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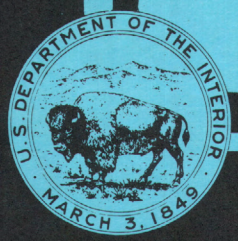
Water Resources Data for Oklahoma

Water Year 1976

Volume 2. Red River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-76-2

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

CALENDAR FOR WATER YEAR 1976

1975

OCTOBER

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1976

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SEPTEMBER

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Water Resources Data for Oklahoma

Water Year 1976

Volume 2. Red River Basin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-76-2

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

UNITED STATES DEPARTMENT OF THE INTERIOR

THOMAS S. KLEPPE, Secretary

GEOLOGICAL SURVEY

Cecil D. Andrus, Director

For information on the water program in Oklahoma write to
District Chief, Water Resources Division
U.S. Geological Survey
Rm. 621, 201 N.W. 3rd Street
Oklahoma City, Oklahoma 73102

1977

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 J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Oklahoma are in two volumes as follows:

Volume 1. Arkansas River Basin
Volume 2. Red River Basin

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Volume 2, Red River Basin

5. Report Date August 1977

6.

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15. Supplementary Notes

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16. Abstracts

Water resources data for the 1976 water year for Oklahoma consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes or reservoirs. Volumes 1 and 2 of this report contain discharge records for 122 gaging stations; stage and contents for 22 lakes or reservoirs; water quality for 95 gaging stations and 3 lakes. Also included are 44 crest-stage partial-record stations and 1 low-flow partial-record station. 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.

17. Key Words and Document Analysis. 17a. Descriptors

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ILLUSTRATIONS

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

WATER RESOURCES DATA FOR OKLAHOMA, 1976

Volume 2, Red River Basin

INTRODUCTION

Water resources data for Oklahoma for the 1975 water year are presented in two volumes, appropriately identified by river basins. Data in each volume consist of records of stage, dischage, and water quality of streams; stage, contents, and water quality of lakes and reservoirs. Volumes 1 and 2 of this report contain discharge records for 122 gaging stations; stage and contents for 22 lakes and reservoirs; water quality for 95 gaging stations, and 3 lakes. Also included are data for 44 crest-stage partial-record stations and 1 low-flow partial-record station. 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 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, 604 South Pickett Street, Alexandria, Virginia, 22304.

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, volume 1 of this report is identified as "U.S. Geological Survey Water-Data Report OK-76-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

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

Oklahoma Water Resources Board, Gerald E. Borelli, Chairman, suceeded by W. Earl Walker; Forrest Nelson, executive director.

Oklahoma Department of Highways, Richard A. Ward, Director.

Oklahoma City Water Department, Charles Baker, Director of water services.

Oklahoma State Department of Health, Environmental Health Services, Loyd F. Pummill, chief.

Oklahoma Pollution Control Coordinating Board, James F. Lovell, Chairman; Denver Talley, executive director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 83 gaging stations and 29 water-quality stations published in this report. Assistance for 3 gaging stations and 5 water-quality stations was furnished by the Bureau of Reclamation, U.S. Department of the Interior. Also furnishing assistance was the Environmental Protection Agency.

The following organizations aided in collecting records:

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

Organizations that supplied data are acknowledged in station descriptions.

HYDROLOGIC CONDITIONS

Streamflow for the first six months of the 1976 water year was near normal due to rains in prior years; however, lack of runoff from rainfall gave evidence of the beginnings of a drought. Because of normal streamflow, reservoir contents remained near normal during this period. Normal runoff continued in April except in northeast Oklahoma where excessive runoff was experienced. A new peak of 27 years of record occurred at Baron Fork at Eldon (recurrence interval, 20 years). Other stations in the area had peaks in the range of 2 to 7 recurrence intervals. Flow was above normal in May in the northwest section for the first time in three years. Mingo and Joe Creeks in Tulsa experienced a flood which was within the top five rises in 75 years. Three deaths occurred, 1,980 homes were flooded, and damage was in the millions. Another major flood occurred in July in the City of Pryor, causing damage in excess of one million dollars. The second highest peak since 1939 occurred at Spring River near Quapaw on July 3. Except for these isolated heavy runoff areas, streamflow remained at or below normal. Drought conditions had become serious for the north-central area by the end of the year. Monthly and annual mean discharge is compared with median at Washita River near Durwood in figure 2.

Reservoir contents were below the previous year at the year's end but were near average for the year. The exception was Keystone Lake in north-central Oklahoma, which was only 69 percent of normal at year's end.

Dissolved solids in the streams was higher than normal at the first of the water year and remained higher throughout the year. Drought conditions were responsible, in part, for this situation. At Washita River near Durwood highest mean monthly specific conductance (for a 31-year period) occurred for the months of October, November, December, July, and August and was at least fourth highest for every month except September. Monthly and annual mean specific conductance is compared with the mean monthly and annual specific conductance at Washita River near Durwood in figure 3. A study of figures 2 and 3 show that while there was less than normal flow, there was higher than normal specific conductivity.

Ground-water levels were below average throughout the year and below the levels of last year. There was a general rising trend during April to July and a general decline thereafter. Some water levels in the Oklahoma Panhandle and in central Oklahoma reached an all time low this year with records up to 20 years in the panhandle and 33 years in central Oklahoma.

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.

Adenosine triphosphate (ATP) is the primary energy donor in cellular life process. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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 ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the 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 ± 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 ± 1.0°C on M-enterrococcus 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 contained cells per sample, usually milliters (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 commont 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 (FT^3/s, 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 refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (coloidal) suspended particles. Analyses are performed on filtered samples.

Diversity index is a 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 sample 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 a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is 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.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formulation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (ug/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 (UG/L, ug/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.

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

Milligrams of oxygen per area or volume per unit time (mg O_2/(m^2·time) for periphyton and macrophytes and mg O_2/(m^3·time)) for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made with 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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.

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 discharge times mg/L times 0.0027.

Suspended-sediment load is 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.

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

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 lived.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The aritifical 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 U.S.G.S. 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.

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 Kimgdom 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:

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the 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 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 the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the disccharge 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 indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

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 03041000, which appears just to the left of the station name, includes the 2-digit part number "03" plus the 6-digit downstream order number "041000".

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 figire 1 below.

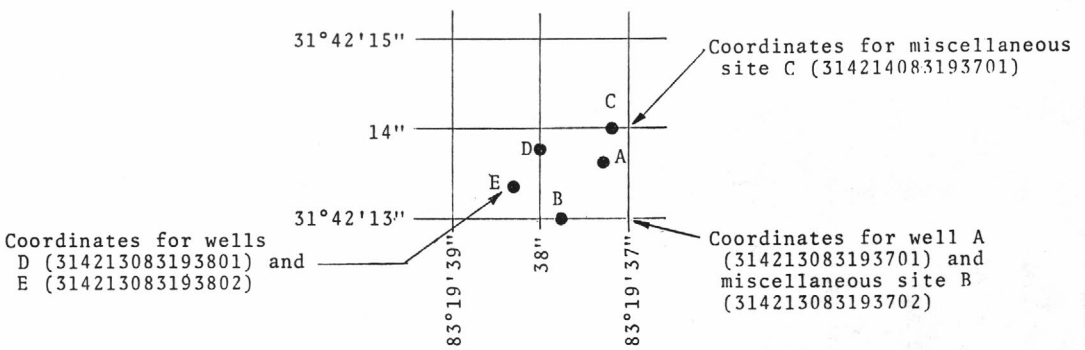

Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

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.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

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 text-books, in Water-Supply Paper 888, and in 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 discharge 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 engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by 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 northern 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. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

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 above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

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.

Skeleton rating tables are published, immediately following EXTREMES, for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

The daily table for stream-gaging stations 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, of 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 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other 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, 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.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

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 sections.

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 produce 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 mean sea level (msl) or land-surface datum (lsd). Mean sea level 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 mean sea level 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 may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy 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-three 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). Prices are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigation."

1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H.H. Stevens Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1976. 65 pages. $1.60.

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. $0.85.

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. $1.90.

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. $1.75.

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. $1.00.

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. $0.20.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

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. $0.35.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.30.

3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. $0.20.

3-A7. *Stage measurements at gaging stations*, by T.J. Buckanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $0.45.

3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

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. $0.40.

3-A12. *Fluorometric procedures for dye tracing*, by J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages. $2.50.

3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.

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. $2.50.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $1.15.

4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. $0.30.

4-A2. *Frequency curves*, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.20.

4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI Book 4, Chapter B1. 1972. 18 pages. $0.65.

4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

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. $0.65.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M.W. Skougstad, and M.J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

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. $0.80.

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. $0.90.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by K.V. Slack, R.C. Averett, P.E. Greeson, and R.G. Lipscomb: USGS--TWRI Book 5, Chapter A4. 1973. 165 pages. $2.85.

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $0.65.

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. $2.30.

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. $0.70.

8-B2. *Calibration and maintanance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $0.40.

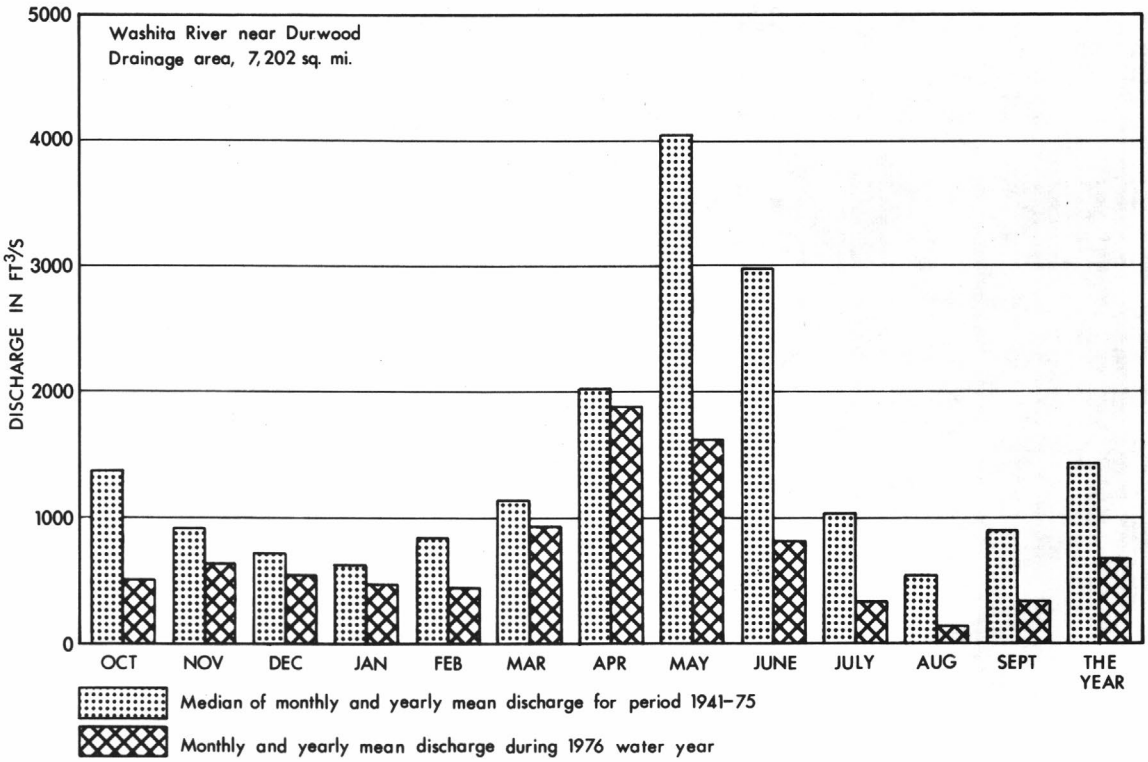

FIGURE 2.--Discharge during 1976 water year compared with median discharge for period 1941-75 for one representative gaging station.

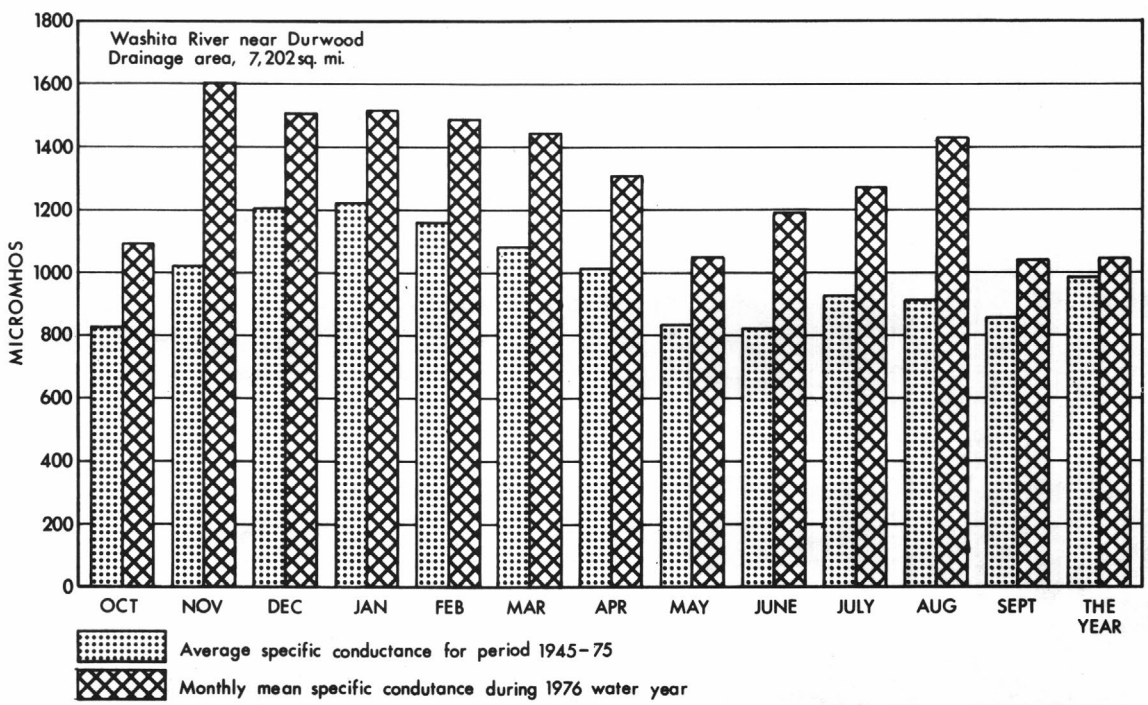

FIGURE 3.-- Specific conductance during 1976 water year compared with average specific conductance for period 1945-75 at one site.

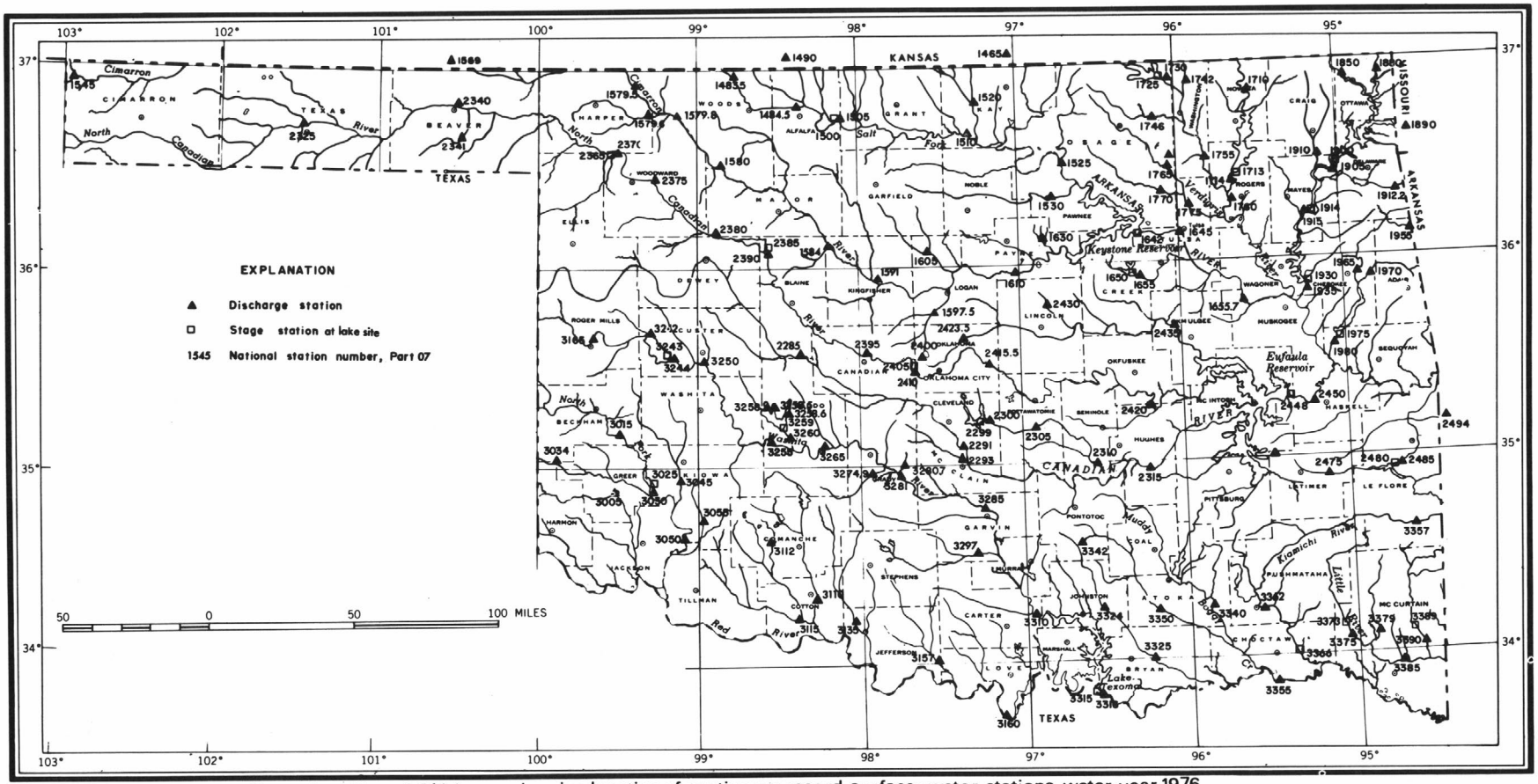

Figure 4.--Map of Oklahoma showing location of continuous-record surface-water stations, water year 1976.

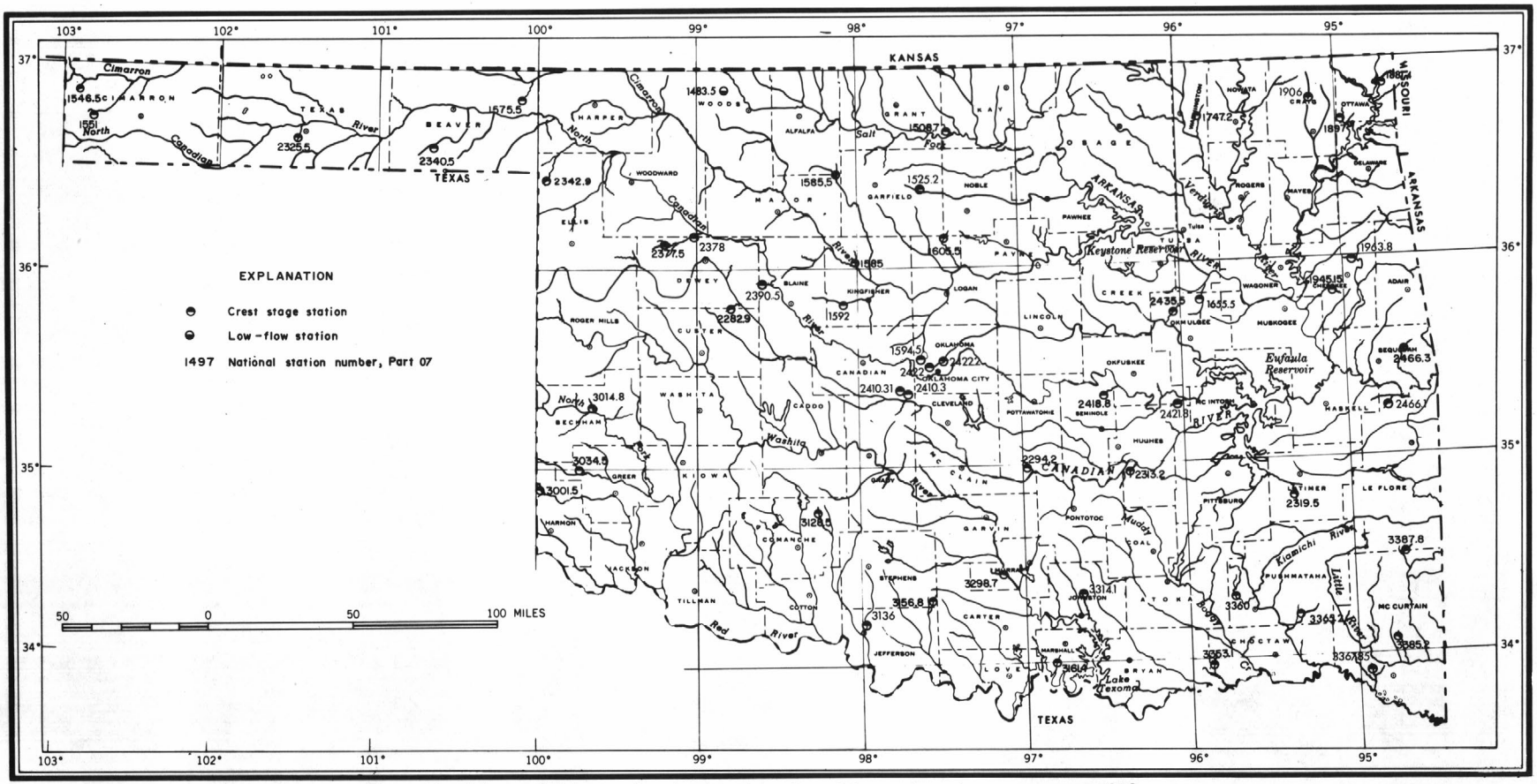

Figure 5.-- Map of Oklahoma showing location of partial record stations, water year 1976.

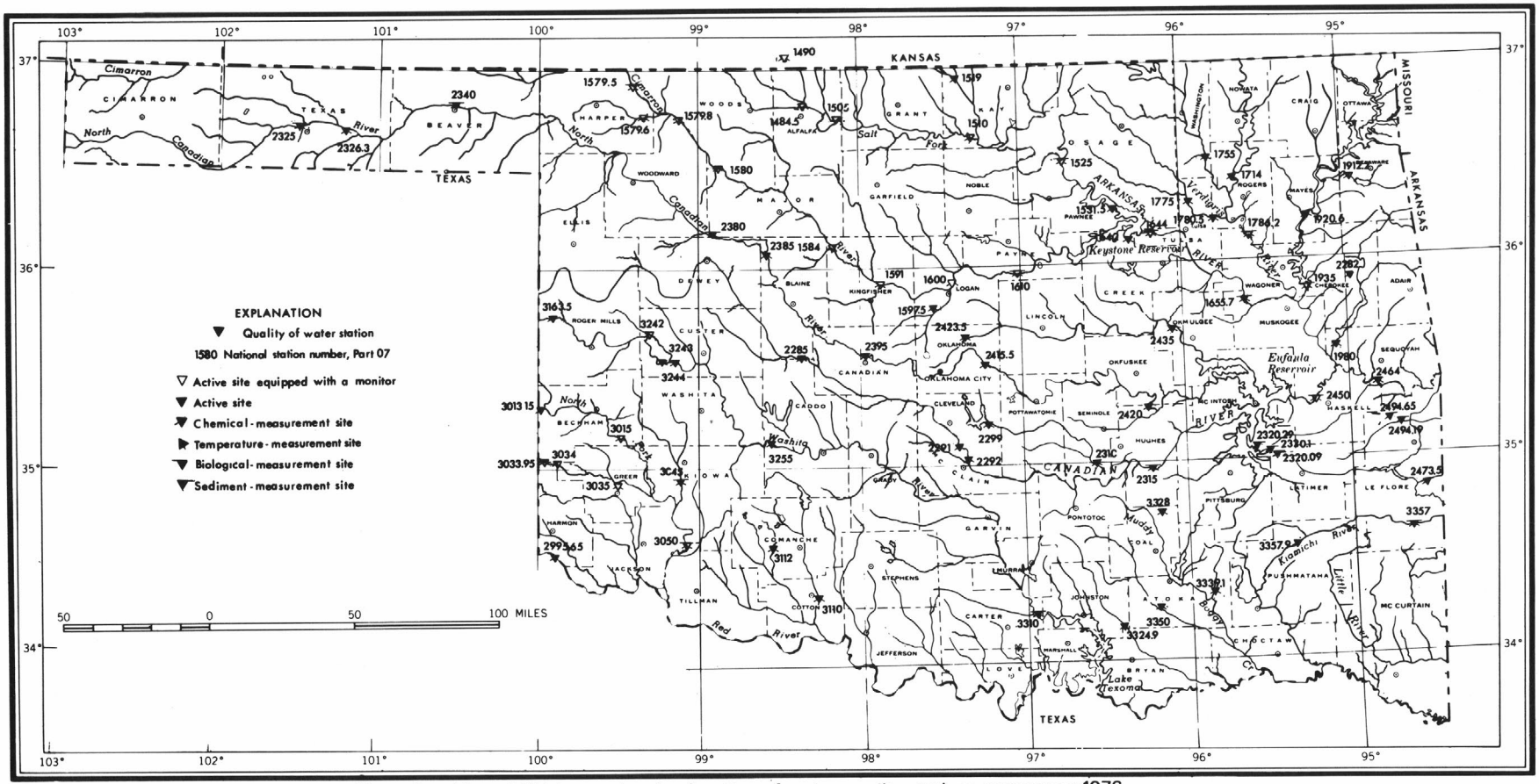

Figure 6.--Map of Oklahoma showing location of water-quality stations, water year 1976.

GAGING STATION RECORDS

RED RIVER BASIN

07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'32", long 99°30'28", in SW 1/4 SE 1/4 sec.34, T.5 N., R.22 W., Greer County, 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 mi^2 (4,056 km^2), of which 209 mi^2 (541 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

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) above mean sea level (levels by 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.--39 years (water years 1937-76), 86.8 ft^3/s (2.458 m^3/s), 62,890 acre-ft/yr (77.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft^3/s (2,039 m^3/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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,400 ft^3/s (493 m^3/s) at 0515 Sept. 13, gage height, 12.09 ft (3.685 m), no other peak above base of 6,000 ft^3/s (170 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	33	54	39	24	12	83	51	8.2		18
2	12	908	32	45	38	23	12	79	78	6.9		18
3	12	231	32	40	38	22	11	67	59	6.8		3.9
4	12	213	31	33	38	23	10	55	34	3.8		0
5	11	130	31	27	40	21	11	46	29	15		0
6	11	89	28	38	40	20	11	56	25	6.5		0
7	11	69	28	32	34	22	12	45	22	3.0		0
8	10	58	28	30	43	27	13	39	19	1.5		0
9	9.9	49	29	27	53	33	14	37	17	.60		0
10	10	42	29	25	49	35	15	131	15	.30		0
11	9.7	38	29	33	49	40	19	35	13	1.0		0
12	9.0	34	28	42	50	43	19	27	10	.50		0
13	9.0	31	31	53	47	35	18	24	8.2	.25		3460
14	11	31	30	51	46	30	17	25	9.2	.15		295
15	53	31	28	51	43	28	165	21	7.0	0		138
16	26	31	29	44	42	26	567	17	6.5	.50		120
17	21	31	27	39	40	25	580	14	3.5	.30		89
18	18	32	22	38	39	23	259	12	2.0	.15		129
19	16	38	20	38	36	23	178	10	1.2	0		68
20	14	44	33	36	36	21	147	9.0	.85	0		60
21	14	54	36	36	33	18	106	8.5	.65	0		90
22	14	59	32	35	30	17	82	8.2	.50	0		47
23	13	47	33	35	29	16	72	12	.40	0		31
24	12	40	46	33	27	15	58	38	179	0		25
25	12	38	54	33	25	15	49	82	78	0		21
26	12	37	55	33	24	15	44	216	28	0		19
27	12	36	51	33	23	14	41	308	15	0		17
28	12	38	52	36	24	13	59	157	8.8	0		20
29	12	42	63	37	23	12	139	88	4.8	0		20
30	12	34	65	38	---	11	83	57	3.3	0		17
31	13	---	60	38	---	11	---	56	---	0		---
TOTAL	436.6	2569	1125	1163	1078	701	2823	1862.7	728.90	55.45	0	4705.9
MEAN	14.1	85.6	36.3	37.5	37.2	22.6	94.1	60.1	24.3	1.79	0	157
MAX	53	908	65	54	53	43	580	308	179	15	0	3460
MIN	9.0	14	20	25	23	11	10	8.2	.40	0	0	0
AC-FT	866	5100	2230	2310	2140	1390	5600	3690	1450	110	0	9330

CAL YR 1975 TOTAL 37397.10 MEAN 102 MAX 9070 MIN 6.8 AC-FT 74180
WTR YR 1976 TOTAL 17248.55 MEAN 47.1 MAX 3460 MIN 0 AC-FT 34210

07300500 SALT FORK RED RIVER AT MANGUM, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-52, 1954-56, 1960-63, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1946 to September 1948.
WATER TEMPERATURE: December 1946 to September 1948.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
24...	1028	9740	1700	40	2700	8.4	7.5	72	11.0	98	15	1491
DEC												
22...	1028	9740	1610	32	3000	8.5	8.0	7	--	--	22	--
JAN												
27...	1028	9740	1745	33	2900	8.5	7.0	6	10.9	97	12	1568
FEB												
25...	1028	9740	1000	25	3900	8.1	8.0	1	12.3	114	50	1782
MAR												
23...	1028	9740	1445	16	3800	8.2	21.5	1	8.6	106	51	2100
APR												
27...	1028	9740	1400	41	3100	8.2	17.0	40	9.5	107	8	1600
MAY												
25...	1028	9740	1600	82	3000	9.0	24.0	>1000	8.2	114	258	4325
JUN												
22...	1028	9740	1630	.50	3500	8.3	32.0	1	7.7	113	8	2200

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
24...	560	1092	90	240	6.9	262	.6	2166	2.3	.11	2
DEC											
22...	550	--	85	170	5.9	--	.6	--	2.5	<.01	--
JAN											
27...	560	1521	83	180	5.3	256	.5	2687	1.1	.07	--
FEB											
25...	650	--	110	160	7.8	292	.6	3166	.60	--	1
MAR											
23...	550	1500	110	220	7.0	300	.5	3730	.60	<.08	--
APR											
27...	480	1200	98	180	6.2	340	.6	2710	1.0	<.09	--
MAY											
25...	1000	675	114	200	9.6	277	.6	2605	1.4	1.5	62
JUN											
22...	650	1600	120	260	9.3	350	.6	3590	.70	.09	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
24...	3	19	8	1600	29	130	--	16	--	4	20
DEC											
22...	--	--	--	<100	--	41	--	--	--	--	--
JAN											
27...	--	--	--	200	--	40	--	--	--	--	--
FEB											
25...	2	4	4	200	13	72	--	8	--	2	2
MAR											
23...	--	--	--	<100	--	50	--	--	--	--	--
APR											
27...	--	--	--	500	--	100	--	--	--	--	--
MAY											
25...	5	132	95	1000	75	2980	<.5	145	15	6	360
JUN											
22...	--	--	--	100	--	240	--	--	--	--	--

07301500 NORTH FORK RED RIVER NEAR CARTER, OK

LOCATION.--Lat 35°10'05", long 99°30'25", in NW 1/4 SE 1/4 sec.15, T.8 N., R.22 W., Beckham County, 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 mi^2 (6,053 km^2), of which 399 mi^2 (1,033 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

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) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--30 years (water years 1945-62, 1965-76), 117 ft^3/s (3.313 m^3/s), 84,770 acre-ft/yr (105 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,400 ft^3/s (1,512 m^3/s) May 26, 1959, gage height, 13.42 ft (4.090 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,390 ft^3/s (67.7 m^3/s) Apr. 17, gage height, 7.48 ft (2.280 m), no peak above base of 3,200 ft^3/s (90.6 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	5.8	52	94	56	26	24	143	194	.07		0
2	2.0	1160	56	88	56	27	24	150	124	.03		.36
3	1.8	281	50	80	54	29	24	132	89	.03		.84
4	1.6	164	50	52	54	29	24	98	76	.02		.38
5	1.5	126	48	56	52	29	24	75	50	.02		.11
6	1.5	92	46	52	54	29	27	65	36	0		.08
7	1.5	74	42	54	50	30	28	54	29	0		.08
8	1.2	60	44	54	48	40	29	43	26	0		.09
9	1.2	53	42	50	60	52	29	39	22	0		.10
10	1.1	45	42	60	62	94	29	367	21	0		.09
11	1.0	43	40	60	70	112	31	261	22	0		.06
12	1.0	39	42	65	72	85	41	209	24	0		.11
13	.96	34	44	70	70	65	46	145	21	0		452
14	1.1	34	48	58	62	56	46	80	18	0		101
15	18	33	44	103	56	50	207	46	15	0		17
16	33	34	40	80	54	44	1200	37	12	1.2		8.9
17	14	36	39	75	50	40	1580	29	11	5.8		167
18	7.8	35	40	68	46	34	759	25	8.1	.56		135
19	6.4	48	39	65	44	35	290	22	6.4	.13		52
20	5.6	65	40	60	42	34	205	19	6.0	.03		23
21	4.9	114	44	56	39	31	142	18	6.0	0		20
22	4.9	91	52	56	36	29	148	17	7.4	0		19
23	4.8	78	62	54	33	28	127	18	5.9	0		17
24	4.6	65	68	54	32	26	112	25	5.5	0		9.5
25	4.1	59	70	54	29	25	105	29	2.2	0		5.7
26	4.2	51	80	56	29	25	99	886	1.2	0		2.8
27	4.5	57	82	58	27	24	95	656	.61	0		1.8
28	4.8	57	88	56	27	24	101	260	.27	0		1.2
29	4.7	58	94	52	26	25	146	207	.15	0		1.1
30	4.2	60	103	52	---	26	113	151	.11	0		1.0
31	4.6	---	109	56	---	24	---	155	---	0		---
TOTAL	154.86	3151.8	1740	1948	1390	1227	5855	4461	839.84	7.89	0	1037.30
MEAN	5.00	105	56.1	62.8	47.9	39.6	195	144	28.0	.25	0	34.6
MAX	33	1160	109	103	72	112	1580	886	194	5.8	0	452
MIN	.96	5.8	39	50	26	24	24	17	.11	0	0	0
AC-FT	307	6250	3450	3860	2760	2430	11610	8850	1670	16	0	2060

CAL YR 1975 TOTAL 56048.26 MEAN 154 MAX 7040 MIN .96 AC-FT 111200
WTR YR 1976 TOTAL 21812.69 MEAN 59.6 MAX 1580 MIN 0 AC-FT 43270

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-51, 1958-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1976.
WATER TEMPERATURE: July 1968 to September 1976.

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. 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 tables, and loads for those parameters were calculated from specific conductance values.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,540 micromhos Jan. 10, 1976; minimum daily, 420 micromhos Sept. 6, 1973.
WATER TEMPERATURE: Maximum, 34.0°C July 1, 1972, Aug. 22, 24, 1975; minimum, -0.5°C Feb. 2-3, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,540 micromhos Jan. 10; minimum daily, 486 micromhos Sept. 13.
WATER TEMPERATURE: Maximum daily, 31.0°C July 2; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
05...	--	--	0810	--	1.5	3330	7.9	--	--	--	--	--
15...	--	--	1510	--	18	1580	7.4	--	--	--	--	--
25...	--	--	1500	--	4.2	3320	7.9	--	--	--	--	--
NOV												
05...	--	--	1540	--	118	2510	8.1	--	--	--	--	--
13...	--	--	1520	--	34	3150	8.0	--	--	--	--	--
25...	1028	9740	0930	59	--	2600	8.3	.5	41	11.2	84	35
25...	--	--	1520	--	60	2940	7.9	--	--	--	--	--
DEC												
05...	--	--	1520	--	48	2980	7.9	--	--	--	--	--
15...	--	--	1720	--	44	2950	7.9	--	--	--	--	--
23...	1028	9740	0830	62	--	2900	8.7	3.0	8	--	--	44
24...	--	--	1045	--	68	2720	7.8	--	--	--	--	--
JAN												
05...	--	--	1520	--	56	2840	8.1	--	--	--	--	--
15...	--	--	0800	--	103	2970	7.0	--	--	--	--	--
25...	--	--	1405	--	54	2920	8.0	--	--	--	--	--
27...	1028	9740	1630	58	--	2800	8.5	7.0	2	12.4	112	16
FEB												
05...	--	--	1520	--	52	2840	7.9	--	--	--	--	--
15...	--	--	1530	--	56	2790	8.1	--	--	--	--	--
24...	1028	9740	1730	32	--	3100	8.2	13.0	4	10.8	112	55
25...	--	--	1510	--	29	2920	7.5	--	--	--	--	--
MAR												
05...	--	--	1520	--	29	2850	7.9	--	--	--	--	--
15...	--	--	0800	--	50	2850	7.7	--	--	--	--	--
23...	1028	9740	1600	28	--	3000	8.4	20.5	3	9.7	118	28
25...	--	--	1520	--	26	2860	8.1	--	--	--	--	--
APR												
06...	--	--	1530	--	27	2970	7.9	--	--	--	--	--
16...	--	--	1520	--	1590	1940	7.3	--	--	--	--	--
25...	--	--	1430	--	106	2650	7.9	--	--	--	--	--
28...	1028	9740	1200	101	--	2450	8.2	14.5	16	9.8	105	62
MAY												
05...	--	--	1510	--	75	2630	7.7	--	--	--	--	--
16...	--	--	1410	--	39	2710	7.5	--	--	--	--	--
22...	--	--	1345	--	18	2920	8.0	--	--	--	--	--
25...	1028	9740	1300	29	--	2600	8.7	20.5	5	8.3	101	38
JUN												
01...	--	--	1545	--	215	1830	7.7	--	--	--	--	--
12...	--	--	1630	--	24	3060	7.7	--	--	--	--	--
22...	1028	9740	1220	7.4	--	2500	8.3	29.0	3	7.4	104	10
27...	--	--	0750	--	.69	2890	7.6	--	--	--	--	--
SEP												
15...	--	--	0800	--	19	553	7.7	--	--	--	--	--
19...	--	--	1820	--	44	1520	7.8	--	--	--	--	--
22...	1028	9740	1330	19	--	1100	8.8	25.0	35	10.1	133	34
26...	--	--	1845	--	12	2550	7.7	--	--	--	--	--

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT											
05...	1300	1200	350	100	280	32	3.4	5.3	162	0	133
15...	580	460	160	43	110	29	2.0	7.3	147	0	121
25...	1200	1100	320	97	280	34	3.5	5.7	171	0	140
NOV											
05...	900	730	240	74	220	34	3.2	9.9	211	0	173
13...	1100	910	280	100	310	38	4.0	6.9	248	0	203
25...	--	--	--	--	--	--	--	--	--	--	--
25...	960	770	250	82	270	38	3.8	5.9	237	0	194
DEC											
05...	970	830	250	83	270	38	3.8	4.8	161	0	132
15...	970	820	250	84	270	38	3.8	4.6	186	0	153
23...	--	--	--	--	--	--	--	--	--	--	--
24...	930	760	240	80	240	36	3.4	4.1	203	0	167
JAN											
05...	850	720	210	78	250	39	3.7	4.2	156	0	128
15...	1000	830	270	83	270	37	3.7	4.0	226	0	185
25...	940	790	240	83	270	38	3.8	3.8	185	0	152
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	890	750	220	82	270	40	3.9	4.0	168	0	138
15...	920	790	230	85	290	40	4.2	4.6	170	0	139
24...	--	--	--	--	--	--	--	--	--	--	--
25...	970	810	240	91	290	39	4.0	4.2	197	0	162
MAR											
05...	960	790	230	93	270	38	3.8	4.2	206	0	169
15...	960	820	230	94	280	39	3.9	4.9	172	0	141
23...	--	--	--	--	--	--	--	--	--	--	--
25...	930	780	220	93	290	40	4.1	4.6	180	0	148
APR											
06...	990	850	240	96	300	39	4.1	5.7	182	0	149
16...	730	560	180	68	150	31	2.4	8.1	204	0	167
25...	880	670	220	80	280	41	4.1	7.2	259	0	212
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	780	590	200	67	280	44	4.4	5.4	230	0	189
16...	850	680	200	85	300	43	4.5	5.7	205	0	168
22...	950	790	220	98	300	41	4.2	5.0	202	0	166
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
01...	610	440	150	57	170	38	3.0	6.1	211	0	173
12...	990	810	240	95	300	40	4.1	6.1	219	0	180
22...	--	--	--	--	--	--	--	--	--	--	--
27...	1100	910	240	110	260	35	3.5	6.8	178	0	146
SEP											
15...	210	130	64	13	21	17	.6	7.4	98	0	80
19...	540	470	160	35	110	30	2.1	7.9	94	0	77
22...	--	--	--	--	--	--	--	--	--	--	--
26...	950	830	260	72	210	32	3.0	7.7	146	0	120

DATE	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
05...	3.3	1200	370	--	2550	3.47	10.3	.07	--	--	--
15...	9.4	480	140	--	1110	1.51	53.9	.66	--	--	--
25...	3.4	1100	380	--	2550	3.47	28.9	.24	--	--	--
NOV											
05...	2.7	770	300	--	1830	2.49	583	.82	--	--	--
13...	4.0	960	400	--	2340	3.18	215	.73	--	--	--
25...	--	--	--	.6	--	--	--	--	1.6	.12	4
25...	4.8	820	370	--	2150	2.92	348	1.1	--	--	--
DEC											
05...	3.2	900	390	--	2120	2.88	275	.88	--	--	--
15...	3.7	840	380	--	2110	2.87	251	.76	--	--	--
23...	--	--	--	.5	--	--	--	--	1.4	<.01	--
24...	5.1	800	340	--	1910	2.60	351	1.2	--	--	--
JAN											
05...	2.0	750	360	--	1950	2.65	295	1.5	--	--	--
15...	36	850	370	--	2130	2.90	592	1.6	--	--	--
25...	3.0	760	370	--	2030	2.76	296	.82	--	--	--
27...	--	--	--	.5	--	--	--	--	1.1	.18	--
FEB											
05...	3.4	800	370	--	2000	2.72	281	.77	--	--	--
15...	2.2	820	380	--	1980	2.69	299	.30	--	--	--
24...	--	--	--	.6	--	--	--	--	1.0	<.10	3
25...	10	890	370	--	2100	2.86	164	.34	--	--	--

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
MAR											
05...	4.2	860	340	--	2080	2.83	163	.29	--	--	--
15...	5.5	760	400	--	2000	2.72	270	.31	--	--	--
23...	--	--	--	.5	--	--	--	--	.80	.08	--
25...	2.3	870	370	--	2070	2.82	145	.08	--	--	--
APR											
06...	3.7	900	400	--	2150	2.92	157	.00	--	--	--
16...	16	620	180	--	1420	1.93	6100	.59	--	--	--
25...	5.2	680	360	--	1790	2.43	512	1.1	--	--	--
28...	--	--	--	.5	--	--	--	--	.60	<.08	--
MAY											
05...	7.3	680	370	--	1830	2.49	371	.71	--	--	--
16...	10	760	380	--	1910	2.60	201	.28	--	--	--
22...	3.2	840	400	--	2110	2.87	103	.15	--	--	--
25...	--	--	--	.4	--	--	--	--	1.6	<.08	4
JUN											
01...	6.7	500	230	--	1260	1.71	731	.66	--	--	--
12...	7.0	860	400	--	2230	3.03	145	.23	--	--	--
22...	--	--	--	.6	--	--	--	--	.80	<.09	--
27...	7.2	920	360	--	2180	2.96	4.06	.29	--	--	--
SEP											
15...	3.1	150	31	--	374	.51	19.2	1.5	--	--	--
19...	2.4	460	170	--	1060	1.44	126	.62	--	--	--
22...	--	--	--	.3	--	--	--	--	1.3	.18	--
26...	4.7	870	300	--	1950	2.65	63.2	.21	--	--	--

DATE	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
25...	2	11	7	1300	22	75	--	10	--	3	9
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	200	--	45	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	200	--	42	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	3	5	4	100	16	43	--	13	--	3	4
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	<100	--	35	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	600	--	130	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
25...	2	11	9	200	21	26	<.5	9	3	4	12
JUN											
01...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	--	23	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	300	--	35	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3330	3230	3030	2810	2900	2860	2910	2510	1750	2980		---
2	3360	1360	2990	2740	2900	2920	2950	2680	2010	3080		---
3	3350	1090	3050	2750	2880	2870	3010	2720	---	---		1180
4	3330	2760	2790	2920	2830	2850	3130	2580	---	---		1180
5	3300	2330	3310	3270	2820	2870	3270	2630	2680	---		---
6	3210	2920	4000	2670	2880	2810	2960	1760	2650	---		---
7	3390	2560	3050	3320	2930	2750	3130	2690	2520	---		---
8	3310	2860	2730	3270	2790	2610	3240	2710	2240	---		---
9	3400	3050	3320	3110	---	2470	3240	2710	2630	---		---
10	3330	2890	2510	3110	2770	2740	3020	2730	2660	---		---
11	3310	3030	3100	3500	2670	3700	2990	1700	2890	---		---
12	3260	3170	3790	2580	2190	2420	3120	2230	3060	---		---
13	3090	3170	2970	3030	2640	3100	3440	2350	2820	---		634
14	3080	3110	3000	2940	2740	2640	3340	2580	2900	---		506
15	2500	3110	2980	2980	2790	2990	1470	---	2920	---		668
16	2590	3090	2770	2740	2810	2680	1880	2710	2970	---		999
17	1970	3080	2980	2580	2710	2850	2100	2750	2970	1500		1550
18	2460	3180	2870	2550	2860	2950	1260	---	3010	1650		1200
19	2720	2940	2960	2720	2910	2870	2050	2910	2970	---		1360
20	2840	2910	2760	2810	2920	2960	1660	2960	2880	---		1520
21	3080	3270	3090	2800	2940	2840	2070	2980	2890	---		1550
22	3110	3290	3020	2810	2990	3010	2230	2630	3000	---		1740
23	3370	2850	3160	2830	3090	2320	2350	---	2940	---		2400
24	3300	2830	2720	2860	3010	2910	1860	---	2760	---		1300
25	3330	2930	2780	2880	2940	2830	2630	---	2900	---		2170
26	3290	3040	2720	2920	2760	2980	2650	1690	2870	---		2550
27	3340	3080	2860	3000	2740	2920	2540	1930	2890	---		2480
28	3310	3050	2870	2890	2920	2850	2370	1670	2970	---		2490
29	3330	3020	2760	2990	2870	2940	2210	1890	---	---		2480
30	3320	3070	2530	2950	---	3000	2110	1920	3040	---		---
31	3250	---	2660	2830	---	2950	---	2040	---	---		---
MONTH	3130	2880	2970	2910	2830	2850	2570	2410	2770	---		---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	16.0	4.0	4.0	6.5	13.5	14.0	18.0	25.0	25.5		---
2	16.5	14.5	6.0	1.0	4.5	11.5	16.0	16.0	27.0	31.0		---
3	16.5	14.0	7.5	0.0	2.0	7.0	16.0	17.0	26.5	---		---
4	16.5	16.0	9.0	0.0	0.0	6.0	16.0	20.0	26.5	---		---
5	17.5	17.0	6.0	1.5	1.0	8.0	17.5	17.0	25.0	---		---
6	18.5	17.0	6.0	0.0	4.0	8.0	18.5	20.0	25.5	---		---
7	18.0	16.5	5.5	0.0	7.5	6.5	16.5	15.0	24.5	---		---
8	18.0	16.0	6.5	0.0	9.0	8.0	17.0	16.0	25.5	---		---
9	19.0	15.0	7.5	0.0	---	5.5	17.0	22.0	25.5	---		---
10	20.0	12.0	8.5	0.5	13.0	7.5	17.5	17.0	28.0	---		---
11	21.0	12.0	2.0	2.5	10.5	9.0	18.0	14.0	25.5	---		---
12	21.5	8.5	2.5	3.0	11.5	6.5	18.0	18.0	27.5	---		---
13	21.0	7.0	1.0	3.5	14.0	9.0	18.5	22.0	27.0	---		17.0
14	20.0	9.0	4.5	5.0	12.5	8.0	21.5	17.0	26.5	---		17.0
15	16.5	9.5	2.5	7.5	13.5	8.0	---	---	23.5	---		19.0
16	16.0	10.5	3.0	8.0	14.0	9.5	16.0	22.0	19.5	---		20.0
17	15.0	13.0	0.5	7.0	11.5	15.0	15.0	22.0	22.5	29.0		20.0
18	15.0	15.0	0.0	4.0	10.5	14.0	16.0	---	18.0	30.0		20.0
19	16.0	13.0	1.5	4.5	10.0	15.0	16.5	23.0	19.0	---		24.0
20	17.0	5.0	3.0	5.5	9.5	10.5	14.0	23.0	24.0	---		21.0
21	15.5	2.0	3.0	7.5	5.0	14.0	15.5	22.5	24.0	---		18.0
22	18.0	3.5	5.0	7.0	7.5	15.0	19.0	20.0	25.0	---		19.0
23	17.0	4.0	3.0	4.0	9.0	11.0	21.0	---	26.5	---		15.0
24	13.5	4.5	1.5	2.0	7.5	18.0	20.0	18.0	26.5	---		14.0
25	9.5	3.5	3.0	2.0	10.5	18.5	18.5	17.5	29.5	---		26.0
26	11.5	1.0	4.5	4.5	11.5	13.0	15.0	17.0	29.5	---		20.0
27	16.0	3.0	5.0	6.5	13.0	13.0	15.5	18.0	31.0	---		12.0
28	15.0	6.0	3.5	8.0	15.0	15.0	13.0	21.0	24.5	---		19.0
29	14.5	11.5	2.5	7.5	13.5	13.0	12.0	23.5	33.0	---		19.0
30	14.0	5.0	3.5	7.0	---	12.5	11.0	24.5	29.0	---		---
31	15.5	---	4.5	7.0	---	13.0	---	25.0	---	---		---
MONTH	16.5	10.0	4.0	4.0	9.0	11.0	16.5	19.5	25.5	---		---

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	1100	990	870	900	890	910	780	540	960		---
2	1200	410	960	850	900	910	940	830	620	1000		---
3	1200	330	1000	850	890	890	980	840	---	---		350
4	1200	860	870	910	880	880	1100	800	---	---		350
5	1200	720	1200	1200	870	890	1200	810	830	---		---
6	1100	910	1700	830	890	870	940	540	820	---		---
7	1300	790	1000	1200	920	850	1100	830	780	---		---
8	1200	890	850	1200	870	810	1100	840	690	---		---
9	1300	1000	1200	1100	---	760	1100	840	810	---		---
10	1200	900	780	1100	860	850	990	850	820	---		---
11	1200	990	1000	1300	830	1500	960	520	900	---		---
12	1200	1100	1500	800	680	750	1100	690	1000	---		---
13	1000	1100	950	990	820	1000	1300	730	870	---		180
14	1000	1100	970	930	850	820	1200	800	900	---		140
15	770	1100	960	960	870	960	450	---	910	---		190
16	800	1000	860	850	870	830	580	840	950	---		300
17	610	1000	960	800	840	880	650	850	950	460		470
18	760	1100	890	790	890	940	380	---	980	510		360
19	840	930	940	840	910	890	630	910	950	---		410
20	880	910	860	870	910	940	510	940	890	---		460
21	1000	1200	1000	870	930	880	640	960	900	---		470
22	1100	1200	990	870	960	980	690	810	970	---		530
23	1200	880	1100	880	1000	720	730	---	930	---		740
24	1200	880	840	890	980	910	570	---	860	---		390
25	1200	920	860	890	930	880	810	---	900	---		670
26	1200	1000	840	910	860	960	820	520	890	---		790
27	1200	1000	890	970	850	910	790	590	900	---		770
28	1200	1000	890	900	910	880	730	510	950	---		770
29	1200	990	860	960	890	930	680	580	---	---		770
30	1200	1000	780	940	---	970	650	590	1000	---		---
31	1200	---	820	880	---	940	---	630	---	---		---
MONTH	1100	940	980	940	880	910	840	750	870	---		---

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.45	17.2	139	221	136	62.5	59.0	301	283	.18		---
2	6.48	1280	145	202	136	66.3	60.9	336	208	.08		---
3	5.83	250	135	184	130	69.7	63.5	299	---	---		.79
4	5.18	381	117	128	128	68.9	71.3	212	---	---		.36
5	4.86	245	156	181	122	69.7	77.8	164	112	---		---
6	4.45	226	211	117	130	68.1	68.5	94.8	79.7	---		---
7	5.26	158	113	175	124	68.8	83.2	121	61.1	---		---
8	3.89	144	101	175	113	87.5	86.1	97.5	48.4	---		---
9	4.21	143	136	148	---	107	86.1	88.5	48.1	---		---
10	3.56	109	88.5	178	144	216	77.5	842	46.5	---		---
11	3.24	115	108	211	157	454	80.4	366	53.5	---		---
12	3.24	116	170	140	132	172	122	389	64.8	---		---
13	2.59	101	113	187	155	175	161	286	49.3	---		220
14	2.97	101	126	146	142	124	149	173	43.7	---		38.2
15	37.4	98.0	114	267	132	130	252	---	36.9	---		8.72
16	71.3	91.8	92.9	184	127	98.6	1880	83.9	30.8	---		7.21
17	23.1	97.2	101	162	113	95.0	2770	66.6	28.2	7.20		212
18	16.0	104	96.1	145	111	86.3	779	---	21.4	.77		131
19	14.5	121	99.0	147	108	84.1	493	54.1	16.4	---		57.6
20	13.3	160	92.9	141	103	86.3	282	48.2	14.4	---		28.6
21	13.2	369	119	132	97.9	73.7	245	46.7	14.6	---		25.4
22	14.6	295	139	132	93.3	76.7	276	37.2	19.4	---		27.2
23	15.6	185	184	128	89.1	54.4	250	---	14.8	---		34.0
24	14.9	154	154	130	84.7	63.9	172	---	12.8	---		10.0
25	13.3	147	163	130	72.8	59.4	230	---	5.35	---		10.3
26	13.6	138	181	138	67.3	64.8	219	1240	2.88	---		5.97
27	14.6	154	197	152	62.0	59.0	203	1050	1.48	---		3.74
28	15.6	154	211	136	66.3	57.0	199	358	.69	---		2.49
29	15.2	155	218	135	62.5	62.8	268	324	---	---		2.29
30	13.6	162	217	132	---	68.1	198	241	.30	---		---
31	14.9	---	241	133	---	60.9	---	264	---	---		---
MONTH	12.8	199	144	159	112	99.7	332	292	48.8	---		---

4BER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	430	390	350	370	360	370	300	190	380		---
2	460	140	380	340	370	370	380	320	230	400		---
3	450	100	400	340	360	360	390	330	---	---		120
4	450	340	350	370	350	360	410	310	---	---		120
5	440	270	450	440	350	360	440	310	320	---		---
6	430	370	1000000	320	360	350	380	190	320	---		---
7	460	300	400	450	370	340	410	330	300	---		---
8	450	360	330	440	350	310	430	330	260	---		---
9	460	400	450	410	---	290	430	330	310	---		---
10	450	360	300	410	340	340	390	330	320	---		---
11	450	390	410	480	320	520	380	190	360	---		---
12	440	420	540	310	250	280	410	260	400	---		---
13	400	420	380	390	320	410	470	270	350	---		42
14	400	410	390	370	340	320	450	310	370	---		25
15	290	410	380	380	350	380	160	---	370	---		47
16	310	400	340	340	350	320	210	330	380	---		91
17	220	400	380	310	330	360	240	340	380	160		170
18	290	420	360	300	360	380	130	---	390	180		120
19	330	370	380	330	370	360	230	370	380	---		140
20	350	370	340	350	370	380	180	380	360	---		160
21	400	440	400	350	370	350	240	380	360	---		170
22	410	440	390	350	380	390	260	310	390	---		190
23	460	360	420	350	400	270	270	---	370	---		280
24	440	350	330	360	390	370	210	---	340	---		130
25	450	370	340	360	370	350	310	---	370	---		250
26	440	390	330	370	340	380	320	180	360	---		300
27	450	400	360	390	340	370	300	220	360	---		290
28	450	400	360	360	370	360	280	180	380	---		290
29	450	390	340	380	360	370	260	210	---	---		290
30	450	400	300	380	---	390	240	220	390	---		---
31	430	---	320	350	---	380	---	230	---	---		---
MONTH	410	370	32600	370	350	360	320	290	340	---		---

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.79	6.73	54.8	88.8	55.9	25.3	24.0	116	99.5	.07		---
2	2.48	438	57.5	80.8	55.9	27.0	24.6	130	77.0	.03		---
3	2.19	75.9	54.0	73.4	52.5	28.2	25.3	118	---	---		.27
4	1.94	151	47.2	51.9	51.0	28.2	26.6	82.0	---	---		.12
5	1.78	91.9	58.3	66.5	49.1	28.2	28.5	62.8	43.2	---		---
6	1.74	91.9	124000.0	44.9	52.5	27.4	27.7	33.3	31.1	---		---
7	1.86	59.9	45.4	65.6	49.9	27.5	31.0	48.1	23.5	---		---
8	1.46	58.3	39.2	64.2	45.4	33.5	33.7	38.3	18.3	---		---
9	1.49	57.2	51.0	55.3	---	40.7	33.7	34.7	18.4	---		---
10	1.34	43.7	34.0	66.4	56.9	86.3	30.5	327	18.1	---		---
11	1.21	45.3	44.3	77.8	60.5	157	31.8	134	21.4	---		---
12	1.19	44.2	61.2	54.4	48.6	64.3	45.4	147	25.9	---		---
13	1.04	38.6	45.1	73.7	60.5	72.0	58.4	106	19.8	---		51.3
14	1.19	37.6	50.5	57.9	56.9	48.4	55.9	67.0	18.0	---		6.82
15	14.1	36.5	45.1	106	52.9	51.3	89.4	---	15.0	---		2.16
16	27.6	36.7	36.7	73.4	51.0	38.0	680	33.0	12.3	---		2.19
17	8.32	38.9	40.0	62.8	44.5	38.9	1020	26.6	11.3	2.51		76.7
18	6.11	39.7	38.9	55.1	44.7	34.9	266	---	8.53	.27		43.7
19	5.70	48.0	40.0	57.9	44.0	34.0	180	22.0	6.57	---		19.7
20	5.29	64.9	36.7	56.7	42.0	34.9	99.6	19.5	5.83	---		9.94
21	5.29	135	47.5	52.9	39.0	29.3	92.0	18.5	5.83	---		9.18
22	5.42	108	54.8	52.9	36.9	30.5	104	14.2	7.79	---		9.75
23	5.96	75.8	70.3	51.0	35.6	20.4	92.6	---	5.89	---		12.9
24	5.46	61.4	60.6	52.5	33.7	26.0	63.5	---	5.05	---		3.33
25	4.98	58.9	64.3	52.5	29.0	23.6	87.9	---	2.20	---		3.85
26	4.99	53.7	71.3	55.9	26.6	25.6	85.5	431	1.17	---		2.27
27	5.47	61.6	79.7	61.1	24.8	24.0	76.9	390	.59	---		1.41
28	5.83	61.6	85.5	54.4	27.0	23.3	76.4	126	.28	---		.94
29	5.71	61.1	86.3	53.4	25.3	25.0	102	117	---	---		.86
30	5.10	64.8	83.4	53.4	---	27.4	73.2	89.7	.12	---		---
31	5.34	---	94.2	52.9	---	24.6	---	96.3	---	---		---
MONTH	4.85	74.9	4050	62.1	44.7	38.9	122	109	18.6	---		---

07301500 NORTH FORK RED RIVER NEAR CARTER, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG. C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2540	2430	2220	1990	2090	2050	2100	1680	1210	2170		---
2	2570	933	2180	1920	2090	2110	2140	1860	1390	2280		---
3	2560	745	2250	1930	2070	2060	2200	1900	---	---		808
4	2540	1940	1970	2110	2020	2040	2330	1750	---	---		808
5	2510	1570	2520	2470	2000	2060	2470	1810	1860	---		---
6	2410	2110	3240	1850	2070	1990	2150	1210	1830	---		---
7	2600	1730	2250	2530	2120	1930	2330	1870	1690	---		---
8	2520	2050	1910	2470	1970	1790	2440	1890	1520	---		---
9	2610	2250	2530	2310	---	1640	2440	1890	1810	---		---
10	2540	2080	1680	2310	1950	1920	2210	1910	1840	---		---
11	2520	2220	2300	2710	1850	2920	2180	1170	2080	---		---
12	2460	2370	3020	1750	1500	1620	2320	1520	2260	---		---
13	2290	2370	2160	2220	1820	2300	2650	1580	2000	---		427
14	2280	2310	2190	2130	1920	1820	2550	1750	2090	---		337
15	1670	2310	2170	2170	1970	2180	1010	---	2110	---		450
16	1760	2290	1950	1920	1990	1860	1300	1890	2160	---		681
17	1360	2280	2170	1750	1890	2040	1450	1930	2160	1030		1070
18	1640	2380	2060	1720	2050	2140	864	---	2200	1140		822
19	1900	2130	2150	1900	2100	2060	1420	2100	2160	---		933
20	2030	2100	1940	1990	2110	2150	1140	2150	2070	---		1050
21	2280	2470	2290	1980	2130	2030	1430	2170	2080	---		1070
22	2310	2500	2210	1990	2180	2200	1520	1810	2190	---		1200
23	2580	2040	2360	2020	2290	1570	1580	---	2130	---		1610
24	2510	2020	1900	2050	2200	2100	1280	---	1940	---		892
25	2540	2120	1960	2070	2130	2020	1810	---	2090	---		1490
26	2500	2230	1900	2110	1940	2170	1630	1160	2060	---		1720
27	2550	2280	2050	2190	1920	2110	1710	1330	2080	---		1650
28	2520	2250	2060	2080	2110	2040	1590	1150	2160	---		1660
29	2540	2210	1940	2180	2060	2130	1510	1300	---	---		1650
30	2530	2270	1700	2140	---	2190	1460	1320	2230	---		---
31	2450	---	1840	2020	---	2140	---	1410	---	---		---
MONTH	2340	2100	2160	2100	2020	2040	1850	1670	1980	---		---

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.8	38.1	312	505	316	144	136	649	634	.41		---
2	13.9	2920	330	456	316	154	139	753	465	.18		---
3	12.4	565	304	417	302	161	143	677	---	---		1.83
4	11.0	859	266	296	295	160	151	463	---	---		.83
5	10.2	534	327	373	281	161	160	367	251	---		---
6	9.76	524	402	260	302	156	157	212	178	---		---
7	10.5	346	255	369	286	156	176	273	132	---		---
8	8.16	332	227	360	255	193	191	219	107	---		---
9	8.46	322	287	312	---	230	191	199	108	---		---
10	7.54	253	191	374	326	487	173	1890	104	---		---
11	6.80	258	248	439	350	883	182	824	124	---		---
12	6.64	250	342	307	292	372	257	858	146	---		---
13	5.94	218	257	420	344	404	329	619	113	---		521
14	6.77	212	284	334	321	275	317	378	102	---		91.9
15	81.2	206	258	603	298	294	564	---	85.5	---		20.7
16	157	210	211	415	290	221	4210	189	70.0	---		16.4
17	51.4	222	229	354	255	220	6190	151	64.2	16.1		482
18	34.5	225	222	316	255	196	1770	---	48.1	1.72		300
19	32.8	276	226	333	249	195	1110	125	37.3	---		131
20	30.7	369	210	322	239	197	631	110	33.5	---		65.2
21	30.2	760	272	299	224	170	548	105	33.7	---		57.8
22	30.6	614	310	301	212	172	607	83.1	43.8	---		61.6
23	33.4	430	395	295	204	119	542	---	33.9	---		73.9
24	31.2	355	349	299	190	147	387	---	28.8	---		22.9
25	28.1	338	370	302	167	136	513	---	12.4	---		22.9
26	28.3	307	410	319	152	146	489	2770	6.67	---		13.0
27	31.0	351	454	343	140	137	439	2360	3.43	---		8.02
28	32.7	346	489	314	154	132	434	807	1.57	---		5.38
29	32.2	346	492	306	145	144	595	727	---	---		4.90
30	28.7	368	473	300	---	154	445	538	.66	---		---
31	30.4	---	542	305	---	139	---	590	---	---		---
MONTH	27.7	445	321	353	256	221	739	651	110	---		---

07302500 LAKE ALTUS AT LUGERT, OK

LOCATION.--Lat 34°53'15", long 99°17'47", in SW 1/4 SE 1/4 sec.22, T.5 N., R.20 W., Kiowa County, 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 mi^2 (6,514 km^2), of which 399 mi^2 (1,033 km^2) is probably noncontributing.

PERIOD OF RECORD.--December 1943 to September 1950 (monthly records only), October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (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 hm^3) at elevation 1,559.0 ft (475.18 m) crest of uncontrolled spillway and 72,500 acre-ft (89.4 hm^3) at elevation 1,547.0 ft (471.53 m) crest of controlled spillway. Dead storage, 1,660 acre-ft (2.05 hm^3) 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 km^2). Revised capacity table used since Jan. 1, 1969.

COOPERATION.--Data on diversions furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 170,600 acre-ft (210 hm^3) May 19, 1951, elevation 1,562.10 ft (476.128 m); minimum after initial storage, 4,690 acre-ft (5.78 hm^3) Aug. 25, 1944, elevation, 1,520.2 ft (463.357 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 136,600 acre-ft (168 hm^3) May 27, elevation, 1,559.32 ft (475.281 m); minimum, 75,400 acre-ft (93.0 hm^3) Sept. 12, elevation, 1,547.70 ft (471.739 m).

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

1547	72,500	1554	105,500
1549	81,030	1557	122,400
1551	90,280	1560	140,900

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120300	119200	123700	126400	128700	129800	124800	135500	134900	133500	105900	76590
2	120200	121000	123600	126600	128700	129800	124500	135800	135100	133100	104800	76510
3	120000	122300	123600	126600	128700	129900	124200	135800	135100	132700	103800	76460
4	119900	122900	123700	126400	128600	130000	123700	135600	135200	132200	102700	76420
5	119800	123300	124000	126600	128600	129800	123200	136000	135200	131400	101600	76340
6	119600	123700	123900	126700	128400	129800	123000	136100	135200	130900	100500	76210
7	119400	123800	123900	126900	128600	130000	122900	135900	135400	129600	99590	76170
8	119500	123800	124000	126700	128700	130300	122600	135900	134900	128700	98560	76250
9	119400	123900	124100	126400	128800	130200	122100	135900	134700	127900	97290	76000
10	119200	123800	124000	126800	128900	130200	121900	135900	134700	127200	95980	75830
11	119100	123900	124200	126700	129000	130700	122000	135800	134500	126700	94580	75490
12	118900	123800	124200	126900	129200	130800	121700	135600	134400	126100	93250	75830
13	118800	123600	124100	127000	129400	130700	121400	135200	135200	125500	91830	77530
14	120000	123600	124600	127000	129400	130800	121200	134900	135100	124800	90620	78480
15	120400	123500	124300	127200	129400	130900	122400	134900	135200	123900	89510	78530
16	120400	123600	124500	127400	129600	130800	124500	134900	134800	123100	88320	78570
17	120300	123200	124500	127600	129800	130600	127500	134900	134700	122200	87290	78920
18	120200	123400	124200	127500	129700	130900	129600	134700	134700	121000	86260	79090
19	120200	124300	124200	127800	129700	130900	131000	134600	134500	120000	85240	79270
20	120000	123500	124300	127800	130000	130900	131800	134500	134300	118700	84180	79270
21	119900	123300	124300	127900	129600	130900	132400	134500	134200	117300	83050	79350
22	119900	123300	124500	128000	129700	130800	132700	134900	133900	116100	82100	79090
23	119800	123400	124700	128100	129700	130100	133100	134900	134400	114900	81160	79220
24	119600	123400	125400	128200	129400	130000	133400	135000	134700	113900	80280	79140
25	119500	123500	125500	128300	129700	129000	133500	135000	134500	112900	79350	79180
26	119100	123500	125400	128300	129500	128900	133500	136100	134400	111900	78270	79140
27	119100	123400	125500	128300	129500	127800	133800	136000	134200	110700	77530	79180
28	119200	123500	125800	128400	129500	127500	134500	135200	134000	109000	76890	79050
29	119100	124100	126100	128600	129800	127100	134800	134700	133900	108700	76460	78920
30	119100	123400	126200	128700	---	126400	135200	135000	133900	107700	76340	78790
31	119000	---	126300	128700	---	125800	---	134900	---	106600	76380	---
MAX	120400	124300	126300	128700	130000	130900	135200	136100	135400	133500	105900	79350
MIN	118800	119200	123600	126400	128400	125800	121200	134500	133900	106600	76340	75490
†	1,556.42	1,557.17	1,557.66	1,558.06	1,558.24	1,557.58	1,559.11	1,559.05	1,558.89	1,554.21	1,547.93	1,548.49
‡	-38,300	+4,400	+2,900	+2,400	1,100	-4,000	+9,400	-300	-1,000	-27,300	-30,220	+2,410
++	0	643	0	0	561	5,071	4,815	595	0	23,690	26,940	0

CAL YR 1975 MAX 139,200 MIN 61,860 ++ 22,750 ‡ +64,560
WTR YR 1976 MAX 136,100 MIN 75,490 ++ 62,315 ‡ -41,710

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-ft.
++ Total diversions, in acre-ft.

07303000 NORTH FORK RED RIVER BELOW ATLUS DAM, NEAR LUGERT, OK

LOCATION.--Lat 34°53'26", long 99°18'22", in SW 1/4 sec.22, T.15 N., R.20 W., Greer County, on right bank 3,500 ft (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).

DRAINAGE AREA.--2,515 mi^2 (6,514 km^2), of which 399 mi^2 (1,033 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to December 1932 (published as "at Lugert Dam"), December 1943 to September 1950 (published as spill from Lake Altus), October 1950 to September 1962, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,471.81 ft (448.608 m) above mean sea level. Mar. 19, 1930, to Dec. 21, 1932, nonrecording gage at former Lugert Dam, 0.7 mi (1.1 km) upstream at datum 1,504.31 ft (458.514 m) above mean sea level, unadjusted.

REMARKS.--Records good. Some regulation at low flow by Lugert Lake prior to December 1943 capacity, 13,500 acre-ft (16.6 hm^3) and completely regulated thereafter by Lake Altus (station 07302500). Diversions at Lake Altus bypass most of streamflow. Seepage from Altus Dam not included except for period March 1951 to January 1953.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s (456 m^3/s) May 18, 1951, gage height, 12.70 ft (3.87 m); no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 16, 1928, reached a stage of 14.5 ft (4.42 m), site and datum then in use, discharge, 14,300 ft^3/s (405 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft^3/s (34.8 m^3/s) May 28, gage height, 7.42 ft (2.262 m); no flow most of the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	15	161			
2							0	20	50			
3							0	33	18			
4							0	36	15			
5							0	38	16			
6							0	47	20			
7							0	52	102			
8							0	54	161			
9							0	52	136			
10							0	65	42			
11							0	190	15			
12							0	302	9.5			
13							0	332	8.2			
14							0	308	13			
15							0	194	17			
16							0	81	16			
17							0	38	13			
18							0	17	11			
19							0	12	10			
20							0	8.2	0			
21							0	6.5	0			
22							0	6.0	0			
23							0	7.6	0			
24							0	8.2	3.1			
25							0	12	5.5			
26							.30	54	0			
27							2.7	541	0			
28							5.0	1110	0			
29							11	610	0			
30					---		12	191	0			
31		---			---		---	111	---			---
TOTAL	0	0	0	0	0	0	31.00	4551.5	842.3	0	0	0
MEAN	0	0	0	0	0	0	1.03	147	28.1	0	0	0
MAX	0	0	0	0	0	0	12	1110	161	0	0	0
MIN	0	0	0	0	0	0	0	6.0	0	0	0	0
AC-FT	0	0	0	0	0	0	61	9030	1670	0	0	0

WTR YR 1976 TOTAL 5424.80 MEAN 14.8 MAX 1110 MIN 0 AC-FT 10760

07303000 NORTH FORK RED RIVER BELOW ALTUS DAM NEAR LUGERT, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, November 1975 to September 1976 (discontinued).

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
25...	1028	9740	1100	.00	--	8.1	4.0	5	11.2	92	176	1848
DEC												
23...	1028	9740	1000	.00	16000	8.1	4.0	2	--	--	300	1800
JAN												
28...	1028	9740	1015	.00	17000	8.2	3.0	1	12.6	102	480	1964
FEB												
25...	1028	9740	1045	.00	17000	7.9	11.0	1	12.3	135	664	200
MAR												
23...	1028	9740	1400	.00	18000	8.1	18.0	0	12.6	145	579	1944
APR												
27...	1028	9740	1245	2.7	2500	8.0	17.0	15	8.2	92	46	780
MAY												
26...	1028	9740	0815	5.4	2200	8.2	21.5	5	8.0	99	34	700
JUN												
23...	1028	9740	0800	.00	14500	7.9	22.0	45	7.0	88	98	1900
JUL												
20...	1028	9740	1420	.00	2350	8.4	30.0	39	9.2	128	21	814
AUG												
18...	1028	9740	1100	.00	3000	8.2	27.5	31	5.9	78	23	630
SEP												
22...	1028	9740	0900	.00	2450	8.4	21.0	12	8.6	105	54	706

07303000 NORTH FORK RED RIVER BELOW ALTUS DAM NEAR LUGERT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
25...	625	1302	125	2380	16	4044	.4	9180	2.9	.01	1
DEC											
23...	580	1300	130	2100	18	4300	.4	9640	2.7	<.00	--
JAN											
28...	570	1895	140	3000	17	4619	.4	9657	3.8	.10	--
FEB											
25...	625	139	155	3000	19	--	.4	10900	1.5	--	--
MAR											
23...	720	1379	170	2700	17	5329	.3	11490	.50	<.08	--
APR											
27...	200	480	70	210	7.3	450	.5	1700	.90	<.09	--
MAY											
26...	203	478	68	236	7.5	341	.5	1669	1.2	<.08	3
JUN											
23...	470	1300	110	2300	16	4000	.5	8660	.60	<.09	--
JUL											
20...	214	557	76	276	9.8	375	.5	1833	2.4	.10	--
AUG											
18...	240	527	90	303	11	453	.6	2168	3.0	<.08	5
SEP											
22...	203	454	74	247	8.5	360	.5	1839	3.1	.32	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
25...	8	12	9	100	30	47	--	33	--	5	3
DEC											
23...	--	--	--	100	--	42	--	--	--	--	--
JAN											
28...	--	--	--	100	--	60	--	--	--	--	--
FEB											
25...	8	5	11	100	23	68	--	34	--	5	21
MAR											
23...	--	--	--	<100	--	55	--	--	--	--	--
APR											
27...	--	--	--	400	--	65	--	--	--	--	--
MAY											
26...	2	6	10	200	16	31	<.5	17	2	3	11
JUN											
23...	--	--	--	600	--	200	--	--	--	--	--
JUL											
20...	--	--	--	700	--	163	--	--	--	--	--
AUG											
18...	3	27	5	400	26	191	.5	16	<3	3	6
SEP											
22...	--	--	--	500	--	140	--	--	--	--	--

07303395 ELM FORK OF NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK

LOCATION.--Lat 35°01'15", long 99°56'58", in NE 1/4 SW 1/4 sec.3, T.6 N., R.26 W., Harmon County, 0.1 mi (0.2 km) upstream from fiord at saltworks, 2.6 mi (4.2 km) upstream from Carl gage, and at mile 56.6 (91.9 km).

DRAINAGE AREA.--411 mi^2 (1,023 km^2).

PERIOD OF RECORD.--Water years 1960, 1961, 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to current year.
WATER TEMPEATURE: April 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1973.

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 tables, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 80,700 micromhos Aug. 2, 1974; minimum, 1,330 micromhos May 21, 1974.
WATER TEMPERATURE: Maximum, 34.5°C June 7, 1973; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 27,300 micromhos Sept. 8; minimum daily, 2,460 micromhos Sept. 1.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 5; minimum daily 0.0°C Dec. 17, Jan. 5, 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM
OCT										
01...	1745	12	9900	7.9	2100	2000	650	120	1500	61
16...	1500	14	7800	7.9	1900	1800	600	100	1100	55
25...	1530	9.8	8420	--	2000	1900	630	110	1200	56
NOV										
15...	1130	19	7700	8.9	2000	1900	610	120	1000	52
20...	1715	28	5210	8.3	1900	1800	590	100	550	39
28...	1215	18	6500	8.1	1900	1800	590	110	820	48
DEC										
02...	1245	16	6730	7.0	1900	1700	580	100	810	49
17...	1815	14	7200	7.9	1900	1800	580	110	910	51
30...	1645	21	5350	7.6	1800	1600	540	100	630	44
JAN										
02...	1815	15	4960	7.8	1600	1500	480	100	720	49
08...	1300	12	8800	7.6	2100	2000	630	130	1200	55
28...	1615	15	6510	7.7	1800	1700	540	110	790	49
FEB										
02...	1645	12	6300	7.8	1900	1700	560	110	770	47
17...	1100	14	7110	7.7	1900	1800	580	120	930	51
22...	1230	12	7560	7.9	2000	1900	590	120	1000	52
MAR										
04...	1415	14	7550	7.6	1900	1800	560	110	1100	56
14...	1215	16	7480	7.7	1900	1800	550	120	1000	54
25...	1515	11	8310	7.7	2000	1900	590	130	1200	56
APR										
13...	1045	11	--	7.7	1900	1800	560	120	1200	58
19...	1600	57	4150	7.8	1500	1400	470	70	390	37
21...	1615	36	5610	8.2	1700	1600	530	87	670	46
MAY										
10...	1745	218	2540	7.4	1300	1200	440	44	120	17
15...	1700	37	6550	7.7	1900	1800	580	110	840	49
20...	1915	24	8100	7.8	2100	2000	640	130	1100	53
JUN										
01...	1630	44	3180	8.0	1600	1500	510	78	190	21
13...	1200	6.6	9860	7.6	2200	2100	670	130	1500	59
27...	1243	6.0	16200	7.5	2600	2500	750	180	2900	71
JUL										
01...	1745	24	6810	7.8	1800	1700	580	93	890	51
14...	1930	.70	24300	7.6	2800	2700	780	200	4900	79
31...	1215	.38	60300	7.5	4100	4000	1000	390	15000	89
AUG										
05...	1500	1.1	34700	7.5	3400	3300	940	250	7400	83
09...	1700	1.1	87000	7.4	6300	6200	1500	630	23000	89
12...	1330	.38	104000	7.2	7700	7500	1800	780	30000	89
SEP										
01...	1000	149	2460	7.2	1100	1000	410	29	130	20
04...	1930	11	19500	7.0	2600	2500	780	150	3600	75
08...	1230	4.6	27300	7.3	2600	2500	760	160	5500	82

07303395 ELM FORK OF NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)
OCT										
01...	14	10	111	91	2.2	1700	2400	6890	9.37	.57
16...	11	10	129	106	2.6	1700	1700	5460	7.43	1.0
25...	12	8.8	124	102	--	1700	2000	6100	8.30	.75
NOV										
15...	9.7	8.9	148	121	.3	1700	1700	5570	7.58	1.4
20...	5.5	7.5	153	126	1.2	1700	890	4010	5.45	1.4
28...	8.1	7.9	151	124	1.9	1600	1300	4760	6.47	1.9
DEC										
02...	8.2	7.4	161	132	26	1600	1400	4950	6.73	1.9
17...	9.1	7.1	140	115	2.8	1700	1500	5220	7.10	1.9
30...	6.5	6.0	140	115	5.6	1500	1100	4300	5.85	2.1
JAN										
02...	7.8	6.2	125	103	3.2	1400	1100	4330	5.89	1.8
08...	11	8.4	140	115	5.6	1800	1900	6240	8.49	3.0
28...	8.1	6.6	114	94	3.6	1600	1300	4720	6.42	2.0
FEB										
02...	7.8	7.2	143	117	3.6	1500	1200	4580	6.23	2.1
17...	9.2	7.7	133	109	4.2	1700	1500	5060	6.88	1.7
22...	9.8	8.0	123	101	2.5	1800	1600	5340	7.26	1.6
MAR										
04...	11	7.8	122	100	4.9	1600	1700	5150	7.00	1.5
14...	10	7.6	134	110	4.3	1600	1700	5030	6.84	1.5
25...	12	9.1	111	91	3.5	1800	1900	6090	8.28	1.0
APR										
13...	12	9.5	111	91	3.5	1800	2000	6010	8.17	.33
19...	4.4	8.1	131	107	3.3	1300	660	3180	4.32	.35
21...	7.1	8.8	156	128	1.6	1400	1100	4120	5.60	.50
MAY										
10...	1.5	7.0	106	87	6.8	1200	210	2160	2.94	1.1
15...	8.4	9.4	112	92	3.6	1800	1400	4960	6.75	.35
20...	10	10	117	96	3.0	1900	1800	5880	8.00	.17
JUN										
01...	2.1	7.0	147	121	2.4	1500	310	2720	3.70	1.6
13...	14	12	118	97	4.7	2000	2400	6910	9.40	.28
27...	25	16	106	87	5.4	2600	4400	11100	15.1	.22
JUL										
01...	9.1	11	102	84	2.6	1800	1500	4980	6.77	.64
14...	41	25	78	64	3.1	2200	8000	16500	22.4	.30
31...	102	49	110	90	5.6	2700	25000	44700	60.8	.98
AUG										
05...	55	31	84	69	4.3	2400	12000	23500	32.0	.65
09...	126	80	132	108	8.4	3500	39000	68600	93.3	1.2
12...	149	97	213	175	22	3400	50000	87200	119	1.9
SEP										
01...	1.7	8.6	138	113	14	980	210	1990	2.71	2.8
04...	31	22	97	80	16	2000	6000	12800	17.4	.49
08...	47	25	104	85	8.3	2000	9200	18000	24.5	.19

07303395 ELM FORK OF THE NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9670	7990	6990	5320	6910	7740	9860	6100	3180	6390		2460
2	9620	3250	6790	4620	6820	7260	8640	6540	4750	9860		---
3	9790	4690	6670	5700	6810	7160	8810	6870	6640	12100		---
4	9720	5570	6700	5400	6580	8620	8940	7020	---	10500		18800
5	9630	5930	6500	5100	6620	7060	8880	---	5370	11200		22300
6	10200	6450	7030	6000	6780	7140	8920	7340	5870	15500		25300
7	10100	6510	6860	8440	6420	7080	8570	7510	6880	---		26800
8	9800	6860	6730	8440	6480	7430	8370	7780	6580	19300		27200
9	9610	6910	6710	6520	6690	7120	6560	7860	7720	---		25200
10	10400	6940	6920	5600	6790	6930	7600	2570	8630	21700		23900
11	11000	7010	6540	5830	6850	---	---	---	---	---		25000
12	10800	6990	6790	7060	7000	---	8220	---	---	---		26500
13	10600	7100	6880	5960	6860	7070	9870	5710	9860	---		---
14	10100	7070	6700	6390	7020	7480	8530	6180	10200	---		7220
15	7740	7310	5840	6780	7050	---	---	6550	11900	---		12100
16	7810	7020	6790	6490	7090	7270	---	7100	12000	---		---
17	7850	7180	6590	6790	7160	---	---	7370	---	14400		---
18	8350	6840	6880	6730	7270	7450	---	7650	---	16400		---
19	8580	6950	6420	6440	7180	9000	8060	7800	12400	---		---
20	8360	5260	6040	6730	7400	7670	---	8100	13000	---		---
21	8620	5640	6380	6890	7930	7970	3910	8000	14000	---		---
22	8620	5820	6330	7190	7310	7600	5530	4850	15300	---		---
23	8220	6160	6680	6680	7320	7820	5790	5730	14900	---		11500
24	8170	6240	6730	6680	7250	8140	6170	5690	14000	---		---
25	8400	6490	6430	6660	7000	9250	6240	---	14200	---		10800
26	8840	6470	6430	6450	7320	7400	6460	---	15000	---		---
27	8530	5880	6640	6730	7480	8500	6320	---	16400	---		---
28	7780	6520	6430	6610	7200	9100	6500	4960	16200	---		---
29	7970	7120	5950	6440	7490	9070	6360	5680	15200	---		10100
30	8230	6720	5480	6520	---	8360	6270	---	4020	---		10300
31	8460	---	5810	6740	---	8710	---	---	---	---		---
MONTH	9080	6430	6540	6450	7040	7830	7470	---	10600	---		---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	17.5	5.5	7.0	9.0	10.5	10.5	---	---	30.5	---	21.0
2	17.5	16.5	6.0	4.0	8.5	10.0	13.0	---	---	32.0	---	---
3	17.5	16.5	7.0	4.0	8.5	9.0	16.5	21.5	---	31.0	---	---
4	17.0	17.5	8.0	3.5	6.0	9.0	12.5	---	---	---	---	29.0
5	19.0	17.5	9.5	3.5	4.5	8.0	13.0	---	---	31.5	36.0	---
6	19.0	16.5	7.0	4.5	3.0	9.0	16.5	---	---	34.0	32.0	27.5
7	19.0	15.0	6.5	3.5	4.5	8.0	16.0	18.5	---	---	---	---
8	16.0	14.0	7.0	3.5	7.0	8.0	22.0	---	---	31.0	---	26.0
9	19.0	16.0	6.5	3.0	9.5	17.0	19.0	23.5	---	---	---	21.5
10	20.5	13.0	6.5	3.0	13.0	17.0	16.5	18.5	---	29.0	---	24.5
11	21.0	12.0	8.0	3.0	12.5	---	---	---	---	---	---	29.5
12	21.5	10.0	8.0	4.5	12.5	---	22.5	---	---	---	---	30.5
13	21.0	9.0	7.0	6.0	15.0	11.0	16.0	19.5	---	---	---	---
14	20.0	8.5	9.0	5.5	14.0	12.0	12.5	---	---	---	---	24.5
15	18.5	10.0	6.0	6.5	14.0	---	---	26.5	---	---	---	25.0
16	16.0	10.0	6.0	8.0	14.0	13.5	---	---	---	---	---	---
17	16.5	11.0	4.0	9.0	11.0	---	---	25.0	---	29.0	---	---
18	16.5	15.5	3.5	9.5	12.0	14.0	---	18.5	---	35.0	---	---
19	16.5	14.0	4.5	7.5	10.5	13.0	20.5	24.5	---	---	---	---
20	18.0	6.5	5.5	6.0	10.0	---	---	21.5	---	---	---	---
21	19.0	5.5	5.0	7.0	6.0	---	21.5	23.5	---	---	---	---
22	18.5	6.5	7.0	7.5	7.5	11.0	24.5	27.0	---	---	---	27.5
23	19.0	7.0	5.5	9.0	9.5	12.5	24.0	26.5	---	---	---	25.0
24	15.5	7.5	5.0	8.0	9.0	15.5	22.0	26.5	32.0	---	---	25.0
25	12.5	5.5	6.0	5.0	11.0	18.0	16.5	---	---	---	---	25.5
26	13.5	3.5	7.0	4.5	12.0	13.5	11.5	---	26.5	---	---	22.0
27	16.5	5.0	7.5	5.5	11.5	11.5	---	---	32.5	---	---	17.0
28	16.0	7.5	6.5	7.5	13.5	13.5	---	26.5	---	---	---	17.5
29	16.5	11.0	5.5	8.5	15.0	14.5	11.0	25.0	---	---	---	19.0
30	15.5	6.5	6.0	9.5	---	13.0	---	---	31.0	---	---	19.5
31	16.5	---	7.0	8.5	---	13.5	---	---	---	---	27.5	---
MONTH	17.5	11.0	6.5	6.0	10.0	12.0	---	---	---	---	---	---

07303395 ELM FORK OF THE NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1800	1600	1500	1600	1700	2000	1500	1200	1600		1100
2	1900	1200	1600	1400	1600	1700	1800	1600	1400	2000		---
3	2000	1400	1600	1500	1600	1700	1800	1600	1600	2000		---
4	1900	1500	1600	1500	1600	1800	1900	1600	---	2000		2200
5	1900	1500	1600	1400	1600	1700	1900	---	1500	2000		2200
6	2000	1600	1700	1500	1600	1700	1900	1700	1500	2100		2300
7	2000	1600	1600	1800	1600	1700	1800	1700	1600	---		2300
8	2000	1600	1600	1800	1600	1700	1800	1700	1600	2200		2300
9	1900	1600	1600	1600	1600	1700	1600	1700	1700	---		2300
10	2000	1600	1600	1500	1600	1600	1700	1200	1800	2200		2200
11	2000	1600	1600	1500	1600	---	---	---	---	---		2300
12	2000	1600	1600	1700	1600	---	1800	---	---	---		2300
13	2000	1700	1600	1500	1600	1700	2000	1500	2000	---		---
14	2000	1700	1600	1600	1600	1700	1800	1600	2000	---		1700
15	1700	1700	1500	1600	1700	---	---	1600	2000	---		2000
16	1700	1600	1600	1600	1700	1700	---	1700	2000	---		---
17	1700	1700	1600	1600	1700	---	---	1700	---	2100		---
18	1800	1600	1600	1600	1700	1700	---	1700	---	2100		---
19	1800	1600	1600	1600	1700	1900	1800	1700	2000	---		---
20	1800	1500	1500	1600	1700	1700	---	1800	2000	---		---
21	1800	1500	1600	1600	1600	1800	1300	1800	2100	---		---
22	1800	1500	1600	1700	1700	1700	1500	1400	2100	---		---
23	1800	1600	1600	1600	1700	1700	1500	1500	2100	---		2000
24	1800	1600	1600	1600	1700	1800	1600	1500	2100	---		---
25	1800	1600	1600	1600	1600	1900	1600	---	2100	---		2000
26	1900	1600	1600	1600	1700	1700	1600	---	2100	---		---
27	1800	1500	1600	1600	1700	1800	1600	---	2100	---		---
28	1700	1600	1600	1600	1700	1900	1600	1400	2100	---		---
29	1800	1700	1500	1600	1700	1900	1600	1500	2100	---		2000
30	1800	1600	1500	1600	---	1800	1600	---	1300	---		2000
31	1800	---	1500	1600	---	1800	---	---	---	---		---
MONTH	1900	1600	1600	1600	1700	1700	1700	---	1800	---		---

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61.6	277	64.8	68.8	51.8	59.7	52.9	117	143	104		443
2	61.6	1660	69.1	56.7	51.8	59.7	53.5	117	102	86.4		---
3	64.8	469	69.1	52.6	51.8	59.7	47.6	104	95.0	59.4		---
4	61.6	158	69.1	52.6	51.8	68.0	50.3	90.7	---	36.7		65.3
5	61.6	126	73.4	60.5	56.2	59.7	50.3	---	56.7	23.2		38.6
6	64.8	121	68.8	76.9	56.2	68.8	56.4	78.0	48.6	13.0		28.6
7	64.8	108	64.8	42.8	60.5	73.4	58.3	68.8	47.5	---		21.1
8	64.8	99.4	69.1	58.3	64.8	91.8	63.2	68.8	42.3	11.9		28.6
9	61.6	95.0	69.1	82.1	60.5	91.8	51.8	68.8	40.4	---		40.4
10	59.4	86.4	69.1	109	60.5	82.1	45.0	706	39.9	8.32		31.5
11	59.4	90.7	69.1	97.2	56.2	---	---	---	---	---		24.8
12	59.4	82.1	64.8	87.2	56.2	---	53.5	---	---	---		1860
13	59.4	87.2	69.1	76.9	60.5	73.4	59.4	207	35.6	---		---
14	70.2	87.2	69.1	69.1	56.2	73.4	58.3	186	33.5	---		106
15	142	87.2	60.7	69.1	64.3	---	---	160	31.3	---		52.9
16	64.3	86.4	64.8	69.1	64.3	73.4	---	151	29.2	---		---
17	55.1	91.8	60.5	69.1	64.3	---	---	138	---	14.2		---
18	53.5	90.7	60.5	64.8	64.3	68.8	---	124	---	8.50		---
19	53.5	117	69.1	64.8	59.7	71.8	277	119	25.9	---		---
20	47.6	113	76.9	60.5	59.7	59.7	---	117	24.8	---		---
21	47.6	85.0	69.1	56.2	58.3	58.3	126	107	25.5	---		---
22	47.6	72.9	73.4	59.7	55.1	55.1	113	79.4	25.5	---		---
23	47.6	77.8	69.1	56.2	55.1	55.1	93.1	101	2.61	---		75.6
24	47.6	77.8	82.1	56.2	59.7	58.3	86.4	126	73.7	---		---
25	47.6	77.8	82.1	56.2	56.2	56.4	77.8	---	55.6	---		45.9
26	56.4	69.1	77.8	56.2	55.1	50.5	73.4	---	40.3	---		---
27	53.5	76.9	73.4	56.2	55.1	53.5	77.8	---	34.0	---		---
28	50.5	77.8	73.4	64.8	64.3	61.6	112	299	29.5	---		---
29	53.5	82.6	85.0	64.8	59.7	61.6	121	239	23.2	---		38.9
30	53.5	64.8	85.0	64.8	---	58.3	121	---	59.7	---		34.6
31	58.3	---	76.9	60.5	---	53.5	---	---	---	---		---
MONTH	59.8	163	70.9	65.8	58.3	65.1	82.5	---	46.6	---		---

07303395 ELM FORK OF THE NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	1800	1500	980	1500	1700	2400	1200	320	1300		210
2	2300	340	1400	760	1400	1600	2000	1400	800	2400		---
3	2400	790	1400	1100	1400	1600	2100	1500	1400	3000		---
4	2300	1100	1400	1000	1400	2000	2100	1500	---	2600		5600
5	2300	1200	1300	910	1400	1500	2100	---	1000	2800		7300
6	2500	1300	1500	1200	1400	1500	2100	1600	1200	4000		8400
7	2500	1300	1500	1900	1300	1500	2000	1700	1500	---		9000
8	2400	1500	1400	1900	1300	1600	1900	1700	1400	5900		9200
9	2300	1500	1400	1400	1400	1500	1400	1800	1700	---		8400
10	2500	1500	1500	1100	1400	1500	1700	220	2000	7000		7900
11	2700	1500	1400	1100	1500	---	---	---	---	---		8300
12	2700	1500	1400	1500	1500	---	1900	---	---	---		8900
13	2600	1500	1500	1200	1500	1500	2400	1100	2400	---		---
14	2500	1500	1400	1300	1500	1600	2000	1200	2500	---		1600
15	1700	1600	1100	1400	1500	---	---	1400	3000	---		3000
16	1800	1500	1400	1300	1500	1600	---	1500	3000	---		---
17	1800	1600	1400	1400	1600	---	---	1600	---	3700		---
18	1900	1500	1500	1400	1600	1600	---	1700	---	4500		---
19	2000	1500	1300	1300	1600	2100	1800	1700	3100	---		---
20	1900	960	1200	1400	1600	1700	---	1800	3300	---		---
21	2000	1100	1300	1500	1800	1800	540	1800	3600	---		---
22	2000	1100	1300	1600	1600	1700	1000	840	4000	---		---
23	1900	1200	1400	1400	1600	1800	1100	1100	3900	---		2900
24	1900	1300	1400	1400	1600	1900	1200	1100	3600	---		---
25	1900	1300	1300	1400	1500	2200	1300	---	3700	---		2700
26	2100	1300	1300	1300	1600	1600	1300	---	3900	---		---
27	2000	1200	1400	1400	1600	2000	1300	---	4500	---		---
28	1700	1400	1300	1400	1600	2200	1300	870	4400	---		---
29	1800	1500	1200	1300	1700	2100	1300	1100	3900	---		2500
30	1900	1400	1000	1400	---	1900	1300	---	580	---		2500
31	2000	---	1100	1400	---	2000	---	---	---	---		---
MONTH	2100	1300	1400	1300	1500	1800	1600	---	2600	---		---

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.5	277	60.7	45.0	48.6	59.7	63.5	94.0	38.0	84.2		84.5
2	74.5	471	60.5	30.8	45.4	56.2	59.4	102	58.3	104		---
3	77.8	264	60.5	38.6	45.4	56.2	55.6	97.2	83.2	89.1		---
4	74.5	116	60.5	35.1	45.4	75.6	55.6	85.0	---	47.7		166
5	74.5	100	59.7	39.3	49.1	52.6	55.6	---	37.8	32.5		128
6	81.0	98.3	60.7	61.6	49.1	60.7	62.4	73.4	38.9	24.8		104
7	81.0	87.7	60.7	45.1	49.1	64.8	64.8	68.8	44.5	---		82.6
8	77.8	93.1	60.5	61.6	52.6	86.4	66.7	68.8	37.0	31.9		114
9	74.5	89.1	60.5	71.8	52.9	81.0	45.4	72.9	40.4	---		147
10	74.2	81.0	64.8	80.2	52.9	76.9	45.0	129	44.3	26.5		113
11	80.2	85.0	60.5	71.3	52.6	---	---	---	---	---		89.6
12	80.2	76.9	56.7	76.9	52.6	---	56.4	---	---	---		7180
13	77.2	76.9	64.8	61.6	56.7	64.8	71.3	151	42.8	---		---
14	87.7	76.9	60.5	56.2	52.6	69.1	64.8	139	41.8	---		99.4
15	142	82.1	44.5	60.5	56.7	---	---	140	47.0	---		79.4
16	68.0	81.0	56.7	56.2	56.7	69.1	---	134	43.7	---		---
17	58.3	86.4	52.9	60.5	60.5	---	---	130	---	25.0		---
18	56.4	85.0	56.7	56.7	60.5	64.8	---	124	---	18.2		---
19	59.4	109	56.2	52.6	56.2	79.4	277	119	40.2	---		---
20	50.3	72.6	61.6	52.9	56.2	59.7	---	117	41.0	---		---
21	52.9	62.4	56.2	52.6	58.3	58.3	52.5	107	43.7	---		---
22	52.9	53.5	59.7	56.2	51.8	55.1	75.6	47.6	48.6	---		---
23	50.3	58.3	60.5	49.1	51.8	58.3	68.3	74.2	4.84	---		110
24	50.3	63.2	71.8	49.1	56.2	61.6	64.8	92.1	126	---		---
25	50.3	63.2	66.7	49.1	52.6	65.3	63.2	---	97.9	---		62.0
26	62.4	56.2	63.2	45.6	51.8	47.5	59.7	---	74.8	---		---
27	59.4	61.6	64.3	49.1	51.8	59.4	63.2	---	72.9	---		---
28	50.5	68.0	59.7	56.7	60.5	71.3	91.3	186	61.8	---		---
29	53.5	72.9	68.0	52.6	59.7	68.0	98.3	175	43.2	---		48.6
30	56.4	56.7	56.7	56.7	---	61.6	98.3	---	26.6	---		43.2
31	64.8	---	56.4	52.9	---	59.4	---	---	---	---		---
MONTH	68.6	104	60.1	54.3	53.3	64.5	74.1	---	51.2	---		---

07303395 ELM FORK OF THE NORTH FORK RED RIVER AT SALTON CROSSING NEAR CARL, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG. C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6890	5820	5190	4110	5140	5670	7010	4620	2610	4810		2110
2	6860	2660	5060	3620	5080	5360	6240	4900	3710	7010		---
3	6970	3670	4990	4370	5070	5300	6340	5110	4970	8130		---
4	6920	4290	5000	4170	4930	6220	6430	5210	---	7350		12000
5	6870	4520	4880	3960	4950	5230	6390	---	4150	7690		14500
6	7200	4850	5210	4560	5060	5280	6410	5410	4480	9810		16700
7	7150	4880	5110	6110	4830	5250	6190	5520	5120	---		17700
8	6970	5110	5020	6110	4870	5470	6070	5690	4930	12400		18000
9	6850	5140	5010	4890	5000	5270	4920	5740	5650	---		16600
10	7300	5160	5140	4310	5060	5150	5580	2180	6230	14100		15700
11	7590	5200	4900	4450	5100	---	---	---	---	---		16400
12	7490	5190	5060	5230	5200	---	5970	---	---	---		17500
13	7400	5260	5120	4530	5110	5240	7020	4380	7010	---		---
14	7150	5240	5000	4810	5210	5500	6170	4670	7200	---		5330
15	5670	5390	4460	5060	5230	---	---	4910	8030	---		8130
16	5710	5210	5060	4870	5250	5370	---	5260	8080	---		---
17	5730	5310	4930	5060	5300	---	---	5430	---	9270		---
18	6050	5090	5120	5020	5370	5480	---	5610	---	10300		---
19	6200	5160	4830	4840	5310	6470	5870	5700	8280	---		---
20	6060	4070	4590	5020	5450	5620	---	5890	8580	---		---
21	6220	4330	4800	5130	5790	5810	3120	5830	9070	---		---
22	6220	4450	4770	5320	5390	5580	4260	3780	9710	---		---
23	5970	4660	4990	4990	5400	5720	4430	4390	9510	---		7840
24	5940	4710	5020	4990	5350	5920	4670	4360	9070	---		---
25	6080	4870	4830	4980	5200	6620	4710	---	9170	---		7490
26	6360	4860	4830	4850	5400	5450	4850	---	9560	---		---
27	6170	4480	4970	5020	5500	6150	4760	---	10300	---		---
28	5690	4890	4830	4950	5320	6530	4880	3860	10200	---		---
29	5810	5270	4530	4840	5510	6510	4790	4360	9660	---		7150
30	5980	5020	4220	4890	---	6060	4730	---	3200	---		7250
31	6120	---	4440	5030	---	6280	---	---	---	---		---
MONTH	6500	4830	4900	4840	5220	5720	5490	---	7140	---		---

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	896	210	189	167	199	185	362	310	312		849
2	222	3680	219	147	165	188	185	357	270	303		---
3	226	1230	216	153	164	186	168	331	295	241		---
4	224	452	216	146	160	235	170	295	---	135		356
5	223	378	224	171	174	184	169	---	157	89.3		254
6	233	367	211	234	178	214	190	248	145	60.9		207
7	232	329	207	145	183	227	201	224	152	---		162
8	226	317	217	198	197	295	213	230	130	67.0		224
9	222	305	216	251	189	285	159	232	134	---		291
10	217	279	222	314	191	264	148	1280	138	53.3		225
11	225	295	212	288	179	---	---	---	---	---		177
12	222	266	205	268	183	---	177	---	---	---		14100
13	220	270	221	232	193	226	208	603	125	---		---
14	251	269	216	208	183	238	200	542	121	---		331
15	475	277	181	219	198	---	---	491	126	---		215
16	216	281	205	210	198	232	---	469	118	---		---
17	186	287	186	219	200	---	---	440	---	62.6		---
18	180	289	194	203	203	222	---	409	---	41.7		---
19	184	376	209	196	186	245	903	400	107	---		---
20	160	308	235	190	191	197	---	382	107	---		---
21	165	246	207	180	188	188	303	346	110	---		---
22	165	216	219	187	175	181	322	214	118	---		---
23	158	226	216	175	175	185	275	296	11.8	---		296
24	157	229	258	175	188	192	252	365	318	---		---
25	161	237	248	175	183	197	229	---	243	---		172
26	189	210	235	170	175	162	223	---	183	---		---
27	183	230	228	176	178	183	231	---	167	---		---
28	169	238	222	200	201	212	343	823	143	---		---
29	173	256	257	196	193	211	362	695	107	---		139
30	178	203	239	198	---	196	358	---	147	---		125
31	198	---	228	190	---	187	---	---	---	---		---
MONTH	208	448	219	200	184	212	257	---	159	---		---

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK

LOCATION.--Lat 35°00'42", long 99°54'12", in SW 1/4 NW 1/4 sec.12, T.6 N., R.26 W., Harmon County, near left bank on downstream side of pier of bridge on State Highway 30, 4.0 mi (6.4 km) northeast of Carl, and at mile 54.0 (86.9 km).

DRAINAGE AREA.--416 mi^2 (1,077 km^2).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1731: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,714.95 ft (552.717 m) above mean sea level (State Highway Department bench mark).

REMARKS.--Records fair.

AVERAGE DISCHARGE.--17 years, 39.1 ft^3/s (1.107 m^3/s), 28,330 acre-ft/yr (34.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft^3/s (507 m^3/s) Apr. 27, 1962, gage height, 11.45 ft (3.490 m), from rating curve extended above 1,000 ft^3/s (28.3 m^3/s) on basis of slope-area measurement of peak flow; no flow Sept. 4, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)	DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)
Sept. 12	2030	*3,300	93.5	5.92	1.804	Sept. 16	2300	2,390	67.7	5.34	1.628

Minimum daily discharge, 0.02 ft^3/s (0.001 m^3/s) Aug. 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	58	16	18	13	14	11	30	45	25	.36	149
2	13	513	17	16	13	14	12	28	28	17	.35	63
3	13	124	17	14	13	14	11	25	23	12	.35	25
4	13	40	17	14	13	15	11	22	18	8.0	.80	12
5	13	32	18	17	14	14	11	20	15	5.5	2.3	7.7
6	13	29	16	20	14	16	12	18	13	3.5	2.3	5.8
7	13	26	16	10	15	17	13	16	12	2.5	1.8	4.6
8	13	24	17	13	16	21	14	16	11	2.0	1.6	5.8
9	13	23	17	20	15	21	13	16	10	1.7	1.1	7.7
10	12	21	17	28	15	20	11	218	9.4	1.4	.72	6.5
11	12	22	17	25	14	19	11	103	8.8	1.1	.65	5.2
12	12	20	16	20	14	18	12	69	8.2	.90	.38	299
13	12	20	17	20	15	17	12	52	7.8	.80	.34	245
14	14	20	17	17	14	17	13	44	7.4	.70	.27	24
15	32	20	16	17	15	18	86	38	7.0	1.0	.27	11
16	15	21	16	17	15	17	464	34	6.6	5.0	.19	80
17	13	21	15	17	15	17	312	31	6.4	2.5	.19	606
18	12	22	15	16	15	16	101	28	6.2	1.5	.11	74
19	12	28	17	16	14	15	58	27	6.0	1.1	.11	91
20	11	29	20	15	14	14	51	25	5.8	.90	.11	174
21	11	22	17	14	13	13	37	23	5.7	.80	.11	50
22	11	19	18	14	13	13	29	22	5.7	.68	.06	21
23	11	19	17	14	13	13	24	26	5.8	.62	.06	15
24	11	19	20	14	14	13	21	32	14	.58	.06	11
25	11	19	20	14	14	12	19	47	11	.52	.06	9.7
26	12	17	19	14	13	12	18	225	8.3	.48	.06	8.8
27	12	20	18	14	13	12	19	172	7.2	.46	.02	9.8
28	12	19	18	16	15	13	27	80	6.4	.44	.02	9.5
29	12	19	22	16	14	13	29	60	5.3	.42	.02	8.4
30	12	16	22	16	---	13	29	50	18	.40	.02	7.6
31	13	---	20	15	---	12	---	90	---	.38	.06	---
TOTAL	402	1302	545	511	408	473	1491	1687	342.0	99.88	14.85	2047.1
MEAN	13.0	43.4	17.6	16.5	14.1	15.3	49.7	54.4	11.4	3.22	.48	68.2
MAX	32	513	22	28	16	21	464	225	45	25	2.3	606
MIN	11	16	15	10	13	12	11	16	5.3	.38	.02	4.6
AC-FT	797	2580	1080	1010	809	938	2960	3350	678	198	29	4060

CAL YR 1975 TOTAL 16673.50 MEAN 45.7 MAX 3030 MIN 5.2 AC-FT 33070
WTR YR 1976 TOTAL 9322.83 MEAN 25.5 MAX 606 MIN .02 AC-FT 18490

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 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 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. 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 tables, and loads for those parameters were calculated from specific conductance values.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 224,000 micromhos Sept. 15, 1971; minimum, 2,190 micromhos June 2, 1973.
WATER TEMPERATURES: Maximum, 39.0°C June 22, 1969, Aug. 17, 1970; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 211,000 micromhos Aug. 29; minimum daily, 6,400 micromhos May 10.
WATER TEMPERATURE: Maximum daily, 37.0°C Aug. 18; minimum daily, 0.0°C Dec. 17, Jan. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
05...	--	--	1215	--	14	33800	7.4	--	--	--	--	--
14...	--	--	1240	--	13	37400	7.4	--	--	--	--	--
25...	--	--	1545	--	12	29600	8.0	--	--	--	--	--
NOV												
05...	--	--	1145	--	34	19600	8.7	16.0	--	--	--	--
15...	--	--	1115	--	20	24200	8.2	9.0	--	--	--	--
24...	1028	9740	1500	19	--	--	8.1	10.0	6	11.4	106	294
25...	--	--	1700	--	20	21800	9.3	3.0	--	--	--	--
DEC												
05...	--	--	1630	--	19	22400	7.7	--	--	--	--	--
15...	--	--	1730	--	19	22100	7.7	--	--	--	--	--
22...	1028	9740	1500	18	--	24000	8.1	7.0	10	--	--	280
23...	--	--	1200	--	18	24300	7.8	--	--	--	--	--
JAN												
05...	--	--	1515	--	30	20100	7.6	--	--	--	--	--
15...	--	--	1230	--	17	25800	7.8	--	--	--	--	--
26...	--	--	1700	--	18	21900	7.9	--	--	--	--	--
27...	1028	9740	1500	14	--	30000	10.7	7.0	2	12.0	108	960
FEB												
03...	--	--	1115	--	13	23200	7.9	--	--	--	--	--
15...	--	--	1230	--	17	22400	8.0	--	--	--	--	--
24...	1028	9740	1545	14	--	26000	8.2	15.0	1	10.0	108	192
25...	--	--	0845	--	14	24800	7.8	--	--	--	--	--
MAR												
09...	--	--	1500	--	22	21400	8.1	--	--	--	--	--
20...	--	--	1515	--	13	26200	8.1	--	--	--	--	--
24...	1028	9740	0930	13	--	30000	8.0	14.0	1	10.2	110	310
31...	--	--	1530	--	12	31300	7.9	--	--	--	--	--
APR												
05...	--	--	1630	--	12	30600	7.6	--	--	--	--	--
14...	--	--	1300	--	12	30600	7.7	--	--	--	--	--
25...	--	--	1145	--	19	21300	7.6	--	--	--	--	--
28...	1028	9740	1030	27	--	24000	8.2	14.0	70	9.1	97	180
MAY												
10...	--	--	1730	--	187	6400	7.3	--	--	--	--	--
13...	--	--	1600	--	51	21800	7.6	--	--	--	--	--
20...	--	--	1900	--	25	29800	7.6	--	--	--	--	--
25...	1028	9740	1730	47	--	21000	9.4	24.0	22	7.9	101	348
JUN												
01...	--	--	1645	--	129	8530	7.5	--	--	--	--	--
15...	--	--	1315	7.0	--	47400	7.7	--	--	--	--	--
23...	1028	9740	0915	5.8	--	70000	7.8	23.0	2	9.5	120	96
27...	--	--	1230	--	7.7	68500	--	--	--	--	--	--
JUL												
01...	--	--	1730	--	25	27800	7.3	--	--	--	--	--
12...	--	--	1400	--	2.4	91800	7.5	--	--	--	--	--
21...	1028	9740	1300	.80	--	--	8.3	31.0	0	10.1	148	271
31...	--	--	1200	--	1.5	160000	6.8	--	--	--	--	--
AUG												
03...	--	--	1615	--	1.5	135000	6.6	--	--	--	--	--
18...	1028	9740	1045	.11	--	199000	7.2	32.0	5	6.9	99	3550

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
SEP												
04...	--	--	2000	--	10	57000	7.4	--	--	--	--	--
15...	--	--	1045	--	12	35200	7.3	--	--	--	--	--
22...	1028	9740	1230	21	--	23700	7.9	23.0	0	8.3	102	38
29...	--	--	1300	--	9.0	76200	7.1	--	--	--	--	--

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT											
05...	2700	2700	770	200	7400	85	61	30	111	0	91
14...	2900	2800	750	240	8400	86	68	35	105	0	86
25...	2400	2300	640	200	6300	85	56	27	122	0	100
NOV											
05...	2100	1900	580	150	3900	80	37	17	147	0	121
15...	2400	2200	670	170	4900	82	44	20	161	0	132
24...	--	--	--	--	--	--	--	--	--	--	--
25...	2200	2000	610	160	4200	81	39	17	169	0	139
DEC											
05...	2200	2100	610	170	4300	81	40	19	149	0	122
15...	2300	2200	640	170	4200	80	38	18	164	0	135
22...	--	--	--	--	--	--	--	--	--	--	--
23...	2200	2100	630	150	4800	83	45	19	171	0	140
JAN											
05...	2100	2000	590	160	4200	81	40	16	188	0	154
15...	2300	2100	610	180	5300	83	48	19	169	0	139
26...	2100	2000	600	150	4500	82	43	17	134	0	110
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
03...	2200	2100	620	170	4800	82	44	20	127	0	104
15...	2300	2200	630	180	4600	81	42	20	136	0	112
24...	--	--	--	--	--	--	--	--	--	--	--
25...	2400	2300	660	190	5200	82	46	22	153	0	126
MAR											
09...	2200	2100	590	170	4500	82	42	18	134	0	110
20...	2400	2300	640	190	5300	83	47	21	126	0	103
24...	--	--	--	--	--	--	--	--	--	--	--
31...	2600	2500	670	220	6500	84	56	24	111	0	91
APR											
05...	2700	2600	720	220	7200	85	59	26	91	0	75
14...	2500	2400	670	190	5500	83	48	22	95	0	78
25...	2200	2200	620	160	4200	80	39	19	59	0	48
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	1400	1300	460	56	960	60	11	10	112	0	92
13...	2300	2200	640	180	4500	81	41	22	124	0	102
20...	2800	2800	760	230	6200	82	51	31	115	0	94
25...	--	--	--	--	--	--	--	--	--	--	--
JUN											
01...	1600	1500	490	96	1300	63	14	11	129	0	106
15...	3400	3400	820	340	12000	88	89	40	108	0	89
23...	--	--	--	--	--	--	--	--	--	--	--
27...	3900	3800	870	410	17000	90	119	65	88	0	72
JUL											
01...	2300	2200	630	170	6000	85	55	28	97	0	80
12...	4600	4500	980	520	25000	92	161	90	71	0	58
21...	--	--	--	--	--	--	--	--	--	--	--
31...	7600	7500	1400	990	51000	93	255	180	120	0	98
AUG											
03...	7000	6900	1400	850	43000	93	224	130	92	0	75
18...	--	--	--	--	--	--	--	--	--	--	--
SEP											
04...	3500	3500	890	320	14000	89	102	51	88	0	72
15...	2700	2600	750	190	7700	86	65	30	87	0	71
22...	--	--	--	--	--	--	--	--	--	--	--
29...	4900	4700	1200	450	20000	90	125	59	177	0	145

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOT ARSEN. (AS) (UG/L)
OCT											
05...	7.1	1800	12000	--	22100	30.1	835	1.1	--	--	--
14...	6.7	2000	14000	--	25400	34.5	892	.92	--	--	--
25...	2.0	1900	10000	--	19100	26.0	619	.92	--	--	--
NOV											
05...	.5	1500	6200	--	13000	17.7	1190	.75	--	--	--
15...	1.6	1700	8100	--	16000	21.8	864	1.2	--	--	--
24...	--	--	--	.4	--	--	--	--	3.2	.03	2
25...	.1	1500	7100	--	14500	19.4	772	1.5	--	--	--
DEC											
05...	4.8	1600	7300	--	14600	19.9	749	4.2	--	--	--
15...	5.2	1600	7200	--	14500	19.7	744	2.0	--	--	--
22...	--	--	--	.4	--	--	--	--	2.0	<.01	--
23...	4.3	1500	8100	--	15800	21.5	768	2.3	--	--	--
JAN											
05...	7.6	1500	6700	--	13800	18.8	1120	2.1	--	--	--
15...	4.3	1600	8400	--	16500	22.4	757	2.5	--	--	--
26...	2.7	1600	6900	--	14000	19.0	680	2.2	--	--	--
27...	--	--	--	.4	--	--	--	--	3.2	.02	--
FEB											
03...	2.6	1900	7800	--	15400	20.9	541	2.1	--	--	--
15...	2.2	1700	7500	--	15100	20.5	693	1.8	--	--	--
24...	--	--	--	.4	--	--	--	--	--	<.10	2
25...	3.9	1800	8400	--	16400	22.3	620	1.7	--	--	--
MAR											
09...	1.7	1800	6900	--	14300	19.4	849	1.6	--	--	--
20...	1.6	1800	8700	--	17500	23.8	614	1.4	--	--	--
24...	--	--	--	.4	--	--	--	--	.60	<.08	--
31...	2.2	2000	11000	--	20800	28.3	674	.93	--	--	--
APR											
05...	3.7	1800	12000	--	22600	30.7	732	.68	--	--	--
14...	3.0	1800	9400	--	18200	24.8	590	.60	--	--	--
25...	2.4	1700	7100	--	13900	18.9	713	.61	--	--	--
26...	--	--	--	--	--	--	--	--	1.1	.11	--
MAY											
10...	9.0	1100	1500	--	4270	5.81	2160	1.9	--	--	--
13...	5.0	1400	7200	--	14600	19.9	2010	.45	--	--	--
20...	4.6	1900	11000	--	20400	27.7	1380	.60	--	--	--
25...	--	--	--	.3	--	--	--	--	1.4	<.08	1
JUN											
01...	6.5	1300	2100	--	5570	7.58	1940	.92	--	--	--
15...	3.4	1800	20000	--	33300	45.3	629	.59	--	--	--
23...	--	--	--	.5	--	--	--	--	.80	<.09	--
27...	.0	2200	29000	--	50800	69.1	1060	.72	--	--	--
JUL											
01...	7.8	1500	9400	--	18300	24.9	1240	.66	--	--	--
12...	3.6	1300	38000	--	70400	95.7	456	.89	--	--	--
21...	--	--	--	.2	--	--	--	--	2.4	<.08	--
31...	30	2400	84000	--	141000	192	571	.24	--	--	--
AUG											
03...	37	3300	71000	--	124000	169	502	2.6	--	--	--
18...	--	--	--	.2	--	--	--	--	28	<.08	16
SEP											
04...	5.6	2100	23000	--	40700	55.4	1100	.75	--	--	--
15...	7.0	1800	13000	--	23600	32.1	765	.79	--	--	--
22...	--	--	--	.3	--	--	--	--	.70	.47	--
29...	23	2500	32000	--	59200	80.5	1440	1.7	--	--	--

07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	19	33	7	400	75	100	--	78	--	13	8
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	--	90	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	200	--	89	--	--	--	--	--
FEB											
03...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	11	5	10	100	21	72	--	40	--	5	<1
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	<100	--	42	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	800	--	220	--	--	--	--	--
MAY											
10...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
25...	6	15	21	500	33	240	<.5	26	7	8	6
JUN											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	600	--	330	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	400	--	359	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	--	--	--	--	--	--	--	--	--	--	--
18...	570	280	6400	4100	3000	3740	.5	2700	<3	160	<20
SEP											
04...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	400	--	115	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--

07303400 ELM FORK OF THE NORTH FORK RED RIVER NEAR CARL, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33200	25200	24600	19500	23200	28600	33100	20500	8310	25100	147000	---
2	33900	16500	24700	19200	22800	26100	30600	21400	16300	33100	150000	---
3	35100	16100	23800	43000	23000	25300	31700	21900	23300	33300	119000	---
4	33600	16900	23600	29800	24800	25000	31000	24100	19800	47600	138000	53900
5	34000	19500	22400	15200	25400	23800	30600	24700	16000	59900	138000	68200
6	34600	21900	21800	14800	27400	24100	32700	25200	20800	68400	152000	81400
7	35900	22200	23300	25800	26500	26200	32900	24300	23600	76600	161000	89400
8	34700	22800	22100	35500	24100	26000	28500	24700	24800	84800	154000	94800
9	34800	22200	23000	21900	24200	22800	23200	25600	27800	89600	168000	94900
10	34800	22600	24100	19800	21600	25300	35000	6400	31500	94800	177000	89700
11	38900	23300	22500	20700	20200	26400	33600	---	31700	86900	168000	97400
12	37600	23700	23500	26800	22900	25000	28200	20900	35700	90600	166000	94200
13	---	24200	24000	23500	22100	24400	29900	22800	37900	93100	---	41500
14	37400	24600	22600	22300	21800	25100	29800	21600	42700	106000	---	24500
15	---	24400	22000	25300	22000	24000	25800	21700	47000	105000	---	32400
16	26400	23700	22900	24300	22500	23900	15600	24000	48400	83400	---	---
17	28400	24400	22200	23500	16700	25300	18200	24200	52400	50900	---	---
18	29900	23900	27000	22500	22400	25400	23200	27000	51700	64300	198000	---
19	30700	26000	20100	21800	21600	21700	26000	28100	36200	76800	175000	---
20	30900	16000	15800	24900	19600	26100	29000	28600	55900	90600	167000	---
21	30900	---	23200	26100	24600	26900	10000	28800	60800	98600	184000	12300
22	31900	---	26800	25500	24400	26200	16100	19800	64800	107000	202000	21300
23	30200	---	23900	22900	27200	23000	18100	10800	58200	109000	208000	26500
24	29400	21400	24700	22600	25900	23900	20700	18600	58900	106000	202000	41200
25	29500	21800	23500	21900	24800	33300	20100	---	61400	111000	203000	56100
26	30100	21300	22900	24000	24200	27500	23400	---	65500	119000	203000	63000
27	29800	---	24900	23300	26800	24100	18900	---	68000	130000	181000	68300
28	28200	22300	24100	25300	25900	20100	18100	16900	55300	134000	192000	67800
29	29100	---	21100	24700	25500	22300	20200	20500	45800	134000	211000	74900
30	29500	20500	17300	25100	---	28500	20600	17600	23600	141000	204000	64900
31	28200	---	20400	24600	---	30800	---	12300	---	144000	202000	---
MONTH	32100	21900	22900	24100	23600	25300	25200	21600	40500	90100	175800	---

YEAR MAX 211000 MIN 6400 MEAN 45800

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	17.0	4.5	5.5	7.5	13.0	13.5	17.0	26.0	27.0	29.5	25.0
2	17.5	15.0	10.0	2.0	7.0	12.5	15.5	18.0	24.5	28.0	27.0	26.0
3	18.0	15.5	9.5	1.5	7.0	8.0	16.5	16.5	24.0	29.0	27.5	28.5
4	21.0	17.5	11.5	1.0	4.5	7.5	16.0	18.5	24.0	27.5	30.0	28.5
5	17.0	17.5	12.0	2.0	2.0	6.5	17.5	17.5	24.5	27.0	30.0	28.5
6	21.5	17.5	5.5	3.0	1.0	8.5	17.5	18.0	25.0	27.5	28.5	27.0
7	22.0	17.0	4.0	1.0	2.5	7.0	16.5	16.0	25.0	28.0	28.5	27.0
8	15.0	16.5	8.0	0.5	6.0	6.5	25.5	18.0	25.5	29.0	30.0	26.5
9	12.0	15.0	5.0	1.0	8.5	11.5	36.5	20.0	25.5	28.0	29.5	21.0
10	24.5	12.0	10.5	1.5	12.0	12.5	34.0	15.0	28.0	26.5	30.5	22.0
11	25.0	12.5	8.0	1.5	11.0	13.0	31.5	20.5	26.0	27.5	31.5	25.0
12	21.0	8.5	5.0	2.5	12.0	9.5	23.5	19.0	26.5	27.0	31.0	26.0
13	---	7.5	11.5	4.0	14.0	7.5	23.5	16.5	23.5	27.5	30.5	22.0
14	17.5	9.5	12.5	3.5	12.5	9.5	24.5	16.5	23.0	28.0	31.0	25.5
15	---	10.5	6.0	4.5	13.5	10.0	11.0	20.5	23.5	28.5	30.0	27.0
16	19.5	11.0	4.5	6.0	14.0	9.0	---	18.5	22.5	29.5	30.5	28.0
17	18.0	12.5	2.0	7.5	10.5	11.5	---	20.0	23.5	29.5	31.0	23.5
18	19.0	16.0	1.5	8.0	10.0	14.5	---	20.0	23.5	30.0	31.5	25.5
19	19.5	16.0	3.0	6.5	10.0	14.5	20.5	21.5	23.0	29.0	30.0	24.5
20	13.0	5.0	4.5	4.0	9.0	12.5	---	24.5	24.0	28.5	29.0	23.0
21	14.0	---	3.5	5.0	4.0	11.0	22.5	23.5	24.0	28.5	29.5	24.0
22	19.5	---	6.0	6.0	10.0	13.0	25.5	24.0	---	28.0	29.5	22.0
23	18.0	---	3.5	7.5	8.0	13.5	25.0	20.0	29.5	28.0	28.5	24.5
24	15.0	6.5	3.5	6.5	8.0	17.5	23.5	18.0	26.0	29.5	28.0	25.0
25	10.5	3.0	4.0	3.0	10.5	19.0	16.5	19.0	27.5	29.5	29.5	25.5
26	12.5	2.0	5.5	2.5	11.0	13.5	10.0	22.5	29.0	28.0	29.5	23.0
27	16.5	---	5.5	3.5	12.0	12.5	---	23.5	30.0	27.5	28.0	18.0
28	15.5	4.5	5.5	5.5	15.0	14.5	15.5	24.0	30.0	27.5	28.5	18.0
29	15.5	---	4.0	7.0	14.5	14.0	13.5	23.0	28.5	28.0	28.5	19.5
30	14.5	4.5	4.0	8.0	---	12.5	13.5	24.0	26.5	28.0	27.5	21.0
31	16.0	---	5.5	7.0	---	13.5	---	26.0	---	29.0	28.5	---
MONTH	17.5	11.5	6.0	4.0	9.0	11.5	20.5	20.0	25.5	28.0	29.5	24.5

YEAR MAX 36.5 MIN 0.5 MEAN 17.5

07303400 ELM FORK OF THE NORTH FORK RED RIVER NEAR CARL, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	1600	1600	1500	1600	1700	1800	1500	1200	1600	3500	---
2	1800	1400	1600	1500	1600	1600	1700	1500	1400	1800	3500	---
3	1800	1400	1600	2000	1600	1600	1800	1500	1600	1800	3100	---
4	1800	1400	1600	1700	1600	1600	1700	1600	1500	2100	3300	2200
5	1600	1500	1500	1400	1600	1600	1700	1600	1400	2300	3300	2400
6	1800	1500	1500	1400	1700	1600	1800	1600	1500	2400	3500	2600
7	1900	1500	1600	1600	1600	1600	1800	1600	1600	2500	3700	2700
8	1800	1600	1500	1800	1600	1600	1700	1600	1600	2600	3600	2700
9	1600	1500	1600	1500	1600	1600	1600	1600	1700	2700	3800	2700
10	1800	1500	1600	1500	1500	1600	1800	1200	1800	2700	3900	2700
11	1900	1600	1500	1500	1500	1600	1800	---	1800	2600	3800	2800
12	1900	1600	1600	1600	1600	1600	1700	1500	1900	2700	3700	2700
13	---	1600	1600	1600	1500	1600	1700	1600	1900	2700	---	2000
14	1900	1600	1500	1500	1500	1600	1700	1500	2000	2900	---	1600
15	---	1600	1500	1600	1500	1600	1600	1500	2100	2900	---	1800
16	1600	1600	1600	1600	1500	1600	1400	1600	2100	2600	---	---
17	1700	1600	1500	1600	1400	1600	1400	1600	2100	2100	---	---
18	1700	1600	1700	1500	1500	1600	1600	1700	2100	2300	4200	---
19	1700	1600	1500	1500	1500	1500	1600	1700	1900	2500	3900	---
20	1700	1400	1400	1600	1500	1600	1700	1700	2200	2700	3800	---
21	1700	---	1600	1600	1600	1600	1500	1700	2300	2800	4000	1300
22	1800	---	1600	1600	1600	1600	1400	1500	2300	2900	4200	1500
23	1700	---	1600	1600	1700	1600	1400	1500	2200	2900	4300	1600
24	1700	1500	1600	1500	1600	1600	1500	1500	2200	2900	4200	2000
25	1700	1500	1600	1500	1600	1800	1500	---	2300	3000	4300	2200
26	1700	1500	1600	1600	1600	1700	1600	---	2300	3100	4300	2300
27	1700	---	1600	1600	1600	1600	1500	---	2400	3200	4000	2400
28	1700	1500	1600	1600	1600	1500	1400	1400	2200	3300	4100	2400
29	1700	---	1500	1600	1600	1500	1500	1500	2100	3300	4400	2500
30	1700	1500	1400	1600	---	1700	1500	1400	1600	3400	4300	2300
31	1700	---	1500	1600	---	1700	---	1300	---	3400	4200	---
MONTH	1800	1500	1600	1600	1600	1600	1600	1500	1900	2700	3900	---
YEAR	MAX	4400	MIN	1200	MEAN	1900						

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.2	251	69.1	72.9	56.2	64.3	53.5	121	146	108	3.40	---
2	63.2	1940	73.4	64.8	56.2	60.5	55.1	113	106	82.6	3.31	---
3	63.2	469	73.4	75.6	56.2	60.5	53.5	101	99.4	58.3	2.93	---
4	63.2	151	73.4	64.3	56.2	64.8	50.5	95.0	72.9	45.4	7.13	71.3
5	63.2	130	72.9	64.3	60.5	60.5	50.5	86.4	56.7	34.2	20.5	49.9
6	63.2	117	64.8	75.6	64.3	69.1	58.3	77.8	52.6	22.7	21.7	40.7
7	66.7	105	69.1	43.2	64.8	73.4	63.2	69.1	51.8	16.9	18.0	33.5
8	63.2	104	68.8	63.2	69.1	90.7	64.3	69.1	47.5	14.0	15.6	42.3
9	63.2	93.1	73.4	81.0	64.8	90.7	56.2	69.1	45.9	12.4	11.3	56.1
10	58.3	85.0	73.4	113	60.7	86.4	53.5	706	45.7	10.2	7.58	47.4
11	61.6	95.0	68.8	101	56.7	82.1	53.5	---	42.8	7.72	6.67	39.3
12	61.6	86.4	69.1	86.4	60.5	77.8	55.1	279	42.1	6.56	3.80	2180
13	---	86.4	73.4	86.4	60.7	73.4	55.1	225	40.0	5.83	---	1320
14	71.8	86.4	68.8	68.8	56.7	73.4	59.7	178	40.0	5.48	---	104
15	---	86.4	64.8	73.4	60.7	77.8	372	154	39.7	7.83	---	53.5
16	64.8	90.7	69.1	73.4	60.7	73.4	1750	147	37.4	35.1	---	---
17	59.7	90.7	60.7	73.4	56.7	73.4	1180	134	36.3	14.2	---	---
18	55.1	95.0	68.8	64.8	60.7	69.1	436	129	35.2	9.31	1.25	---
19	55.1	121	68.8	64.8	56.7	60.7	251	124	30.8	7.42	1.16	---
20	50.5	110	75.6	64.8	56.7	60.5	234	115	34.5	6.56	1.13	---
21	50.5	---	73.4	60.5	56.2	56.2	130	106	35.4	6.05	1.19	175
22	53.5	---	77.8	60.5	56.2	56.2	110	89.1	35.4	5.32	.68	85.0
23	50.5	---	73.4	60.5	59.7	56.2	90.7	91.3	34.5	4.85	.70	64.8
24	50.5	76.9	86.4	56.7	60.5	56.2	85.0	130	83.2	4.54	.68	59.4
25	50.5	76.9	86.4	56.7	60.5	58.3	76.9	---	68.3	4.21	.70	57.6
26	55.1	68.8	82.1	60.5	56.2	55.1	77.8	---	51.5	4.02	.70	54.6
27	55.1	---	77.8	60.5	56.2	51.8	76.9	---	46.7	3.97	.22	63.5
28	55.1	76.9	77.8	69.1	64.8	52.6	102	302	38.0	3.92	.22	61.6
29	55.1	---	89.1	69.1	60.5	52.6	117	243	30.1	3.74	.24	56.7
30	55.1	64.8	83.2	69.1	---	59.7	117	189	77.8	3.67	.23	47.2
31	59.7	---	81.0	64.8	---	55.1	---	316	---	3.49	.68	---
MONTH	58.7	190	73.8	69.8	59.5	66.2	200	165	53.5	18.0	5.06	---
YEAR	MAX	2180	MIN	.22	MEAN	94.1						

07303400 ELM FORK OF THE NORTH FORK RED RIVER NEAR CARL, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11000	8500	8300	6300	7700	9700	11000	6700	2200	8400	78000	---
2	12000	5200	8500	6200	7600	8800	10000	7100	5200	11000	79000	---
3	12000	5100	8000	16000	7700	8500	11000	7200	7800	11000	59000	---
4	12000	5400	7900	10000	8300	8400	11000	8100	6500	18000	73000	21000
5	12000	6300	7400	4700	8500	8000	10000	8300	5000	24000	73000	28000
6	12000	7200	7200	4600	9300	8100	11000	8500	6800	28000	80000	34000
7	12000	7400	7800	8700	9000	8800	11000	8100	7900	32000	83000	37000
8	12000	7600	7500	12000	8100	8800	9700	8300	8300	35000	81000	40000
9	12000	7400	7700	7200	8100	7600	7700	8600	9400	38000	86000	40000
10	12000	7500	8100	6500	7100	7800	12000	1500	11000	40000	90000	38000
11	14000	7800	7500	6800	6600	8900	12000	---	11000	36000	86000	42000
12	13000	7900	7800	9100	7600	8400	9600	6900	12000	38000	85000	40000
13	---	8100	8000	7800	7300	8200	10000	7600	13000	39000	---	15000
14	13000	8300	7500	7400	7200	8400	10000	7100	15000	48000	---	8200
15	---	8200	7300	8500	7300	8000	8700	7200	18000	48000	---	11000
16	8900	7900	7600	8100	7500	8000	4900	8000	18000	35000	---	---
17	9700	8200	7400	7800	5300	8500	5900	8100	20000	19000	---	---
18	10000	8000	9100	7500	7400	8500	7700	9100	20000	26000	99000	---
19	11000	8800	6600	7200	7100	7200	8800	9600	13000	32000	89000	---
20	11000	5000	5000	8400	6400	8800	9900	9700	22000	38000	86000	---
21	11000	---	7700	8800	8300	9100	2600	9800	24000	43000	93000	3700
22	11000	---	9100	8600	8200	8800	5100	6500	26000	49000	100000	7000
23	10000	---	8000	7600	9200	7700	5800	3100	23000	51000	100000	9000
24	10000	7100	6300	7500	8700	8000	6800	6000	23000	48000	100000	15000
25	10000	7200	7600	7200	8300	11000	6600	---	25000	52000	100000	22000
26	10000	7000	7600	8000	8100	9300	7800	---	27000	59000	100000	25000
27	10000	---	8400	7800	9100	8100	6100	---	28000	67000	92000	28000
28	9600	7400	8100	8500	8700	6600	5800	5400	22000	70000	96000	28000
29	9900	---	6900	8300	8600	7400	6600	6700	17000	70000	100000	31000
30	10000	6700	5500	8400	---	9700	6800	5600	7900	75000	100000	26000
31	9600	---	6700	8300	---	11000	---	3700	---	76000	100000	---
MONTH	11100	7200	7600	8100	7900	8500	8400	7100	15200	40800	88800	---

YEAR MAX 100000 MIN 1500 MEAN 19000

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	386	1330	359	306	270	367	327	543	267	567	75.8	---
2	421	7200	381	268	267	333	324	537	393	505	74.7	---
3	421	1710	367	605	270	321	327	486	484	356	55.8	---
4	421	583	363	378	291	340	327	481	316	389	158	680
5	421	544	360	216	321	302	297	448	202	356	453	582
6	421	564	311	248	352	380	356	413	239	265	497	532
7	421	519	337	235	364	404	386	350	256	216	403	460
8	421	492	335	421	350	499	367	359	247	189	350	626
9	421	460	353	389	328	431	270	372	254	174	255	832
10	389	425	372	491	268	421	356	883	279	151	175	667
11	454	463	344	459	249	457	356	---	261	107	151	590
12	421	427	337	491	287	408	311	1290	266	92.3	87.2	32300
13	---	437	367	421	296	376	324	1070	274	84.2	---	9920
14	491	448	344	340	272	386	351	843	300	90.7	---	531
15	---	443	315	390	296	389	2020	739	340	130	---	327
16	360	448	328	372	304	367	6140	734	321	472	---	---
17	340	465	300	358	215	390	4970	678	346	128	---	---
18	324	475	369	324	300	367	2100	688	335	105	29.4	---
19	356	665	303	311	268	292	1380	700	211	95.0	26.4	---
20	327	391	270	340	242	333	1360	655	345	92.3	25.5	---
21	327	---	353	333	291	319	280	609	369	92.9	27.6	499
22	327	---	442	325	288	309	399	386	400	90.0	16.2	397
23	297	---	367	287	323	270	376	218	360	85.4	16.2	364
24	297	364	448	283	329	281	386	518	869	75.2	16.2	445
25	297	369	421	272	314	356	339	---	742	73.0	16.2	576
26	324	321	390	302	284	301	379	---	605	76.5	16.2	594
27	324	---	408	295	319	262	313	---	544	83.2	4.97	741
28	311	380	394	367	352	232	423	1170	380	83.2	5.18	716
29	321	---	410	359	325	260	517	1090	243	79.4	5.40	703
30	324	289	327	363	---	340	532	756	384	81.0	5.40	534
31	337	---	362	336	---	356	---	899	---	78.0	16.2	---
MONTH	369	808	359	351	298	349	886	664	361	176	114	---

YEAR MAX 32300 MIN 4.97 MEAN 555

07303400 ELM FORK OF THE NORTH FORK RED RIVER NEAR CARL, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG. C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22500	17000	16600	13000	15600	19300	22400	13700	5320	16900	117000	---
2	23000	11000	16600	12800	15300	17600	20700	14400	10800	22400	122000	---
3	23800	10700	16000	29700	15500	17100	21500	14700	15700	22600	86900	---
4	22800	11300	15900	20200	16700	16800	21000	16200	13300	33600	101000	38900
5	23100	13000	15000	10100	17100	16000	20700	16600	10600	43900	101000	50800
6	23500	14700	14600	9800	18500	16200	22200	17000	13900	51000	125000	61900
7	24400	14900	15700	17400	17900	17700	22300	16400	15900	57900	141000	68600
8	23500	15300	14800	24100	16200	17500	19300	16600	16700	64800	129000	73100
9	23600	14900	15500	14700	16300	15500	15600	17300	18800	68800	153000	73200
10	23600	15200	16200	13300	14500	15700	23700	4000	21300	73100	168000	68900
11	26400	15700	15100	13900	13500	17800	22800	---	21500	66500	153000	74700
12	25500	15900	15800	18100	15400	16800	19100	14000	24200	69600	149000	72600
13	---	16300	16200	15800	14800	16400	20200	15300	25800	71700	---	28500
14	25400	16600	15200	15000	14600	16900	20200	14500	29500	79500	---	16500
15	---	16400	14800	17100	14800	16200	17400	14600	33100	79000	---	22000
16	17800	15900	15400	16400	15100	16100	10400	16200	34200	63600	---	---
17	19200	16400	14900	15800	11100	17100	12200	16300	37600	36300	---	---
18	20200	16100	18200	15100	15000	17100	15600	18200	37000	47600	204000	---
19	20800	17500	13500	14600	14500	14600	17500	19000	24600	58000	165000	---
20	20900	10600	10500	16800	13100	17600	19600	19300	40500	69600	151000	---
21	20900	---	15600	17600	16600	18200	6490	19500	44600	75300	180000	8080
22	21600	---	18100	17200	16400	17700	10700	13300	48000	80100	211000	14300
23	20400	---	16100	15400	18400	15500	12100	7040	42500	81200	222000	17900
24	19900	14400	16600	15200	17500	16100	13900	12400	43000	79500	211000	28200
25	20000	14600	15800	14700	16700	22600	15500	---	45100	82400	213000	40700
26	20400	14300	15400	16200	16300	18600	15700	---	48600	86900	213000	46500
27	20200	---	16800	15700	16100	16200	12600	---	50700	93200	175000	50900
28	19100	15000	16200	17100	17500	13500	12100	11300	40000	95400	194000	50500
29	19700	---	14200	16600	17200	15000	13500	13700	32100	95400	227000	56500
30	20000	13700	11500	16900	---	19300	13800	11700	15900	106000	215000	48100
31	19100	---	13700	16600	---	20800	---	8080	---	111000	211000	---
MONTH	21800	14700	15400	16200	15900	17100	17000	14500	28700	67200	166800	---

YEAR MAX 227000 MIN 4000 MEAN 35600

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	790	2660	717	632	548	730	665	1110	646	1140	114	---
2	807	15200	762	553	537	665	671	1090	816	1030	115	---
3	835	3580	734	1120	544	646	639	992	975	732	82.1	---
4	800	1220	730	764	586	680	624	962	646	726	218	1260
5	811	1120	729	464	646	605	615	896	429	652	627	1060
6	825	1150	631	529	699	700	719	826	488	482	776	969
7	856	1050	678	470	725	812	783	708	515	391	685	852
8	825	991	679	846	700	992	730	717	496	350	557	1140
9	828	925	711	794	660	886	548	747	508	316	454	1520
10	765	862	744	1010	587	848	704	2350	541	276	327	1210
11	855	933	693	938	510	913	677	---	511	198	269	1050
12	826	859	683	977	582	816	619	2610	536	169	153	58600
13	---	880	744	853	599	753	654	2150	543	155	---	18900
14	960	896	698	688	552	776	709	1720	589	150	---	1070
15	---	886	639	785	599	787	4040	1500	626	213	---	653
16	721	902	665	753	612	739	13000	1490	609	859	---	---
17	674	930	603	725	450	785	10300	1360	650	245	---	---
18	654	956	737	652	607	739	4250	1380	619	193	60.6	---
19	674	1320	620	631	548	591	2740	1390	399	172	49.0	---
20	621	830	567	680	495	665	2700	1300	634	169	44.8	---
21	621	---	716	665	583	639	648	1210	686	163	53.5	1090
22	642	---	880	650	576	621	838	790	739	147	34.2	811
23	606	---	739	582	646	544	784	494	666	136	36.0	725
24	591	739	896	575	661	565	788	1070	1630	124	34.2	838
25	594	749	853	556	631	732	693	---	1340	116	34.5	1070
26	661	656	790	612	572	603	763	---	1090	113	34.5	1100
27	654	---	816	593	635	525	646	---	986	116	9.45	1350
28	619	769	787	739	709	474	882	2440	691	113	10.5	1300
29	638	---	843	717	650	526	1060	2220	459	108	12.3	1280
30	648	592	683	730	---	677	1080	1580	773	114	11.6	987
31	670	---	740	672	---	674	---	1960	---	114	34.2	---
MONTH	727	1670	726	708	602	700	1820	1370	695	322	186	---

YEAR MAX 58600 MIN 9.45 MEAN 1090

07303500 ELM FORK OF NORTH FORK RED RIVER, NEAR MANGUM, OK

LOCATION.--Lat 34°55'36", long 99°30'00", on east line sec.10, T.5 N., R.22 W., Greer County, at bridge on U.S. Highway 283, 3.0 mi (4.8 km) north of Mangum, 5.0 mi (8.0 km) downstream from Haystack Creek, and at mile 17.8 (28.6 km).

DRAINAGE AREA.--838 mi^2 (2,170 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1905 to March 1908 (published as Elm Fork of Red River), March 1930 to September 1931, October 1937 to September 1947, April 1965 to September 1967, August 1968 to 1976 (discontinued). Monthly discharge for some periods, published in WSP 1311. Occasional low-flow measurements, water years 1954, 1958-60, 1962-64, April to September 1965.

REVISED RECORDS.--WSP 1087: 1940(M). WSP 1311: 1906-8, 1951(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,520.77 ft (463.531 m) above mean sea level (Bureau of Reclamation bench mark). Apr. 12, 1905, to Mar. 31, 1908, nonrecording gage at unknown datum. Mar. 16, 1930, to Sept. 30, 1947, and April 1965 to Sept. 30, 1967, at datum 10.00 ft (3.048 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--23 years (water years 1906-7, 1931, 1938-47, 1966-67, 1969-76), 99.6 ft^3/s (2.821 m^3/s), 72,160 acre-ft/yr (89.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft^3/s (867 m^3/s) May 12, 1947, gage height, 23.52 ft (7.169 m), present datum; maximum gage height, 15.0 ft (4.57 m) May 27, 1905, datum then in use; no flow at times in 1939-40, 1945-46, 1964, 1970-71.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in spring of 1921 reached a stage of 26.4 ft (8.05 m), present datum, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft^3/s (68.0 m^3/s) and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)	DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)
Nov. 2	1445	5,290	150	19.58	5.968	Sept. 13	1300	*6,940	197	20.94	6.383
Apr. 16	1115	2,820	79.9	16.99	5.179						

Minimum daily, 0.60 ft^3/s (0.017 m^3/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	22	31	37	29	25	20	51	153	9.6	1.9	59
2	23	2650	30	34	28	25	20	46	82	14	1.9	152
3	23	724	31	33	28	25	19	38	63	13	1.8	50
4	23	129	31	31	28	25	20	34	27	8.2	1.7	26
5	22	86	31	30	29	25	19	31	30	8.2	1.9	14
6	22	67	30	31	29	25	19	35	39	6.8	1.9	9.3
7	22	57	30	44	29	25	19	30	26	6.5	1.9	7.2
8	22	51	30	34	29	28	20	28	23	6.2	1.5	6.5
9	21	46	30	32	31	31	20	28	19	5.5	1.2	5.9
10	21	43	29	34	30	31	21	289	18	5.5	.70	18
11	21	40	30	36	29	30	23	219	16	6.2	1.0	10
12	21	38	30	36	29	28	24	91	15	5.2	1.0	6.5
13	20	37	31	33	28	26	22	63	14	4.9	.90	3700
14	27	37	31	34	28	25	22	50	14	4.3	.70	328
15	62	36	30	32	27	25	358	48	13	4.3	.80	129
16	38	36	30	31	27	25	2080	45	13	11	.80	73
17	31	36	30	31	27	24	1640	43	12	43	.80	821
18	25	36	30	31	27	24	684	40	11	13	.60	363
19	22	39	29	30	26	24	177	38	8.2	6.5	.70	115
20	21	46	31	30	26	23	127	37	11	5.8	.80	96
21	21	47	32	30	26	22	112	37	9.6	5.2	.70	152
22	21	39	32	29	25	22	77	37	9.6	4.6	.70	76
23	20	34	33	30	25	22	56	36	9.6	3.3	.80	53
24	20	33	36	30	25	22	49	37	185	3.3	.70	47
25	20	33	38	30	25	22	43	55	93	2.6	.80	44
26	19	31	37	30	25	22	38	281	26	3.1	.70	40
27	20	31	35	28	25	21	38	427	15	2.8	.70	38
28	20	33	34	29	25	21	60	123	12	3.1	.90	36
29	20	33	38	30	25	21	56	76	10	3.1	1.5	35
30	20	33	38	29	---	20	56	59	9.6	2.8	4.8	33
31	20	---	38	30	---	20	---	60	---	2.4	2.8	---
TOTAL	731	4603	996	989	790	754	5939	2512	986.6	224.0	39.60	6543.4
MEAN	23.6	153	32.1	31.9	27.2	24.3	198	81.0	32.9	7.23	1.28	218
MAX	62	2650	38	44	31	31	2080	427	185	43	4.8	3700
MIN	19	22	29	28	25	20	19	28	8.2	2.4	.60	5.9
AC-FT	1450	9130	1980	1960	1570	1500	11780	4980	1960	444	79	12980

CAL YR 1975 TOTAL 41287.00 MEAN 113 MAX 4500 MIN 19 AC-FT 81890
WTR YR 1976 TOTAL 25107.60 MEAN 68.6 MAX 3700 MIN .60 AC-FT 49800

07303500 ELM FORK OF NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1958, 1960, 1962-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1976.
WATER TEMPERATURE: July 1968 to September 1976.

INSTRUMENTATION.--Water-quality monitor July 1968 to September 1976 (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 at or about 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 tables, and loads for those parameters were calculated from specific conductance values.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 62,000 micromhos Mar. 19, 1971; minimum, 1,040 micromhos Apr. 15, 1973.
WATER TEMPERATURE: Maximum, 37.0°C Aug. 11, 1969; minimum, -2.0°C Jan. 7, 9-13, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 28,400 micromhos Dec. 5; minimum daily, 2,140 micromhos Apr. 17.
WATER TEMPERATURE: Maximum daily, 35.0°C June 27; minimum daily, 0.5°C Jan. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
05...	--	--	1454	--	22	21800	7.9	21.5	--	--	--	--
16...	--	--	1700	--	46	20800	7.5	21.0	--	--	--	--
25...	--	--	1335	--	20	22500	7.8	--	--	--	--	--
NOV												
03...	--	--	1706	--	520	2340	7.5	15.5	--	--	--	--
14...	--	--	1735	--	37	16100	7.8	13.5	--	--	--	--
25...	1028	9740	0830	--	--	30000	8.2	10.0	4	9.9	75	196
25...	--	--	1505	--	33	15200	8.2	8.0	--	--	--	--
DEC												
05...	--	--	1705	--	31	17600	7.8	--	--	--	--	--
15...	--	--	1705	--	30	17300	7.8	--	--	--	--	--
22...	1028	9740	1700	--	--	19000	8.0	8.0	1	--	--	200
24...	--	--	1400	--	36	15400	7.8	--	--	--	--	--
JAN												
04...	--	--	1350	--	31	16200	7.7	--	--	--	--	--
15...	--	--	1715	--	32	17200	7.8	--	--	--	--	--
25...	--	--	1450	--	30	18300	8.0	--	--	--	--	--
27...	1028	9740	1700	--	--	20000	8.2	8.0	2	12.2	111	650
FEB												
05...	--	--	1705	--	29	17700	7.8	--	--	--	--	--
15...	--	--	1800	--	26	18800	7.7	--	--	--	--	--
25...	1028	9740	0830	--	--	20000	8.0	8.0	0	11.0	102	682
25...	--	--	1721	--	24	20000	7.7	--	--	--	--	--
MAR												
05...	--	--	1706	--	25	20200	7.9	--	--	--	--	--
15...	--	--	1710	--	25	19700	7.8	--	--	--	--	--
24...	1028	9740	1100	--	--	23000	8.0	15.0	1	10.2	111	270
25...	--	--	1710	--	21	20200	7.8	--	--	--	--	--
APR												
05...	--	--	1715	--	18	22500	7.9	--	--	--	--	--
15...	--	--	1710	--	744	4680	7.2	--	--	--	--	--
25...	--	--	1640	--	43	12500	7.8	--	--	--	--	--
27...	1028	9740	1515	--	--	13000	8.2	17.0	10	9.8	111	93
MAY												
05...	--	--	1705	--	31	15100	7.9	23.0	--	--	--	--
15...	--	--	1415	--	47	12500	8.0	--	--	--	--	--
25...	1028	9740	1500	--	--	20000	8.9	24.0	77	7.7	99	182
26...	--	--	1715	--	478	6100	7.5	--	--	--	--	--
JUN												
21...	--	--	1735	--	9.7	20700	7.6	29.5	--	--	--	--
22...	1028	9740	1400	--	--	19000	8.0	32.0	22	9.5	138	98
24...	--	--	1700	--	340	5940	7.6	26.0	--	--	--	--
28...	--	--	1705	--	11	17100	7.5	35.0	--	--	--	--
JUL												
02...	--	--	1710	--	18	23200	7.3	--	--	--	--	--
17...	--	--	1345	--	34	11800	7.2	30.5	--	--	--	--
20...	1028	9740	1200	--	--	21800	8.6	26.0	16	8.0	106	11
AUG												
17...	1028	9740	1410	--	--	16200	7.9	30.0	6	11.6	158	96
SEP												
05...	--	--	1705	--	12	16400	7.7	--	--	--	--	--
12...	--	--	1745	--	5.5	22300	7.6	--	--	--	--	--
13...	--	--	1710	--	4300	2450	7.4	--	--	--	--	--
22...	1028	9740	1230	--	--	6500	8.0	22.0	95	8.2	102	38

07303500 ELM FORK OF NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT											
05...	2300	2200	650	170	4400	80	40	22	151	0	124
16...	2100	2000	580	150	4300	82	41	19	142	0	116
25...	2700	2600	770	190	4500	78	38	21	179	0	147
NOV											
03...	860	790	310	22	180	31	2.7	10	87	0	71
14...	2000	1900	590	130	2900	76	28	16	188	0	154
25...	--	--	--	--	--	--	--	--	--	--	--
25...	2000	1800	570	140	3000	76	29	17	207	0	170
DEC											
05...	2100	1900	580	150	3300	77	32	17	175	0	144
15...	2000	1900	550	160	3200	77	31	16	142	0	116
22...	--	--	--	--	--	--	--	--	--	--	--
24...	1900	1700	510	140	2800	77	28	12	160	0	131
JAN											
04...	2100	1900	560	160	3100	76	30	15	190	0	156
15...	2000	1900	550	160	3200	77	31	15	134	0	110
25...	2100	2000	570	170	3700	79	35	17	158	0	130
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	2100	1900	570	160	3600	79	34	16	187	0	153
15...	2100	2000	580	170	3500	78	33	17	163	0	134
25...	--	--	--	--	--	--	--	--	--	--	--
25...	2300	2100	610	180	3800	78	35	18	156	0	128
MAR											
05...	2200	2100	590	180	4100	80	38	18	160	0	131
15...	2200	2100	590	180	3800	79	35	17	162	0	133
24...	--	--	--	--	--	--	--	--	--	--	--
25...	2300	2200	610	190	3900	78	35	19	139	0	114
APR											
05...	2300	2200	610	190	4300	80	39	21	148	0	121
15...	1000	890	320	56	620	56	6.4	11	166	0	136
25...	1800	1700	540	120	2100	71	21	15	172	0	141
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
05...	2100	1900	570	160	2700	74	26	16	175	0	144
15...	1900	1800	550	130	2100	70	21	14	170	0	139
25...	--	--	--	--	--	--	--	--	--	--	--
26...	1100	940	300	75	990	67	13	10	150	0	123
JUN											
21...	2300	2200	650	170	4100	79	37	22	149	0	122
22...	--	--	--	--	--	--	--	--	--	--	--
24...	820	700	240	54	900	70	14	12	154	0	126
28...	2000	1900	560	140	3200	78	31	21	123	0	101
JUL											
02...	2300	2200	630	180	4100	79	37	23	125	0	103
17...	1600	1500	500	80	2200	75	24	20	94	0	77
20...	--	--	--	--	--	--	--	--	--	--	--
AUG											
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	1900	1800	570	110	2900	77	29	20	109	0	89
12...	2200	2100	620	170	4400	81	40	22	143	0	117
13...	700	630	250	19	260	44	4.3	8.6	93	0	76
22...	--	--	--	--	--	--	--	--	--	--	--

07303500 ELM FORK OF NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
05...	3.0	1700	7000	--	14100	19.2	838	1.7	--	--	--
16...	7.2	1400	6600	--	13400	18.2	1660	.87	--	--	--
25...	4.5	1700	7600	--	14500	19.7	783	1.4	--	--	--
NOV											
03...	4.4	740	290	--	1730	2.35	2430	.43	--	--	--
14...	4.8	1600	4800	--	10500	14.3	1050	1.2	--	--	--
25...	--	--	--	.3	--	--	--	--	2.2	.01	1
25...	2.1	1600	4800	--	10600	14.4	944	1.7	--	.00	--
DEC											
05...	4.4	1700	5400	--	11700	15.9	979	3.9	--	--	--
15...	3.6	1600	5400	--	11400	15.5	923	2.2	--	--	--
22...	--	--	--	.3	--	--	--	--	2.2	<.01	--
24...	4.1	1500	4700	--	10100	13.7	982	2.3	--	--	--
JAN											
04...	6.1	1700	5200	--	10900	14.8	912	2.5	--	--	--
15...	3.4	1700	5300	--	11100	15.1	959	2.6	--	--	--
25...	2.5	1500	6000	--	12700	17.3	1030	2.7	--	--	--
27...	--	--	--	.4	--	--	--	--	3.1	.02	--
FEB											
05...	4.7	2100	5600	--	12200	16.6	955	2.5	--	--	--
15...	5.2	1700	6100	--	12100	16.5	849	2.3	--	--	--
25...	--	--	--	.4	--	--	--	--	.40	<.10	1
25...	5.0	1700	6100	--	13200	18.0	855	2.4	--	--	--
MAR											
05...	3.2	1800	6600	--	13300	18.1	898	2.2	--	--	--
15...	4.1	1700	6500	--	13200	18.0	891	1.9	--	--	--
24...	--	--	--	.4	--	--	--	--	.40	<.08	--
25...	3.5	1700	6400	--	12600	17.1	714	1.5	--	--	--
APR											
05...	3.0	--	6900	--	14800	20.1	719	1.3	--	--	--
15...	17	910	970	--	3110	4.23	6250	.47	--	--	--
25...	4.4	1500	3600	--	7760	10.6	901	.42	--	--	--
27...	--	--	--	.4	--	--	--	--	.60	<.08	--
MAY											
05...	3.5	1600	4500	--	9790	13.3	819	.92	--	--	--
15...	2.7	1500	3600	--	8160	11.1	1040	1.3	--	--	--
25...	--	--	--	.4	--	--	--	--	2.9	<.08	3
26...	7.6	1000	1400	--	3840	5.22	4960	.74	--	--	--
JUN											
21...	6.0	1400	7000	--	13800	18.8	361	1.3	--	--	--
22...	--	--	--	.5	--	--	--	--	.70	<.09	--
24...	6.2	650	1400	--	3590	4.88	3300	.76	--	--	--
28...	6.2	1300	5500	--	11000	15.0	327	.70	--	--	--
JUL											
02...	10	2100	7500	--	15900	21.6	773	.63	--	--	--
17...	9.5	1300	3400	--	7640	10.4	701	.98	--	--	--
20...	--	--	--	.3	--	--	--	--	1.7	<.08	--
AUG											
17...	--	--	--	.4	--	--	--	--	1.3	<.08	5
SEP											
05...	3.5	1500	5000	--	10600	14.4	343	.49	--	--	--
12...	5.7	1600	7200	--	14500	19.7	215	.97	--	--	--
13...	5.9	600	360	--	1660	2.26	19300	1.4	--	--	--
22...	--	--	--	.3	--	--	--	--	1.3	.35	--

07303500 ELM FORK OF NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
25...	9	11	9	100	20	45	--	40	--	5	2
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	<100	--	43	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JAN											
04...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	100	--	46	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	11	6	7	100	23	450	--	26	--	5	2
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	<100	--	50	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	400	--	60	--	--	--	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	5	18	22	600	33	99	<.5	36	7	8	6
26...	--	--	--	--	--	--	--	--	--	--	--
JUN											
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	--	152	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	600	--	163	--	--	--	--	--
AUG											
17...	10	30	18	200	45	205	.5	43	15	11	11
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	1300	--	132	--	--	--	--	--

07303500 ELM FORK OF THE NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21600	20800	18300	17000	20100	20800	21800	---	6570	18200	18800	4420
2	21700	5550	18700	16300	20300	20200	22100	12900	7520	23200	18700	10800
3	20300	2220	17400	16700	19800	20400	22100	14000	10400	---	---	8700
4	22700	5550	17100	15600	19300	19600	21500	14400	11700	20700	18300	11500
5	23300	7250	17600	16600	17300	19100	23700	15100	13500	20600	18300	16400
6	20100	8550	17500	16800	18800	21000	22100	14700	12300	21300	18300	18600
7	21200	9830	18800	18000	18300	19800	22300	15700	11500	21200	18400	19900
8	24600	11400	17200	18100	18400	19800	22600	16100	14300	21000	18500	20200
9	20000	12500	15900	18400	18900	18800	23100	16600	16000	20600	18300	20600
10	23500	13500	16800	18600	19700	18800	23800	4100	17200	20600	18100	6440
11	22900	14600	16800	19700	18900	18800	22400	5480	18100	20200	17800	20200
12	21900	15100	18600	20800	19500	19600	---	6510	18400	19400	17700	22300
13	24200	15300	17400	16600	18800	19200	17800	9290	---	19700	17700	2450
14	21100	15900	17500	16600	18400	19100	20900	11600	19600	19900	17500	3410
15	18200	16200	17700	17100	18800	19700	4680	12500	19800	19900	17400	5990
16	20900	16700	17100	15500	18600	19600	2220	14100	19900	19400	17400	8000
17	26800	16600	17100	16200	18100	19700	2140	15000	19600	11800	17100	4790
18	19400	15000	17000	18700	18600	19800	2390	15800	19600	18400	16800	6990
19	17500	16400	16600	17900	18500	20200	4250	16400	19600	24400	---	7010
20	18500	14200	16900	19100	18100	19700	6550	16800	19800	24000	16800	7020
21	20100	15800	18000	18200	19100	21000	7700	17300	20700	23000	16800	6520
22	21000	14800	18600	17200	19500	20700	9210	17700	---	22400	16700	6530
23	22000	16500	17400	16700	19200	19000	10500	17900	---	21700	16600	9100
24	22100	14100	15800	18300	19900	8920	---	17400	5940	21400	16300	11400
25	22600	16000	15900	18500	20000	20500	12500	20500	6310	20600	16500	16800
26	22200	17100	16700	19200	18800	21400	13300	6100	12100	20500	16800	17500
27	22500	14600	17700	19400	20000	19900	13600	3750	14800	19600	16800	16200
28	23800	14500	17500	18500	20100	20000	---	6050	17100	18600	16200	17500
29	24400	17200	16400	18100	20000	22600	---	8770	18200	19100	---	20400
30	18800	17300	16500	18900	---	22000	---	11300	18600	18900	12300	20400
31	21500	---	17000	20700	---	21700	---	11800	---	---	14500	---
MONTH	21700	13700	17300	17900	19100	19700	15000	12900	15200	20400	17200	12300

YEAR MAX 26800 MIN 2140 MEAN 16900

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	20.0	9.5	10.0	13.0	19.0	21.5	---	28.5	33.5	32.0	28.0
2	22.5	15.5	11.5	6.0	12.5	16.0	22.0	25.0	32.0	33.5	29.0	27.5
3	22.5	15.0	12.5	5.0	12.0	8.5	21.5	23.0	30.5	---	---	26.5
4	16.0	13.0	---	2.0	7.5	13.0	22.5	25.0	30.0	30.0	32.0	28.5
5	21.5	19.5	14.5	0.5	3.5	12.0	24.0	23.0	26.5	28.5	33.0	34.0
6	23.0	13.5	10.0	7.0	3.0	10.5	22.5	24.5	26.0	33.0	26.0	31.0
7	23.0	15.0	10.0	1.0	4.5	10.0	18.0	21.0	28.5	33.5	27.5	29.0
8	23.5	11.0	11.0	0.5	9.0	9.0	23.0	23.5	31.0	29.0	32.0	29.5
9	24.0	15.5	12.0	1.5	13.5	17.0	22.0	23.0	31.5	29.5	31.0	22.5
10	25.0	15.5	13.0	3.0	14.5	17.5	2.0	16.0	32.5	24.5	30.0	21.0
11	25.0	14.5	12.0	4.5	14.5	17.0	15.0	25.5	28.0	27.0	31.0	27.5
12	26.0	12.5	8.0	8.0	17.5	13.5	11.0	21.5	30.5	31.0	33.0	28.5
13	25.5	12.0	10.5	9.5	18.0	14.0	14.5	22.0	---	31.0	32.0	20.5
14	22.5	13.5	14.5	8.0	14.5	13.0	28.0	22.0	32.0	32.0	29.5	25.0
15	---	13.5	8.0	9.0	18.0	14.0	19.0	23.5	28.5	30.0	31.0	---
16	21.0	11.5	8.0	11.0	18.5	16.0	17.0	24.5	31.5	33.0	31.5	---
17	20.5	17.0	4.0	13.0	16.0	18.5	17.5	28.0	29.0	30.5	32.0	---
18	16.0	15.0	5.0	13.0	16.5	20.5	20.0	27.0	23.0	34.0	31.0	---
19	18.0	13.5	6.5	8.5	17.0	20.0	21.5	27.5	28.5	32.0	---	---
20	23.0	19.0	8.0	8.5	15.0	18.5	19.0	27.5	31.0	33.0	30.0	---
21	23.5	8.0	6.0	11.0	10.5	18.0	20.0	28.5	29.5	33.0	29.5	---
22	13.0	9.0	7.5	11.0	13.5	20.0	25.5	32.0	32.0	31.0	30.0	---
23	15.5	8.5	6.5	12.0	7.0	19.5	26.0	26.5	31.0	---	28.5	---
24	10.5	9.5	2.5	11.0	16.0	23.5	14.0	31.0	26.0	---	27.0	---
25	12.0	8.0	---	5.0	17.5	24.0	25.0	24.0	31.0	---	31.0	---
26	15.5	5.5	8.5	---	17.0	18.5	18.5	20.5	33.0	---	31.0	---
27	15.0	8.0	6.0	9.0	17.5	15.5	19.5	21.0	35.0	---	31.5	---
28	13.0	8.0	4.5	11.0	16.5	17.5	16.5	27.0	35.0	31.0	25.0	---
29	12.0	14.5	4.5	12.0	17.5	17.5	15.5	28.5	34.0	32.0	---	---
30	12.0	8.0	---	13.0	---	19.0	15.5	30.5	31.0	28.5	26.0	---
31	10.0	---	---	9.5	---	20.0	---	25.0	---	32.5	29.0	---
MONTH	19.0	13.0	8.5	8.0	13.5	16.5	19.5	25.0	30.0	31.0	30.0	---

YEAR MAX 35.0 MIN 0.5 MEAN 19.5

07303500 ELM FORK OF THE NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	1800	1600	1600	1700	1800	1800	---	1000	1600	1700	920
2	1800	990	1700	1500	1700	1700	1800	1400	1100	1900	1700	1300
3	1700	780	1600	1600	1700	1700	1800	1400	1200	---	---	1200
4	1900	990	1600	1500	1700	1700	1800	1400	1300	1800	1600	1300
5	1900	1100	1600	1600	1600	1700	1900	1500	1400	1800	1600	1500
6	1700	1200	1600	1600	1700	1800	1800	1500	1300	1800	1600	1700
7	1800	1200	1700	1600	1600	1700	1800	1500	1300	1800	1600	1700
8	2000	1300	1600	1600	1600	1700	1900	1500	1400	1800	1700	1700
9	1700	1400	1500	1600	1700	1700	1900	1600	1500	1800	1600	1800
10	1900	1400	1600	1700	1700	1700	1900	900	1600	1800	1600	1000
11	1900	1500	1600	1700	1700	1700	1800	980	1600	1700	1600	1700
12	1800	1500	1700	1800	1700	1700	---	1000	1600	1700	1600	1800
13	1900	1500	1600	1600	1700	1700	1600	1200	---	1700	1600	800
14	1800	1500	1600	1600	1600	1700	1800	1300	1700	1700	1600	850
15	1600	1500	1600	1600	1700	1700	930	1400	1700	1700	1600	1000
16	1800	1600	1600	1500	1700	1700	780	1400	1700	1700	1600	1100
17	2100	1600	1600	1500	1600	1700	780	1500	1700	1300	1600	940
18	1700	1500	1600	1700	1700	1700	790	1500	1700	1600	1600	1100
19	1600	1500	1600	1600	1700	1700	910	1500	1700	1900	---	1100
20	1700	1400	1600	1700	1600	1700	1000	1600	1700	1900	1600	1100
21	1700	1500	1600	1600	1700	1800	1100	1600	1800	1900	1600	1000
22	1800	1500	1700	1600	1700	1800	1200	1600	---	1800	1600	1000
23	1800	1600	1600	1600	1700	1700	1300	1600	---	1800	1600	1200
24	1800	1400	1500	1600	1700	1200	---	1600	1000	1800	1500	1300
25	1900	1500	1500	1700	1700	1800	1400	1800	1000	1800	1600	1600
26	1800	1600	1600	1700	1700	1800	1400	1000	1300	1800	1600	1600
27	1900	1500	1600	1700	1700	1700	1400	870	1500	1700	1600	1500
28	1900	1500	1600	1700	1700	1700	---	1000	1600	1700	1500	1600
29	1900	1600	1500	1600	1700	1900	---	1200	1600	1700	---	1700
30	1700	1600	1600	1700	---	1800	---	1300	1700	1700	1300	1700
31	1800	---	1600	1800	---	1800	---	1300	---	---	1500	---
MONTH	1800	1400	1600	1600	1700	1700	1500	1400	1500	1700	1600	1300

YEAR MAX 2100 MIN 780 MEAN 1600

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	107	134	160	133	121	97.2	---	413	41.5	8.72	147
2	112	7080	138	138	129	115	97.2	174	244	71.8	8.72	534
3	106	1520	134	143	129	115	92.3	144	204	---	---	162
4	118	345	134	126	129	115	97.2	129	94.8	39.9	7.34	91.3
5	113	255	134	130	125	115	97.5	126	113	39.9	8.21	56.7
6	101	217	130	134	133	121	92.3	142	137	33.0	8.21	42.7
7	107	185	138	190	125	115	92.3	121	91.3	31.6	8.21	33.0
8	119	179	130	147	125	129	103	113	86.9	30.1	6.88	29.8
9	96.4	174	121	138	142	142	103	121	76.9	26.7	5.18	28.7
10	108	163	125	156	138	142	108	702	77.8	26.7	3.02	48.6
11	108	162	130	165	133	138	112	579	69.1	28.5	4.32	45.9
12	102	154	138	175	133	129	---	246	64.8	23.9	4.32	31.6
13	103	150	134	143	129	119	95.0	204	---	22.5	3.89	7990
14	131	150	134	147	121	115	107	175	64.3	19.7	3.02	753
15	268	146	130	138	124	115	899	181	59.7	19.7	3.46	348
16	185	156	130	126	124	115	4380	170	59.7	50.5	3.46	217
17	176	156	130	126	117	110	3450	174	55.1	151	3.46	2080
18	115	146	130	142	124	110	1460	162	50.5	56.2	2.59	1080
19	95.0	158	125	130	119	110	435	154	37.6	33.3	---	342
20	96.4	174	134	138	112	106	343	160	50.5	29.8	3.46	285
21	96.4	190	138	130	119	107	333	160	46.7	26.7	3.02	410
22	102	158	147	125	115	107	249	160	---	22.4	3.02	205
23	97.2	147	143	130	115	101	197	156	---	16.0	3.46	172
24	97.2	125	146	130	115	71.3	---	160	499	16.0	2.83	165
25	103	134	154	138	115	107	163	267	251	12.6	3.46	190
26	92.3	134	160	138	115	107	144	759	91.3	15.1	3.02	173
27	103	126	151	129	115	96.4	144	1000	60.7	12.9	3.02	154
28	103	134	147	133	115	96.4	---	332	51.8	14.2	3.64	156
29	103	143	154	130	115	108	---	246	43.2	14.2	---	161
30	91.8	143	164	133	---	97.2	---	207	44.1	12.9	16.8	151
31	97.2	---	164	146	---	97.2	---	211	---	---	11.3	---
MONTH	115	440	139	140	124	113	540	255	116	32.4	5.35	543

YEAR MAX 7990 MIN 2.59 MEAN 211

07303500 ELM FORK OF THE NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7100	6800	5800	5200	6500	6800	7200	---	1600	5700	6000	940
2	7100	1300	5900	5000	6600	6500	7300	3700	1900	7700	5900	3000
3	6600	440	5400	5100	6400	6600	7300	4100	2900	---	---	2300
4	7500	1300	5300	4700	6200	6300	7000	4200	3300	6700	5800	3300
5	7800	1900	5500	5100	5400	6100	7900	4500	3900	6700	5800	5000
6	6500	2300	5400	5200	6000	6800	7300	4300	3500	7000	5800	5900
7	6900	2700	6000	5600	5800	6400	7400	4700	3300	6900	5800	6400
8	8300	3200	5300	5700	5800	6400	7500	4900	4200	6800	5800	6500
9	6400	3600	4800	5800	6000	6000	7700	5100	4800	6700	5800	6700
10	7800	3900	5200	5900	6300	6000	8000	860	5300	6700	5700	1600
11	7600	4300	5200	6300	6000	6000	7400	1300	5700	6500	5600	6500
12	7200	4500	5900	6800	6200	6300	---	1600	5800	6200	5500	7400
13	8100	4600	5400	5100	6000	6100	5600	2500	---	6300	5500	490
14	6900	4800	5400	5100	5800	6100	6800	3300	6300	6400	5400	710
15	5700	4900	5500	5300	6000	6300	1000	3600	6400	6400	5400	1400
16	6800	5100	5300	4600	5900	6300	440	4100	6400	6200	5400	2100
17	9200	5100	5300	4900	5700	6300	420	4400	6300	3400	5300	1000
18	6200	4400	5200	5900	5900	6400	470	4800	6300	5800	5200	1800
19	5400	5000	5100	5600	5800	6500	900	5000	6300	8200	---	1800
20	5800	4200	5200	6100	5700	6300	1600	5200	6400	8000	5200	1800
21	6500	4800	5600	5700	6100	6800	2000	5400	6700	7600	5200	1600
22	6800	4400	5900	5300	6200	6700	2500	5500	---	7400	5100	1600
23	7200	5000	5400	5100	6100	6000	2900	5600	---	7100	5100	2500
24	7300	4100	4800	5800	6400	2400	---	5400	1400	7000	5000	3200
25	7500	4800	4800	5800	6400	6600	3600	6600	1500	6700	5000	5200
26	7300	5300	5100	6100	6000	7000	3900	1500	3500	6600	5200	5400
27	7400	4300	5500	6200	6400	6400	4000	780	4400	6300	5200	4900
28	8000	4300	5400	5800	6500	6400	---	1500	5300	5900	4900	5400
29	8200	5300	5000	5700	6400	7500	---	2400	5700	6100	---	6600
30	6000	5400	5000	6000	---	7200	---	3200	5900	6000	3500	6600
31	7000	---	5200	6700	---	7100	---	3400	---	---	4300	---
MONTH	7100	4100	5300	5600	6100	6300	4700	3800	4600	6600	5300	3700

YEAR MAX 9200 MIN 420 MEAN 5300

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	404	485	519	509	459	389	---	661	148	30.8	150
2	441	9300	478	459	499	439	394	460	421	291	30.3	1230
3	410	860	452	454	484	445	374	421	493	---	---	310
4	466	453	444	393	469	425	378	386	241	148	26.6	232
5	463	441	460	413	423	412	405	377	316	148	29.8	189
6	386	416	437	435	470	459	374	406	369	129	29.8	148
7	410	416	486	665	454	432	380	381	232	121	29.8	124
8	493	441	429	523	454	484	405	370	261	114	23.5	114
9	363	447	389	501	502	502	416	386	246	99.5	18.8	107
10	442	453	407	542	510	502	454	671	258	99.5	10.8	77.8
11	431	464	421	612	470	486	460	769	246	109	15.1	175
12	408	462	478	661	485	476	---	393	235	87.0	14.9	130
13	437	460	452	454	454	428	333	425	---	83.3	13.4	4900
14	503	480	452	468	438	412	404	445	238	74.3	10.2	629
15	954	476	445	458	437	425	967	467	225	74.3	11.7	488
16	698	496	429	385	430	425	2470	498	225	184	11.7	414
17	770	496	429	410	416	408	1860	511	204	395	11.4	2220
18	418	428	421	494	430	415	868	518	187	204	8.42	1760
19	321	526	399	454	407	421	430	513	139	144	---	559
20	329	522	435	494	400	391	549	519	190	125	11.2	467
21	369	609	484	462	428	404	605	539	174	107	9.83	657
22	386	463	510	415	418	398	520	549	---	91.9	9.64	328
23	389	459	481	413	412	356	438	544	---	63.3	11.0	358
24	394	365	467	470	432	143	---	539	699	62.4	9.45	406
25	405	428	492	470	432	392	418	980	377	47.0	10.8	618
26	374	444	509	494	405	416	400	1140	246	55.2	9.83	583
27	400	360	520	469	432	363	410	899	178	47.6	9.83	503
28	432	383	496	454	439	363	---	498	172	49.4	11.9	525
29	443	472	513	462	432	425	---	492	154	51.1	---	624
30	324	481	513	470	---	389	---	510	153	45.4	45.4	588
31	378	---	534	543	---	383	---	551	---	---	32.5	---
MONTH	448	764	463	481	447	415	604	539	279	117	17.8	654

YEAR MAX 9300 MIN 8.42 MEAN 438

07303500 ELM FORK OF THE NORTH FORK RED RIVER NEAR MANGUM, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG, C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14100	13500	11900	11000	13100	13500	14200	---	4020	11800	12200	2840
2	14100	3460	12100	10500	13200	13100	14400	8230	4650	15200	12100	6830
3	13200	1650	11300	10800	12900	13300	14400	8970	6570	---	---	5440
4	14800	3460	11100	10000	12500	12700	14000	9240	7430	13500	11900	7300
5	15200	4470	11400	10700	11200	12400	15500	9710	8640	13400	11900	10600
6	13100	5340	11300	10900	12200	13700	14400	9440	7830	13900	11900	12100
7	13800	6190	12200	11700	11900	12900	14600	10100	7300	13800	11900	12900
8	16100	7230	11100	11700	11900	12900	14800	10400	9170	13700	12000	13100
9	13000	7970	10200	11900	12300	12200	15100	10700	10300	13400	11900	13400
10	15400	8640	10900	12100	12800	12200	15600	2670	11100	13400	11700	3940
11	15000	9380	10900	12800	12300	12200	14600	3420	11700	13100	11500	13100
12	14300	9710	12100	13500	12700	12700	---	3980	11900	12600	11500	14600
13	15800	9850	11300	10700	12200	12500	11500	5830	---	12800	11500	1780
14	13700	10200	11300	10700	11900	12400	13600	7370	12700	12900	11300	2300
15	11800	10500	11500	11100	12200	12800	2980	7970	12900	12900	11300	3690
16	13600	10800	11100	9980	12100	12700	1650	9040	12900	12600	11300	4970
17	17600	10700	11100	10500	11700	12800	1610	9640	12700	7500	11100	3040
18	12600	9640	11000	12100	12100	12900	1740	10200	12700	11900	10900	4300
19	11300	10600	10700	11600	12000	13100	2750	10600	12700	16000	---	4310
20	12000	9110	10900	12400	11700	12800	4000	10900	12900	15700	10900	4320
21	13100	10200	11700	11800	12400	13700	4770	11200	13500	15000	10900	3980
22	13700	9510	12100	11100	12700	13500	5780	11500	---	14600	10800	3990
23	14400	10700	11300	10800	12500	12300	6630	11600	---	14100	10700	5700
24	14400	9040	10200	11900	12900	5580	---	11300	3670	13900	10500	7230
25	14800	10300	10200	12000	13000	13300	7970	13300	3870	13400	10700	10900
26	14500	11100	10800	12500	12200	13900	8500	3750	7700	13300	10900	11300
27	14700	9380	11500	12600	13000	12900	8700	2480	9510	12700	10900	10500
28	15600	9310	11300	12000	13100	13000	---	3730	11100	12100	10500	11300
29	16000	11100	10600	11700	13000	14800	---	5480	11800	12400	---	13300
30	12200	11200	10700	12300	---	14400	---	7170	12100	12300	7830	13300
31	14000	---	11000	13500	---	14100	---	7500	---	---	9310	---
MONTH	14100	8810	11200	11600	12400	12800	9750	8250	9750	13200	11100	7880
YEAR	MAX	17600	MIN	1610	MEAN	10900						

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	876	802	996	1100	1030	911	767	---	1660	306	62.6	452
2	876	24800	980	964	998	884	778	1020	1030	575	62.1	2800
3	820	3230	946	962	975	898	739	920	1120	---	---	734
4	919	1210	929	837	945	857	756	848	542	299	54.6	512
5	903	1040	954	867	877	837	795	813	700	297	61.0	401
6	778	966	915	912	955	925	739	892	824	255	61.0	304
7	820	953	988	1390	932	871	749	818	512	242	61.0	251
8	956	996	899	1070	932	975	799	786	569	229	48.6	230
9	737	990	826	1030	1030	1020	815	809	528	199	38.6	213
10	873	1000	853	1110	1040	1020	885	2080	539	199	22.1	191
11	850	1010	883	1240	963	988	907	2020	505	219	31.0	354
12	811	996	980	1310	994	960	---	978	482	177	31.0	256
13	853	984	946	953	922	877	683	992	---	169	27.9	17800
14	999	1020	946	982	900	837	808	995	480	150	21.4	2040
15	1980	1020	931	959	889	864	2880	1030	453	150	24.4	1290
16	1400	1050	899	835	882	857	9270	1100	453	374	24.4	980
17	1470	1040	899	879	853	829	7130	1120	411	871	24.0	6740
18	850	937	891	1010	882	836	3210	1100	377	418	17.7	4210
19	671	1120	838	940	842	849	1310	1090	281	281	---	1340
20	680	1130	912	1000	821	795	1370	1090	383	246	23.5	1120
21	743	1290	1010	956	870	814	1440	1120	350	211	20.6	1630
22	777	1000	1050	869	857	802	1200	1150	---	181	20.4	819
23	778	982	1010	875	844	731	1000	1130	---	126	23.1	816
24	778	805	991	964	871	331	---	1130	1830	124	19.8	917
25	799	918	1050	972	877	790	925	1980	972	94.1	23.1	1290
26	744	929	1080	1010	823	826	872	2850	541	111	20.6	1220
27	794	785	1090	953	877	731	893	2860	385	96.0	20.6	1080
28	842	830	1040	940	884	737	---	1240	360	101	25.5	1100
29	864	989	1090	948	877	839	---	1120	319	104	---	1260
30	659	998	1100	963	---	778	---	1140	314	93.0	101	1190
31	756	---	1130	1090	---	761	---	1220	---	---	70.4	---
MONTH	892	1860	969	996	912	840	1670	1250	627	238	37.2	1780
YEAR	MAX	24800	MIN	17.7	MEAN	1010						

07304500 ELK CREEK NEAR HOBART, OK

LOCATION.--Lat 34°54'51", long 99°06'49", in NE 1/4 NE 1/4 sec.17, T.5 N., R.18 W., Kiowa County, 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 mi^2 (1,422 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to March 1908, October 1949 to current year.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905.

GAGE.--Water-stage recorder. Datum of gage is 1,429.4 ft (435.68 m) above mean sea level. See WSP 1920 for history of changes prior to Apr. 28, 1954.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--30 years (water years 1905-07, 1950-76), 72.0 ft^3/s (2.039 m^3/s), 52,160 acre-fy/yr (64.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft^3/s (634 m^3/s) Oct. 4, 1955, gage height, 30.75 ft (9.373 m), from floodmarks, from rating curve extended above 5,300 ft^3/s (150 m^3/s) on basis of field estimate of peak flow; no flow at times in most years.
Flood of June 9, 1907, reached a stage of 28.9 ft (8.81 m), datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s (62.3 m^3/s) and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)	DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)
Sept. 13	1900	*9,990	283	29.13	8.879	Sept. 17	0845	3,070	86.9	22.91	6.983

Minimum daily, 2.0 ft^3/s (0.057 m^3/s) Aug. 31 to Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	21	35	43	38	20	21	100	128	27	9.4	2.0
2	23	175	37	39	32	20	20	89	99	25	9.8	2.0
3	22	505	35	38	29	20	20	76	73	24	7.8	2.0
4	21	189	35	33	29	19	19	59	57	23	7.0	2.0
5	21	97	35	27	32	20	18	53	47	23	6.2	2.0
6	20	173	34	35	30	20	18	46	40	22	5.8	2.0
7	20	127	46	24	26	21	18	42	59	21	5.0	2.0
8	19	77	35	39	25	25	18	37	69	21	4.5	2.0
9	19	60	31	37	30	36	18	34	67	20	4.0	2.0
10	18	52	34	31	28	40	17	32	65	20	3.5	2.0
11	18	48	32	33	26	43	17	176	63	19	3.3	2.0
12	18	43	31	39	26	38	17	119	60	18	3.2	2.0
13	18	48	33	34	27	35	17	85	67	17	3.0	5700
14	26	42	33	33	25	32	17	72	280	15	2.9	3230
15	793	42	35	31	24	27	66	64	108	14	2.8	359
16	126	42	41	30	23	25	518	55	93	14	2.7	218
17	59	43	31	30	22	25	582	50	80	13	2.6	2230
18	35	44	41	29	22	25	493	46	66	12	2.6	824
19	34	44	32	29	21	24	253	42	58	12	2.5	294
20	33	66	29	37	21	24	711	41	48	12	2.4	220
21	31	67	42	30	20	23	215	40	42	11	2.4	183
22	29	48	50	26	27	22	116	40	36	11	2.3	125
23	27	44	49	27	26	22	85	85	31	11	2.3	79
24	26	39	49	27	23	22	64	53	326	11	2.3	61
25	25	39	47	38	23	23	52	42	196	10	2.2	51
26	24	38	43	43	21	24	45	287	96	10	2.2	46
27	24	44	43	38	21	23	40	578	60	10	2.2	40
28	23	36	41	34	20	23	67	358	37	9.8	2.1	34
29	23	37	43	33	20	23	78	200	31	9.4	2.1	30
30	23	36	46	33	---	22	127	160	28	11	2.1	27
31	22	---	45	32	---	21	---	152	---	10	2.0	---
TOTAL	1642	2366	1193	1032	737	787	3767	3313	2510	486.2	115.2	13775.0
MEAN	53.0	78.9	38.5	33.3	25.4	25.4	126	107	83.7	15.7	3.72	459
MAX	793	505	50	43	38	43	711	578	326	27	9.8	5700
MIN	18	21	29	24	20	19	17	32	28	9.4	2.0	2.0
AC-FT	3260	4690	2370	2050	1460	1560	7470	6570	4980	964	228	27320

CAL YR 1975	TOTAL 58388.0	MEAN 160	MAX 6710	MIN 17	AC-FT 115800			
WTR YR 1976	TOTAL 31723.4	MEAN 86.7	MAX 5700	MIN 2.0	AC-FT 62920			

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.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,100 micromhos Nov. 27, 1958; minimum daily, 153 micromhos Sept. 5, 1971.
WATER TEMPERATURE: Maximum daily, 35.0°C July 8, 1951; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,420 micromhos Mar. 11; minimum daily, 171 micromhos Sept. 17.
WATER TEMPERATURE: Maximum daily, 25.5°C Aug. 1, 11; minimum daily, 0.0°C Jan. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
14...	--	--	0855	--	18	1980	8.4	--	--	--	--	--
15...	--	--	0824	--	1130	468	8.0	--	--	--	--	--
29...	--	--	0755	--	24	1900	8.3	--	--	--	--	--
NOV												
04...	--	--	0805	--	207	640	8.1	--	--	--	--	--
19...	--	--	0800	--	44	1590	8.5	--	--	--	--	--
25...	1028	9740	1200	39	--	1600	8.3	5.0	11	10.4	87	15
30...	--	--	0800	--	35	1910	8.3	--	--	--	--	--
DEC												
01...	--	--	0840	--	35	1870	8.3	--	--	--	--	--
23...	1028	9740	1115	49	--	1550	8.8	3.5	7	--	--	19
24...	--	--	0845	--	48	1360	8.3	--	--	--	--	--
30...	--	--	1335	--	46	2180	8.1	--	--	--	--	--
JAN												
02...	--	--	0825	--	40	2160	8.2	3.0	--	--	--	--
11...	--	--	0850	--	27	2070	8.2	.5	--	--	--	--
28...	1028	9740	1100	34	--	1650	5.3	3.0	2	13.8	111	12
30...	--	--	0812	--	32	1690	8.3	4.0	--	--	--	--
FEB												
01...	--	--	0840	--	41	1730	8.3	--	--	--	--	--
12...	--	--	0835	--	26	1970	8.2	--	--	--	--	--
22...	--	--	0840	--	18	2180	8.4	--	--	--	--	--
25...	1028	9740	1200	23	--	2100	8.5	12.0	1	14.3	144	27
MAR												
02...	--	--	0815	--	20	2020	8.2	--	--	--	--	--
11...	--	--	0705	--	43	2420	8.2	--	--	--	--	--
23...	1028	9740	1300	22	--	2100	8.6	15.0	1	13.4	144	12
28...	--	--	0815	--	23	1770	8.3	--	--	--	--	--
APR												
10...	--	--	0806	--	17	2100	7.8	--	--	--	--	--
20...	--	--	0740	--	829	480	7.1	--	--	--	--	--
27...	--	--	0735	--	59	1550	7.6	--	--	--	--	--
27...	1028	9740	1045	58	--	1400	8.1	15.5	20	9.3	101	50
MAY												
01...	--	--	0820	--	99	1000	7.6	--	--	--	--	--
09...	--	--	0820	34	--	1760	8.2	--	--	--	--	--
26...	1028	9740	0930	287	--	1300	7.9	17.5	>1000	8.9	102	110
28...	--	--	0800	--	370	489	7.7	--	--	--	--	--
JUN												
08...	--	--	0840	--	69	1200	8.0	--	--	--	--	--
22...	1028	9740	1615	36	--	1650	8.5	26.0	63	7.9	100	22
23...	--	--	0830	31	--	1700	7.9	--	--	--	--	--
24...	--	--	1030	--	282	518	7.7	--	--	--	--	--
JUL												
02...	--	--	0800	25	--	1510	7.6	--	--	--	--	--
16...	--	--	0805	14	--	1790	7.8	--	--	--	--	--
21...	--	--	0820	11	--	1930	7.7	--	--	--	--	--
21...	1028	9740	0950	11	--	1750	8.1	24.5	29	5.7	73	34
AUG												
05...	--	--	0830	6.2	--	2060	7.7	--	--	--	--	--
10...	--	--	0720	3.5	--	1800	7.8	--	--	--	--	--
17...	1028	9740	1700	2.6	--	2080	8.2	29.0	9	12.2	164	14
25...	--	--	0837	2.2	--	2300	7.6	--	--	--	--	--

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
SEP												
12...	--	--	0800	2.0	--	2590	7.8	--	--	--	--	--
17...	--	--	0805	--	3280	171	7.7	--	--	--	--	--
21...	1028	9740	1745	217	--	900	8.1	21.5	98	7.5	92	58
26...	--	--	0815	--	47	1360	8.1	--	--	--	--	--

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL CALCIUM (CA) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT												
14...	770	400	--	160	--	89	--	140	28	2.2	5.1	434
15...	180	60	--	52	--	13	--	25	22	.8	5.5	150
29...	790	400	--	170	--	89	--	130	26	2.0	5.4	472
NOV												
04...	260	110	--	64	--	24	--	32	21	.9	8.3	178
19...	700	350	--	150	--	79	--	100	24	1.6	6.0	400
25...	--	--	--	--	--	--	--	--	--	--	--	--
30...	850	470	--	180	--	98	--	120	23	1.8	9.4	469
DEC												
01...	810	430	--	170	--	94	--	150	29	2.3	4.3	468
23...	--	--	--	--	--	--	--	--	--	--	--	--
24...	550	220	--	110	--	66	--	95	27	1.8	4.4	393
30...	950	590	--	200	--	110	--	150	25	2.1	6.2	445
JAN												
02...	880	580	--	170	--	110	--	140	26	2.1	4.8	364
11...	800	530	--	140	--	110	--	140	27	2.2	4.2	328
28...	--	--	--	--	--	--	--	--	--	--	--	--
30...	630	350	--	110	--	87	--	110	27	1.9	3.6	346
FEB												
01...	720	400	--	130	--	95	--	110	25	1.8	3.4	388
12...	880	500	--	170	--	110	--	130	24	1.9	3.5	458
22...	920	590	--	170	--	120	--	160	27	2.3	4.1	404
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
02...	800	560	--	140	--	110	--	150	29	2.3	4.4	300
11...	1000	750	--	200	--	130	--	180	27	2.4	4.5	343
23...	--	--	--	--	--	--	--	--	--	--	--	--
28...	730	420	--	140	--	93	--	130	28	2.1	4.1	378
APR												
10...	880	510	--	170	--	110	--	160	28	2.4	4.7	449
20...	190	73	--	48	--	17	--	28	24	.9	5.1	143
27...	660	340	--	130	--	82	--	96	24	1.6	5.8	399
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
01...	380	170	--	78	--	45	--	64	26	1.4	5.7	261
09...	720	380	--	150	--	85	--	130	28	2.1	5.8	415
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	220	71	--	55	--	20	--	26	20	.8	5.6	181
JUN												
08...	500	190	--	110	--	54	--	78	25	1.5	5.8	374
22...	--	--	--	--	--	--	--	--	--	--	--	--
23...	780	460	--	150	--	99	--	110	23	1.7	6.2	399
24...	200	98	--	47	--	20	--	27	22	.8	6.3	124
JUL												
02...	570	340	--	97	--	79	--	120	31	2.2	7.2	282
16...	670	450	--	110	--	97	--	150	32	2.5	6.0	273
21...	780	510	--	130	--	110	--	150	29	2.3	5.8	321
21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	800	530	--	140	--	110	--	140	27	2.2	5.7	333
10...	650	360	--	110	--	91	--	130	30	2.2	5.7	348
17...	--	--	--	--	--	--	--	--	--	--	--	--
25...	780	510	--	130	--	110	--	210	37	3.3	6.0	324
SEP												
12...	1100	900	--	230	--	120	--	190	28	2.5	7.5	202
17...	82	16	--	24	--	5.4	--	6.9	15	.3	3.7	81
21...	--	--	--	--	--	--	--	--	--	--	--	--
26...	540	320	--	120	--	59	--	94	27	1.8	6.7	276

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
14...	6	366	2.8	540	130	--	1410	1.92	68.5	1.5	--	--
15...	0	123	2.4	78	33	--	256	.35	781	.91	--	--
29...	0	387	3.8	500	120	--	1370	1.86	88.8	1.7	--	--
NOV												
04...	0	146	2.3	140	30	--	414	.56	231	.91	--	--
19...	13	350	2.2	430	85	--	1130	1.54	134	2.3	--	--
25...	--	--	--	--	--	.6	--	--	--	--	3.2	.49
30...	0	385	3.8	560	120	--	1440	1.96	136	3.1	--	--
DEC												
01...	0	384	3.8	560	110	--	1380	1.88	130	2.7	--	--
23...	--	--	--	--	--	.6	--	--	--	--	5.0	.16
24...	0	322	3.2	330	74	--	944	1.28	122	2.5	--	--
30...	0	365	5.7	670	150	--	1600	2.18	199	2.7	--	--
JAN												
02...	0	299	3.7	660	130	--	1590	2.16	172	2.6	--	--
11...	0	269	3.3	600	120	--	1450	1.97	106	3.3	--	--
28...	--	--	--	--	--	.6	--	--	--	--	--	2.1
30...	0	284	2.8	440	90	--	1160	1.58	100	2.5	--	--
FEB												
01...	0	318	3.1	460	94	--	1220	1.66	135	2.2	--	--
12...	0	376	4.6	560	120	--	1480	2.01	104	1.9	--	--
22...	0	331	2.6	690	140	--	1630	2.22	79.2	.93	--	--
25...	--	--	--	--	--	.5	--	--	--	--	1.1	.38
MAR												
02...	0	246	3.0	670	130	--	1380	1.88	74.5	.76	--	--
11...	0	281	3.5	800	170	--	1780	2.42	207	1.5	--	--
23...	--	--	--	--	--	.5	--	--	--	--	1.3	.38
28...	0	310	3.0	490	120	--	1260	1.71	78.2	.95	--	--
APR												
10...	0	368	11	640	150	--	1550	2.11	71.1	1.3	--	--
20...	0	117	18	78	36	--	307	.42	687	1.5	--	--
27...	0	327	16	440	78	--	1100	1.50	175	2.1	--	--
27...	--	--	--	--	--	.5	--	--	--	--	1.0	.45
MAY												
01...	0	214	10	230	58	--	663	.90	177	2.6	--	--
09...	0	340	4.2	440	140	--	1250	1.70	115	2.3	--	--
26...	--	--	--	--	--	.3	--	--	--	--	3.7	1.2
28...	0	148	5.8	83	28	--	326	.44	326	1.1	--	--
JUN												
08...	0	307	6.0	230	70	--	770	1.05	143	2.4	--	--
22...	--	--	--	--	--	.6	--	--	--	--	1.6	.47
23...	0	327	8.0	500	100	--	1230	1.67	103	2.3	--	--
24...	0	102	4.0	100	33	--	309	.42	235	.82	--	--
JUL												
02...	0	231	11	420	120	--	1040	1.41	70.2	.80	--	--
16...	0	224	6.9	520	140	--	1270	1.73	48.0	.63	--	--
21...	0	263	10	590	140	--	1400	1.90	41.6	.62	--	--
21...	--	--	--	--	--	.4	--	--	--	--	2.4	.12
AUG												
05...	0	273	11	630	170	--	1510	2.05	25.3	.69	--	--
10...	0	285	8.8	470	150	--	1260	1.71	11.9	.54	--	--
17...	--	--	--	--	--	.5	--	--	--	--	1.8	.10
25...	0	266	13	690	220	--	1660	2.26	9.86	.44	--	--
SEP												
12...	0	166	5.1	960	230	--	1970	2.68	10.6	.68	--	--
17...	0	66	2.6	13	13	--	119	.16	1050	1.4	--	--
21...	--	--	--	--	--	.3	--	--	--	--	2.8	.40
26...	0	226	3.5	360	99	--	936	1.27	119	1.7	--	--

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
25...	4	2	9	3	1000	26	134	--	6	--	3	6
30...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
01...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	200	--	96	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
02...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	100	--	120	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
01...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	4	1	5	4	<100	13	156	--	9	--	3	1
MAR												
02...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	<100	--	180	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
10...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	500	--	200	--	--	--	--	--
MAY												
01...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
26...	32	3	65	50	900	34	1440	<.5	60	4	3	150
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	500	--	113	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	600	--	258	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
17...	9	3	22	15	700	31	274	1.0	20	5	2	11
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
12...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	1700	--	630	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--

07304500 ELK CREEK NEAR HOBART, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1860	1900	1870	2150	1730	1980	2000	1000	685	1550	1980	1870
2	1880	1810	1910	2160	1770	2020	2020	1220	900	1510	---	1960
3	1870	811	1900	2120	1840	2100	2040	1390	1020	1610	1950	1970
4	1900	640	1900	2080	1880	2160	2050	1320	909	1640	2040	---
5	1910	768	1940	2060	1840	2170	2040	1350	948	1670	2060	2050
6	1880	989	1940	2070	1820	2200	2060	1430	1040	1690	2050	2080
7	1940	968	1960	2110	1830	2190	2040	1410	1130	1710	2000	2140
8	1930	926	2040	2120	1880	2230	2070	1490	1200	1720	1980	2190
9	1930	1040	1850	2080	1850	2160	2090	1760	1350	1740	1850	1780
10	1930	1180	1900	2130	1940	2300	2100	1590	1370	1730	1800	2100
11	1950	1260	1870	2070	1900	2420	2070	1660	1590	1750	1810	2460
12	1950	1310	1920	2020	1970	2040	2070	525	1560	1720	1860	2590
13	1960	1380	1940	1930	1970	1970	2100	712	1570	1730	1910	213
14	1980	1340	1970	1910	1990	1820	2080	817	941	1760	1980	211
15	468	1410	2010	1940	2020	1890	1210	889	814	1770	2040	412
16	578	1470	2010	1980	2000	1970	711	963	992	1790	2120	584
17	776	1520	1970	2000	2120	1920	863	992	1210	1820	2140	171
18	1380	1560	1880	2050	2140	1950	784	1000	1420	1880	2170	285
19	1280	1590	1840	2050	2160	2010	695	1080	1520	1890	2200	341
20	1330	1650	1820	2060	2160	1980	480	1120	1620	1910	2220	548
21	1430	1630	1880	2040	2160	2000	749	1200	1680	1930	2190	688
22	1550	1590	1950	2080	2180	2000	994	1300	---	1910	2170	936
23	1660	1740	1820	1980	2170	2030	1100	927	1700	1880	---	939
24	1740	1800	1360	1960	2130	2050	1280	864	518	1890	2230	1070
25	1810	1740	1420	1970	2140	2110	1420	1300	783	1910	2300	1190
26	1860	1790	1580	1940	2170	2120	1480	1010	827	1900	2260	1360
27	1870	1810	---	1780	1940	2040	1550	892	920	1830	2280	1530
28	1870	1830	---	1760	1960	1770	1180	489	1150	1810	2270	1630
29	1900	1770	---	1690	1940	1870	1390	---	1430	1830	2290	1770
30	1910	1910	2180	1690	---	1930	1500	---	1520	1880	1940	1880
31	1920	---	2160	1730	---	1960	---	566	---	1920	1960	---
MONTH	1680	1440	1890	1990	1990	2040	1540	1110	1180	1780	2070	1340

YEAR MAX 2590 MIN 171 MEAN 1670

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	15.0	4.0	5.0	5.0	11.0	10.0	12.0	21.0	24.0	25.5	22.0
2	15.0	15.0	5.0	3.0	4.5	13.0	12.0	14.0	20.0	24.0	25.0	22.0
3	14.0	14.0	5.0	2.0	4.0	11.0	14.0	14.0	21.5	25.0	23.0	23.0
4	12.5	14.0	6.0	0.0	4.0	7.0	14.5	14.0	22.0	25.0	23.0	24.0
5	13.5	15.0	8.5	0.0	3.0	5.0	14.0	16.0	21.0	23.0	24.0	23.5
6	15.0	14.0	7.0	1.0	1.0	5.0	15.0	15.0	22.0	23.0	24.5	24.0
7	15.0	14.5	5.0	0.0	0.0	6.0	17.0	15.5	21.5	22.5	25.0	24.0
8	15.0	15.0	5.5	0.0	1.5	5.0	15.5	14.0	22.0	23.0	25.0	24.0
9	16.5	15.0	5.0	0.0	2.5	7.0	15.0	16.0	22.0	24.0	25.0	20.0
10	17.0	13.0	6.0	0.5	7.0	8.0	14.5	17.0	22.5	22.0	25.0	18.0
11	17.5	11.5	7.5	0.5	5.0	10.0	16.5	18.0	22.5	23.0	25.5	23.0
12	19.0	10.0	7.0	1.0	7.5	10.0	16.0	14.0	23.0	23.0	24.5	21.5
13	18.0	7.0	8.0	1.0	10.0	5.0	18.0	14.5	24.0	23.0	24.5	19.0
14	19.0	7.5	10.0	1.5	11.0	6.5	18.0	14.5	22.0	23.0	24.0	19.0
15	17.0	8.0	6.0	2.0	11.0	9.0	18.0	15.0	22.0	24.0	24.5	19.5
16	15.0	9.0	4.0	3.0	12.0	6.0	13.0	16.0	21.0	24.0	24.0	22.0
17	14.5	11.0	2.5	4.0	11.0	7.0	15.0	16.0	21.0	24.0	24.0	20.0
18	14.0	13.0	1.0	4.5	9.0	8.5	15.0	16.0	22.0	24.0	24.0	21.0
19	13.5	14.5	1.0	5.5	8.5	10.5	15.0	17.0	19.0	24.5	23.0	20.0
20	14.0	8.0	1.0	3.0	9.0	10.0	14.0	18.0	19.5	25.0	23.0	21.0
21	14.0	5.0	1.0	3.0	5.0	10.0	13.0	18.0	21.0	25.0	22.0	19.0
22	15.0	6.0	3.0	3.0	4.0	10.0	14.0	19.5	21.0	24.0	22.0	19.5
23	15.0	4.0	4.0	5.0	5.0	10.5	18.0	19.0	23.0	24.0	22.5	19.5
24	15.0	4.0	3.0	5.0	6.0	12.5	18.0	19.5	20.0	24.0	22.5	20.0
25	12.0	4.5	2.0	4.0	7.0	15.5	16.0	19.5	22.0	25.0	21.0	21.0
26	10.5	1.0	2.0	1.5	8.0	16.0	15.5	17.0	22.0	24.5	22.0	21.0
27	12.0	2.0	---	1.0	9.5	11.0	15.0	17.0	24.0	25.0	22.0	20.0
28	13.0	3.0	---	2.0	10.0	12.0	15.0	16.0	25.0	25.0	22.5	16.5
29	13.0	5.0	---	3.0	11.0	14.0	14.0	18.0	25.0	24.0	22.5	16.0
30	13.0	4.0	4.0	4.0	---	11.0	13.5	19.0	25.0	25.0	22.0	16.0
31	14.0	---	3.0	4.5	---	11.5	---	19.0	---	25.0	21.0	---
MONTH	15.0	9.5	4.5	2.5	6.5	9.5	15.0	16.5	22.0	24.0	23.5	20.5

YEAR MAX 25.5 MIN 0.0 MEAN 14.0

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK

LOCATION.--Lat 34°38'04", long 99°05'47", in NW 1/4 NE 1/4 sec.21, T.2 N., R.18 W., Tillman County, near left bank on downstream side of pier of bridge on 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 mi^2 (10,992 km^2), of which 399 mi^2 (1,033 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1905 to March 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to July 1905, published as "near Snyder".

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905-7.

GAGE.--Water-stage recorder. Datum of gage is 1,294.83 ft (394.664 m) above mean sea level (Bureau of Reclamation bench mark). 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 good. 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 km^2) 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 ft^3/s (12.89 m^3/s), 329,600 acre-ft/yr (406 hm^3/yr); (since regulation by Lake Altus) 32 years (water years 1945-76), 263 ft^3/s (7.448 m^3/s), 190,500 acre-ft/yr (235 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,700 ft^3/s (869 m^3/s) Oct. 5, 1955, gage height, 16.50 ft (5.029 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, 9,680 ft^3/s (274 m^3/s) Sept. 15, gage height, 13.19 ft (4.020 m); minimum daily, 7.1 ft^3/s (0.20 m^3/s) Aug. 18-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	67	109	108	69	60	51	324	413	88	21	52
2	76	87	108	103	70	60	50	293	354	79	20	25
3	74	1150	105	100	71	60	49	246	233	73	19	27
4	73	1750	104	95	68	61	49	229	157	73	17	96
5	71	536	103	89	69	61	49	197	125	71	16	64
6	70	380	98	80	71	61	49	181	101	65	16	40
7	67	358	97	68	74	64	54	168	98	62	15	28
8	65	300	102	65	72	69	62	173	250	58	13	26
9	65	227	99	59	71	71	53	164	249	54	12	86
10	64	194	95	57	72	72	48	146	195	57	11	76
11	62	174	94	78	73	78	46	101	76	67	10	29
12	59	161	93	105	75	80	47	685	92	62	9.7	21
13	56	148	92	91	76	78	48	467	59	52	9.2	1600
14	55	143	90	89	75	76	50	400	773	48	8.5	7250
15	151	136	87	86	74	73	121	323	647	45	7.7	3630
16	1050	127	83	84	72	70	406	215	231	45	7.5	500
17	248	123	95	80	69	68	2410	159	132	44	7.5	1970
18	171	118	90	77	67	65	2550	155	108	43	7.1	3650
19	122	125	90	75	66	65	1770	135	92	52	7.1	1070
20	104	122	93	72	65	61	1020	119	68	50	7.1	543
21	98	131	84	72	64	59	1030	110	76	40	7.1	307
22	91	145	88	75	63	58	415	102	71	37	7.1	290
23	86	136	100	70	63	57	301	184	69	32	7.3	249
24	80	121	111	69	67	56	227	183	501	29	7.8	160
25	76	115	117	68	63	56	191	138	689	27	8.6	118
26	74	110	111	69	64	57	169	144	405	24	8.2	104
27	73	116	105	74	63	56	161	557	214	24	7.7	98
28	71	117	103	76	62	55	249	1750	136	29	8.9	93
29	68	114	104	72	62	55	381	1050	108	38	11	81
30	66	110	106	70	---	53	290	500	100	22	33	73
31	66	---	110	69	---	53	---	521	---	21	46	---
TOTAL	3630	7641	3066	2445	1990	1968	12396	10119	6822	1511	394.1	22356
MEAN	117	255	98.9	78.9	68.6	63.5	413	326	227	48.7	12.7	745
MAX	1050	1750	117	108	76	80	2550	1750	773	88	46	7250
MIN	55	67	83	57	62	53	46	101	59	21	7.1	21
AC-FT	7200	15160	6080	4850	3950	3900	24590	20070	13530	3000	782	44340

CAL YR 1975 TOTAL 138372.0 MEAN 379 MAX 11700 MIN 55 AC-FT 274500
WTR YR 1976 TOTAL 74338.1 MEAN 203 MAX 7250 MIN 7.1 AC-FT 147400

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-52, 1954-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1959 to September 1963, July 1968 to current year.
WATER TEMPERATURE: November 1959 to September 1963, July 1968 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1959.

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 tables, and loads for those parameters were calculated from specific conductance values.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 23,300 micromhos June 8, 1971; minimum daily, 434 micromhoms Sept. 18, 1976.
WATER TEMPERATURE: Maximum, 38°C July 19, 1969; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 13,900 micromhos Sept. 5; minimum daily, 434 micromhos Sept. 18.
WATER TEMPERATURE: Maximum daily, 34.0°C July 12; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
05...	--	--	0820	71	8340	7.9	--	--	--	1100	930	270
16...	--	--	1300	1090	1600	7.7	--	--	--	300	180	84
26...	--	--	0930	74	8050	8.1	--	--	--	1100	890	290
29...	--	--	1745	70	8000	--	21.0	5	--	960	770	220
NOV												
05...	--	--	0830	596	1810	7.4	--	--	--	630	540	210
15...	--	--	1230	138	6120	8.2	--	--	--	1000	800	270
25...	--	--	1000	115	7870	8.2	--	--	--	1200	990	330
26...	1028	9740	--	110	1000	8.1	7.0	--	85	--	--	--
DEC												
05...	--	--	0915	103	8070	8.0	--	--	--	1100	920	280
15...	--	--	0900	88	8360	8.0	--	--	--	1100	980	280
23...	--	--	1200	101	7810	8.7	5.0	3	--	1100	810	280
23...	1028	9740	1201	101	9200	8.7	5.0	--	59	--	--	--
25...	--	--	0845	118	7060	7.9	--	--	--	1000	840	250
JAN												
05...	--	--	0915	88	9330	7.8	--	--	--	1300	1100	340
15...	--	--	0845	88	8790	7.9	--	--	--	1300	1000	330
25...	--	--	0915	68	8900	7.7	--	--	--	1200	1000	310
28...	1028	9740	1301	76	9000	8.5	10.0	--	38	--	--	--
FEB												
05...	--	--	0925	70	8610	8.2	--	--	--	1100	980	270
15...	--	--	0915	74	9350	8.1	--	--	--	1200	1100	290
25...	--	--	0900	63	8840	8.0	--	--	--	1300	1100	300
25...	--	--	1100	65	9000	8.5	11.0	2	--	1300	1100	310
25...	1028	9740	1101	65	9000	8.5	11.0	--	--	--	--	--
MAR												
05...	--	--	1000	62	9510	7.7	--	--	--	1300	1100	310
15...	--	--	0930	73	8780	7.8	--	--	--	1200	1000	280
17...	--	--	1230	68	9000	8.4	11.5	2	--	1200	1000	300
17...	1028	9740	1231	68	9000	8.4	11.5	--	99	--	--	--
25...	--	--	0830	56	9610	7.6	--	--	--	1300	1100	310
APR												
04...	--	--	0810	50	9780	7.6	--	--	--	1300	1200	320
16...	--	--	0700	255	1990	7.7	--	--	--	320	200	88
21...	--	--	1200	1030	1100	7.7	15.0	580	--	310	220	91
21...	1028	9740	1201	1030	1100	7.7	15.0	--	107	--	--	--
25...	--	--	0915	196	4400	7.9	--	--	--	860	700	250
MAY												
18...	--	--	1400	154	5200	8.4	27.0	60	--	930	740	260
18...	1028	9740	1401	154	5200	8.4	27.0	--	39	--	--	--
23...	--	--	0830	171	--	--	--	--	--	1100	880	280
24...	--	--	0800	182	4680	7.9	--	--	--	720	560	190
31...	--	--	0800	547	1820	8.2	--	--	--	460	350	130
JUN												
09...	--	--	0745	280	4150	7.8	--	--	--	960	800	250
21...	--	--	0725	144	6590	7.6	--	--	--	900	740	240
23...	--	--	1015	66	6000	8.3	27.0	4	--	940	770	220
23...	1028	9740	1016	66	6000	8.3	27.0	--	12	--	--	--
25...	--	--	0745	709	934	7.7	--	--	--	200	97	57

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
JUL												
05...	--	--	0730	73	8790	7.8	--	--	--	1100	980	300
13...	--	--	1045	52	8000	8.5	28.0	20	--	1100	930	280
13...	1028	9740	1046	52	8000	8.5	28.0	18	57	--	--	--
15...	--	--	2100	45	7180	7.8	--	--	--	1000	890	260
25...	--	--	0845	27	8110	7.6	--	--	--	1200	990	300
AUG												
11...	--	--	0945	11	8050	7.5	--	--	--	1000	890	250
15...	--	--	0910	8.1	6940	8.1	--	--	--	980	810	230
26...	--	--	1430	8.6	7900	8.4	34.0	10	--	1000	950	260
26...	1028	9740	1431	8.6	7900	8.4	34.0	--	67	--	--	--
31...	--	--	0800	46	2770	7.8	--	--	--	440	340	120
SEP												
05...	--	--	1030	66	13900	7.3	--	--	--	1700	1600	530
14...	--	--	0745	6640	694	7.8	--	--	--	160	73	48
21...	--	--	1245	292	2400	8.1	21.0	400	--	580	470	190
21...	1028	9740	1246	292	2400	8.1	21.0	--	44	--	--	--
25...	--	--	0900	120	3990	7.9	--	--	--	750	590	230

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT												
05...	97	1500	75	20	9.8	178	146	3.6	870	2300	--	--
16...	21	200	59	5.1	7.7	141	116	4.5	170	320	--	--
26...	95	1300	72	17	10	278	228	3.5	810	2100	--	--
29...	100	1500	77	21	10	236	194	--	920	2400	--	.3
NOV												
05...	25	140	32	2.4	9.7	104	85	6.6	520	210	--	--
15...	80	950	67	13	9.5	252	207	2.5	730	1500	--	--
25...	97	1300	70	16	10	286	235	2.9	830	2000	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	92	1300	72	17	10	191	157	3.1	860	2100	--	--
15...	100	1400	73	18	9.1	161	132	2.6	890	2200	--	--
23...	86	1300	73	17	8.1	294	241	.9	900	2000	--	.4
23...	--	--	--	--	--	--	--	--	--	--	--	--
25...	94	1100	70	15	7.4	206	169	4.2	760	1800	--	--
JAN												
05...	120	1600	72	19	9.3	247	203	6.3	1100	2600	--	--
15...	110	1400	70	17	8.1	279	229	5.6	940	2300	--	--
25...	110	1500	73	19	8.5	238	195	7.6	940	2400	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	110	1500	74	19	9.1	185	152	1.9	890	2400	--	--
15...	120	1600	74	20	9.7	188	154	2.4	1100	2500	--	--
25...	130	1500	72	18	9.5	192	157	3.1	1100	2300	--	--
25...	120	1400	70	17	10	255	209	1.3	1000	2300	--	.5
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	120	1600	73	20	9.8	193	158	6.2	1000	2500	--	--
15...	120	1500	73	19	9.4	199	163	5.0	970	2300	--	--
17...	110	1500	73	19	9.2	240	197	1.5	1000	2400	--	.4
17...	--	--	--	--	--	--	--	--	--	--	--	--
25...	120	1600	73	20	10	192	157	7.7	--	--	--	--
APR												
04...	130	1700	73	20	12	191	157	7.7	--	--	--	--
16...	24	290	66	7.1	6.4	146	120	4.7	220	430	--	--
21...	21	110	43	2.7	6.0	116	95	3.7	210	170	--	.3
21...	--	--	--	--	--	--	--	--	--	--	--	--
25...	58	600	60	8.9	9.1	200	164	4.0	750	950	--	--
MAY												
18...	69	820	65	12	8.5	235	193	1.5	770	1300	--	.5
18...	--	--	--	--	--	--	--	--	--	--	--	--
23...	87	1100	69	15	10	216	177	--	930	1700	--	--
24...	59	720	68	12	9.8	192	157	3.9	520	1100	--	--
31...	33	210	49	4.3	7.5	135	111	1.4	390	290	--	--
JUN												
09...	82	1100	71	15	12	194	159	4.9	690	880	--	--
21...	74	570	58	8.3	9.0	197	162	7.9	720	1700	--	--
23...	94	1000	70	14	8.5	198	162	1.6	770	1500	--	.4
23...	--	--	--	--	--	--	--	--	--	--	--	--
25...	15	110	53	3.4	6.4	131	107	4.2	110	160	--	--
JUL												
05...	92	1400	73	18	12	175	144	4.4	910	2300	--	--
13...	96	1300	72	17	11	201	165	1.0	800	2300	--	.4
13...	--	--	--	--	--	--	--	--	--	--	.4	--
15...	94	1300	73	18	11	177	145	4.5	850	2000	--	--
25...	99	1400	72	18	12	199	163	8.0	880	2200	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
AUG												
11...	100	1400	74	19	11	178	146	9.0	930	2100	--	--
15...	98	1200	73	17	9.3	208	171	2.6	770	1800	--	--
26...	97	1400	74	19	11	124	102	.8	970	2000	--	.4
26...	--	--	--	--	--	--	--	--	--	--	--	--
31...	34	400	66	8.3	7.1	123	101	3.1	380	580	--	--
SEP												
05...	89	2500	76	26	19	127	104	10	1400	4100	--	--
14...	10	76	50	2.6	5.2	107	88	2.7	73	150	--	--
21...	25	290	52	5.3	7.1	129	106	1.6	440	480	--	.3
21...	--	--	--	--	--	--	--	--	--	--	--	--
25...	42	580	63	9.2	8.2	186	153	3.7	560	900	--	--

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT											
05...	--	5240	--	7.13	1010	--	.22	--	--	--	--
16...	--	931	--	1.27	2740	--	1.7	--	--	--	--
26...	--	4930	--	6.70	985	--	.45	--	--	--	--
29...	5.9	5300	5270	7.21	1000	.03	--	1.0	1.0	4.6	.02
NOV											
05...	--	1260	--	1.71	2030	--	.61	--	--	--	--
15...	--	3830	--	5.21	1430	--	.88	--	--	--	--
25...	--	5010	--	6.81	1560	--	.98	--	--	--	--
26...	--	--	--	--	--	--	--	--	.90	--	--
DEC											
05...	--	5060	--	6.88	1410	--	1.2	--	--	--	--
15...	--	5270	--	7.17	1250	--	.92	--	--	--	--
23...	4.5	4870	4720	6.62	1330	1.2	--	.61	1.8	8.0	.00
23...	--	--	--	--	--	--	--	--	.90	--	--
25...	--	4400	--	5.98	1400	--	1.7	--	--	--	--
JAN											
05...	--	5980	--	8.13	1420	--	1.6	--	--	--	--
15...	--	5580	--	7.59	1330	--	1.6	--	--	--	--
25...	--	5460	--	7.43	1000	--	.67	--	--	--	--
28...	--	--	--	--	--	--	--	--	1.7	--	--
FEB											
05...	--	5260	--	7.15	994	--	.66	--	--	--	--
15...	--	5940	--	8.08	1190	--	.42	--	--	--	--
25...	--	5630	--	7.66	958	--	.22	--	--	--	--
25...	.5	5640	5270	7.67	990	.08	--	.69	.77	3.4	.03
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	6070	--	8.26	1020	--	.47	--	--	--	--
15...	--	5540	--	7.53	1090	--	.43	--	--	--	--
17...	.4	5760	5440	7.83	1060	.01	--	.91	.92	4.1	.03
17...	--	--	--	--	--	--	--	--	1.1	--	--
25...	--	6090	--	8.28	921	--	.34	--	--	--	--
APR											
04...	--	6050	--	8.23	817	--	.98	--	--	--	--
16...	--	1170	--	1.59	806	--	.84	--	--	--	--
21...	6.7	720	672	.98	2000	.64	--	4.2	4.8	21	.59
21...	--	--	--	--	--	--	--	--	4.2	--	--
25...	--	2900	--	3.94	1540	--	.99	--	--	--	--
MAY											
18...	9.3	3470	3350	4.72	1440	.51	--	.77	1.3	5.7	.14
18...	--	--	--	--	--	--	--	--	<1.0	--	--
23...	--	4150	--	5.64	1920	--	.57	--	--	--	--
24...	--	2780	--	3.78	1370	--	.99	--	--	--	--
31...	--	1130	--	1.54	1670	--	.34	--	--	--	--
JUN											
09...	--	2690	--	3.66	2030	--	.71	--	--	--	--
21...	--	4120	--	5.60	1600	--	.32	--	--	--	--
23...	6.4	3780	3700	5.14	674	.00	--	.56	.56	2.5	.11
23...	--	--	--	--	--	--	--	--	.60	--	--
25...	--	566	--	.77	1080	--	.97	--	--	--	--
JUL											
05...	--	4980	--	6.77	982	--	.23	--	--	--	--
13...	4.9	4890	4890	6.65	687	.06	--	.91	.97	4.3	.09
13...	--	--	--	--	--	--	--	--	1.9	--	<.09
15...	--	4590	--	6.24	558	--	.33	--	--	--	--
25...	--	5110	--	6.95	373	--	.71	--	--	--	--
AUG											
11...	--	5040	--	6.85	150	--	.71	--	--	--	--
15...	--	4340	--	5.90	94.9	--	2.0	--	--	--	--
26...	5.3	5060	4800	6.88	117	.01	--	.72	.73	3.2	.06
26...	--	--	--	--	--	--	--	--	2.7	--	--
31...	--	1650	--	2.24	205	--	.65	--	--	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
SEP											
05...	--	9040	--	12.3	1610	--	1.4	--	--	--	--
14...	--	478	--	.65	8570	--	1.8	--	--	--	--
21...	9.2	1580	1510	2.15	1250	.39	--	1.4	1.8	7.9	.49
21...	--	--	--	--	--	--	--	--	1.8	--	--
25...	--	2520	--	3.43	816	--	.77	--	--	--	--

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED OXYGEN (MG/L)	PER-CENT SATUR-ATION	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
29...	--	--	1745	70	9.9	118	--	--	--	84	48
NOV											
26...	1028	9740	--	110	7.1	--	--	--	--	--	--
DEC											
23...	--	--	1200	101	11.7	99	36	66	--	--	--
23...	1028	9740	1201	101	11.7	99	--	--	--	--	--
JAN											
28...	--	--	1300	76	11.1	102	--	--	--	--	--
28...	1028	9740	1301	76	11.1	102	--	--	--	--	--
FEB											
25...	--	--	1100	65	10.6	103	81	86	--	--	--
25...	1028	9740	1101	65	10.6	103	--	--	--	--	--
MAR											
17...	--	--	1230	68	12.4	123	--	--	--	--	--
17...	1028	9740	1231	68	12.4	123	--	--	--	--	--
APR											
21...	--	--	1200	1030	8.5	91	3550	9400	--	--	--
21...	1028	9740	1201	1030	8.5	91	--	--	--	--	--
MAY											
18...	--	--	1400	154	8.9	119	832	876	7.0	--	--
18...	1028	9740	1401	154	8.9	119	--	--	--	--	--
JUN											
23...	--	--	1015	66	8.8	--	--	--	--	--	--
23...	1028	9740	1016	66	8.8	117	--	--	--	--	--
JUL											
13...	--	--	1045	52	8.8	119	--	--	7.7	--	--
13...	1028	9740	1046	52	8.8	119	--	--	--	--	--
AUG											
26...	--	--	1430	8.6	11.0	159	84	836	--	--	--
26...	1028	9740	1431	8.6	11.0	159	--	--	--	--	--
SEP											
21...	--	--	1245	292	8.3	100	--	--	13	--	--
21...	1028	9740	1246	292	8.3	100	--	--	--	--	--

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
NOV										
26...	1028	9740	--	110	--	--	--	--	--	--
DEC										
23...	1028	9740	1201	101	--	--	--	--	--	--
JAN										
28...	1028	9740	1301	76	--	--	--	--	--	--
FEB										
25...	1028	9740	1101	65	--	--	--	--	--	--
MAR										
17...	1028	9740	1231	68	--	--	--	--	--	--
APR										
21...	1028	9740	1201	1030	--	--	--	--	--	--
MAY										
18...	--	--	1400	154	4	1	3	1	1	0
18...	1028	9740	1401	154	--	--	--	--	--	--
JUN										
23...	1028	9740	1016	66	--	--	--	--	--	--
JUL										
13...	--	--	1045	52	4	3	1	30	23	7
13...	1028	9740	1046	52	--	--	--	--	--	--
AUG										
26...	1028	9740	1431	8.6	--	--	--	--	--	--
SEP										
21...	--	--	1245	292	18	12	6	<10	<10	0
21...	1028	9740	1246	292	--	--	--	--	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCOTBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CHROMIUM (CR) (UG/L)	SUSPENDED CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUSPENDED COBALT (CO) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUSPENDED COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
NOV										
26...	--	--	--	--	--	--	--	--	--	--
DEC										
23...	--	--	--	--	--	--	--	--	--	100
JAN										
28...	--	--	--	--	--	--	--	--	--	<100
FEB										
25...	--	--	--	--	--	--	--	--	--	--
MAR										
17...	--	--	--	--	--	--	--	--	--	<100
APR										
21...	--	--	--	--	--	--	--	--	--	2100
MAY										
18...	20	20	0	0	0	0	12	9	3	3000
18...	--	--	--	--	--	--	--	--	--	--
JUN										
23...	--	--	--	--	--	--	--	--	--	300
JUL										
13...	10	10	0	<50	<50	0	50	47	3	1400
13...	--	--	--	--	--	--	--	--	--	400
AUG										
26...	--	--	--	--	--	--	--	--	--	--
SEP										
21...	30	30	0	100	100	0	20	14	6	100
21...	--	--	--	--	--	--	--	--	--	1100

DATE	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUSPENDED LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	SUSPENDED MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUSPENDED MERCURY (HG) (UG/L)
NOV									
26...	--	--	--	--	--	--	--	--	--
DEC									
23...	--	--	--	--	35	--	--	--	--
JAN									
28...	--	--	--	--	27	--	--	--	--
FEB									
25...	--	--	--	--	--	--	--	--	--
MAR									
17...	--	--	--	--	84	--	--	--	--
APR									
21...	--	--	--	--	970	--	--	--	--
MAY									
18...	40	14	11	3	90	90	0	--	--
18...	--	--	--	--	--	--	--	--	--
JUN									
23...	--	--	--	--	112	--	--	--	--
JUL									
13...	30	100	36	64	140	90	50	.4	.4
13...	--	--	--	--	93	--	--	--	--
AUG									
26...	--	--	--	--	--	--	--	--	--
SEP									
21...	20	100	95	5	550	550	0	.1	.1
21...	--	--	--	--	330	--	--	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
NOV									
26...	--	22	--	--	--	6	--	--	--
DEC									
23...	--	--	--	--	--	--	--	--	--
JAN									
28...	--	--	--	--	--	--	--	--	--
FEB									
25...	--	960	--	--	--	5	--	--	--
MAR									
17...	--	--	--	--	--	--	--	--	--
APR									
21...	--	--	--	--	--	--	--	--	--
MAY									
18...	.0	--	1	1	0	--	20	20	0
18...	--	15	--	--	--	--	--	--	--
JUN									
23...	--	--	--	--	--	--	--	--	--
JUL									
13...	.0	--	1	0	1	--	1400	790	610
13...	--	--	--	--	--	--	--	--	--
AUG									
26...	--	43	--	--	--	6	--	--	--
SEP									
21...	.0	--	2	1	1	--	70	60	10
21...	--	--	--	--	--	--	--	--	--

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 29	1745	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Coelastraceae			
		Coelastrum			
		Occystaceae			
		Ankistrodesmus	670	5	
		Kirchneriella	130	1	
		Oocystis	540	4	
		Westella	4,300	30	
		Scenedesmaceae			
		Scenedesmus	1,000	8	
		Tetrastrum	540	4	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	400	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	3,100	22	
		Pennales			
		Naviculaceae			
		Navicula			
		Nitzschiaceae			
		Nitzschia	2,500	18	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	810	6	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglencaceae			
		Trachelomonas			
		TOTAL	14,000		
Dec. 23	1200	CHRYSOPHYTA			Sediment sampler
		Bacillariophyceae			
		Pennales			
		Naviculaceae			
		Amphiprora		0	
		Navicula	1,200	100	
		Nitzschiaceae			
		Nitzschia		0	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena		0	
		TOTAL	1,200		
Feb. 25	1100	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Micractiniaceae			
		Micractinium		0	
		Occystaceae			
		Dictyosphaerium	320	6	
		Kirchneriella		0	
		Oocystis	160	3	
		Scenedesmaceae			
		Scenedesmus		0	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	320	6	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	160	3	
		Pennales			
		Fragilariaceae			
		Synedra		0	
		Naviculaceae			
		Amphiprora	560	10	
		Caloneis		0	
		Navicula	1,800	34	
		Nitzschiaceae			
		Nitzschia	160	3	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	1,900	35	

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 25	1100	Oscillatoriales			Sediment sampler
		Oscillatoriaceae			
		Oscillatoria		0	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena		0	
		TOTAL	5,400		
Mar. 17	1230	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Scenedesmaceae			
		Scenedesmus		0	
		Volvocales			
		Chlamydomonadaceae			
		Carteria	590	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Stephanodiscus	1,100	8	
		Pennales			
		Fragilariaceae			
		Synedra	130	1	
		Naviculaceae			
		Amphiprora	530	4	
		Caloneis	200	1	
		Navicula	3,400	25	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	4,000	30	
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	3,400	25	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena	130	1	
		TOTAL	13,000		
Apr. 21	1200	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	580	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	580	2	
		Pennales			
		Naviculaceae			
		Navicula	4,600	12	
		Nitzschiaceae			
		Denticula	580	2	
		Nitzschia	2,300	6	
		Surirellaceae			
		Surirella	1,200	3	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Ocillatoria	28,000	73	
		Rivulariaceae			
		Raphidiopsis	580	2	
		TOTAL	38,000		
May 18	1400	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	220	1	
		Scenedesmaceae			
		Scenedesmus	1,500	9	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	430	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Melosira	220	1	

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
May 15	1400	Pennales			Sediment sampler
		Achnanthaceae			
		Achnanthes	650	4	
		Naviculaceae			
		Caloneis	220	1	
		Navicula	2,000	12	
		Nitzschiaceae			
		Nitzschia	3,500	21	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	7,600	46	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Trachelomonas	220	1	
		TOTAL	16,000		
June 23	1015	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Coelastraceae			
		Coelastrum	4,800	6	
		Occystaceae			
		Ankistrodesmus	610	1	
		Scenedesmaceae			
		Scenedesmus	7,300	9	
		Tetrastrum	2,400	3	
		Volvocales			
		Volvocaceae			
		Gonium	2,400	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	55,000	69	
		Pennales			
		Gomphonemataceae			
		Gomphonema	610	1	
		Nitzschiaceae			
		Nitzschia	2,400	3	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	3,000	4	
		PYRRHOPHYTA			
		Dinophyceae			
		Gymnodiniales			
		Gymnodiniaceae			
		Gymnodinium	610	1	
		TOTAL	79,000		
July 13	1045	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	680	1	
		Oocystis		0	
		Tetraedron		0	
		Scenedesmaceae			
		Scenedesmus	1,400	2	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	57,000	80	
		Melosira	4,200	6	
		Pennales			
		Naviculaceae			
		Diploneis		0	
		Navicula		0	
		Nitzschiaceae			
		Nitzschia	1,600	2	
		Surirellaceae			
		Surirella	680	1	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 13	1045	Agemenellum	780	1	Sediment sampler
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	4,400	6	
		TOTAL	72,000		
Aug. 26	1430	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Oocystis	810	2	
		Scenedesmaceae			
		Scenedesmus	3,200	7	
		Volvocales			
		Chlamydomonadaceae			
		Carteria	5,100	11	
		Chlorogonium		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	1,600	3	
		Pennales			
		Cymbellaceae			
		Amphora		0	
		Naviculaceae			
		Diploneis		0	
		Gyrosigma		0	
		Navicula	1,600	3	
		Tropidoneis		0	
		Nitzschiaceae			
		Hantzschia		0	
		Nitzschia	410	1	
		Chrysophyceae			
		Chrysomonadales			
		Synuraceae			
		Synura	3,700	8	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Agmenellum	6,500	14	
		Anacystis	19,000	40	
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	5,100	11	
		EUGLENOPHYTA			
		Cryptophyceae			
		Cryptomonidales			
		Cryptomonodaceae			
		Cryptomonas		0	
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Trachelomonas		0	
		PYRRHOPHYTA			
		Dinophyceae			
		Peridiniales			
		Glenodiniaceae			
		Glenodinium		0	
		TOTAL	47,000		
Sept. 21	1245	CHRYSOPHYTA			Sediment sampler
		Bacillariophyceae			
		Pennales			
		Fragilariaceae			
		Synedra		0	
		Naviculaceae			
		Navicula	190	20	
		Nitzschiaceae			
		Nitzschia	190	20	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	580	60	
		TOTAL	970		

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8700	8880	8040	7770	8780	9910	9510	4490	2300	5880	7950	3060
2	8640	7670	3220	7820	8270	8750	9780	5060	2930	6310	7940	5100
3	8640	8110	8100	8330	8210	9520	9460	5120	5070	6280	7850	7010
4	8680	2190	8310	9180	8630	9830	9940	4870	5070	6500	7770	6830
5	8490	1800	8070	8880	8710	9280	9900	5130	3990	9580	7740	13800
6	8660	2740	8170	5680	8760	9730	9990	6280	4680	---	7700	7810
7	8710	2820	8120	7900	8960	9300	9830	5560	5200	8060	7790	7440
8	8900	4910	8240	8870	9500	8700	8940	5360	6790	7660	7920	7760
9	8880	6080	7550	9270	9550	9160	8760	5590	4640	7380	8130	7810
10	8900	5990	8040	7610	9020	9560	9310	5510	3510	6900	7940	2770
11	8950	5420	8370	8810	8910	8820	10200	5870	4100	6860	8050	3600
12	9070	5960	8220	8680	8780	8510	10700	5110	5260	7740	8030	5990
13	9140	6300	8020	9060	9310	8740	10400	3100	6290	7470	7850	790
14	9180	6500	8210	8520	8980	9020	10600	3070	4130	7280	7370	945
15	8570	7280	8360	9090	9000	8450	8530	2980	1330	7180	6940	878
16	1600	6640	8390	9950	9080	8860	1200	3500	1670	7270	5350	1760
17	2300	6830	8480	9150	9010	9350	2780	3980	3280	7110	5870	1840
18	2580	6420	8350	8870	8910	8820	2470	5080	4380	7240	6200	769
19	4920	7120	8470	8350	9160	8820	1330	5460	5560	12000	5910	2860
20	6760	6870	8240	8550	9530	8950	1880	5860	5470	9250	4830	1850
21	8210	7390	8190	8320	9140	9330	1170	6470	6450	8630	4280	2380
22	9020	6850	8320	8080	9500	9370	1810	7000	6250	8180	4100	3070
23	8530	7060	8100	8450	9190	8920	3360	6520	5890	8320	4030	5750
24	7950	7930	7210	8870	9590	10000	3980	5190	1210	8100	7070	4070
25	7860	7870	7060	9060	9040	9670	4400	5130	1220	8110	6940	3990
26	7170	8240	7570	8490	9090	9700	5000	5490	2890	8070	6310	4600
27	8350	8440	7720	8590	8960	9570	2900	3840	3630	7650	7220	5060
28	8410	7910	7790	8110	8110	9050	3260	3110	3850	7850	9070	5190
29	8680	7290	7560	8530	7830	9560	1630	2320	4500	4730	7220	5550
30	8690	7860	6940	9090	---	9340	1730	2300	5480	7590	6030	5910
31	8790	---	7560	8420	---	9020	---	1860	---	8080	3320	---
MONTH	7800	6450	7840	8530	8950	9210	6160	4720	4230	7640	6800	4540

YEAR MAX 13800 MIN 769 MEAN 6910

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	16.0	0.0	8.5	9.0	16.0	15.5	16.0	23.5	29.0	27.0	27.0
2	14.0	16.0	10.0	5.5	8.0	17.0	17.5	19.0	25.5	29.0	26.0	27.5
3	14.5	13.0	9.0	4.0	8.5	11.0	18.5	17.5	26.0	30.0	25.0	28.5
4	15.0	15.0	8.0	3.5	5.5	10.5	19.0	18.5	25.0	30.5	25.0	30.5
5	15.0	15.0	12.0	4.5	3.0	11.5	19.5	19.0	25.0	30.5	25.0	30.5
6	15.0	15.0	4.0	5.5	2.0	10.5	20.0	19.5	24.0	31.0	25.0	29.0
7	15.0	15.0	5.0	2.5	4.0	9.5	18.0	18.0	24.0	31.0	25.5	28.5
8	22.0	14.0	5.0	2.5	7.0	9.0	19.0	8.5	24.0	31.0	25.5	27.0
9	18.0	16.0	8.0	3.0	11.5	13.0	19.5	5.5	24.5	30.0	25.0	24.5
10	18.0	12.0	7.0	3.0	14.5	14.5	19.5	17.0	24.5	29.0	24.5	24.0
11	20.0	17.0	7.0	4.5	12.5	16.0	20.5	20.0	24.5	29.5	24.5	25.0
12	19.0	11.0	6.0	6.5	15.0	13.0	21.0	21.0	26.0	30.5	24.0	24.0
13	19.0	7.0	8.0	7.5	17.0	9.0	20.5	17.0	26.0	31.0	24.0	23.0
14	18.0	11.0	13.0	5.5	16.0	11.5	22.0	16.0	23.0	31.0	24.5	23.5
15	17.0	12.0	3.0	6.5	16.0	12.0	19.5	17.0	23.0	30.5	24.0	25.5
16	15.0	10.0	7.0	9.0	17.0	11.0	17.5	17.0	24.0	32.0	23.5	27.5
17	14.0	12.0	2.0	9.5	14.0	13.0	17.0	16.0	22.5	32.0	23.5	26.5
18	12.0	14.0	5.0	11.5	12.5	15.0	15.0	17.0	21.5	32.0	23.5	25.5
19	13.0	16.0	5.0	9.0	12.5	17.5	17.0	17.0	23.0	31.0	24.5	26.0
20	19.0	5.0	7.0	6.5	12.5	15.5	17.0	21.0	24.0	30.5	24.0	25.5
21	16.0	3.0	6.5	7.0	6.5	14.5	14.0	22.0	23.5	30.5	24.0	24.5
22	18.0	3.0	8.5	8.5	7.5	15.5	16.0	22.5	26.0	30.0	24.0	22.0
23	15.0	3.0	7.5	10.0	10.0	15.5	20.0	23.0	27.5	31.0	23.5	22.0
24	12.0	3.0	6.0	9.5	10.5	19.0	18.0	24.5	25.5	32.0	23.5	22.0
25	12.0	4.0	6.5	5.5	12.5	20.5	16.0	21.5	27.0	31.5	25.0	23.0
26	10.0	0.0	7.5	3.5	13.5	18.0	14.0	20.0	28.5	31.0	25.0	22.0
27	10.0	0.0	8.0	6.5	14.5	16.0	15.0	18.5	30.0	29.5	25.0	20.0
28	14.0	0.5	8.0	6.5	17.0	16.0	16.0	19.5	30.5	28.5	25.0	15.0
29	12.5	0.5	7.0	9.0	18.0	16.5	13.0	21.5	30.5	29.0	26.0	15.0
30	15.0	0.0	7.0	9.5	---	14.0	16.0	23.5	29.5	27.5	24.5	17.0
31	15.5	---	8.0	9.0	---	15.0	---	23.0	---	27.0	26.0	---
MONTH	15.5	9.5	7.0	6.5	11.5	14.0	17.5	18.5	25.5	30.5	24.5	24.5

YEAR MAX 32.0 MIN 0.0 MEAN 17.0

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	930	950	850	810	940	1100	1000	620	370	750	840	480
2	920	800	490	820	880	940	1100	670	470	760	830	670
3	920	860	850	880	870	1000	1000	680	670	760	820	780
4	930	350	880	990	920	1100	1100	650	670	770	810	780
5	900	280	850	950	930	1000	1100	680	570	1000	810	1400
6	920	450	860	730	940	1100	1100	760	630	---	810	820
7	930	460	860	830	960	1000	1100	720	680	850	820	800
8	950	660	870	950	1000	930	960	700	780	800	830	810
9	950	760	800	1000	1000	990	940	720	630	800	860	820
10	950	750	850	800	970	1000	1000	710	520	780	830	450
11	960	700	890	940	960	940	1100	750	580	780	850	530
12	980	750	870	930	940	910	1100	670	690	810	850	750
13	980	760	840	970	1000	930	1100	480	760	800	820	100
14	990	770	870	910	960	970	1100	480	580	790	790	130
15	910	790	890	980	970	900	910	470	200	790	780	120
16	250	770	890	1100	980	950	170	520	260	790	700	270
17	370	780	900	990	970	1000	450	570	500	790	750	290
18	420	770	890	950	960	940	400	670	610	790	760	98
19	660	790	900	890	990	940	200	710	720	1200	750	460
20	780	780	870	910	1000	960	300	750	710	1000	650	290
21	870	800	870	880	980	1000	170	770	770	920	600	380
22	970	760	880	850	1000	1000	280	780	760	860	580	480
23	910	790	850	900	990	960	510	770	750	880	570	740
24	840	830	790	950	1000	1100	570	680	180	850	790	580
25	820	830	790	970	970	1100	610	680	180	860	780	570
26	790	870	800	900	980	1100	660	710	460	850	760	630
27	890	900	810	920	960	1000	460	550	530	800	790	670
28	890	830	820	860	860	970	500	480	550	820	980	680
29	930	790	800	910	820	1000	250	370	620	640	790	720
30	930	820	780	980	---	1000	270	370	710	800	750	750
31	940	---	800	890	---	970	---	290	---	850	500	---
MONTH	850	740	840	910	960	990	720	630	570	830	770	570

YEAR MAX 1400 MIN 98 MEAN 780

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	172	250	236	175	178	138	542	413	178	47.6	67.4
2	189	188	143	228	166	152	148	530	449	162	44.8	45.2
3	184	2670	241	238	167	162	132	452	421	150	42.1	56.9
4	183	1650	247	254	169	181	146	402	284	152	37.2	202
5	173	405	236	228	173	165	146	362	192	192	35.0	242
6	174	462	228	158	180	181	146	371	172	---	35.0	88.6
7	168	445	225	152	192	173	160	327	180	142	33.2	60.5
8	167	535	240	167	194	173	161	327	526	125	29.1	56.9
9	167	466	214	159	192	190	135	319	424	117	27.9	190
10	164	393	218	123	189	194	130	280	274	120	24.7	92.3
11	161	329	226	198	189	198	137	205	119	141	22.9	41.5
12	156	326	218	264	190	197	140	1240	171	136	22.3	42.5
13	148	304	209	238	205	196	143	605	121	112	20.4	432
14	147	297	211	219	194	199	148	518	1210	102	18.1	2540
15	371	290	209	228	194	177	297	410	349	96.0	16.2	1180
16	709	264	199	249	191	180	186	302	162	96.0	14.2	364
17	248	259	231	214	181	184	2930	245	178	93.9	15.2	1540
18	194	245	216	198	174	165	2750	280	178	91.7	14.6	966
19	217	267	219	180	176	165	956	259	179	168	14.4	1330
20	219	257	218	177	175	158	826	241	130	135	12.5	425
21	230	283	197	171	169	159	473	229	158	99.4	11.5	315
22	238	305	209	172	170	157	314	215	146	85.9	11.1	376
23	211	290	229	170	168	148	414	383	140	76.0	11.2	498
24	181	271	237	177	181	166	349	336	243	66.6	16.6	251
25	168	258	250	178	165	166	315	253	335	62.7	18.1	182
26	158	258	240	168	169	169	301	276	503	55.1	16.8	177
27	175	282	230	184	163	151	200	827	306	51.8	16.4	177
28	171	262	228	176	144	144	336	2270	202	64.2	23.5	171
29	171	243	225	177	137	148	257	1050	181	65.7	23.5	157
30	166	244	223	185	---	143	211	499	192	47.5	66.8	148
31	168	---	238	166	---	139	---	408	---	48.2	62.1	---
MONTH	206	431	223	195	177	170	438	483	285	108	26.0	414

YEAR MAX 2930 MIN 11.1 MEAN 262

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2400	2400	2100	2100	2400	2700	2600	1000	400	1500	2100	610
2	2300	2000	660	2100	2200	2400	2700	1200	580	1600	2100	1200
3	2300	2200	2200	2200	2200	2600	2600	1200	1200	1600	2100	1800
4	2300	370	2200	2500	2300	2700	2800	1200	1200	1700	2100	1800
5	2300	260	2200	2400	2400	2500	2700	1200	880	2600	2100	4100
6	2300	520	2200	1400	2400	2700	2800	1600	1100	---	2000	2100
7	2400	550	2200	2100	2400	2500	2700	1400	1300	2200	2100	2000
8	2400	1200	2200	2400	2600	2400	2400	1300	1800	2000	2100	2100
9	2400	1500	2000	2500	2600	2500	2400	1400	1100	1900	2200	2100
10	2400	1500	2100	2000	2500	2600	2500	1400	740	1800	2100	530
11	2400	1300	2200	2400	2400	2400	2800	1500	920	1800	2100	770
12	2500	1500	2200	2300	2400	2300	3000	1200	1300	2100	2100	1500
13	2500	1600	2100	2500	2500	2400	2900	620	1600	2000	2100	58
14	2500	1700	2200	2300	2400	2500	3000	620	930	1900	1900	67
15	2300	1900	2200	2500	2400	2300	2300	590	120	1900	1800	63
16	200	1700	2300	2800	2500	2400	87	740	220	1900	1300	250
17	400	1800	2300	2500	2400	2600	530	880	680	1900	1500	270
18	480	1600	2200	2400	2400	2400	450	1200	1000	1900	1600	57
19	1200	1900	2300	2200	2500	2400	120	1300	1400	3500	1500	560
20	1700	1800	2200	2300	2600	2400	280	1500	1300	2500	1100	270
21	2200	1900	2200	2200	2500	2500	80	1700	1600	2300	970	420
22	2500	1800	2200	2200	2600	2600	260	1800	1600	2200	920	620
23	2300	1800	2200	2300	2500	2400	700	1700	1500	2200	890	1400
24	2100	2100	1900	2400	2600	2800	880	1300	90	2200	1800	910
25	2100	2100	1800	2500	2500	2700	1000	1200	93	2200	1800	880
26	1900	2200	2000	2300	2500	2700	1200	1300	570	2200	1600	1100
27	2200	2300	2000	2300	2400	2600	570	830	770	2000	1900	1200
28	2300	2100	2100	2200	2200	2500	670	630	840	2100	2500	1300
29	2300	1900	2000	2300	2100	2600	210	400	1000	1100	1900	1400
30	2300	2100	1800	2500	---	2600	240	400	1300	2000	1500	1500
31	2400	---	2000	2300	---	2500	---	270	---	2200	690	---
MONTH	2100	1700	2100	2300	2400	2500	1600	1100	970	2000	1800	1100

YEAR MAX 4100 MIN 57 MEAN 1800

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	505	434	618	612	447	437	358	875	446	356	119	85.6
2	472	470	192	584	416	389	364	949	554	341	113	81.0
3	460	6830	624	594	422	421	344	797	755	315	108	131
4	453	1750	618	641	422	445	370	742	509	335	96.4	467
5	441	376	612	577	447	412	357	638	297	498	90.7	708
6	435	534	582	302	460	445	370	782	300	---	86.4	227
7	434	532	576	386	480	432	394	635	344	368	85.0	151
8	421	972	606	421	505	447	402	607	1220	313	73.7	147
9	421	919	535	398	498	479	343	620	740	277	71.3	488
10	415	786	539	308	486	505	324	552	390	277	62.4	109
11	402	611	558	505	473	505	348	409	189	326	56.7	60.3
12	398	652	552	652	486	497	381	2220	323	352	55.0	85.0
13	378	639	522	614	513	505	376	782	255	281	52.2	251
14	371	656	535	553	486	513	405	670	1940	246	43.6	1310
15	938	698	517	580	480	453	751	515	210	231	37.4	617
16	567	583	515	635	486	454	95.4	430	137	231	26.3	337
17	268	598	590	540	447	477	3450	378	242	226	30.4	1440
18	222	510	535	499	434	421	3100	502	292	221	30.7	562
19	395	641	559	445	445	421	573	474	348	491	28.8	1620
20	477	593	552	447	456	395	771	482	239	337	21.1	396
21	582	672	499	428	432	398	222	505	328	248	18.6	348
22	614	705	523	445	442	407	291	496	307	220	17.6	485
23	534	661	594	435	425	369	569	845	279	190	17.5	941
24	454	686	569	447	470	423	539	642	122	172	37.9	393
25	431	652	569	459	425	408	516	447	173	160	41.8	280
26	380	653	599	428	432	416	548	505	623	143	35.4	309
27	434	720	567	460	408	393	248	1250	445	130	39.5	318
28	441	663	584	451	368	371	450	2980	308	164	60.1	326
29	422	585	562	447	352	386	216	1130	292	113	56.4	306
30	410	624	515	472	---	372	188	540	351	119	134	296
31	428	---	594	428	---	358	---	380	---	125	85.7	---
MONTH	452	880	552	490	450	431	589	767	432	260	59.1	442

YEAR MAX 6830 MIN 17.5 MEAN 483

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG. C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5490	5610	5070	4900	5550	6270	6020	2780	1430	3680	5010	1870
2	5460	4830	1960	4930	5220	5530	6190	3150	1800	3950	5000	3170
3	5460	5110	5110	5260	5180	6020	5980	3190	3160	3930	4950	4410
4	5480	1370	5240	5800	5450	6220	6290	3030	3160	4080	4900	4290
5	5360	1150	5090	5610	5500	5870	6270	3190	2460	6060	4880	8780
6	5470	1690	5150	3550	5530	6160	6330	3930	2900	---	4850	4920
7	5500	1730	5120	4980	5660	5880	6220	3470	3240	5080	4910	4680
8	5620	3050	5200	5600	6010	5490	5650	3340	4260	4820	4990	4890
9	5610	3810	4750	5860	6040	5790	5530	3490	2880	4640	5130	4920
10	5620	3750	5070	4790	5700	6050	5890	3440	2150	4330	5000	1700
11	5660	3380	5280	5570	5630	5570	6460	3670	2530	4310	5080	2210
12	5730	3730	5190	5480	5550	5370	6780	3180	3280	4880	5060	3750
13	5780	3950	5060	5730	5890	5520	6590	1890	3940	4700	4950	570
14	5800	4080	5180	5380	5670	5700	6720	1880	2550	4580	4640	659
15	5410	4580	5280	5750	5690	5330	5380	1820	879	4510	4360	621
16	1030	4170	5290	6300	5740	5600	805	2140	1070	4570	3340	1130
17	1430	4290	5350	5780	5690	5910	1710	2450	2000	4470	3670	1170
18	1600	4030	5270	5600	5630	5570	1530	3160	2710	4550	3880	558
19	3060	4480	5350	5270	5790	5570	879	3410	3470	7620	3700	1760
20	4240	4320	5200	5400	6030	5660	1190	3660	3410	5850	3000	1180
21	5180	4650	5170	5250	5780	5900	788	4060	4040	5450	2650	1480
22	5700	4300	5250	5090	6010	5930	1150	4400	3920	5160	2530	1880
23	5380	4440	5110	5330	5810	5640	2050	4090	3680	5250	2480	3590
24	5010	5000	4530	5600	6070	6330	2450	3230	811	5110	4440	2510
25	4950	4960	4440	5730	5710	6120	2720	3190	816	5110	4360	2460
26	4510	5200	4770	5360	5750	6140	3110	3430	1770	5090	3950	2850
27	5270	5330	4860	5420	5660	6060	1780	2360	2230	4820	4540	3150
28	5310	4990	4910	5110	5110	5720	1990	1900	2370	4950	5730	3230
29	5480	4590	4760	5380	4930	6050	1050	1450	2790	2940	4540	3460
30	5490	4950	4360	5750	---	5910	1110	1430	3420	4780	3770	3700
31	5550	---	4760	5310	---	5700	---	1180	---	5090	2030	---
MONTH	4920	4050	4940	5380	5650	5830	3890	2940	2640	4810	4270	2850

YEAR MAX 8780 MIN 558 MEAN 4350

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1010	1490	1430	1030	1020	829	2430	1590	874	284	263
2	1120	1130	572	1370	987	896	836	2490	1720	843	270	214
3	1090	15900	1450	1420	993	975	791	2120	1990	775	254	321
4	1080	6470	1470	1490	1000	1020	832	1870	1340	804	225	1110
5	1030	1660	1420	1350	1020	967	830	1700	830	1160	211	1520
6	1030	1730	1360	767	1060	1010	837	1920	791	---	210	531
7	995	1670	1340	914	1130	1020	907	1570	857	850	199	354
8	986	2470	1430	983	1170	1020	946	1560	2880	755	175	343
9	985	2340	1270	933	1160	1110	791	1550	1940	677	166	1140
10	971	1960	1300	737	1110	1180	763	1360	1130	666	148	349
11	947	1590	1340	1170	1110	1170	802	1000	519	780	137	173
12	913	1620	1300	1550	1120	1160	860	5880	815	817	133	213
13	874	1580	1260	1410	1210	1160	854	2380	628	660	123	2460
14	861	1580	1260	1290	1150	1170	907	2030	5320	594	106	12900
15	2210	1680	1240	1340	1140	1050	1760	1590	1540	548	90.6	6090
16	2920	1430	1190	1430	1120	1060	882	1240	667	555	67.6	1530
17	958	1420	1370	1250	1060	1090	11100	1050	713	531	74.3	6220
18	739	1280	1280	1160	1020	978	10500	1320	790	528	74.4	5500
19	1010	1510	1300	1070	1030	978	4200	1240	862	1070	70.9	5080
20	1190	1420	1310	1050	1060	932	3280	1180	626	790	57.5	1730
21	1370	1640	1170	1020	999	940	2190	1210	829	589	50.8	1230
22	1400	1680	1250	1030	1020	929	1290	1210	751	515	48.5	1470
23	1250	1630	1380	1010	988	868	1670	2030	686	454	48.9	2410
24	1080	1630	1360	1040	1100	957	1500	1600	1100	400	93.5	1080
25	1020	1540	1400	1050	971	925	1400	1190	1520	373	101	784
26	901	1540	1430	999	994	945	1420	1330	1940	330	87.5	800
27	1040	1670	1380	1080	963	916	774	3550	1290	312	94.4	833
28	1020	1580	1370	1050	855	849	1340	8980	870	388	138	811
29	1010	1410	1340	1050	825	898	1080	4110	814	302	135	757
30	978	1470	1250	1090	---	846	869	1930	923	284	336	729
31	989	---	1410	989	---	816	---	1660	---	289	252	---
MONTH	1130	2240	1310	1150	1050	995	1900	2140	1280	617	144	1960

YEAR MAX 15900 MIN 48.5 MEAN 1320

07305500 WEST OTTER CREEK AT SNYDER LAKE, NEAR MOUNTAIN PARK, OK

LOCATION.--Lat 34°44'02", long 98°59'10", in NE 1/4, sec.16, T.3 N., R.17 W., Kiowa County, Hydrologic Unit 11120303, near east end of Snyder Dam, 0.8 mi (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 mi^2 (342 km^2).

PERIOD OF RECORD.--April 1903 to March 1908, October 1951 to September 1971, July 1972 to current year. Published as Otter Creek near Mountain Park 1903-8 and as Otter Creek at Snyder Lake, near Mountain Park 1951-60. Monthly discharge only for some periods, published as WSP 1311.

REVISED RECORDS.--WSP 1731: 1960(M). WSP 1920: 1959-60.

GAGE.--Water-stage recorder and broad crested masonry spillway. Datum of gage is 1,361.06 ft (414.851 m) above mean sea level (corrected). 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 poor. The city of Snyder diverted about 130 acre-ft (160,000 m^3) annually prior to October 1958 and none thereafter. Flow completely regulated since June, 1975 by Tom Steed Reservoir.

AVERAGE DISCHARGE.--27 years (water years 1904-7, 1952-71, 1973-1975 prior to complete regulation) 23.0 ft^3/s (0.651 m^3/s), 16,660 acre-ft/yr (20.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s (40.2 m^3/s) June 6, 1953, gage height, 19.50 ft (5.944 m), from floodmarks, from rating curve extended above 1,600 ft^3/s (45.3 m^3/s) on basis of contracted-opening and flow-over-dam measurements of peak flow; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	6.0	.20	.20	0			
2					0	7.0	0	.10	0			
3					0	7.0	0	0	0			
4					0	7.3	0	0	0			
5					0	6.0	0	0	0			
6					0	5.0	.20	0	0			
7					0	4.0	.30	.30	0			
8					0	3.1	.20	.20	0			
9					0	1.7	0	.10	0			
10					0	1.3	0	0	0			
11					0	1.1	0	0	0			
12					0	1.0	0	0	0			
13					0	.90	.30	0	0			
14					0	.80	.60	0	0			
15					0	.70	.80	0	0			
16					0	.70	3.7	0	0			
17					0	.70	12	0	0			
18					0	.80	10	0	0			
19					0	.80	4.1	0	0			
20					0	.70	5.3	0	0			
21					44	.60	5.9	0	.20			
22					23	.50	6.2	0	.10			
23					4.4	.50	4.0	0	.10			
24					9.4	.50	2.0	0	0			
25					6.7	.50	1.0	0	0			
26					6.4	.50	0	0	0			
27					6.0	.40	0	0	0			
28					6.0	.20	0	0	0			
29					6.0	0	0	0	0			
30					---	0	.30	0	0			
31		---			---	0	---	0	---			---
TOTAL	0	0	0	0	111.9	60.30	57.10	.90	.40	0	0	0
MEAN	0	0	0	0	3.86	1.95	1.90	.029	.013	0	0	0
MAX	0	0	0	0	44	7.3	12	.30	.20	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	222	120	113	1.8	.8	0	0	0

CAL YR 1975 TOTAL 4974.28 MEAN 13.6 MAX 399 MIN 0 AC-FT 9870
WTR YR 1976 TOTAL 230.60 MEAN .63 MAX 44 MIN 0 AC-FT 457

07309000 EAST CACHE CREEK NEAR ELGIN, OK

LOCATION.--Lat 34°46'55", long 98°22'00", NW 1/4 sec.33, T.4 N., R.11 W., Comanche County, Hydrologic Unit 11130202, at gaging station at bridge on U.S. Highway 277, 1.1 miles (1.76 km) upstream from Rock Creek, and 4.25 mi (6.83 km) west of Elgin.

DRAINAGE AREA.--248 mi^2 (642 km^2).

PERIOD OF RECORD.--Water years 1956, 1958, January 1976 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1956, October 1957 to August 1958.
WATER TEMPERATURE: October 1955 to September 1956, October 1957 to August 1958.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
JAN 28...	1028	9740	1600	600	8.8	8.0	4	10.8	95	<5	280
MAR 16...	1028	9740	1400	800	8.2	14.0	0	10.6	109	21	320
APR 20...	1028	9740	1645	670	8.0	18.0	30	8.9	102	27	280
MAY 19...	1028	9740	1000	650	7.6	20.0	10	7.3	86	31	276
JUN 23...	1028	9740	1730	790	8.1	28.0	20	8.4	110	14	330
JUL 12...	1028	9740	1530	750	8.3	31.0	62	9.5	134	9	267
AUG 26...	1028	9740	1000	650	7.6	25.0	56	5.4	66	25	227
SEP 29...	1028	9740	1000	730	7.2	17.0	7	5.7	61	17	289

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN 28...	86	220	14	--	5.3	52	.2	454	.60	.01	--
MAR 16...	--	250	--	37	4.2	43	.2	533	1.4	.09	--
APR 20...	84	210	17	35	3.9	47	.3	482	1.1	<.08	--
MAY 19...	84	193	18	35	5.6	42	.3	435	1.1	<.08	2
JUN 23...	97	220	20	48	5.0	61	.5	509	.90	<.09	--
JUL 12...	80	209	21	42	5.3	49	.3	437	2.8	<.09	--
AUG 26...	71	194	22	50	7.2	48	.4	488	1.8	.10	12
SEP 29...	76	222	20	39	6.0	41	.4	456	1.2	<.09	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
JAN 28...	--	--	--	400	--	190	--	--	--	--	--
MAR 16...	--	--	--	700	--	480	--	--	--	--	--
APR 20...	--	--	--	600	--	560	--	--	--	--	--
MAY 19...	3	7	8	400	16	357	<.5	12	<2	5	16
JUN 23...	--	--	--	700	--	430	--	--	--	--	--
JUL 12...	--	--	--	--	--	294	--	--	--	--	--
AUG 26...	<1	25	6	700	13	270	<.5	12	2	<1	12
SEP 29...	--	--	--	300	--	100	--	--	--	--	--

07311000 EAST CACHE CREEK NEAR WALTERS, OK

LOCATION.--Lat 34°21'44", long 98°16'56", on south line of SE 1/4 SE 1/4 sec.19, T.2 S., R.10 W., Cotton County 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 mi^2 (1,748 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to December 1963; October 1969 to current year. Prior to October 1969, published as Cache Creek near Walters.

GAGE.--Water-stage recorder. Datum of gage is 938.2 ft (285.963 m) above mean sea level (State Highway Department bench mark). Prior to Jan. 8, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow partly regulated by Lake Lawtonka, capacity, 42,300 acre-ft (52.2 hm^3) prior to late 1953, and 63,000 acre-ft (77.7 hm^3) thereafter on Medicine Creek, by Lake Thomas capacity, 8,300 acre-ft (10.2 hm^3) on Little Medicine Creek, and since March 1961 by Lake Ellsworth, capacity, 94,500 acre-ft (117 hm^3) on East Cache Creek. Low flow sustained by sewage from cities of Lawton and Walters.

AVERAGE DISCHARGE.--32 years, 169 ft^3/s (4.786 m^3/s), 122,400 acre-ft/yr (151 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft^3/s (799 m^3/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, 922 ft^3/s (26.1 m^3/s), Apr. 20, gage height, 14.45 ft (4.404 m), no peak above base of 2,400 ft^3/s (68.0 m^3/s); minimum daily, 13 ft^3/s (0.37 m^3/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	29	28	37	30	35	28	171	66	37	30	23
2	28	30	28	32	30	35	28	145	64	50	29	31
3	28	30	27	29	29	34	26	108	50	30	29	37
4	27	39	27	28	29	34	25	85	46	26	29	19
5	27	33	24	27	31	35	24	76	41	26	30	16
6	27	142	24	27	31	35	24	70	39	25	30	16
7	26	139	25	27	36	35	24	92	36	24	38	14
8	25	53	25	32	33	44	27	92	33	24	39	13
9	27	32	25	30	31	278	32	75	32	25	28	15
10	27	28	26	33	31	183	31	69	32	25	27	17
11	27	27	27	36	30	68	29	63	31	25	28	18
12	27	26	26	33	31	52	27	61	30	24	28	16
13	26	26	25	33	31	114	26	60	29	28	27	159
14	25	26	25	33	34	71	72	57	28	27	27	637
15	26	26	25	31	34	49	41	60	29	26	26	96
16	64	26	24	29	33	40	293	57	26	25	26	38
17	68	26	24	30	32	34	666	56	25	27	25	29
18	39	26	27	31	32	32	382	51	124	24	25	25
19	32	27	27	29	32	31	363	51	245	21	25	22
20	30	29	27	28	31	30	801	49	81	20	25	22
21	31	71	25	28	28	30	436	48	37	20	24	22
22	30	42	25	28	28	28	180	50	30	20	21	22
23	27	30	26	28	28	28	113	57	30	17	20	22
24	24	25	28	29	27	28	92	132	30	17	20	21
25	24	25	32	30	30	28	81	88	106	18	21	19
26	24	25	56	30	32	26	75	66	85	22	22	18
27	24	26	58	29	32	27	69	113	45	21	20	18
28	23	26	43	29	35	26	128	167	35	23	19	17
29	24	27	37	29	36	26	646	78	31	109	20	18
30	26	28	39	30	---	26	431	55	32	68	21	19
31	27	---	43	30	---	28	---	56	---	39	21	---
TOTAL	917	1145	928	935	907	1570	5220	2458	1548	913	800	1459
MEAN	29.6	38.2	29.9	30.2	31.3	50.6	174	79.3	51.6	29.5	25.8	48.6
MAX	68	142	58	37	36	278	801	171	245	109	39	637
MIN	23	25	24	27	27	26	24	48	25	17	19	13
AC-FT	1820	2270	1840	1850	1800	3110	10350	4880	3070	1810	1590	2890

CAL YR 1975	TOTAL	116586	MEAN 319	MAX 8250	MIN 23	AC-FT	231200	
WTR YR 1976	TOTAL	18800	MEAN 51.4	MAX 801	MIN 13	AC-FT	37290	

07311000 EAST CACHE CREEK NEAR WALTERS, OK

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1948, 1951 to 1955, 1958 to 1963, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1953, October 1969 to current year.
WATER TEMPERATURE: October 1951 to September 1953, 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.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,860 micromhos Jan. 10, 1971; minimum daily, 101 micromhos Nov. 1, 1972.
WATER TEMPERATURE: Maximum daily, 38.5°C July 29, 1970; minimum daily, 0.0°C Jan. 8, 20 to 24, 1970, Jan. 8, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 901 micromhos Dec. 9; minimum daily, 287 micromhos Sept. 12.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 26; minimum daily, 0.0°C Jan. 8.

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
08...	--	--	1015	--	25	878	8.5	--	--	--	--	--
17...	--	--	1000	--	72	422	7.9	--	--	--	--	--
NOV												
06...	--	--	1830	--	104	189	7.8	--	--	--	--	--
18...	--	--	1700	--	26	816	8.2	--	--	--	--	--
28...	1028	9740	1130	26	--	900	7.4	7.0	7	9.0	76	27
DEC												
09...	--	--	1700	--	25	901	7.8	--	--	--	--	--
22...	1028	9740	1100	25	--	900	7.9	5.0	3	12.6	105	30
29...	--	--	1700	--	36	684	8.1	--	--	--	--	--
JAN												
02...	--	--	1700	--	30	784	7.7	4.0	--	--	--	--
15...	--	--	1745	--	31	856	7.5	5.0	--	--	--	--
27...	1028	9740	1300	29	--	870	8.2	5.0	--	12.5	102	--
FEB												
08...	--	--	2100	33	--	761	7.6	--	--	--	--	--
15...	--	--	1230	--	34	864	7.2	--	--	--	--	--
26...	1028	9740	1330	32	--	850	8.0	8.0	10	11.4	102	31
MAR												
14...	--	--	1230	--	68	436	7.6	--	--	--	--	--
22...	--	--	1730	--	29	832	7.5	--	--	--	--	--
23...	1028	9740	1700	28	--	730	7.6	15.5	25	4.9	52	28
APR												
15...	--	--	1700	--	36	601	7.6	--	--	--	--	--
27...	1028	9740	1315	69	--	630	7.6	18.0	4	4.4	49	46
MAY												
15...	--	--	1700	--	61	752	7.6	--	--	--	--	--
25...	1028	9740	1300	88	--	550	7.6	21.0	80	3.6	41	49
26...	--	--	1800	--	78	610	8.1	--	--	--	--	--
JUN												
01...	--	--	1730	--	70	726	7.3	--	--	--	--	--
18...	--	--	1700	--	219	429	7.6	--	--	--	--	--
23...	1028	9740	1730	30	--	460	7.4	25.0	44	3.0	38	11
JUL												
06...	--	--	1730	--	26	712	7.2	--	--	--	--	--
28...	1028	9740	1145	23	--	750	7.6	26.0	15	2.4	31	22
29...	--	--	1747	--	157	563	7.3	--	--	--	--	--
AUG												
09...	--	--	1700	--	29	661	7.8	--	--	--	--	--
26...	1028	9740	1100	22	--	700	7.2	25.0	60	3.0	38	34
30...	--	--	1700	--	20	398	7.7	--	--	--	--	--
SEP												
07...	--	--	1700	--	13	289	7.5	--	--	--	--	--
25...	--	--	1600	--	19	642	8.0	--	--	--	--	--
29...	1028	9740	1130	18	--	600	7.2	17.0	58	4.9	54	33

07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT											
08...	240	0	73	15	84	42	2.3	8.1	300	0	246
17...	140	0	44	8.1	37	35	1.3	6.3	199	0	163
NOV											
06...	51	0	15	3.3	16	38	1.0	5.0	62	0	51
18...	230	0	69	14	74	40	2.1	8.9	282	0	231
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
09...	260	15	77	16	86	41	2.3	8.5	296	0	243
22...	--	--	--	--	--	--	--	--	--	--	--
29...	190	0	56	12	67	43	2.1	5.4	231	0	189
JAN											
02...	220	17	65	15	72	40	2.1	7.0	252	0	207
15...	250	11	72	17	79	40	2.2	8.0	291	0	239
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	220	9	64	14	72	41	2.1	7.1	254	0	208
15...	240	4	71	14	85	43	2.4	8.4	282	0	231
26...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	120	0	37	7.2	41	41	1.6	5.8	157	0	129
22...	230	6	69	14	82	43	2.4	7.8	273	0	224
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	190	20	55	12	61	41	1.9	6.3	203	0	167
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
15...	230	27	70	14	69	38	2.0	6.5	250	0	205
25...	--	--	--	--	--	--	--	--	--	--	--
26...	190	14	58	12	51	36	1.6	5.8	220	0	180
JUN											
01...	210	11	63	13	68	40	2.0	7.2	244	0	200
18...	130	3	40	7.2	40	39	1.5	5.6	154	0	126
23...	--	--	--	--	--	--	--	--	--	--	--
JUL											
06...	200	7	60	12	83	46	2.6	8.4	234	0	192
28...	--	--	--	--	--	--	--	--	--	--	--
29...	170	25	50	10	53	40	1.8	8.2	172	0	141
AUG											
09...	180	8	53	11	65	43	2.1	9.2	207	0	170
26...	--	--	--	--	--	--	--	--	--	--	--
30...	100	0	31	5.9	38	43	1.6	6.9	128	0	105
SEP											
07...	100	16	33	4.8	18	27	.8	4.6	105	0	86
25...	180	28	52	11	60	41	2.0	8.6	179	0	147
29...	--	--	--	--	--	--	--	--	--	--	--

07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
08...	1.5	77	80	--	497	.68	33.5	3.8	--	--	--
17...	4.0	20	34	--	254	.35	49.4	2.7	--	--	--
NOV											
06...	1.6	15	16	--	110	.15	30.9	1.0	--	--	--
18...	2.8	53	72	--	474	.64	33.3	4.9	--	--	--
28...	--	--	--	.8	--	--	--	--	<2.5	4.2	2
DEC											
09...	7.5	62	90	--	536	.73	36.2	7.8	--	--	--
22...	--	--	--	.8	--	--	--	--	8.5	.11	--
29...	2.9	48	67	--	403	.55	39.2	3.6	--	--	--
JAN											
02...	8.0	45	72	--	446	.61	36.1	6.0	--	--	--
15...	15	54	73	--	501	.68	41.9	6.2	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	10	53	69	--	432	.59	38.5	4.9	--	--	--
15...	28	53	84	--	489	.67	44.9	6.4	--	--	--
26...	--	--	--	.8	--	--	--	--	5.5	2.5	2
MAR											
14...	6.3	31	32	--	264	.36	48.5	3.0	--	--	--
22...	14	70	79	--	485	.66	38.0	6.5	--	--	--
23...	--	--	--	.6	--	--	--	--	2.8	1.0	--
APR											
15...	8.2	59	52	--	371	.50	36.1	3.2	--	--	--
27...	--	--	--	.6	--	--	--	--	1.9	1.4	--
MAY											
15...	10	72	64	--	443	.60	73.0	4.7	--	--	--
25...	--	--	--	.5	--	--	--	--	1.1	1.4	7
26...	2.8	64	45	--	363	.49	76.4	2.9	--	--	--
JUN											
01...	20	57	61	--	411	.56	77.7	4.7	--	--	--
18...	6.2	32	38	--	252	.34	149	2.3	--	--	--
23...	--	--	--	.5	--	--	--	--	1.4	1.4	--
JUL											
06...	24	58	67	--	429	.58	30.1	6.5	--	--	--
28...	--	--	--	.9	--	--	--	--	5.7	4.1	--
29...	14	47	51	--	346	.47	147	4.6	--	--	--
AUG											
09...	5.3	51	63	--	393	.53	30.8	4.8	--	--	--
26...	--	--	--	.8	--	--	--	--	3.5	2.2	15
30...	4.1	34	35	--	237	.32	12.8	4.3	--	--	--
SEP											
07...	5.3	21	18	--	176	.24	6.18	4.4	--	--	--
25...	2.9	50	61	--	390	.53	20.0	6.1	--	--	--
29...	--	--	--	.7	--	--	--	--	2.0	2.3	--

07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
08...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
28...	1	4	7	300	9	87	--	7	--	2	9
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	200	--	100	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
JAN											
02...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
26...	1	2	4	500	22	615	--	5	--	1	7
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	300	--	550	--	--	--	--	--
APR											
15...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	600	--	280	--	--	--	--	--
MAY											
15...	--	--	--	--	--	--	--	--	--	--	--
25...	1	19	19	2300	33	344	<.5	18	<2	1	40
26...	--	--	--	--	--	--	--	--	--	--	--
JUN											
01...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	500	--	185	--	--	--	--	--
JUL											
06...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	400	--	512	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
26...	4	23	10	500	28	163	<.5	30	2	4	9
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	600	--	139	--	--	--	--	--

07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	16.0	8.0	7.0	3.0	16.0	10.0	14.0	18.0	21.0	26.0	24.0
2	18.0	16.0	8.0	4.0	6.0	17.0	13.0	17.0	17.0	22.0	26.0	25.0
3	18.0	15.0	8.0	4.0	6.0	14.0	15.0	14.0	18.0	24.0	27.0	26.0
4	18.0	16.0	---	4.0	7.0	13.0	12.0	16.0	19.0	25.0	26.0	28.0
5	18.0	15.0	12.0	3.0	3.0	11.0	14.0	16.0	20.0	26.0	27.0	27.0
6	18.0	15.0	10.0	4.0	3.0	12.0	15.0	12.0	19.0	22.0	26.0	24.0
7	19.0	17.0	8.0	2.0	3.0	9.0	14.0	15.0	18.0	21.0	24.0	26.0
8	19.0	16.0	9.0	0.0	5.0	8.0	11.0	17.0	18.0	22.0	25.0	28.0
9	20.0	16.0	9.0	4.0	8.0	10.0	12.0	13.0	20.0	21.0	28.0	28.0
10	22.0	15.0	9.0	4.0	9.0	7.0	15.0	17.0	20.0	23.0	27.0	27.0
11	21.0	15.0	9.0	3.0	10.0	12.0	9.0	15.0	19.0	24.0	29.0	29.0
12	22.0	11.0	9.0	5.0	10.0	10.0	11.0	16.0	23.0	23.0	25.0	28.0
13	23.0	10.0	11.0	3.0	8.0	10.0	15.0	13.0	25.0	24.0	27.0	24.0
14	23.0	10.0	13.0	3.0	14.0	10.0	10.0	13.0	23.0	22.0	26.0	25.0
15	21.0	11.0	8.0	5.0	15.0	8.0	14.0	14.0	22.0	24.0	27.0	21.0
16	20.0	12.0	7.0	5.0	8.0	7.0	15.0	15.0	24.0	23.0	28.0	23.0
17	17.0	13.0	5.0	6.0	7.0	10.0	16.0	12.0	24.0	25.0	27.0	24.0
18	18.0	14.0	4.0	5.0	7.0	11.0	12.0	13.0	24.0	23.0	25.0	24.0
19	18.0	14.0	5.0	5.0	8.0	15.0	15.0	11.0	25.0	25.0	25.0	24.0
20	19.0	10.0	4.0	4.0	8.0	14.0	12.0	14.0	20.0	23.0	25.0	25.0
21	18.0	10.0	3.0	5.0	4.0	14.0	11.0	15.0	19.0	24.0	25.0	24.0
22	18.0	10.0	5.0	4.0	5.0	11.0	14.0	12.0	21.0	24.0	24.0	24.0
23	19.0	10.0	5.0	4.0	12.0	14.0	14.0	13.0	25.0	26.0	27.0	25.0
24	16.0	7.0	4.0	5.0	9.0	13.0	14.0	---	19.0	20.0	29.0	23.0
25	18.0	6.0	4.0	4.0	11.0	14.0	16.0	15.0	23.0	25.0	28.0	21.0
26	14.0	4.0	6.0	3.0	10.0	15.0	15.0	16.0	25.0	25.0	32.0	23.0
27	15.0	4.0	6.0	4.0	11.0	12.0	16.0	14.0	19.0	26.0	31.0	21.0
28	16.0	7.0	5.0	4.0	15.0	14.0	14.0	15.0	20.0	23.0	27.0	21.0
29	15.0	9.0	4.0	5.0	15.0	15.0	12.0	15.0	24.0	24.0	23.0	23.0
30	15.0	8.0	5.0	4.0	---	14.0	13.0	15.0	22.0	24.0	26.0	21.0
31	16.0	---	6.0	3.0	---	11.0	---	17.0	---	25.0	27.0	---
MONTH	18.5	11.5	7.0	4.0	8.5	12.0	13.5	14.5	21.0	23.5	26.5	24.5

YEAR MAX 32.0 MIN 0.0 MEAN 15.5

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	851	794	820	798	817	832	814	636	726	690	583	396
2	852	784	800	784	830	832	---	640	716	689	627	398
3	858	781	773	822	835	779	---	643	726	694	628	398
4	839	782	797	---	840	774	---	643	---	693	624	397
5	847	574	801	---	840	776	813	643	724	708	625	398
6	791	189	783	850	838	779	810	644	723	712	626	293
7	863	423	797	832	763	777	---	645	724	705	624	289
8	878	360	823	848	761	758	---	644	---	710	624	291
9	859	430	901	843	769	754	816	646	725	707	661	293
10	841	574	850	841	761	437	808	748	722	709	668	294
11	854	612	813	843	864	437	810	749	724	709	669	289
12	846	724	824	---	864	436	---	750	---	576	668	287
13	874	782	808	---	861	440	---	752	725	572	---	581
14	856	790	814	845	864	436	---	750	433	577	---	584
15	842	795	811	856	864	717	601	752	432	578	670	581
16	872	798	841	847	813	719	604	749	---	576	667	585
17	422	799	846	845	815	694	605	718	---	574	672	587
18	550	816	813	848	811	694	602	728	429	574	671	584
19	650	791	805	---	811	724	602	727	432	689	670	587
20	675	792	805	---	814	756	603	726	430	692	---	646
21	675	740	806	840	813	758	---	728	510	693	671	647
22	737	743	805	---	813	832	---	728	513	698	669	646
23	781	656	788	---	785	830	---	730	---	690	687	649
24	794	655	789	838	786	830	604	---	514	687	---	645
25	771	651	787	---	788	827	606	616	513	690	686	642
26	771	707	787	---	786	826	642	610	512	564	---	644
27	790	785	773	840	786	826	---	611	509	567	---	608
28	822	805	773	835	786	830	---	611	694	570	687	610
29	830	803	684	---	786	808	---	612	---	563	684	608
30	814	810	739	---	---	818	640	612	698	564	398	608
31	812	---	742	836	---	823	---	723	---	566	394	---
MONTH	791	692	800	---	813	728	---	684	---	645	634	502

YEAR MAX 901 MIN 189 MEAN 700

07311200 BLUE BEAVER CREEK NEAR CACHE, OK
(Hydrologic bench-mark station)

LOCATION.--Lat 34°37'24", long 98°33'48", in NE 1/4 NE 1/4 sec.28, T.2 N., R.13 W., Comanche County, on downstream side of right bank pier of bridge on U.S. Highway 62, 3,000 ft (914.4 m) upstream from St. Louis-San Francisco Railway Co. bridge, 4.0 mi (6.4 km) east of Cache, and at mile 12.0 (19.3 km).

DRAINAGE AREA.--24.6 mi^2 (63.7 km^2).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,215.26 ft (370.411 m) above mean sea level.

REMARKS.--Records fair. Minor regulation by Lake Rush, Lake Jed Johnson, and Lake Ketch, combined surface-area 132 acres (534,000 m^2).

AVERAGE DISCHARGE.--12 years, 8.82 ft^3/s (0.250 m^3/s), 6,390 acre-ft/yr (7.88 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,050 ft^3/s (86.4 m^3/s) May 6, 1969, gage height, 12.17 ft (3.709 m) from floodmarks, from rating curve extended above 250 ft^3/s (7.08 m^3/s) on basis of conveyance studies; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 575 ft^3/s (16.3 m^3/s) at 1215 Apr. 17, gage height, 8.89 ft (2.710 m), no other peak above base of 500 ft^3/s (14.2 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.02	.05	.07	.09	.05	.21	35	49	2.7	0	0
2	.15	.21	.05	.03	.11	.03	.21	30	29	4.2	0	0
3	.13	.11	.05	.03	.11	.03	.21	25	18	3.0	0	0
4	.11	.07	.05	.03	.11	.05	.15	23	11	3.0	0	0
5	.11	.05	.05	.05	.13	.03	.18	19	7.2	3.0	0	0
6	.11	.44	.03	.10	.13	.03	.18	39	5.3	2.4	.02	0
7	.07	.11	.03	.07	.13	.24	.24	29	4.4	1.6	0	0
8	.07	.07	.03	.07	.13	1.1	.24	21	3.8	1.0	0	0
9	.07	.05	.04	.09	.13	.44	.15	17	3.2	.59	0	0
10	.07	.05	.03	.11	.13	.18	.13	13	2.7	.59	0	0
11	.05	.05	.03	.09	.11	.35	.13	10	2.2	.71	0	0
12	.02	.05	.03	.09	.11	.35	.21	8.5	2.0	1.0	0	0
13	.01	.05	.05	.09	.11	.13	.27	7.0	1.8	.71	0	.44
14	.02	.05	.05	.11	.11	.13	.21	6.0	1.7	.65	0	.59
15	.91	.03	.02	.13	.11	.11	15	5.5	1.4	.65	0	.18
16	.05	.03	.03	.13	.11	.24	209	5.0	1.2	.65	0	.09
17	0	.03	.03	.11	.09	.39	209	4.5	1.1	.48	0	.09
18	0	.03	.02	.13	.09	.39	128	4.0	4.6	.30	0	.09
19	0	.24	.03	.13	.09	.39	103	3.7	3.0	.20	0	.15
20	0	.09	.05	.13	.09	.31	170	3.3	1.5	.13	0	.15
21	0	.09	.03	.13	.07	.27	75	3.1	1.2	.07	0	.11
22	0	.09	.07	.11	.07	.27	49	3.0	1.1	.02	0	.05
23	0	.09	.05	.11	.09	.27	36	15	1.4	0	0	.03
24	0	.09	.27	.11	.09	.27	31	13	4.2	0	0	.02
25	0	.09	.53	.09	.09	.27	24	15	2.4	0	0	.01
26	0	.09	.24	.09	.09	.21	19	30	3.0	0	0	.02
27	.01	.09	.13	.09	.07	.18	17	34	3.0	0	0	.03
28	.02	.09	.09	.09	.05	.21	130	15	3.0	0	0	.03
29	.01	.09	.11	.09	.07	.21	58	8.9	2.7	0	0	.05
30	.02	.07	.09	.09	---	.15	28	25	2.2	0	0	.05
31	.03	---	.09	.09	---	.21	---	100	---	0	0	---
TOTAL	2.25	2.71	2.45	2.88	2.91	7.49	1303.72	570.5	178.3	27.65	.02	2.18
MEAN	.073	.090	.079	.093	.10	.24	43.5	18.4	5.94	.89	.0006	.073
MAX	.91	.44	.53	.13	.13	1.1	209	100	49	4.2	.02	.59
MIN	0	.02	.02	.03	.05	.03	.13	3.0	1.1	0	0	0
AC-FT	4.5	5.4	4.9	5.7	5.8	15	2590	1130	354	55	.04	4.3

CAL YR 1975 TOTAL 5605.88 MEAN 15.4 MAX 597 MIN 0 AC-FT 11120
WTR YR 1976 TOTAL 2103.06 MEAN 5.75 MAX 209 MIN 0 AC-FT 4170

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 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
NOV										
05...	0910	.02	220	6.7	16.0	5.1	54	73	0	20
28...	0830	.07	360	7.9	4.0	9.9	78	--	--	--
DEC										
23...	1430	.05	260	8.6	5.0	12.2	102	--	--	--
JAN										
28...	1430	.07	220	8.2	6.0	12.3	102	--	--	--
FEB										
10...	1055	.11	240	8.5	10.5	--	--	69	0	19
MAY										
26...	1730	39	305	7.8	19.5	7.6	--	80	0	23
AUG										
06...	1110	.03	210	7.3	24.0	3.9	47	72	0	20

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
NOV										
05...	5.5	16	32	.8	1.7	100	0	82	32	10
28...	--	--	--	--	--	--	--	--	--	--
DEC										
23...	--	--	--	--	--	--	--	--	--	--
JAN										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
10...	5.3	21	39	1.1	1.7	97	0	80	.5	17
MAY										
26...	5.5	29	42	1.4	5.0	126	0	103	3.2	20
AUG										
06...	5.3	15	30	.8	2.6	90	0	74	7.2	8.9

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
NOV									
05...	8.3	.5	12	129	123	.18	.01	.10	.35
28...	--	--	--	--	--	--	--	--	--
DEC									
23...	--	--	--	--	--	--	--	--	--
JAN									
28...	--	--	--	--	--	--	--	--	--
FEB									
10...	12	.4	8.6	128	133	.17	.04	.01	.02
MAY									
26...	24	.6	7.9	185	177	.25	19.5	.33	.17
AUG									
06...	11	.4	10	121	118	.16	.01	.34	.07

07311500 DEEP RED RUN NEAR RANDLETT, OK

LOCATION.--Lat 34°13'15", long 98°27'10", in SW 1/4 SW 1/4 sec.10, T.4 S., R.12 W., Cotton County, 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 mi^2 (1,598 km^2).

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

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1631: 1956. WSP 1920: 1951.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 924.49 ft (281.785 m) above mean sea level (State Highway Department bench mark). Prior to Nov. 10, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--27 years, 115 ft^3/s (3.257 m^3/s), 83,320 acre-ft/yr (103 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft^3/s (1,370 m^3/s) Sept. 22, 1969, gage height, 27.51 ft (8.385 m), from rating curve extended above 13,000 ft^3/s (368 m^3/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, 6,650 ft^3/s (188 m^3/s) at 0330 Sept. 15, gage height, 23.13 ft (7.050 m), no other peak above base of 2,000 ft^3/s (56.6 m^3/s); no flow Aug. 12-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	3.1	4.9	21	5.3	4.4	4.2	162	88	5.7	11	676
2	5.8	3.4	4.9	15	5.5	4.5	10	68	597	316	2.7	1350
3	5.5	3.6	4.9	12	5.5	4.6	37	47	333	111	1.1	1120
4	6.4	137	4.9	10	5.5	4.7	26	36	63	9.1	.56	480
5	6.1	67	5.1	9.0	5.5	32	9.8	25	30	3.3	.39	48
6	5.5	31	5.2	8.2	5.3	27	6.0	18	22	1.6	.28	24
7	4.9	18	5.2	7.6	5.3	13	4.9	15	17	.79	.14	15
8	4.6	14	5.3	7.2	5.8	11	4.4	17	48	.62	.09	9.8
9	4.9	11	5.5	6.5	5.8	16	4.3	33	38	.46	.06	6.8
10	4.6	8.8	5.5	6.2	5.9	40	4.1	19	21	.46	.03	5.3
11	4.3	6.9	5.5	6.1	6.1	35	3.7	14	13	.42	.01	8.0
12	4.1	5.6	5.5	6.2	6.0	24	3.6	11	9.1	.33	0	12
13	3.6	4.8	5.5	6.4	6.1	187	3.9	9.8	6.8	.39	0	2390
14	3.4	4.7	5.5	6.6	6.1	99	4.6	16	5.0	.39	0	4040
15	3.8	4.4	5.5	6.6	6.1	34	5.2	12	3.9	.38	0	5290
16	4.3	4.2	5.5	6.4	6.1	21	27	8.0	3.2	.30	0	2420
17	8.6	4.1	5.2	6.4	6.4	15	492	6.1	2.8	.26	0	373
18	8.2	4.3	4.9	6.4	6.2	12	867	5.0	7.8	.20	0	170
19	6.4	5.1	4.9	6.4	5.9	9.5	595	4.5	240	.24	0	796
20	5.8	5.8	4.9	6.4	5.7	8.4	199	4.1	136	.19	0	254
21	4.9	5.5	5.2	5.7	5.3	7.5	88	3.8	40	.11	0	157
22	4.3	6.4	5.2	5.3	4.9	6.8	42	3.6	18	.09	0	72
23	4.1	14	5.2	5.2	4.8	5.9	29	4.5	10	.08	0	39
24	3.6	15	6.1	5.2	4.4	5.8	22	4.0	15	.08	0	27
25	3.8	11	7.7	5.2	4.3	5.6	16	4.1	10	.06	0	21
26	3.6	8.1	14	5.2	4.3	5.4	12	4.8	44	.04	0	17
27	3.6	7.2	17	5.2	4.6	5.1	10	29	25	38	0	14
28	3.8	6.3	16	5.2	4.6	4.9	20	84	13	23	0	13
29	3.4	5.9	16	5.2	4.6	4.9	174	57	7.4	7.8	0	12
30	3.4	5.2	21	5.2	---	4.6	316	30	5.4	32	0	11
31	3.4	---	22	5.2	---	4.3	---	17	---	46	14	---
TOTAL	149.1	431.4	239.7	224.4	157.9	662.9	3040.7	772.3	1872.4	599.39	30.36	19870.9
MEAN	4.81	14.4	7.73	7.24	5.44	21.4	101	24.9	62.4	19.3	.98	662
MAX	8.6	137	22	21	6.4	187	867	162	597	316	14	5290
MIN	3.4	3.1	4.9	5.2	4.3	4.3	3.6	3.6	2.8	.04	0	5.3
AC-FT	296	856	475	445	313	1310	6030	1530	3710	1190	60	39410

CAL YR 1975 TOTAL 87388.20 MEAN 239 MAX 6140 MIN 3.1 AC-FT 173300
WTR YR 1976 TOTAL 28051.45 MEAN 76.6 MAX 5290 MIN 0 AC-FT 55640

07311505 WEST CACHE CREEK NEAR TAYLOR, OK

LOCATION.--Lat 34°12'32", long 98°19'48", west edge sec.14, T.4 S., R.11 W., Cotton County, Hydrologic Unit 11130203, at county road bridge, and 2.2 mi (3.5 km) upstream from confluence with East Cache Creek, 2.5 mi (4.0 km) north of Taylor.

DRAINAGE AREA.--1,121 mi^2 (2,903 km^2).

PERIOD OF RECORD.--Water years 1959, January 1976 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
JAN												
27...	1028	9740	1400	--	3000	8.6	6.0	3	11.9	100	35	631
FEB												
26...	1028	9740	1000	--	3100	8.5	9.0	9	10.7	97	96	638
MAR												
23...	1028	9740	1615	--	1300	8.5	18.5	2	14.1	160	55	260
APR												
27...	1028	9740	1245	--	500	8.2	17.5	39	8.2	91	42	125
MAY												
25...	1028	9740	1345	--	420	8.1	22.5	78	7.7	92	30	159
JUN												
23...	1028	9740	1645	--	1000	8.3	27.0	61	7.4	97	18	250
JUL												
28...	1028	9740	1240	--	1800	8.3	27.0	170	6.7	88	16	384
SEP												
29...	1028	9740	1045	--	1250	7.6	17.0	34	5.9	66	24	377

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN											
27...	140	363	55	400	13	659	.3	1688	1.2	.14	--
FEB											
26...	170	325	67	370	7.8	645	.3	1713	.90	.18	3
MAR											
23...	100	183	31	170	6.6	280	.3	842	.80	.14	--
APR											
27...	42	108	9.7	46	3.5	106	.4	289	.80	.12	--
MAY											
25...	35	101	8.7	41	4.5	54	.4	--	.80	.21	2
JUN											
23...	63	162	21	120	7.9	188	.3	578	1.4	.18	--
JUL											
28...	111	223	40	263	8.6	379	.4	1205	2.7	.33	--
SEP											
29...	--	344	27	144	8.9	227	.3	739	.80	.27	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
JAN											
27...	--	--	--	300	--	500	--	--	--	--	--
FEB											
26...	1	4	4	300	14	600	--	11	--	3	1
MAR											
23...	--	--	--	200	--	280	--	--	--	--	--
APR											
27...	--	--	--	500	--	100	--	--	--	--	--
MAY											
25...	2	18	9	1200	18	212	<.5	13	<2	<1	20
JUN											
23...	--	--	--	400	--	120	--	--	--	--	--
JUL											
28...	--	--	--	1300	--	549	--	--	--	--	--
SEP											
29...	--	--	--	300	--	150	--	--	--	--	--

07313500 BEAVER CREEK NEAR WAURIKA, OK

LOCATION.--Lat 34°13'00", long 98°02'57", on north line of NW 1/4 NW 1/4 sec.16, T.4 S., R.8 W., Jefferson County, on left bank on downstream side of bridge on State Highway 5, 4.5 mi (7.2 km) northwest of Waurika, 6.2 mi (10.0 km) upstream from Cow Creek, and at mile 25.8 (41.5 km).

DRAINAGE AREA.--563 mi^2 (1,458 km^2).

WATER-DISCHARGE RECORDS

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) above mean sea level (State Highway Department bench mark). Prior to Apr. 5, 1966, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good prior to May 3 and poor thereafter.

AVERAGE DISCHARGE.--23 years, 107 ft^3/s (3.030 m^3/s), 77,520 acre-ft/yr (95.6 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft^3/s (912 m^3/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 cfs (1,850 m^3/s) by contracted-opening measurement of peak flow. A similar stage was reached prior to 1889, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 696 ft^3/s (19.7 m^3/s) Apr. 21, gage height, 13.33 ft (4.063 m), no peak above base of 2,000 ft^3/s (56.6 m^3/s); no flow Aug. 10 to Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	9.7	20	35	22	22	26	98	48	8.2	34	0
2	20	11	22	32	22	23	26	63	39	8.0	8.4	0
3	19	14	22	30	22	23	26	53	34	6.0	5.9	0
4	18	24	21	27	22	23	25	41	30	5.0	4.7	0
5	18	33	21	24	22	22	25	40	28	4.0	2.0	0
6	18	56	21	20	22	22	24	42	24	3.0	1.0	0
7	17	122	22	22	23	24	24	41	20	2.6	.40	0
8	17	53	22	19	23	52	24	36	32	2.4	.20	0
9	16	41	20	26	23	223	25	36	18	2.4	.10	0
10	16	33	19	20	24	178	25	36	14	2.2	0	0
11	16	29	20	22	27	90	26	35	12	2.0	0	0
12	15	26	20	26	27	58	26	92	11	1.9	0	0
13	15	24	21	29	26	83	25	172	10	3.0	0	0
14	22	22	22	29	25	64	20	48	10	5.0	0	242
15	17	22	21	29	25	48	22	45	7.8	3.0	0	349
16	147	24	21	28	24	47	24	44	7.6	6.0	0	78
17	138	24	21	26	24	36	26	43	7.6	5.2	0	35
18	120	23	20	25	24	34	33	36	68	4.6	0	20
19	40	23	20	25	23	30	107	35	103	4.0	0	102
20	18	21	19	25	22	27	334	34	45	3.5	0	38
21	13	20	19	24	21	26	609	30	20	3.1	0	11
22	16	25	20	24	21	26	336	30	12	2.6	0	5.4
23	15	23	23	23	19	25	85	32	12	2.4	0	4.9
24	14	19	27	23	19	26	62	34	11	2.2	0	4.5
25	15	18	35	23	18	26	52	35	5.0	2.0	0	4.2
26	15	17	42	23	20	26	43	38	5.8	1.9	0	3.4
27	14	17	48	23	21	26	37	38	7.2	1.7	0	2.7
28	16	17	42	23	21	25	126	58	8.7	1.6	0	3.4
29	14	18	37	22	22	25	339	71	8.0	1.5	0	2.1
30	21	19	35	22	---	25	203	45	8.2	98	0	2.1
31	13	---	36	21	---	25	---	35	---	117	0	---
TOTAL	889	827.7	779	770	654	1410	2785	1516	666.9	316.0	56.70	907.7
MEAN	28.7	27.6	25.1	24.8	22.6	45.5	92.8	48.9	22.2	10.2	1.83	30.3
MAX	147	122	48	35	27	223	609	172	103	117	34	349
MIN	13	9.7	19	19	18	22	20	30	5.0	1.5	0	0
AC-FT	1760	1640	1550	1530	1300	2800	5520	3010	1320	627	112	1800

CAL YR 1975 TOTAL 94297.40 MEAN 258 MAX 12800 MIN 7.7 AC-FT 187000
WTR YR 1976 TOTAL 11578.00 MEAN 31.6 MAX 609 MIN 0 AC-FT 22960

07313500 BEAVER CREEK NEAR WAURIKA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-66, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1962.
WATER TEMPERATURE: October 1955 to September 1962.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
25...	1028	9740	--	18	1600	8.6	8.0	24	6.1	--	19	--
DEC												
22...	1028	9740	0700	20	1300	8.7	4.0	7	12.3	100	22	630
JAN												
27...	1028	9740	1430	23	1400	8.7	7.0	15	11.8	102	<4	630
FEB												
26...	1028	9740	1230	20	1450	8.7	9.0	27	11.4	104	31	638
MAR												
23...	1028	9740	1815	25	1300	8.3	17.0	5	12.0	132	31	440
APR												
27...	1028	9740	1415	37	1250	8.2	19.5	65	7.9	82	12	550
MAY												
25...	1028	9740	1430	36	1200	8.3	23.0	180	7.5	90	30	476
JUN												
23...	1028	9740	1530	12	800	8.0	27.0	120	6.5	86	22	260
SEP												
28...	1028	9740	1600	3.4	600	8.3	19.0	20	6.5	75	29	178

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
25...	--	401	62	70	3.8	111	.6	994	.80	.10	--
DEC											
22...	170	370	61	--	3.5	110	.6	--	--	<.01	--
JAN											
27...	140	350	62	83	3.0	120	.4	921	.50	.02	--
FEB											
26...	123	345	58	81	3.0	118	.5	919	.80	<.10	3
MAR											
23...	200	360	68	85	4.1	130	.6	980	1.0	<.08	--
APR											
27...	140	340	52	71	5.2	100	.6	872	1.4	.18	--
MAY											
25...	111	270	53	88	9.6	116	.5	809	1.1	.30	7
JUN											
23...	60	150	24	74	6.8	110	.4	486	1.6	.19	--
SEP											
28...	45	167	17	52	5.4	72	.4	--	.50	.13	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
25...	2	9	3	1300	18	150	--	9	--	2	6
DEC											
22...	--	--	--	200	--	110	--	--	--	--	--
JAN											
27...	--	--	--	300	--	85	--	--	--	--	--
FEB											
26...	1	4	2	500	11	230	--	10	--	2	4
MAR											
23...	--	--	--	1300	--	200	--	--	--	--	--
APR											
27...	--	--	--	700	--	300	--	--	--	--	--
MAY											
25...	<1	34	20	9600	28	430	<.5	27	<2	2	40
JUN											
23...	--	--	--	700	--	270	--	--	--	--	--
SEP											
28...	--	--	--	300	--	125	--	--	--	--	--

07315700 MUD CREEK NEAR COURTNEY, OK

LOCATION.--Lat 34°00'20", long 97°34'00", in NW 1/4 SE 1/4 sec.25, T.6 S., R.4 W., Jefferson County, 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 mi^2 (1,481 km^2).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 730.00 ft (222.504 m) above mean sea level (State Highway Department bench mark). Prior to Oct. 1, 1968, auxiliary water-stage recorder 2.0 mi (3.2 km) downstream from base gage.

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 119 ft^3/s (3.370 m^3/s), 86,220 acre-ft/yr (106 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft^3/s (946 m^3/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 ft^3/s (36.8 m^3/s) and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)	DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GAGE HEIGHT (ft)	GAGE HEIGHT (m)
Apr. 21	1600	*4,710	133	26.15	7.971	June 2	1445	3,350	94.9	25.16	7.669

No flow Aug. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	3.6	4.4	9.7	5.5	5.3	18	195	975	21	2.9	19
2	5.1	4.2	4.3	8.9	5.6	4.9	15	85	2610	19	3.0	9.6
3	4.9	4.7	4.8	8.4	7.1	4.7	13	61	2470	29	3.8	31
4	5.0	5.2	5.1	7.8	6.6	4.7	12	48	617	26	3.6	18
5	5.1	5.5	5.8	7.9	5.5	5.0	11	41	85	14	3.2	5.8
6	5.7	6.8	6.1	7.3	5.6	5.0	10	36	59	10	2.6	2.9
7	4.9	6.2	5.8	6.7	5.7	11	11	33	46	9.2	2.4	1.5
8	4.2	5.0	5.9	5.9	5.5	57	13	32	52	9.1	5.8	.93
9	3.8	4.5	6.7	5.5	6.0	289	16	31	43	8.0	3.4	.71
10	3.3	6.2	6.8	5.5	6.3	441	15	30	35	7.8	2.4	5.8
11	3.3	5.5	6.3	5.9	6.2	205	18	29	30	7.6	1.8	34
12	3.2	4.5	6.1	5.7	6.0	76	14	32	29	7.2	1.5	8.3
13	3.1	3.6	6.1	5.5	6.5	48	12	39	29	7.2	1.2	6.9
14	2.8	2.9	6.2	5.4	7.4	46	9.9	439	29	7.3	.93	4.3
15	3.1	2.9	6.4	6.7	7.6	30	8.7	821	29	7.7	.64	6.0
16	3.0	2.8	6.3	7.9	7.7	23	9.0	379	29	14	.46	15
17	2.8	2.8	6.4	7.2	7.1	22	9.8	74	29	23	.31	9.8
18	3.1	2.7	5.8	7.2	6.3	20	13	54	101	38	.27	8.6
19	6.2	2.8	5.6	6.6	6.0	18	45	43	168	19	.24	7.0
20	6.7	3.5	5.4	6.1	6.0	17	693	38	198	12	.17	5.9
21	5.3	4.1	5.1	5.8	7.3	16	3050	37	67	8.5	.14	3.5
22	4.3	4.8	4.9	5.8	6.9	15	3730	37	36	6.8	.10	2.7
23	3.7	4.9	4.9	6.7	6.6	15	2290	38	32	6.2	.10	13
24	3.3	6.3	6.4	6.6	7.3	14	493	51	31	6.4	.10	7.0
25	2.9	5.5	17	6.0	6.6	13	102	128	31	6.2	.14	3.6
26	3.0	4.8	23	5.9	6.4	13	73	92	29	5.6	.14	2.1
27	3.4	4.4	24	5.5	6.2	12	57	103	27	4.9	.10	1.4
28	3.4	4.0	25	5.7	6.2	12	96	401	25	4.4	0	.96
29	3.5	4.2	19	6.0	5.9	13	330	585	23	4.0	0	.75
30	3.4	4.5	15	5.9	---	20	366	191	22	3.7	12	.55
31	3.2	---	12	6.1	---	17	---	257	---	3.3	39	---
TOTAL	124.2	133.4	272.6	203.8	185.6	1492.6	11553.4	4460	7988	356.1	92.44	236.60
MEAN	4.01	4.45	8.79	6.57	6.40	48.1	385	144	266	11.5	2.98	7.89
MAX	6.7	6.8	25	9.7	7.7	441	3730	821	2610	38	39	34
MIN	2.8	2.7	4.3	5.4	5.5	4.7	8.7	29	22	3.3	0	.55
AC-FT	246	265	541	404	368	2960	22920	8850	15840	706	183	469

CAL YR 1975	TOTAL	115173.00	MEAN 316	MAX 10700	MIN 2.7	AC-FT	228400	
WTR YR 1976	TOTAL	27098.74	MEAN 74.0	MAX 3730	MIN 0	AC-FT	53750	

07315700 MUD CREEK NEAR COURTNEY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1962-63, November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
24...	1028	9740	1730	--	3000	8.4	7.0	10	--	--	62	882
DEC												
22...	1028	9740	1600	--	3100	8.2	7.0	20	>20.0	--	40	830
JAN												
27...	1028	9740	1530	--	2700	8.2	5.5	3	12.2	101	28	910
FEB												
25...	1028	9740	1400	--	2000	--	13.5	7	14.2	143	41	726
MAR												
23...	1028	9740	1345	--	1800	8.6	16.5	4	9.4	100	39	460
APR												
27...	1028	9740	1300	--	1250	8.7	16.0	40	7.6	80	42	370
MAY												
26...	1028	9740	1200	--	1700	7.6	21.0	89	6.2	72	49	478
JUN												
23...	1028	9740	1300	--	950	7.8	24.0	100	5.8	72	18	260
JUL												
28...	1028	9740	1240	--	1750	7.9	29.0	32	5.5	74	24	410
AUG												
25...	1028	9740	1145	--	2000	6.3	26.0	87	4.0	51	31	527
SEP												
28...	1028	9740	1215	--	590	7.7	19.5	14	5.0	57	34	--

07315700 MUD CREEK NEAR COURTNEY, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
24...	195	365	115	275	8.3	661	.6	1824	<1.3	.04	--
DEC											
22...	180	370	99	280	6.2	590	.5	1610	1.0	.03	--
JAN											
27...	170	410	94	260	5.3	--	.5	423	1.0	.04	--
FEB											
25...	170	330	100	230	5.4	527	.5	1543	1.0	--	<1
MAR											
23...	95	240	62	190	5.9	360	.4	1110	1.8	.10	--
APR											
27...	84	183	41	120	4.9	250	.3	819	2.8	.29	--
MAY											
28...	106	258	62	180	6.0	379	.3	1043	1.6	.29	4
JUN											
23...	54	150	27	81	5.7	170	.4	544	1.4	.12	--
JUL											
28...	95	199	52	225	6.3	394	.4	1094	1.6	.14	--
AUG											
25...	111	272	69	225	--	382	.5	1226	1.9	.13	20
SEP											
28...	--	366	22	55	5.9	82	.4	304	1.0	.24	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
24...	2	9	7	600	15	460	--	--	--	2	11
DEC											
22...	--	--	--	800	--	630	--	--	--	--	--
JAN											
27...	--	--	--	800	--	440	--	--	--	--	--
FEB											
25...	<1	4	6	700	21	670	--	13	--	3	10
MAR											
23...	--	--	--	700	--	550	--	--	--	--	--
APR											
27...	--	--	--	100	--	10	--	--	--	--	--
MAY											
28...	2	15	37	2600	136	720	<.5	23	<2	2	60
JUN											
23...	--	--	--	1500	--	440	--	--	--	--	--
JUL											
28...	--	--	--	700	--	542	--	--	--	--	--
AUG											
25...	2	33	14	4300	38	2770	<.5	31	<3	1	47
SEP											
28...	--	--	--	1000	--	341	--	--	--	--	--

07315900 WALNUT BAYOU NEAR BURNEYVILLE, OK

LOCATION.--Lat 33°56'30", long 97°18'20", in NW 1/4 NE 1/4 sec.21, T.7 S., R.1 W., Love County, Hydrologic Unit 11130201, near right bank on downstream side of bridge on State Highway 32, 0.8 mi (1.3 km) downstream of bridge on State Highway 32, 0.8 mi (1.3 km) downstream from Simon Creek, 2.5 mi (4.0 km) northwest of Burneyville, and at mile 6.5 (10.5 km).

DRAINAGE AREA.--314 mi^2 (813 km^2).

PERIOD OF RECORD.--Water years 1960-63, 1969-71, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1971.
WATER TEMPERATURE: October 1968 to September 1971.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
24...	1028	9740	1645	--	2350	8.6	7.0	5	--	--	62	651
DEC												
22...	1028	9740	1500	--	2500	8.4	8.0	4	15.4	136	20	580
JAN												
27...	1028	9740	1400	--	2000	7.6	6.0	3	13.0	108	44	570
FEB												
25...	1028	9740	1340	--	1750	--	14.0	5	>20.0	--	100	543
MAR												
23...	1028	9740	1300	--	1300	8.1	16.0	25	10.6	116	39	240
APR												
28...	1028	9740	1330	--	1000	8.1	16.0	35	8.4	88	46	320
MAY												
25...	1028	9740	1345	--	1900	8.1	23.5	39	8.4	102	49	470
JUN												
23...	1028	9740	1200	--	1100	8.2	26.0	40	8.5	109	29	300
JUL												
28...	1028	9740	1135	--	1020	7.9	28.0	8	6.9	92	15	330
SEP												
28...	1028	9740	1130	--	1450	7.4	18.5	10	7.6	85	31	333

07315900 WALNUT BAYOU NEAR BURNEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
24...	205	399	65	303	8.0	756	.5	1725	.70	.02	1
DEC											
22...	180	370	48	260	5.5	540	.4	--	.70	<.01	--
JAN											
27...	120	380	42	190	4.0	440	.4	1080	1.3	.02	--
FEB											
25...	180	348	50	200	5.4	507	.4	1296	.80	--	1
MAR											
23...	98	230	32	140	5.5	280	.4	807	.60	<.08	--
APR											
28...	76	190	22	99	4.6	180	.3	597	2.6	.28	--
MAY											
25...	130	308	44	215	6.4	437	.4	1211	.90	.09	4
JUN											
23...	75	210	22	110	5.5	220	.4	624	.90	<.09	--
JUL											
28...	89	183	29	107	4.6	177	.4	691	1.6	<.08	--
SEP											
28...	103	310	41	150	4.7	237	.4	903	1.3	<.09	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
24...	2	--	7	100	13	115	--	6	--	3	2
DEC											
22...	--	--	--	100	--	150	--	--	--	--	--
JAN											
27...	--	--	--	200	--	160	--	--	--	--	--
FEB											
25...	1	4	5	500	16	130	--	12	--	2	2
MAR											
23...	--	--	--	400	--	160	--	--	--	--	--
APR											
28...	--	--	--	200	--	10	--	--	--	--	--
MAY											
25...	3	10	13	1000	15	316	<.5	14	<2	2	10
JUN											
23...	--	--	--	300	--	160	--	--	--	--	--
JUL											
28...	--	--	--	200	--	596	--	--	--	--	--
SEP											
28...	--	--	--	300	--	742	--	--	--	--	--

07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW 1/4 sec.36, T.9 S., R.1 E., Love County, Okla., 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 mi^2 (79,725 km^2) of which 5,936 mi^2 (15,374 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft (1,913.387 m) above mean sea level. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Records good. Slight regulation by nine major upstream reservoirs in Oklahoma and Texas with a total capacity of 1,402,000 acre-ft (1.73 km^2).

COOPERATION.--Gage-height record and 31 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--40 years, 2,750 ft^3/s (77.88 m^3/s), 1,992,000 acre-ft/yr (2.46 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 168,000 ft^3/s (4,758 m^3/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 ft^3/s (1.36 m^3/s) Jan. 27, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,300 ft^3/s (490 m^3/s) Apr. 20, gage height, 15.25 ft (4.648 m); maximum gage height, 15.44 ft (4.706 m) Sept. 16, no peak above base of 24,000 ft^3/s (680 m^3/s); minimum daily discharge, 243 ft^3/s (6.88 m^3/s) Aug. 24-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	840	561	620	900	503	403	422	2990	4970	2000	365	285
2	790	553	595	932	487	403	418	4830	4700	1460	432	336
3	748	550	594	1040	487	398	412	4520	5500	1100	521	401
4	727	547	600	1050	487	381	412	3150	9730	1060	592	1480
5	712	547	600	947	487	391	412	2590	9730	1010	506	1800
6	693	550	593	862	487	380	412	2360	5160	940	448	1890
7	665	1400	580	810	487	383	421	1980	3400	812	382	1550
8	644	2250	570	742	487	446	441	1650	2460	642	347	1120
9	625	2510	570	647	487	626	470	1410	2030	571	317	803
10	619	2120	570	739	487	903	473	1260	1560	565	323	656
11	637	1740	576	649	487	1110	461	1240	1370	640	530	508
12	650	1390	576	631	487	1700	457	1310	1270	646	599	434
13	650	1180	568	631	487	1690	457	1480	1100	576	537	408
14	631	1050	553	629	487	1390	450	1470	948	553	458	408
15	619	940	552	597	487	1080	440	3430	916	549	389	954
16	619	874	539	588	487	913	475	3210	899	570	346	14000
17	625	818	536	588	487	928	535	2180	819	589	317	14000
18	613	769	542	588	487	901	713	1300	1080	634	275	12200
19	619	741	542	596	486	782	6570	1220	1490	748	261	7410
20	649	705	542	606	469	706	15300	1070	1760	608	261	4570
21	679	687	531	603	469	637	14300	967	2440	545	261	6070
22	938	662	536	600	469	585	12800	922	2420	650	261	8640
23	1070	662	536	591	469	555	11900	1100	2120	483	250	7240
24	913	662	542	580	469	525	7700	1350	1530	416	243	5300
25	806	662	616	571	466	525	5060	1310	1120	408	243	3630
26	705	662	687	545	451	486	3180	1960	927	398	243	2470
27	670	650	694	533	438	452	2440	1970	892	371	243	1930
28	632	637	709	530	426	452	2060	3050	809	351	274	1640
29	594	637	839	530	411	448	2090	2640	892	368	295	1380
30	577	654	886	530	---	441	2170	5800	2170	376	269	1190
31	571	---	894	528	---	423	---	7160	---	374	280	---
TOTAL	21530	28370	18888	20913	13805	21443	93851	72879	76212	21013	11068	104703
MEAN	695	946	609	675	476	692	3128	2351	2540	678	357	3490
MAX	1070	2510	894	1050	503	1700	15300	7160	9730	2000	599	14000
MIN	571	547	531	528	411	380	412	922	809	351	243	285
AC-FT	42700	56270	37460	41480	27380	42530	186200	144600	151200	41680	21950	207700

CAL YR 1975 TOTAL 1616265 MEAN 4428 MAX 56200 MIN 531 AC-FT 3206000
WTR YR 1976 TOTAL 504675 MEAN 1379 MAX 15300 MIN 243 AC-FT 1001000

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-63, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1952 to September 1963.
WATER TEMPERATURE: October 1952 to September 1963.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
24...	1028	9740	1600	662	6000	8.2	8.0	50	--	--	74	1100
DEC												
22...	1028	9740	1415	536	6000	8.7	6.0	6	--	--	68	1200
JAN												
27...	1028	9740	1300	533	6100	8.5	5.0	1	16.0	128	120	1200
FEB												
11...	1028	9740	1155	487	3500	--	13.5	5	9.8	89	87	1100
MAR												
10...	1028	9740	0930	903	2400	7.9	15.0	15	9.6	99	65	770
APR												
07...	1028	9740	1236	421	5000	--	17.0	10	13.0	140	63	2100
MAY												
11...	1028	9740	1100	1240	4500	8.6	24.0	90	9.9	118	24	950
JUN												
09...	1028	9740	0936	2030	2400	--	26.5	280	--	--	61	520
JUL												
07...	1028	9740	1215	812	--	--	27.0	140	7.9	101	130	900
AUG												
25...	1028	9740	1000	243	6500	8.6	25.0	85	7.7	96	68	176
SEP												
28...	1028	9740	1000	1640	1200	7.6	20.5	27	8.3	96	39	344

07316000 RED RIVER NEAR GAINESVILLE, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
24...	<10	7	10	400	20	70	--	20	--	<10	<10
DEC											
22...	--	--	--	2100	--	14	--	--	--	--	--
JAN											
27...	--	--	--	100	--	47	--	--	--	--	--
FEB											
11...	<10	9	10	200	20	66	--	20	--	<10	<10
MAR											
10...	--	--	--	2100	--	390	--	--	--	--	--
APR											
07...	--	--	--	<100	--	<5	--	--	--	--	--
MAY											
11...	10	20	10	1200	30	180	.5	20	4	10	20
JUN											
09...	--	--	--	1100	--	18	--	--	--	--	--
JUL											
07...	--	--	--	2500	--	200	--	--	--	--	--
AUG											
25...	<1	16	7	600	21	279	<.5	14	<3	2	20
SEP											
28...	--	--	--	1400	--	390	--	--	--	--	--

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
24...	360	710	85	820	11	1300	.5	3340	1.1	.22	4
DEC											
22...	320	670	89	830	1.0	1300	.5	3370	1.2	.28	--
JAN											
27...	320	960	91	900	11	1500	.5	4100	6.1	.16	--
FEB											
11...	360	920	100	670	9.6	1500	.5	3470	1.7	.34	4
MAR											
10...	230	470	66	500	9.0	870	.5	2410	1.7	.16	--
APR											
07...	260	127	100	90	10	1600	.3	3770	.90	.33	--
MAY											
11...	260	630	76	700	10	1250	.4	3100	1.1	.42	8
JUN											
09...	140	340	33	340	9.6	550	.4	1670	.90	.76	--
JUL											
07...	260	630	64	720	13	1200	.4	3090	2.4	.23	--
AUG											
25...	61	124	12	66	9.4	1530	.5	4065	4.2	.16	12
SEP											
28...	117	322	31	202	8.9	330	.3	994	2.3	.24	--

07316500 WASHITA RIVER NEAR CHEYENNE, OK

LOCATION.--Lat 35°37'35", long 99°40'05", in SE 1/4 sec.5, T.13 N., R.23 W., Roger Mills County, 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 mi^2 (2,056 km^2).

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

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,905.98 ft (580.943 m) above mean sea level (levels by Corps of Engineers). May 1, 1938, to Nov. 16, 1946, and Oct. 1, 1947, to Jan. 11, 1948, nonrecording gage at same site and datum.

REMARKS.--Records good. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--39 years, 29.8 ft^3/s (0.843 m^3/s), 21,590 acre-ft/yr (26.6 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft^3/s (1,977 m^3/s) Apr. 29, 1954, gage height, 15.24 ft (4.645 m); from rating curve extended above 27,000 ft^3/s (765 m^3/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3, 1934, reached a stage of 1.0 ft (0.30 m) lower than that in 1954 at site on upstream side of highway fill.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,960 ft^3/s (55.5 m^3/s) at 0100, May 26, gage height, 5.31 ft (1.618 m), no other peak above base of 1,100 ft^3/s (31.2 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.29	5.7	9.8	7.9	7.7	7.4	50	29	0		0
2		44	5.4	5.6	7.8	7.4	6.4	46	24	0		0
3		17	4.8	2.3	7.6	6.2	5.5	40	20	0		0
4		12	5.1	3.0	7.8	6.4	5.6	34	18	0		0
5		6.7	6.2	3.0	8.8	6.4	5.0	31	16	0		0
6		5.1	5.6	3.2	7.1	6.3	5.2	29	15	0		0
7		3.9	5.6	2.9	4.8	8.4	5.4	25	14	0		0
8		3.2	6.1	1.8	6.2	13	8.1	22	12	0		0
9		2.6	6.3	1.8	10	16	8.8	21	12	0		0
10		2.3	7.1	2.1	11	15	7.8	23	11	0		0
11		2.2	6.9	2.7	12	15	8.0	20	9.6	0		0
12		1.8	6.5	3.6	12	14	6.0	18	7.9	0		0
13		1.7	8.2	7.1	11	11	6.2	17	7.6	0		.05
14		1.9	8.6	8.4	12	10	7.1	16	5.9	0		0
15		2.0	7.3	11	11	10	20	15	4.7	.35		0
16		2.0	7.1	14	11	10	57	14	4.0	2.2		0
17		2.3	6.5	13	10	9.5	126	12	3.4	1.6		2.9
18		2.4	3.4	13	8.8	9.3	120	10	5.8	1.3		1.1
19		5.6	5.4	12	7.6	9.3	75	9.7	3.7	.89		.34
20		6.1	5.6	10	7.6	9.5	95	8.1	2.9	.57		2.8
21		5.9	6.4	11	6.9	8.5	65	6.7	2.5	.37		.58
22		5.4	7.6	11	7.3	7.3	62	9.3	1.8	.24		.24
23		4.6	7.4	12	7.3	6.7	55	49	1.7	.15		.10
24		4.0	8.7	11	6.9	6.5	45	26	1.5	.11		0
25		3.2	9.3	10	6.8	6.0	38	48	1.1	.04		0
26		2.5	9.3	6.2	6.7	6.1	34	431	.84	0		0
27		3.6	9.4	4.8	6.7	7.2	32	90	.49	0		0
28		5.1	9.4	7.6	7.2	7.0	45	67	.35	0		0
29		6.3	13	9.0	7.8	6.7	43	50	.07	0		0
30		6.1	11	8.4	---	6.3	47	40	.07	0		0
31		---	12	8.0	---	8.0	---	36	---	0		---
TOTAL	0	171.79	226.9	229.3	245.6	276.7	1051.5	1313.8	236.92	7.82	0	8.11
MEAN	0	5.73	7.32	7.40	8.47	8.93	35.1	42.4	7.90	.25	0	.27
MAX	0	44	13	14	12	16	126	431	29	2.2	0	2.9
MIN	0	.29	3.4	1.8	4.8	6.0	5.0	6.7	.07	0	0	0
AC-FT	0	341	450	455	487	549	2090	2610	470	16	0	16

CAL YR 1975 TOTAL 4568.13 MEAN 12.5 MAX 158 MIN 0 AC-FT 9060
WTR YR 1976 TOTAL 3768.44 MEAN 10.3 MAX 431 MIN 0 AC-FT 7470

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, 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 mi^2 (3,592 km^2).

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) above mean sea level.

REMARKS.--Records poor. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--7 years, 20.9 ft^3/s (0.592 m^3/s), 15,140 acre-ft/yr (18.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft^3/s (71.9 m^3/s) April 18, 1970, gage height, 19.23 ft (5.861 m), from rating curve extended above 500 ft^3/s (14.2 m^3/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 496 ft^3/s (14.0 m^3/s) May 27, gage height, 10.20 ft (3.109 m), no peak above base of 1,500 ft^3/s (42.5 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	4.0	19	25	21	19	14	90	147	1.8		0
2	6.3	70	16	23	21	18	14	86	107	1.2		0
3	6.3	97	15	15	20	17	13	76	87	.84		0
4	6.3	50	15	14	20	18	12	66	73	.33		0
5	5.2	35	16	17	20	18	12	59	59	.16		0
6	3.8	37	15	16	14	18	11	52	51	.10		0
7	2.8	21	15	9.2	18	16	11	48	45	.04		0
8	2.3	19	16	23	23	19	10	40	40	.02		0
9	2.1	17	16	27	23	23	9.8	37	35	0		0
10	2.1	15	16	26	22	25	9.0	67	30	0		0
11	2.0	13	17	25	21	24	8.3	57	26	0		0
12	1.9	11	16	32	21	23	9.2	42	23	0		.01
13	2.0	9.8	15	37	23	23	11	35	21	0		0
14	2.2	9.4	16	32	22	22	12	31	22	0		0
15	3.0	9.0	16	40	22	21	18	28	19	.05		0
16	3.0	9.0	15	31	22	21	80	26	18	.46		0
17	4.5	8.7	14	29	20	21	168	24	17	.39		0
18	3.7	8.7	9.3	30	20	21	293	22	16	.26		0
19	3.4	11	12	30	20	20	208	20	17	.33		0
20	3.0	14	13	28	21	20	191	18	9.3	.30		0
21	2.8	18	12	25	21	19	171	17	7.8	.20		0
22	2.4	15	16	22	18	18	141	18	7.0	.16		0
23	2.3	14	17	22	17	17	110	17	7.3	.14		0
24	2.6	15	20	22	18	17	93	20	14	.12		0
25	2.3	16	21	22	18	16	81	29	11	.10		.01
26	2.1	11	22	21	16	15	69	107	7.0	.04		0
27	2.4	16	22	14	16	14	61	369	5.0	.04		0
28	2.6	20	21	19	16	13	69	368	4.2	.04		0
29	2.8	20	25	20	17	12	110	193	4.0	.02		0
30	2.6	18	25	21	---	14	91	126	2.8	0		0
31	2.8	---	26	20	---	15	---	138	---	0		---
TOTAL	99.9	631.6	529.3	737.2	571	577	2110.3	2326	932.4	7.14	0	.02
MEAN	3.22	21.1	17.1	23.8	19.7	18.6	70.3	75.0	31.1	.23	0	.0007
MAX	6.3	97	26	40	23	25	293	369	147	1.8	0	.01
MIN	1.9	4.0	9.3	9.2	14	12	8.3	17	2.8	0	0	0
AC-FT	198	1250	1050	1460	1130	1140	4190	4610	1850	14	0	.04

CAL YR 1975 TOTAL 17831.30 MEAN 48.9 MAX 1330 MIN 1.9 AC-FT 35370
WTR YR 1976 TOTAL 8521.86 MEAN 23.3 MAX 369 MIN 0 AC-FT 16900

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 1976.
WATER TEMPERATURE: October 1969 to September 1976.

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, 2,850 micromhos Apr. 23, 1976; minimum daily, 450 micromhos July 24, 1975.
WATER TEMPERATURE: Maximum daily, 33.5°C June 18, 1974; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,850 micromhos Apr. 23; minimum daily, 976 micromhos May 27.
WATER TEMPERATURE: Maximum daily, 27.5°C June 11, 25; minimum daily, 0.5°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM
NOV										
19...	1615	11	2300	8.2	1400	1100	310	150	63	9
27...	1646	22	2170	8.2	1200	950	280	130	72	11
DEC										
02...	1611	15	2150	8.0	1100	960	240	130	76	13
13...	1601	16	2240	7.8	1300	1000	270	140	77	12
20...	1552	16	2370	7.7	1300	1100	280	150	80	12
JAN										
12...	1547	32	2720	7.7	1600	1300	360	170	85	10
19...	1518	30	2000	7.9	1000	810	230	110	83	15
28...	1552	19	2170	7.8	1100	830	240	120	100	17
FEB										
07...	1521	18	2470	7.8	1300	1100	280	150	94	13
22...	1602	16	2140	7.8	1000	860	220	120	100	17
25...	1557	17	2200	7.9	1000	860	220	120	110	19
MAR										
02...	1554	18	2280	7.9	1200	1000	240	140	100	16
08...	1554	24	2150	7.7	1100	930	230	130	100	16
31...	1551	14	2410	7.7	1300	1100	270	150	100	14
APR										
03...	1502	13	2380	8.0	1300	1100	270	140	99	15
18...	1530	280	1260	7.8	610	480	140	63	42	13
23...	1600	108	1580	7.7	790	540	180	82	81	18
MAY										
03...	1559	74	1750	8.0	860	570	190	93	90	18
24...	1730	20	2180	7.9	1200	970	250	140	90	14
27...	1835	369	976	8.1	460	350	110	45	32	13
JUN										
01...	1830	133	1410	8.1	700	490	160	72	65	17
07...	1830	44	1810	8.3	910	700	200	100	81	16
24...	1830	14	2030	8.1	1200	1000	310	110	58	9
JUL										
02...	0600	1.2	2030	7.9	1200	1000	260	130	75	12
05...	0700	.16	1880	8.1	1000	820	220	110	64	12
08...	0600	.02	1960	8.2	1100	890	230	120	60	11

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)
NOV										
19...	.7	5.7	351	288	3.5	1100	30	2090	2.84	.23
27...	.9	5.8	345	283	3.5	1000	36	1870	2.54	.20
DEC										
02...	1.0	5.4	214	176	3.4	1000	41	1830	2.49	.32
13...	.9	4.8	303	249	7.7	1100	41	1940	2.64	.24
20...	1.0	4.4	303	249	9.7	1100	41	2080	2.83	.36
JAN										
12...	.9	4.6	338	277	11	1400	46	2480	3.37	.36
19...	1.1	4.5	262	215	5.3	910	39	1660	2.26	.17
28...	1.3	4.0	320	262	8.1	950	55	1810	2.46	.22
FEB										
07...	1.1	4.1	232	190	5.9	1200	48	2160	2.94	.24
22...	1.3	4.9	226	185	5.7	1000	54	1770	2.41	.15
25...	1.5	4.9	226	185	4.6	1000	54	1810	2.46	.12
MAR										
02...	1.3	5.2	186	153	3.7	1100	59	1870	2.54	.16
08...	1.3	4.6	225	185	7.2	1000	97	1870	2.54	.18
31...	1.2	4.6	214	176	6.8	1200	53	2040	2.77	.04
APR										
03...	1.2	4.8	217	178	3.5	1200	63	2160	2.94	.19
18...	.7	9.8	155	127	3.9	530	21	997	1.36	1.0
23...	1.3	7.5	298	244	9.5	600	50	1250	1.70	.32
MAY										
03...	1.3	6.0	346	284	5.5	680	52	1380	1.88	.50
24...	1.1	6.1	280	230	5.6	1100	48	1910	2.60	.54
27...	.7	10	140	115	1.8	400	19	708	.96	.96
JUN										
01...	1.1	6.5	251	206	3.2	580	44	1120	1.52	.44
07...	1.2	5.9	262	215	2.1	840	42	1500	2.04	.37
24...	.7	7.3	218	179	2.8	1100	37	1810	2.46	.22
JUL										
02...	.9	7.8	206	169	4.2	1100	30	1820	2.48	.27
05...	.9	7.4	223	183	2.8	900	32	1570	2.14	.23
08...	.8	8.1	213	175	2.2	950	32	1700	2.31	.49

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	---	2180	2240	2200	2220	2560	1800	1350	2250		
2	2000	---	2180	2190	2170	2260	2470	1740	1450	2210		
3	2000	---	2220	2200	2200	2310	2410	1740	1580	2000		
4	2010	---	2260	2540	2220	2310	2390	1730	1610	1900		
5	2030	---	2280	2400	2190	2310	2410	1750	1700	2050		
6	1860	---	2310	2300	2140	2300	2440	1790	1720	1900		
7	1860	---	2220	2680	2510	2240	2470	1810	1800	1900		
8	1890	---	2310	2570	2260	2170	2440	1800	1880	1970		
9	1920	---	2260	2630	2230	2220	2310	1860	1920	---		
10	1950	---	2190	2410	2200	2150	2370	1970	1890	---		
11	2000	---	2240	2380	2210	2370	2330	1470	1890	---		
12	2010	---	2260	2760	2230	2220	2380	1710	1870	---		
13	2050	---	2230	1930	2270	2160	2410	1770	1860	---		
14	1950	---	2300	2020	2140	---	2350	1790	1820	---		
15	1940	---	2250	2040	2400	---	2280	1970	1730	---		
16	2030	---	2270	2070	2330	2150	1760	1910	1720	---		
17	1970	---	2180	2090	2250	2150	1860	1950	1810	---		
18	1990	---	2180	2060	2000	2170	1280	1960	1840	---		
19	2080	2300	2230	2000	2190	2400	1330	1950	1800	---		
20	2160	2380	2300	2010	2140	2230	1350	1880	1820	---		
21	2200	2360	2180	2020	2250	2390	1390	1880	1840	---		
22	2350	2390	2290	2070	2020	2500	1600	1950	1890	---		
23	2330	2340	2170	2090	2160	2430	1650	2020	1910	---		
24	2450	2290	2130	2100	2180	2250	1660	2150	2080	---		
25	2620	2240	2240	2110	2140	2170	1730	2000	2080	---		
26	---	2150	2310	2200	2260	2180	1790	1460	2120	---		
27	---	2230	2290	2220	2270	2360	1840	1020	2250	---		
28	---	2150	2250	2120	2320	2320	2000	1060	2320	---		
29	---	2010	2230	2110	2310	2280	1970	1220	1830	---		
30	---	2170	2270	2130	---	2500	1740	1350	1920	---		
31	---	---	2250	2180	---	2430	---	1440	---	---		
MONTH	2070	---	2240	2220	2220	2280	2030	1740	1840	---		

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	---	6.0	4.5	8.0	11.5	12.5	14.0	21.5	24.0		
2	13.5	---	5.0	3.5	5.0	11.5	15.0	16.5	22.5	26.0		
3	14.5	---	3.0	0.5	4.5	8.0	16.0	15.5	23.0	25.0		
4	13.5	---	5.5	0.5	3.5	7.5	14.5	17.0	22.5	21.5		
5	16.0	---	9.0	0.5	3.5	6.0	15.5	17.0	19.5	19.5		
6	17.0	---	5.5	2.5	0.5	6.5	17.0	17.5	22.0	20.0		
7	18.0	---	4.0	0.5	1.0	6.0	16.0	15.5	21.5	20.0		
8	21.5	---	4.5	1.0	2.5	6.0	16.0	16.0	23.0	22.0		
9	20.0	---	7.0	2.0	5.5	8.0	16.5	16.5	24.0	---		
10	22.0	---	6.0	2.0	9.0	10.0	17.0	17.0	22.0	---		
11	23.0	---	4.0	1.0	9.0	12.0	18.5	18.0	23.5	---		
12	23.5	---	3.0	0.5	9.5	9.0	18.0	17.5	24.5	---		
13	22.5	---	10.0	1.0	12.0	7.0	18.5	15.5	24.0	---		
14	19.0	---	9.0	2.0	11.5	8.0	18.0	16.0	24.5	---		
15	14.5	---	3.0	4.0	12.0	9.0	18.5	17.5	21.5	24.0		
16	13.5	---	3.5	6.0	12.0	8.0	16.0	17.0	20.5	23.5		
17	15.0	---	1.5	6.0	10.5	10.0	16.5	17.5	20.5	23.0		
18	20.0	---	0.5	3.0	8.5	12.5	15.5	18.0	21.5	24.5		
19	22.5	---	2.0	---	9.5	14.0	17.0	19.0	22.0	25.5		
20	20.0	5.5	3.5	3.5	9.0	13.0	16.0	20.5	22.0	26.0		
21	22.0	5.5	3.0	3.0	6.0	11.0	15.5	21.0	22.0	25.0		
22	---	3.0	2.5	4.0	4.5	12.0	18.5	22.0	24.0	24.0		
23	---	4.5	2.5	5.0	6.0	11.5	20.5	21.5	25.0	24.0		
24	---	3.0	2.5	5.5	7.0	14.5	19.5	22.0	24.0	24.5		
25	---	2.5	2.0	3.5	8.5	17.0	18.0	20.5	23.5	24.5		
26	---	0.5	5.0	1.5	9.5	14.5	16.0	17.5	25.0	23.0		
27	---	1.0	5.0	1.0	10.0	12.5	14.5	16.5	---	24.0		
28	---	4.0	6.5	2.5	12.5	14.5	15.5	18.0	---	25.0		
29	---	9.5	2.5	4.0	12.5	15.0	12.5	21.0	25.5	25.0		
30	---	4.5	3.0	5.5	---	12.0	13.0	23.5	25.0	---		
31	---	---	1.5	5.5	---	12.5	---	22.0	---	---		
MONTH	---	---	4.0	3.0	7.5	10.5	16.5	18.0	23.0	---		

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

DISSOLVED SULFATE (SO4), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	930	---	1000	1100	1100	1100	1300	810	560	1100		
2	930	---	1000	1000	1000	1100	1200	780	600	1100		
3	930	---	1100	1100	1100	1100	1200	780	680	930		
4	940	---	1100	1300	1100	1100	1200	770	700	870		
5	950	---	1100	1200	1000	1100	1200	780	750	960		
6	850	---	1100	1100	1000	1100	1200	810	760	870		
7	850	---	1100	1300	1200	1100	1200	820	810	870		
8	870	---	1100	1300	1100	1000	1200	810	860	910		
9	880	---	1100	1300	1100	1100	1100	850	880	---		
10	900	---	1000	1200	1100	1000	1200	910	870	---		
11	930	---	1100	1200	1100	1200	1100	620	870	---		
12	940	---	1100	1400	1100	1100	1200	760	850	---		
13	960	---	1100	890	1100	1000	1200	790	850	---		
14	900	---	1100	940	1000	---	1100	810	820	---		
15	900	---	1100	960	1200	---	1100	910	770	---		
16	950	---	1100	970	1100	1000	790	880	760	---		
17	910	---	1000	990	1100	1000	850	900	820	---		
18	930	---	1000	970	930	1000	530	910	840	---		
19	980	1100	1100	930	1000	1200	550	900	810	---		
20	1000	1200	1100	940	1000	1100	560	860	820	---		
21	1100	1100	1000	940	1100	1200	570	860	840	---		
22	1100	1200	1100	970	940	1200	690	900	870	---		
23	1100	1100	1000	990	1000	1200	720	940	880	---		
24	1200	1100	1000	990	1000	1100	730	1000	980	---		
25	1300	1100	1100	1000	1000	1000	770	930	980	---		
26	---	1000	1100	1100	1100	1000	810	610	1000	---		
27	---	1100	1100	1100	1100	1100	840	420	1100	---		
28	---	1000	1100	1000	1100	1100	930	440	1100	---		
29	---	940	1100	1000	1100	1100	910	500	830	---		
30	---	1000	1100	1000	---	1200	780	560	880	---		
31	---	---	1100	1000	---	1200	---	600	---	---		
MONTH	970	---	1100	1100	1100	1100	960	780	840	---		

DISSOLVED SULFATE (SO4), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.8	---	51.3	74.2	62.4	56.4	49.1	197	222	5.35		
2	15.8	---	43.2	62.1	56.7	53.5	45.4	181	173	3.56		
3	15.8	---	44.5	44.5	59.4	50.5	42.1	160	160	2.11		
4	16.0	---	44.5	49.1	59.4	53.5	38.9	137	138	.78		
5	13.3	---	47.5	55.1	54.0	53.5	38.9	124	119	.41		
6	8.72	---	44.5	47.5	37.8	53.5	35.6	114	105	.23		
7	6.43	---	44.5	32.3	58.3	47.5	35.6	106	98.4	.09		
8	5.40	---	47.5	80.7	68.3	51.3	32.4	87.5	92.9	.05		
9	4.99	---	47.5	94.8	68.3	68.3	29.1	84.9	83.2	---		
10	5.10	---	43.2	84.2	65.3	67.5	29.2	165	70.5	---		
11	5.02	---	50.5	81.0	62.4	77.8	24.7	95.4	61.1	---		
12	4.82	---	47.5	121	62.4	68.3	29.8	86.2	52.8	---		
13	5.18	---	44.5	88.9	68.3	62.1	35.6	74.7	48.2	---		
14	5.35	---	47.5	81.2	59.4	---	35.6	67.8	48.7	---		
15	7.29	---	47.5	104	71.3	---	53.5	68.8	39.5	---		
16	7.69	---	44.5	81.2	65.3	56.7	171	61.8	36.9	---		
17	11.1	---	37.8	77.5	59.4	56.7	386	58.3	37.6	---		
18	9.29	---	25.1	78.6	50.2	56.7	419	54.1	36.3	---		
19	9.00	32.7	35.6	75.3	54.0	64.8	309	48.6	37.2	---		
20	8.10	45.4	38.6	71.1	56.7	59.4	289	41.8	20.6	---		
21	8.32	53.5	32.4	63.4	62.4	61.6	263	39.5	17.7	---		
22	7.13	48.6	47.5	57.6	45.7	58.3	263	43.7	16.4	---		
23	6.83	41.6	45.9	58.8	45.9	55.1	214	43.1	17.3	---		
24	8.42	44.5	54.0	58.8	48.6	50.5	183	54.0	37.0	---		
25	8.07	47.5	62.4	59.4	48.6	43.2	168	72.8	29.1	---		
26	---	29.7	65.3	62.4	47.5	40.5	151	176	18.9	---		
27	---	47.5	65.3	41.6	47.5	41.6	138	418	14.9	---		
28	---	54.0	62.4	51.3	47.5	38.6	173	437	12.5	---		
29	---	50.8	74.2	54.0	50.5	35.6	270	261	8.96	---		
30	---	48.6	74.2	56.7	---	45.4	192	191	6.65	---		
31	---	---	77.2	54.0	---	48.6	---	224	---	---		
MONTH	8.75	---	49.6	67.8	56.7	54.4	138	128	62.0	---		

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	---	44	45	45	45	52	37	28	45		
2	41	---	44	44	44	46	50	35	30	45		
3	41	---	45	45	45	47	49	35	32	41		
4	41	---	46	51	45	47	48	35	33	39		
5	41	---	46	48	44	47	49	36	35	42		
6	38	---	47	46	43	46	49	36	35	39		
7	38	---	45	54	51	45	50	37	37	39		
8	38	---	47	52	46	44	49	37	38	40		
9	39	---	46	53	45	45	47	38	39	---		
10	40	---	44	49	45	44	48	40	38	---		
11	41	---	45	48	45	48	47	30	38	---		
12	41	---	46	55	45	45	48	35	38	---		
13	42	---	45	39	46	44	49	36	38	---		
14	40	---	46	41	43	---	47	36	37	---		
15	39	---	45	41	48	---	46	40	35	---		
16	41	---	46	42	47	44	36	39	35	---		
17	40	---	44	42	45	44	38	40	37	---		
18	40	---	44	42	41	44	26	40	37	---		
19	42	46	45	41	44	48	27	40	37	---		
20	44	48	46	41	43	45	28	38	37	---		
21	45	48	44	41	45	48	29	38	37	---		
22	47	48	46	42	41	50	33	40	38	---		
23	47	47	44	42	44	49	34	41	39	---		
24	49	46	43	43	44	45	34	44	42	---		
25	53	45	45	43	43	44	35	41	42	---		
26	---	44	47	45	46	44	36	30	43	---		
27	---	45	46	45	46	48	37	21	45	---		
28	---	44	45	43	47	47	41	22	47	---		
29	---	41	45	43	47	46	40	25	37	---		
30	---	44	46	43	---	50	35	28	39	---		
31	---	---	45	44	---	49	---	30	---	---		
MONTH	42	---	45	45	45	46	41	35	37	---		

DISSOLVED CHLORIDE (CL), TONS PER DAY, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	---	2.26	3.04	2.55	2.31	1.97	8.99	11.1	.22		
2	.70	---	1.90	2.73	2.49	2.24	1.89	8.13	8.67	.15		
3	.70	---	1.82	1.82	2.43	2.16	1.72	7.18	7.52	.09		
4	.70	---	1.86	1.93	2.43	2.28	1.56	6.24	6.50	.03		
5	.58	---	1.99	2.20	2.38	2.28	1.59	5.73	5.58	.02		
6	.39	---	1.90	1.99	1.63	2.24	1.46	5.05	4.82	.01		
7	.29	---	1.82	1.34	2.48	1.94	1.48	4.80	4.50	0		
8	.24	---	2.03	3.23	2.86	2.26	1.32	4.00	4.10	0		
9	.22	---	1.99	3.86	2.79	2.79	1.24	3.80	3.69	---		
10	.23	---	1.90	3.44	2.67	2.97	1.17	7.24	3.08	---		
11	.22	---	2.07	3.24	2.55	3.11	1.05	4.62	2.67	---		
12	.21	---	1.99	4.75	2.55	2.79	1.19	3.97	2.36	---		
13	.23	---	1.82	3.90	2.86	2.73	1.46	3.40	2.15	---		
14	.24	---	1.99	3.54	2.55	---	1.52	3.01	2.20	---		
15	.32	---	1.94	4.43	2.85	---	2.24	3.02	1.80	---		
16	.33	---	1.86	3.52	2.79	2.49	7.78	2.74	1.70	---		
17	.49	---	1.66	3.29	2.43	2.49	17.2	2.59	1.70	---		
18	.40	---	1.10	3.40	2.21	2.49	20.6	2.38	1.60	---		
19	.39	1.37	1.46	3.32	2.38	2.59	15.2	2.16	1.70	---		
20	.36	1.81	1.61	3.10	2.44	2.43	14.4	1.85	.93	---		
21	.34	2.33	1.43	2.77	2.55	2.46	13.4	1.74	.78	---		
22	.30	1.94	1.99	2.49	1.99	2.43	12.6	1.94	.72	---		
23	.29	1.78	2.02	2.49	2.02	2.25	10.1	1.88	.77	---		
24	.34	1.86	2.32	2.55	2.14	2.07	8.54	2.38	1.59	---		
25	.33	1.94	2.55	2.55	2.09	1.90	7.65	3.21	1.25	---		
26	---	1.31	2.79	2.55	1.99	1.78	6.71	8.67	.81	---		
27	---	1.94	2.73	1.70	1.99	1.81	6.09	20.9	.61	---		
28	---	2.38	2.55	2.21	2.03	1.65	7.64	21.9	.53	---		
29	---	2.21	3.04	2.32	2.16	1.49	11.9	13.0	.40	---		
30	---	2.14	3.10	2.44	---	1.89	8.60	9.53	.29	---		
31	---	---	3.16	2.38	---	1.98	---	11.2	---	---		
MONTH	.38	---	2.08	2.85	2.38	2.28	6.37	6.04	2.87	---		

07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

DISSOLVED SOLIDS (RESIDUE AT 180 DEG. C), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1660	---	1870	1940	1890	1910	2300	1440	1070	1950		
2	1660	---	1870	1880	1860	1960	2200	1370	1140	1900		
3	1660	---	1910	1890	1890	2020	2130	1370	1250	1660		
4	1680	---	1960	2280	1910	2020	2110	1360	1270	1550		
5	1700	---	1980	2120	1880	2020	2130	1380	1340	1720		
6	1500	---	2020	2000	1820	2000	2160	1430	1360	1550		
7	1500	---	1910	2440	2240	1940	2200	1450	1440	1550		
8	1540	---	2020	2310	1960	1860	2160	1440	1530	1630		
9	1570	---	1960	2380	1930	1910	2020	1500	1570	---		
10	1610	---	1880	2130	1890	1830	2080	1630	1540	---		
11	1660	---	1940	2100	1900	2080	2040	1160	1540	---		
12	1680	---	1960	2530	1930	1910	2100	1350	1520	---		
13	1720	---	1930	1580	1970	1850	2130	1400	1500	---		
14	1610	---	2000	1690	1820	---	2060	1430	1460	---		
15	1600	---	1950	1710	2120	---	1980	1630	1360	---		
16	1700	---	1970	1740	2040	1830	1390	1560	1360	---		
17	1630	---	1870	1770	1950	1830	1500	1610	1450	---		
18	1650	---	1870	1730	1660	1860	1010	1620	1480	---		
19	1750	2000	1930	1660	1880	2120	1050	1610	1440	---		
20	1850	2100	2000	1680	1820	1930	1070	1530	1460	---		
21	1890	2070	1870	1690	1950	2110	1100	1530	1480	---		
22	2060	2110	1990	1740	1690	2230	1260	1610	1540	---		
23	2040	2050	1860	1770	1850	2150	1300	1690	1560	---		
24	2180	1990	1810	1780	1870	1950	1310	1830	1750	---		
25	2370	1940	1940	1790	1820	1860	1360	1660	1750	---		
26	---	1830	2020	1890	1960	1870	1430	1150	1800	---		
27	---	1930	1990	1910	1970	2070	1480	806	1950	---		
28	---	1830	1950	1800	2030	2030	1660	837	2030	---		
29	---	1680	1930	1790	2020	1980	1630	963	1470	---		
30	---	1860	1970	1810	---	2230	1370	1070	1570	---		
31	---	---	1950	1870	---	2150	---	1140	---	---		
MONTH	1740	---	1940	1920	1910	1980	1720	1410	1500	---		

DISSOLVED SOLIDS (TONS PER DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.2	---	95.9	131	107	98.0	86.9	350	425	9.48		
2	28.2	---	80.8	117	105	95.3	83.2	318	329	6.16		
3	28.2	---	77.4	76.5	102	92.7	74.8	281	294	3.76		
4	28.6	---	79.4	86.2	103	98.2	68.4	242	250	1.38		
5	23.9	---	85.5	97.3	102	98.2	69.0	220	213	.74		
6	15.4	---	81.8	86.4	68.8	97.2	64.2	201	187	.42		
7	11.3	---	77.4	60.6	109	83.8	65.3	188	175	.17		
8	9.56	---	87.3	143	122	95.4	58.3	156	165	.09		
9	8.90	---	84.7	174	120	119	53.4	150	148	---		
10	9.13	---	81.2	150	112	124	50.5	295	125	---		
11	8.96	---	89.0	142	108	135	45.7	179	108	---		
12	8.62	---	84.7	219	109	119	52.2	153	94.4	---		
13	9.29	---	78.2	158	122	115	63.3	132	85.0	---		
14	9.56	---	86.4	146	108	---	66.7	120	86.7	---		
15	13.0	---	84.2	185	126	---	96.2	123	69.8	---		
16	13.8	---	79.8	146	121	104	300	110	66.1	---		
17	19.8	---	70.7	139	105	104	680	104	66.6	---		
18	16.5	---	47.0	140	89.6	105	799	96.2	63.9	---		
19	16.1	59.4	62.5	134	102	114	590	86.9	66.1	---		
20	15.0	79.4	70.2	127	103	104	552	74.4	36.7	---		
21	14.3	101	60.6	114	111	108	508	70.2	31.2	---		
22	13.3	85.5	86.0	103	82.1	108	480	78.2	29.1	---		
23	12.7	77.5	85.4	105	84.9	98.7	386	77.6	30.7	---		
24	15.3	80.6	97.7	106	90.9	89.5	329	98.8	66.1	---		
25	14.7	83.8	110	106	88.5	80.4	297	130	52.0	---		
26	---	54.4	120	107	84.7	75.7	266	332	34.0	---		
27	---	83.4	118	72.2	85.1	78.2	244	803	26.3	---		
28	---	98.8	111	92.3	87.7	71.3	309	832	23.0	---		
29	---	90.7	130	96.7	92.7	64.2	484	502	15.9	---		
30	---	90.4	133	103	---	84.3	337	364	11.9	---		
31	---	---	137	101	---	87.1	---	425	---	---		
MONTH	15.7	---	89.4	121	102	98.2	252	235	112	---		

07324300 FOSS RESERVOIR NEAR FOSS, OK

LOCATION.--Lat 35°32'18", long 99°10'40", in S 1/2 sec.2, T.12 N., R.19 W., Custer County, 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 mi^2 (3,875 km^2).

RESERVOIR CONTENTS RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to October 1961, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Storage began Feb. 13, 1961. Capacity, 436,500 acre-ft (538 hm^3) at elevation 1,668.6 ft (508.59 m) crest of drop inlet and 256,100 acre-ft (316 hm^3) at elevation 1,652.0 ft (503.530 m) conservation pool. Dead storage, 12,420 acre-ft (15.3 hm^3) 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.

COOPERATION.--Elevations and data on diversions furnished by Foss Reservoir Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 163,600 acre-ft (202 hm^3) June 18, 1976, elevation, 1,639.82 ft (499.817 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 163,600 acre-ft (202 hm^3) June 18, elevation, 1,639.82 ft (499.817 m); minimum, 151,500 acre-ft (187 hm^3) Oct. 1, elevation, 1,637.87 ft (499.223 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,638.20	153,500	--	--
Oct. 31	1,637.90	151,700	-1,800	230
Nov. 30	1,638.20	153,500	+1,800	87
Dec. 31	1,638.20	153,500	0	220
CAL YR 75	-	--	+36,800	--
Jan. 31	1,638.20	153,500	0	223
Feb. 28	1,638.30	154,200	+700	201
Mar. 31	1,638.30	154,200	0	175
Apr. 30	1,639.00	158,400	+4,200	216
May 31	1,639.70	162,900	+4,500	127
June 30	1,639.50	161,600	-1,300	224
July 31	1,638.70	156,600	-5,000	292
Aug. 31	1,638.10	152,900	-3,700	433
Sept. 30	1,637.60	149,900	-3,000	286
WTR YR 76	--	--	-3,600	2,714

† Elevation at 0800 on following day.

07324300 FOSS RESERVOIR NEAR FOSS, OK

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-1974, October 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
OCT												
06...	1028	9740	1340	154100	1750	8.3	18.5	--	8.0	--	--	--
NOV												
18...	1028	9740	1000	153500	--	8.5	14.0	2	10.4	109	16	--
DEC												
16...	1028	9740	1500	153400	1980	--	7.5	6	14.6	133	4	1200
30...	1028	9740	1130	153500	2100	8.4	6.0	--	11.7	--	--	--
FEB												
12...	1028	9740	1130	153700	1500	--	10.0	1	11.6	112	13	788
APR												
05...	1028	9740	1230	153900	2200	8.8	12.5	1	9.4	97	20	1589
MAY												
24...	1028	9740	1400	158200	1800	8.1	21.0	1	8.1	98	15	--
JUN												
17...	1028	9740	1015	163400	1820	8.4	23.5	--	8.1	101	15	1000
AUG												
06...	1028	9740	1100	155900	1950	8.1	26.0	2	7.0	92	17	888
SEP												
22...	1028	9740	1000	151500	2000	8.5	23.0	2	8.9	109	18	888

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
06...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	2	7	4	100	18	20	--	10	--	2	5
DEC											
16...	--	--	--	<100	--	55	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
12...	1	6	5	200	19	31	--	8	--	2	7
APR											
05...	--	--	--	100	--	5	--	--	--	--	--
MAY											
24...	3	10	9	<100	25	10	<.5	12	<2	2	4
JUN											
17...	--	--	--	300	--	74	--	--	--	--	--
AUG											
06...	3	15	5	<100	26	16	<.5	10	<2	2	8
SEP											
22...	--	--	--	<100	--	14	--	--	--	--	--

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
06...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	--	--	160	85	15	--	1.0	--	.90	.03	3
DEC											
16...	--	--	140	88	16	64	.4	1590	1.0	.02	--
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
12...	270	493	130	79	16	59	.5	1660	.90	<.10	4
APR											
05...	--	--	120	90	13	77	.3	1690	.80	<.08	--
MAY											
24...	--	--	--	--	--	--	.3	--	1.2	<.08	2
JUN											
17...	159	520	97	92	15	63	--	1700	.80	<.80	--
AUG											
06...	210	241	140	86	14	58	.2	1767	2.2	.14	3
SEP											
22...	200	555	137	85	15	52	.3	1852	1.3	<.08	--

07324400 WASHITA RIVER NEAR FOSS, OK

LOCATION.--Lat 35°32'20", long 99°10'10", in SW 1/4 SW 1/4 sec.1, T.12 N., R.19 W., Custer County, 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.--1,511 mi^2 (4,017 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1956 to April 1957, Feburary 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 good. Except for 55 mi^2 (1,425 km^2) intervening area, flow completely regulated since 1961 by Foss Reservoir (see sta. 07324300).

AVERAGE DISCHARGE.--15 years (water years 1962-76), 11.8 ft^3/s (0.334 m^3/s), 8,550 ft^3/s (10.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s (397 m^3/s) Apr. 19, 1957, gage height, 20.40 ft (6.218 m), from rating cuve extended above 3,600 ft^3/s (102 m^3/s) on basis of velocity-area study; no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1959 reached a stage of 23.4 ft (7.13 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,150 ft^3/s (32.6 m^3/s) May 26, gage height, 18.24 ft (5.560 m); minimum daily, 2.7 ft^3/s (0.076 m^3/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.7	11	11	7.2	7.5	6.1	29	47	8.1	4.6	4.2
2	11	65	11	10	7.2	7.0	5.9	26	35	7.4	4.2	4.1
3	9.9	25	10	10	7.2	6.5	5.9	21	31	7.4	4.5	4.0
4	9.8	15	9.8	10	7.2	7.6	5.8	20	25	7.0	4.5	3.8
5	9.7	45	11	12	7.0	7.0	5.6	19	23	6.7	4.6	3.7
6	9.6	59	11	12	7.0	5.8	6.3	18	21	6.3	4.8	3.7
7	9.2	28	11	9.3	7.1	5.3	6.8	15	20	6.7	4.9	3.7
8	8.8	19	10	9.0	7.3	7.9	6.8	14	19	6.7	4.4	5.7
9	8.7	14	11	9.0	8.0	13	6.7	14	28	6.3	4.1	27
10	8.7	13	11	9.0	7.8	8.7	7.0	41	19	6.5	4.0	5.2
11	8.7	11	11	8.9	7.7	7.6	8.1	40	18	6.1	3.8	4.8
12	8.4	9.6	11	8.5	7.6	7.2	6.7	33	17	6.1	3.9	4.5
13	8.3	9.8	11	8.7	9.0	7.0	6.1	27	16	5.6	3.7	14
14	9.4	9.5	11	8.7	8.8	7.0	6.7	24	16	5.8	4.1	9.6
15	21	9.1	11	8.7	7.6	7.4	7.4	21	16	5.9	4.0	5.2
16	8.5	8.9	11	8.5	7.6	7.6	69	19	16	6.3	4.1	5.0
17	7.2	9.4	11	8.5	7.5	7.6	62	16	15	5.9	3.9	4.9
18	7.0	9.1	11	8.5	7.4	7.6	44	14	27	5.1	4.0	4.9
19	6.8	10	11	8.3	7.4	7.6	40	12	16	4.5	4.1	4.6
20	6.8	17	11	8.1	7.4	7.6	43	12	15	4.4	4.3	12
21	7.0	14	10	7.9	7.4	7.6	18	12	15	4.4	4.3	6.0
22	7.2	11	11	7.9	8.2	7.2	16	12	15	6.3	4.0	5.3
23	7.2	11	11	7.9	8.1	7.0	15	13	15	4.8	3.8	5.2
24	7.0	10	11	7.8	8.0	7.0	14	11	14	4.8	3.7	4.5
25	6.8	10	11	7.8	8.1	6.8	14	14	14	4.8	3.8	4.4
26	6.8	9.7	11	7.4	8.2	6.7	12	647	13	4.9	3.8	4.5
27	11	10	10	7.4	8.1	6.5	11	285	13	4.6	3.6	5.2
28	7.4	10	11	7.4	8.0	6.5	69	261	10	4.8	3.5	5.1
29	7.0	14	12	7.3	7.6	6.3	37	231	8.1	4.9	3.6	4.5
30	7.6	11	11	7.2	---	6.3	30	130	7.6	5.1	3.8	2.7
31	8.0	---	11	7.2	---	6.1	---	73	---	4.4	4.3	---
TOTAL	273.5	504.8	336.8	269.9	222.7	224.5	591.9	2124	564.7	178.6	126.7	182.0
MEAN	8.82	16.8	10.9	8.71	7.68	7.24	19.7	68.5	18.8	5.76	4.09	6.07
MAX	21	65	12	12	9.0	13	69	647	47	8.1	4.9	27
MIN	6.8	7.7	9.8	7.2	7.0	5.3	5.6	11	7.6	4.4	3.5	2.7
AC-FT	542	1000	668	535	442	445	1170	4210	1120	354	251	361

CAL YR 1975 TOTAL 13305.3 MEAN 36.5 MAX 925 MIN 6.8 AC-FT 26390
WTR YR 1976 TOTAL 5600.1 MEAN 15.3 MAX 647 MIN 2.7 AC-FT 11110

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 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.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,880 micromhos Aug. 18, 1976; minimum daily, 164 micromhos Mar. 30, 1973.
WATER TEMPERATURE: Maximum daily, 35.0°C Aug. 10-11, 1948; minimum daily, -0.5°C Jan. 9-11, 1974.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,880 micromhos Aug. 18; minimum daily, 394 micromhos May 27.
WATER TEMPERATURE: Maximum daily, 30.0°C Aug. 12; minimum daily, 0.0°C Jan. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)
OCT												
13...	--	--	1600	--	8.3	1740	8.2	--	--	--	--	--
15...	--	--	0900	--	30	859	8.0	--	--	--	--	--
19...	--	--	0900	--	9.0	1530	8.1	--	--	--	--	--
NOV												
06...	--	--	0900	--	62	506	7.9	14.0	--	--	--	--
15...	--	--	0900	--	9.4	1420	8.1	8.0	--	--	--	--
18...	1028	9740	1130	9.1	--	1450	8.2	13.0	12	8.9	92	16
25...	--	--	0900	--	10	1550	8.1	6.0	--	--	--	--
DEC												
01...	--	--	0900	--	10	1380	8.2	--	--	--	--	--
16...	1028	9740	1415	11	--	1600	--	6.5	5	13.8	123	4
21...	--	--	1700	--	10	1580	8.1	--	--	--	--	--
23...	--	--	1400	--	11	1780	7.9	--	--	--	--	--
JAN												
05...	--	--	0900	--	9.9	1440	8.3	--	--	--	--	--
21...	1028	9740	1200	7.9	--	1850	8.0	5.0	2	13.2	111	20
23...	--	--	1300	--	7.9	1710	8.1	--	--	--	--	--
28...	--	--	0900	--	7.4	1840	7.8	--	--	--	--	--
FEB												
08...	--	--	1300	--	7.2	1750	8.1	--	--	--	--	--
12...	1028	9740	1100	7.6	--	1300	--	11.0	1	12.2	118	8
13...	--	--	1600	--	11	2100	8.0	--	--	--	--	--
25...	--	--	1300	--	8.1	1780	8.3	--	--	--	--	--
MAR												
02...	--	--	1630	7.0	--	1640	8.0	--	--	--	--	--
05...	--	--	0900	7.0	--	1830	8.0	--	--	--	--	--
10...	1028	9740	1130	8.7	--	1800	7.9	11.0	2	11.2	111	9
22...	--	--	0900	7.2	--	1970	8.1	--	--	--	--	--
APR												
05...	1028	9740	1430	5.6	--	2000	8.4	19.0	20	10.2	120	--
06...	--	--	0900	6.3	--	2130	7.8	--	--	--	--	--
16...	--	--	0800	69	--	635	7.0	--	--	--	--	--
27...	--	--	0800	11	--	1590	7.9	--	--	--	--	--
28...	--	--	1630	69	--	491	7.9	--	--	--	--	--
MAY												
07...	1028	9740	1400	15	--	1000	7.8	14.0	32	9.2	97	31
16...	--	--	1130	--	19	931	7.9	--	--	--	--	--
18...	--	--	1000	--	15	1320	7.9	--	--	--	--	--
27...	--	--	0830	--	286	394	8.0	--	--	--	--	--
JUN												
04...	--	--	0800	--	31	1160	7.8	--	--	--	--	--
14...	--	--	1000	16	--	1090	7.9	--	--	--	--	--
17...	1028	9740	1115	15	--	1120	8.2	23.0	50	8.0	99	7
25...	--	--	1000	14	--	1340	7.9	--	--	--	--	--
JUL												
03...	--	--	1800	--	7.9	1800	7.6	--	--	--	--	--
21...	--	--	0900	--	4.2	2080	7.5	--	--	--	--	--
26...	--	--	0900	--	4.9	2430	7.5	--	--	--	--	--
AUG												
05...	--	--	0900	--	4.6	2420	8.0	--	--	--	--	--
15...	--	--	1000	--	3.7	1990	7.8	--	--	--	--	--
25...	--	--	1300	--	3.9	2300	7.7	--	--	--	--	--
SEP												
03...	--	--	0900	--	3.9	2350	7.6	--	--	--	--	--
13...	--	--	0900	--	4.6	1750	7.8	--	--	--	--	--
21...	--	--	0800	--	5.9	1410	8.1	--	--	--	--	--
29...	1028	9740	1500	4.5	--	2300	8.2	14.5	4	9.8	104	18

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT											
13...	860	600	180	100	70	15	1.0	9.4	321	0	263
15...	390	120	81	46	37	17	.8	5.7	337	0	276
19...	790	480	160	94	60	14	.9	7.1	370	0	303
NOV											
06...	210	40	41	26	27	21	.8	5.5	206	0	169
15...	700	400	140	85	58	15	1.0	6.5	365	0	299
18...	--	--	--	--	--	--	--	--	--	--	--
25...	790	530	160	95	60	14	.9	6.8	317	0	260
DEC											
01...	650	370	130	76	53	15	.9	5.8	339	0	278
16...	--	--	--	--	--	--	--	--	--	--	--
21...	740	490	150	89	61	15	1.0	7.2	305	0	250
23...	890	610	190	100	66	14	1.0	8.3	338	0	277
JAN											
05...	740	560	140	95	63	15	1.0	7.8	215	0	176
21...	--	--	--	--	--	--	--	--	--	--	--
23...	880	610	170	110	69	14	1.0	8.0	325	0	267
28...	940	690	180	120	72	14	1.0	8.9	305	0	250
FEB											
08...	880	640	190	99	73	15	1.1	9.0	299	0	245
12...	--	--	--	--	--	--	--	--	--	--	--
13...	960	790	220	100	72	14	1.0	12	214	0	176
25...	900	650	180	110	72	15	1.0	8.9	313	0	257
MAR											
02...	790	550	150	100	70	16	1.1	6.9	290	0	238
05...	990	720	200	120	77	14	1.1	8.8	328	0	269
10...	--	--	--	--	--	--	--	--	--	--	--
22...	1100	840	210	130	82	14	1.1	9.8	263	0	216
APR											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	1100	910	220	140	89	15	1.2	12	260	0	213
16...	290	120	63	33	21	13	.5	6.7	211	0	173
27...	800	510	160	97	66	15	1.0	8.4	352	0	289
28...	200	56	44	22	16	14	.5	4.5	176	0	144
MAY											
07...	--	--	--	--	--	--	--	--	--	--	--
16...	440	220	87	53	41	17	.9	5.5	259	0	212
18...	630	400	120	81	54	15	.9	7.5	281	0	230
27...	170	15	39	18	17	17	.6	4.7	191	0	157
JUN											
04...	550	330	110	67	45	15	.8	7.6	275	0	226
14...	580	330	120	67	49	15	.9	7.2	300	0	246
17...	--	--	--	--	--	--	--	--	--	--	--
25...	680	430	130	86	55	15	.9	7.8	304	0	249
JUL											
03...	990	750	200	120	79	15	1.1	10	293	0	240
21...	1100	890	240	120	90	15	1.2	13	251	0	206
26...	1300	1200	270	160	110	15	1.3	17	205	0	168
AUG											
05...	1300	1200	240	170	95	14	1.1	15	175	0	144
15...	1000	810	190	130	85	15	1.2	12	242	0	198
25...	1300	1100	240	160	96	14	1.2	15	159	0	130
SEP											
03...	1200	1100	260	140	97	15	1.2	16	179	0	147
13...	880	680	170	110	71	15	1.0	10	243	0	199
21...	680	520	130	86	57	15	1.0	8.7	196	0	161
29...	--	--	--	--	--	--	--	--	--	--	--

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
13...	3.2	670	29	--	1390	1.89	31.1	.44	--	--	--
15...	5.4	170	13	--	562	.76	45.5	.90	--	--	--
19...	4.7	550	24	--	1270	1.73	30.9	.67	--	--	--
NOV											
06...	4.2	75	12	--	314	.43	52.6	.55	--	--	--
15...	4.6	450	23	--	1070	1.46	27.2	.76	--	--	--
18...	--	--	--	--	--	--	--	--	1.3	.11	4
25...	4.0	590	26	--	1200	1.63	33.0	.64	--	--	--
DEC											
01...	3.4	460	22	--	1030	1.40	28.9	.73	--	--	--
16...	--	--	--	.4	--	--	--	--	1.4	.04	--
21...	3.9	590	26	--	1210	1.65	34.0	.82	--	--	--
23...	6.8	720	36	--	1420	1.93	42.2	.87	--	--	--
JAN											
05...	1.7	600	33	--	1190	1.62	31.8	.84	--	--	--
21...	--	--	--	.4	--	--	--	--	2.6	.07	--
23...	4.1	680	33	--	1360	1.85	29.0	.74	--	--	--
28...	7.7	790	36	--	1490	2.03	29.8	.76	--	--	--
FEB											
08...	3.8	730	32	--	1400	1.90	27.2	.76	--	--	--
12...	--	--	--	.4	--	--	--	--	2.2	<.10	4
13...	3.4	680	180	--	1580	2.15	46.9	.44	--	--	--
25...	2.5	710	38	--	1420	1.93	31.1	.71	--	--	--
MAR											
02...	4.6	650	30	--	1200	1.63	22.7	.67	--	--	--
05...	5.2	780	39	--	1410	1.92	26.6	.74	--	--	--
10...	--	--	--	.6	--	--	--	--	.80	<.14	--
22...	3.3	870	42	--	1530	2.08	29.7	.46	--	--	--
APR											
05...	--	--	--	.4	--	--	--	--	.60	.21	--
06...	6.6	--	52	--	1840	2.50	31.3	.74	--	--	--
16...	34	150	19	--	423	.58	78.8	.36	--	--	--
27...	7.1	610	32	--	1240	1.69	36.8	.99	--	--	--
28...	3.5	87	8.6	--	310	.42	57.8	2.1	--	2.6	--
MAY											
07...	--	--	--	.5	--	--	--	--	1.4	<.08	5
16...	5.2	280	22	--	631	.86	32.4	.96	--	--	--
18...	5.7	470	30	--	947	1.29	38.4	.88	--	--	--
27...	3.1	48	12	--	216	.29	167	.83	--	--	--
JUN											
04...	7.0	380	23	--	838	1.14	70.1	.67	--	--	--
14...	6.0	420	25	--	849	1.15	36.7	1.1	--	--	--
17...	--	--	--	.4	--	--	--	--	.90	<.08	--
25...	6.1	510	28	--	1020	1.39	38.6	1.1	--	--	--
JUL											
03...	12	790	40	--	1460	1.99	31.1	1.1	--	--	--
21...	13	980	45	--	1800	2.45	20.4	.89	--	--	--
26...	10	1300	59	--	2190	2.98	29.0	1.0	--	--	--
AUG											
05...	2.8	1200	57	--	2180	2.96	27.1	.84	--	--	--
15...	6.1	940	41	--	1680	2.28	16.8	.82	--	--	--
25...	5.1	1200	60	--	2020	2.75	21.3	.69	--	--	--
SEP											
03...	7.2	1300	52	--	2090	2.84	22.0	.61	--	--	--
13...	6.2	740	27	--	1430	1.94	17.8	1.1	--	--	--
21...	2.5	570	30	--	1120	1.52	17.8	.97	--	--	--
29...	--	--	--	.4	--	--	--	--	.80	.44	--

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT											
13...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
18...	2	9	5	300	20	125	--	7	--	2	4
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	<100	--	100	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JAN											
05...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	2100	--	120	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
12...	2	4	4	200	21	142	--	9	--	2	4
13...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	100	--	160	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	--	--	--	100	--	160	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
07...	2	26	8	200	90	135	<.5	8	<2	2	11
16...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	300	--	150	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
03...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	200	--	--	--	--	--	--	--

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	---	1380	---	---	1660	1870	839	647	2020	---	2270
2	1320	---	1400	---	1780	1640	---	941	697	1930	2390	1910
3	---	734	1460	---	1780	1640	---	994	1100	1800	---	2350
4	---	980	1470	---	1970	1820	---	1060	1160	---	2320	---
5	---	---	1480	1440	1760	1830	1700	1110	---	---	2420	---
6	1360	506	1700	1720	---	---	2130	686	---	1800	2290	---
7	1400	783	---	---	1530	---	1920	1050	1190	1890	---	2610
8	1380	---	1510	1760	1750	1850	1930	1040	1040	2010	---	2710
9	1380	---	1560	1740	1590	---	1870	1080	1110	2090	2390	---
10	1380	1240	1610	---	1660	1720	---	---	---	---	2490	---
11	1480	1270	1690	---	1640	---	---	---	1190	---	2310	---
12	1490	1330	1630	---	1640	---	1920	686	---	2000	2460	---
13	1740	1390	1560	---	2100	---	---	722	---	1840	2790	1750
14	1420	1390	1540	1520	1660	---	1670	811	882	2060	2660	1590
15	859	1420	1650	1550	---	1890	1420	764	---	---	1990	2130
16	---	---	---	1670	1870	---	635	931	---	---	2850	2230
17	1340	1410	1670	1680	1770	1850	---	978	---	---	---	2170
18	---	---	1630	---	1870	---	---	1320	---	---	2880	---
19	1530	1420	1620	1730	1880	---	781	1230	---	1870	2710	---
20	1480	1060	---	1690	1870	---	---	---	---	1900	2800	2100
21	1600	---	1580	1760	---	---	---	---	1090	2080	---	1410
22	1590	---	1550	1820	---	1970	1300	1140	1290	2320	---	---
23	---	1370	1780	1710	1760	---	---	---	---	2280	2090	---
24	1580	1380	---	---	1830	---	---	1250	1320	---	2580	---
25	---	1550	---	1810	1780	1890	---	---	1340	---	2300	---
26	---	1420	---	1730	---	---	1580	427	---	2430	---	---
27	---	---	---	---	1810	---	1590	394	---	---	2510	---
28	1560	---	---	1840	---	---	698	410	1500	---	---	---
29	1590	---	1730	1580	---	1680	835	---	---	2440	---	---
30	1620	1390	---	1530	---	---	876	---	1800	2300	2590	---
31	1590	---	1460	---	---	---	---	---	---	2360	2410	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	---	3.5	---	---	10.0	18.0	12.0	19.0	21.0	---	22.0
2	12.0	---	9.0	---	5.0	11.0	---	12.0	18.5	25.0	22.5	27.0
3	---	13.5	8.0	---	4.0	10.0	---	11.5	23.0	26.0	---	22.0
4	---	15.5	7.0	---	5.0	6.0	---	12.0	19.0	---	22.0	---
5	---	---	11.0	1.0	2.0	4.0	12.0	16.0	---	---	23.0	---
6	14.0	14.0	6.0	4.0	---	---	13.0	12.0	---	20.5	23.0	---
7	14.0	16.0	---	---	3.0	---	15.5	14.0	18.5	21.0	---	23.0
8	15.0	---	6.0	0.0	12.0	6.0	20.0	14.0	21.0	22.0	---	23.0
9	16.0	---	8.0	1.0	5.0	---	13.0	16.0	19.0	23.0	23.5	---
10	15.0	12.0	6.5	---	11.0	14.0	---	---	---	---	24.0	---
11	22.0	11.0	8.0	5.0	11.0	---	---	---	20.0	---	28.0	---
12	22.0	8.0	7.0	3.5	8.0	---	14.0	19.0	---	21.5	30.0	---
13	22.0	10.0	8.0	3.5	12.5	---	---	16.0	---	25.5	25.5	20.0
14	18.5	11.0	12.0	2.5	11.0	---	17.0	13.0	21.0	25.0	23.0	21.0
15	16.0	8.0	4.0	4.0	---	10.0	17.0	14.0	---	---	24.0	21.0
16	---	---	---	5.0	11.0	---	14.0	14.5	---	---	24.0	25.0
17	13.0	10.0	3.0	---	9.0	13.0	---	14.0	---	---	---	22.0
18	---	---	1.0	---	7.0	---	---	14.5	---	---	28.5	---
19	12.0	14.0	4.5	6.0	7.0	---	15.0	13.0	---	24.0	24.5	---
20	13.0	5.5	---	3.0	7.5	---	---	16.5	---	23.0	23.0	20.0
21	15.0	---	5.0	3.5	---	---	---	18.0	18.5	23.0	---	17.0
22	15.0	---	5.0	3.0	---	14.0	22.0	17.5	24.0	23.0	---	---
23	---	4.0	5.5	8.0	9.5	---	---	18.0	---	23.0	23.0	---
24	13.0	6.0	---	---	10.0	---	---	18.0	20.5	---	27.0	---
25	---	6.0	---	1.5	10.0	13.0	---	16.5	20.0	---	26.0	---
26	---	5.0	---	1.0	---	---	15.0	15.0	---	22.5	---	---
27	---	---	---	---	9.0	---	14.0	15.0	---	---	29.0	---
28	13.0	---	---	3.0	---	---	12.0	18.0	23.0	---	---	---
29	15.0	---	4.0	4.0	---	13.0	12.0	---	---	23.0	---	---
30	11.5	6.5	---	6.0	---	---	12.0	---	22.0	24.0	23.0	---
31	14.0	---	4.5	---	---	---	---	---	---	25.0	23.0	---
MONTH	---	---	---	---	---	---	---	15.0	---	---	---	---

07325000 WASHITA RIVER NEAR CLINTON, OK

LOCATION.--Lat 35°31'52", long 98°57'57", in SW 1/4 NE 1/4 sec.11, T.12 N., R.17 W., Custer County, within channel on downstream side of pier of bridge on U.S. Highway 183, 0.5 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).

DRAINAGE AREA.--1,977 mi^2 (5,120 km^2).

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

REVISED RECORDS.--WSP 1221: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,467.60 ft (447.324 m) above mean sea level. See WSP 1920 for history of changes prior to Mar. 19, 1941.

REMARKS.--Records good. Flow regulated since February 1961 by Foss Reservoir (station 07324300) and by numerous flood-retarding structures.

AVERAGE DISCAHRGE.--25 years (water years 1936-60), 146 ft^3/s (4.135 m^3/s), 105,700 acre-ft/yr (130 hm^3/yr); 16 years (water years 1961-76), 53.2 ft^3/s (1.507 m^3/s), 38,540 acre-ft/yr (47.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft^3/s (1,890 m^3/s) May 16, 1951, gage height, 31.09 ft (9.476 m), from rating curve extended above 7,900 ft^3/s (224 m^3/s) by contracted-opening measurement of peak flow; no flow at times in 1952-56, 1964, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3-4, 1934, reached a stage of 33.9 ft (10.33 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,310 ft^3/s (37.1 m^3/s) May 27, gage height, 14.42 ft (4.395 m); minimum daily, 8.8 ft^3/s (0.25 m^3/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	43	68	58	46	36	33	133	235	24	13	12
2	41	269	66	55	45	36	33	111	151	24	12	12
3	39	212	60	51	45	36	32	89	108	23	13	11
4	38	101	57	48	45	36	31	82	93	23	13	11
5	38	77	57	55	45	39	31	78	82	22	16	11
6	37	161	56	55	43	38	31	68	76	20	46	10
7	36	104	56	52	41	36	31	59	72	19	17	10
8	35	76	56	51	50	39	30	55	67	18	15	10
9	35	68	56	51	48	53	30	52	64	18	14	12
10	35	64	60	51	64	55	29	284	64	18	12	17
11	34	60	60	49	59	49	28	491	58	17	12	11
12	34	58	58	46	52	46	29	383	53	17	11	10
13	34	53	57	51	51	45	30	243	50	16	11	31
14	39	52	56	51	50	43	30	133	48	15	11	38
15	124	53	56	50	52	42	88	83	45	18	12	19
16	68	54	56	52	50	42	228	73	39	35	12	16
17	50	54	54	52	47	41	427	65	36	24	11	15
18	46	55	50	51	43	40	362	58	217	22	11	15
19	44	59	51	50	41	39	165	53	68	20	10	14
20	42	131	55	51	40	37	122	52	50	18	10	25
21	42	90	52	47	43	40	109	48	40	17	10	19
22	41	69	60	46	42	35	91	47	33	16	9.7	16
23	40	62	62	47	37	35	87	70	30	16	9.9	15
24	40	59	63	47	36	35	79	58	28	15	10	14
25	39	58	65	48	37	36	70	52	26	15	10	14
26	40	56	65	47	37	35	62	726	25	14	10	14
27	40	56	63	43	37	35	55	1020	25	14	9.5	14
28	43	58	61	47	37	35	127	445	24	16	8.9	15
29	40	58	59	48	36	34	339	345	24	16	8.8	15
30	39	80	60	47	---	34	159	291	25	15	9.0	15
31	41	---	60	46	---	34	---	312	---	14	11	---
TOTAL	1333	2450	1815	1543	1299	1216	2998	6059	1956	579	388.8	461
MEAN	43.0	81.7	58.5	49.8	44.8	39.2	99.9	195	65.2	18.7	12.5	15.4
MAX	124	269	68	58	64	55	427	1020	235	35	46	38
MIN	34	43	50	43	36	34	28	47	24	14	8.8	10
AC-FT	2640	4860	3600	3060	2580	2410	5950	12020	3880	1150	771	914

CAL YR 1975 TOTAL 54376.0 MEAN 149 MAX 2000 MIN 34 AC-FT 107900
WTR YR 1976 TOTAL 22097.8 MEAN 60.4 MAX 1020 MIN 8.8 AC-FT 43830

07325500 WASHITA RIVER AT CARNEGIE, OK

LOCATION.--Lat 35°07'02", long 98°33'49", in NW 1/4 NW 1/4 sec.3, T.7 N., R.13 W., Caddo County, 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.

DRAINAGE AREA.--3,129 mi^2 (8.104 km^2), includes that of Running Creek.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1087: 1938. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,249.23 ft (380.765 m) above mean sea level. Prior to October 1942, water-stage recorder at site 8.0 mi (12.9 km) upstream at datum 24.57 ft (7.489 m) higher.

REMARKS.--Records fair. Some diversion above station for irrigation. October 1942 to May 1949, occasional fluctuation caused by power plant at Carnegie, 7.5 mi (12.1 km) above station. Some regulation by Foss Reservoir since Feburary 1961 (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 23 years (water years 1938-60), 314 ft^3/s (8.892 m^3/s), 277,500 acre-ft/yr (342 hm^3/yr); (Since reguation by Foss Reservoir) 15 years (water years 1962-76), 225 ft^3/s (6.372 m^3/s), 160,800 acre-ft/yr (198 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s (1,420 m^3/s) May 18, 1949, gage height, 26.21 ft (7.989 m), from rating curve extended above 35,500 ft^3/s (1,010 m^3/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1956 and 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1903, reached a stage of about 29 ft (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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft^3/s (42.2 m^3/s) May 28, gage height, 8.79 ft (2.680 m), no peak above base of 3,000 ft^3/s (85.0 m^3/s); minimum daily, 20 ft^3/s (0.57 m^3/s) Aug. 19, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	137	160	176	155	125	112	488	515	89	37	31
2	138	194	157	173	191	125	110	390	478	65	33	31
3	136	413	168	165	185	123	109	330	402	81	32	31
4	135	788	166	160	181	126	111	281	317	90	48	32
5	138	408	165	155	179	130	113	242	274	85	36	30
6	136	249	160	150	160	129	116	217	250	83	67	30
7	132	235	157	158	151	128	131	204	231	78	42	28
8	132	256	154	124	146	145	155	200	216	75	110	24
9	129	249	150	99	145	154	109	183	206	73	76	220
10	123	200	149	147	148	177	100	273	191	71	55	240
11	121	191	149	170	153	184	100	737	180	67	42	100
12	120	180	150	183	157	185	98	414	169	64	35	120
13	120	173	153	179	163	197	96	559	154	64	28	370
14	120	168	150	174	159	183	96	467	148	62	23	1100
15	155	164	151	165	154	166	155	348	148	71	21	700
16	870	163	148	162	150	150	335	266	148	67	21	320
17	452	164	145	157	150	140	817	217	130	66	21	250
18	273	168	144	164	150	140	957	190	126	65	21	180
19	193	175	143	161	146	140	891	172	125	72	20	150
20	173	176	141	156	142	140	828	157	390	59	21	160
21	164	278	141	152	141	130	1200	147	222	52	23	250
22	156	236	146	156	138	130	590	138	170	45	22	220
23	151	214	150	154	135	130	420	148	134	40	20	140
24	145	187	164	154	139	130	329	374	166	43	22	98
25	138	174	178	160	133	120	272	207	364	38	21	83
26	139	168	185	157	128	120	236	207	228	35	21	76
27	139	166	186	152	128	120	209	943	145	36	25	68
28	138	165	182	154	132	115	212	1430	122	38	25	67
29	136	164	180	151	125	115	344	1040	100	35	25	65
30	136	160	176	151	---	115	434	635	94	47	30	64
31	139	---	177	154	---	112	---	612	---	47	30	---
TOTAL	5519	6763	4925	4873	4364	4324	9785	12216	6543	1923	1053	5298
MEAN	178	225	159	157	150	139	326	394	218	62.0	34.0	177
MAX	870	788	186	183	191	197	1200	1430	515	90	110	1100
MIN	120	137	141	99	125	112	96	138	94	35	20	24
AC-FT	10950	13410	9770	9670	8660	8580	19410	24230	12980	3810	2090	10510

CAL YR 1975 TOTAL 165733 MEAN 454 MAX 5200 MIN 120 AC-FT 328700
WTR YR 1976 TOTAL 67586 MEAN 185 MAX 1430 MIN 20 AC-FT 134100

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 daily basis. Partial analyses were made each month on those samples having maximum, minimum and mean specific conductance for the month.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,530 micromhos Aug. 26, 1954; minimum daily, 197 micromhos Sept. 25, 1971.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 26, 1976; minimum daily, 0.0°C on sever days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,830 micromhos Aug. 27; minimum daily, 562 micromhos Sept. 13.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 26; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO
OCT											
10...	1000	124	2580	8.0	1300	1100	350	110	130	18	1.6
17...	1800	402	1220	7.8	510	380	140	40	60	20	1.2
29...	0800	136	2570	8.0	1300	1000	360	100	120	17	1.4
NOV											
05...	0900	408	1300	7.9	650	510	170	55	41	12	.7
18...	1030	169	2540	8.3	1400	1100	360	110	110	15	1.3
27...	0900	166	2430	8.3	1300	1100	350	110	95	13	1.1
DEC											
05...	1500	165	2270	8.1	1200	910	310	99	92	14	1.2
13...	1000	152	2640	8.1	1400	1100	360	120	100	13	1.2
30...	0900	177	2560	8.1	1400	1100	360	120	100	13	1.2
JAN											
01...	1100	177	2420	8.0	1200	1100	290	120	110	16	1.4
11...	1200	194	2720	7.9	1400	1200	380	120	110	14	1.3
29...	0900	151	2580	8.2	1400	1100	350	120	100	14	1.2
FEB											
05...	1000	179	2380	8.0	1200	1100	300	120	98	15	1.2
16...	1000	151	2530	8.1	1300	1100	330	120	110	15	1.3
25...	1200	133	2620	8.1	1400	1200	350	130	110	14	1.3
MAR											
08...	2200	155	2650	7.8	1400	1200	340	130	110	15	1.3
13...	1300	197	2540	7.9	1400	1200	350	130	110	14	1.3
21...	1000	130	2600	8.0	1400	1200	350	130	110	14	1.3
APR											
14...	0730	96	2650	7.4	1400	1100	350	120	120	16	1.4
21...	0800	1360	1150	7.3	550	440	160	37	37	13	.7
27...	0930	212	2150	7.5	1100	900	280	100	79	13	1.0
MAY											
03...	1930	315	1710	7.7	890	690	220	82	69	14	1.0
14...	0900	484	974	7.7	440	260	110	41	40	16	.8
24...	0900	499	2300	8.0	1200	1000	310	110	98	15	1.2
JUN											
06...	1510	250	1740	7.8	930	740	240	80	58	12	.8
17...	1415	130	2290	7.9	1200	1000	300	110	100	15	1.3
21...	1300	222	1130	7.6	560	460	160	40	27	9	.5
JUL											
06...	1930	83	1990	7.3	960	840	240	88	100	18	1.4
12...	2100	64	2480	7.0	1300	1100	310	120	130	18	1.6
30...	1800	47	2790	7.3	1400	1200	350	120	160	20	1.9
AUG											
11...	1800	39	1300	6.8	610	540	160	52	51	15	.9
16...	1430	23	2310	7.7	1100	960	280	93	130	21	1.7
27...	1200	27	2830	7.4	1300	1200	340	120	180	23	2.1
SEP											
04...	1100	32	2740	7.6	1300	1100	340	110	170	22	2.1
09...	0900	220	328	7.3	150	61	49	6.2	5.9	8	.2
26...	0900	76	1700	7.7	830	670	230	62	73	16	1.1

07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)
OCT											
10...	4.1	302	0	248	4.8	1100	140	2150	2.92	720	1.5
17...	8.3	165	0	135	4.2	400	59	866	1.18	940	1.1
29...	4.8	351	0	288	5.6	1200	120	2180	2.96	800	1.8
NOV											
05...	8.1	170	0	139	3.4	530	36	1000	1.36	1100	1.4
18...	5.1	347	0	285	2.8	1100	99	2170	2.95	990	2.3
27...	5.5	331	0	271	2.7	1100	87	2100	2.86	941	2.1
DEC											
05...	5.0	331	0	271	4.2	1000	90	1960	2.67	873	2.1
13...	7.9	333	0	273	4.2	1200	100	2250	3.06	923	2.4
30...	4.9	336	0	276	4.3	1200	100	2210	3.01	1060	2.3
JAN											
01...	4.0	154	0	126	2.5	1100	96	2110	2.87	1010	2.1
11...	3.7	315	0	258	6.3	1200	110	2350	3.20	1230	2.8
29...	3.9	294	0	241	3.0	1200	95	2240	3.05	913	2.2
FEB											
05...	4.6	168	0	138	2.7	1200	81	2070	2.82	1000	1.8
16...	4.4	254	0	208	3.2	1200	93	2170	2.95	885	1.4
25...	4.0	280	0	230	3.6	1200	110	2250	3.06	808	1.7
MAR											
08...	3.9	270	0	221	6.8	1200	100	2300	3.13	963	1.6
13...	4.2	202	0	166	4.1	1200	91	2160	2.94	1150	1.6
21...	4.1	216	0	177	3.5	1200	100	2250	3.06	790	1.3
APR											
14...	4.5	299	0	245	19	1200	120	2330	3.17	604	1.4
21...	5.9	138	0	113	11	490	38	877	1.19	3220	.87
27...	6.1	256	0	210	13	1000	67	1820	2.48	1040	1.5
MAY											
03...	6.0	238	0	195	7.6	680	63	1360	1.85	1160	1.8
14...	4.4	225	0	185	7.2	290	29	700	.95	915	1.3
24...	5.2	264	0	217	4.2	1000	110	1970	2.68	2650	2.0
JUN											
06...	6.1	229	0	188	5.8	770	43	1470	2.00	992	1.2
17...	5.8	220	0	180	4.4	990	110	1960	2.67	688	1.4
21...	7.9	129	0	106	5.2	430	24	864	1.18	518	.94
JUL											
06...	5.9	144	0	118	12	880	110	1620	2.20	363	.75
12...	5.4	177	0	145	28	1200	140	2100	2.86	363	.67
30...	5.7	192	0	157	15	1300	180	2330	3.17	296	.68
AUG											
11...	7.0	93	0	76	24	560	49	1020	1.39	107	.76
16...	6.9	153	0	126	4.9	960	150	1900	2.58	118	.43
27...	5.7	207	0	170	13	1200	210	2340	3.18	171	.84
SEP											
04...	5.2	233	0	191	9.4	1200	200	2300	3.13	199	.64
09...	3.8	106	0	87	8.5	53	3.8	219	.30	130	2.7
26...	5.9	198	0	162	6.3	710	82	1350	1.84	277	1.4

07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2470	2540	2560	2420	---	2580	2620	2000	1210	2250	2620	2700
2	---	2430	2570	2580	2540	2590	---	1480	1330	2300	2290	2710
3	2530	2440	2520	2520	2480	2620	2600	1710	1480	2340	1470	2740
4	2510	1700	2470	---	2480	2640	2600	1900	1420	2370	2160	2740
5	2550	1300	2270	---	2380	---	2570	2020	1660	2400	2570	2740
6	2550	1400	---	---	2470	2640	2540	2080	1740	1990	2800	2720
7	2510	1850	2440	2620	2470	2610	2560	2210	1780	2430	1990	2740
8	2550	1990	2550	2680	2500	2650	2560	2280	1860	---	2210	2600
9	2560	2170	---	2600	2500	2580	2610	2200	1980	2450	1820	328
10	2580	1810	---	2580	2530	2540	2630	2290	1990	2490	1700	1010
11	2550	2030	2510	2720	2550	---	2630	1320	2040	2520	1300	1640
12	2480	2230	2590	2570	2510	---	2580	1260	2100	2480	---	---
13	---	2340	2640	2640	2560	2540	2570	989	2160	2510	1790	562
14	2520	---	2580	2540	2540	2640	2650	974	2130	2490	1990	1140
15	2490	2450	2550	---	2500	2630	2060	1110	---	2540	2120	635
16	1620	2480	2580	---	2530	2580	2260	1410	2250	2430	2310	768
17	1220	2500	2560	2470	2530	2570	1970	1380	2290	2510	2150	893
18	1520	2540	---	2520	2550	2570	1610	1650	2280	2520	2500	822
19	1500	2480	2580	2520	2500	2590	1390	1850	2190	2570	2620	1060
20	---	2480	2540	2510	2520	2590	1570	---	1700	2620	2720	1180
21	2040	2510	---	2500	2500	2600	1150	2050	1130	2470	---	1880
22	2260	2350	---	2510	2540	2590	1220	2160	---	2340	2710	1630
23	2370	2340	2540	2530	2570	2580	1540	2170	1540	2410	2700	---
24	2480	2230	2520	2550	2560	---	1720	2300	1800	2500	2740	1120
25	2480	2170	2560	2540	2620	2640	1920	1250	1440	2570	---	1660
26	2500	2330	2520	2580	2390	2610	2080	1620	1390	2590	---	1700
27	2500	2430	2510	2600	2560	2640	2150	2160	1760	2590	2830	1930
28	2550	2510	2560	2530	2550	2600	2140	1200	1970	2620	---	2170
29	2570	2510	2540	2580	2580	2580	2220	---	2070	2660	2790	2310
30	2530	2530	2560	2530	---	2620	1890	1030	2150	2790	---	2320
31	2530	---	2570	2600	---	---	---	1030	---	2720	2780	---
MONTH	2340	2240	2540	2560	2520	2600	2160	1690	1820	2480	2320	1730

YEAR MAX 2830 MIN 328 MEAN 2240

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	8.0	5.0	---	16.0	16.0	13.0	24.5	28.0	29.0	23.0
2	---	16.0	5.0	4.0	7.0	15.0	---	14.5	25.0	28.0	27.0	23.0
3	17.0	15.0	10.0	3.0	7.0	11.0	16.0	17.0	24.0	28.0	29.0	26.0
4	19.0	14.5	8.0	5.0	6.0	10.0	14.5	18.0	24.0	27.0	27.0	25.0
5	19.0	15.0	7.0	5.0	5.0	---	15.0	19.0	24.0	24.0	30.0	26.0
6	15.0	15.0	---	3.0	2.0	7.0	15.0	16.0	25.0	28.0	24.0	28.0
7	19.0	15.0	9.0	1.0	3.0	8.0	16.0	18.0	24.0	28.0	28.0	26.0
8	17.0	15.0	7.0	1.0	3.0	7.0	16.0	16.0	23.0	---	28.0	26.0
9	17.0	16.0	6.0	0.0	4.0	8.0	16.0	19.0	25.5	26.0	31.0	20.0
10	18.0	14.0	11.0	3.0	8.0	13.0	19.0	19.0	24.5	27.0	30.0	22.0
11	19.0	14.0	9.0	2.0	8.0	12.0	18.0	14.0	24.0	25.0	32.0	24.0
12	23.0	13.0	7.0	4.0	10.0	12.0	17.0	17.0	28.5	27.0	28.0	---
13	---	9.0	8.0	5.0	12.0	10.0	20.0	18.0	29.0	26.0	26.0	20.0
14	19.0	---	11.0	4.0	13.0	9.5	18.0	16.0	28.5	24.0	29.0	20.0
15	19.0	11.0	9.0	5.0	13.0	9.0	18.0	17.0	---	24.0	28.0	21.0
16	15.0	11.0	6.0	5.5	13.0	9.0	15.0	17.0	27.0	29.0	30.0	24.0
17	15.0	13.0	9.0	5.0	13.0	14.0	17.0	16.0	24.0	24.0	26.0	24.0
18	15.0	13.0	---	5.0	12.0	12.0	16.0	25.0	23.0	30.0	31.0	25.0
19	21.0	8.0	5.0	6.0	14.0	12.0	19.0	25.0	22.0	27.0	29.0	25.0
20	---	10.0	3.0	4.0	11.0	12.0	17.0	---	20.0	27.0	28.0	---
21	17.0	7.0	4.0	6.0	7.0	12.5	17.0	---	23.0	29.0	29.0	22.0
22	17.0	5.0	4.0	7.0	6.0	12.0	17.0	25.0	---	26.0	27.0	23.0
23	17.0	7.0	4.0	5.0	6.0	12.0	19.0	20.0	25.0	29.0	26.0	---
24	17.0	5.0	4.0	6.0	11.0	12.5	19.0	22.0	23.0	24.0	29.0	21.0
25	13.0	4.0	3.0	5.0	10.0	15.0	19.0	19.5	24.0	28.0	25.0	23.0
26	13.0	2.0	3.0	6.0	13.0	15.5	18.0	20.0	24.0	30.0	26.0	21.0
27	13.0	3.0	3.0	6.0	10.0	15.0	16.0	19.0	26.0	29.0	27.0	19.0
28	13.0	7.0	4.0	7.0	15.0	14.0	16.0	19.0	28.0	28.0	---	---
29	18.0	11.0	4.0	5.0	14.5	14.5	15.0	---	30.0	30.0	23.0	---
30	13.5	7.0	3.0	5.0	---	14.0	14.0	20.0	25.0	30.0	24.0	---
31	14.0	---	5.0	7.0	---	12.0	---	20.0	---	31.5	23.0	---
MONTH	17.0	10.5	6.0	4.5	9.0	12.0	17.0	18.5	25.0	27.5	27.5	23.0

YEAR MAX 32.0 MIN 0.0 MEAN 16.5

07325800 COBB CREEK NEAR EAKLY, OK

LOCATION.--Lat 35°17'26", long 98°35'38", in NW 1/4 NE 1/4 sec.5, T.9 N., R.13 W., Caddo County, 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).

DRAINAGE AREA.--132 mi^2 (342 km^2).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,369.70 ft (417.485 m) above mean sea level.

REMARKS.--Records good. Minor regulation by three small reservoirs having combined surface-area 262 acres (1.06 km^2) and capacity of 3,100 acre-ft (3.82 hm^3).

AVERAGE DISCHARGE.--8 years, 23.2 ft^3/s (0.657 m^3/s), 16,810 acre-ft/yr (20.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft^3/s (71.4 m^3/s) Mar. 30, 1973, gage height, 17.04 ft (5.194 m); from rating curve extended above 500 ft^3/s (14.2 m^3/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and minimum (*):

DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GATE HEIGHT (ft)	GATE HEIGHT (m)	DATE	TIME	DISCHARGE (ft^3/s)	DISCHARGE (m^3/s)	GATE HEIGHT (ft)	GATE HEIGHT (m)
May 26	1630	500	14.2	8.10	2.469	Sept. 8	2130	883	25.0	10.51	3.203

Minimum daily discharge, 1.7 ft^3/s (0.048 m^3/s) Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	11	18	21	18	15	12	17	19	7.9	1.8	3.7
2	9.0	150	17	20	18	15	12	16	14	7.7	1.7	3.4
3	10	60	17	18	18	14	12	16	11	10	1.7	3.2
4	10	25	17	17	17	14	12	16	10	19	2.5	3.2
5	10	35	17	17	17	13	13	15	9.5	9.8	2.3	2.9
6	10	30	17	17	18	13	13	15	9.3	8.7	8.0	2.7
7	10	25	17	17	18	13	15	15	17	7.9	4.2	2.6
8	10	20	17	19	18	25	25	14	14	7.4	4.8	143
9	9.7	18	17	18	18	53	18	14	11	7.2	3.6	58
10	9.5	17	16	18	18	34	15	28	11	7.2	3.0	6.8
11	9.3	16	16	18	18	22	14	19	9.5	7.2	2.8	4.4
12	9.0	17	16	18	17	36	14	15	8.8	7.4	2.6	7.4
13	9.0	15	16	18	17	28	13	15	8.2	7.0	2.7	112
14	15	15	16	19	17	23	14	15	10	7.1	8.2	22
15	150	15	17	18	17	21	98	14	9.3	7.2	4.0	6.1
16	70	15	17	18	17	21	70	13	9.0	8.8	2.7	4.6
17	25	15	17	18	17	19	30	13	8.5	7.2	2.4	4.4
18	15	25	16	19	16	17	20	12	9.5	6.5	2.3	3.9
19	13	100	16	19	16	17	15	12	14	6.1	2.2	3.7
20	12	50	16	19	16	17	19	12	12	7.0	2.1	76
21	12	35	16	18	17	17	17	12	11	5.6	2.1	10
22	12	25	16	18	22	15	16	12	9.8	4.8	2.1	8.0
23	11	20	17	18	18	15	15	16	9.3	4.8	2.1	7.0
24	11	19	20	18	17	15	14	15	12	4.8	2.3	6.2
25	11	18	25	18	16	15	14	14	13	4.8	2.6	5.8
26	11	18	27	19	16	15	14	197	11	4.6	2.6	5.5
27	12	17	25	19	16	17	13	79	10	4.2	2.6	5.3
28	12	17	23	18	15	14	40	31	9.3	6.1	2.5	5.2
29	12	17	22	18	15	14	18	19	8.5	5.5	2.5	5.0
30	11	18	24	18	---	14	17	14	8.2	2.1	3.3	5.0
31	11	---	23	19	---	13	---	88	---	1.9	3.7	---
TOTAL	550.5	878	571	567	498	594	632	803	326.7	213.5	94.0	537.0
MEAN	17.8	29.3	18.4	18.3	17.2	19.2	21.1	25.9	10.9	6.89	3.03	17.9
MAX	150	150	27	21	22	53	98	197	19	19	8.2	143
MIN	9.0	11	16	17	15	13	12	12	8.2	1.9	1.7	2.6
AC-FT	1090	1740	1130	1120	988	1180	1250	1590	648	423	186	1070

CAL YR 1975 TOTAL 15686.5 MEAN 43.0 MAX 821 MIN 3.7 AC-FT 31110
WTR YR 1976 TOTAL 6264.7 MEAN 17.1 MAX 197 MIN 1.7 AC-FT 12430

07325850 LAKE CREEK NEAR EAKLY, OK

LOCATION.--Lat 35°17'27", long 98°31'44", in NE 1/4 NW 1/4 sec.1, T.9 N., R.13 W., Caddo County, on downstream side of bridge on State Highway 152, 1.2 mi (1.9 km) upstream from Fort Cobb Reservoir, 2.0 mi (3.2 km) southeast of Eakly, and at mile 4.2 (6.8 km).

DRAINAGE AREA.--52.0 mi^2 (134.7 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is 1,365.47 ft (416.195 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years, 6.48 ft^3/s (0.184 m^3/s), 4,690 acre-ft/yr (5.78 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,030 ft^3/s (57.5 m^3/s) Nov. 2, 1974, gage height, 13.13 ft (4.002 m); from rating curve extended above 200 ft^3/s (5.66 m^3/s); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft^3/s (5.13 m^3/s) Apr. 15, gage height, 6.27 ft (1.911 m), no peak above base of 250 ft^3/s (7.08 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.6	3.8	8.4	6.9	3.4	3.9	14	2.9	.06	.25	.05
2	.80	41	4.2	6.3	6.9	3.4	4.1	8.5	2.6	.06	.14	.06
3	.98	14	4.3	5.1	7.0	4.3	3.9	5.4	2.3	.23	.12	.05
4	1.1	7.7	4.7	4.7	7.1	4.3	3.6	4.5	2.1	39	.04	.04
5	1.1	11	5.1	5.6	6.0	3.0	4.1	4.0	1.9	2.6	.04	.02
6	1.1	9.0	4.0	7.3	4.5	3.0	4.2	3.6	1.9	2.4	7.9	.02
7	.96	6.6	3.7	3.0	6.0	3.8	17	3.4	1.7	2.2	8.3	.02
8	.96	5.5	4.5	2.8	10	18	16	3.1	1.6	1.9	4.6	1.1
9	.89	5.0	4.3	3.8	10	23	6.4	3.2	1.5	1.4	3.9	.04
10	.94	3.9	4.4	6.6	8.6	11	4.7	3.9	1.3	1.4	1.3	.08
11	.94	4.1	4.4	8.6	8.5	13	4.5	3.3	1.2	1.3	.43	.04
12	.85	3.3	4.2	8.0	7.6	23	4.4	3.3	1.2	1.0	.19	.04
13	.87	3.1	5.0	9.0	7.2	7.9	4.5	3.5	1.1	.62	.29	.57
14	6.7	3.9	6.0	6.7	6.3	7.2	4.6	2.6	4.8	.41	3.9	.31
15	72	4.1	8.3	7.4	6.7	7.4	88	2.5	.90	.34	.47	.14
16	11	4.3	7.7	7.6	6.4	6.4	80	2.2	.50	.75	.14	.04
17	5.9	4.6	5.2	7.1	5.9	6.0	54	1.8	.35	.55	.09	0
18	4.0	4.7	3.6	7.4	4.8	5.9	21	1.8	.25	.32	.08	0
19	3.5	30	5.0	7.7	4.8	5.9	12	1.7	.20	.15	.06	0
20	3.0	20	5.6	6.4	4.9	5.2	44	1.6	.18	.07	.05	0
21	2.6	7.7	5.1	7.1	4.0	4.4	16	1.7	.16	.04	.04	0
22	2.5	6.3	6.9	6.9	3.4	4.6	11	1.7	.13	.04	.04	0
23	2.8	5.8	6.8	7.3	4.1	4.4	8.1	3.5	.11	.04	.02	.02
24	2.2	5.6	9.8	7.4	4.0	4.4	7.2	2.6	.91	0	.02	.04
25	1.6	5.4	17	7.2	4.0	4.8	5.4	2.9	.35	.08	.02	.04
26	2.3	5.3	16	6.0	3.5	4.6	5.3	46	.25	.04	.02	.04
27	2.7	5.5	14	6.1	3.5	3.8	5.3	14	.18	0	.02	.04
28	2.5	5.6	10	7.2	3.8	3.9	36	5.8	.12	0	.02	.04
29	2.1	6.5	11	8.0	3.8	4.4	15	4.0	.09	1.7	.02	.04
30	2.3	4.2	13	8.0	---	3.6	12	3.1	.08	.91	.01	.04
31	3.1	---	10	7.9	---	3.5	---	6.3	---	.31	.03	---
TOTAL	145.49	247.3	217.4	208.6	170.2	211.5	506.2	169.5	32.86	59.92	32.55	2.92
MEAN	4.69	8.24	7.01	6.73	5.87	6.82	16.9	5.47	1.10	1.93	1.05	.097
MAX	72	41	17	9.0	10	23	88	46	4.8	39	8.3	1.1
MIN	.80	3.1	3.6	2.8	3.4	3.0	3.6	1.6	.08	0	.01	0
AC-FT	289	491	431	414	338	420	1000	336	65	119	65	5.8

CAL YR 1975 TOTAL 5558.28 MEAN 15.2 MAX 434 MIN .20 AC-FT 11020
WTR YR 1976 TOTAL 2004.44 MEAN 5.48 MAX 88 MIN 0 AC-FT 3980

07325860 WILLOW CREEK NEAR ALBERT, OK

LOCATION.--Lat 35°14'00", long 98°27'57", in NE 1/4 NW 1/4 sec.28, T.9 N., R.12 W., Caddo County, at County road bridge 3.1 mi (5.0 km) west of Albert, 5.2 mi (8.4 km) above Fort Cobb Dam, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--28.9 mi^2 (72.5 km^2).

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,340.00 ft (408.432 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years, 3.54 m^3/s (0.100 m^3/s), 2,560 acre-ft/yr (3.16 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft^3/s (48.7 m^3/s) July 24, 1975, gage height, 9.35 ft (2.850 m) from rating curve extended above 20 ft^3/s (0.57 m^3/s) on basis of channel conveyance study; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71 ft^3/s (2.01 m^3/s) Apr. 28, gage height, 4.59 ft (1.399 m), no peak above base of 200 ft^3/s (5.66 m^3/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	1.9	2.2	3.4	2.7	2.3	1.9	5.6	2.7	.34	.12	.09
2	.98	7.8	2.2	3.1	2.7	2.3	1.9	5.2	2.7	.37	.11	.09
3	.94	1.9	2.2	2.8	2.6	2.6	1.9	4.8	2.4	.30	.10	.08
4	.91	1.4	2.3	2.7	2.6	3.0	1.9	5.1	1.8	.43	.10	.06
5	.91	2.7	2.4	2.9	2.9	2.5	2.0	4.9	1.6	.39	.09	.03
6	.84	2.7	2.1	3.0	2.8	2.6	2.0	4.8	1.4	.32	.20	.03
7	.84	2.6	2.0	2.0	2.8	2.9	5.4	4.6	1.4	.21	.15	.02
8	.83	2.4	2.2	1.9	3.3	9.5	3.8	4.5	1.3	.20	.12	8.7
9	.89	2.3	2.2	2.1	3.0	5.9	2.2	4.5	1.2	.15	.08	4.3
10	.98	2.2	2.2	2.6	2.8	3.3	1.9	4.5	1.1	.17	.01	.15
11	.97	2.1	2.2	2.9	2.7	3.6	1.8	3.7	1.0	.19	.01	.10
12	.91	2.0	2.2	2.9	2.5	3.6	1.8	3.7	.98	.27	.01	.94
13	.84	2.1	2.4	2.9	2.4	2.7	1.8	3.2	1.2	.18	0	9.8
14	1.0	2.1	2.5	2.6	2.2	2.7	1.9	2.2	1.5	.22	.01	.96
15	1.7	2.1	2.3	2.6	2.3	2.6	14	2.0	1.0	.14	0	.33
16	1.9	2.2	2.3	2.6	2.3	2.5	14	1.8	.98	.24	0	.28
17	1.1	2.2	2.2	2.6	2.3	2.5	8.2	1.7	.98	.22	0	.22
18	1.4	2.2	1.9	2.6	2.1	2.8	3.9	1.7	.95	.17	0	.22
19	1.6	6.6	2.2	2.5	2.2	2.4	3.1	1.6	.90	.15	0	.16
20	1.6	3.9	2.3	2.4	2.2	2.2	8.5	1.6	.85	.14	0	.22
21	1.6	2.3	2.3	2.4	2.2	2.1	4.7	1.6	.80	.13	0	.19
22	1.6	2.1	2.6	2.5	2.0	2.2	4.2	1.6	.75	.12	0	.14
23	1.5	2.1	2.7	2.5	2.1	2.2	4.4	2.8	.72	.11	0	.11
24	1.6	2.1	3.9	2.6	2.1	2.1	4.1	2.1	1.8	.11	0	.11
25	1.5	2.1	5.3	2.5	2.1	2.2	4.1	2.8	.87	.10	0	.11
26	1.6	2.0	4.9	2.4	2.0	2.1	4.2	13	.77	.10	0	.11
27	1.7	2.1	4.5	2.3	2.1	2.1	4.1	5.3	.70	.10	0	.15
28	1.7	2.1	3.9	2.5	2.3	2.1	21	2.5	.56	.20	0	.15
29	1.7	2.5	4.3	2.6	2.3	2.2	6.7	2.4	.38	.17	0	.15
30	1.7	2.4	4.2	2.8	---	2.1	5.5	2.0	.34	.15	.03	.15
31	1.8	---	3.8	2.7	---	2.0	---	2.8	---	.13	.05	---
TOTAL	40.02	77.2	86.9	80.9	70.6	87.9	146.9	110.6	35.63	6.22	1.19	28.15
MEAN	1.29	2.57	2.80	2.61	2.43	2.84	4.90	3.57	1.19	.20	.038	.94
MAX	1.9	7.8	5.3	3.4	3.3	9.5	21	13	2.7	.43	.20	9.8
MIN	.83	1.4	1.9	1.9	2.0	2.0	1.8	1.6	.34	.10	0	.02
AC-FT	79	153	172	160	140	174	291	219	71	12	2.4	56

CAL YR 1975 TOTAL 2688.82 MEAN 7.37 MAX 504 MIN .42 AC-FT 5330
WTR YR 1976 TOTAL 772.21 MEAN 2.11 MAX 21 MIN 0 AC-FT 1530

07325900 FORT COBB RESERVOIR NEAR FORT COBB, OK

LOCATION.--Lat 35°09'30", long 98°27'40", in SE 1/4 sec.21, T.8 N., R.12 W., Caddo County, 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 mi^2 (787 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to October 1961, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by earth dam. Storage began Mar. 30, 1959. Conservation pool was first filled in June 1962. Capacity, 143,700 acre-ft (177 hm^3) at elevation 1,354.8 ft (412.94 m) crest of drop inlet, 80,010 acre-ft (98.7 hm^3) at elevation 1,342.0 ft (409.04 m) conservation pool, and 1,664 acre-ft (2.05 hm^3) 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 hm^3) Sept. 26, 1965, elevation, 1,347.10 ft (410.596 m); minimum since conservation pool was first filled, 54,650 acre-ft (67.4 hm^3) Oct. 19, 1972, elevation 1,335.06 ft (406.926 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,720 acre-ft (104 hm^3) May 1, elevation, 1,343.13 ft (409.386 m); minimum, 72,620 acre-ft (89.5 hm) Sept. 8, elevation, 1,340.14 ft (408.475 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,341.65	78,580	--	--
Oct. 31	1,341.50	77,980	-600	756
Nov. 30	1,341.76	79,030	+1,050	783
Dec. 31	1,342.08	80,340	+1,310	879
CAL YR 75	--	--	-490	8,992
Jan. 31	1,342.25	81,040	+700	697
Feb. 28	1,341.99	79,970	-1,070	804
Mar. 31	1,342.13	80,540	+570	791
Apr. 30	1,343.13	84,720	+4,180	745
May 31	1,342.97	84,040	-680	682
June 30	1,341.76	79,030	-5,010	706
July 31	1,341.14	76,540	-2,490	952
Aug. 31	1,340.31	77,210	+670	931
Sept. 30	1,340.76	75,030	-2,180	703
WTR YR 76	--	--	-3,550	9,429

† Elevation at 0800 on following day.

07326000 COBB CREEK NEAR FORT COBB, OK

LOCATION.--Lat 35°08'37", long 98°26'33", in NE 1/4 NE 1/4 sec.27, T.8 N., R.12 W., Caddo County, 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 mi^2 (811 km^2). Area at site used prior to Oct. 1, 1969, 319 mi^2 (826 km^2).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1960, published as Pond Creek near Fort Cobb.

REVISED RECORDS.--WSP 1087: 1938: WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,259.49 ft (383.893 m) above mean sea level (Bureau of Reclamation bench mark). Oct. 1, 1939, to Aug. 29, 1940, nonrecording gage and Aug. 30, 1940, to Sept. 30, 1969, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 6.92 ft (2.109 m) lower.

REMARKS.--Records good. Flow regulated since March 1959 by Fort Cobb Reservoir (station 07325900).

AVERAGE DISCHARGE.--19 years (water years 1940-58), 50.2 ft^3/s (1.42 m^3/s) 36,340 acre-ft/yr (44.8 hm^3/yr); 18 years (water years 1959-76), 18.0 ft^3/s (0.510 m^3/s), 13,040 acre-ft/yr (16.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft^3/s (991 m^3/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 ft^3/s (122 m^3/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 ft^3/s (0.006 m^3/s) Sept. 20, 24-28, 1956.

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, 407 ft^3/s (11.5 m^3/s) June 4, 5, 6, gage height, 7.87 ft (2.399 m); minimum daily, 0.79 ft^3/s (0.022 m^3/s) Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.0	2.9	2.5	2.7	2.3	2.6	2.5	2.7	2.5	1.4	2.0
2	3.6	3.8	2.9	2.4	2.6	2.2	2.7	2.1	2.6	2.4	1.4	2.0
3	3.5	3.3	2.8	2.4	2.7	2.8	2.8	2.2	136	2.4	1.4	1.9
4	4.5	3.1	2.8	2.4	2.8	2.4	2.8	2.3	405	2.4	3.4	2.1
5	4.0	3.1	2.8	2.4	2.8	2.2	2.7	55	406	2.2	3.2	1.8
6	3.5	3.1	2.8	2.5	2.6	2.3	2.3	100	405	1.6	4.5	1.9
7	3.2	3.1	2.8	2.4	2.6	2.4	2.9	99	200	1.6	3.2	1.4
8	3.0	3.1	2.8	2.3	2.8	3.5	3.1	99	5.9	1.7	2.7	2.6
9	3.0	3.1	2.8	2.5	2.8	2.8	2.9	98	4.4	1.9	2.3	9.8
10	3.2	3.1	2.7	2.6	2.8	2.4	2.8	99	4.1	1.3	1.6	5.8
11	2.5	3.3	2.6	2.6	2.8	2.4	2.8	99	4.0	1.7	1.5	2.2
12	2.4	2.9	2.6	2.5	2.8	2.7	2.6	98	3.7	2.0	2.8	2.4
13	3.2	3.1	2.6	2.6	2.7	2.3	2.6	98	3.7	2.0	2.1	5.7
14	3.7	2.9	2.6	2.6	2.7	2.3	2.5	71	3.6	2.2	1.5	4.2
15	5.0	2.8	2.6	2.6	2.8	2.4	4.0	4.1	4.1	1.6	1.7	2.4
16	4.6	2.9	2.6	2.5	2.8	2.4	4.1	3.5	3.0	2.6	2.3	2.3
17	4.4	2.9	2.6	2.4	2.8	2.2	4.3	3.2	3.0	2.4	2.3	2.3
18	4.3	2.9	2.6	2.8	65	2.3	2.8	3.0	3.0	2.3	1.2	2.2
19	4.0	2.9	2.6	2.7	107	2.3	2.7	3.0	3.0	2.5	1.2	2.2
20	3.3	2.9	2.6	2.6	106	2.2	2.9	3.5	2.8	2.2	.97	2.3
21	3.1	2.9	2.8	2.5	107	2.2	2.6	2.8	2.8	1.8	.79	2.4
22	3.0	2.8	2.8	2.6	107	2.2	2.5	2.6	2.8	1.4	1.2	2.8
23	3.0	2.9	2.8	2.6	61	2.3	2.4	3.6	2.4	1.0	1.4	2.4
24	2.9	2.9	2.8	2.6	3.2	2.3	2.4	2.8	3.4	1.2	1.8	2.2
25	2.8	2.9	2.8	2.6	2.8	2.3	2.4	2.8	2.5	1.0	2.0	2.2
26	3.0	2.9	2.8	2.6	2.6	2.2	2.4	3.8	2.5	1.4	2.0	2.2
27	3.1	2.9	2.8	2.6	2.5	2.2	2.6	3.2	2.4	.97	1.5	2.2
28	3.1	2.9	2.8	2.6	2.5	2.2	2.8	2.9	2.4	1.1	1.3	2.3
29	3.0	2.9	2.8	2.6	2.3	2.5	2.7	3.1	2.3	1.7	1.6	2.3
30	3.0	2.9	2.7	2.6	---	2.3	2.6	2.8	2.4	1.8	2.3	2.4
31	3.0	---	2.5	2.7	---	2.4	---	3.1	---	1.7	2.1	---
TOTAL	105.4	90.2	84.5	78.9	615.5	73.9	84.3	978.9	1631.5	56.57	60.66	82.9
MEAN	3.40	3.01	2.73	2.55	21.2	2.38	2.81	31.6	54.4	1.82	1.96	2.76
MAX	5.0	3.8	2.9	2.8	107	3.5	4.3	100	406	2.6	4.5	9.8
MIN	2.4	2.8	2.5	2.3	2.3	2.2	2.3	2.1	2.3	.97	.79	1.4
AC-FT	209	179	168	156	1220	147	167	1940	3240	112	120	164

CAL YR 1975 TOTAL 26281.30 MEAN 72.0 MAX 880 MIN 1.5 AC-FT 52130
WTR YR 1976 TOTAL 3943.23 MEAN 10.8 MAX 406 MIN .79 AC-FT 7820

07326500 WASHITA RIVER AT ANADARKO, OK

LOCATION.--Lat 35°05'06", long 98°14'35", in NW 1/4 sec.15, T.7 N., R.10 W., Caddo County, 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 about 305.2 (491.1 km).

DRAINAGE AREA.--3,656 mi^2 (9,460 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to September 1908; June 1924 to June 1925, published as "near Anadarko", October 1935 to February 1938; October 1963 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1903, 1907-8, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,150.00 ft (350.520 m) above mean sea level. Oct. 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 (8.53 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.

REMARKS.--Some regulation by low-water dams upstream and since March 1959, by Fort Cobb Reservoir (station 07325900), since February 1961, by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--21 years (water years 1902-8, 1935-37, 1963-76), 387 ft^3/s (10.96 m^3/s), 280,400 acre-ft/yr (346 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 29,000 ft^3/s (821 m^3/s) May 25, 1903, gage height, 26.8 ft (8.169 m), site and datum then in use, affected by backwater; no flow Aug. 1, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1949, reached an elevation of 1,176.7 ft (358.66 m), from floodmark, at right bank on downstream side of bridge on U.S. Highway 281.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft^3/s (39.1 m^3/s) Sept. 15, gage height, 9.59 ft (2.923 m), no peak above base of 3,000 ft^3/s (85.0 m^3/s); minimum daily, 25 ft^3/s (0.71 m^3/s) Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	165	192	207	179	150	135	454	549	132	51	48
2	175	165	192	203	186	147	129	474	454	129	50	48
3	172	203	192	200	200	153	129	399	429	123	46	48
4	168	496	206	193	200	156	129	344	540	120	61	46
5	165	631	203	189	196	150	129	296	707	118	68	44
6	165	435	199	186	193	147	129	317	652	115	70	44
7	165	310	196	182	189	147	144	348	617	107	64	42
8	162	268	192	169	182	159	141	335	407	104	72	42
9	159	276	189	169	182	179	138	330	248	101	108	66
10	159	264	189	176	179	176	129	313	232	96	112	193
11	159	240	189	196	179	186	126	452	217	94	81	226
12	152	221	189	210	182	196	126	754	207	94	66	105
13	149	206	189	210	182	189	126	579	196	94	55	134
14	146	199	192	203	189	189	126	657	189	91	51	366
15	159	196	189	196	186	189	150	497	182	86	48	1080
16	205	192	189	193	182	169	248	346	172	86	44	693
17	759	192	189	193	179	159	541	288	169	94	39	338
18	479	196	185	193	176	156	948	248	166	84	37	255
19	319	203	185	193	203	156	971	225	156	79	37	162
20	244	214	185	193	259	156	930	207	183	86	40	150
21	217	206	182	186	252	156	891	193	424	84	34	149
22	199	272	182	186	248	156	1070	182	245	70	28	249
23	185	268	182	189	244	156	582	182	186	64	26	226
24	178	256	192	189	207	153	431	186	248	55	25	141
25	172	225	206	189	147	147	348	358	245	53	25	101
26	168	210	214	186	144	150	292	309	354	50	26	84
27	168	203	217	182	141	147	259	309	261	48	29	96
28	165	199	217	182	141	144	259	873	179	46	32	99
29	165	203	217	182	144	144	271	1240	147	46	34	94
30	165	196	214	179	---	141	360	809	132	44	39	94
31	165	---	210	179	---	138	---	555	---	44	42	---
TOTAL	6393	7510	6064	5883	5471	4941	10387	13059	9093	2637	1540	5483
MEAN	206	250	196	190	189	159	346	421	303	85.1	49.7	183
MAX	759	631	217	210	259	196	1070	1240	707	132	112	1080
MIN	146	165	182	169	141	138	126	182	132	44	25	42
AC-FT	12680	14900	12030	11670	10850	9800	20600	25900	18040	5230	3050	10860

CAL YR 1975 TOTAL 206041 MEAN 564 MAX 4470 MIN 146 AC-FT 408700
WTR YR 1976 TOTAL 78461 MEAN 214 MAX 1240 MIN 25 AC-FT 155600

07326500 WASHITA RIVER AT ANADARKO, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1965-71, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1971.
WATER TEMPERATURE: October 1974 to September 1971.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
25...	1028	9740	1415	225	2000	8.2	6.0	30	10.8	93	19	1281
DEC												
23...	1028	9740	1315	182	2200	8.7	4.0	1	--	--	15	1244
JAN												
28...	1028	9740	1300	182	2200	6.8	5.0	4	12.2	102	8	1334
FEB												
25...	1028	9740	1400	147	1950	8.5	14.0	2	14.3	149	27	838
MAR												
16...	1028	9740	1030	169	2700	7.7	10.5	2	13.4	128	17	1400
APR												
21...	1028	9740	1545	891	1400	7.9	19.0	85	8.7	101	115	880
MAY												
19...	1028	9740	1200	225	1300	8.0	20.5	70	8.6	102	43	687
JUN												
22...	1028	9740	1245	245	1120	8.3	25.0	120	13.2	163	12	680
JUL												
12...	1028	9740	1340	94	2150	8.4	28.0	23	9.8	132	24	1128
AUG												
26...	1028	9740	1130	26	1600	7.9	26.0	28	6.8	84	24	819
SEP												
29...	1028	9740	1400	94	1500	8.2	20.0	3	13.2	148	24	500

07326500 WASHITA RIVER AT ANADARKO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
25...	385	777	100	74	6.2	75	.5	1483	2.9	.27	--
DEC											
23...	380	938	99	--	4.2	89	.5	--	3.5	.04	--
JAN											
28...	380	1029	100	93	4.0	92	.5	1949	2.3	.72	--
FEB											
25...	265	526	66	61	6.0	65	.4	1398	1.0	--	--
MAR											
16...	188	940	230	85	5.4	86	.4	2090	1.0	.17	--
APR											
21...	230	590	75	52	7.9	53	.3	1100	5.0	.10	--
MAY											
19...	195	423	64	50	5.1	46	.4	1052	1.1	.34	7
JUN											
22...	190	580	49	34	6.6	37	.5	955	.80	.18	--
JUL											
12...	304	710	97	106	6.2	111	.4	1786	1.9	.15	--
AUG											
26...	229	533	71	94	7.1	97	.4	1475	1.9	.35	16
SEP											
29...	200	455	54	60	6.7	62	.4	--	1.0	.28	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
25...	2	11	5	1300	25	106	--	8	--	3	9
DEC											
23...	--	--	--	100	--	53	--	--	--	--	--
JAN											
28...	--	--	--	100	--	58	--	--	--	--	--
FEB											
25...	1	5	4	300	22	110	--	11	--	2	<100
MAR											
16...	--	--	--	400	--	130	--	--	--	--	--
APR											
21...	--	--	--	4000	--	1700	--	--	--	--	--
MAY											
19...	2	13	10	1100	30	277	.5	13	3	7	22
JUN											
22...	--	--	--	1500	--	290	--	--	--	--	--
JUL											
12...	--	--	--	700	--	364	--	--	--	--	--
AUG											
26...	2	28	6	500	26	439	<.5	15	2	2	90
SEP											
29...	--	--	--	400	--	81	--	--	--	--	--

07327490 LITTLE WASHITA RIVER NEAR NINNEKAH, OK

LOCATION.--Lat 34°56'41", long 97°57'08", in SE 1/4 SE 1/4 sec.32, T.6 N., R.7 W., Grady County, 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 Ninnekah, 5.5 mi (8.8 km) south of Chickasha, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--208 mi^2 (539 km^2).

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) above mean sea level.

REMARKS.--Small diversions above station for irrigation.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--13 years, 27.8 ft^3/s (0.787 m^3/s), 20,140 acre-ft/yr (24.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,560 ft^3/s (214 m^3/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, 1,320 ft^3/s (37.4 m^3/s) July 15, gage height, 5.90 ft (1.798 m), no peak above base of 1,500 ft^3/s (42.5 m^3/s); minimum daily, 0.50 ft^3/s (0.014 m^3/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	19	28	39	27	36	35	42	20	20	8.7	18
2	37	19	27	37	26	35	35	36	16	19	7.9	13
3	38	27	25	35	25	36	34	36	15	17	6.9	12
4	39	25	22	33	26	39	34	38	16	16	20	9.8
5	38	22	19	35	33	35	33	35	17	15	21	8.7
6	37	29	23	36	37	33	34	48	23	14	24	7.6
7	36	25	21	26	31	38	39	34	19	12	17	6.9
8	36	25	21	54	31	181	46	29	21	12	13	7.9
9	33	23	20	52	31	113	37	29	21	12	11	20
10	32	29	19	56	29	56	32	30	21	12	8.3	17
11	31	29	19	48	29	50	29	30	20	14	6.6	15
12	29	29	20	39	29	59	29	27	18	14	5.6	15
13	29	28	18	38	28	44	31	28	18	13	5.1	97
14	29	28	17	36	27	40	30	29	17	13	5.3	45
15	46	27	22	36	29	39	45	29	16	48	4.5	21
16	25	27	22	37	27	35	65	27	14	46	4.3	18
17	22	25	22	33	29	35	58	24	14	19	3.8	14
18	20	23	22	29	29	36	62	24	17	15	4.3	12
19	20	25	25	33	30	35	333	24	17	14	4.0	12
20	20	39	29	32	30	33	131	23	15	12	3.3	12
21	19	35	27	33	32	33	48	21	14	10	1.7	11
22	19	29	30	31	30	33	34	22	14	9.0	1.0	9.4
23	20	29	29	29	30	31	27	27	14	8.7	1.5	7.9
24	22	29	37	29	30	28	25	24	404	8.3	1.3	7.9
25	24	31	49	31	31	27	27	27	68	7.9	27	7.2
26	27	35	49	29	30	27	29	368	34	7.9	1.0	7.2
27	27	35	42	27	30	27	29	208	28	7.6	.50	8.3
28	23	31	41	29	32	29	56	43	24	7.2	.50	9.0
29	23	25	49	29	33	54	57	26	21	24	7.5	9.0
30	22	30	46	28	---	35	48	24	19	15	30	9.4
31	23	---	42	28	---	35	---	29	---	11	21	---
TOTAL	884	832	882	1087	861	1367	1552	1441	995	473.6	277.60	468.2
MEAN	28.5	27.7	28.5	35.1	29.7	44.1	51.7	46.5	33.2	15.3	8.95	15.6
MAX	46	39	49	56	37	181	333	368	404	48	30	97
MIN	19	19	17	26	25	27	25	21	14	7.2	.50	6.9
AC-FT	1750	1650	1750	2160	1710	2710	3080	2860	1970	939	551	929

CAL YR 1975 TOTAL 24821.00 MEAN 68.0 MAX 1870 MIN 17 AC-FT 49230
WTR YR 1976 TOTAL 11120.40 MEAN 30.4 MAX 404 MIN .50 AC-FT 22060

07328070 WINTER CREEK NEAR ALEX, OK

LOCATION.--Lat 34°59'35", long 97°45'40", in NE 1/4 sec.18, T.6 N., R.5 W., Grady County, 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 mi^2 (86 km^2).

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

GAGE.--Water-stage recorder and broad crest V-notch weir. Datum of gage is 1,048.20 ft (319.419 m) above mean sea level.

REMARKS.--Flow regulated by 16 flood-retarding structures, combined capacity, 1,050 acre-ft (1.29 hm^3). Minor diversions for irrigation above station.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--12 years, 8.44 ft^3/s (0.239 m^3/s), 6,110 acre-ft/yr (7.53 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft^3/s (121 m^3/s) May 24, 1973 gage height, 7.88 ft (2.402 m); no flow in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 10, 1964, reached a stage of 8.62 ft (2.627 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) at 1300 July 15, gage height, 5.90 ft (1.798 m), no other peak above base of 500 ft^3/s (14.2 m^3/s); minimum, 0.66 ft^3/s (0.019 m^3/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.3	5.4	5.4	4.2	2.7	2.5	8.2	4.0	1.2	1.9	1.2
2	3.4	5.1	5.8	5.0	4.2	2.7	2.3	6.6	3.2	1.3	2.0	1.1
3	3.4	5.4	5.8	5.0	4.0	3.5	2.2	5.4	2.9	1.4	1.9	1.0
4	3.1	5.4	5.8	4.8	4.0	3.7	2.5	4.8	2.5	1.5	1.8	.90
5	2.9	5.6	9.4	4.8	5.0	3.7	2.9	4.4	2.3	1.5	6.6	.80
6	2.9	6.1	7.1	4.6	5.2	3.5	3.0	5.9	5.3	1.4	18	.80
7	3.4	5.8	6.3	4.0	4.6	5.0	3.8	4.8	2.9	1.2	7.4	.70
8	3.4	5.8	6.3	3.0	4.6	15	4.6	3.8	2.4	1.2	3.4	.90
9	3.4	5.6	5.8	3.2	4.6	13	4.0	3.7	2.1	1.2	2.4	2.1
10	3.4	5.4	5.6	4.6	4.6	9.4	3.7	3.7	1.9	1.2	2.0	1.1
11	3.4	4.9	5.6	5.0	4.6	8.8	3.4	3.5	1.6	1.2	1.8	.80
12	3.4	4.9	5.6	4.6	4.4	9.1	3.4	3.7	1.6	1.2	1.6	1.1
13	3.4	4.5	5.6	4.6	4.4	6.6	3.4	4.0	1.7	1.0	1.2	12
14	3.4	4.3	5.8	4.4	4.4	6.1	3.4	3.7	1.7	1.1	1.0	2.5
15	6.5	4.3	6.1	4.4	4.2	5.6	5.9	3.4	1.5	215	1.0	2.2
16	5.1	4.7	5.4	4.4	4.2	5.2	6.6	3.2	1.1	113	.90	2.0
17	4.7	5.4	5.4	4.4	4.2	4.6	5.4	3.0	1.0	49	1.0	1.8
18	4.5	5.4	5.6	4.4	4.0	4.4	4.8	2.7	1.2	35	1.0	1.8
19	4.3	8.2	5.4	4.4	3.8	4.2	25	2.5	1.0	23	.80	1.8
20	4.1	7.9	5.1	4.2	3.8	4.2	17	2.4	.80	14	.80	1.8
21	3.9	6.3	5.1	4.2	4.0	3.8	11	2.1	.80	9.1	.70	1.7
22	3.9	6.1	5.4	4.2	3.4	3.7	9.4	1.8	.80	6.3	.70	1.6
23	3.9	5.6	5.4	4.2	3.0	3.5	7.6	2.4	1.2	5.0	.80	1.5
24	4.1	5.4	7.3	4.4	3.0	3.4	6.8	2.1	32	4.0	.70	1.5
25	3.4	5.1	9.4	4.4	3.0	3.4	5.4	2.2	8.1	3.4	1.0	1.5
26	3.6	5.4	8.2	4.4	3.0	3.2	4.8	4.0	5.6	2.7	.70	1.5
27	3.8	5.1	7.6	4.6	3.1	3.1	4.2	4.2	4.4	2.4	.70	1.5
28	4.1	5.1	7.3	4.0	2.9	2.9	16	2.9	3.2	1.9	.70	1.5
29	4.1	6.1	7.6	4.0	2.7	3.4	11	2.9	2.5	2.6	.70	1.3
30	4.1	6.5	7.1	4.2	---	3.2	9.1	2.5	1.6	2.0	.80	1.1
31	4.1	---	6.8	4.6	---	2.7	---	5.9	---	1.7	1.5	---
TOTAL	118.5	165.7	196.1	136.4	115.1	157.3	195.1	116.4	102.90	507.7	67.50	53.10
MEAN	3.82	5.52	6.33	4.40	3.97	5.07	6.50	3.75	3.43	16.4	2.18	1.77
MAX	6.5	8.2	9.4	5.4	5.2	15	25	8.2	32	215	18	12
MIN	2.9	4.3	5.1	3.0	2.7	2.7	2.2	1.8	.80	1.0	.70	.70
AC-FT	235	329	389	271	228	312	387	231	204	1010	134	105

CAL YR 1975 TOTAL 5505.50 MEAN 15.1 MAX 530 MIN 2.1 AC-FT 10920
WTR YR 1976 TOTAL 1931.80 MEAN 5.28 MAX 215 MIN .70 AC-FT 3830

07328100 WASHITA RIVER AT ALEX, OK

LOCATION.--Lat 34°55'35", long 97°46'30", in NW 1/4 sec.7, T.5 N., R.5 W., Grady County, 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 mi^2 (12,398 km^2).

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.--Some regulation by Fort Cobb Reservoir (station 07325900), by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--12 years, 374 ft^3/s (10.59 m^3/s), 271,000 acre-ft/yr (334 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,350 ft^3/s (265 m^3/s) May 7, 1969; 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.--Maximum discharge, 2,050 ft^3/s (58.1 m^3/s) Apr. 20, gage height, 8.59 ft (2.618 m), no peak above base of 3,800 ft^3/s (108 m^3/s); minimum daily, 25 ft^3/s (0.71 m^3/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	289	253	303	334	267	237	215	535	814	217	69	80
2	284	260	296	319	265	237	205	611	714	205	66	80
3	273	268	293	312	265	233	198	637	634	194	69	80
4	268	287	293	303	273	258	196	607	555	181	83	80
5	262	325	303	298	298	285	196	527	542	170	104	72
6	260	600	298	303	305	267	196	494	719	162	377	68
7	255	625	293	282	301	263	196	442	710	158	176	62
8	253	509	291	278	296	406	196	445	674	155	187	62
9	249	418	287	282	298	562	266	447	601	142	147	99
10	247	366	284	278	294	478	287	431	401	137	131	86
11	242	374	282	324	282	398	245	422	331	134	128	119
12	238	354	277	317	273	372	223	403	303	136	140	161
13	232	327	284	310	269	356	213	709	287	126	112	507
14	228	315	289	312	269	349	207	731	296	130	90	307
15	264	307	284	315	273	331	228	726	345	619	73	279
16	284	307	284	308	276	322	313	712	306	835	62	628
17	291	305	282	305	269	312	492	560	260	377	55	886
18	458	303	275	301	260	294	846	441	247	259	51	554
19	691	303	275	294	258	280	1450	366	241	192	43	413
20	537	322	280	289	258	265	1850	334	233	160	39	316
21	413	329	277	287	287	252	1420	301	219	137	39	238
22	349	327	277	287	336	243	1110	278	270	125	36	196
23	319	319	280	287	339	239	1180	282	410	119	38	185
24	300	354	291	285	344	233	878	280	939	106	43	256
25	280	356	331	282	339	241	678	278	611	96	43	241
26	266	341	341	282	303	229	572	351	438	89	55	176
27	262	319	339	282	254	227	499	960	365	85	30	148
28	262	310	339	282	247	227	528	642	414	78	25	133
29	253	317	349	280	241	268	612	766	338	89	34	131
30	249	305	354	278	---	267	616	1160	252	88	63	136
31	251	---	341	273	---	225	---	1050	---	73	76	---
TOTAL	9309	10405	9272	9169	8239	9156	16311	16928	13469	5774	2684	6779
MEAN	300	347	299	296	284	295	544	546	449	186	86.6	226
MAX	691	625	354	334	344	562	1850	1160	939	835	377	886
MIN	228	253	275	273	241	225	196	278	219	73	25	62
AC-FT	18460	20640	18390	18190	16340	16160	32350	33580	26720	11450	5320	13450

CAL YR 1975 TOTAL 307332 MEAN 842 MAX 7260 MIN 228 AC-FT 609600
WTR YR 1976 TOTAL 117495 MEAN 321 MAX 1850 MIN 25 AC-FT 233100

07328500 WASHITA RIVER NEAR PAULS VALLEY, OK

LOCATION.--Lat 34°45'17", long 97°15'04", in SE 1/4 sec.1, T.3 N., R.1 W., Garvin County, on right bank 200 ft (61.0 m) upstream from bridge on U.S. Highway 77, 2 mi (3.2 km) northwest of Pauls Valley, 6 mi (9.7 km) downstream from Owl Creek, 7 mi (11.3 km) upstream from Washington Creek, and at mile 146.5 (235.7 km).

DRAINAGE AREA.--5,330 mi² (13,805 km²).

WATER-DISCHARGE RECORDS

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) above mean sea level. During 1899, nonrecording gage at site 9 mi (14.5 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 fair. 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.--39 years, 699 ft³/s (19.80 m³/s), 506,400 acre-ft/yr (624 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.--Maximum discharge, 3,190 ft³/s (90.3 m³/s) Apr. 20, gage height, 9.78 ft (2.81 m), no peaks above base of 5,000 ft³/s (142 m³/s); minimum daily, 58 ft³/s (1.64 m³/s) Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	383	326	373	346	294	352	349	534	852	318	75	133
2	376	328	355	335	297	352	326	494	693	260	70	132
3	360	332	352	326	300	352	323	500	637	235	73	137
4	354	336	346	321	305	348	315	549	614	224	78	129
5	346	345	350	321	307	346	315	566	552	210	90	120
6	343	365	355	318	312	346	315	536	530	187	120	113
7	333	494	347	316	323	350	317	501	746	169	281	113
8	322	629	332	313	332	436	315	477	664	158	313	103
9	314	590	321	318	336	854	315	461	601	150	220	452
10	307	529	313	335	342	844	319	463	567	145	223	332
11	303	493	310	338	345	675	361	461	459	140	151	308
12	294	466	312	349	339	543	364	484	400	135	135	247
13	294	454	307	346	338	510	326	551	365	132	122	395
14	291	419	309	343	337	492	317	581	336	130	112	694
15	306	415	313	335	340	474	315	612	323	180	102	446
16	388	399	298	321	343	441	316	607	327	705	91	347
17	382	398	289	316	346	423	368	617	358	686	78	495
18	364	388	284	303	346	416	504	575	321	402	69	644
19	367	386	280	290	346	404	1010	518	293	346	67	458
20	548	389	277	279	344	387	2560	436	273	274	65	382
21	531	390	276	273	337	370	2060	393	261	225	63	332
22	487	395	276	272	338	356	1490	364	245	184	62	305
23	444	391	278	274	372	345	1150	365	232	149	60	246
24	417	379	286	275	385	335	1100	342	326	135	58	211
25	387	385	306	279	385	332	761	388	731	120	58	214
26	367	387	331	282	390	337	631	425	510	110	77	261
27	353	405	367	282	379	327	538	1050	443	96	65	243
28	347	381	331	284	361	323	512	877	398	90	81	196
29	343	380	313	287	352	323	533	651	380	90	89	180
30	335	384	321	289	---	340	544	717	386	88	93	167
31	327	---	346	292	---	373	---	986	---	80	115	---
TOTAL	11313	12358	9854	9558	9871	13106	18969	17081	13823	6553	3356	8535
MEAN	365	412	318	308	340	423	632	551	461	211	108	285
MAX	548	629	373	349	390	854	2560	1050	852	705	313	694
MIN	291	326	276	272	294	323	315	342	232	80	58	103
AC-FT	22440	24510	19550	18960	19580	26000	37630	33880	27420	13000	6660	16930

CAL YR 1975 TOTAL 434701 MEAN 1191 MAX 13800 MIN 264 AC-FT 862200
WTR YR 1976 TOTAL 134377 MEAN 367 MAX 2560 MIN 58 AC-FT 266500

07328500 WASHITA RIVER NEAR PAULS VALLEY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-63, November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
25...	1028	9740	0700	385	2100	8.5	3.0	70	--	--	19	1029
DEC												
22...	1028	9740	1800	276	2020	8.4	4.0	20	16.6	134	4	1065
JAN												
28...	1028	9740	1100	284	2050	8.5	3.5	2	12.5	99	16	1000
FEB												
24...	1028	9740	1430	385	1700	--	11.5	20	9.4	91	<4	1074
MAR												
23...	1028	9740	1700	345	1850	9.0	18.0	0	9.7	108	31	930
MAY												
25...	1028	9740	1530	388	1400	8.3	25.0	94	8.7	109	76	684
JUN												
22...	1028	9740	0908	245	1800	8.1	23.0	35	8.0	98	14	730
JUL												
28...	1028	9740	0910	90	1600	8.2	27.0	25	6.6	87	19	710
AUG												
25...	1028	9740	1330	58	1500	8.4	30.0	14	9.6	118	18	680
SEP												
28...	1028	9740	1600	196	1210	7.9	20.5	12	10.0	113	30	533

07328500 WASHITA RIVER NEAR PAULS VALLEY, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
25...	320	651	95	88	5.2	98	--	1317	2.3	.31	6
DEC											
22...	61	745	86	85	3.5	91	.5	1361	1.4	.14	--
JAN											
28...	310	870	85	85	4.0	99	.5	1590	3.9	.16	--
FEB											
24...	350	671	92	85	4.8	97	.4	1658	1.5	--	4
MAR											
23...	230	590	99	90	8.2	90	.4	1740	1.1	.10	--
MAY											
25...	187	436	65	64	5.5	75	.4	1083	1.1	.45	9
JUN											
22...	230	540	83	84	6.5	86	.4	1440	1.4	.23	--
JUL											
28...	188	407	82	104	6.7	104	.3	1350	2.2	.22	--
AUG											
25...	165	378	80	96	6.5	102	.4	1254	1.9	<.08	9
SEP											
28...	148	444	46	58	7.2	52	.4	907	1.3	2.0	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
25...	2	14	6	1200	22	184	--	12	--	2	13
DEC											
22...	--	--	--	300	--	65	--	--	--	--	--
JAN											
28...	--	--	--	300	--	100	--	--	--	--	--
FEB											
24...	2	6	5	1200	19	155	--	12	--	3	8
MAR											
23...	--	--	--	300	--	120	--	--	--	--	--
MAY											
25...	1	16	15	1500	22	310	<.5	19	2	3	27
JUN											
22...	--	--	--	400	--	120	--	--	--	--	--
JUL											
28...	--	--	--	300	--	101	--	--	--	--	--
AUG											
25...	2	25	4	200	18	90	<.5	10	2	2	3
SEP											
28...	--	--	--	700	--	219	--	--	--	--	--

07329500 RUSH CREEK NEAR MAYSVILLE, OK

LOCATION.--Lat 34°44'36", long 97°24'18", in SW 1/4 SW 1/4 sec.10, T.3 N., R.2 W., Garvin County, near right bank on downstream side of pier of bridge on State Highway 74, 2.8 miles (4.5 km) downstream from Panther Creek, 5.3 miles (8.5 km) south of Maysville, and at mile 14.2 (22.8 km).

DRAINAGE AREA.--206 mi^2 (534 km^2).

PERIOD OF RECORD.--December 1953 to September 1976 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 903.04 ft (275.247 m) above mean sea level (State Highway Deaprtment bench mark).

REMARKS.--Records fair.

AVERAGE DISCHARGE.--22 years (water years 1955-76), 51.6 ft^3/s (1.461 $m^3.s$), 37,380 acre-ft/yr (46.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft^3/s (1,090 m^3/s) May 18, 1957, gage height, 23.62 ft (7.199 m), from rating curve extended above 5,300 ft^3/s (150 m^3/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 941 ft^3/s (26.6 m^3/s) May 26, gage height, 5.65 ft (1.722 m), no peak above base of 3,000 ft^3/s (85.0 m^3/s); minimum daily, 2.0 ft^3/s (0.057 m^3/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	23	26	21	18	14	16	35	46	6.9	4.5	3.1
2	17	24	20	20	18	15	14	25	41	6.9	4.3	3.1
3	16	26	19	20	18	15	14	19	35	6.7	4.1	14
4	16	25	19	19	18	17	17	18	31	6.5	4.0	8.1
5	16	26	19	19	19	15	14	17	30	6.3	4.2	4.4
6	16	28	18	19	19	15	14	17	40	5.9	6.3	3.5
7	15	26	17	18	20	17	14	16	37	5.7	4.8	5.8
8	15	26	17	8.2	19	56	14	16	30	5.5	3.3	79
9	15	25	17	15	19	75	23	15	25	5.1	3.0	72
10	14	23	17	24	19	56	26	15	20	5.3	2.8	35
11	14	23	17	23	19	47	22	15	17	5.0	2.7	22
12	14	20	20	22	18	50	19	40	15	6.3	2.6	10
13	14	18	26	21	18	36	16	52	13	5.2	2.5	7.2
14	14	19	25	21	19	35	17	41	12	5.3	2.5	14
15	20	19	24	20	19	31	18	34	12	35	2.4	22
16	32	20	23	20	18	28	31	29	12	54	2.3	10
17	27	20	19	20	18	26	28	24	11	23	2.3	8.2
18	24	20	18	19	17	30	36	21	11	18	2.2	7.3
19	22	23	17	19	16	30	135	17	20	15	2.2	6.6
20	20	28	17	19	16	19	267	15	12	13	2.1	6.0
21	19	26	17	19	15	19	124	15	11	11	2.3	5.6
22	18	24	16	19	16	19	74	14	9.9	8.9	2.1	5.4
23	18	22	19	19	15	18	51	20	10	8.0	2.0	6.1
24	17	21	18	23	14	19	44	22	12	7.4	2.1	39
25	17	21	19	27	13	19	36	21	12	6.8	2.6	18
26	19	21	25	26	13	18	30	180	10	6.4	2.4	7.8
27	23	21	23	23	13	17	29	157	8.9	6.0	2.4	6.3
28	22	21	22	19	13	18	49	57	8.8	5.7	4.5	5.6
29	22	22	21	18	13	19	54	46	7.1	6.0	3.8	6.4
30	22	36	21	18	---	19	42	121	6.6	7.0	3.4	41
31	23	---	21	18	---	17	---	58	---	5.3	3.3	---
TOTAL	578	697	617	616.2	490	829	1288	1192	566.3	319.1	96.0	482.5
MEAN	18.6	23.2	19.9	19.9	16.9	26.7	42.9	38.5	18.9	10.3	3.10	16.1
MAX	32	36	26	27	20	75	267	180	46	54	6.3	79
MIN	14	18	16	8.2	13	14	14	14	6.6	5.0	2.0	3.1
AC-FT	1150	1380	1220	1220	972	1640	2550	2360	1120	633	190	957

CAL YR 1975	TOTAL	33250.0	MEAN 91.1	MAX 3940	MIN 13	AC-FT 65950
WTR YR 1976	TOTAL	7771.1	MEAN 21.2	MAX 267	MIN 2.0	AC-FT 15410

07329700 WILDHORSE CREEK NEAR HOOVER, OK

LOCATION.--Lat 34°32'29", long 97°14'49", on west line of SW 1/4 sec.19, T.1 N., R.1 E., Garvin County, 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 mi^2 (1,564 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1951-69. October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 803.3 ft (244.85 m) above mean sea level.

REMARKS.--Records good. Flow regulated by Duncan, Clear Creek, Humphries and Fuqua Lakes, combined surface-area, 3,340 acres (13.5 km^2), and capacity, 44,800 acre-ft (55.2 hm^3), and numerous flood-retarding structures.

AVERAGE DISCHARGE.--7 years, 205 ft^3/s (5.806 m^3/s), 148,500 acre-ft/yr (183 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft^3/s (354 m^3/s) Apr. 22, 1973, gage height, 24.10 ft (7.346 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,610 ft^3/s (159 m^3/s) at 2315 Apr. 19, gage height, 16.24 ft (4.950 m), no other peak above base of 4,000 ft^3/s (113 m^3/s); minimum, 1.7 ft^3/s (0.048 m^3/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	36	39	73	35	38	32	152	224	20	13	8.7
2	46	41	38	60	38	38	35	132	162	20	11	52
3	46	47	36	55	36	44	34	114	121	20	10	14
4	42	47	35	51	36	57	33	102	98	19	9.9	8.9
5	40	51	38	49	43	46	32	96	84	19	9.1	6.8
6	38	135	37	57	43	42	32	95	73	19	13	5.4
7	38	84	34	45	36	53	31	89	199	18	12	4.5
8	36	57	34	22	31	454	31	82	92	18	11	4.0
9	35	49	33	30	31	493	33	78	70	17	9.3	6.2
10	34	45	33	53	28	216	31	76	60	17	8.3	7.4
11	33	42	34	44	28	160	31	74	53	16	7.3	6.8
12	32	40	34	42	27	209	30	405	49	17	6.5	5.5
13	32	38	32	40	26	104	30	725	45	16	5.8	4.8
14	30	39	33	39	26	78	34	321	42	16	5.2	5.1
15	36	41	34	38	26	71	35	234	39	16	4.9	8.9
16	49	41	30	37	27	68	39	195	37	87	4.6	9.6
17	43	41	31	36	29	65	63	164	35	39	4.7	7.3
18	37	42	28	35	29	62	98	122	62	26	4.0	5.2
19	35	51	26	35	31	57	1220	97	91	20	3.5	5.2
20	36	61	32	34	34	50	3510	84	48	18	3.3	5.2
21	33	61	34	34	40	45	1410	77	38	16	3.4	5.5
22	33	51	36	44	37	41	641	71	35	14	3.6	4.9
23	33	44	37	44	38	37	439	94	32	12	3.6	3.9
24	36	42	46	41	37	35	325	122	31	12	3.4	3.4
25	34	41	95	36	36	34	267	88	31	12	3.3	2.5
26	33	41	123	33	37	33	218	275	29	11	2.8	2.2
27	37	40	84	35	36	33	180	1370	28	11	2.3	2.0
28	37	43	66	37	37	34	182	473	26	10	2.4	1.9
29	37	45	67	38	38	68	239	251	23	20	4.8	1.9
30	34	45	69	38	---	50	172	307	21	48	3.8	1.9
31	34	---	74	38	---	42	---	397	---	16	5.0	---
TOTAL	1143	1481	1402	1293	976	2857	9487	6962	1978	640	194.8	211.6
MEAN	36.9	49.4	45.2	41.7	33.7	92.2	316	225	65.9	20.6	6.28	7.05
MAX	49	135	123	73	43	493	3510	1370	224	87	13	52
MIN	30	36	26	22	26	33	30	71	21	10	2.3	1.9
AC-FT	2270	2940	2780	2560	1940	5670	18820	13810	3920	1270	386	420

CAL YR 1975 TOTAL 176414.0 MEAN 483 MAX 8090 MIN 14 AC-FT 349900
WTR YR 1976 TOTAL 28625.4 MEAN 78.2 MAX 3510 MIN 1.9 AC-FT 56780

07331000 WASHITA RIVER NEAR DURWOOD, OK

LOCATION.--Lat 34°14'03", long 96°58'32", in NW 1/4 SW 1/4 sec.3, T.4 S., R.3 E., Carter County, near left bank on downstream side of pier of bridge on U.S. Highway 177, 1.3 miles (2.1 km) downstream from Caddo Creek, 4 miles (6.4 km) north of Durwood, and at mile 63.4 (102.0 km).

DRAINAGE AREA.--7,202 mi^2 (18,653 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1281: 1935 (m).

GAGE.--Water-stage recorder. Datum of gage is 650.57 ft (198.294 m) above mean sea level (levels by Corps of Engineers). Prior to Feb. 16, 1939, nonrecording gage at same site and datum. Dec. 15, 1950, to Feb. 19, 1952, nonrecording gage at site 500 ft (152.4 m) upstream at same datum.

REMARKS.--Records good. Some diversions above station for irrigation. Some regulation since March 1959 by Fort Cobb Reservoir (see sta. 07325900), since February 1961 by Foss Reservoir (see sta. 07324300), and by numerous flood-retarding structures.

COOPERATION.--Results of 11 discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 1,399 ft^3/s (39.62 m^3/s) 1,014, 000 acre-ft/yr (1.25 km^2/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,000 ft^3/s (2,780 m^3/s) May 19, 1957; gage height, 42.30 ft (12.893 m), from floodmark; 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, 16,800 ft^3/s (476 m^3/s) at 0900 Apr. 20, gage height, 19.55 ft (5.958 m), no other peak above base of 10,000 ft^3/s (283 m^3/s); minimum daily, 68 ft^3/s (1.93 m^3/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	557	480	661	570	427	474	471	1310	2660	453	175	108
2	543	494	654	572	423	448	450	1230	2080	426	157	140
3	538	520	614	544	419	443	417	1080	1640	363	142	186
4	527	514	562	521	416	447	410	906	1330	328	129	156
5	508	527	546	504	416	466	371	922	939	299	130	133
6	495	563	537	478	416	464	356	990	834	278	123	119
7	484	624	529	486	417	465	368	906	795	265	127	107
8	472	622	511	378	433	1190	387	830	1180	252	174	101
9	459	799	504	271	443	2130	404	770	1010	243	313	104
10	447	830	494	368	442	1720	384	761	886	243	294	139
11	439	732	478	493	437	1410	387	700	825	234	212	364
12	433	664	472	508	434	1710	397	863	704	227	182	257
13	418	617	480	516	432	1470	417	5560	588	216	171	220
14	410	600	487	493	435	1210	410	3070	520	209	149	180
15	447	592	504	483	423	1080	394	2170	481	217	133	668
16	449	573	512	464	426	972	437	1950	454	228	137	621
17	481	574	525	464	430	906	478	1740	432	690	129	468
18	547	580	515	464	436	723	709	1610	502	951	116	440
19	532	612	504	461	444	617	2180	1380	675	624	103	814
20	503	644	520	458	448	613	14200	1220	625	478	98	644
21	617	659	527	445	451	600	8820	1130	458	407	91	486
22	784	677	535	435	457	554	5680	878	404	346	84	430
23	701	675	537	446	461	531	4140	904	377	277	78	407
24	637	691	548	483	459	516	2820	966	359	277	72	323
25	585	683	571	485	496	504	2520	890	376	230	68	282
26	537	660	592	492	516	478	1880	1320	778	216	71	250
27	511	674	619	496	520	482	1520	3340	755	189	77	240
28	498	684	608	479	521	482	1450	3100	566	174	72	269
29	496	676	603	446	511	492	1840	2430	500	169	75	261
30	491	700	574	433	---	500	1550	2200	466	164	85	223
31	485	---	567	432	---	475	---	2510	---	204	146	---
TOTAL	16031	18940	16890	14568	12989	24572	56247	49636	24199	9877	4113	9140
MEAN	517	631	545	470	448	793	1875	1601	807	319	133	305
MAX	784	830	661	572	521	2130	14200	5560	2660	951	313	814
MIN	410	480	472	271	416	443	356	700	359	164	68	101
AC-FT	31800	37570	33500	28900	25760	48740	111600	98450	48000	19590	8160	18130

CAL YR 1975 TOTAL 910214 MEAN 2494 MAX 24500 MIN 410 AC-FT 1805000
WTR YR 1976 TOTAL 257202 MEAN 703 MAX 14200 MIN 68 AC-FT 510200

07331000 WASHITA RIVER NEAR DURWOOD, 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. Partial analyses were made on at least one sample each month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Monthly samples were collected by the U.S. Geological Survey and selected parameters were analyzed by Oklahoma State Department of Health.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,120 micromhos Nov. 15, 1963; minimum daily, 94.9 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, 1,950 micromhos Sept. 24; minimum daily, 446 micromhos Apr. 20.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 12; minimum daily, 2.0°C Jan. 7-9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
23...	--	--	1430	696	1680	8.3	24.0	20	--	820	620	200
NOV												
24...	--	--	1400	696	1850	8.3	7.0	50	--	780	510	190
24...	1028	9740	1401	696	1850	8.3	7.0	--	19	--	--	--
DEC												
22...	--	--	1200	535	1910	7.8	5.0	20	--	820	530	210
22...	1028	9740	1201	535	1910	7.8	5.0	--	4	--	--	--
JAN												
28...	--	--	0900	496	1700	8.6	3.5	10	--	780	520	190
28...	1028	9740	0901	496	1700	8.6	3.5	--	12	--	--	--
FEB												
25...	--	--	1830	504	1750	--	13.5	9	--	680	460	140
25...	1028	9740	1831	504	--	--	13.5	--	40	--	--	--
MAR												
23...	--	--	1530	531	1500	8.6	19.0	9	--	750	530	170
23...	1028	9740	1531	531	1500	8.6	19.0	--	16	--	--	--
APR												
13...	--	--	1200	417	1550	8.1	21.5	18	--	730	510	160
13...	1028	9740	1201	417	1550	8.1	21.5	--	27	--	--	--
MAY												
13...	--	--	1500	5490	550	7.9	19.0	200	--	230	93	59
13...	1028	9740	1501	5490	550	7.9	19.0	--	138	--	--	--
JUN												
30...	--	--	1300	478	1130	7.5	29.0	290	--	530	360	140
30...	1028	9740	1301	478	1130	7.5	29.0	--	7	--	--	--
JUL												
16...	--	--	1130	228	1480	8.9	28.0	20	--	600	450	120
16...	1028	9740	1131	228	1480	8.9	28.0	--	19	--	--	--
AUG												
25...	--	--	1000	67	1450	8.1	23.5	3	--	650	500	130
25...	1028	9740	1001	67	1450	8.1	23.5	--	69	--	--	--
SEP												
27...	--	--	1200	250	900	8.4	24.0	170	--	410	260	110
27...	1028	9740	1201	250	900	8.4	24.0	--	28	--	--	--

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT												
23...	78	91	19	1.4	4.5	239	196	1.9	660	110	--	.4
NOV												
24...	75	86	19	1.3	4.4	337	276	2.7	520	100	--	.4
24...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
22...	72	93	20	1.4	3.5	360	295	9.1	560	110	--	.3
22...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
28...	75	84	19	1.3	3.1	326	267	1.3	550	100	--	.4
28...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
25...	81	89	22	1.5	3.2	271	222	--	600	100	--	.3
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
23...	79	76	18	1.2	4.0	274	225	1.1	--	--	--	.4
23...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
13...	81	92	21	1.5	4.0	275	226	3.5	490	120	--	.4
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
13...	19	25	19	.7	3.6	162	133	3.3	100	31	--	.4
13...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
30...	43	54	18	1.0	6.0	204	167	10	350	81	--	.7
30...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
16...	73	94	25	1.7	5.1	180	148	.4	500	120	--	.4
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
25...	78	110	27	1.9	6.3	174	143	2.2	520	140	--	.5
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
27...	33	53	22	1.1	5.9	182	149	1.2	290	58	--	.5
27...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT											
23...	7.7	1300	1270	1.77	2440	.00	--	1.6	1.6	7.1	.17
NOV											
24...	15	1160	1160	1.58	2180	.72	--	.87	1.6	7.0	.15
24...	--	--	--	--	--	--	--	--	2.4	--	--
DEC											
22...	14	1330	1240	1.81	1920	.76	--	.77	1.5	6.8	.13
22...	--	--	--	--	--	--	--	--	3.3	--	--
JAN											
28...	9.9	1230	1170	1.67	1650	.87	--	.66	1.5	6.8	.04
28...	--	--	--	--	--	--	--	--	1.6	--	--
FEB											
25...	6.5	1350	1150	1.84	1840	.46	--	.47	.93	4.1	.12
25...	--	--	--	--	--	--	--	--	1.0	--	--
MAR											
23...	6.4	1220	--	1.66	1750	.01	--	.78	.79	3.5	.08
23...	--	--	--	--	--	--	--	--	.70	--	--
APR											
13...	5.9	1200	1090	1.63	1350	.00	--	.76	.76	3.4	.14
13...	--	--	--	--	--	--	--	--	.60	--	--
MAY											
13...	8.3	372	326	.51	5510	.58	--	1.1	1.7	7.4	.85
13...	--	--	--	--	--	--	--	--	.90	--	--
JUN											
30...	9.7	841	785	1.14	1090	.78	--	1.7	2.5	11	.48
30...	--	--	--	--	--	--	--	--	2.2	--	--
JUL											
16...	9.6	1050	1010	1.43	646	.02	--	2.1	2.1	9.4	.29
16...	--	--	--	--	--	--	--	--	5.0	--	--
AUG											
25...	8.3	1150	1080	1.56	208	.02	--	1.2	1.2	5.4	.13
25...	--	--	--	--	--	--	--	--	2.6	--	--
SEP											
27...	9.0	674	649	.92	455	.92	--	1.6	2.5	11	.34
27...	--	--	--	--	--	--	--	--	1.2	--	--

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED OXYGEN (MG/L)	PER-CENT SATUR-ATION	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
23...	--	--	1430	696	13.0	162	--	--	--	465	24
NOV											
24...	--	--	1400	696	14.8	125	--	--	15	--	--
24...	1028	9740	1401	696	14.8	125	--	--	--	--	--
DEC											
22...	--	--	1200	535	16.0	131	--	--	--	60	50
22...	1028	9740	1201	535	16.0	131	--	--	--	--	--
JAN											
28...	--	--	0900	496	13.4	106	--	--	--	--	--
28...	1028	9740	0901	496	13.4	106	--	--	--	--	--
FEB											
25...	--	--	1830	504	12.2	122	--	--	--	233	17
25...	1028	9740	1831	504	12.2	122	--	--	--	--	--
MAR											
23...	--	--	1530	531	10.1	113	31	15	--	213	27
23...	1028	9740	1531	531	10.1	113	--	--	--	--	--
APR											
13...	--	--	1200	417	8.7	102	56	--	--	172	69
13...	1028	9740	1201	417	8.7	102	--	--	--	--	--
MAY											
13...	--	--	1500	5490	7.3	82	--	--	13	5611	51
13...	1028	9740	1501	5490	7.3	82	--	--	--	--	--
JUN											
30...	--	--	1300	478	7.3	97	--	--	--	101	48
30...	1028	9740	1301	478	7.3	97	--	--	--	--	--
JUL											
16...	--	--	1130	228	12.0	158	58	42	5.6	387	16
16...	1028	9740	1131	228	12.0	158	--	--	--	--	--
AUG											
25...	--	--	1000	67	8.6	104	822	71	--	26	53
25...	1028	9740	1001	67	8.6	104	--	--	--	--	--
SEP											
26...	--	--	1330	391	9.6	88	202	B1450	--	--	--
27...	--	--	1200	250	7.9	99	84	380	8.6	301	94
27...	1028	9740	1201	250	7.9	99	--	--	--	--	--

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
NOV										
24...	--	--	1400	696	5	1	4	20	20	0
24...	1028	9740	1401	696	--	--	--	--	--	--
DEC										
22...	1028	9740	1201	535	--	--	--	--	--	--
JAN										
28...	1028	9740	0901	496	--	--	--	--	--	--
FEB										
25...	--	--	1830	504	1	1	0	--	--	0
25...	1028	9740	1831	504	--	--	--	--	--	--
MAR										
23...	1028	9740	1531	531	--	--	--	--	--	--
APR										
13...	1028	9740	1201	417	--	--	--	--	--	--
MAY										
13...	--	--	1500	5490	38	37	1	1	0	1
13...	1028	9740	1501	5490	--	--	--	--	--	--
JUN										
30...	1028	9740	1301	478	--	--	--	--	--	--
JUL										
16...	--	--	1130	228	2	0	2	10	5	5
16...	1028	9740	1131	228	--	--	--	--	--	--
AUG										
25...	1028	9740	1001	67	--	--	--	--	--	--
SEP										
27...	--	--	1200	250	7	2	5	<10	<9	1
27...	1028	9740	1201	250	--	--	--	--	--	--

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CHROMIUM (CR) (UG/L)	SUSPENDED CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUSPENDED COBALT (CO) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUSPENDED COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
NOV										
24...	10	0	10	<50	<49	1	10	9	1	1600
24...	--	--	--	--	--	--	--	--	--	--
DEC										
22...	--	--	--	--	--	--	--	--	--	300
JAN										
28...	--	--	--	--	--	--	--	--	--	200
FEB										
25...	--	--	10	--	--	0	--	--	1	--
25...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	300
APR										
13...	--	--	--	--	--	--	--	--	--	500
MAY										
13...	20	20	0	16	16	0	45	35	10	39000
13...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	--	--	--	--	--	--	--	--	--	4000
JUL										
16...	0	0	0	<50	<50	0	20	18	2	560
16...	--	--	--	--	--	--	--	--	--	--
AUG										
25...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	10	10	0	50	50	0	10	8	2	2900
27...	--	--	--	--	--	--	--	--	--	1100

DATE	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUSPENDED LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	SUSPENDED MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUSPENDED MERCURY (HG) (UG/L)
NOV									
24...	40	<100	<98	2	120	100	20	.0	.0
24...	--	--	--	--	--	--	--	--	--
DEC									
22...	--	--	--	--	80	--	--	--	--
JAN									
28...	--	--	--	--	74	--	--	--	--
FEB									
25...	0	--	--	0	--	--	10	--	--
25...	--	--	--	--	--	--	--	--	--
MAR									
23...	--	--	--	--	120	--	--	--	--
APR									
13...	--	--	--	--	120	--	--	--	--
MAY									
13...	10	34	30	4	1400	1400	10	--	--
13...	--	--	--	--	--	--	--	--	--
JUN									
30...	--	--	--	--	710	--	--	--	--
JUL									
16...	10	100	76	24	90	80	10	.0	.0
16...	--	--	--	--	--	--	--	--	--
AUG									
25...	--	--	--	--	--	--	--	--	--
SEP									
27...	10	100	99	1	320	320	0	.1	.1
27...	--	--	--	--	290	--	--	--	--

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
NOV									
24...	.0	--	1	0	1	--	30	30	0
24...	--	13	--	--	--	3	--	--	--
DEC									
22...	--	--	--	--	--	--	--	--	--
JAN									
28...	--	--	--	--	--	--	--	--	--
FEB									
25...	.0	--	0	0	0	--	--	--	0
25...	--	6	--	--	--	3	--	--	--
MAR									
23...	--	--	--	--	--	--	--	--	--
APR									
13...	--	--	--	--	--	--	--	--	--
MAY									
13...	.0	--	0	0	0	--	90	90	0
13...	--	95	--	--	--	4	--	--	--
JUN									
30...	--	--	--	--	--	--	--	--	--
JUL									
16...	.0	--	1	0	1	--	30	30	0
16...	--	--	--	--	--	--	--	--	--
AUG									
25...	--	20	--	--	--	<10	--	--	--
SEP									
27...	.0	--	1	0	1	--	100	100	0
27...	--	--	--	--	--	--	--	--	--

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 23	1500	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Coelastraceae			
		Coelastrum	6,500	4	
		Occystaceae			
		Ankistrodesmus	11,000	7	
		Chodatella	810	1	
		Gleoactinium	1,600	1	
		Kirchneriella	400		
		Oocystis	3,200	2	
		Tetraedron	400		
		Scenedesmaceae			
		Scenedesmus	8,100	5	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	87,000	56	
		Pennales			
		Nitzschiaceae			
		Nitzschia	33,000	21	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Agmenellum			
		Anacystis	3,600	2	
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria			
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena			
		TOTAL	150,000		
Nov. 24	1400	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	280	2	
		Scenedesmaceae			
		Actinastrum		0	
		Scenedesmus	1,100	7	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	1,700	11	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	3,900	25	
		Melosira	550	4	
		Pennales			
		Naviculaceae			
		Navicula	280	2	
		Nitzschiaceae			
		Nitzschia	280	2	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	7,800	49	
		TOTAL	16,000		
Dec. 22	1200	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	230	3	
		Scenedesmaceae			
		Scenedesmus		0	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	460	6	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	6,000	79	
		Pennales			
		Nitzschiaceae			
		Nitzschia	920	12	

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Dec. 22	1200	CYANOPHYTA			Sediment sampler
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria		0	
		TOTAL	7,600		
Jan. 28	0900	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	350	8	
		Oocystis		0	
		Selenastrum	180	4	
		Scenedesmaceae			
		Scenedesmus	530	13	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	180	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	2,000	48	
		Melosira	88	2	
		Pennales			
		Gomphonemataceae			
		Gomphonema		0	
		Naviculaceae			
		Navicula	180	4	
		Nitzschiaceae			
		Nitzschia	440	10	
		Surirellaceae			
		Surirella	180	4	
		PYRRHOPHYTA			
		Dinophyceae			
		Gymnodiniales			
		Gymnodiniaceae			
		Gymnodinium	88	2	
		TOTAL	4,200		
Feb. 25	1830	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Micractiniaceae			
		Micractinium	16,000	22	
		Occystaceae			
		Ankistrodesmus	6,600	9	
		Dictyosphaerium	8,600	12	
		Kirchneriella	990	1	
		Oocystis		0	
		Scenedesmaceae			
		Actinastrum	8,022	11	
		Curcigenia		0	
		Scenedesmus	1,300	2	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	2,300	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	9,200	13	
		Pennales			
		Fragilariaceae			
		Synedra		0	
		Gomphonemataceae			
		Gomphonema		0	
		Naviculaceae			
		Navicula		0	
		Nitzschiaceae			
		Hantzschia		0	
		Nitzschia	8,600	12	
		Chrysophyceae			
		Chrysomonadales			
		Chromulinaceae			
		Chrysococcus	6,300	9	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	3,300	5	
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria		0	

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 25	1830	EUGLENOPHYTA			Sediment sampler
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena		0	
		TOTAL	72,000		
Mar. 23	1530	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus	8,000	31	
		Closteriopsis	600	2	
		Dictyosphaerium	660	3	
		Oocystis		0	
		Selenastrum		0	
		Westella	420	2	
		Scenedesmaceae			
		Actinastrum	1,300	5	
		Scenedesmus	1,800	7	
		Volvocales			
		Chlamydomonadaceae			
		Chlamydomonas	1,100	4	
		Zygenamatales			
		Desmidiaceae			
		Closterium		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	600	2	
		Pennales			
		Cymbellaceae			
		Cymbella		0	
		Fragilariaceae			
		Synedra		0	
		Nitzschiaceae			
		Nitzschia	6,500	25	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	3,700	14	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Euglena	830	3	
		Trachelomonas	240	1	
		TOTAL	26,000		
Apr. 13	1200	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Micractiniaceae			
		Micractinium	2,200	3	
		Occystaceae			
		Ankistrodesmus	12,000	15	
		Chodatella	720	1	
		Dictyosphaerium	2,900	4	
		Selenastrum	4,300	5	
		Scenedesmaceae			
		Actinastrum	16,000	20	
		Scenedesmus	17,000	21	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	6,800	9	
		Pennales			
		Naviculaceae			
		Navicula		0	
		Nitzschiaceae			
		Nitzschia	7,900	10	
		CYANOPHYTA			
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Anacystis	5,800	7	
		Oscillatoriales			
		Oscillatoriaceae			
		Oscillatoria	4,300	5	
		TOTAL	79,000		

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
June 30	1300	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Coelastraceae			
		Coelastrum	1,800	15	
		Occystaceae			
		Ankistrodesmus		0	
		Oocystis	450	4	
		Scenedesmaceae			
		Scenedesmus	2,700	23	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinosiscaceae			
		Cyclotella	3,200	27	
		Melosira	2,400	20	
		Pennales			
		Cymbellaceae			
		Amphora	110	1	
		Naviculaceae			
		Navicula	230	2	
		Nitzshicaceae			
		Nitzschia	790	7	
		Surirellaceae			
		Surirella	110	1	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Trachelomonas	110	1	
		TOTAL	12,000		
July 16	1130	CHLOROPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Coelastraceae			
		Coelastrum		0	
		Occystaceae			
		Ankistrodesmus		0	
		Franceia		0	
		Kirchneriella		0	
		Scenedesmaceae			
		Actinastrum	12,000	1	
		Volvocales			
		Volvocaceae			
		Gonium		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella	5,700	1	
		Melosira	6,800	1	
		Pennales			
		Nitzschiaceae			
		Nitzschia	41,000	4	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Nostocaceae			
		Anabaena	550,000	59	
		Anabaenopsis	6,800	1	
		Cylindrospermum	45,000	5	
		Oscillatoriaceae			
		Lyngbya	68,000	7	
		Oscillatoria	190,000	20	
		TOTAL	930,000		
Aug. 25	1000	CHLOTOPHYTA			Sediment sampler
		Chlorophyceae			
		Chlorococcales			
		Occystaceae			
		Ankistrodesmus		0	
		Kirchneriella		0	
		Oocystis		0	
		Westella		0	
		Scenedesmaceae			
		Scenedesmus		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Centrales			
		Coscinodiscaceae			
		Cyclotella		0	
		Pennales			
		Nitzschiaceae			
		Nitzschia	8,500	1	

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Aug. 25	1000	CYANOPHYTA			Sediment sampler
		Myxophyceae			
		Chroococcales			
		Chroococcaceae			
		Agmenellum	18,000	2	
		Anacystsi	48,000	4	
		Oscillatoriales			
		Nostocaceae			
		Anabaena	73,000	7	
		Anabaenopsis	13,000	1	
		Aphanizomenon	31,000	3	
		Cylindrospermum	150,000	14	
		Oscillatoriaceae			
		Oscillatoria	730,000	67	
		TOTAL	1,100,000		
Sept. 27	1200	CHRYSOPHYTA			Sediment sampler
		Bacillariophyceae			
		Pennales			
		Naviculaceae			
		Navicula		0	
		Nitzschiaceae			
		Nitzschia	3,300	1	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoriales			
		Nostocaceae			
		Aphanizomenon	300,000	93	
		Cylindrospermum	17,000	5	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglenales			
		Euglenaceae			
		Trachelomonas		0	
		TOTAL	320,000		

07331000 WASHITA RIVER NEAR DURWOOD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1520	1810	1630	1700	1540	1720	1040	1080	1180	1560	1280
2	1580	1520	1700	1670	1740	1480	1680	1100	1100	1280	1730	1220
3	1600	1520	1650	1580	1660	1450	1690	1170	959	1290	1570	1130
4	1620	1570	1670	1570	1730	1450	1660	1280	828	1250	1590	1090
5	1610	1590	1610	---	1750	1460	1630	1350	893	1470	1510	800
6	1630	1520	1650	---	1770	1580	1680	1400	994	1290	1480	1040
7	1620	1520	---	1730	1760	1750	1720	1450	954	1470	1460	1180
8	1610	1570	---	1760	1760	1290	1680	1580	1060	1360	1450	1270
9	1630	1650	1760	---	1740	907	1470	1520	1040	1400	1410	1320
10	1630	1700	1740	---	1760	997	1600	1550	1210	1390	1360	1260
11	1660	1820	1760	1620	1750	1080	1650	1400	1080	1420	1220	1580
12	1660	1710	1780	1650	1720	893	1680	1410	1070	1440	936	739
13	1640	1440	1750	1680	1800	1000	1690	538	1100	1520	1130	534
14	1670	1470	1730	1800	1770	1200	1680	697	---	1480	1320	796
15	1600	1400	1740	1750	1740	1300	1680	676	1110	1480	1450	1110
16	1600	1420	1720	1720	1720	1270	1640	950	1120	1490	1620	1060
17	1660	1520	---	1810	1700	1300	1340	979	1190	1540	1520	970
18	1670	1590	---	1730	1700	1480	1400	1160	1320	1120	1320	807
19	1510	---	1730	1770	1720	1520	881	873	1370	652	1320	1460
20	1520	1550	1780	1700	1740	1540	446	880	1170	734	1280	1140
21	1570	1500	---	1770	1720	1580	566	876	1360	776	1260	1100
22	1790	1540	---	1790	1750	1570	741	897	1330	872	1350	955
23	1750	1640	---	1780	1740	1640	805	910	1400	848	1470	878
24	1950	1660	1740	1700	1770	1650	879	912	1420	1150	1580	815
25	1440	1660	1630	---	1790	1640	956	1120	1440	1210	1600	808
26	1340	1700	1590	---	1850	1680	1070	981	1490	1320	1490	904
27	1400	1750	1620	1590	1890	---	1010	573	1720	1290	1520	989
28	1500	1770	1690	1700	1970	---	989	767	1230	1400	1480	1000
29	1490	1760	1720	1740	1570	1680	868	861	1160	1430	1420	1050
30	1460	1700	1660	1760	---	1600	918	859	1200	1440	1490	986
31	1470	---	1700	1740	---	1640	---	754	---	1530	1280	---
MONTH	1590	1600	---	1710	1750	1420	1310	1050	1190	1270	1430	1040
YEAR	MAX	1970	MIN	446	MEAN	1410						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	16.5	10.0	12.0	10.5	18.0	15.0	20.0	24.0	27.0	33.0	24.0
2	26.0	19.0	11.0	6.5	11.0	20.0	20.0	23.0	---	29.0	29.0	26.0
3	18.0	18.0	14.0	5.0	12.0	19.0	17.0	21.0	26.0	26.0	28.0	24.0
4	18.0	20.0	12.5	3.0	9.0	17.0	19.0	19.0	25.0	28.0	29.0	26.0
5	22.0	19.0	---	2.5	8.0	10.0	21.0	19.0	25.0	28.0	32.0	32.0
6	22.5	21.0	8.0	4.0	5.0	9.0	23.0	---	27.0	26.0	29.0	32.0
7	24.0	22.0	11.5	2.0	9.0	12.5	19.0	16.0	26.0	30.0	26.5	27.0
8	28.0	20.0	12.0	2.0	7.0	13.0	16.0	17.0	27.0	32.0	34.0	29.0
9	26.5	21.0	10.0	2.0	9.0	12.0	18.0	21.0	28.0	29.0	27.0	23.0
10	---	17.0	10.0	3.5	13.0	---	22.0	24.0	29.0	28.0	34.0	20.0
11	27.0	18.0	15.0	7.0	13.0	14.0	23.0	22.0	30.0	28.0	27.0	26.0
12	27.0	12.0	11.0	8.0	18.0	14.0	24.0	25.0	27.0	30.0	36.0	27.0
13	25.0	11.0	15.0	7.0	21.0	8.0	26.0	20.0	29.0	27.0	26.5	22.0
14	25.0	10.0	17.0	7.0	16.0	11.0	22.0	18.0	25.0	26.0	27.0	24.0
15	22.0	14.0	11.0	7.0	21.0	13.0	23.5	19.0	15.0	29.0	34.0	24.0
16	---	14.0	9.0	8.0	19.0	10.5	20.0	22.0	28.0	27.0	30.0	24.0
17	20.0	17.0	6.0	8.0	16.0	16.0	21.0	21.0	29.0	27.0	28.0	26.0
18	16.0	15.5	5.0	10.0	17.0	15.5	20.0	21.0	25.5	29.0	34.0	25.0
19	20.0	---	3.0	7.5	17.0	18.0	20.0	23.0	27.0	27.0	28.0	25.0
20	21.5	11.0	6.0	7.0	18.0	18.0	19.0	24.0	29.0	31.0	29.0	24.0
21	17.0	9.0	---	7.0	12.0	19.0	17.0	22.0	28.0	32.0	32.0	23.0
22	22.0	8.0	9.0	8.0	13.0	17.0	20.0	22.5	28.0	33.0	27.0	24.0
23	23.0	9.0	11.0	11.0	13.0	19.0	---	24.0	25.0	29.0	26.0	25.0
24	20.0	7.0	6.0	10.0	10.0	15.0	20.0	23.0	29.5	29.0	31.0	---
25	13.5	6.0	5.0	10.0	15.0	18.0	22.0	21.0	30.0	33.0	25.0	---
26	15.0	5.5	5.0	7.0	17.0	22.0	21.0	23.0	26.0	34.0	27.0	29.0
27	15.0	5.0	7.0	7.0	14.0	17.0	27.0	19.0	30.0	34.0	27.0	23.5
28	19.0	7.0	7.5	9.0	---	17.0	18.0	18.0	31.0	31.0	26.0	20.0
29	18.0	12.0	6.0	10.0	19.0	19.0	17.0	26.0	32.0	26.0	28.0	25.0
30	17.0	11.0	6.0	11.0	---	17.0	17.0	27.0	30.0	34.0	26.0	22.0
31	20.0	---	9.0	9.0	---	14.0	---	24.0	---	28.0	24.0	---
MONTH	21.0	13.5	9.5	7.0	13.5	15.5	20.5	21.5	27.5	29.5	29.0	25.0
YEAR	MAX	36.0	MIN	2.0	MEAN	19.5						

07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE 1/4 sec.33, T.8 S., R.7 E., Bryan County, Okla., in control tower of Denison Dam on Red River, 1.2 miles (1.9 km) upstream from Shawnee Creek, 1.8 miles (2.9 km) upstream from Sand Creek, 4.0 miles (6.4 km) northwest of Denison, and at mile 725.9 (1,168.0 km).
DRAINAGE AREA.--39,719 mi^2 (102,872 km^2), of which 5,936 mi^2 (15,374 km^2) is probably noncontributing.
PERIOD OF RECORD.--July 1942 to current year. Month-end contents only for some periods, published in WSP 1311.
REVISED RECORDS.--WSP 1211: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Mar. 30, 1944, nonrecording gage at same site and datum. Prior to Oct. 1, 1948, auxiliary nonrecording gage in Cumberland pool at same datum.
REMARKS.--Reservoir is formed by a rolled-fill earth dam. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power-pool was first filled Mar. 15, 1945. Capacity, based on 1962 survey, 5,392,900 acre-ft (6.65 km^3) at elevation 640.0 ft (195.07 m), crest of spillway, 2,733,300 acre-ft (3.37 km^3) at elevation 617.0 ft (188.06 m), maximum power pool, 1,049,200 acre-ft (1.29 km^3) at elevation 590.0 ft (179.83 m), minimum power pool, in Denison pool. Dead storage, 11,000 acre-ft (13.6 hm^3) at elevation 610.0 ft (185.93 m) in Cumberland pool. When contents are below 2,167,900 acre-ft (2.67 km^3), 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 the Denison pool. Figures given herein represent total contents of both pools. Reservoir is used principally for flood control and power development. Revised capacity table, based on survey in 1962, used since Oct. 1, 1963.
COOOPRATION.--Records furnished by Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,991,300 acre-ft (7.39 km^3) 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 km^3) Sept. 16, 1964; minimum elevation, 599.96 ft (182.868 m) Mar. 1, 2, 1957.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,797,000 acre-ft (3.45 km^3) June 1, elevation, 617.72 ft (188.281 m); minimum, 2,338,000 acre-ft (2.88 km^3) Feb. 25, elevation, 612.24 ft (186.611 m).

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

612	2,319,000	615	2,562,000
613	2,398,000	616	2,646,000
614	2,479,000	618	2,822,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2656000	2549000	2495000	2462000	2395000	2342000	2419000	2746000	2794000	2747000	2663000	2495000
2	2652000	2556000	2491000	2454000	2390000	2341000	2420000	2749000	2785000	2745000	2658000	2492000
3	2649000	2555000	2487000	2453000	2387000	2343000	2426000	2750000	2776000	2758000	2656000	2486000
4	2650000	2555000	2487000	2451000	2387000	2346000	2428000	2748000	2768000	2760000	2653000	2479000
5	2651000	2555000	2494000	2446000	2387000	2346000	2427000	2762000	2766000	2762000	2646000	2479000
6	2649000	2555000	2490000	2440000	2379000	2343000	2424000	2767000	2762000	2762000	2646000	2478000
7	2645000	2551000	2491000	2430000	2378000	2348000	2422000	2764000	2758000	2757000	2639000	2474000
8	2639000	2553000	2491000	2410000	2378000	2354000	2422000	2762000	2754000	2754000	2638000	2473000
9	2635000	2560000	2488000	2398000	2376000	2349000	2420000	2755000	2744000	2753000	2628000	2472000
10	2631000	2559000	2485000	2404000	2376000	2353000	2419000	2746000	2738000	2753000	2621000	2467000
11	2631000	2563000	2485000	2406000	2376000	2362000	2418000	2738000	2736000	2760000	2615000	2461000
12	2632000	2567000	2479000	2400000	2374000	2372000	2414000	2740000	2734000	2757000	2609000	2456000
13	2627000	2564000	2479000	2404000	2372000	2376000	2412000	2746000	2733000	2754000	2599000	2450000
14	2624000	2560000	2479000	2403000	2372000	2382000	2408000	2747000	2727000	2748000	2593000	2440000
15	2627000	2555000	2477000	2404000	2376000	2392000	2411000	2749000	2730000	2747000	2589000	2434000
16	2623000	2557000	2471000	2404000	2378000	2386000	2411000	2754000	2723000	2749000	2583000	2445000
17	2618000	2553000	2467000	2406000	2372000	2388000	2419000	2752000	2717000	2749000	2579000	2464000
18	2618000	2548000	2454000	2406000	2364000	2391000	2426000	2747000	2770000	2754000	2572000	2483000
19	2618000	2551000	2450000	2411000	2361000	2392000	2468000	2742000	2773000	2750000	2562000	2502000
20	2610000	2549000	2448000	2410000	2366000	2394000	2548000	2737000	2777000	2746000	2553000	2509000
21	2604000	2536000	2442000	2408000	2363000	2395000	2593000	2731000	2776000	2740000	2549000	2512000
22	2596000	2522000	2438000	2406000	2357000	2400000	2631000	2725000	2776000	2733000	2547000	2520000
23	2588000	2521000	2433000	2407000	2349000	2402000	2663000	2732000	2775000	2723000	2542000	2531000
24	2587000	2515000	2439000	2410000	2339000	2406000	2690000	2732000	2775000	2718000	2533000	2536000
25	2576000	2514000	2446000	2415000	2340000	2408000	2701000	2731000	2769000	2710000	2525000	2538000
26	2572000	2500000	2441000	2403000	2340000	2412000	2713000	2747000	2763000	2705000	2514000	2537000
27	2562000	2500000	2444000	2396000	2340000	2412000	2718000	2752000	2757000	2696000	2508000	2536000
28	2563000	2492000	2452000	2396000	2340000	2413000	2733000	2753000	2750000	2689000	2503000	2532000
29	2563000	2507000	2450000	2394000	2342000	2415000	2739000	2755000	2745000	2684000	2499000	2528000
30	2562000	2506000	2450000	2394000	---	2418000	2751000	2775000	2743000	2678000	2498000	2523000
31	2552000	---	2452000	2395000	---	2420000	---	2789000	---	2672000	2493000	---
MAX	2656000	2567000	2495000	2462000	2395000	2420000	2751000	2789000	2794000	2762000	2663000	2538000
MIN	2552000	2492000	2433000	2394000	2339000	2341000	2408000	2725000	2717000	2672000	2493000	2434000
†	614.89	614.34	613.68	612.97	612.29	613.28	617.20	617.63	617.11	616.30	614.18	614.54
‡	-111,000	-46,000	-54,000	-57,000	-53,000	+78,000	+331,000	+38,000	-46,000	-71,000	-179,000	+30,000

CAL YR 1975 MAX 3,104,000 MIN 2,433,000 ‡ -306,000
WTR YR 1976 MAX 2,794,000 MIN 2,339,000 ‡ -140,000

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-ft.

07331600 RED RIVER AT DENISON DAM, NEAR DENISON, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, on right bank 1,800 ft (548.6 m) downstream from Denison Dam powerhouse, 0.4 mile (0.6 km) upstream from Shawnee Creek (spillway flow return), 4.5 miles (7.2 km) north of Denison, and at mile 725.5 (1,167.3 km).

DRAINAGE AREA.--39,720 mi^2 (102,875 km^2), of which 5,936 mi^2 (15,374 km^2) is probably noncontributing. At site used prior to October 1961, drainage area 39,777 mi^2 (103,022 km^2), of which 5,936 mi^2 (15,374 km^2) 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) above mean sea level. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder at county road bridge 2.5 miles (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 good. Flow completely 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 (water years 1924-43), 5,684 ft^3/s (161.0 m^3/s), 4,118,000 acre-ft/yr (5.08 km^3/yr); (since regulation by Denison Dam) 32 years, (water years 1945-66), 4,397 ft^3/s (124.5 m^3/s), 3,186,000 acre-ft/yr (3.93 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft^3/s (5,690 m^3/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 ft^3/s (0.340 m^3/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 National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,300 ft^3/s (320 m^3/s) June 1, gage height, 8.91 ft (2.716 m); minimum daily, 56 ft^3/s (1.59 m^3/s) Mar. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	2840	6380	107	117	985	64	5450	11000	1930	2970	1730
2	1970	183	3930	4600	3540	1540	62	3660	10900	2420	2390	2310
3	1960	2680	2470	1100	1640	669	63	4990	10900	167	134	3040
4	150	101	1730	900	1610	126	65	4970	10900	87	904	4120
5	101	299	1670	3700	1620	82	973	3310	9330	90	3430	1630
6	2090	93	126	3780	4040	1510	2390	5210	9070	1590	2390	1920
7	2290	3520	121	7030	839	159	1460	3950	5510	2910	2860	2240
8	2930	136	2190	8510	130	3440	1530	4560	5380	2160	335	2330
9	3450	196	868	5290	1640	2760	1500	4370	7460	2160	4640	1910
10	3450	2900	1430	188	2010	1230	1480	7020	5260	156	3900	1870
11	176	373	2150	109	1190	108	1470	6330	2820	83	2690	1930
12	93	312	3090	2830	1630	100	2330	4330	2960	2090	2560	1350
13	2430	1220	192	521	2170	445	1380	3050	1870	2160	4920	4590
14	2650	3000	698	1010	122	122	1540	4460	2870	2160	3230	4220
15	2550	2140	3940	1070	107	102	1520	4480	2480	2170	1740	3680
16	2490	177	3130	1050	1010	2410	1510	4510	3650	1460	2480	4540
17	2670	2980	3720	124	6060	98	1460	5130	4960	280	2820	5120
18	161	3340	4730	124	3100	84	1530	5210	3800	702	3040	4270
19	93	3080	2950	793	2180	74	1600	5240	1660	3980	3850	312
20	4070	3010	2020	1520	2270	66	2290	5760	147	2210	2710	2090
21	4340	5580	2770	1590	1110	823	1720	5290	2480	3550	1670	2520
22	4660	5160	3340	1580	971	137	1460	4760	2770	3800	197	1930
23	5160	927	2960	1040	3930	72	1500	4770	3360	5240	2740	2020
24	4840	2890	2770	114	4370	56	2420	3270	2960	3800	3110	3230
25	3130	3290	150	115	1040	60	1510	2950	4960	3360	4500	3130
26	2520	4200	2630	4590	1380	59	1470	2940	4830	2580	4790	3950
27	4720	241	250	3330	593	59	1500	3330	4370	3310	4080	2550
28	1860	4130	150	1840	533	601	1520	5000	4760	2600	3160	2410
29	804	1370	1810	1920	140	917	1760	5100	4010	2450	2210	2940
30	1120	793	285	1300	---	66	176	5100	4610	2760	207	2920
31	3700	---	108	459	---	72	---	8640	---	3170	2020	---
TOTAL	74798	61161	64758	62234	51092	19032	41253	147140	152037	67585	82677	82802
MEAN	2413	2039	2089	2008	1762	614	1375	4746	5068	2180	2667	2760
MAX	5160	5580	6380	8510	6060	3440	2420	8640	11000	5240	4920	5120
MIN	93	93	108	107	107	56	62	2940	147	83	134	312
AC-FT	148400	121300	128400	123400	101300	37750	81830	291900	301600	134100	164000	164200

CAL YR 1975 TOTAL 2901380 MEAN 7949 MAX 55100 MIN 91 AC-FT 5755000
WTR YR 1976 TOTAL 906569 MEAN 2477 MAX 11000 MIN 56 AC-FT 1798000

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-63, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to September 1963.
WATER TEMPERATURE: May 1944 to September 1963.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
20...	1028	9740	1445	3010	925	8.2	15.5	5	--	--	27	310
DEC												
18...	1028	9740	1030	4730	1350	8.0	11.0	5	10.9	102	32	340
JAN												
28...	1028	9740	0930	1840	1650	8.1	5.0	2	14.0	116	24	360
FEB												
10...	1028	9740	1800	2010	1100	--	10.5	1	10.1	94	8	320
MAR												
09...	1028	9740	1730	2760	1500	8.4	12.5	1	9.3	89	9	370
APR												
07...	1028	9740	1000	1460	1350	--	16.0	1	15.2	160	16	370
MAY												
11...	1028	9740	1345	6330	1600	8.3	20.0	2	9.6	105	12	360
JUN												
09...	1028	9740	1100	7460	1650	--	20.0	2	--	--	27	400
JUL												
07...	1028	9740	1430	2910	--	--	22.0	2	4.3	51	42	390
AUG												
05...	1028	9740	0900	3430	1600	7.2	21.0	2	3.0	35	18	368
SEP												
16...	1028	9740	1030	4540	1750	6.2	22.0	1	5.3	63	16	430

07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
20...	--	200	25	140	6.6	230	.3	715	.80	.05	--
DEC											
18...	91	240	26	150	6.9	290	.2	797	.60	.04	--
JAN											
28...	94	290	24	160	7.1	280	.3	844	.70	.01	--
FEB											
10...	110	230	25	150	7.8	290	.3	804	1.3	<.10	1
MAR											
09...	110	230	30	140	7.2	270	.4	990	.70	<.14	--
APR											
07...	95	240	30	180	6.3	290	.3	993	.50	<.08	--
MAY											
11...	110	240	35	190	6.7	300	.4	1030	1.1	.17	<1
JUN											
09...	100	270	33	200	6.5	300	.4	1060	.90	<.08	--
JUL											
07...	100	260	33	190	6.3	340	.3	1070	1.6	<.09	--
AUG											
05...	114	241	34	205	6.8	304	.1	1040	1.1	.13	4
SEP											
16...	110	320	35	200	6.3	310	.4	1090	1.6	.20	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
20...	<10	7	--	700	20	33	--	<10	--	<10	--
DEC											
18...	--	--	--	<100	--	40	--	--	--	--	--
JAN											
28...	--	--	--	100	--	41	--	--	--	--	--
FEB											
10...	<10	4	<10	<100	10	30	--	10	--	<10	8
MAR											
09...	--	--	--	<100	--	20	--	--	--	--	--
APR											
07...	--	--	--	<100	--	32	--	--	--	--	--
MAY											
11...	<10	4	10	100	20	25	.5	10	2	10	10
JUN											
09...	--	--	--	200	--	<1	--	--	--	--	--
JUL											
07...	--	--	--	100	--	250	--	--	--	--	--
AUG											
05...	2	11	4	100	17	750	<.5	9	<3	3	5
SEP											
16...	--	--	--	200	--	580	--	--	--	--	--

07332400 BLUE RIVER AT MILBURN, OK
(Formerly published as Blue Creek near Milburn)

LOCATION.--Lat 34°15'04", long 96°33'05", in SW 1/4 SW 1/4 sec.35, T.3 S., R.7 E., Johnston County, on downstream side of left bank pier of bridge on State Highway 48A, 0.5 mi (0.8 km) north of Milburn, and at mile 84.9 (136.6 km).

DRAINAGE AREA.--203 mi^2 (526 km^2).

PERIOD OF RECORD.--Occasional low flow measuremenst made in water years 1956-61. October 1965 to current year. Prior to October 1975 published as Blue Creek near Milburn.

GAGE.--Water-stage recorder. Datum of gage is 649.65 ft (198.013 m), from Oklahoma State Highway Department.

REMARKS.--Records good.

AVERAGE DISCHARGE.--11 years, 154 ft^3/s (4.361 m^3/s), 10.30 in/yr (262 mm/yr), 111,600 acre-ft/yr (138 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft^3/s (994 m^3/s) Oct. 8, 1970, gage height, 27.87 ft (8.495 m); minimum, 20 ft^3/s (0.57 m^3/s) Mar. 15-19, Apr. 5-7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,500 ft^3/s (637 m^3/s) at 0145 Apr. 20, gage height, 26.40 ft (8.047 m), no other peak above base of 2,200 ft^3/s (62.3 m^3/s); minimum, 30 ft^3/s (0.85 m^3/s) Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	46	68	63	48	53	86	122	84	86	40	37
2	44	55	55	60	48	53	82	113	75	72	39	42
3	43	52	52	57	48	52	106	106	73	54	39	37
4	43	48	51	55	49	52	128	102	72	50	39	34
5	42	53	90	55	48	51	91	149	70	48	39	33
6	42	52	113	55	47	49	84	232	69	46	45	33
7	42	48	61	54	47	53	80	125	68	45	40	33
8	42	47	57	55	47	443	78	109	67	44	38	32
9	41	47	54	53	48	275	75	101	66	44	38	32
10	41	45	52	52	49	157	72	98	65	43	38	32
11	41	44	52	54	48	107	71	95	64	44	37	32
12	41	44	51	53	48	234	72	127	64	44	37	32
13	40	42	51	53	48	116	75	206	63	43	36	33
14	41	43	51	52	47	96	72	138	62	43	35	33
15	48	44	49	51	48	90	70	106	61	43	35	32
16	47	44	48	52	47	86	73	98	60	44	34	33
17	42	45	47	51	48	81	183	88	58	42	34	37
18	43	44	46	52	46	79	444	83	60	44	33	35
19	45	46	47	53	45	78	1290	81	61	47	33	35
20	46	49	47	52	48	77	7170	79	56	42	33	35
21	47	45	47	51	61	73	401	78	55	41	33	33
22	48	44	47	51	54	72	232	77	55	41	33	32
23	48	43	48	51	53	71	169	111	55	42	33	32
24	52	43	51	52	53	71	161	88	62	43	33	32
25	52	43	70	51	52	74	138	77	61	43	33	32
26	47	43	82	49	52	74	130	88	59	43	34	32
27	48	43	89	48	52	70	126	230	54	43	34	32
28	48	43	91	49	52	72	194	124	53	43	35	31
29	47	124	83	49	52	462	213	89	52	42	35	32
30	47	149	71	49	---	134	132	79	166	42	38	32
31	46	---	66	49	---	94	---	89	---	41	37	---
TOTAL	1390	1558	1887	1631	1433	3549	12298	3488	1990	1432	1120	1002
MEAN	44.8	51.9	60.9	52.6	49.4	114	410	113	66.3	46.2	36.1	33.4
MAX	52	149	113	63	61	462	7170	232	166	86	45	42
MIN	40	42	46	48	45	49	70	77	52	41	33	31
CFSM	.22	.26	.30	.26	.24	.56	2.02	.56	.33	.23	.18	.16
IN.	.25	.29	.35	.30	.26	.65	2.25	.64	.36	.26	.21	.18
AC-FT	2760	3090	3740	3240	2840	7040	24390	6920	3950	2840	2220	1990

CAL YR 1975	TOTAL	61430	MEAN 168	MAX 1850	MIN 40	CFSM .83	IN 11.26	AC-FT 121800
WTR YR 1976	TOTAL	32778	MEAN 89.6	MAX 7170	MIN 31	CFSM .44	IN 6.01	AC-FT 65020

07332500 BLUE RIVER NEAR BLUE, OK

LOCATION.--Lat 33°59'49", long 96°14'27", on line between secs. 27 and 34, T.6 S., R.10 E., Bryan County, near left bank on downstream side of pier of bridge on U.S. Highway 70, 1.0 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 (62.4 km).

DRAINAGE AREA.--476 mi^2 (1,233 km^2).

WATER-DISCHARGE RECORDS

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) above mean sea level. 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 good. 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 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--40 years, 304 ft^3/s (8.609 m^3/s), 8.67 in/yr (220 mm/yr), 220,200 acre-ft/yr (272 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,400 ft^3/s (974 m^3/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, 15,700 ft^3/s (445 m^3/s) at 0100 Apr. 21, gage height, 30.09 ft (9.171 m), no other peak above base of 4,000 ft^3/s (113 m^3/s); minimum, 24 ft^3/s (0.68 m^3/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	50	480	91	56	57	129	252	1510	442	40	55
2	57	54	156	84	58	51	106	211	625	404	41	48
3	57	98	98	81	62	52	99	178	194	130	39	45
4	58	80	85	80	62	50	202	149	137	103	36	49
5	54	60	82	76	57	50	242	262	114	83	35	43
6	49	55	83	72	57	48	123	2230	100	76	26	38
7	47	67	174	73	60	53	100	1140	93	70	28	36
8	47	64	102	71	60	258	91	361	90	66	39	34
9	46	56	82	66	60	1170	82	232	86	63	33	35
10	47	53	76	75	57	537	79	187	79	64	30	35
11	46	51	72	83	58	281	72	162	72	59	28	34
12	51	47	72	76	57	302	71	149	67	64	31	33
13	51	42	77	70	58	326	67	596	63	57	32	34
14	52	50	74	71	61	206	72	521	60	54	31	34
15	55	51	72	66	57	145	70	320	58	53	31	35
16	63	45	71	65	59	124	72	237	76	54	31	32
17	66	47	69	64	64	115	74	182	74	56	30	29
18	55	51	66	67	88	107	1570	136	763	56	30	36
19	50	54	64	66	70	105	1680	116	379	55	30	52
20	48	62	63	64	58	100	8380	108	119	60	31	32
21	48	60	64	61	85	100	11700	101	89	54	30	33
22	49	59	64	61	117	94	2750	97	76	47	30	31
23	49	58	65	61	84	89	529	110	73	46	31	28
24	49	54	68	64	62	89	417	328	70	46	31	27
25	54	54	87	68	56	92	357	191	72	45	31	26
26	54	54	208	66	55	91	278	120	82	45	32	26
27	55	54	247	60	53	87	229	494	72	44	32	27
28	52	56	214	58	53	86	212	526	64	44	40	27
29	51	64	168	61	57	87	446	250	59	41	38	26
30	51	625	135	58	---	871	437	149	60	39	36	28
31	51	---	108	57	---	258	---	1900	---	40	49	---
TOTAL	1620	2275	3546	2136	1841	6081	30736	11995	5476	2560	1032	1048
MEAN	52.3	75.8	114	68.9	63.5	196	1025	387	183	82.6	33.3	34.9
MAX	66	625	480	91	117	1170	11700	2230	1510	442	49	55
MIN	46	42	63	57	53	48	67	97	58	39	26	26
CFSM	.11	.16	.24	.14	.13	.41	2.15	.81	.38	.17	.07	.07
IN.	.13	.18	.28	.17	.14	.48	2.40	.94	.43	.20	.08	.08
AC-FT	3210	4510	7030	4240	3650	12060	60960	23790	10860	5080	2050	2080

CAL YR 1975 TOTAL 136902 MEAN 375 MAX 5390 MIN 42 CFSM .79 IN 10.70 AC-FT 271500
WTR YR 1976 TOTAL 70346 MEAN 192 MAX 11700 MIN 26 CFSM .40 IN 5.50 AC-FT 139500

07332500 BLUE RIVER NEAR BLUE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-58, 1960-63, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1959 to September 1963.
WATER TEMPERATURE: November 1959 to September 1963.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
20...	1028	9740	1235	62	420	8.1	12.5	8	--	--	<4	268
DEC												
17...	1028	9740	0900	69	460	8.4	5.0	25	11.6	94	8	253
JAN												
28...	1028	9740	1115	58	560	8.1	3.5	2	14.6	116	12	288
FEB												
10...	1028	9740	1705	57	425	--	13.5	2	13.6	136	<4	246
MAR												
09...	1028	9740	1645	1170	--	8.9	13.5	45	9.2	92	51	222
APR												
07...	1028	9740	0845	100	325	--	16.0	32	12.0	126	28	159
MAY												
11...	1028	9740	1600	162	500	8.2	21.0	29	7.4	86	12	244
JUN												
09...	1028	9740	1200	86	540	--	25.0	6	--	--	4	280
JUL												
07...	1028	9740	1530	70	--	--	27.5	16	7.9	102	7	237
AUG												
05...	1028	9740	1015	35	570	8.1	25.0	98	6.7	85	13	239
SEP												
15...	1028	9740	1630	35	490	8.1	25.0	12	8.3	104	8	310

07332500 BLUE RIVER NEAR BLUE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
20...	71	134	33	9.0	2.0	11	.2	312	1.2	.31	--
DEC											
17...	62	160	23	10	2.4	18	.2	244	.80	.27	--
JAN											
28...	62	154	28	7.0	1.7	16	.2	368	1.2	1.0	--
FEB											
10...	79	147	33	10	1.4	14	.2	243	1.1	.20	<1
MAR											
09...	70	111	.5	7.0	3.3	19	.2	--	2.3	<.14	--
APR											
07...	39	100	15	12	2.3	39	.1	274	.50	.21	--
MAY											
11...	81	162	16	11	2.1	19	.2	287	1.1	.11	2
JUN											
09...	74	177	20	11	2.2	12	.3	321	.80	.13	--
JUL											
07...	50	140	24	7.0	2.1	16	.2	272	1.4	.09	--
AUG											
05...	60	122	32	8.0	1.9	11	.1	287	1.6	.24	3
SEP											
15...	52	289	33	9.0	2.2	25	.3	321	1.0	.69	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
20...	<1	5	4	700	8	68	--	5	--	1	6
DEC											
17...	--	--	--	200	--	75	--	--	--	--	--
JAN											
28...	--	--	--	300	--	79	--	--	--	--	--
FEB											
10...	<1	2	2	200	6	81	--	4	--	<1	24
MAR											
09...	--	--	--	8200	--	1510	--	--	--	--	--
APR											
07...	--	--	--	600	--	140	--	--	--	--	--
MAY											
11...	4	7	5	400	17	130	<.5	5	<2	4	10
JUN											
09...	--	--	--	<100	--	<1	--	--	--	--	--
JUL											
07...	--	--	--	500	--	97	--	--	--	--	--
AUG											
05...	1	13	3	<100	14	95	<.5	4	<3	1	8
SEP											
15...	--	--	--	300	--	57	--	--	--	--	--

07333910 McGEE CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°18'54", long 95°52'30", NW 1/4 NE 1/4 sec.7, T.3 S., R.14 E., Atoka County, Hydrologic Unit 11140103, 3.7 mi (6.0 km) northwest of Farris and at mile 3.6 (5.8 km).

PERIOD OF RECORD.--March to September 1976.

COOPERATION.--Samples were collected by the U.S. Geological Survey and analyses were furnished by the Oklahoma Water Resources Board.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	TURBIDITY (JTU) (00070)	DISSOLVED OXYGEN (MG/L) (00300)	PERCENT SATURATION (00301)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	HARDNESS (CA,MG) (MG/L) (00900)	NONCARBONATE HARDNESS (MG/L) (00902)	TOTAL CALCIUM (CA) (MG/L) (00916)
MAR											
02...	0930	82	7.1	9.0	--	10.5	93	--	23	--	4.6
15...	1213	94	7.6	14.0	--	--	--	--	23	--	47
JUN											
02...	1500	62	6.3	26.0	--	7.6	--	--	16	8	--
JUL											
07...	1930	86	7.8	28.0	24	7.6	100	--	35	--	5.6
26...	1500	116	8.3	33.0	17	9.4	130	13	44	--	6.2
AUG											
04...	1630	109	6.9	30.0	17	--	--	--	50	--	6.7
SEP											
07...	1515	130	7.0	27.0	--	8.2	105	--	--	--	7.4
17...	1415	130	7.7	32.0	--	8.1	109	--	29	--	7.0

DATE	DISSOLVED CALCIUM (CA) (MG/L) (00915)	TOTAL MAGNESIUM (MG) (MG/L) (00927)	DISSOLVED MAGNESIUM (MG) (MG/L) (00925)	TOTAL SODIUM (NA) (MG/L) (00929)	DISSOLVED SODIUM (NA) (MG/L) (00930)	PERCENT SODIUM (00932)	SODIUM ADSORPTION RATIO (00931)	TOTAL POTASSIUM (K) (MG/L) (00937)	DISSOLVED POTASSIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)
MAR										
02...	4.6	2.8	2.7	12	12	51	1.1	1.9	1.9	--
15...	4.9	2.8	2.7	13	13	53	1.2	16	1.5	--
JUN										
02...	3.7	--	1.6	--	6.3	43	.7	--	1.9	10
JUL										
07...	--	2.9	--	7.0	--	--	--	2.7	--	--
26...	--	2.9	--	8.0	--	--	--	2.0	--	--
AUG										
04...	--	3.3	--	6.0	--	--	--	2.0	--	--
SEP										
07...	--	3.7	--	9.0	--	--	--	1.6	--	--
17...	6.5	3.3	3.2	--	9.0	38	.7	2.2	1.9	--

DATE	CARBONATE (CO3) (MG/L) (00445)	ALKALINITY AS CACO3 (MG/L) (00410)	CARBON DIOXIDE (CO2) (MG/L) (00405)	DISSOLVED SULFATE (SO4) (MG/L) (00945)	DISSOLVED CHLORIDE (CL) (MG/L) (00940)	DISSOLVED FLUORIDE (F) (MG/L) (00950)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DISSOLVED SOLIDS (TONS PER AC-FT) (70303)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	TOTAL PHOSPHORUS (P) (MG/L) (00665)
MAR										
02...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	0	8	8.0	--	--	--	--	--	.02	.06
JUL										
07...	--	23	--	5.0	16	--	--	.01	--	--
26...	--	--	--	--	17	.1	71	.10	--	.09
AUG										
04...	--	23	--	5.0	15	--	--	--	--	--
SEP										
07...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--

07333910 McGEE CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED ALUM-INUM (AL) (UG/L) (01106)	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL CAD-MIUM (CD) (UG/L) (01027)	DIS-SOLVED CAD-MIUM (CD) (UG/L) (01025)	TOTAL CHRO-MIUM (CR) (UG/L) (01034)	DIS-SOLVED CHRO-MIUM (CR) (UG/L) (01030)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	DIS-SOLVED IRON (FE) (UG/L) (01046)	TOTAL LEAD (PB) (UG/L) (01051)
MAR										
02...	--	<1	<1	<1	17	12	8	8	320	3
15...	--	2	<1	<1	11	8	2	2	220	2
JUN										
02...	220	--	--	7	--	0	--	5	230	--
JUL										
07...	--	1	2	--	15	--	6	--	--	8
26...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	--	2	<1	--	12	--	1	--	--	--
SEP										
07...	--	2	<1	--	19	--	4	--	--	--
17...	--	3	3	2	11	9	6	7	220	14

DATE	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MAN-GANESE (MN) (UG/L) (01055)	DIS-SOLVED MAN-GANESE (MN) (UG/L) (01056)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL NICKEL (NI) (UG/L) (01067)	DIS-SOLVED NICKEL (NI) (UG/L) (01065)	TOTAL SELE-NIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)
MAR										
02...	1	40	20	<.5	9	5	--	--	2	18
15...	<1	50	10	3.1	3	3	<3	2	2	22
JUN										
02...	29	--	20	--	--	4	--	--	--	10
JUL										
07...	--	78	--	.0	8	--	<2	<1	23	--
26...	--	49	--	--	--	--	--	--	--	--
AUG										
04...	--	52	--	.0	7	--	<2	<1	11	--
SEP										
07...	--	67	--	<.5	5	--	<2	<1	12	--
17...	9	390	30	.5	100	4	--	--	21	12

07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°16'17", long 95°54'43", in NE 1/4 NW 1/4 sec.26, T.3 S., R.13 E., Atoka County, 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 mi^2 (2,815 km^2).

WATER-DISCHARGE RECORDS

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) above mean sea level. 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 good. Some regulation since June 1959 by Atoka Reservoir, capacity, 125,000 acre-ft (154 hm^2), on North Boggy Creek, drainage area, 176 mi^2 (456 km^2); pipeline diversions to Oklahoma City since November 1963, normal capacity, 60 mgd (227,100 m^3/d).

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

AVERAGE DISCHARGE.--39 years, 915 ft^3/s (25.91 m^3/s), 662,900 acre-ft/yr (817 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,900 ft^3/s (1,750 m^3/s) June 17, 1945, gage height, 44.94 ft (13.698 m), datum then in use, from rating curve extended above 37,000 ft^3/s (1,050 m^3/s); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,000 ft^3/s (906 m^3/s) at 0900 Apr. 20, gage height, 42.99 ft (13.103 m), no other peak above base of 10,000 ft^3/s (283 m^3/s); minimum, 1.2 ft^3/s (0.034 m^3/s) Aug. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	2880	289	25	45	452	824	739	431	7.1	44
2	16	48	1220	211	24	39	272	489	556	884	6.1	34
3	14	347	410	170	23	35	205	341	341	770	5.4	37
4	13	198	236	143	23	32	219	253	227	431	4.6	27
5	11	140	163	116	23	27	321	303	162	163	4.2	19
6	10	269	199	96	22	27	201	3740	126	100	4.1	15
7	9.8	285	1560	90	22	27	150	3320	147	68	3.8	12
8	9.2	276	656	69	22	4050	121	1580	110	50	3.5	9.1
9	8.4	193	276	60	22	8320	101	793	92	40	3.3	7.0
10	7.8	115	180	55	21	5330	83	493	74	35	3.2	5.6
11	7.5	73	127	53	21	2370	68	416	60	32	3.0	4.9
12	6.7	52	98	51	21	1260	57	560	50	31	2.9	4.8
13	5.9	41	80	49	21	2220	58	4460	45	31	3.1	4.9
14	5.2	33	68	45	21	1530	93	5110	40	27	3.5	4.8
15	5.7	29	61	44	22	658	103	5800	36	24	3.8	4.1
16	6.5	26	54	45	23	490	88	4890	42	22	4.1	4.0
17	7.4	25	50	45	28	366	92	2350	45	20	3.6	3.6
18	9.4	23	47	41	39	276	5500	1240	429	18	3.0	2.8
19	9.4	21	44	38	42	223	7620	731	481	48	2.0	4.3
20	8.7	24	40	37	46	192	25900	476	285	56	1.2	4.6
21	8.1	25	37	35	535	180	19600	334	129	28	1.2	5.8
22	7.6	26	35	33	534	146	14800	251	74	21	1.5	8.0
23	7.3	32	33	30	286	120	13700	211	69	18	1.4	8.0
24	8.8	32	33	30	175	103	8630	200	74	16	1.4	6.9
25	9.9	33	148	30	121	88	2010	159	919	16	1.4	5.6
26	10	36	1120	30	90	84	949	128	844	14	1.4	5.3
27	10	33	1640	29	72	90	657	1170	474	12	1.4	26
28	10	32	1200	28	59	86	545	3200	254	11	2.2	29
29	13	35	837	27	51	73	875	2330	163	10	3.9	19
30	22	1640	560	27	---	1270	1360	860	123	8.9	118	11
31	21	---	390	26	---	1530	---	584	---	8.0	68	---
TOTAL	318.3	4161	14482	2072	2434	31287	104830	47596	7210	3443.9	277.3	377.1
MEAN	10.3	139	467	66.8	83.9	1009	3494	1535	240	111	8.95	12.6
MAX	22	1640	2880	289	535	8320	25900	5800	919	884	118	44
MIN	5.2	19	33	26	21	27	57	128	36	8.0	1.2	2.8
AC-FT	631	8250	28730	4110	4830	62060	207900	94410	14300	6830	550	748

CAL YR 1975 TOTAL 371016.9 MEAN 1016 MAX 11900 MIN 5.2 AC-FT 735900
WTR YR 1976 TOTAL 218488.6 MEAN 597 MAX 25900 MIN 1.2 AC-FT 433400

07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1950-58, 1962-64, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to September 1948.
WATER TEMPERATURE: October 1947 to September 1948.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
06...	1028	9740	1000	269	180	7.6	18.5	25	9.5	104	20	60
DEC												
04...	1028	9740	1200	236	150	7.2	9.0	150	10.6	96	32	44
JAN												
27...	1028	9740	1430	29	270	7.7	2.0	40	7.1	53	12	44
FEB												
10...	1028	9740	1430	21	500	--	12.0	9	12.8	123	21	79
MAR												
09...	1028	9740	1300	8320	--	8.4	13.0	88	9.5	93	37	24
APR												
06...	1028	9740	1600	201	160	7.3	17.5	54	9.1	99	24	48
MAY												
11...	1028	9740	1930	416	140	8.2	20.0	49	9.0	99	12	50
JUN												
09...	1028	9740	1400	92	140	--	28.0	52	--	--	19	134
JUL												
07...	1028	9740	1815	68	--	--	28.0	180	7.1	92	25	77
AUG												
04...	1028	9740	1430	4.6	315	7.6	28.0	385	7.4	96	20	90
SEP												
15...	1028	9740	1200	4.1	--	7.5	26.5	37	7.2	92	24	--

07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
06...	18	42	7.0	17	3.2	23	.1	99	2.6	.04	2
DEC											
04...	13	27	5.2	17	5.2	13	.1	75	1.2	.24	--
JAN											
27...	18	42	8.3	21	3.0	34	.2	213	1.2	.48	--
FEB											
10...	31	66	9.3	26	3.0	36	.2	200	1.0	<.10	1
MAR											
09...	7.7	22	2.8	4.0	3.0	13	.1	--	1.8	<.14	--
APR											
06...	14	32	4.5	14	2.8	38	.1	160	.50	.19	--
MAY											
11...	14	30	4.2	--	3.2	21	.2	134	.80	.10	2
JUN											
09...	12	41	4.3	11	2.6	20	.2	143	.80	.89	--
JUL											
07...	--	35	--	11	3.1	20	.2	225	2.4	.17	--
AUG											
04...	22	57	7.7	18	4.4	41	.1	179	1.7	.15	2
SEP											
15...	16	--	5.5	13	4.1	21	.3	--	1.4	1.9	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
06...	<1	5	3	2100	<2	160	--	6	--	<1	9
DEC											
04...	--	--	--	3400	--	20	--	--	--	--	--
JAN											
27...	--	--	--	2200	--	180	--	--	--	--	--
FEB											
10...	2	2	3	1100	21	190	--	7	--	<1	--
MAR											
09...	--	--	--	1900	--	290	--	--	--	--	--
APR											
06...	--	--	--	1300	--	120	--	--	--	--	--
MAY											
11...	<1	14	6	2000	7	130	<.5	8	<2	3	19
JUN											
09...	--	--	--	2100	--	30	--	--	--	--	--
JUL											
07...	--	--	--	3000	--	196	--	--	--	--	--
AUG											
04...	1	13	6	1800	17	426	<.5	6	<3	1	16
SEP											
15...	--	--	--	1200	--	307	--	--	--	--	--

07334200 BYRD'S MILL SPRING NEAR FITTSTOWN, OK

LOCATION.--Lat 34°35'45", long 96°39'55", in SW 1/4 SW 1/4 sec.34, T.2 N., R.6 E., Pontotoc County, upstream from weir outlet of spring, 0.5 mile (0.8 km) upstream from Big Spring Creek, 2.0 miles (3.2 km) west of Fittstown, and 12.0 miles (19.3 km) south of Ada.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 1,022 ft (311.5 m) from ground-water survey map.

REMARKS.--Records fair. Records do not include diversion of about 6 to 10 ft^3/s (0.170 to 0.283 m^3/s) by city of Ada for municipal water supply, a part of which is discharge as effluent to Sandy Creek, tributary to Canadian River.

AVERAGE DISCHARGE.--17 years, 8.14 ft^3/s (0.231 m^3/s), 5,900 acre-ft/yr (7.27 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30 ft^3/s (0.850 m^3/s) May 30, 1960, gage height, 3.22 ft (0.981 m); no flow at times in 1959, 1964-67.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft^3/s (0.51 m^3/s) Nov. 7, gage height, 3.10 ft (0.945 m); minimum daily, 2.2 ft^3/s (0.06 m^3/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	5.2	4.7	3.9	3.3	2.5	4.5	6.6	6.7	5.3	4.2	3.4
2	6.7	5.2	4.7	3.9	3.3	2.5	4.5	6.7	6.7	5.3	4.2	3.3
3	6.7	5.2	4.7	3.9	3.3	2.5	4.5	6.7	6.7	5.2	4.2	3.2
4	6.7	5.2	4.7	3.9	3.3	2.5	4.5	6.7	6.7	5.2	4.0	3.2
5	6.7	5.2	4.7	3.9	3.2	2.3	4.5	6.7	6.7	5.2	3.8	3.1
6	6.7	5.2	4.6	3.8	3.2	2.3	4.5	6.7	6.7	5.2	3.8	3.0
7	6.3	11	4.6	3.8	3.2	2.3	4.5	6.7	6.7	5.2	3.7	3.1
8	6.3	7.9	4.6	3.8	3.2	2.7	4.5	6.7	6.6	5.2	3.7	3.0
9	6.3	7.1	4.6	3.8	3.2	2.9	4.3	6.7	6.6	5.1	3.7	2.9
10	6.3	7.1	4.5	3.8	3.2	3.2	4.3	6.7	6.7	5.1	3.7	2.8
11	6.3	5.5	4.5	3.7	2.9	3.2	4.2	6.7	6.7	5.0	3.6	2.8
12	5.9	4.5	4.5	3.7	2.9	3.2	4.3	6.7	6.5	4.9	3.6	2.8
13	5.9	4.5	4.5	3.7	2.9	3.4	4.4	6.6	6.3	4.8	3.7	2.7
14	5.9	4.5	4.4	3.7	2.9	3.7	4.4	6.6	6.2	4.8	3.7	2.7
15	5.9	4.9	4.4	3.6	2.9	3.7	4.4	6.6	6.2	4.7	3.8	2.7
16	5.9	4.9	4.4	3.6	2.9	4.0	4.3	6.6	6.2	4.6	3.8	2.7
17	5.9	4.5	4.4	3.6	2.9	4.0	4.3	6.6	5.8	4.5	3.9	2.6
18	5.9	4.9	4.3	3.6	2.9	4.0	4.2	6.7	5.9	4.5	3.9	2.5
19	5.9	4.9	4.3	3.6	2.9	4.2	4.3	6.7	5.9	4.4	3.8	2.5
20	5.9	4.9	4.3	3.5	2.9	4.2	5.5	6.7	5.8	4.4	3.6	2.5
21	5.9	4.9	4.3	3.5	2.7	4.2	5.5	6.7	5.9	4.4	3.6	2.5
22	5.9	4.9	4.2	3.5	2.7	4.2	5.5	6.9	5.8	4.4	3.6	2.5
23	5.5	4.9	4.2	3.5	2.7	4.2	5.6	6.9	5.6	4.6	3.7	2.4
24	5.5	4.9	4.2	3.5	2.7	4.2	5.9	6.7	5.5	4.5	3.7	2.4
25	5.5	4.9	4.1	3.5	2.7	4.2	5.7	7.0	5.5	4.5	3.6	2.4
26	5.5	4.8	4.1	3.4	2.7	4.2	5.8	7.0	5.4	4.5	3.7	2.4
27	5.5	4.8	4.1	3.4	2.7	4.2	5.9	7.0	5.3	4.5	3.5	2.3
28	5.5	4.8	4.1	3.4	2.7	4.2	6.0	7.0	5.3	4.5	3.4	2.3
29	5.5	4.8	4.0	3.4	2.7	4.5	6.1	7.0	5.2	4.3	3.4	2.3
30	5.2	4.8	4.0	3.4	---	4.2	6.3	6.9	5.2	4.2	3.4	2.2
31	5.2	---	4.0	3.4	---	4.2	---	6.7	---	4.2	3.4	---
TOTAL	185.5	160.8	135.7	112.7	85.7	109.8	147.2	209.2	183.0	147.2	115.4	81.2
MEAN	5.98	5.36	4.38	3.64	2.96	3.54	4.91	6.75	6.10	4.75	3.72	2.71
MAX	6.7	11	4.7	3.9	3.3	4.5	6.3	7.0	6.7	5.3	4.2	3.4
MIN	5.2	4.5	4.0	3.4	2.7	2.3	4.2	6.6	5.2	4.2	3.4	2.2
AC-FT	368	319	269	224	170	218	292	415	363	292	229	161

CAL YR 1975 TOTAL 4239.8 MEAN 11.6 MAX 23 MIN 4.0 AC-FT 8410
WTR YR 1976 TOTAL 1673.4 MEAN 4.57 MAX 11 MIN 2.2 AC-FT 3320

07335000 CLEAR BOGGY CREEK NEAR CANEY, OK

LOCATION.--Lat 34°15'09", long 96°12'19", in NW 1/4 SE 1/4 sec.36, T.3 S., R.10 E., Atoka County, 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 mi^2 (1,865 km^2).

WATER-DISCHARGE RECORDS

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) above mean sea level. Prior to Mar. 13, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 24 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--34 years, 498 ft^3/s (14.10 m^3/s), 9.39 in/yr (239 mm/yr), 360,800 acre-ft/yr (445 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft^3/s (1,500 m^3/s) Dec. 11, 1943, Dec. 11, 1946, gage height, 26.77 ft (8.159 m); no flow at times in 1954, 1956, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft^3/s (411 m^3/s) at 1245 Apr. 20, gage height, 23.45 ft (7.148 m), no other peak above base of 4,500 ft^3/s (127 m^3/s); minimum, 7.1 ft^3/s (0.20 m^3/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	24	834	197	61	40	269	739	535	1620	29	128
2	31	29	366	162	59	39	207	577	329	1230	28	60
3	30	49	219	138	58	38	170	462	248	848	26	62
4	29	48	165	122	57	38	278	384	199	425	24	34
5	29	47	147	110	57	37	188	413	177	288	23	26
6	27	46	578	101	57	36	140	1660	146	220	26	22
7	26	45	541	93	55	34	121	1080	137	186	30	17
8	25	44	284	84	56	830	107	566	118	137	48	14
9	25	42	198	96	51	3010	95	421	109	109	39	12
10	25	41	161	86	44	1940	86	351	100	93	31	12
11	25	39	136	83	44	963	80	305	90	113	26	11
12	24	32	117	80	42	1010	74	524	83	101	23	10
13	23	28	103	78	43	1540	70	3440	79	79	21	9.4
14	23	27	95	75	43	719	69	2100	74	68	19	9.4
15	26	27	89	71	41	520	67	1100	73	62	18	9.0
16	31	25	84	68	41	439	69	832	76	56	16	9.0
17	29	27	76	66	50	370	70	635	71	53	14	9.0
18	32	28	71	63	62	308	1930	477	90	56	13	16
19	32	30	67	62	50	259	2290	383	120	58	12	20
20	28	36	64	65	48	226	10900	321	98	53	11	12
21	25	33	62	63	126	193	10700	279	90	52	9.8	11
22	25	35	62	61	90	164	8630	249	78	48	8.7	9.8
23	25	45	62	60	62	144	5730	247	65	46	8.2	11
24	25	38	64	59	54	132	2500	252	62	46	8.0	11
25	27	33	96	59	47	124	1820	212	75	43	8.3	10
26	28	30	392	58	45	115	1500	187	77	39	8.5	9.3
27	34	29	553	54	41	104	1320	777	69	38	7.6	8.7
28	33	30	447	53	40	95	1170	1470	67	36	16	8.3
29	28	230	358	51	40	347	1280	645	62	34	10	8.2
30	26	1400	295	53	---	1380	1030	446	347	33	58	7.5
31	25	---	243	62	---	411	---	1090	---	31	96	---
TOTAL	850	2617	7029	2533	1564	15605	52960	22624	3944	6301	716.1	596.6
MEAN	27.4	87.2	227	81.7	53.9	503	1765	730	131	203	23.1	19.9
MAX	34	1400	834	197	126	3010	10900	3440	535	1620	96	128
MIN	23	24	62	51	40	34	67	187	62	31	7.6	7.5
CFSM	.04	.12	.32	.11	.07	.70	2.45	1.01	.18	.28	.03	.03
IN.	.04	.14	.36	.13	.08	.81	2.74	1.17	.20	.33	.04	.03
AC-FT	1690	5190	13940	5020	3100	30950	105000	44870	7820	12500	1420	1180

CAL YR 1975 TOTAL 215714.0 MEAN 591 MAX 7980 MIN 19 CFSM .82 IN 11.15 AC-FT 427900
WTR YR 1976 TOTAL 117339.7 MEAN 321 MAX 10900 MIN 7.5 CFSM .45 IN 6.06 AC-FT 232700

07335000 CLEAR BOGGY CREEK NEAR CANEY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1959.
WATER TEMPERATURE: October 1955 to September 1959.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)
NOV									
20...	1028	9740	1830	36	420	8.5	10.0	10	--
DEC									
04...	1028	9740	1400	165	450	7.9	9.0	180	10.9
JAN									
27...	1028	9740	1620	54	1000	8.1	12.0	3	13.4
FEB									
10...	1028	9740	1610	44	625	--	14.5	3	10.0
MAR									
09...	1028	9740	1450	3010	220	8.6	15.0	15	5.7
APR									
06...	1028	9740	1700	140	450	7.8	19.5	30	8.5
MAY									
11...	1028	9740	1815	305	460	8.4	24.0	38	8.2
JUN									
09...	1028	9740	1257	109	520	--	27.0	35	--
JUL									
07...	1028	9740	1700	186	--	--	28.5	57	15.3
AUG									
04...	1028	9740	1645	24	700	8.0	28.5	98	8.4
SEP									
15...	1028	9740	1045	9.0	720	7.3	23.5	17	7.6

07335000 CLEAR BOGGY CREEK NEAR CANEY, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
NOV									
20...	--	12	.3	--	.09	2	<1	5	4
DEC									
04...	99	28	.2	1.0	.24	--	--	--	--
JAN									
27...	129	4	.2	.10	.10	--	--	--	--
FEB									
10...	102	8	.2	.70	<.10	<1	<1	3	2
MAR									
09...	59	79	.2	2.1	.22	--	--	--	--
APR									
06...	96	--	.2	.50	.20	--	--	--	--
MAY									
11...	96	12	.2	1.2	.27	2	5	8	5
JUN									
09...	--	4	.2	.70	.11	--	--	--	--
JUL									
07...	201	93	.0	1.8	.09	--	--	--	--
AUG									
04...	110	51	.2	1.7	<.12	2	1	12	4
SEP									
15...	93	14	.3	1.4	.10	--	--	--	--

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV								
20...	400	14	105	--	4	--	1	5
DEC								
04...	300	--	<5	--	--	--	--	--
JAN								
27...	200	--	78	--	--	--	--	--
FEB								
10...	400	13	100	--	5	--	1	2
MAR								
09...	200	--	100	--	--	--	--	--
APR								
06...	600	--	100	--	--	--	--	--
MAY								
11...	800	10	142	<.5	7	<2	4	12
JUN								
09...	100	--	1	--	--	--	--	--
JUL								
07...	1600	--	154	--	--	--	--	--
AUG								
04...	200	10	135	<.5	6	<3	1	10
SEP								
15...	300	--	162	--	--	--	--	--

07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW 1/4 sec.11, T.8 S., R.17 E., Choctaw County, Okla., near right bank on downstream side of pier of bridge on U.S. Highway 271 at Arthur City, 10.6 miles (17.1 km) downstream from Muddy Boggy River, 26.0 miles (41.8 km) upstream from Kiamichi River, and at mile 633.1 (1,018.7 km).

DRAINAGE AREA.--44,531 mi^2 (115,335 km^2), of which 5,936 mi^2 (15,374 km^2) 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) above mean sea level. 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 24 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Denison Dam) 13 years, (water years 1906-11, 1937-43), 9,266 ft^3/s (262.4 m^3/s) 6,713,000 acre-ft/yr (8.28 km^3/yr); (since regulation of Denison Dam) 32 years, (water years 1945-76), 8,008 ft^3/s (226.8 m^3/s), 5,802,000 acre-ft/yr (7.15 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 400,000 ft^3/s (11,300 m^3/s) May 28, 1908, gage height, 43.2 ft (13.17 m), from rating curve extended above 41,000 ft^3/s (1,160 m^3/s) on basis of records for later years; minimum, 130 ft^3/s (3.68 m^3/s) Dec. 11, 12, 1956, gage height, 4.49 ft (1.369 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,000 ft^3/s (1,250 m^3/s) Apr. 22, gage height, unknown; minimum daily, 571 ft^3/s (16.2 m^3/s) Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2420	1350	3800	2400	2100	987	4000	7740	9260	5540	3260	2190
2	2910	2970	5800	1300	1350	867	3110	6720	15200	7930	3240	1200
3	2850	3840	7600	1000	899	588	1700	7340	15300	13200	3590	2170
4	2550	2530	6380	4800	2340	1020	1290	7640	12700	12700	2890	2350
5	2490	2710	4300	2000	2640	1670	1170	8090	12100	7660	1980	2640
6	1860	1920	2660	1530	2210	1000	1250	13000	11100	3000	828	3880
7	719	830	2470	2880	2160	588	1410	23600	10100	1840	1770	2940
8	831	791	2630	4380	3640	952	1950	20500	9380	1590	3160	1960
9	2380	1720	2570	7270	2780	4360	2570	13900	6880	3300	3060	2290
10	2900	2330	1940	8370	1370	9390	2190	9170	6250	3800	2380	2340
11	3530	958	2140	6170	1130	12000	2150	7220	7600	3000	2010	2280
12	3800	1090	1840	2640	2060	11200	2080	8580	5810	2200	4110	1950
13	2450	1860	2410	1370	2210	8850	2150	10400	3720	1250	3300	2300
14	735	866	3030	2040	1860	6000	2570	12400	3670	1470	2760	1510
15	603	622	2230	2520	2260	5450	2570	13700	2550	2580	3730	2680
16	2600	2500	799	1560	1850	3700	2160	13700	3140	3140	3660	4220
17	2800	3100	2600	1630	697	2390	2370	13700	2930	6470	2680	4250
18	2800	2100	3500	1640	620	2580	9500	13100	5990	13500	2030	4240
19	2800	1200	3830	1340	4220	2830	24000	10700	11200	8570	2590	5120
20	2500	3350	4620	763	4940	1740	37000	7970	15100	3730	2750	4900
21	889	3680	3890	571	3650	1300	42000	7130	6460	3900	3140	3210
22	1790	3660	2710	1400	3140	1090	43000	7190	2820	4030	3230	1580
23	4480	5210	3160	2120	2740	972	36000	6690	2300	4000	2240	2750
24	5280	5460	3480	2210	2500	1210	30800	6110	3320	4390	1510	2470
25	5350	2870	3880	1970	3720	1250	29600	5750	3670	5560	848	2190
26	5610	2800	3780	1310	5000	883	28200	4830	4100	4720	2460	2770
27	4360	3800	2740	674	3230	760	23100	4230	6320	4620	3360	3790
28	3470	4400	4170	2630	1940	734	18200	4380	5690	3500	4280	3900
29	4770	2500	4110	4460	1440	777	13700	6860	5200	3500	4270	3400
30	3400	2700	2630	3000	---	810	9200	8370	5430	3440	3870	2860
31	2220	---	1950	2580	---	1690	---	8150	---	3070	2950	---
TOTAL	88147	75717	103849	80528	70696	89638	380990	298860	215290	151200	87936	86330
MEAN	2843	2524	3350	2598	2438	2892	12700	9641	7176	4877	2837	2878
MAX	5610	5460	7600	8370	5000	12000	43000	23600	15300	13500	4280	5120
MIN	603	622	799	571	620	588	1170	4230	2300	1250	828	1200
AC-FT	174800	150200	206000	159700	140200	177800	755700	592800	427000	299900	174400	171200

CAL YR 1975 TOTAL 4393634 MEAN 12040 MAX 60700 MIN 603 AC-FT 8715000
WTR YR 1976 TOTAL 1729181 MEAN 4725 MAX 43000 MIN 571 AC-FT 3430000

07335500 RED RIVER AT ARTHUR CITY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
20...	1028	9740	0930	3355	950	8.1	13.0	15	--	--	16	310
DEC												
04...	1028	9740	0900	6380	800	7.7	11.0	110	10.8	102	28	200
JAN												
16...	1028	9740	--	1560	--	--	--	7	--	--	4	320
MAR												
18...	1028	9740	0930	2580	400	8.3	13.0	70	10.0	98	52	160
MAY												
20...	1028	9740	0900	7970	540	7.6	20.0	55	8.4	98	19	110
JUN												
17...	1028	9740	0900	2930	1300	8.6	27.0	25	8.5	108	26	330
JUL												
20...	1028	9740	2000	3730	360	7.3	25.0	100	7.5	92	15	130
AUG												
19...	1028	9740	0900	2590	1410	8.3	25.0	17	7.5	91	--	380
SEP												
23...	1028	9740	0930	2750	1350	8.4	23.0	7	8.4	102	27	393

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
20...	100	210	27	100	6.2	220	.4	685	<1.0	.06	2
DEC											
04...	50	150	19	77	7.3	150	.2	391	2.2	.17	--
JAN											
16...	75	220	24	120	5.5	230	.2	737	.30	.07	--
MAR											
18...	53	120	11	27	3.6	54	.2	292	1.1	.25	--
MAY											
20...	34	81	9.7	39	4.8	67	.2	296	1.1	.13	4
JUN											
17...	96	240	27	160	5.8	260	.2	832	1.4	.14	--
JUL											
20...	38	96	5.7	23	3.9	34	.2	222	1.9	.13	--
AUG											
19...	115	263	35	193	6.7	317	.3	1104	.80	.09	2
SEP											
23...	100	270	32	200	6.4	300	.3	1015	1.8	.12	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
20...	<10	7	<10	900	10	--	--	10	--	<10	<10
DEC											
04...	--	--	--	300	--	140	--	--	--	--	--
JAN											
16...	--	--	--	300	--	85	--	--	--	--	--
MAR											
18...	--	--	--	2000	--	170	--	--	--	--	--
MAY											
20...	<10	10	10	1700	10	150	<.5	10	<2	<10	10
JUN											
17...	--	--	--	500	--	200	--	--	--	--	--
JUL											
20...	--	--	--	700	--	<1	--	--	--	--	--
AUG											
19...	2	46	5	300	39	81	<.5	13	<2	2	11
SEP											
23...	--	--	--	400	--	140	--	--	--	--	--

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK
(Hydrologic bench mark station)

LOCATION.--Lat 34°38'18", long 94°36'45", in SW 1/4 SE 1/4 sec.18, T.2 N., R.26 E., LeFlore County, in Ouachita National Forest, on downstream side of right bank pier of bridge on State Highway 63, 0.2 mile (0.3 km) upstream from Rattlesnake Creek, 1.1 miles (1.8 km) upstream from Big Branch, 2.1 miles (3.4 km) east of Big Cedar, and at mile 157.6 (253.6 km).

DRAINAGE AREA.--40.1 mi^2 (103.9 km^2).

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) above mean sea level (State Highway Department bench mark).

REMARKS.--Records good.

AVERAGE DISCHARGE.--11 years, 78.4 ft^3/s (2.220 m^3/s), 26.55 in/yr (674 mm/yr), 56,800 acre-ft/yr (70.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft^3/s (609 m^3/s) Dec. 10, 1971, gage height, 17.08 ft (5.206 m), from rating curve extended above 9,000 ft^3/s (255 m^3/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,630 ft^3/s (74.5 m^3/s) at 0230 Dec. 6, gage height, 9.85 ft (3.002 m), no other peak above base of 2,000 ft^3/s (56.6 m^3/s); no flow Aug. 10-23, Sept. 8-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.3	18	112	29	19	48	41	70	9.5	.31	.16
2	2.1	1.8	18	85	26	16	42	34	50	8.3	.29	.16
3	2.0	9.5	17	66	24	14	38	28	38	6.7	.23	.16
4	1.8	25	16	51	22	20	37	24	29	5.6	.16	.16
5	1.7	15	71	43	23	23	31	22	22	4.8	.11	.12
6	1.6	11	784	38	21	18	27	77	20	4.1	.18	.08
7	1.5	9.6	176	35	19	18	24	64	17	3.5	.15	.05
8	1.4	8.4	106	32	18	930	21	55	13	3.0	.10	.02
9	1.7	7.9	72	29	17	508	19	47	9.9	2.7	.06	0
10	1.7	7.4	52	24	16	259	17	41	8.2	2.4	.02	0
11	1.7	6.6	42	22	16	174	16	35	6.8	2.1	0	0
12	1.6	5.9	35	19	16	147	15	80	5.8	1.9	0	0
13	1.5	5.6	29	18	15	112	15	332	5.2	1.7	0	0
14	1.4	5.2	26	16	14	97	15	175	4.7	1.5	0	0
15	1.4	5.1	34	14	13	81	13	145	4.5	1.4	0	0
16	1.4	4.9	28	13	13	66	15	127	5.2	1.5	0	0
17	1.4	4.7	26	12	38	53	15	99	4.4	1.4	0	.07
18	1.4	4.5	24	11	47	46	35	74	13	1.2	0	45
19	1.3	5.2	23	12	41	42	70	58	14	1.3	0	19
20	1.3	11	21	15	40	48	836	46	7.5	1.2	0	7.8
21	1.2	9.4	19	13	83	43	297	37	5.8	1.1	0	5.2
22	1.1	8.8	17	12	62	35	171	29	4.9	1.0	0	3.5
23	1.1	8.6	16	11	56	30	120	24	4.5	.91	.20	2.9
24	1.3	8.6	16	12	48	28	134	27	6.0	.84	.53	2.4
25	2.2	8.4	27	49	41	28	110	22	103	.81	.49	2.1
26	1.8	8.5	29	41	35	25	86	18	50	1.2	.38	2.3
27	1.7	8.1	38	39	29	21	69	25	32	1.1	.31	4.7
28	1.7	7.7	299	39	25	44	65	25	22	.82	.28	3.0
29	1.6	8.4	465	37	22	67	61	19	16	.63	.23	2.5
30	1.5	15	239	34	---	57	48	16	11	.50	.18	2.2
31	1.4	---	153	32	---	54	---	152	---	.39	.16	---
TOTAL	48.9	247.1	2936	986	869	3123	2510	1998	603.4	75.10	4.37	103.58
MEAN	1.58	8.24	94.7	31.8	30.0	101	83.7	64.5	20.1	2.42	.14	3.45
MAX	2.4	25	784	112	83	930	836	332	103	9.5	.53	45
MIN	1.1	1.3	16	11	13	14	13	16	4.4	.39	0	0
CFSM	.04	.21	2.36	.79	.75	2.52	2.09	1.61	.50	.06	.003	.09
IN.	.05	.23	2.72	.91	.81	2.90	2.33	1.85	.56	.07	.004	.10
AC-FT	97	490	5820	1960	1720	6190	4980	3960	1200	149	8.7	205

CAL YR 1975 TOTAL 26873.95 MEAN 73.6 MAX 1730 MIN 0 CFSM 1.84 IN 24.93 AC-FT 53300
WTR YR 1976 TOTAL 13504.45 MEAN 36.9 MAX 930 MIN 0 CFSM .92 IN 12.53 AC-FT 26790

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 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION
OCT										
15...	--	--	1630	1.4	36	6.5	20.0	--	6.9	80
NOV										
11...	--	--	1230	6.7	25	7.9	13.0	--	10.6	107
11...	1028	9740	1231	6.7	<50	7.9	13.0	7	10.6	107
DEC										
09...	--	--	1515	70	22	6.9	9.5	--	10.4	97
09...	1028	9740	1516	70	22	6.9	9.5	12	10.4	97
JAN										
14...	1028	9740	1531	16	<50	--	8.0	6	--	--
FEB										
03...	--	--	1600	24	19	7.1	9.0	--	10.8	101
03...	1028	9740	1601	24	19	7.1	9.0	5	10.8	101
MAR										
02...	--	--	1630	16	20	6.8	17.0	--	9.3	103
02...	1028	9740	1631	16	20	6.8	17.0	5	9.3	103
APR										
06...	--	--	1700	26	25	7.5	18.0	--	9.3	104
06...	1028	9740	1701	26	25	7.5	18.0	5	9.3	104
MAY										
04...	--	--	1400	24	30	--	17.0	--	8.7	98
04...	1028	9740	1401	24	30	--	17.0	4	8.7	98
JUN										
02...	--	--	1400	51	50	9.0	20.5	--	8.8	105
02...	1028	9740	1401	51	<50	9.0	20.5	10	8.8	105
JUL										
08...	--	--	1100	3.1	26	7.0	22.5	--	7.5	92
08...	1028	9740	1101	3.1	26	7.0	22.5	5	7.5	92
SEP										
22...	--	--	1530	3.5	44	7.2	20.0	--	8.6	98
22...	1028	9740	1531	3.5	44	7.2	20.0	13	8.6	98

DATE	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM
OCT										
15...	--	--	84	630	11	0	1.4	1.8	2.0	26
NOV										
11...	--	--	--	--	7	0	.8	1.3	3.1	44
11...	<4	--	--	--	--	--	--	--	--	--
DEC										
09...	--	--	--	--	5	0	.9	.7	2.2	44
09...	<4	--	--	--	--	--	--	--	--	--
JAN										
14...	<4	--	--	--	--	--	--	--	--	--
FEB										
03...	--	--	--	--	9	2	1.6	1.2	1.7	28
03...	<4	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	5	0	.9	.6	2.4	48
02...	<4	--	--	--	--	--	--	--	--	--
APR										
06...	--	--	--	--	8	0	1.1	1.2	2.0	34
06...	16	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	6	0	1.0	.9	2.1	39
04...	16	--	--	--	--	--	--	--	--	--
JUN										
02...	--	--	--	--	5	3	1.6	.3	2.0	42
02...	<4	--	--	--	--	--	--	--	--	--
JUL										
08...	--	--	--	--	9	0	1.7	1.1	2.5	36
08...	82	--	--	--	--	--	--	--	--	--
SEP										
22...	--	470	44	75	9	1	1.7	1.1	2.2	31
22...	20	--	--	--	--	--	--	--	--	--

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT										
15...	.3	1.2	13	0	11	6.6	3.1	2.6	--	.1
NOV										
11...	.5	1.0	10	0	8	.2	5.9	4.3	--	.1
11...	--	--	--	--	--	--	--	--	--	--
DEC										
09...	.4	.8	6	--	5	1.2	3.8	2.1	--	.1
09...	--	--	--	--	--	--	--	--	.1	--
JAN										
14...	--	--	--	--	--	--	--	--	.1	--
FEB										
03...	.2	.6	9	0	7	1.1	3.5	2.2	--	.1
03...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	.5	.7	6	0	5	1.5	3.5	2.1	--	.1
02...	--	--	--	--	--	--	--	--	<.1	--
APR										
06...	.3	.6	9	0	7	.5	3.2	1.9	--	.0
06...	--	--	--	--	--	--	--	--	<.1	--
MAY										
04...	.4	.7	6	1	7	--	3.1	2.7	--	.1
04...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	.4	.6	3	0	2	.0	3.9	2.8	--	.1
02...	--	--	--	--	--	--	--	--	<.1	--
JUL										
08...	.4	.8	8	0	9	1.3	5.2	3.9	--	.1
08...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	.3	1.4	9	0	7	.9	6.0	3.2	--	.1
22...	--	--	--	--	--	--	--	--	.2	--

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT									
15...	7.3	30	--	26	.04	.11	.01	--	.00
NOV									
11...	7.9	29	--	29	.04	.52	.00	--	.02
11...	--	--	--	--	--	--	--	--	--
DEC									
09...	6.9	--	--	20	.04	5.48	.06	--	.03
09...	--	--	--	--	--	--	--	.70	.02
JAN									
14...	--	--	--	--	--	--	--	1.0	<.01
FEB									
03...	6.4	19	--	22	.03	1.23	.01	--	.00
03...	--	--	--	--	--	--	--	<.10	.01
MAR									
02...	6.8	24	--	20	.03	1.04	.00	--	.02
02...	--	--	--	--	--	--	--	<.30	<.01
APR									
06...	7.0	22	--	21	.03	1.54	.00	--	.15
06...	--	--	--	--	--	--	--	.30	<.10
MAY									
04...	7.2	--	--	22	.05	1.43	.01	--	.00
04...	--	--	--	--	--	--	--	.70	<.09
JUN									
02...	8.0	30	--	21	.04	4.13	.00	--	.02
02...	--	--	--	--	--	--	--	.90	<.08
JUL									
08...	7.8	37	--	29	.05	.31	.04	--	.01
08...	--	--	--	--	--	--	--	1.4	<.09
SEP									
22...	7.3	31	32	27	.04	.29	.06	--	.03
22...	--	--	--	--	--	--	--	.80	.19

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
NOV								
11...	--	--	1230	6.7	<1	<1	2	2
11...	1028	9740	1231	6.7	<1	<1	2	2
DEC								
09...	1028	9740	1516	70	--	--	--	--
JAN								
14...	1028	9740	1531	16	--	--	--	--
FEB								
03...	--	--	1600	24	1	<10	0	10
03...	1028	9740	1601	24	<1	<1	2	<1
MAR								
02...	1028	9740	1631	16	--	--	--	--
APR								
06...	1028	9740	1701	26	--	--	--	--
MAY								
04...	1028	9740	1401	24	<1	<1	3	1
JUN								
02...	1028	9740	1401	51	--	--	--	--
JUL								
08...	1028	9740	1101	3.1	--	--	--	--
SEP								
22...	1028	9740	1531	3.5	--	--	--	--

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV								
11...	600	<1	13	--	<1	--	<1	2
11...	600	<1	13	--	<1	--	<1	2
DEC								
09...	100	--	<5	--	--	--	--	--
JAN								
14...	900	--	13	--	--	--	--	--
FEB								
03...	420	<100	20	.0	--	0	--	10
03...	300	10	18	--	1	--	<1	3
MAR								
02...	400	--	6	--	--	--	--	--
APR								
06...	100	--	<5	--	--	--	--	--
MAY								
04...	100	<5	5	<5.0	<1	<2	<1	3
JUN								
02...	100	--	<5	--	--	--	--	--
JUL								
08...	400	--	5	--	<3	--	--	--
SEP								
22...	300	--	8	--	--	--	--	--

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL PCB (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)
OCT 15...	1630	1.4	--	--	--	--	--	--
FEB 03...	1600	24	--	--	--	--	--	--
MAY 04...	1400	24	--	--	--	--	--	--
JUN 06...	1300	51	--	--	--	--	--	--
SEP 22...	1530	3.5	.0	.00	.0	.00	.00	.00

DATE	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)
OCT 15...	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--
MAY 04...	--	--	--	--	--	--	--	--	--
JUN 06...	--	--	--	--	--	--	--	--	--
SEP 22...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL PARATHION (UG/L)	TOTAL TOXAPHENE (UG/L)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT 15...	--	--	--	--	--	--	154	41
FEB 03...	--	--	--	--	--	--	3	67
MAY 04...	--	--	--	--	--	--	100	2
JUN 06...	--	--	--	--	--	--	5	55
SEP 22...	.00	0	.00	.00	.00	.00	5	70

07336200 KIAMICHI RIVER NEAR ANTLERS, OK

LOCATION.--Lat 34°14'55", long 95°36'18", in SW 1/4 sec.35, T.3 S., R.16 E., Pushmataha County, 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).

DRAINAGE AREA.--1,138 mi^2 (2,947 km^2).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 419.82 ft (127.961 m) above mean sea level.

REMARKS.--Records good. Small diversion above station for municipal water supply of city of Antlers.

COOPERATION.--Gage height record, 21 discharge measurement furnished by Corps of Engineers; records computed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft^3/s (1,090 m^3/s) Nov. 26, 1973, gage height, 32.62 ft (9.943 m); no flow Oct. 1-21, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,500 ft^3/s (977 m^3/s) at 1700 Apr. 21, gage height, 30.27 ft (9.226 m), no other peak above base of 18,000 ft^3/s (510 m^3/s); minimum, 0.60 ft^3/s (0.017 m^3/s) Aug. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	4.8	482	1540	122	227	702	793	1900	230	9.6	7.5
2	42	12	603	1080	118	206	536	619	1220	303	11	7.9
3	38	24	349	826	116	189	458	503	720	205	10	33
4	33	96	246	652	111	174	485	413	515	243	9.6	47
5	30	120	194	526	103	168	568	377	402	190	8.7	44
6	28	144	165	438	96	158	540	3140	348	143	6.9	74
7	26	283	962	378	93	178	456	4520	345	113	6.7	97
8	24	404	1270	333	89	2710	385	2060	289	92	5.7	91
9	23	259	657	294	86	13500	333	1210	248	77	4.7	64
10	22	180	461	261	82	10900	291	836	207	68	4.3	48
11	21	143	363	233	81	3670	256	640	180	59	4.1	35
12	21	111	298	220	80	2490	231	544	155	53	3.8	27
13	18	90	252	210	77	2230	221	2840	136	47	2.9	22
14	17	76	220	200	75	1550	220	3930	116	41	2.9	18
15	14	65	199	185	72	1190	221	4460	103	37	2.4	16
16	13	57	194	170	71	1010	229	4340	97	33	2.7	14
17	12	52	320	158	78	864	349	3120	89	30	2.3	13
18	11	47	297	147	130	724	2700	1820	96	26	1.7	14
19	10	47	243	137	142	614	7550	1190	187	299	1.6	24
20	8.5	50	205	133	262	532	22400	869	436	328	1.4	20
21	7.1	49	181	128	447	468	32800	669	337	65	1.2	15
22	6.6	60	164	124	707	406	26700	536	238	40	1.1	13
23	6.4	95	154	120	810	357	4450	446	172	31	.86	11
24	6.3	86	147	118	565	328	2260	390	216	26	.60	9.6
25	6.4	77	171	120	440	294	3170	327	956	22	.60	9.2
26	6.4	75	506	122	371	269	2300	308	1390	19	.65	11
27	6.4	74	1210	117	318	256	1460	5460	895	17	.83	14
28	6.4	67	1560	108	281	250	1090	3620	576	14	2.5	12
29	6.1	63	1940	104	251	299	967	1510	366	13	2.7	10
30	5.8	75	4600	124	---	675	957	912	265	12	3.7	9.1
31	5.5	---	2600	128	---	1040	---	772	---	11	6.4	---
TOTAL	526.9	2985.8	21213	9434	6274	47926	115285	53174	13200	2887	124.14	830.3
MEAN	17.0	99.5	684	304	216	1546	3843	1715	440	93.1	4.00	27.7
MAX	46	404	4600	1540	810	13500	32800	5460	1900	328	11	97
MIN	5.5	4.8	147	104	71	158	220	308	89	11	.60	7.5
CFSM	.01	.09	.60	.27	.19	1.36	3.38	1.51	.39	.08	.003	.02
IN.	.02	.10	.69	.31	.21	1.57	3.77	1.74	.43	.09	.004	.03
AC-FT	1050	5920	42080	18710	12440	95060	228700	105500	26180	5730	246	1650

CAL YR 1975	TOTAL	463442.70	MEAN	1270	MAX	13700	MIN	4.8	CFSM	1.12	IN	15.15	AC-FT	919200
WTR YR 1976	TOTAL	273860.14	MEAN	748	MAX	32800	MIN	.60	CFSM	.66	IN	8.95	AC-FT	543200

RED RIVER BASIN

07336200 KIAMICHI RIVER NEAR ANTLERS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	PER-CENT SATUR-ATION	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARD-NESS (CA,MG) (MG/L)
NOV												
06...	1028	9740	0800	144	100	7.2	16.0	12	8.5	88	16	79
DEC												
04...	1028	9740	1100	246	80	7.7	8.0	32	11.1	97	16	27
JAN												
16...	1028	9740	--	170	--	8.7	9.0	18	--	--	24	51
FEB												
04...	1028	9740	1400	111	60	8.2	9.5	10	10.7	98	59	--
MAR												
04...	1028	9740	0800	174	68	7.5	18.0	33	8.6	97	4	22
APR												
07...	1028	9740	1700	456	--	8.4	16.0	21	9.3	98	23	16
JUN												
03...	1028	9740	1000	720	60	7.6	25.0	55	8.4	104	19	19
JUL												
07...	1028	9740	1730	113	70	7.6	30.0	18	8.0	107	7	17
AUG												
04...	1028	9740	1300	9.6	--	7.1	27.0	170	5.4	69	17	38
SEP												
15...	1028	9740	1400	16	85	6.8	26.0	16	6.3	80	16	--

07336200 KIAMICHI RIVER NEAR ANTLERS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
06...	8.5	27	3.3	9.0	2.1	16	<.1	51	2.5	.02	<1
DEC											
04...	5.0	10	3.9	5.0	2.1	11	--	66	.10	.70	--
JAN											
16...	3.0	24	1.0	4.0	.6	--	<.1	67	.20	.03	--
FEB											
04...	2.6	--	2.0	2.0	1.2	11	.1	--	.40	.01	--
MAR											
04...	4.4	16	2.1	5.0	1.2	17	<.1	38	.60	.02	--
APR											
07...	8.0	11	1.9	8.0	1.0	26	<.1	93	.50	<.08	--
JUN											
03...	2.9	19	1.4	4.0	1.3	20	<.1	58	1.0	<.08	--
JUL											
07...	1.7	6	1.1	2.0	.8	12	<.1	51	1.4	<.09	--
AUG											
04...	5.5	17	2.5	5.0	2.4	11	<.1	66	1.3	<.12	2
SEP											
15...	4.3	--	2.4	6.0	1.7	21	.3	78	1.3	.16	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
06...	<1	3	2	1000	<2	75	--	1	--	<1	10
DEC											
04...	--	--	--	1300	--	35	--	--	--	--	--
JAN											
16...	--	--	--	900	--	45	--	--	--	--	--
FEB											
04...	1	2	1	700	10	41	--	1	--	1	49
MAR											
04...	--	--	--	700	--	60	--	--	--	--	--
APR											
07...	--	--	--	500	--	60	--	--	--	--	--
JUN											
03...	--	--	--	600	--	40	--	--	--	--	--
JUL											
07...	--	--	--	1200	--	14	--	--	--	--	--
AUG											
04...	1	12	3	1800	25	282	<.5	2	<3	<1	14
SEP											
15...	--	--	--	600	--	115	--	--	--	--	--

07336600 HUGO LAKE NEAR HUGO, OK

LOCATION.--Lat 34°00'42", long 95°22'49", in NW 1/4 NW 1/4 sec.25, T.6 S., R.18 E., Choctaw County, on upstream face of Hugo Dam, 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 mi^2 (4,426 km^2).

PERIOD OF RECORD.--January 1974 to current year.

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

REMARKS.--Reservoir is formed by rolled earth dam. Regulated storage began Jan. 18, 1974; conservation pool was first filled Mar. 12, 1974. Total capacity, 1,561,500 acre-ft (1.93 km^3) at elevation 452.5 ft (137.92 m), top of dam, 966,700 acre-ft (1.19 km^3) at elevation 437.5 ft (133.35 m), top of flood control pool. Dead storage 21,080 acre-ft (26.0 hm^3) 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, 533,100 acre-ft (657 hm^3) Nov. 13, 1974, elevation, 425.35 ft (129.647 m); minimum since conservation pool was first filled, 130,100 acre-ft (160 hm^3) Sept. 30, 1976, elevation, 402.32 ft (122.627 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 331,600 acre-ft (409 hm^3) Apr. 23, elevation, 414.88 ft (126.455 m); minimum, 130,100 acre-ft (160 hm^3) Sept. 30, elevation 402.32 ft (122.627 m).

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

402	126,100	409	223,700
404	150,800	412	275,000
406	177,900	415	334,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156500	147800	155300	173800	161600	158300	161900	166400	165800	167600	154600	140300
2	155800	149400	155800	169500	161600	158100	161900	162000	164100	167600	153800	139700
3	155300	150100	156500	167300	160800	158100	161900	159500	160800	167100	153600	140500
4	155000	150200	156800	163400	161000	158700	161900	158800	158400	166200	153400	141300
5	155400	150300	158000	159500	162500	157300	161200	158800	157800	165700	153000	140900
6	154200	150300	158500	159300	162200	157000	159500	172600	156800	164600	152800	139700
7	153800	150900	159300	158900	161400	157400	158300	181600	155800	163400	152800	138700
8	153100	151700	161600	158500	161400	165700	157300	180000	155500	162500	152200	137800
9	153000	152800	162500	157000	161100	184400	156800	175200	155500	161900	151200	137100
10	152800	152600	161200	157400	161100	194800	156800	169100	155400	161400	150300	136500
11	152600	153100	160600	157800	161400	181200	156900	161600	155300	161000	149300	135900
12	152400	152800	160300	158500	161200	170000	157000	158700	154900	160600	148700	135200
13	151900	152800	160300	159500	161200	163900	158300	165200	154600	159700	148200	134900
14	151700	152600	159900	158700	161100	157200	158400	169100	154100	159300	148000	134500
15	151900	152400	159600	159200	161100	154600	158400	173300	154500	156800	147100	134300
16	151700	152400	159600	159700	161400	154600	160800	178500	154100	158500	147000	134900
17	151300	152400	159600	159500	163000	155800	162200	179400	153200	158300	146100	134500
18	151100	152400	159500	159300	162600	156800	173600	175900	155400	158600	145200	134300
19	150800	153900	159500	160700	161500	157000	201100	173000	155500	159300	144600	134100
20	150300	154600	159500	160000	161600	158300	246400	167100	155500	160000	144000	134000
21	149900	154300	159300	160000	163400	158300	291100	161000	155500	160000	143500	133300
22	149400	154200	159200	160000	162300	158300	327800	160300	155500	159700	142900	132900
23	149300	154200	159300	160000	162900	157800	319900	159300	155400	159500	142500	132200
24	149900	154200	160600	160000	162700	158300	298700	158500	155500	158900	142200	131900
25	149200	154400	162500	161600	162600	157700	278400	158100	159500	158500	141900	131400
26	148800	154900	163300	160800	161800	157700	258300	158400	162500	158100	141800	131400
27	148300	156600	166400	160600	161000	157600	233800	167600	164500	157600	141700	131400
28	148600	156200	170300	160600	160000	158300	208600	171300	165400	157000	141500	130900
29	148200	155300	173300	160600	159100	159300	183500	170300	165000	156500	141300	130500
30	148300	154900	177900	161000	---	159500	169900	168100	164600	155800	140300	130100
31	148000	---	177900	162300	---	161200	---	165600	---	155500	140300	---
MAX	156500	156600	177900	173800	163400	194800	327800	181600	165800	167600	154600	141300
MIN	148000	147800	155300	157000	159100	154600	156800	158100	153200	155500	140300	130100
†	403.77	404.30	406.00	404.85	404.61	404.77	405.41	405.09	405.02	404.35	403.15	402.32
‡	-9,300	+6,900	+23,000	-15,600	-3,200	+2,100	+8,700	-4,300	-1,000	-9,100	-15,200	-10,200

CAL YR 1975 MAX 328,200 MIN 138,400 ‡ -25,500
WTR YR 1976 MAX 327,800 MIN 130,100 ‡ -27,200

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-ft.

07336730 RED RIVER NEAR VALLIANT, OK

LOCATION.--Lat 33°53'20", long 95°04'56", McCurtain County, 5.8 mi (9.2 km) south of Valliant, 0.1 mi (0.2 km) upstream from Garland Creek, approximately 8.8 mi (14.2 km) upstream from Highway 37 bridge.

DRAINAGE AREA.--46,730 mi^2 (121,030 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1970 to September 1976 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT										
22...	1045	950	--	19.0	5	--	9.5	107	18	1.8
NOV										
05...	1100	950	8.1	18.0	5	--	9.6	104	16	--
DEC										
03...	1100	750	8.1	9.0	--	--	10.4	94	--	--
MAR										
03...	1130	850	8.5	12.0	5	10	10.3	100	26	--
MAY										
19...	1100	500	7.6	20.0	90	85	8.7	99	35	--
JUN										
02...	1100	850	9.7	23.0	--	--	8.9	107	--	--
16...	1200	1380	--	27.0	8	35	8.4	106	19	2.1
JUL										
07...	1130	480	7.7	26.0	70	75	8.2	104	36	--
21...	1100	360	7.5	27.0	--	--	7.1	91	--	2.4
AUG										
04...	1115	1490	8.4	26.0	10	7	8.4	105	56	--
18...	1100	1350	8.1	28.0	3	10	8.3	105	17	--
SEP										
08...	1100	1350	8.5	25.0	3	25	7.6	99	15	2.0
22...	1100	1350	8.4	23.0	3	20	8.3	100	14	2.2

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHENOLS (UG/L)
OCT									
22...	160	3.3	.09	.40	.01	.03	.10	.03	6
NOV									
05...	180	2.7	.00	.00	.00	.00	.00	.05	1
DEC									
03...	--	--	--	--	--	--	--	--	--
MAR									
03...	150	--	.03	.13	.00	.00	.03	.07	4
MAY									
19...	70	--	.06	.27	.01	.03	.07	.19	8
JUN									
02...	--	--	--	--	--	--	--	--	--
16...	260	--	.01	.04	.00	.00	.01	.13	3
JUL									
07...	52	--	.69	3.1	.01	.03	.70	.22	2
21...	--	--	--	--	--	--	--	--	--
AUG									
04...	280	--	.02	.09	.00	.00	.02	.07	2
18...	280	--	.40	1.8	.00	.00	.40	.08	2
SEP									
08...	270	--	.00	.00	.01	.03	.00	.09	3
22...	270	--	.00	.00	.00	.00	.00	.10	0

07336760 RED RIVER NEAR MILLERTON, OK

LOCATION.--Lat 35°51'42", long 95°01'51", McCurtain County, at State Highway 37 bridge, 8.2 mi (13.2 km) southwest of Millerton, approximately 8.8 mi (11.2 km) downstream from Garland Creek.

DRAINAGE AREA.--46,930 mi² (121,519 km²).

PERIOD OF RECORD.--Chemical analyses: July 1970 to September 1976 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT										
08...	1100	950	--	19.5	10	--	9.8	109	23	--
22...	1130	965	--	20.0	20	--	10.2	105	21	3.0
NOV										
05...	0900	950	8.2	18.0	12	--	11.6	126	23	--
19...	0830	967	7.8	15.5	13	--	9.7	99	22	--
DEC										
03...	0800	800	8.1	9.0	--	--	10.4	94	--	--
JAN										
14...	1100	1300	8.7	11.0	10	--	--	--	13	--
22...	0800	700	7.3	7.0	5	--	11.3	98	15	--
FEB										
04...	0800	1200	8.4	11.0	17	--	10.5	98	4	--
18...	0800	1150	8.7	13.0	--	--	10.0	99	--	--
MAR										
03...	0800	900	8.5	12.0	25	11	10.3	100	34	--
17...	0830	320	8.5	11.0	200	160	11.2	105	34	--
APR										
07...	0900	330	8.7	21.0	50	31	8.6	100	24	--
21...	0800	300	8.3	19.0	170	190	8.8	98	49	--
MAY										
07...	0915	940	8.9	21.0	--	--	8.6	100	--	--
19...	0900	560	7.7	20.0	90	90	8.7	99	37	--
JUN										
02...	0800	850	9.7	21.0	--	--	8.9	103	--	--
16...	0830	1300	8.6	27.0	8	10	8.4	106	150	2.4
JUL										
07...	0830	440	7.8	24.0	70	95	6.8	83	30	--
21...	0830	360	7.5	27.0	--	--	7.2	91	--	2.8
AUG										
04...	0830	1590	8.7	25.0	12	4	10.1	125	44	--
18...	0800	1425	8.2	27.0	7	30	7.1	89	22	--
SEP										
08...	0800	1500	8.3	28.0	7	25	7.6	99	16	2.4
22...	1000	1500	8.5	23.0	3	20	8.3	100	16	2.3

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHENOLS (UG/L)
OCT									
08...	160	5.8	.18	.80	.01	.03	.19	.08	6
22...	170	2.7	.00	.00	.00	.00	.00	.05	8
NOV									
05...	160	4.6	.00	.00	.00	.00	.00	.10	1
19...	190	3.6	.07	.31	.00	.00	.07	.02	4
DEC									
03...	--	--	--	--	--	--	--	--	--
JAN									
14...	150	11	.23	1.0	.01	.03	.24	.02	1
22...	93	15	.19	.84	.02	.07	.21	.02	11
FEB									
04...	190	3.8	.18	.80	.00	.00	.18	.07	4
18...	--	--	--	--	--	--	--	--	--
MAR									
03...	81	--	.01	.04	.00	.00	.01	.00	4
17...	33	--	.23	1.0	.01	.03	.24	.14	3
APR									
07...	33	--	.00	.00	.01	.03	.00	.17	5
21...	34	--	--	--	--	--	--	.33	2
MAY									
07...	--	--	--	--	--	--	--	--	--
19...	82	--	.05	.22	.02	.07	.07	.17	6
JUN									
02...	--	--	--	--	--	--	--	--	--
16...	250	--	.01	.04	.00	.00	.01	.08	6
JUL									
07...	48	--	.18	.80	.00	.00	.18	.23	2
21...	--	--	--	--	--	--	--	--	--
AUG									
04...	270	--	.03	.13	.01	.03	.04	.07	2
18...	310	--	.01	.04	.00	.00	.01	.11	4
SEP									
08...	290	--	.00	.00	.01	.03	.00	.11	1
22...	290	--	.00	.00	.00	.00	.00	.08	1

07337100 LITTLE RIVER ABOVE PINE CREEK LAKE NEAR CLOUDY, OK

LOCATION.--Lat 34°19'32", long 95°11'58", near center NW 1/4 sec.3, T.3 S., R.20 E., Pushmataha County, Hydrologic Unit 11140107, at bridge on county road, 700 ft (213 m) downstream from Cloudy Creek, 5 mi (8.0 km) northwest of Cloudy.

PERIOD OF RECORD.--November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
JAN											
22...	1028	9740	1200	27	7.8	6.0	13	11.6	98	4	2
MAR											
03...	1028	9740	1700	39	6.9	18.0	6	9.6	107	9	<2
APR											
07...	1028	9740	1545	42	8.2	17.5	14	9.4	102	15	14
MAY											
07...	1028	9740	1430	38	7.8	19.0	14	9.0	101	12	22
JUN											
02...	1028	9740	1530	30	7.6	22.5	35	8.6	98	4	25
JUL											
07...	1028	9740	1615	60	8.0	30.0	27	8.5	113	--	25
AUG											
04...	1028	9740	1500	53	8.1	31.0	6	--	--	122	190
SEP											
08...	1028	9740	1545	94	8.0	30.5	6	8.3	111	9	11

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN											
22...	1.0	44	1.0	2.0	.7	7.0	<.1	33	3.3	.02	--
MAR											
03...	2.3	2	1.3	3.0	1.2	6.0	<.1	21	.60	<.01	--
APR											
07...	2.3	7	1.1	.5	.8	--	<.1	54	.70	.08	--
MAY											
07...	3.0	17	.9	5.0	1.0	15	<.1	15	--	.08	1
JUN											
02...	1.6	25	1.0	3.0	.8	14	.1	53	--	.08	--
JUL											
07...	3.6	10	1.8	4.0	1.6	12	<.1	70	--	.09	--
AUG											
04...	3.0	150	1.4	2.0	1.4	11	<.1	56	--	.12	1
SEP											
08...	2.1	11	1.3	2.0	4.7	6.0	.3	74	--	.02	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
JAN											
22...	--	--	--	100	--	10	--	--	--	--	--
MAR											
03...	--	--	--	200	--	46	--	--	--	--	--
APR											
07...	--	--	--	300	--	25	--	--	--	--	--
MAY											
07...	<10	6	<10	300	10	100	<.5	<10	2	<10	<10
JUN											
02...	--	--	--	400	--	54	--	--	--	--	--
JUL											
07...	--	--	--	1100	--	68	--	--	--	--	--
AUG											
04...	<10	20	<10	600	<10	25	<.5	<10	2	1	10
SEP											
08...	--	--	--	300	--	11	--	--	--	--	--

07337300 PINE CREEK LAKE NEAR WRIGHT CITY, OK

LOCATION.--Lat 34°06'43", long 95°04'46", in NE 1/4 NW 1/4 sec.23, T.5 S., R.21 E., McCurtain County, 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 mi^2 (1,645 km^2).

PERIOD OF RECORD.--June 1969 to current year. Prior to October 1970 published as Pine Creek Reservoir near Wright City.

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

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 km^3) at elevation 509.0 ft (153.14 m), top of dam, 465,800 acre-ft (574 hm^3) at elevation 480.0 ft (146.30 m), crest of spillway, 53,800 acre-ft (66.3 hm^3) at elevation 438.0 ft (133.50 m) top of conservation pool, 7,140 acre-ft (8.80 hm^3) 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 hm^3) Dec. 16, 1971, elevation, 472.57 ft (144.039 m); minimum since conservation pool was first filled, 28,220 acre-ft (34.8 hm^3) Oct. 21, 1972, elevation, 429.34 ft (130.863 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 124,100 acre-ft (153 hm^3)Apr. 21, elevation, 451.26 ft (137.544 m); minimum, 45,260 acre-ft (55.8 hm^3) Sept. 30, elevation, 435.58 ft (132.765 m).

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

435	43,400	443	75,230
436	46,650	447	96,650
439	57,610	452	129,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52860	48870	46950	54170	54390	54350	57290	55000	53300	56740	51750	47490
2	52710	49040	46990	53530	54430	54280	57330	54890	51750	56550	51610	47460
3	52560	49150	46950	54170	54430	54130	57020	54700	52780	56430	51460	47560
4	52450	49080	46890	54470	54540	54090	56630	54810	53490	56200	51280	47560
5	52340	49010	46920	54810	54660	53940	56270	55270	53940	55930	51070	47670
6	52190	48940	46990	55150	54580	53980	55890	58970	54320	55580	51170	47630
7	52120	48870	47050	55040	54580	54170	55420	61560	54540	55230	50990	47490
8	52010	48730	47430	55040	54660	60640	54890	61930	54730	54850	50810	47390
9	51860	48700	47700	55150	54700	68930	54470	61560	54890	54540	50640	47190
10	51830	48560	47900	55310	54850	68340	54320	60810	54890	54350	50460	47050
11	51720	48490	48110	55380	54810	62730	54170	58890	54890	54240	50210	46890
12	51650	48250	48210	55350	54810	61930	54090	58250	54850	54090	50030	46750
13	51500	48080	48390	55350	54850	60150	55120	63200	54730	53900	49850	46650
14	51280	47940	48450	55350	54850	58290	55420	61890	54580	53830	49640	46580
15	51210	47900	48520	55210	54850	56940	55420	62190	54470	53710	49460	46480
16	51070	47870	48520	55190	54960	55690	55690	61890	54390	53560	49320	46550
17	50890	47730	48630	55080	55040	55040	59010	60360	54280	53490	49150	46580
18	50740	47670	48630	54960	55040	54700	65100	58090	54430	53380	48970	46520
19	50640	47730	48770	54890	55150	54540	78950	56980	54430	53450	48800	46480
20	50490	47630	49010	54810	55650	54540	120100	57450	54390	53450	48560	46380
21	50350	47530	48970	54730	55580	54320	122600	57690	54350	53300	48490	46320
22	50170	47390	49010	54660	55850	54280	115900	57770	54320	53190	48280	46120
23	50030	47330	49110	54580	56200	54390	107000	57770	54200	53120	48010	45980
24	49850	47220	49390	54540	56200	54540	96300	57690	54050	52930	48080	45890
25	49610	47120	49750	54430	56040	54770	87330	57370	54510	52860	48010	45720
26	49750	47050	50030	54280	55810	54960	77750	59700	56080	52710	47900	45790
27	49540	47020	50670	54200	55420	54960	67620	69660	56780	52560	47730	45690
28	49460	47020	51360	54240	55040	55460	59620	70440	57100	52410	47900	45520
29	49290	47190	54770	54280	54660	56430	59850	66150	57250	52300	47770	45390
30	49110	47050	56270	54320	---	56700	54960	61260	57020	52120	47630	45260
31	48940	---	55460	54390	---	57100	---	57020	---	51970	47530	---
MAX	52860	49150	56270	55380	56200	68930	122600	70440	57250	56740	51750	47670
MIN	48940	47020	46890	53530	54390	53940	54090	54700	51750	51970	47530	45260
†	436.67	436.12	438.45	438.17	438.24	438.87	438.32	438.85	438.85	437.52	436.26	435.58
‡	-4,140	-1,890	+8,410	-1,070	+270	+2,440	-2,140	+2,060	0	-5,050	-4,440	-2,270

CAL YR 1975 MAX 136,900 MIN 46,890 ‡ +1,180
WTR YR 1976 MAX 122,600 MIN 45,260 ‡ -7,820

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-ft.

07337500 LITTLE RIVER NEAR WRIGHT CITY, OK

LOCATION.--Lat 34°04'10", long 95°02'47", in NE 1/4 NW 1/4 sec.6, T.6 S., R.22 E., McCurtain County, 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).

DRAINAGE AREA.--645 mi^2 (1,671 km^2).

PERIOD OF RECORD.--October 1929 to September 1931, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 346.76 ft (105.692 m) above mean sea level. 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.

REMARKS.--Records fair. Except for 10 mi^2 (25.9 km^2) intervening area, flow completely regulated since June 1969 by Pine Creek Lake (station 07337300).

COOPERATION.--Gage height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Pine Creek Lake) 27 years (water years 1930-69), 917 ft^3/s (25.97 m^3/s), 664,400 acre-ft/yr (819 hm^3/yr); (since regulation by Pine Creek Lake) 6 years (water years 1971-76), 1,100 ft^3/s (31.15 m^3/s), 797,000 acre-ft/yr (983 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,200 ft^3/s (2,210 m^3/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, 6,510 ft^3/s (184 m^3/s) Apr. 22, gage height, 21.37 ft (6.514 m); minimum daily, 3.0 ft^3/s (0.085 m^3/s) Dec. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	13	1500	13	315	228	348	3540	250	16	22
2	9.6	22	13	881	13	180	265	335	2460	239	18	22
3	9.6	40	13	17	9.6	159	385	305	84	190	21	37
4	13	30	13	7.2	13	146	423	116	82	187	16	42
5	17	22	13	40	21	70	421	110	82	187	28	26
6	17	22	17	82	20	61	421	229	82	186	32	25
7	17	17	17	73	17	64	428	429	83	184	27	22
8	17	17	17	77	15	216	428	1060	86	185	26	23
9	17	17	7.2	77	15	605	384	1080	86	152	28	20
10	13	13	5.4	82	13	2920	208	1070	86	75	26	17
11	13	9.6	3.7	82	13	3570	185	1280	88	85	24	17
12	13	5.4	3.0	82	14	3230	162	1960	90	69	22	16
13	13	4.0	3.5	82	13	2100	76	2900	91	16	23	13
14	9.6	5.4	4.0	77	15	2030	89	3780	86	18	23	18
15	9.6	5.4	4.0	77	17	1800	218	2370	86	23	23	19
16	9.6	7.2	4.0	77	17	1220	253	2270	88	13	18	25
17	9.6	7.2	5.4	77	18	1000	264	2240	86	11	21	25
18	9.6	7.2	4.0	82	21	520	302	2220	122	9.6	22	26
19	9.6	13	5.4	82	21	474	836	1350	119	26	24	26
20	9.6	26	5.4	82	21	329	2800	242	95	7.5	26	26
21	13	13	4.0	82	137	289	5020	243	87	7.1	26	25
22	13	9.6	4.0	82	165	254	6480	242	85	11	24	13
23	13	9.6	13	82	208	105	6420	243	86	12	21	15
24	13	9.6	35	86	347	73	6290	245	89	12	29	16
25	9.6	9.6	69	91	356	73	6160	242	99	9.6	24	13
26	13	9.6	64	86	356	72	6030	259	91	9.2	13	18
27	13	9.6	55	86	354	74	5910	344	90	8.4	14	38
28	13	9.6	51	73	357	88	5300	1380	93	5.5	19	27
29	13	13	40	22	359	115	3200	3490	95	5.6	14	21
30	13	17	348	17	---	124	1200	3500	222	8.9	15	19
31	13	---	1440	13	---	208	---	3700	---	14	19	---
TOTAL	389.0	413.6	2294.0	4356.2	2958.6	22484	60786	39582	8659	2216.4	684	672
MEAN	12.5	13.8	74.0	141	102	725	2026	1277	289	71.5	22.1	22.4
MAX	17	40	1440	1500	359	3570	6480	3780	3540	250	32	42
MIN	9.6	4.0	3.0	7.2	9.6	61	76	110	82	5.5	13	13
AC-FT	772	820	4550	8640	5870	44600	120600	78510	17180	4400	1360	1330

CAL YR 1975 TOTAL 289879.4 MEAN 794 MAX 6420 MIN 3.0 AC-FT 575000
WTR YR 1976 TOTAL 145494.8 MEAN 398 MAX 6480 MIN 3.0 AC-FT 288600

07337500 LITTLE RIVER NEAR WRIGHT CITY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
05...	1028	9740	1530	14	40	8.1	19.0	5	9.6	105	16	29
DEC												
03...	1028	9740	1400	6.8	50	7.8	11.0	7	10.8	102	12	14
JAN												
14...	1028	9740	1145	65	--	8.9	12.0	61	10.5	102	6	53
FEB												
18...	1028	9740	1500	21	22	6.9	13.0	2	10.7	105	25	4
MAR												
03...	1028	9740	1300	159	64	8.1	14.0	43	10.2	103	4	7
APR												
07...	1028	9740	1200	428	45	8.0	14.5	12	9.6	98	19	--
MAY												
07...	1028	9740	1200	429	43	8.7	20.0	13	9.1	104	12	11
JUN												
02...	1028	9740	1300	2460	35	7.9	22.5	30	8.4	100	23	23
JUL												
07...	1028	9740	1230	184	62	7.4	22.0	25	6.9	81	14	25
AUG												
04...	1028	9740	1200	18	70	6.8	25.0	17	--	--	15	25
SEP												
08...	1028	9740	1315	23	77	6.9	28.5	36	8.2	106	20	11

07337500 LITTLE RIVER NEAR WRIGHT CITY, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
05...	4.2	10	1.6	4.5	.7	9.0	<.1	25	3.3	<.08	<1
DEC											
03...	2.7	10	1.0	6.0	1.0	5.0	<.1	130	1.0	.01	--
JAN											
14...	3.0	16	1.0	2.8	1.0	13	<.1	48	.30	.01	--
FEB											
18...	1.4	2	.7	1.0	.6	9.0	<.1	--	.80	<.10	1
MAR											
03...	2.5	7	.9	5.0	1.2	13	.1	35	.50	.03	--
APR											
07...	2.7	<1	1.0	3.0	.8	26	<.1	52	.60	<.08	--
MAY											
07...	3.2	11	.9	3.0	1.0	13	<.1	53	.90	<.09	1
JUN											
02...	--	--	1.0	3.0	1.0	18	<.1	36	1.0	<.08	--
JUL											
07...	2.6	10	1.3	3.0	.8	12	<.1	72	1.6	<.09	--
AUG											
04...	4.1	17	1.6	<2.0	1.2	9.0	.1	62	1.7	.14	3
SEP											
08...	4.4	11	1.4	<2.0	3.0	4.0	.4	--	3.0	.11	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
05...	<1	2	2	500	5	160	--	<1	--	<1	3
DEC											
03...	--	--	--	400	--	120	--	--	--	--	--
JAN											
14...	--	--	--	300	--	110	--	--	--	--	--
FEB											
18...	<1	1	2	100	7	26	--	<1	--	<1	4
MAR											
03...	--	--	--	500	--	160	--	--	--	--	--
APR											
07...	--	--	--	200	--	80	--	--	--	--	--
MAY											
07...	<1	7	3	400	15	160	.5	2	<2	<1	4
JUN											
02...	--	--	--	400	--	103	--	--	--	--	--
JUL											
07...	--	--	--	1500	--	958	--	--	--	--	--
AUG											
04...	1	12	3	4200	6	821	<.5	3	<3	1	9
SEP											
08...	--	--	--	4100	--	1480	--	--	--	--	--

07337900 GLOVER CREEK NEAR GLOVER, OK

LOCATION.--Lat 34°05'51", long 94°54'07", in NW 1/4 NE 1/4 sec.28, T.5 S., R.23 E., McCurtain County, 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 mi^2 (816 km^2).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 378.70 ft (115.428 m) above mean sea level.

REMARKS.--Records fair.

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

AVERAGE DISCHARGE.--15 years, 462 ft^3/s (13.08 m^3/s), 19.92 in/yr (506 mm/yr), 334,700 acre-ft/yr (413 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,600 ft^3/s (2,790 m^3/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.--Maximum discharge, 12,200 ft^3/s (346 m^3/s) at 1515 Apr. 20, gage height, 12.73 ft (3.880 m), no other peak above base of 8,000 ft^3/s (227 m^3/s); minimum daily, 0.91 ft^3/s (0.026 m^3/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	4.9	16	216	24	69	245	146	646	68	3.8	11
2	6.6	4.7	16	162	24	64	199	112	638	106	3.5	16
3	6.1	7.5	16	127	24	60	165	90	379	250	3.2	24
4	5.8	8.0	16	97	22	55	148	74	230	151	3.0	107
5	5.7	7.5	16	77	27	50	129	68	175	99	2.7	79
6	5.3	6.4	15	66	28	45	114	979	129	72	2.5	195
7	5.3	5.8	62	58	28	40	97	1300	96	57	2.7	96
8	5.3	5.1	139	52	28	2150	82	735	83	46	3.8	50
9	4.9	5.1	89	44	30	3280	72	448	67	38	5.0	32
10	4.3	5.4	68	42	31	1630	65	318	56	31	4.0	23
11	4.4	4.3	55	39	30	1050	60	249	46	26	3.5	17
12	4.0	3.9	46	37	28	723	56	215	39	22	3.0	14
13	3.6	3.7	40	35	27	594	111	1820	33	19	2.7	12
14	3.4	3.4	36	34	26	472	243	1660	28	16	2.4	10
15	3.9	3.7	34	32	25	460	185	1860	25	15	2.2	9.3
16	7.4	4.4	31	29	24	396	147	1280	24	14	2.0	8.3
17	8.7	4.8	30	28	24	328	131	927	21	12	1.9	10
18	9.7	5.7	36	25	24	268	233	593	22	11	1.8	18
19	9.4	7.3	42	24	24	228	1850	400	25	9.8	1.7	18
20	8.9	14	41	24	29	203	6290	291	23	8.1	1.6	17
21	8.8	12	37	23	61	176	2700	215	21	6.6	1.5	28
22	9.2	10	33	22	103	147	1410	165	20	6.0	1.4	19
23	10	9.0	31	21	182	121	941	127	22	5.6	1.3	14
24	11	8.0	30	23	155	105	613	97	27	5.3	1.2	11
25	11	8.6	41	25	137	96	441	77	313	5.0	1.2	9.2
26	10	9.8	49	24	117	92	323	81	509	7.2	1.1	10
27	9.3	11	80	23	98	92	241	1030	349	6.3	1.1	34
28	8.5	11	143	22	85	110	194	877	195	5.5	1.0	42
29	6.9	13	331	23	75	412	173	458	124	5.0	1.0	23
30	3.3	18	495	23	---	432	186	284	84	4.5	.95	16
31	4.4	---	313	24	---	321	---	388	---	4.2	.91	---
TOTAL	212.9	226.0	2427	1501	1540	14269	17844	17364	4449	1132.1	69.66	972.8
MEAN	6.87	7.53	78.3	48.4	53.1	460	595	560	148	36.5	2.25	32.4
MAX	11	18	495	216	182	3280	6290	1860	646	250	5.0	195
MIN	3.3	3.4	15	21	22	40	56	68	20	4.2	.91	8.3
CFSM	.02	.02	.25	.15	.17	1.46	1.89	1.78	.47	.12	.007	.10
IN.	.03	.03	.29	.18	.18	1.69	2.11	2.05	.53	.13	.008	.11
AC-FT	422	448	4810	2980	3050	28300	35390	34440	8820	2250	138	1930

CAL YR 1975 TOTAL 148650.60 MEAN 407 MAX 8890 MIN 2.9 CFSM 1.29 IN 17.55 AC-FT 294800
WTR YR 1976 TOTAL 62007.46 MEAN 169 MAX 6290 MIN .91 CFSM .54 IN 7.32 AC-FT 123000

07337900 GLOVER CREEK NEAR GLOVER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1953, 1962-63, November 1975 to September 1976.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
05...	1028	9740	1430	7.5	140	8.0	18.0	5	9.3	101	4	79
DEC												
03...	1028	9740	1430	16	125	7.8	14.0	2	10.7	107	8	65
JAN												
16...	1028	9740	--	29	--	--	--	16	--	--	24	59
FEB												
03...	1028	9740	1300	24	70	7.2	10.5	7	11.4	106	59	11
MAR												
03...	1028	9740	1500	60	68	7.5	19.0	12	9.0	101	13	<2
APR												
07...	1028	9740	1430	97	55	8.1	19.0	8	9.1	102	15	<1
MAY												
07...	1028	9740	1300	1300	47	8.1	20.0	7	9.0	103	<4	30
JUN												
02...	1028	9740	1400	638	45	7.9	22.5	25	8.3	104	30	21
JUL												
07...	1028	9740	1330	57	55	7.6	32.0	10	7.3	100	7	60
AUG												
04...	1028	9740	1315	3.0	--	7.0	28.0	2	--	--	12	48
SEP												
08...	1028	9740	1400	50	64	8.0	27.0	6	8.2	105	12	13

07337900 GLOVER CREEK NEAR GLOVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
05...	25	67	4.5	4.0	1.0	10	<.1	89	.80	<.08	<1
DEC											
03...	21	50	5.0	3.0	1.0	7.0	.1	102	6.1	.03	--
JAN											
16...	5.0	31	3.0	3.0	1.2	15	<.1	57	.30	.02	--
FEB											
03...	8.7	11	2.0	1.0	.6	7.0	.1	15	.40	<.01	<1
MAR											
03...	5.7	<2	1.6	2.0	1.8	6.0	.0	37	.40	<.00	--
APR											
07...	3.3	<1	1.2	--	.7	--	<.1	68	1.0	<.08	--
MAY											
07...	4.9	19	1.0	2.0	.6	17	.1	53	1.1	<.09	<1
JUN											
02...	3.6	12	1.1	3.0	4.2	10	<.1	37	.80	<.08	--
JUL											
07...	3.9	10	1.2	4.0	1.1	14	<.1	50	1.8	<.09	--
AUG											
04...	10	38	2.4	4.0	1.4	9.0	.1	57	1.7	.13	1
SEP											
08...	4.3	13	1.3	<2.0	2.2	4.0	.2	91	2.2	<.08	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
05...	<1	2	1	200	25	25	--	3	--	<1	<10
DEC											
03...	--	--	--	200	--	20	--	--	--	--	--
JAN											
16...	--	--	--	1000	--	28	--	--	--	--	--
FEB											
03...	<1	2	3	200	2	10	--	2	--	<1	5
MAR											
03...	--	--	--	700	--	82	--	--	--	--	--
APR											
07...	--	--	--	300	--	15	--	--	--	--	--
MAY											
07...	<1	3	2	300	5	10	<.5	<1	<2	<1	3
JUN											
02...	--	--	--	200	--	10	--	--	--	--	--
JUL											
07...	--	--	--	400	--	29	--	--	--	--	--
AUG											
04...	4	9	3	200	8	62	<.5	1	<3	1	9
SEP											
08...	--	--	--	<100	--	26	--	--	--	--	--

07338500 LITTLE RIVER BELOW LUKFATA CREEK, NEAR IDABEL, OK

LOCATION.--Lat 33°56'28", long 94°45'30", in SE 1/4 SE 1/4 sec.14, T.7 S., R.24 E., McCurtain County, 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 mi^2 (3,175 hm^2).

WATER-DISCHARGE RECORDS

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) above mean sea level. 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 41.9 miles (67.4 km) upstream. (See sta. 07337300).

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

AVERAGE DISCHARGE.--22 years (water years 1947-68), 1,622 ft^3/s (45.94 m^3/s), 1,174,000 acre-ft/yr (1.45 km^2/yr); 6 years (water years 1971-76), 1,995 ft^3/s (56.50 m^3/s), 1,445,000 acre-ft/yr (1.78 km^2/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft^3/s (2,920 m^3/s) Dec. 10, 1971, gage height, 39.39 ft (12.006 m); minimum, 0.4 ft^3/s (0.011 m^3/s) Sept. 15, 16, Sept. 21 to Oct. 1, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1938 reached a stage of 39.7 ft (12.10 m), from information by local resident, discharge, 86,000 ft^3/s (2,440 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,010 ft^3/s (255 m^3/s) Apr. 21, gage height, 21.61 ft (6.587 m); minimum daily, 7.8 ft^3/s (.22 m^3/s) Aug. 14, due to construction work upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	33	53	1750	73	465	669	1290	4330	399	18	33
2	38	34	59	1680	71	408	576	627	4480	442	19	42
3	35	45	63	966	70	282	624	569	2770	445	23	131
4	34	53	61	302	69	251	713	486	769	492	25	425
5	34	66	61	201	76	247	691	322	533	433	28	273
6	35	59	70	167	81	180	662	1800	445	375	37	211
7	37	47	73	184	90	149	638	3520	375	340	39	178
8	35	43	81	201	96	811	610	2500	322	314	47	180
9	35	41	161	188	77	4840	593	2010	285	297	47	153
10	34	38	161	178	76	5020	483	1680	261	273	39	116
11	34	37	133	178	82	4540	330	1510	231	186	34	87
12	32	37	111	176	84	4370	304	1890	209	142	33	70
13	31	35	95	170	84	3690	299	2920	197	126	22	59
14	28	33	85	163	88	2750	364	5120	186	98	7.8	53
15	28	33	84	161	82	2550	523	5450	180	64	23	45
16	27	33	77	155	79	2130	546	4500	172	67	25	41
17	24	34	71	149	84	1700	507	3590	165	114	26	38
18	23	35	73	147	99	1230	552	3050	178	111	24	41
19	24	41	73	146	98	911	1680	2730	258	103	22	56
20	24	50	76	147	92	739	5830	1480	325	85	22	74
21	24	66	81	147	96	596	8620	669	229	87	20	81
22	25	76	81	144	168	572	8860	579	176	70	21	96
23	28	66	77	140	314	489	8550	523	157	57	23	92
24	29	54	77	138	436	322	8060	489	161	42	26	76
25	33	49	119	146	523	290	7560	451	477	38	25	61
26	34	45	172	147	492	294	7120	451	677	38	25	57
27	32	45	197	147	480	287	6780	2530	666	38	27	53
28	33	45	201	147	468	304	6490	2370	546	33	24	81
29	34	46	256	138	465	582	5700	2900	425	29	23	133
30	35	51	439	109	---	815	3320	3800	330	26	24	121
31	34	---	1240	82	---	746	---	3930	---	20	27	---
TOTAL	974	1370	4661	8894	5093	42560	88254	65736	20515	5384	825.8	3157
MEAN	31.4	45.7	150	287	176	1373	2942	2121	684	174	26.6	105
MAX	41	76	1240	1750	523	5020	8860	5450	4480	492	47	425
MIN	23	33	53	82	69	149	299	322	157	20	7.8	33
AC-FT	1930	2720	9250	17640	10100	84420	175100	130400	40690	10680	1640	6260

CAL YR 1975	TOTAL	542734.0	MEAN	1487	MAX	11800	MIN	22	AC-FT	1077000
WTR YR 1976	TOTAL	247423.8	MEAN	676	MAX	8860	MIN	7.8	AC-FT	490800

07338500 LITTLE RIVER BELOW LUKFATA CREEK NEAR IDABEL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-54, 1961-63, 1969-73, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to September 1954.
WATER TEMPERATURE: October 1947 to September 1954.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COL-LECTING SAMPLE	CODE FOR AGENCY ANA-LYZING SAMPLE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	PER-CENT SATUR-ATION	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARD-NESS (CA,MG) (MG/L)
NOV												
05...	1028	9740	1200	66	240	8.2	20.0	4	9.1	102	30	90
DEC												
03...	1028	9740	1230	63	280	7.6	10.0	4	11.1	102	12	48
JAN												
14...	1028	9740	1115	161	--	8.0	11.0	13	10.1	96	24	65
FEB												
18...	1028	9740	1200	100	180	7.3	14.0	6	10.2	103	8	37
MAR												
17...	1028	9740	1430	1680	73	8.3	13.0	27	10.8	106	13	--
APR												
21...	1028	9740	1100	8370	38	7.7	18.0	96	9.5	104	46	20
MAY												
19...	1028	9740	1600	3080	65	7.4	21.0	15	8.9	103	4	20
JUN												
16...	1028	9740	1600	170	150	8.2	28.0	7	8.1	104	7	41
JUL												
21...	1028	9740	1345	87	160	7.5	29.5	8	7.9	104	12	56
AUG												
18...	1028	9740	1230	24	250	7.2	27.0	14	6.0	76	15	45
SEP												
22...	1028	9740	1230	96	210	5.2	23.0	3	5.8	70	10	47

07338500 LITTLE RIVER BELOW LUKFATA CREEK NEAR IDABEL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
05...	19	46	--	35	2.1	63	<.1	156	4.1	.07	<1
DEC											
03...	15	31	--	32	2.1	54	.1	157	.30	.02	--
JAN											
14...	7.0	33	1.0	9.0	1.0	18	<.1	72	.50	.04	--
FEB											
18...	18	31	2.9	10	1.2	25	.1	--	.90	<.10	1
MAR											
17...	4.8	20	1.4	3.0	.6	11	<.6	73	.50	.11	--
APR											
21...	4.0	13	.7	3.0	1.1	11	<.1	70	<1.0	.17	--
MAY											
19...	2.8	10	1.1	3.0	1.1	13	<.1	--	1.8	.09	<1
JUN											
16...	8.6	29	1.9	15	1.3	29	.1	78	1.7	.14	--
JUL											
21...	--	35	2.2	13	1.7	32	<.1	105	1.9	.22	--
AUG											
18...	12	34	3.2	26	2.3	65	.2	187	2.0	.10	2
SEP											
22...	16	47	3.4	11	1.9	55	.3	130	<.10	.17	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
05...	<1	3	3	600	3	415	--	1	--	<1	10
DEC											
03...	--	--	--	900	--	130	--	--	--	--	--
JAN											
14...	--	--	--	800	--	160	--	--	--	--	--
FEB											
18...	<1	2	1	600	4	250	--	<1	--	<1	4
MAR											
17...	--	--	--	800	--	100	--	--	--	--	--
APR											
21...	--	--	--	1400	--	210	--	--	--	--	--
MAY											
19...	<1	3	7	600	1	15	<.5	2	<2	1	5
JUN											
16...	--	--	--	500	--	119	--	--	--	--	--
JUL											
21...	--	--	--	200	--	--	--	--	--	--	--
AUG											
18...	<1	16	<3	400	18	340	<.5	<3	2	<1	7
SEP											
22...	--	--	--	400	--	360	--	--	--	--	--

07338900 BROKEN BOW LAKE NEAR BROKEN BOW, OK

LOCATION.--Lat 34°08'35", long 94°41'00", in SW 1/4 sec.3, T.5 S., R.25 E., McCurtain County, 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 mi^2 (1,953 km^2).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1970 published as Broken Bow Reservoir near Broken Bow.

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

REMARKS.--Reservoir is formed by a rolled earth and gravel structure. Regulated storage began Oct. 3, 1968; conservation pool was first filled Jan. 30, 1969. Total capacity, 1,368,000 acre-ft (1.69 km^3) at elevation 627.5 ft (191.26 m), top of flood pool and spillway gates, 918,100 acre-ft (1.13 km^3) at elevation 599.5 ft (182.73 m), top of power pool, and 448,200 acre-ft (553 hm^3) at elevation 599.0 ft (170.38 m), conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, power development and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,178,000 acre-ft (1.45 km^3), Dec. 17, 1971, elevation, 616.41 ft (187.882 m); minimum since conservation pool was first filled, 672,000 acre-ft (829 hm^3) Oct. 21, 1972, elevation 580.48 ft (176.930 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 911,400 acre-ft (1.12 km^3) May 21, elevation, 599.03 ft (182.584 m); minimum, 753,000 acre-ft (928 hm^3) Dec. 5, elevation, 587.15 ft (178.963 m).

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

587	751,100	594	842,100
589	776,500	597	883,000
591	802,300	600	925,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	806800	786800	756800	796300	787500	786000	844600	867300	892900	884000	820300	773900
2	806400	787800	755200	799800	786500	786100	845200	867900	891000	885000	820300	774200
3	805100	787500	754500	800600	786800	786400	846500	866800	891600	885800	820100	772600
4	804900	786400	753900	802200	785800	787400	847500	866800	889000	886200	818600	772600
5	804500	785100	753300	801700	786400	787400	848300	868000	889000	886100	817000	773000
6	803100	784400	773700	800400	786600	786900	848800	874200	889400	885000	814800	772800
7	803000	783500	778600	796100	786100	788600	849000	876300	889100	885000	814500	770900
8	801700	783400	780300	794200	786100	805800	846000	878000	889100	884300	814100	769700
9	801800	783900	782400	790200	785500	827200	842100	879600	888300	881500	810400	769500
10	800500	782500	783200	790200	785700	831500	842100	881100	884700	881000	807200	767800
11	800500	781900	783800	790900	785500	832300	842600	881000	881100	879800	803000	767300
12	800400	780600	784400	790100	783400	831800	840500	880700	881000	876700	800500	767200
13	799100	779900	784800	790500	782900	834600	839200	893300	881000	871900	797800	765900
14	797800	778400	785200	790100	783000	837200	839000	899900	877000	867700	797800	763400
15	798200	778300	785700	790100	783400	838800	837800	904200	877200	867100	796700	761600
16	797400	778000	785200	789500	783000	839800	837900	908900	876100	866000	794900	759700
17	796100	775800	781400	790000	782100	840300	838300	908700	876000	865300	793200	757400
18	795700	774900	778400	790100	782500	841400	840100	908700	875300	865300	789300	759100
19	795400	774400	778300	789600	782500	842100	845800	909900	875600	863100	789300	758300
20	794500	773500	778300	789000	782600	843400	871200	911000	875600	860400	787800	758700
21	793700	772000	778300	788000	783400	844400	878500	909900	873500	855700	787800	756700
22	793000	771600	777500	788400	784200	844000	877600	910000	870500	852300	787500	756400
23	792600	771600	777600	787600	783700	844400	877100	910200	867900	848100	785100	756200
24	791500	766900	778100	788200	784000	844200	880000	904500	869900	848100	783900	755400
25	791000	765800	778900	789100	784800	845300	881900	900200	879000	846900	782600	755400
26	790600	762500	777000	787900	785200	843800	877500	897400	885100	842200	780300	756700
27	789300	762600	777800	787500	784400	844200	874600	893700	888000	838700	775400	754600
28	789300	761300	779000	787300	785100	846000	871900	893200	885800	835100	775200	754800
29	789200	762500	786100	787300	785700	847100	867500	893000	883300	829100	775100	753800
30	788000	761700	791500	786600	---	846500	866800	893700	880500	823200	774900	753500
31	786800	---	793900	787400	---	847500	---	894300	---	823200	773500	---
MAX	806800	787800	793900	802200	787500	847500	881900	911000	892900	886200	820300	774200
MIN	786800	761300	753300	786600	782100	786000	837800	866800	867900	823200	773500	753500
†	589.80	587.84	590.35	589.85	589.72	594.40	595.82	597.81	596.82	592.59	588.77	587.19
‡	-20,900	-25,100	+32,200	-6,500	-1,700	+61,800	+19,300	+27,500	-13,800	-57,300	-49,700	-20,000

CAL YR 1975 MAX 1,024,000 MIN 753,300 ‡ -127,700
WTR YR 1976 MAX 911,000 MIN 753,300 ‡ -54,200

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-ft.

07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK

LOCATION.--Lat 34°02'30", long 94°37'15", in SE 1/4 SE 1/4 sec.7, T.6 S., R.26 E., McCurtain County, near center of span on downstream side of pier of bridge on U.S. Highway 70, 2.0 miles (3.2 km) west of Eagletown, 10.7 miles (17.2 km) downstream from Broken Bow Dam, and at mile 8.9 (14.3 km).

DRAINAGE AREA.--787 mi^2 (2,040 km^2).

WATER-DISCHARGE RECORDS

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) above mean sea level. See WSP 1920 for history of changes prior to July 23, 1950.

REMARKS.--Records good. Except for 33 mi^2 (85 km^2) intervening area, flow completely regulated since October 1968 by Broken Bow Lake (station 07338900).

COOPERATION.--Gage-height record and 12 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 ft^3/s (36.56 m^3/s), 934,600 acre-ft/yr (1.15 km^3/yr); since regulation by Broken Bow Dam, 7 years (water years 1970-76), 1,436 ft^3/s (40.67 m^3/s), 1,040,000 acre-ft/yr (1.28 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft^3/s (2,850 m^3/s) May 20, 1960, gage height, 26.73 ft (8.147 m), from rating curve extended above 65,000 ft^3/s (1,840 m^3/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 ft^3/s (2,620 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,400 ft^3/s (408 m^3/s) May 26, gage height, 10.20 ft (3.109 m); minimum daily, 94 ft^3/s (2.66 m^3/s) Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	466	1340	263	131	246	1680	596	731	1280	953	207
2	288	190	1370	269	338	213	1250	155	1670	296	638	162
3	182	220	853	195	219	344	185	199	1040	347	173	343
4	314	225	180	134	150	140	123	311	841	153	190	487
5	176	748	324	343	451	126	112	197	965	142	443	170
6	288	492	635	1000	176	387	103	391	183	388	798	158
7	223	401	119	1870	493	145	94	342	227	505	818	252
8	190	548	316	1000	145	1260	784	579	372	264	179	595
9	352	169	185	2000	373	672	2200	171	297	1040	895	408
10	209	233	114	500	226	1370	1120	153	1240	870	1680	290
11	415	211	280	300	144	2810	167	148	1940	169	1990	345
12	181	336	139	200	874	3040	812	1110	1130	941	1670	163
13	171	316	314	600	786	1290	1410	1270	178	2300	1260	290
14	311	169	138	163	456	205	983	840	969	2400	740	792
15	498	486	248	323	143	418	388	658	1340	1330	199	1090
16	181	153	211	312	252	274	919	184	280	215	504	857
17	234	747	1150	199	709	449	510	397	445	494	898	719
18	435	332	1630	136	297	464	156	1320	231	161	1480	563
19	177	368	1060	221	152	325	393	646	591	253	915	235
20	230	350	520	214	375	436	1790	162	162	1130	291	262
21	199	503	150	433	398	136	847	494	402	1580	295	374
22	250	455	282	427	144	440	2130	767	1270	2120	161	460
23	286	127	201	166	1260	290	2630	166	1580	2060	438	166
24	399	1050	147	355	769	127	1170	1960	957	1340	1100	159
25	629	1280	282	141	472	340	188	2540	1060	255	703	192
26	183	1350	145	128	353	505	2150	4600	1100	1860	816	162
27	248	611	286	305	514	712	2760	4620	189	2040	1740	280
28	211	297	144	452	571	162	2390	2010	1140	2010	1510	512
29	176	179	182	408	149	443	2590	731	2260	2700	202	208
30	260	106	282	150	---	490	1840	161	1960	3100	161	268
31	238	---	214	292	---	722	---	169	---	1620	252	---
TOTAL	8310	13118	13441	13499	11520	18981	33874	28047	26750	35363	24092	11169
MEAN	268	437	434	435	397	612	1129	905	892	1141	777	372
MAX	629	1350	1630	2000	1260	3040	2760	4620	2260	3100	1990	1090
MIN	171	106	114	128	131	126	94	148	162	142	161	158
AC-FT	16480	26020	26660	26780	22850	37650	67190	55630	53060	70140	47790	22150

CAL YR 1975 TOTAL 483755 MEAN 1325 MAX 7350 MIN 103 AC-FT 959500
WTR YR 1976 TOTAL 238164 MEAN 651 MAX 4620 MIN 94 AC-FT 472400

07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1953, 1955, 1961-63, November 1975 to September 1976.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to September 1948, March 1955 to September 1955, November 1960 to September 1963.
WATER TEMPERATURE: October 1947 to September 1948, March 1955 to September 1955, November 1960 to September 1963.
TURBIDITY: March 1955 to September 1955.

REMARKS.--Samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

COOPERATION.--Samples were collected by U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV												
05...	1028	9740	1330	748	30	7.9	18.0	3	9.5	102	8	--
DEC												
03...	1028	9740	1330	853	750	7.2	13.0	5	10.6	104	4	12
JAN												
15...	1028	9740	--	323	--	8.3	11.0	2	--	--	4	--
FEB												
18...	1028	9740	1300	297	28	7.5	12.5	2	10.5	102	<4	11
MAR												
17...	1028	9740	1545	449	36	7.5	16.0	2	9.6	101	30	--
APR												
21...	1028	9740	1400	847	37	6.8	17.0	10	9.2	99	27	11
MAY												
19...	1028	9740	1400	646	41	7.2	24.0	2	8.5	104	8	14
JUN												
16...	1028	9740	1715	280	38	7.9	25.0	2	8.3	102	37	--
JUL												
21...	1028	9740	1530	1580	60	7.6	23.0	2	8.5	101	5	--
AUG												
18...	1028	9740	1530	1480	<50	7.7	21.5	1	8.6	99	7	11
SEP												
22...	1028	9740	1330	460	48	8.1	23.0	1	8.7	105	7	13

07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
05...	3.3	--	.9	2.0	.5	5.0	<.1	21	1.7	<.01	<1
DEC											
03...	3.1	8	1.0	5.0	1.0	3.0	.1	51	.30	.01	--
JAN											
15...	3.0	--	1.0	2.0	.6	11	<.1	36	.20	.01	--
FEB											
18...	3.1	6	.8	2.0	1.2	9.0	.2	305	.60	<.10	<1
MAR											
17...	4.6	--	1.4	3.0	.6	6.0	--	59	.50	<.08	--
APR											
21...	3.6	11	.7	2.0	3.9	8.0	.7	33	<1.0	<.08	--
MAY											
19...	2.6	8	1.0	5.0	1.0	13	.1	749	1.1	<.09	<1
JUN											
16...	3.1	--	.8	2.0	.8	--	<.1	24	1.7	<.08	--
JUL											
21...	2.1	--	.9	1.0	.5	4.0	<.1	33	1.7	<.08	--
AUG											
18...	2.4	11	1.0	3.0	1.0	--	.1	76	1.2	<.08	1
SEP											
22...	2.7	13	1.0	<5.0	1.0	6.0	.3	44	.70	<.09	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV											
05...	1	2	3	300	5	--	--	3	--	<1	10
DEC											
03...	--	--	--	200	--	120	--	--	--	--	--
JAN											
15...	--	--	--	100	--	200	--	--	--	--	--
FEB											
18...	<1	1	1	100	3	67	--	<1	--	<1	2
MAR											
17...	--	--	--	200	--	47	--	--	--	--	--
APR											
21...	--	--	--	100	--	35	--	--	--	--	--
MAY											
19...	1	7	4	200	7	65	<.5	3	2	<1	7
JUN											
16...	--	--	--	100	--	47	--	--	--	--	--
JUL											
21...	--	--	--	<100	--	2	--	--	--	--	--
AUG											
18...	<1	18	<3	100	10	34	<.5	<3	<2	<1	12
SEP											
22...	--	--	--	100	--	68	--	--	--	--	--

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.

Discharge measurements made at miscellaneous sites during water year 1976

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previous (water years)	Measurements	
					Date	Discharge (cfs)
		Red River Basin				
Mill Creek	Washita River	Lat 34°24'17", long 96°51'47", Johnston County, NW 1/4 NW 1/4 NW 1/4, sec.11, T.2 S., R.4 E., Hydrologic Unit 11130304, at county highway bridge 2.0 mi (3.2 km) west of Mill Creek	46.4	1952-55 1958-63 1965-71	09-02-76	3.24
Mill Creek	Washita River	Lat 34°20'21", long 96°48'45", Johnston County, NE 1/4 NE 1/4 SE 1/4 sec.31, T.2 S., R.5 E., Hydrologic Unit 11130304, at bridge on mining road, 4.0 mi (6.4 km) south of Mill Creek			09-02-76	4.0
Bee Branch	Mill Creek	Lat 34°20'07", long 96°49'35", Johnston County, NE 1/4 NW 1/4 SW 1/4 sec.31, T.2 S., R.5 E., Hydrologic Unit 11130304, at bridge on mining road, 4.3 mi (6.9 km) south of Mill Creek			09-02-76	0.36
Mill Creek	Washita River	Lat 34°15'34", long 96°48'37", Johnston County, NW 1/4 NW 1/4 NW 1/4 sec.32, T.3 S., R.5 E., Hydrologic Unit 11130304, at concrete ford on access road to Daube Ranch, 3.2 mi (5.1 km) northwest of Ravia	89.2	1949-50 1955 1971	09-01-76	10.0
Pennington Creek	Washita River	Lat 34°22'12", long 96°43'20", Johnston County, SW 1/4 SW 1/4 NW 1/2 sec.19, T.2 S., R.6 E., Hydrologic Unit 11130304, above confluence with Spring Creek, 1.75 mi (2.82 km) north of Reagan	44.5		08-31-76	9.68
Spring Creek	Pennington Creek	Lat 34°22'15", long 96°43'05", Johnston County, NW 1/4 SE 1/4 NW 1/4 sec.19, T.2 S., R.6 E., Hydrologic Unit 11130304, above confluence with Pennington Creek, 1.75 mi (2.82 km) north of Reagan	19.6		08-31-76	8.20
Pennington Creek	Washita River	Lat 34°17'19", long 96°41'57", Johnston County, SE 1/4 SE 1/4 SW 1/4 sec.17, T.3 S., R.6 E., Hydrologic Unit 11130304, at Rainbow Falls, 3.4 mi (5.5 km) south of Reagan			08-31-76	23.3
Blue River	Red River	Lat 34°35'54", long 96°25'08", Pontotoc County, NW 1/4 NW 1/4 NW 1/4 sec.5, T.2 S., R.7 E., Hydrologic Unit 11140102, at upstream side of road crossing, 1.7 mi (2.7 km) southeast of Connerville	151		08-24-76	30.3
Blue River	Red River	Lat 34°18'35", long 96°34'29", Pontotoc County, SW 1/4 NW 1/4 SE 1/4 sec.9, T.3 S., R.7 E., Hydrologic Unit 11140102, on Pexton Ranch, 7 mi (11 km) southeast of Reagan	190		08-25-76	37.2
Mill Creek tributary	Mill Creek	Lat 34°36'07", long 96°39'46", Pontotoc County, SE 1/4 SE 1/4 NW 1/4 sec.34, T.1 N., R.6 E., Hydrologic Unit 11140104, at bridge on road to Byrds Mill Spring, 1.8 mi (2.9 km) southwest of Fittstown			08-23-76	.07
Sheep Creek Spring	Clear Boggy Creek	Lat 34°34'18", long 96°38'49", Pontotoc County, SW 1/4 SW 1/4 NW 1/2 sec.11, T.1 N., R.6 E., Hydrologic Unit 11140104, at recreation lodge, 2.9 mi (4.7 km) southwest of Fittstown			08-24-76	2.41
Shady Spring	Sheep Creek	Lat 34°34'37", long 96°38'12", Pontotoc County, NW 1/4 NE 1/4 NE 1/4 sec.11, T.1 N., R.6 E., Hydrologic Unit 11140104, at ranch residence, 2.3 mi (3.7 km) south of Fittstown			08-24-76	0.04

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations.

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		Red River Basin					
07300150	Bear Creek near Vinson, Okla.	Lat 34°54'10", long 99°58'50", in NW 1/4 NE 1/4 sec.19, T.5 N., R.26 W., Harmon County, at bridge on State Highway 9, 6.9 mi (11.1 km) west of Vinson.	7.24	1964-76	11-01-75	9.99	737
07301480	Short Creek near Sayre, Okla.	Lat 35°18'20", long 99°39'15", in SW 1/4 SE 1/4 sec.29, T.10 N., R.23 W., Beckham County, at county road multi-barrel culvert, 0.9 mi (1.4 km) northwest of Sayre.	9.12	1964-75	unknown	unknown	unknown
07303450	Deer Creek near Plainview, Okla.	Lat 35°02'50", long 99°46'10", in NW 1/4 SE 1/4 sec.31, T.7 N., R.24 W., Greer County, at county road bridge, 3.8 mi (6.1 km) southwest of Plainview.	27.8	1964-75	unknown	unknown	unknown
07312850	Nine Mile Beaver Creek near Elgin, Okla.	Lat 34°46'40", long 98°15'25", in SE 1/4 NW 1/4 sec.33, T.4 N., R.10 W., Comanche County, at multi-barrel culvert on State Highway 17, 2.0 mi (3.2 km) east of Elgin.	6.29	1964-76	07-28-76	2.11	161
†07313600	Cow Creek at Waurika, Okla.	Lat 34°10'55", long 98°00'05", in SE 1/4 NE 1/4 sec.26, T.4 S., R.8 W., Jefferson County, at Chicago, Rock Island and Pacific Railway Co. bridge, near north edge of Waurika.		1967-70† 1971-76	04-17-76	18.85	1,690
07315680	Cottonwood Creek tributary near Loco, Okla.	Lat 34°18'40", long 97°34'00", in SE 1/4 NE 1/4 sec.12, T.3 S., R.4 W., Stephens County, at multi-barrel culvert on State Highway 53, 6.6 mi (10.6 km) southeast of Loco.	1.74	1964-76	03-08-76	7.25	252
07316140	Brier Creek near Powell, Okla.	Lat 33°59'54", long 96°49'35", in NW 1/4 NW 1/4 sec.31, T.6 S., R.5 E., Marshall County, at bridge on State Highway 32, 3.6 mi (5.8 km) northeast of Powell.	12.0	1965-76	06-18-76	13.40	4,160
07329870	Honey Creek near Davis, Okla.	Lat 34°26'50", long 97°07'40", in NW 1/4 NE 1/4 sec.30, T.1 S., R.2 E., Murray County, at bridge on State Highway	18.7	1964-76	04-19-76	11.16	1,850
07331410	Buzzard Creek near Reagan, Okla. (discontinued)	Lat 34°19'50", long 96°39'28", in NE 1/4 NE 1/4 sec.3, T.3 S., R.6 E., Johnson County, at bridge on State Highway 99, 4.0 mi (6.4 km) southeast of Reagan.	4.30	1965-76	unknown	3.96	690
07335310	Rock Creek near Boswell, Okla.	Lat 33°57'57", long 95°52'02", in NE 1/4 NE 1/4 sec.7, T.7 S., R.14 E., Choctaw County, at culvert on State Highway 109, 4.2 mi (6.7 km) south of Boswell.	.94	1965-76		<3.86	<173
†07336000	Tenmile Creek near Miller, Okla.	Lat 34°17'55", long 95°44'40", in NW 1/4 sec.16, T.3 S., R.15 E., Pushmataha County, at county raod bridge, 1.2 mi (1.9 km) south of Miller.	68	1957-70† 1971-76	04-20-76	20.15	5,240
07336520	Frazier Creek near Oleta, Okla.	Lat 34°11'50", long 95°21'00", in NW 1/4 NE 1/4 sec.19, T.4 S., R.19 E., Pushmataha County, at bridge on State Highway 3, 0.5 mi (0.8 km) west of Oleta.	19.4	1965-76	04-20-76	7.60	640
07336785	Bokchito Creek near Garvin, Okla. (discontinued)	Lat 33°53'44", long 94°54'23", in NE 1/4 NW 1/4 sec.4, T.8 S., R.23 E., McCurtain County, at multi-barrel culvert on State Highway 37, 4.5 mi (7.2 km) southeast of Garvin.	2.96	1965-76		5.42	350
07338520	Yanubbee Creek near Broken Bow, Okla.	Lat 34°03'35", long 94°44'22", in NW 1/4 SW 1/4 sec.6, T.6 S., R.25 E., McCurtain County, at bridge on U.S. Highway 259, 2.3 mi (3.7 km) north of Broken Bow.	9.10	1964--6	05-26-76	9.00	780
07338780	Mountain Fork tributary near Smithville, Okla.	Lat 34°29'48", long 94°40'06", in NW 1/4 SE 1/4 sec.3, T.1 S., R.25 E., McCurtain County, at multi-barrel culvert on U.S. Highway 259, 2.5 mi (4.0 km) northwest of Smithville.	.68*	1965-76	05-26-76	3.40	89

† Operated as a continuous-record station.
* Revised.

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

07311500 DEEP RED RUN NEAR RANDLETT, OK (LAT 34 13 15 LONG 98 27 10)

DATE	CODE FOR AGENCY COLLECTING SAMPLE	CODE FOR AGENCY ANALYZING SAMPLE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV 28...	1028	9740	1300	6.3	3500	8.2	11.5	8	11.3	106	62	740
DEC 22...	1028	9740	1300	5.2	3500	8.4	7.0	4	11.6	102	44	840

DATE	TOTAL CALCIUM (CA) (MG/L)	CALCIUM AS CACO3 (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV 28...	190	360	72	420	10	770	.4	2070	.60	.24	3
DEC 22...	200	410	82	--	9.0	850	.4	2190	1.7	.09	--

DATE	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
NOV 28...	>0	9	10	400	50	120	--	10	--	>0	10
DEC 22...	--	--	--	100	--	57	--	--	--	--	--

CADDO COUNTY

351308098341601. LOCAL NUMBER, 09N13W28DDD 1.
LOCATION.--LAT 35 13'08", LONG 098 34'16", HYDROLOGIC UNIT 11130302,
OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--RUSH SPRINGS SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M),
DEPTH 335 FT (102M).
DATUM.--MEASURING POINT: TOP OF CASING 2.00 FT (0.61M) ABOVE LAND-SURFACE DATUM.
REMARKS.--
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, 45.16 FT (13.771M)
BELOW LAND-SURFACE DATUM, NOV. 20, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1975	40.14	APR. 20, 1976	40.66	JUNE 30, 1976	41.14
OCT. 10	40.08	APR. 25	40.71	JULY 5	41.15
OCT. 15	40.13	APR. 30	40.69	JULY 10	41.19
OCT. 20	40.01	MAY 5	40.73	JULY 15	41.24
OCT. 25	40.14	MAY 10	40.73	JULY 20	41.33
NOV. 25	40.08	MAY 15	40.67	JULY 25	41.27
NOV. 30	40.27	MAY 20	40.74	AUG. 20	41.56
DEC. 5	40.22	MAY 25	40.86	AUG. 25	41.74
DEC. 10	40.00	MAY 31	40.80	AUG. 31	41.53
DEC. 20	40.18	JUNE 5	40.92	SEP. 5	41.68
APR. 10, 1976	40.63	JUNE 10	40.92	SEP. 10	41.63
APR. 15	40.71	JUNE 25	41.08	SEP. 15	41.62

WTR YEAR 1976 MAX 41.74 AUG 25, 1976 MIN 40.00 DEC 10, 1975

351959098264502. LOCAL NUMBER, 10N12W23BBC 2.
LOCATION.--LAT 35 19'59", LONG 098 26'45", HYDROLOGIC UNIT 11130302,
OWNER: C.E. SMITH.
AQUIFER.--RUSH SPRINGS SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER
DEPTH 228 FT (69.4M)
DATUM.--MEASURING POINT: TOP OF CASING AT LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1955 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 60.35 FT (18.395M)
BELOW LAND-SURFACE DATUM, DEC. 16, 1955; LOWEST, 89.06 FT (27.145M)
BELOW LAND-SURFACE DATUM, OCT. 5, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 10, 1975	85.51	MAY 5, 1976	81.32	JULY 10, 1976	80.59
OCT. 15	85.50	MAY 10	81.35	JULY 15	80.57
OCT. 20	85.22	MAY 15	82.06	JULY 20	80.57
OCT. 25	85.04	MAY 20	81.95	JULY 25	80.50
OCT. 31	84.93	MAY 25	82.16	AUG. 20	80.72
NOV. 5	85.99	MAY 31	81.99	AUG. 25	83.08
APR. 10, 1976	81.51	JUNE 5	81.98	AUG. 31	83.31
APR. 15	81.40	JUNE 10	81.99	SEP. 5	83.13
APR. 20	81.51	JUNE 25	80.70	SEP. 10	82.79
APR. 25	81.34	JUNE 30	80.59	SEP. 15	83.26
APR. 30	81.28	JULY 5	80.69		

WTR YEAR 1976 MAX 85.99 NOV 5, 1975 MIN 80.50 JULY 25, 1976

CADDO COUNTY--Continued

352423098341701. LOCAL NUMBER, 11N13W21DDD 1.
LOCATION.--LAT 35 24'23", LONG 098 34'17", HYDROLOGIC UNIT 11130302,
OWNER: CADDO ELECTRIC CO-OP.
AQUIFER.--RUSH SPRINGS SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED INDUSTRIAL WELL, DIAMETER
DEPTH
DATUM.--MEASURING POINT: TOP OF CASING 0.70 FT (0.21M) ABOVE LAND-SURFACE
DATUM.
REMARKS.--
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, 67.60 FT (20.604M)
BELOW LAND-SURFACE DATUM, NOV. 15, 1974.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 10, 1975	64.37	DEC. 15, 1975	64.45	MAY 15, 1976	64.56
OCT. 15	64.51	DEC. 20	64.47	MAY 20	64.53
OCT. 20	64.29	APR. 10, 1976	64.48	MAY 25	64.50
OCT. 25	64.48	APR. 15	64.44	MAY 31	64.52
OCT. 31	64.23	APR. 20	64.55	JUNE 5	64.53
NOV. 5	64.31	APR. 25	64.57	JUNE 10	64.43
NOV. 25	64.43	APR. 30	64.50	AUG. 20	65.42
NOV. 30	64.73	MAY 5	64.44	AUG. 25	64.63
DEC. 5	64.62	MAY 10	64.52	AUG. 31	64.71
DEC. 10	64.25				

WTR YEAR 1976 MAX 65.42 AUG 20, 1976 MIN 64.23 OCT 31, 1975

COMANCHE COUNTY

343540098342001. LOCAL NUMBER, 01N13W04BAA 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.--MEASURING POINT: TOP OF CASING 1.8 FT (0.55M) ABOVE LAND-SURFACE
DATUM.
REMARKS.--
PERIOD OF RECORD.--1972 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.03 FT (21.650M)
BELOW LAND-SURFACE DATUM, SEP. 25, 1974; LOWEST, 88.62 FT (27.011M)
BELOW LAND-SURFACE DATUM, MAY 10, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 10, 1975	73.00	JAN. 31, 1976	73.08	MAY 15, 1976	72.69
OCT. 15	73.00	FEB. 5	73.13	MAY 20	72.84
OCT. 20	72.98	FEB. 10	73.07	MAY 25	72.77
OCT. 25	73.03	FEB. 15	73.10	MAY 31	72.71
OCT. 31	73.07	FEB. 20	72.97	JUNE 5	72.96
NOV. 5	73.10	FEB. 25	73.26	JUNE 10	73.08
NOV. 10	73.11	FEB. 29	73.03	JUNE 15	73.35
NOV. 15	73.01	MAR. 5	73.22	JUNE 20	73.36
NOV. 20	73.14	MAR. 10	72.94	JUNE 25	73.08
NOV. 25	73.08	MAR. 15	73.16	JULY 25	73.54
NOV. 30	72.90	MAR. 20	73.09	JULY 31	73.50
DEC. 5	73.15	MAR. 25	72.96	AUG. 5	73.58
DEC. 10	72.98	MAR. 31	73.30	AUG. 10	73.77
DEC. 15	73.10	APR. 5	73.23	AUG. 15	73.69
DEC. 20	73.29	APR. 10	73.26	AUG. 20	73.85
DEC. 25	72.97	APR. 15	73.16	AUG. 25	73.91
DEC. 31	72.92	APR. 20	72.96	SEP. 10	74.43
JAN. 5, 1976	72.87	APR. 25	72.91	SEP. 15	74.34
JAN. 10	73.02	APR. 30	72.90	SEP. 20	74.31
JAN. 15	73.22	MAY 5	72.72	SEP. 25	74.14
JAN. 20	73.27	MAY 10	72.87	SEP. 30	74.20
JAN. 25	73.08				

WTR YEAR 1976 MAX 74.43 SEPT 10, 1976 MIN 72.96 MAY 15, 1976

GRADY COUNTY

344656098031401. LOCAL NUMBER, 04N08W33BBB 1.
LOCATION.--LAT 34 46'56", LONG 098 03'14", HYDROLOGIC UNIT 11130208,
OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--RUSH SPRINGS SANDSTONE.
WELL CHARACTERISTICS.--DRILLED TEST WELL, DIAMETER 6 IN (0.15M), DEPTH,
254 FT (77.4M).
DATUM.--MEASURING POINT: TOP OF CASING 3.35 FT (1.02M) ABOVE LAND-SURFACE
DATUM.
REMARKS.--
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 LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1975	79.55	FEB. 5, 1976	79.38	JUNE 5, 1976	79.67
OCT. 10	79.62	FEB. 10	79.26	JUNE 10	79.60
OCT. 15	79.65	FEB. 15	79.22	JUNE 15	79.70
OCT. 20	79.49	FEB. 20	79.20	JUNE 20	79.77
OCT. 25	79.65	FEB. 25	79.32	JUNE 25	79.73
OCT. 31	79.39	FEB. 29	79.19	JUNE 30	79.77
NOV. 5	79.43	MAR. 5	79.49	JULY 5	79.81
NOV. 10	79.53	MAR. 10	79.24	JULY 10	79.86
NOV. 15	79.28	MAR. 15	79.41	JULY 15	79.89
NOV. 20	79.39	MAR. 20	79.41	JULY 20	79.92
NOV. 25	79.32	MAR. 25	79.24	JULY 25	79.94
NOV. 30	79.56	MAR. 31	79.44	JULY 31	79.98
DEC. 5	79.41	APR. 5	79.40	AUG. 5	79.95
DEC. 10	79.16	APR. 10	79.42	AUG. 10	80.11
DEC. 15	79.36	APR. 15	79.39	AUG. 15	80.11
DEC. 20	79.35	APR. 20	79.43	AUG. 20	80.18
DEC. 25	79.14	APR. 25	79.51	AUG. 25	80.23
DEC. 31	79.07	APR. 30	79.52	AUG. 31	80.20
JAN. 5, 1976	79.22	MAY 5	79.40	SEP. 5	80.25
JAN. 10	79.20	MAY 10	79.51	SEP. 10	80.37
JAN. 15	79.29	MAY 15	79.43	SEP. 15	80.34
JAN. 20	79.39	MAY 20	79.57	SEP. 20	80.41
JAN. 25	79.31	MAY 25	79.55	SEP. 25	80.33
JAN. 31	79.29	MAY 31	79.58	SEP. 30	80.43

WTR YEAR 1976 MAX 80.43 SEPT 30, 1976 MIN 79.07 DEC 31, 1975

PONTOTOC COUNTY

343457096404501. LOCAL NUMBER, 01N06E04CAD 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 707 FT (215M).
DATUM.--MEASURING POINT: BASE OF RECORDER SHELTER AT LAND-SURFACE DATUM.
REMARKS.--
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, 126.05 FT (38.420M)
BELOW LAND-SURFACE DATUM, DEC. 31, 1966.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1975	110.26	JAN. 25, 1976	113.98	JUNE 15, 1976	110.41
OCT. 10	110.54	JAN. 31	114.06	JUNE 20	110.77
OCT. 15	110.86	FEB. 5	114.31	JUNE 25	111.14
OCT. 20	111.16	FEB. 10	114.39	JUNE 30	111.50
OCT. 25	111.48	FEB. 15	114.65	JULY 5	111.61
OCT. 31	111.68	FEB. 20	114.82	JULY 10	111.79
NOV. 5	112.04	FEB. 25	115.05	JULY 15	112.04
NOV. 10	112.28	FEB. 29	115.20	JULY 25	112.60
NOV. 15	112.57	APR. 5	112.76	JULY 31	112.97
NOV. 20	112.77	APR. 10	112.90	AUG. 5	113.35
NOV. 25	112.95	APR. 15	113.04	AUG. 10	113.70
NOV. 30	113.27	APR. 20	112.96	AUG. 15	114.04
DEC. 5	113.35	APR. 25	111.38	AUG. 20	114.38
DEC. 10	113.36	APR. 30	110.38	AUG. 25	114.73
DEC. 15	113.58	MAY 5	109.78	AUG. 31	115.11
DEC. 20	113.83	MAY 10	109.58	SEP. 5	115.41
DEC. 25	113.95	MAY 15	109.38	SEP. 10	115.71
DEC. 31	113.75	MAY 20	109.35	SEP. 15	116.00
JAN. 5, 1976	113.63	MAY 25	109.44	SEP. 20	116.23
JAN. 10	113.55	MAY 31	109.59	SEP. 25	116.44
JAN. 15	113.66	JUNE 5	109.86	SEP. 30	116.72
JAN. 20	113.83	JUNE 10	110.10		

WTR YEAR 1976 MAX 116.72 SEPT 30, 1976 MIN 109.35 MAY 20, 1976

ROGER MILLS COUNTY

354527099470501. LOCAL NUMBER, 15N24W19DDA 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.--MEASURING POINT: TOP OF WOOD RECORDER BASE AT LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1970 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 55.57 FT (16.938M) BELOW LAND-SURFACE DATUM, APR. 10, JUNE 10, 1976; LOWEST, 57.27 FT (17.435M) BELOW LAND-SURFACE DATUM, JUNE 5, 1973.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1975	55.84	FEB. 10, 1976	55.98	JUNE 5, 1976	55.67
OCT. 10	55.92	FEB. 15	55.83	JUNE 10	55.57
OCT. 15	56.04	FEB. 20	55.85	JUNE 15	55.75
OCT. 20	55.86	FEB. 25	55.95	JUNE 20	55.64
OCT. 25	56.07	FEB. 29	55.80	JUNE 25	55.68
OCT. 31	55.75	MAR. 5	56.10	JUNE 30	55.68
NOV. 5	55.89	MAR. 10	55.77	JULY 5	55.66
NOV. 10	56.04	MAR. 15	55.84	JULY 15	55.74
NOV. 15	55.80	MAR. 20	55.84	JULY 20	55.69
NOV. 20	55.98	MAR. 25	55.58	JULY 25	55.65
NOV. 25	55.97	MAR. 31	55.74	JULY 31	55.66
NOV. 30	56.24	APR. 5	55.66	AUG. 5	55.66
DEC. 5	56.14	APR. 10	55.57	AUG. 10	55.69
DEC. 10	55.80	APR. 15	55.67	AUG. 15	55.73
DEC. 15	56.06	APR. 20	55.69	AUG. 20	55.68
DEC. 20	55.97	APR. 25	55.74	AUG. 25	55.69
DEC. 25	55.80	APR. 30	55.68	AUG. 31	55.64
DEC. 31	55.75	MAY 5	55.59	SEP. 5	55.69
JAN. 5, 1976	55.77	MAY 10	55.67	SEP. 10	55.71
JAN. 10	55.96	MAY 15	55.68	SEP. 15	55.72
JAN. 20	55.91	MAY 20	55.62	SEP. 20	55.77
JAN. 25	56.00	MAY 25	55.61	SEP. 25	55.62
JAN. 31	55.90	MAY 31	55.63	SEP. 30	55.70
FEB. 5	55.98				

WTR YEAR 1976 MAX 56.24 NOV 30, 1975 MIN 55.57 JUNE 10, 1976

TILLMAN COUNTY

342815099034401. LOCAL NUMBER, 01S18W14CBB 1.
LOCATION.--LAT 34 28'15", LONG 099 03'44", HYDROLOGIC UNIT 11120303,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 5 IN (0.13M), DEPTH 64 FT (19.5M).
DATUM.--MEASURING POINT: TOP OF CASING ON SOUTH SIDE 2.00 FT (0.61M) ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1970-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 17.59 FT (5.361M) BELOW LAND-SURFACE DATUM, JUNE 23, 1970; LOWEST, 24.79 FT (7.556M) BELOW LAND-SURFACE DATUM, AUG. 30, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	19.38	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

TILLMAN COUNTY--Continued

342752099041201. LOCAL NUMBER, 01S18W15DCC 1.
LOCATION.--LAT 34 27'52", LONG 099 04'12", HYDROLOGIC UNIT 11130203,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 5 IN (0.13M),
DEPTH 63 FT (19.2M).
DATUM.--MEASURING POINT: TOP OF CASING ON WEST SIDE 1.90 FT (0.58M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1970-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 18.17 FT (5.538M)
BELOW LAND-SURFACE DATUM, MAR. 24, 1970; LOWEST, 23.41 FT (7.135M)
BELOW LAND-SSURFACE DATUM, AUG. 30, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	18.94	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

342726099034701. LOCAL NUMBER, 01S18W22ADD 1.
LOCATION.--LAT 34 27'26", LONG 099 03'47", HYDROLOGIC UNIT 11130203,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 5 IN (0.13M),
DEPTH 62 FT (18.9M).
DATUM.--MEASURING POINT: TOP OF CASING ON SOUTH SIDE 1.65 FT (0.50M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1970 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 21.26 FT (6.797M)
BELOW LAND-SURFACE DATUM, NOV. 20, 1975; LOWEST, 24.66 FT (7.516M)
BELOW LAND-SURFACE DATUM, SEPT. 20, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV. 20, 1975	21.26	DEC. 15, 1975	21.37	FEB. 15, 1976	21.62
NOV. 25	21.27	DEC. 20	21.37	FEB. 20	21.62
NOV. 30	21.37	JAN. 31, 1976	21.63	FEB. 25	21.67
DEC. 5	21.35	FEB. 5	21.66	MAR. 1	M
DEC. 10	21.28	FEB. 10	21.63		

M MEASUREMENTS DISCONTINUED.
WTR YEAR 1976 MAX 21.67 FEB 25, 1976 MIN 21.26 NOV 20, 1975

342719099031801. LOCAL NUMBER, 01S18W23BAA 1.
LOCATION.--LAT 34 27'19", LAT 099 03'18", HYDROLOGIC UNIT 11130203,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 5 IN (0.13M),
DEPTH 62 FT (18.9M).
DATUM.--MEASURING POINT: TOP OF CASING ON EAST SIDE 2.00 FT (0.61M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1970-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 20.00 FT (6.096M)
BELOW LAND-SURFACE DATUM, MAR. 24, 1970; LOWEST, 24.10 FT (7.346M)
BELOW LAND-SURFACE DATUM, SEP. 21, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	21.78	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

TILLMAN COUNTY--Continued

342628099034501. LOCAL NUMBER, 01S18W26BBB 1.
LOCATION.--LAT 34 26'28", LONG 099 03'45", HYDROLOGIC UNIT 11130203,
OWNER: BILL PURDY.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 12 IN (0.30M)
DEPTH 55 FT (16.8M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE 1.20 FT (0.37M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 23.30 FT (7.102M)
BELOW LAND-SURFACE DATUM, DEC. 11, 1968; LOWEST, 29.80 FT (9.083M)
BELOW LAND-SURFACE DATUM, AUG. 30, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	23.35	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

342605099045201. LOCAL NUMBER, 01S18W33AAA 1.
LOCATION.--LAT 34 26'05", LONG 099 04'52", HYDROLOGIC UNIT 1113102,
OWNER: HOWARD HALE.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 4 IN (0.36M),
DEPTH 50 FT (15.2M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE ON SOUTH SIDE 1.60 FT
(0.49M) ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 24.25 FT (7.391M)
BELOW LAND-SURFACE DATUM, JAN. 28, 1976; LOWEST, 31.60 FT (9.632M)
BELOW LAND-SURFACE DATUM, NOV. 9, 1971.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	24.25	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

342934099103901. LOCAL NUMBER, 01S19W10BAA 1.
LOCATION.--LAT 34 29'34", LONG 099 10'39", HYDROLOGIC UNIT 11120303,
OWNER: I.W. KINNEY.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 14 IN (0.36M),
DEPTH, 45 FT (13.7M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE ON NORTH SIDE 0.50 FT
(0.15M) ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1949-50, 1952-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 21.11 FT (6.434M)
BELOW LAND-SURFACE DATUM, OCT. 19, 1949; LOWEST, 37.11 FT (11.311M)
BELOW LAND-SURFACE DATUM, JUNE 27, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	29.37	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

TILLMAN COUNTY--Continued

342424099034701. LOCAL NUMBER, 02S18W03DDD 1.
LOCATION.-- 34 24'24", LONG 099 03'47", HYDROLOGIC UNIT 11120303,
OWNER: WILLIAM POTHORST.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 14 IN (0.36M),
DEPTH 61 FT (18.6M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE ON EAST SIDE
0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 32.11 FT (9.787M)
BELOW LAND-SURFACE DATUM, JAN. 27, 1976; LOWEST, 39.32 FT (11.985M)
BELOW LAND-SURFACE DATUM, SEPT. 20, 1968.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 27, 1976	32.11	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

342424099050601. LOCAL NUMBER, 02S18W04DCD 1.
LOCATION.--LAT 34 24'24", LONG 099 05'06", HYDROLOGIC UNIT 11120303,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED PUBLIC SUPPLY WELL, DIAMETER 2 IN (0.05M),
DEPTH 62 FT (18.0M).
DATUM.--MEASURING POINT: TOP OF 2-INCH PIPE 2.5 FT (0.76M) ABOVE
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 47.84 FT (14.582M)
BELOW LAND-SURFACE DATUM, APR. 10, 1969; LOWEST, 49.80 FT (15.179M)
BELOW LAND-SURFACE DATUM, SEPT. 8, 1971.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 27, 1976	A	FEB. 1, 1976	M		

A WELL BEING PUMPED.
M MEASUREMENTS DISCONTINUED.

342449099055201. LOCAL NUMBER, 02S18W05ADD 3.
LOCATION.--LAT 34 24'49", LONG 099 05'52", HYDROLOGIC UNIT 11120303,
OWNER: CITY OF FREDERICK.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED PUBLIC SUPPLY WELL, DIAMETER 2 IN (0.05M),
DEPTH
DATUM.--MEASURING POINT: TOP OF 2-INCH PIPE 1.50 FT (046M) ABOVE
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.87 FT (21.906M)
BELOW LAND-SURFACE DATUM, MAY 9, 1969; LOWEST, 77.56 FT (23.640M)
BELOW LAND-SURFACE DATUM, AUG. 30, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 27, 1976	77.49	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

TILLMAN COUNTY--Continued

342422099052501. LOCAL NUMBER, 02S18W09ABB 1.
LOCATION.--LAT 34 24'22", LONG 099 05'25", HYDROLOGIC UNIT 11120303,
OWNER: RALPH KEITH.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 14 IN (0.36M),
DEPTH 83 FT (25.3M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE ON NORTH SIDE AT
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1968-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 60.15 FT (18.334M)
BELOW LAND-SURFACE DATUM, MAR. 12, 1969; LOWEST, 71.84 FT (21.897M)
BELOW LAND-SURFACE DATUM, SEPT. 20, 1968.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 27, 1976	63.18	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

342255099092801. LOCAL NUMBER, 02S19W14DBD 1.
LOCATION.--LAT 34 22'55", LONG 099 09'28", HYDROLOGIC UNIT 11120303,
OWNER: WALTER RAY.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 14 IN (0.36M),
DEPTH 60 FT (18.3M).
DATUM.--MEASURING POINT: HOLE IN PUMP BASE ON WEST SIDE 2.00 FT (0.61M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1953-63, 1965-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 30.81 FT (9.391M)
BELOW LAND-SURFACE DATUM, MAR. 6, 1962; LOWEST, 38.95 FT (11.872M)
BELOW LAND-SURFACE DATUM, JAN. 14, 1965.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 27, 1976	33.30	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

343028099012501. LOCAL NUMBER, 01N17W31DCD 1
LOCATION.--LAT 34 30'28", LONG 099 01'25", HYDROLOGIC UNIT 11130203,
OWNER: M.H. SWARTZ.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED DOMESTIC WELL, DIAMETER 6 IN (0.15M),
DEPTH 39 FT (11.8M).
DATUM.--MEASURING POINT: TOP OF CASING ON WEST SIDE 0.50 FT (0.15M) ABOVE
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1952-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 19.07 FT (5.813M)
BELOW LAND-SURFACE DATUM, SEPT. 30, 1957; LOWEST, 34.90 FT (10638M)
BELOW LAND-SURFACE DATUM, AUG. 16, 1954.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	29.25	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

TILLMAN COUNTY--Continued

343514099025501. LOCAL NUMBER, 01N18W01CBA 1.
LOCATION.--LAT 34 35'14", LONG 099 02'55", HYDROLOGIC UNIT 11120303,
OWNER: JAMES RIGGS.
AQUIFER.--ALLUVIUM.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 16 IN (0.41M),
DEPTH, 39 FT (11.8M).
DATUM.--MEASURING POINT: TOP OF HOLE IN PUMP BASE ON NORTH SIDE AT
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1953-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 5.90 FT (1.798M)
BELOW LAND-SURFACE DATUM, JUNE 20, 1961; LOWEST, 15.79 FT (4.813M)
BELOW LAND-SURFACE DATUM, SEPT. 8, 1971.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	12.14	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

343140099092601. LOCAL NUMBER, 01N19W25BCC 1.
LOCATION.--LAT 34 31'40", LONG 099 09'26", HYDROLOGIC UNIT 11120303,
OWNER: EUGENE YOUNG.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED DOMESTIC WELL, DIAMETER 6 IN (0.15M),
DEPTH 54 FT (16.5M).
DATUM.--MEASURING POINT: TOP OF CASING ON SOUTH SIDE 1.50 FT (0.46M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1952-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 16.00 FT (4.877M)
BELOW LAND-SURFACE DATUM, JULY 22, 1958; LOWEST, 34.90 FT (10.638M)
BELOW LAND-SURFACE DATUM, AUG. 16, 1954.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	K	FEB. 1, 1976	M		

K OBSTRUCTION IN WELL ABOVE WATER SURFACE.
M MEASUREMENTS DISCONTINUED.

343118099102201. LOCAL NUMBER, 01N19W35BBB 1.
LOCATION.--LAT 34 31'18", LONG 099 10'22", HYDROLOGIC UNIT 11120303,
OWNER: T.G. JENNINGS, JR.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED DOMESTIC WELL, DIAMETER 6 IN (0.15M),
DEPTH
DATUM.--MEASURING POINT: TOP OF WOOD FLOOR ON NORTH SIDE 0.30 FT (0.09M)
ABOVE LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1967-72, 1976.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 25.98 FT (7.919M)
BELOW LAND-SURFACE DATUM, FEB. 17, 1967; LOWEST, 31.00 FT (9.449M)
BELOW LAND-SURFACE DATUM, NOV. 27, 1972.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 28, 1976	26.52	FEB. 1, 1976	M		

M MEASUREMENTS DISCONTINUED.

WASHITA COUNTY

352125099102901. LOCAL NUMBER, 10N19W11DAA 1.
LOCATION.--LAT 35 21'25", LONG 099 10'29", HYDROLOGIC UNIT 11120302,
OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--ELK CITY SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M),
DEPTH 220 FT (67.1M).
DATUM.--MEASURING POINT: TOP OF CASING 2.20 FT (0.67M) ABOVE
LAND-SURFACE DATUM.
REMARKS.--
PERIOD OF RECORD.--1961 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 15.92 FT (4.852 M),
BELOW LAND-SURFACE DATUM AUG. 25, 1975;
LOWEST, 25.17 FT (7.672M) BELOW LAND-SURFACE DATUM, MAR. 31, 1968.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1975	16.43	JAN. 31, 1976	17.46	JUNE 5, 1976	17.66
OCT. 25	16.99	FEB. 15	17.42	JUNE 10	17.49
OCT. 31	16.65	FEB. 20	17.52	JUNE 15	17.75
NOV. 5	16.83	FEB. 25	17.56	JUNE 20	17.74
NOV. 10	16.99	MAR. 10	17.52	JUNE 25	17.79
NOV. 15	16.78	MAR. 15	17.81	JUNE 30	17.90
NOV. 20	17.01	MAR. 20	17.92	JULY 5	17.95
NOV. 25	16.89	APR. 10	17.84	JULY 10	18.19
NOV. 30	17.36	APR. 15	17.77	JULY 15	18.21
DEC. 5	17.18	APR. 20	17.76	AUG. 20	16.82
DEC. 10	16.87	APR. 25	17.82	AUG. 25	16.94
DEC. 15	17.25	APR. 30	17.71	AUG. 31	16.97
DEC. 20	17.28	MAY 5	17.46	SEP. 5	16.93
DEC. 25	16.97	MAY 10	17.63	SEP. 10	17.11
DEC. 31	16.86	MAY 15	17.61	SEP. 15	17.15
JAN. 15, 1976	17.38	MAY 20	17.61	SEP. 20	17.32
JAN. 20	17.58	MAY 25	17.63	SEP. 25	17.31
JAN. 25	17.48	MAY 31	17.54	SEP. 30	17.36

WTR YEAR 1976 MAX 18.21 JULY 15, 1976 MIN 16.43 OCT 5, 1975

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

STATION NUMBER	GEOLOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH (FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	TURBIDITY (NTU)	HARDNESS (CA,MG) (MG/L)
BRYAN COUNTY											
340708096004301	218ALRS	75-10-16	0945	--	1120	9.2	18.0	--	--	--	--
	218ALRS	76-03-30	1330	--	830	--	18.0	--	--	--	--
340008096041501	218ALRS	75-10-16	1430	--	1120	9.3	22.0	--	--	--	--
CARTER COUNTY											
370014096163401	112ALVM	76-05-19	1100	--	995	7.1	17.0	--	1	--	420
CHOCTAW COUNTY											
340120095522002	--	75-10-17	0915	--	630	6.4	14.0	--	--	--	--
340055095311501	--	75-10-22	0930	--	560	6.7	21.0	--	--	--	--
	218ALRS	76-03-30	1000	--	580	--	18.0	--	--	--	--
340115095155001	--	75-10-22	1430	--	410	6.8	24.0	--	--	--	--
GARVIN COUNTY											
344818096595401	--	76-03-04	--	70	392	7.7	--	--	--	--	140
LOVE COUNTY											
335600097565003	218ALRS	75-10-14	1615	--	790	8.5	24.0	--	--	--	--
	218ALRS	76-03-30	1615	--	840	--	18.0	--	--	--	--
McCURTAIN COUNTY											
340010095015001	--	75-10-23	1015	--	49	4.9	20.0	--	--	--	--
	218ALRS	76-03-30	0830	--	28	--	14.0	--	--	--	--
340005094414001	--	75-10-23	1515	--	30	5.0	21.0	--	--	--	--
MARSHALL COUNTY											
341220096531501	--	75-10-15	1315	--	580	6.8	19.0	--	--	--	--
340002096432602	218ALRS	75-10-15	1435	--	880	8.8	20.0	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	BROMIDE (BR) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
BRYAN COUNTY										
340708096004301	75-10-16	--	--	.3	--	--	--	--	--	--
	76-03-30	--	--	--	--	--	--	740	--	--
340008096041501	75-10-16	--	--	1.3	--	--	--	--	--	--
CARTER COUNTY										
370014096163401	76-05-19	180	47	.2	--	--	616	--	--	--
CHOCTAW COUNTY										
340120095522002	75-10-17	--	--	.1	--	--	--	--	--	--
340055095311501	75-10-22	--	--	.2	--	--	--	--	--	--
	76-03-30	--	--	--	--	--	--	600	--	--
340115095155001	75-10-22	--	--	.1	--	--	--	--	--	--
GARVIN COUNTY										
344818096595401	76-03-04	16	18	--	--	--	316	--	--	.43
LOVE COUNTY										
335600097565003	75-10-14	--	--	.4	--	--	--	--	--	--
	76-03-30	--	--	--	--	--	--	750	--	--
McCURTAIN COUNTY										
340010095015001	75-10-23	--	--	.1	--	--	--	--	--	--
	76-03-30	--	--	--	--	--	--	45	--	--
340005094414001	75-10-23	--	--	.1	--	--	--	--	--	--
MARSHALL COUNTY										
341220096531501	75-10-15	--	--	.3	--	--	--	--	--	--
340002096432602	75-10-15	--	--	.3	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
BRYAN COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
CARTER COUNTY												
220	--	--	110	32	48	20	1.0	2.5	240	0	200	31
CHOCTAW COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
GARVIN COUNTY												
0	--	--	38	12	58	46	2.1	2.2	241	0	198	7.7
LOVE COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
McCURTAIN COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
MARSHALL COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

DISSOLVED NITRATE (N) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	TOTAL AMMONIA (NH4) (MG/L)	DISSOLVED AMMONIA (NH4) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)
BRYAN COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	0
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	0
CARTER COUNTY												
16	70	--	--	--	--	--	--	.04	.12	--	--	--
CHOCTAW COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	0
--	--	--	--	--	--	--	--	--	--	--	--	0
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	0
GARVIN COUNTY												
--	--	--	--	.10	--	--	--	.02	--	--	--	--
LOVE COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	1
--	--	--	--	--	--	--	--	--	--	--	--	--
McCURTAIN COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	0
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	0
MARSHALL COUNTY												
--	--	--	--	--	--	--	--	--	--	--	--	1
--	--	--	--	--	--	--	--	--	--	--	--	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

STATION NUMBER	DATE OF SAMPLE	TOTAL BARIUM (BA) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
					BRYAN COUNTY					
340708096004301	75-10-16	--	0	--	--	--	0	--	0	--
	76-03-30	--	--	--	--	--	--	--	--	--
340008096041501	75-10-16	--	0	--	--	--	0	--	0	--
					CARTER COUNTY					
370014096163401	76-05-19	0	--	--	--	0	--	0	--	--
					CHOCTAW COUNTY					
340120095522002	75-10-17	--	0	--	--	--	0	--	0	--
340055095311501	75-10-22	--	100	--	--	--	0	--	4	--
	76-03-30	--	--	--	--	--	--	--	--	--
340115095155001	75-10-22	--	100	--	--	--	0	--	0	--
					GARVIN COUNTY					
344818096595401	76-03-04	--	--	--	--	--	--	--	--	--
					LOVE COUNTY					
335600097565003	75-10-14	--	100	--	--	--	0	--	0	--
	76-03-30	--	--	--	--	--	--	--	--	--
					McCURTAIN COUNTY					
340010095015001	75-10-23	--	100	--	--	--	0	--	4	--
	76-03-30	--	--	--	--	--	--	--	--	--
340005094414001	75-10-23	--	0	--	--	--	1	--	4	--
					MARSHALL COUNTY					
341220096531501	75-10-15	--	100	--	--	--	1	--	0	--
340002096432602	75-10-15	--	0	--	--	--	0	--	0	--

STATION NUMBER	DATE OF SAMPLE	DIS-SOLVED MOLYB-DENUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED TIN (SN) (UG/L)	DIS-SOLVED VANA-DIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)
					BRYAN COUNTY						
340708096004301	75-10-16	--	--	--	--	0	--	--	--	6	--
	76-03-30	--	--	--	--	--	--	--	--	--	<9.3
340008096041501	75-10-16	--	--	--	--	0	--	--	--	20	--
					CARTER COUNTY						
370014096163401	76-05-19	--	--	--	--	--	--	--	1000	--	--
					CHOCTAW COUNTY						
340120095522002	75-10-17	--	--	--	--	0	--	--	--	10	--
340055095311501	75-10-22	--	--	--	--	0	--	--	--	4	--
	76-03-30	--	--	--	--	--	--	--	--	--	8.9
340115095155001	75-10-22	--	--	--	--	0	--	--	--	6	--
					GARVIN COUNTY						
344818096595401	76-03-04	--	--	--	--	--	--	--	--	--	--
					LOVE COUNTY						
335600097565003	75-10-14	--	--	--	--	0	--	--	--	10	--
	76-03-30	--	--	--	--	--	--	--	--	--	<7.4
					McCURTAIN COUNTY						
340010095015001	75-10-23	--	--	--	--	0	--	--	--	30	--
	76-03-30	--	--	--	--	--	--	--	--	--	6.4
340005094414001	75-10-23	--	--	--	--	0	--	--	--	8	--
					MARSHALL COUNTY						
341220096531501	75-10-15	--	--	--	--	0	--	--	--	20	--
340002096432602	75-10-15	--	--	--	--	0	--	--	--	20	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	D.. SOLVED LEAD (PB) (UG/L)	DIS-SOLVED LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL MOLYB-DENUM (MO) (UG/L)
					BRYAN COUNTY							
--	--	0	--	90	--	0	--	--	5	--	.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	2	--	10	--	1	--	--	0	--	.0	--
					CARTER COUNTY							
--	0	--	160	--	0	--	--	30	--	.0	--	--
					CHOCTAW COUNTY							
--	--	3	--	0	--	0	--	--	2	--	.0	--
--	--	3	--	40	--	1	--	--	120	--	.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	0	--	440	--	0	--	--	60	--	.0	--
					GARVIN COUNTY							
--	--	--	--	--	--	--	--	--	--	--	--	--
					LOVE COUNTY							
--	--	4	--	20	--	2	--	--	0	--	.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--
					McCURTAIN COUNTY							
--	--	35	--	20	--	0	--	--	10	--	.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	19	--	0	--	2	--	--	4	--	.0	--
					MARSHALL COUNTY							
--	--	5	--	10	--	0	--	--	0	--	.0	--
--	--	0	--	30	--	0	--	--	0	--	.0	--

DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	TOTAL ORGANIC CARBON (C) (MG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
		BRYAN COUNTY	
--	--	--	--
3.7	3.0	--	--
--	--	--	--
		CARTER COUNTY	
--	--	--	--
		CHOCTAW COUNTY	
--	--	--	--
--	--	--	--
4.5	3.7	--	--
--	--	--	--
		GARVIN COUNTY	
--	--	--	--
		LOVE COUNTY	
--	--	--	--
3.2	2.7	--	--
		McCURTAIN COUNTY	
--	--	--	--
3.2	2.5	--	--
--	--	--	--
		MARSHALL COUNTY	
--	--	--	--
	--	--	--

FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply English units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	*hectares (ha)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	**liters (l)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons (10^6 gal)	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 [(ft^3/s) · d]	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)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (l/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (l/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day (mgal/d)	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	tonnes (t)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p.15, 1972 edition.

**The unit liter is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

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