT 11050003, OWNER: A.L. SIMON.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 41 FT (12.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1010 FT (308M), MEASURING POINT: TOP OF CASING
 1.30 FT (0.40M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 10.95 FT (3.338M) BELOW LAND-SURFACE
 DATUM, APR. 29, 1942; LOWEST, 36.29 FT (11.061M) BELOW LAND-SURFACE DATUM, APR. 5, 1937.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	23.20	JUN 30, 1980	19.50	SEP 29, 1980	21.90
WTR YEAR 1980	MAX	19.50	JUNE 30, 1980	MIN	23.20

GROUND-WATER LEVELS

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PAYNE COUNTY

360245096562001, LOCAL NUMBER, 18N-03E-12 CDC 1.
 LOCATION.--LAT 36 02'45", LONG 096 56'20", HYDROLOGIC UNIT 11050003, OWNER: J. WOLF.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 39 FT (11.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 830 FT (253M), MEASURING POINT: TOP OF NORTH
 EDGE OF CASING 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1951 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 7.40 FT (2.256M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 30.70 FT (9.357M) BELOW LAND-SURFACE DATUM, JULY 2, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	19.80	JUN 30, 1980	19.80	SEP 29, 1980	20.10
WTR YEAR 1980	MAX	19.80	DEC 27, 1979	MIN	20.10

360515096564501, LOCAL NUMBER, 19N-03E-35 AAB 1.
 LOCATION.--LAT 36 05'15", LONG 096 56'45", HYDROLOGIC UNIT 11050003, OWNER: LOVELL BRUS.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 900 FT (274M), MEASURING POINT: TOP OF CASING
 2.47 FT (0.75M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 11.33 FT (3.453M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 39.73 FT (12.110M) BELOW LAND-SURFACE DATUM, MAY 24, 1939.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	23.23	JUN 30, 1980	13.53	SEP 29, 1980	21.03
WTR YEAR 1980	MAX	13.53	JUNE 30, 1980	MIN	23.23

361205096572501, LOCAL NUMBER, 20N-03E-23 BAB 1.
 LOCATION.--LAT 36 12'05", LONG 096 57'25", HYDROLOGIC UNIT 11050003, OWNER: V.D. HESSER.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 27 FT (8.23M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1045 FT (319M), MEASURING POINT: TOP OF CASING 0.77
 FT (0.23M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD, 1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.20 FT (0.366M) BELOW LAND-SURFACE
 DATUM, MAY 27, 1943; LOWEST, 14.41 FT (4.392M) BELOW LAND-SURFACE DATUM, MARCH 1, 1957.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 27, 1979	10.60	JUN 30, 1980	10.58	SEP 29, 1980	8.63
WTR YEAR 1980	MAX	8.63	SEP 29, 1980	MIN	10.60

GROUND-WATER LEVELS
PITTSBURG COUNTY

350422095341901, LOCAL NUMBER, 07N-16E-24 BAB 1.
LOCATION.--LAT 35 04'22", LONG 095 34'19", HYDROLOGIC UNIT 11090204, OWNER: SAM SUDWITH.
AQUIFER.--BOGGY FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 63 FT (19.2M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 682 FT (208M). MEASURING POINT: TOP OF CASING
1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1977 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.16 (8.583M) BELOW LAND-SURFACE
DATUM, JUNE 10, 1979; LOWEST, 34.68 FT (10.570M) BELOW LAND-SURFACE DATUM, APR. 20, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	31.63	DEC 20, 1979	32.98	APR 10, 1980	34.49	JUL 10, 1980	32.80
10	31.84	25	33.20	15	34.60	15	32.83
15	31.90	31	33.35	20	34.68	20	32.90
20	31.76	JAN 05, 1980	33.47	25	34.45	25	33.03
25	32.10	10	33.48	30	34.37	31	33.10
31	32.13	15	33.46	MAY 05	33.45	AUG 05	33.12
NOV 05	32.49	20	33.86	25	31.95	10	33.23
10	32.43	25	33.57	31	32.22	15	33.28
15	32.59	31	34.17	JUN 05	32.17	20	33.40
20	32.47	FEB 05	33.96	10	32.46	25	33.59
25	32.50	10	33.99	15	32.51	31	33.56
30	32.86	15	34.01	20	32.58	SEP 05	33.81
DEC 05	32.80	20	33.77	25	32.56		
10	33.00	MAR 31	34.43	30	32.67		
15	33.10	APR 05	34.58	JUL 05	32.73		

WTR YEAR 1980 MAX 31.63 OCT 05, 1979 MIN 34.68 APR 20, 1980

PONTOTOC COUNTY

343457096404501, LOCAL NUMBER, 01N-06E-04 CAD 1.
LOCATION.--LAT 34 34'57", LONG 096 40'45", HYDROLOGIC UNIT 11140102, OWNER: J.H. BRENTZ.
AQUIFER.--ARBUCKLE GROUP.
WELL CHARACTERISTICS.--DRILLED OIL TEST WELL, DIAMETER 18 IN (0.46M), DEPTH 396 FT (121 M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1157 FT (353M). MEASURING POINT: BASE OF RECORDER
SHELTER AT LAND-SURFACE DATUM.
REMARKS.-- WELL ORIGINALLY 1,707 FT (520 M) DEEP.
PERIOD OF RECORD.--1959 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 83.49 FT (25.448M) BELOW LAND-SURFACE
DATUM, APR. 30, 1973; LOWEST, 126.52 FT (38.563M) BELOW LAND-SURFACE DATUM, AUG. 31, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	114.03	JAN 05, 1980	119.23	APR 05, 1980	121.95	JUN 25, 1980	121.37
10	114.47	10	119.38	10	122.05	30	121.75
15	114.81	15	119.66	15	122.19	JUL 05	122.59
20	115.13	FEB 15	120.70	25	122.59	10	123.51
25	115.53	20	120.75	30	123.02	20	124.34
NOV 15	116.82	25	120.96	MAY 05	122.81	25	124.72
20	117.04	29	121.09	10	122.86	31	125.22
DEC 05	117.82	MAR 05	121.18	15	123.44	AUG 05	125.52
10	118.02	10	121.30	20	123.60	10	125.46
15	118.30	15	121.43	25	123.39	20	125.62
20	118.59	20	121.58	JUN 10	120.98	25	126.25
25	118.76	25	121.75	15	120.86	31	126.52
31	119.06	31	121.89	20	121.74		

WTR YEAR 1980 MAX 114.03 OCT 05, 1979 MIN 126.52 AUG 31, 1980

GROUND-WATER LEVELS

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ROGER MILLS COUNTY

354527099470501. LOCAL NUMBER, 15N-24W-19 DDA 1.
 LOCATION.--LAT 35 45'27", LONG 099 47'05", HYDROLOGIC UNIT 11130301, OWNER: CHESTER WRIGHT.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER 12 IN (0.30M), DEPTH 122 FT (37.2M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2315 FT (706M). MEASURING POINT: TOP OF WOOD RECORDER
 BASE AT LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1970 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 55.45 FT (16.896M) BELOW LAND-SURFACE
 DATUM, MARCH 5, 1978; LOWEST, 57.27 FT (17.435M) BELOW LAND-SURFACE DATUM, JUNE 5, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	55.77	DEC 31, 1979	55.83	APR 05, 1980	55.70	JUL 05, 1980	55.69
10	55.77	JAN 05, 1980	55.82	10	55.57	10	55.68
15	55.75	10	55.66	15	55.70	20	55.72
20	55.66	25	55.72	20	55.70	25	55.64
25	55.80	31	55.97	25	55.73	31	55.63
31	55.97	FEB 05	55.87	30	55.70	AUG 05	55.64
NOV 05	56.01	10	55.68	MAY 05	55.68	10	55.60
10	55.91	15	55.87	10	55.58	15	55.53
15	55.77	20	55.61	15	55.63	20	55.60
20	55.79	25	55.98	25	55.70	25	55.57
25	55.79	29	55.97	31	55.68	31	55.51
30	55.79	MAR 05	55.91	JUN 05	55.66	SEP 05	55.61
DEC 05	55.78	10	55.76	10	55.69	10	55.60
10	55.68	15	55.71	15	55.66	15	55.48
15	55.73	20	55.84	20	55.74	20	55.48
20	55.79	25	55.74	25	55.69	25	55.67
25	55.87	31	55.70	30	55.66	30	55.55

WTR YEAR 1980 MAX 55.48 SEP 15, 1980 MIN 56.01 NOV 05, 1979

SEQUOYAH COUNTY

352419094270401. LOCAL NUMBER, 11N-27E-21 CDD 1.
 LOCATION.--LAT 35 24'19", LONG 094 27'04", HYDROLOGIC UNIT 11110104, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M), DEPTH 48 FT (14.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 412 FT (126M). MEASURING POINT: TOP OF RECORDER
 PLATFORM 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1960 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 3.18 FT (0.969M) BELOW LAND-SURFACE
 DATUM, JUNE 20, 1973; LOWEST, 18.72 FT (5.706M) BELOW LAND-SURFACE DATUM, OCT. 10, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	10.37	DEC 15, 1979	10.35	FEB 15, 1980	11.94	JUN 25, 1980	10.60
10	10.69	20	11.34	20	11.90	AUG 10	13.33
15	10.72	25	11.43	29	12.05	15	13.43
20	10.78	31	11.43	MAR 05	11.94	20	13.58
25	11.00	JAN 05, 1980	11.61	10	11.85	25	13.67
31	11.00	10	11.56	APR 20	12.76	30	13.79
NOV 05	11.12	15	11.63	25	13.10	SEP 05	13.91
10	11.15	25	11.68	30	13.70	15	13.82
30	10.31	31	11.98	MAY 05	11.64	20	13.71
DEC 05	10.18	FEB 05	11.87	JUN 15	15.65	25	13.66
10	10.37	10	11.95	20	10.90	30	13.46

WTR YEAR 1980 MAX 10.18 DEC 05, 1979 MIN 15.65 JUNE 15, 1980

GROUND-WATER LEVELS

TEXAS COUNTY

363033101440701. LOCAL NUMBER, 01N-12E-35 BDD 1.
 LOCATION.--LAT 36 30'33", LONG 101 44'07", HYDROLOGIC UNIT 11101033, OWNER: OTTO A. HARLAND.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 386 FT (118M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3430 FT (1045M). MEASURING POINT: TOP OF FLOAT LINE
 HOLE ON NORTH SIDE 1.70 FT (0.52M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--DIGITAL RECORDER INSTALLED MAR. 17, 1980. MEAN-DAILY WATER LEVELS
 PUBLISHED THEREAFTER.
 PERIOD OF RECORD.--1956 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 191.87 FT (58.482M) BELOW LAND-SURFACE
 DATUM, JAN. 10, 1971; LOWEST, 203.41 FT (61.999M) BELOW LAND-SURFACE DATUM,
 SEPT. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	201.83	201.98	201.89	202.18	202.83	203.03
2	---	---	---	---	---	---	201.98	202.08	201.91	202.24	202.74	203.08
3	---	---	---	---	---	---	202.10	202.08	202.00	202.23	202.66	203.02
4	---	---	---	---	---	---	202.18	202.04	202.02	202.20	202.68	203.08
5	202.01	---	201.69	201.76	201.89	201.91	201.97	201.99	201.97	202.23	202.79	203.15
6	---	---	---	---	---	---	201.77	201.94	201.95	202.29	202.93	203.11
7	---	---	---	---	---	---	201.88	201.91	202.10	202.39	202.97	203.00
8	---	---	---	---	---	---	202.19	202.00	202.30	202.48	202.95	203.01
9	---	---	---	---	---	---	202.13	201.82	202.16	202.56	202.93	203.21
10	202.40	---	201.76	201.65	201.74	201.86	201.83	201.65	202.01	202.62	202.89	203.23
11	---	---	---	---	---	---	201.98	201.80	202.04	202.64	203.00	202.99
12	---	---	---	---	---	---	202.20	201.87	202.01	202.64	203.04	202.94
13	---	---	---	---	---	---	202.13	202.07	201.98	202.61	202.93	203.07
14	---	---	---	---	---	---	201.95	202.11	201.98	202.60	202.90	203.15
15	202.18	---	201.75	201.78	201.90	201.93	201.97	202.03	202.06	202.63	202.87	203.03
16	---	---	---	---	---	---	202.06	202.00	202.19	202.67	202.91	202.95
17	---	---	---	---	---	202.02	202.22	202.08	202.22	202.68	203.05	203.05
18	---	---	---	---	---	201.88	202.20	202.17	202.14	202.66	203.02	203.02
19	---	---	---	---	---	201.66	202.14	202.12	202.10	202.74	202.97	202.98
20	201.91	---	201.69	202.07	201.60	201.83	202.14	202.00	202.18	202.73	203.01	202.95
21	---	---	---	---	---	201.87	202.13	202.04	202.15	202.88	203.14	202.95
22	---	---	---	---	---	201.71	202.13	202.00	202.09	202.92	203.11	203.22
23	---	---	---	---	---	201.69	202.12	201.82	202.05	202.82	203.10	203.28
24	---	---	---	---	---	201.88	202.05	201.77	202.02	202.73	203.07	203.16
25	202.30	---	201.89	201.61	202.16	201.80	202.15	201.86	202.11	202.75	203.02	203.34
26	---	---	---	---	---	201.78	202.24	201.96	202.16	202.79	203.07	203.41
27	---	---	---	---	---	201.74	202.27	202.03	202.08	202.80	203.13	203.30
28	---	---	---	---	---	201.74	202.13	201.99	202.13	202.80	203.07	203.18
29	---	---	---	---	202.01	201.85	201.93	201.92	202.21	202.83	203.00	203.18
30	---	---	---	---	---	201.85	201.84	202.01	202.19	202.81	202.95	203.28
31	---	---	201.79	202.07	---	201.76	---	201.95	---	202.87	202.94	---
MEAN	---	---	---	---	---	---	202.06	201.97	202.08	202.61	202.96	203.11
MAX	---	---	---	---	---	---	202.27	202.17	202.30	202.92	203.14	203.41
MIN	---	---	---	---	---	---	201.77	201.65	201.89	202.18	202.66	202.94

WASHITA COUNTY

352142099122501. LOCAL NUMBER, 10N-19W-10 BDD 1.
 LOCATION.--LAT 35 35'05", LONG 099 12'25", HYDROLOGIC UNIT 11120302, OWNER: MIDWEST OKLA
 DEVELOPMENT AUTHORITY.
 AQUIFER.--ELK CITY SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M), DEPTH 107 FT (32.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1920 FT (585M). MEASURING POINT: TOP OF CASING 1.35
 FT (0.41M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--APRIL TO SEPTEMBER 1979
 EXTREMES FOR CURRENT YEAR.-- HIGHEST WATER LEVEL 33.33 FT (10.159M) BELOW LAND-SURFACE DATUM
 APR. 30, 1979; LOWEST, 34.00 FT (10.363M) BELOW LAND-SURFACE DATUM, JULY 25, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 20, 1980	33.78	MAY 20, 1980	33.86	JUL 05, 1980	33.79	AUG 10, 1980	33.96
25	33.80	25	33.80	10	33.86	15	33.92
30	33.80	JUN 15	33.71	20	33.97	20	33.95
MAY 05	33.82	20	33.71	25	34.00	25	33.99
10	33.78	25	33.73	31	33.97	30	33.95
15	33.86	30	33.82	AUG 05	33.98		
WTR YEAR 1980	MAX	33.71	JUNE 15, 1980	MIN	34.00	JULY 25, 1980	

GROUND-WATER LEVELS

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WOODS COUNTY

365143098404201. LOCAL NUMBER, 28N-14W-35 BCC 1.
 LOCATION.--LAT 36 51'43", LONG 098 40'42", HYDROLOGIC UNIT 11060002, OWNER: WILCOX.
 AQUIFER.--CEDAR HILLS SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED MUNICIPAL WELL, DIAMETER 13 IN (0.33M),
 DEPTH 54 FT (16.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1360 FT (415M). MEASURE POINT: EDGE OF
 LARGE HOLE IN STEEL PLATE 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--DIGITAL RECORDER INSTALLED JULY 30, 1980. MEAN-DAILY WATER LEVELS
 PUBLISHED THEREAFTER.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 18.77 FT (5.721M) BELOW
 LAND-SURFACE DATUM, JUNE 15, 1973; LOWEST, 24.25 FT (7.391M) BELOW LAND-SURFACE
 DATUM, MAR. 15, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	19.83	20.38
2	---	---	---	---	---	---	---	---	---	---	19.85	20.40
3	---	---	---	---	---	---	---	---	---	---	19.85	20.41
4	---	---	---	---	---	---	---	---	---	---	19.88	20.44
5	---	22.19	22.04	22.18	22.35	22.46	22.50	21.02	20.57	19.45	19.93	20.46
6	---	---	---	---	---	---	---	---	---	---	19.96	20.47
7	---	---	---	---	---	---	---	---	---	---	19.98	20.48
8	---	---	---	---	---	---	---	---	---	---	19.99	20.51
9	---	---	---	---	---	---	---	---	---	---	20.00	20.54
10	22.21	22.12	22.00	22.23	22.34	22.44	22.44	20.89	20.57	19.49	20.01	20.54
11	---	---	---	---	---	---	---	---	---	---	20.05	20.50
12	---	---	---	---	---	---	---	---	---	---	20.06	20.53
13	---	---	---	---	---	---	---	---	---	---	20.05	20.59
14	---	---	---	---	---	---	---	---	---	---	20.07	20.61
15	22.27	22.04	22.14	22.23	22.41	22.41	22.43	20.87	20.57	19.55	20.07	20.58
16	---	---	---	---	---	---	---	---	---	---	20.09	20.61
17	---	---	---	---	---	---	---	---	---	---	20.13	20.64
18	---	---	---	---	---	---	---	---	---	---	20.13	20.66
19	---	---	---	---	---	---	---	---	---	---	20.14	20.65
20	22.28	22.06	22.07	22.32	22.29	22.48	22.37	20.79	20.37	19.68	20.16	20.67
21	---	---	---	---	---	---	---	---	---	---	20.20	20.68
22	---	---	---	---	---	---	---	---	---	---	20.22	20.74
23	---	---	---	---	---	---	---	---	---	---	20.22	20.75
24	---	---	---	---	---	---	---	---	---	---	20.23	20.74
25	22.40	22.05	22.14	22.30	22.48	22.46	22.13	20.69	19.39	19.73	20.25	20.80
26	---	---	---	---	---	---	---	---	---	---	20.27	20.81
27	---	---	---	---	---	---	---	---	---	---	20.30	20.79
28	---	---	---	---	---	---	---	---	---	---	20.31	20.79
29	---	---	---	---	22.50	---	---	---	---	---	20.31	20.81
30	---	22.05	---	---	---	---	22.23	---	19.37	19.79	20.32	20.82
31	22.38	---	22.17	22.41	---	22.51	---	20.60	---	19.82	20.34	---
MEAN	---	---	---	---	---	---	---	---	---	---	20.10	20.61
MAX	---	---	---	---	---	---	---	---	---	---	20.34	20.82
MIN	---	---	---	---	---	---	---	---	---	---	19.83	20.38

WOODWARD COUNTY

362707099174201. LOCAL NUMBER, 23N-20W-19 CBB 1.
 LOCATION.--LAT 36 27'07", LONG 099 17'42", HYDROLOGIC UNIT 11100301, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 4 IN (0.10M), DEPTH 27 FT (8.23M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1880 FT (573M). MEASURING POINT: TOP EDGE OF CASING
 ON NORTH SIDE 2.00 FT (0.16M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1945 TO 1963, 1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.02 FT (0.311M) BELOW LAND-SURFACE
 DATUM, JULY 1, 1957; LOWEST, 6.94 FT (2.115M) BELOW LAND-SURFACE DATUM, OCT. 9, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	4.55	JAN 10, 1980	4.07	APR 24, 1980	3.72	AUG 13, 1980	4.40
WTR YEAR 1980	MAX	3.72	APR 24, 1980	MIN	4.55	OCT 05, 1979	

GROUND-WATER LEVELS

WOODWARD COUNTY

361256099102101. LOCAL NUMBER, 20N-19W-13 ABB 1.
 LOCATION.--LAT 36 12'56", LONG 099 10'21", HYDROLOGIC UNIT 11100301, OWNER: M. JAZEN.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 40 FT (12.2M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1895 FT (578M). MEASURING POINT: EDGE OF PLYWOOD
 SHELTER BASE 1.10 FT (0.34M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 9.63 FT (2.935M) BELOW LAND-SURFACE
 DATUM, AUG. 31, 1980; LOWEST, 17.44 FT (5.316M) BELOW LAND-SURFACE DATUM, JULY 5, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	10.52	JAN 31, 1980	11.17	APR 20, 1980	11.00	JUL 10, 1980	10.21
10	10.73	FEB 05	11.01	25	11.10	15	10.10
15	10.47	10	10.86	30	11.08	20	10.01
25	10.67	15	11.08	MAY 05	11.12	25	9.95
31	10.88	20	10.86	10	10.95	31	9.89
NOV 05	10.96	25	11.23	15	11.11	AUG 05	9.85
10	10.86	29	11.27	20	11.13	10	9.77
15	10.79	MAR 05	11.11	25	10.99	15	9.71
20	10.77	10	10.95	31	10.85	20	9.78
DEC 25	10.87	15	10.89	JUN 05	10.71	25	9.70
31	10.84	20	11.03	10	10.68	31	9.63
JAN 05, 1980	10.84	25	10.94	15	10.62	SEP 05	9.75
10	10.62	31	10.91	20	10.60	10	9.77
15	10.81	APR 05	10.95	25	10.46	15	9.64
20	11.05	10	10.81	30	10.36		
25	10.82	15	10.94	JUL 05	10.31		

WTR YEAR 1980 MAX 9.63 AUG 31, 1980 MIN 11.27 FEB 29, 1980

361714099315101. LOCAL NUMBER, 21N-22W-23 BBB 1.
 LOCATION.--LAT 36 17'14", LONG 099 31'51", HYDROLOGIC UNIT 11100203, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--UGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED TEST HOLE, DIAMETER 6 IN (0.15M), DEPTH 322 FT (98.1M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2340 FT (713M). MEASURING POINT: TOP OF PLYWOOD SHELF
 2.00FT (0.61M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1957 TO 1963, 1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 27.10 FT (8.260M) BELOW LAND-SURFACE
 DATUM, SEPT. 20, 1980; LOWEST, 32.64 FT (9.949M) BELOW LAND-SURFACE DATUM, MAY 19, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	27.87	DEC 31, 1979	27.94	MAR 25, 1980	28.07	JUL 15, 1980	27.35
10	27.97	JAN 05, 1980	27.92	31	28.06	20	27.34
15	27.86	10	27.86	APR 05	28.07	25	27.32
20	27.81	15	27.91	10	28.04	31	27.30
25	27.92	20	28.02	15	28.09	AUG 05	27.29
31	28.15	25	27.88	20	27.98	10	27.27
NOV 05	28.20	31	28.06	MAY 20	27.61	15	27.23
10	28.11	FEB 05	27.99	25	27.66	20	27.25
15	28.06	10	27.94	31	27.57	25	27.23
20	28.02	15	28.02	JUN 05	27.53	31	27.18
25	27.98	20	27.92	10	27.51	SEP 05	27.23
30	28.03	25	28.11	15	27.47	10	27.23
DEC 05	27.95	29	28.07	20	27.46	15	27.16
10	27.92	MAR 05	28.08	25	27.40	20	27.10
15	27.91	10	28.00	30	27.40	25	27.18
20	27.91	15	28.01	JUL 05	27.40	30	27.11
25	27.99	20	28.07	10	27.38		

WTR YEAR 1980 MAX 27.10 SEP 20, 1980 MIN 28.20 NOV 05, 1979

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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
<i>Length</i>		
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)
<i>Area</i>		
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)
<i>Volume</i>		
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)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm 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)
<i>Flow</i>		
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)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons



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