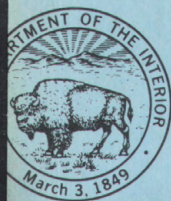
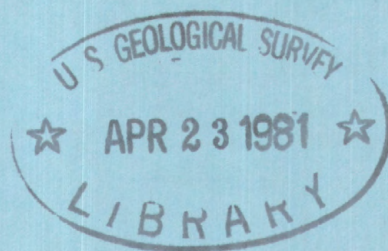


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Water Resources Data for Oklahoma

Volume 1. Arkansas River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-79-1

WATER YEAR 1979

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

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CALENDAR FOR WATER YEAR 1979

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Water Resources Data for Oklahoma

Volume 1. Arkansas River Basin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-79-1

WATER YEAR 1979

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

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Doyle G. Frederick, Acting Director

For information on the water program in Oklahoma write to:

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Oklahoma City, Oklahoma 73102

1981

PREFACE

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

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

Data for Oklahoma are in two volumes as follows:

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

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CONTENTS

	Page
Preface.....	III
List of gaging stations, in downstream order, for which records are published.....	VI
Introduction.....	1
Cooperation.....	1
Hydrologic conditions.....	2
Definition of terms.....	2
Downstream order and station numbers.....	8
Numbering system for wells and miscellaneous sites.....	9
Special networks and programs.....	9
Explanation of stage and water-discharge records.....	10
Collection and computation of data.....	10
Accuracy of field data and computed results.....	12
Other data available.....	12
Explanation of water-quality records.....	13
Collection and examination of data.....	13
Water analysis.....	13
Water temperatures.....	13
Sediment.....	13
Explanation of ground-water level records.....	14
Collection of the data.....	14
Publications on techniques of water-resources investigations.....	15
Gaging station records.....	23
Discharge at crest-stage partial-record stations.....	609
Ground-water records.....	611
Index.....	627

ILLUSTRATIONS

	Page
Figure 1. System for numbering wells and miscellaneous sites.....	9
Figure 2. Discharge during 1979 water year compared with median discharge for period 1941-75 for one representative gaging station.....	17
Figure 3. Specific conductance during 1979 water year compared with average specific conductance for period 1945-75 at one site.....	17
Figure 4. Map of Oklahoma showing locations of continuous-record surface-water stations, water year 1979.....	18
Figure 5. Map of Oklahoma showing locations of partial record stations, water year 1979...	19
Figure 6. Map of Oklahoma showing locations of water-quality stations, water year 1979....	20
Figure 7. Map of Oklahoma showing counties containing observation wells measured more than once a year, and number of wells in each county, water year 1979.....	21
Figure 8. Depth to water in selected wells in Oklahoma.....	22

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

	Page
LOWER MISSISSIPPI RIVER BASIN	
MISSISSIPPI RIVER	
ARKANSAS RIVER BASIN	
Kaw Lake near Ponca City (e).....	23
Arkansas River near Ponca City (dc).....	24
Salt Fork Arkansas River near Winchester (d).....	27
Salt Fork Arkansas River near Alva (c).....	28
Salt Fork Arkansas River near Ingersol (dct).....	29
Great Salt Plains Lake near Jet (e).....	40
Salt Fork Arkansas River near Jet (dct).....	41
Salt Fork Arkansas River at Tonkawa (dct).....	54
Chikaskia River near Blackwell (dc).....	62
Salt Fork Arkansas River near White Eagle (c).....	65
Arkansas River at Ralston (dcmt).....	67
Black Bear Creek at Pawnee (dc).....	83
Cimarron River near Kenton (d).....	86
Cimarron River near Forgan (d).....	87
Cimarron River near Mocane (c).....	88
Cimarron River near Buffalo (dcmts).....	89
Buffalo Creek near Lovedale (dct).....	100
Cimarron River at Freedom (dct).....	111
Cimarron River near Waynoka (dct).....	119
Salt Creek near Okeene (dct).....	127
Cimarron River near Dover (dct).....	138
Cottonwood Creek near Navina (dcmt).....	149
Cottonwood Creek at Seward (dcmt).....	154
Cimarron River near Guthrie (c).....	163
Skeleton Creek near Lovell (dc).....	165
Cimarron River at Perkins (dcmts).....	168
Council Creek near Stillwater (d).....	183
Keystone Lake near Sand Springs (e).....	184
Arkansas River at Tulsa (dcmts).....	185
Polecat Creek:	
Heyburn Lake near Heyburn (e).....	200
Polecat Creek below Heyburn Lake near Heyburn (d).....	201
Arkansas River near Haskell (dcm).....	202
Verdigris River near Lenapah (dc).....	205
Oologah Lake near Oologah (e).....	208
Verdigris River near Oologah (dc).....	209
Hulah Lake near Hulah (e).....	212
Caney River near Hulah (dc).....	213
Little Caney River below Cotton Creek near Copan (dc).....	216
Sand Creek at Okesa (d).....	219
Caney River near Ramona (dct).....	220
Verdigris River near Claremore (d).....	227
Bird Creek:	
Birch Lake near Barnsdall (e).....	230
Birch Creek below Birch Lake near Barnsdall (d).....	231
Bird Creek at Avant (dc).....	232
Candy Creek near Wolco (d).....	235
Hominy Creek near Skiatook (d).....	236
Bird Creek near Sperry (dct).....	237
Bird Creek near Catoosa (c).....	238
Bird Creek at Catoosa (c).....	241
Verdigris River near Inola (cmts).....	243
Neosho River near Commerce (dc).....	250
Spring River near Quapaw (dc).....	253
Elk River near Tiff City, MO (d).....	256
Lake O' The Cherokees at Langley (e).....	257
Neosho River near Langley (dc).....	258
Big Cabin Creek near Big Cabin (d).....	261
Spavinaw Creek near Sycamore (d).....	262
Lake Hudson near Locust Grove (e).....	263
Neosho River near Chouteau (dc).....	264
Fort Gibson Lake near Fort Gibson (e).....	267
Neosho River below Fort Gibson Lake near Fort Gibson (dcmts).....	268
Arkansas River near Muskogee (c).....	275
Illinois River near Watts (dc).....	277
Flint Creek near Kansas (c).....	280
Illinois River near Tahlequah (dc).....	283
Baron Fork at Eldon (dc).....	286
Tenkiller Ferry Lake near Gore (e).....	289
Illinois River near Gore (dc).....	290
Canadian River:	
Deer Creek at Hydro (dcmt).....	294
Canadian River at Bridgeport (dct).....	300
Canadian River at Purcell (c).....	309
Walnut Creek at Purcell (dc).....	311
Little River:	
Lake Thunderbird near Norman (ec).....	312
Little River below Lake Thunderbird near Norman (dc).....	315

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

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

	Page
LOWER MISSISSIPPI RIVER BASIN	
MISSISSIPPI RIVER--Continued	
ARKANSAS RIVER BASIN--Continued	
Little River--Continued	
Little River near Tecumseh (d).....	318
Little River near Sasakwa (dct).....	319
Canadian River at Calvin (dcmts).....	326
Gaines Creek:	
Brushy Creek near Haileyville (dc).....	337
Peaceable Creek near Haileyville (dc).....	345
Jones Creek:	
Blue Creek:	
Blue Creek Tributary near Blocker (c).....	355
Blue Creek near Blocker (dcbt).....	360
Mathuldy Creek near Crowder (ct).....	366
Beaver River near Guymon (dcmt).....	371
Beaver River near Hooker (ct).....	374
Optima Lake near Hardesty (e).....	375
Beaver River near Hardesty (d).....	376
Beaver River at Beaver (dcbmts).....	377
Clear Creek near Elmwood (d).....	386
North Canadian River:	
Fort Supply Lake near Fort Supply (e).....	387
Wolf Creek near Fort Supply (d).....	388
North Canadian River at Woodward (dcbmts).....	389
North Canadian River near Seiling (dcs).....	399
Canton Lake near Canton (ec).....	402
North Canadian River at Canton (dc).....	405
North Canadian River near El Reno (dc).....	408
Lake Hefner Canal near Oklahoma City (d).....	411
Lake Overholser near Oklahoma City (e).....	412
North Canadian River below Lake Overholster near Oklahoma City (d).....	413
North Canadian River near Harrah (dcbmt).....	414
North Canadian River near Wetumka (dcbmts).....	429
Deep Fork near Arcadia (dct).....	442
Dry Creek near Kendrick (d).....	453
Deep Fork near Beggs (dcbmts).....	454
Eufaula Lake near Broken (e).....	466
Canadian River near Whitefield (dcbmts).....	467
Taloka Creek at Stigler (ct).....	482
Taloka Creek Tributary near Stigler (ct).....	488
Taloka Creek near Stigler (dcs).....	491
Robert S. Kerr Lock and Dam (Arkansas River) near Sallisaw (c).....	498
Cache Creek near Spiro	
Coal Creek near Spiro (dcts).....	501
Poteau River near Heavener (c).....	510
Fourche Maline near Wilburton (dct).....	512
Fourche Maline near Red Oak (dc).....	522
Red Oak Creek near Red Oak (dc).....	525
Wister Lake near Wister (e).....	534
Poteau River near Wister (dc).....	535
Caston Creek at Wister (dcs).....	538
Brazil Creek near Red Oak (c).....	547
Rock Creek near Red Oak (c).....	552
Brazil Creek near Walls (dc).....	557
James Fork near Hackett, AR (cts).....	564
James Fork near Williams (cs).....	573
Coal Creek:	
Coal Creek Tributary near Bokoshe (cts).....	579
Coal Creek near Panama (cs).....	585
Holi-Tuska Creek near Panama (dcts).....	595
Poteau River near Fort Smith, AR (c).....	605
Lee Creek:	
Little Lee Creek near Short (c).....	607

WATER RESOURCES DATA FOR OKLAHOMA, 1979

Volume 1. Arkansas River Basin

INTRODUCTION

Water resources data for Oklahoma for the 1979 water year are presented in two volumes, appropriately identified by river basins. Data in each volume consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. Volumes 1 and 2 of this report contain discharge records for 140 stations; stage and contents for 26 lakes and reservoirs; water quality for 135 gaging stations, 3 lakes, and 76 wells; and water levels for 48 observation wells. Also included are data for 42 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma. Records are published for the water year, which begins on October 1 and ends on September 30.

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

For water years 1961 through 1974, stream flow 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. The 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-79-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

COOPERATION

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

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

Oklahoma Department of Transportation, Richard A. Ward, director.

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

Oklahoma Geological Survey, Charles J. Mankin, director.

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

Oklahoma Pollution Control Coordinating Board, James F. Lovell, chairman succeeded by
Cliff LeGate, acting chairman; Lawrence R. Edmison, director, Department of Pollution Control.

Assistance in the form of funds or services was given by the following Federal Agencies: Bureau of Land Management, U.S. Department of the Interior; Corps of Engineers, U.S. Army; Federal Emergency Management Agency; Science and Education Administration, U.S. Department of Agriculture; and Water and Power Resources Service, U.S. Department of the Interior.

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

Organizations that supplied data are acknowledged in station descriptions.

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

HYDROLOGIC CONDITIONS

Runoff in streams continued to fall in the first quarter of 1979 water year. Discharge at the index station was in the lower 25 percent quartile during this period. Runoff continued to be below median for January and February. Generally heavy rains in March caused high runoff in streams over most of the State, resulting in peaks for the year at many stations. However, no historical extremes were experienced, during the year. Scattered showers continued over the State during April which kept the runoff at the index station near median. Streamflow was below normal for May except in isolated areas in the northwest and southwest where localized heavy rains caused minor flooding. Heavy rainfall on June 5-8 in the south-central section caused flooding on small streams and isolated minor flooding on major streams. July streamflow was near normal except in the northwest which was above normal. Rainfall occurred over most of the State in August which kept the streamflow above normal for the month. Rainfall for September was not sufficient to keep the streamflow normal over the State, see figure 2. Reservoir contents were near or above average for the entire year.

Water quality, when related to specific conductance at the index station, remained above average through February. This probably was a result of less than median flows. However, in March the unusually high runoff reduced the specific conductance to near or below average where it remained for five months. Beginning in June, the monthly mean specific conductance showed a gradual increase relative to the long-term average to the end of the year, see figure 3.

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

DEFINITION OF TERMS

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

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

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 persence 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 $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

Cubic foot per second (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.

WATER RESOURCES DATA FOR OKLAHOMA, 1979

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

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

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

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

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

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

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

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

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

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

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

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

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

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

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

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

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

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

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

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

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

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

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce 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.

WATER RESOURCES DATA FOR OKLAHOMA, 1979

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

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

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made with 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

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

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

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emerged 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 artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest 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 planimeted. All areas shown are those for the stage when the planimeted map was made.

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

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

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

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

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

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

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

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

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

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

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

WATER RESOURCES DATA FOR OKLAHOMA, 1979

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of a least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material".

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

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 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 figure 1 below.

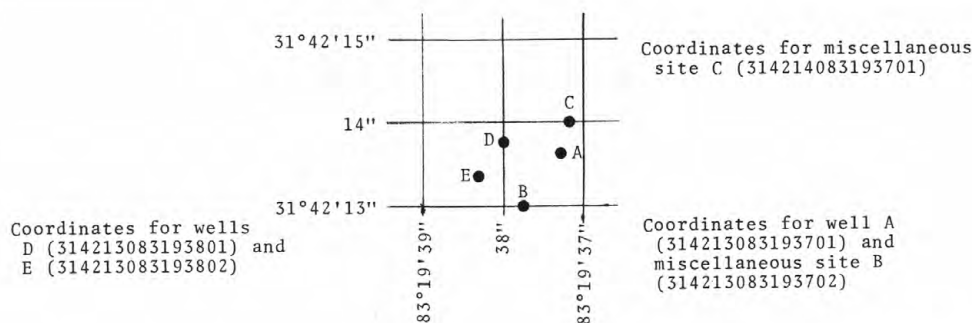


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

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

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

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

WATER RESOURCES DATA FOR OKLAHOMA, 1979

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.

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

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

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5.

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 station gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

WATER RESOURCES DATA FOR OKLAHOMA, 1979

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

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

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

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

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

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

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

Other data available

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

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations. A continuing record station is a specific site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, 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 product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

WATER RESOURCES DATA FOR OKLAHOMA, 1979

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

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

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

WATER RESOURCES DATA FOR OKLAHOMA, 1979

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective January 1978 but 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 Investigations".

- 1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. \$1.60.
- 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. \$0.35.
- 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. \$1.00.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. \$1.00.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.
- 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. \$1.20.
- 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 programed 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. \$2.10.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.35.
- 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. \$1.10.
- 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.

WATER RESOURCES DATA FOR OKLAHOMA, 1979

- 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 A 3, 1972, 40 pages, \$0.90.
- 5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4, 1977, \$20.00.
- 5-A5.* *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5, 1977, 95 pages, \$16.00.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS--TWRI Book 5, Chapter C1, 1969, 58 pages, \$2.10.
- 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 maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2, 1968, 15 pages, \$1.10.

*This publication is available ONLY by mail order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. It is in looseleaf format and is a subscription item. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

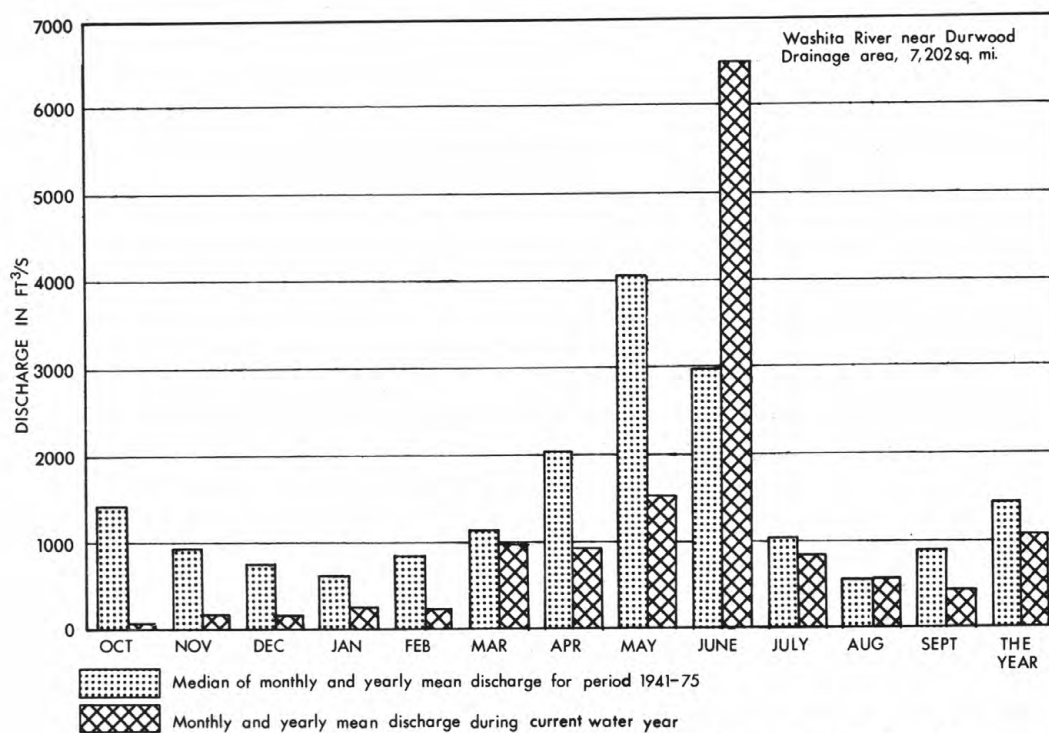


FIGURE 2.--Discharge during 1979 water year compared with median discharge for period 1941-75 for one representative gaging station.

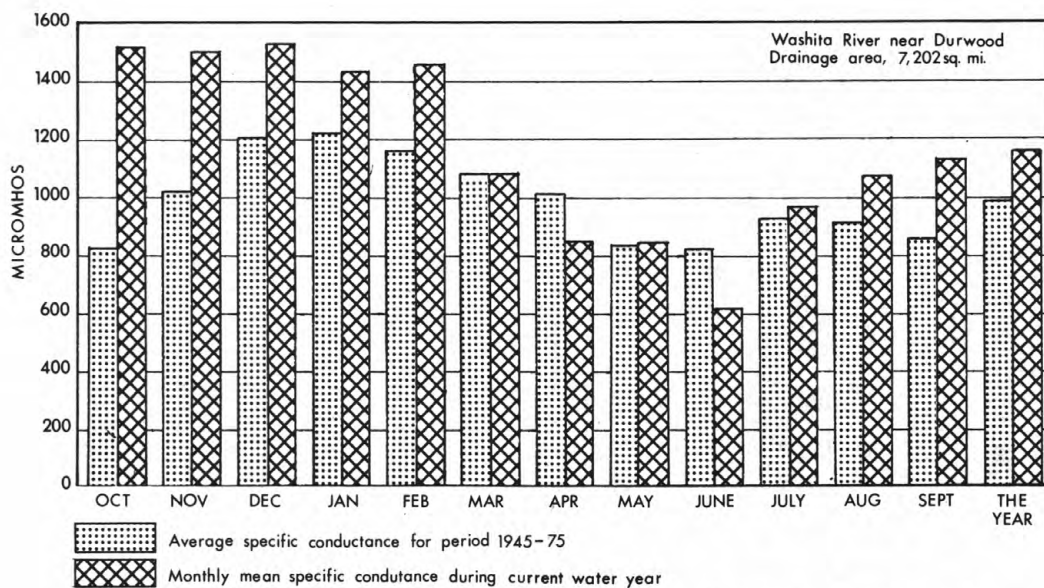


FIGURE 3.--Specific conductance during 1979 water year compared with average specific conductance for period 1945-75 at one site.

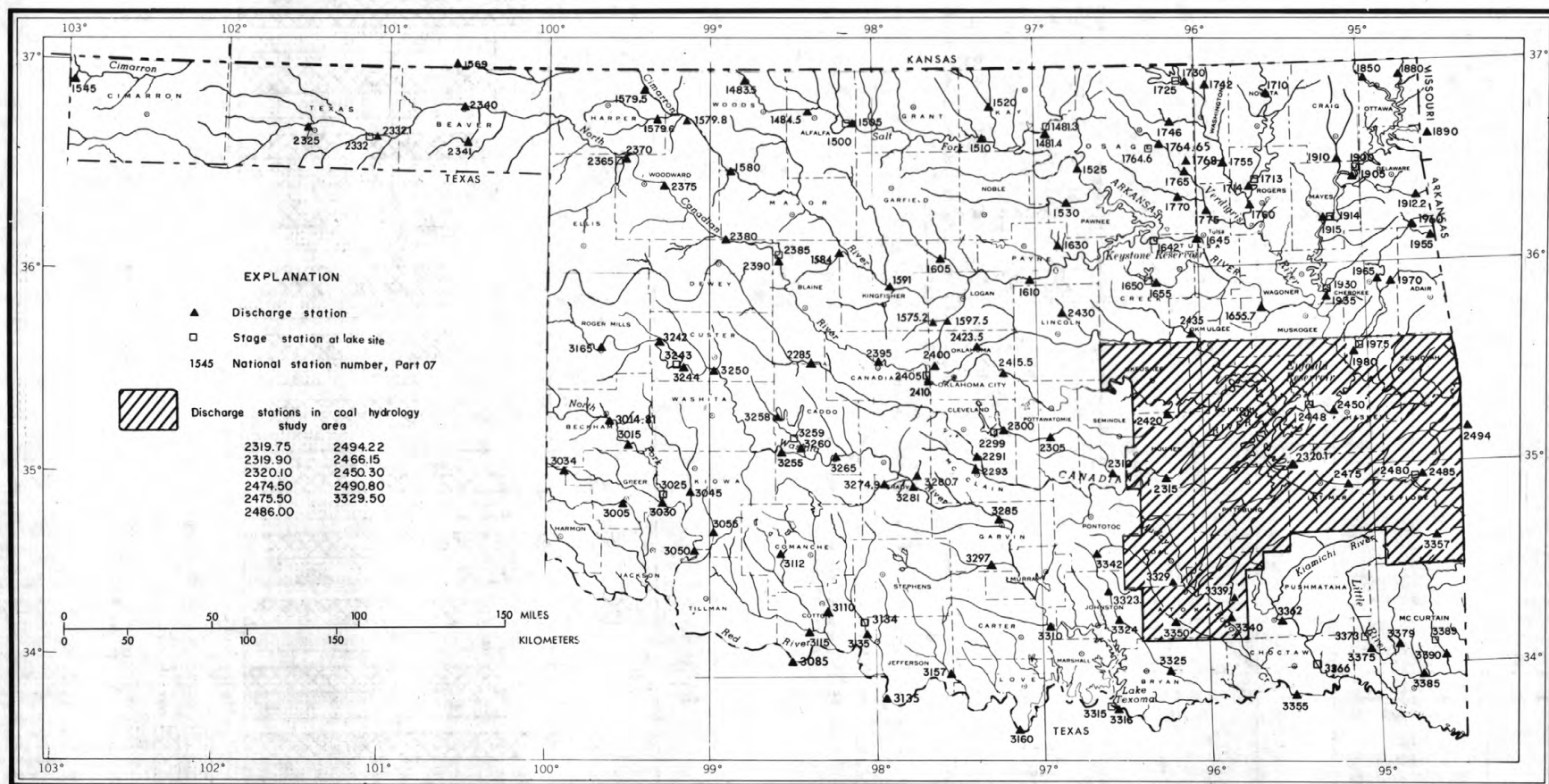


Figure 4.--Locations of continuous-record surface-water stations, water year 1979.

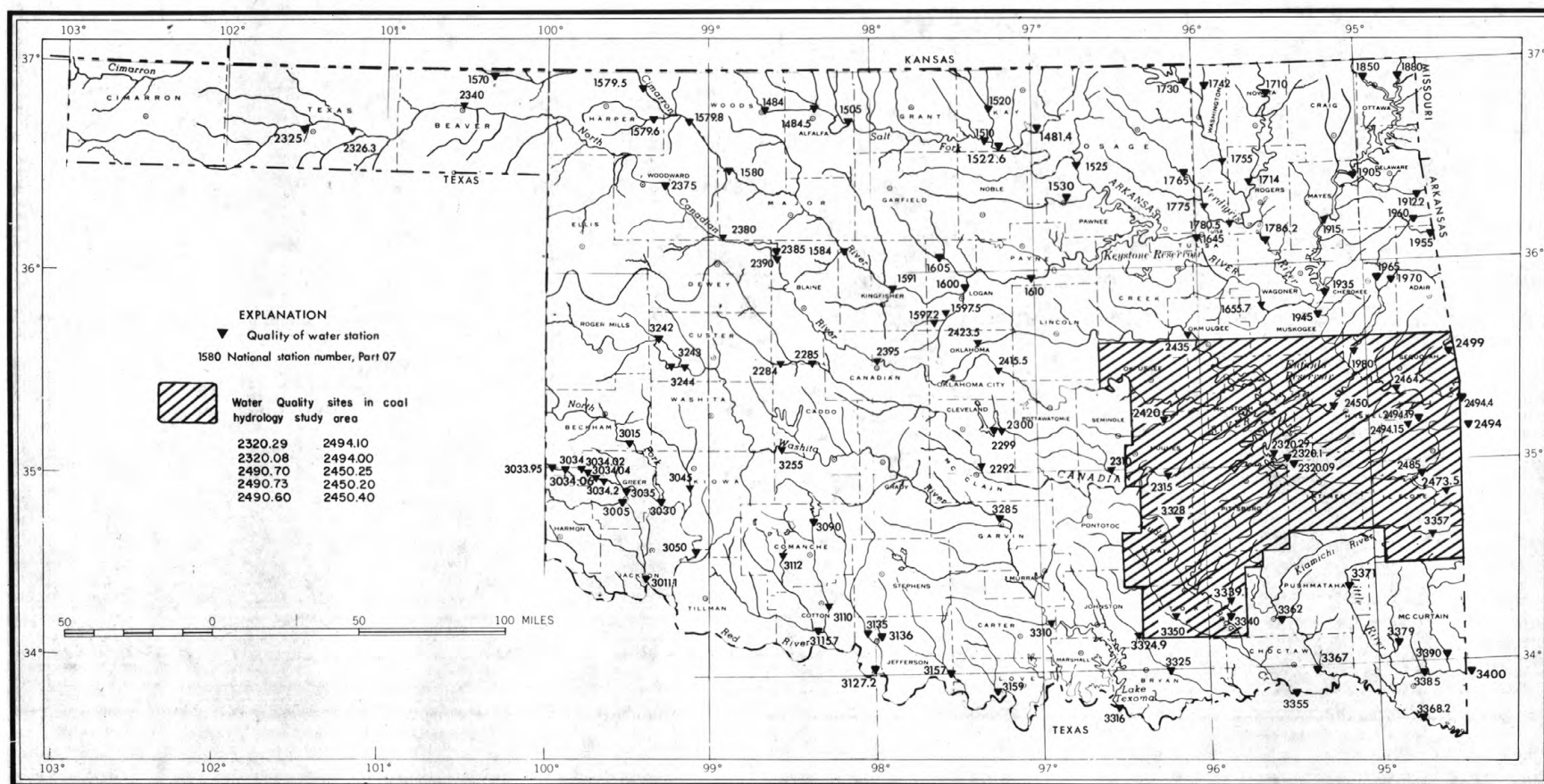


Figure 6.--Locations of water-quality stations, water year 1979.

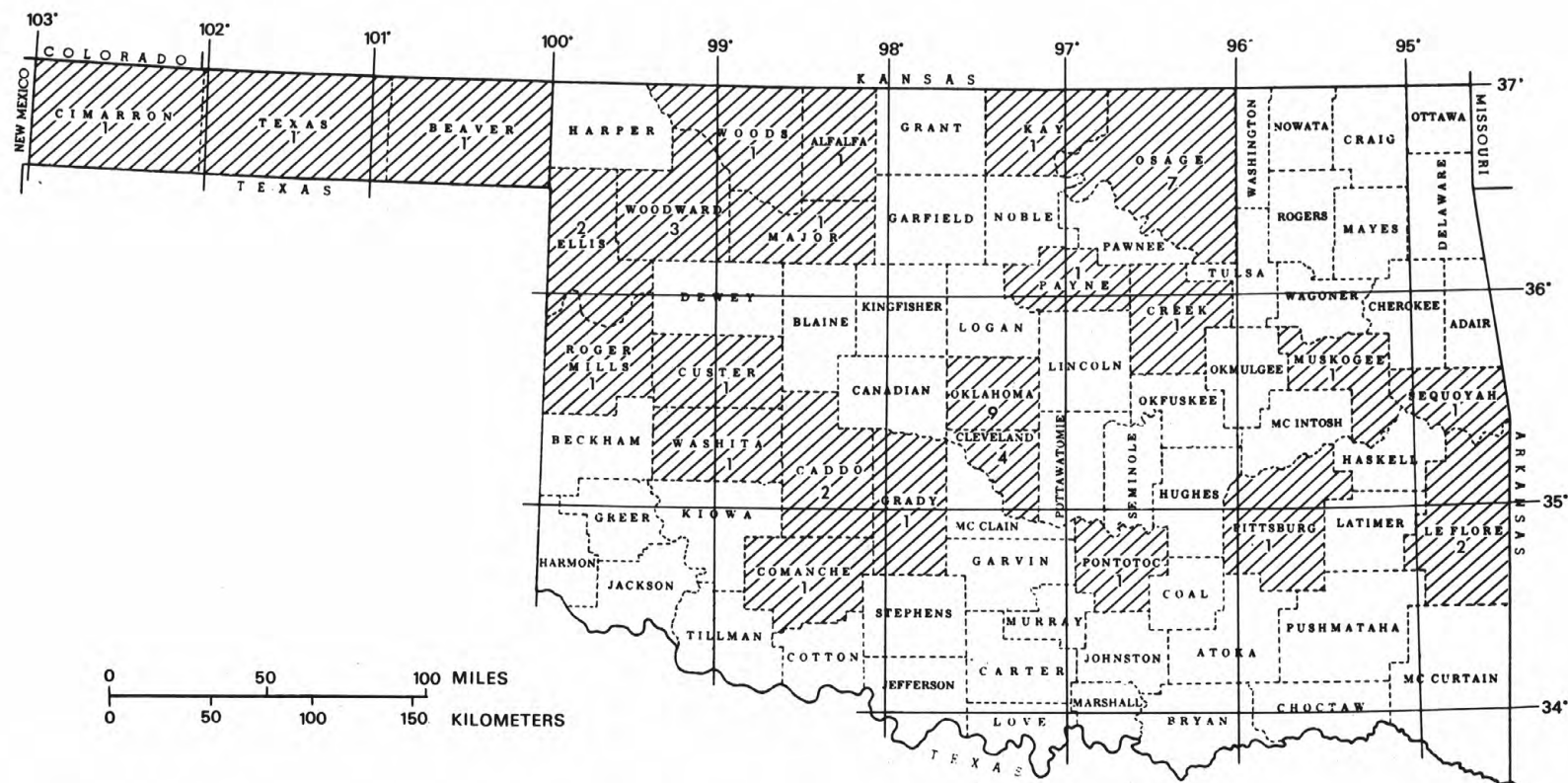


Figure 7.--Counties (hatched) containing observation wells measured more than once a year, and number of wells in each county, water year 1979.

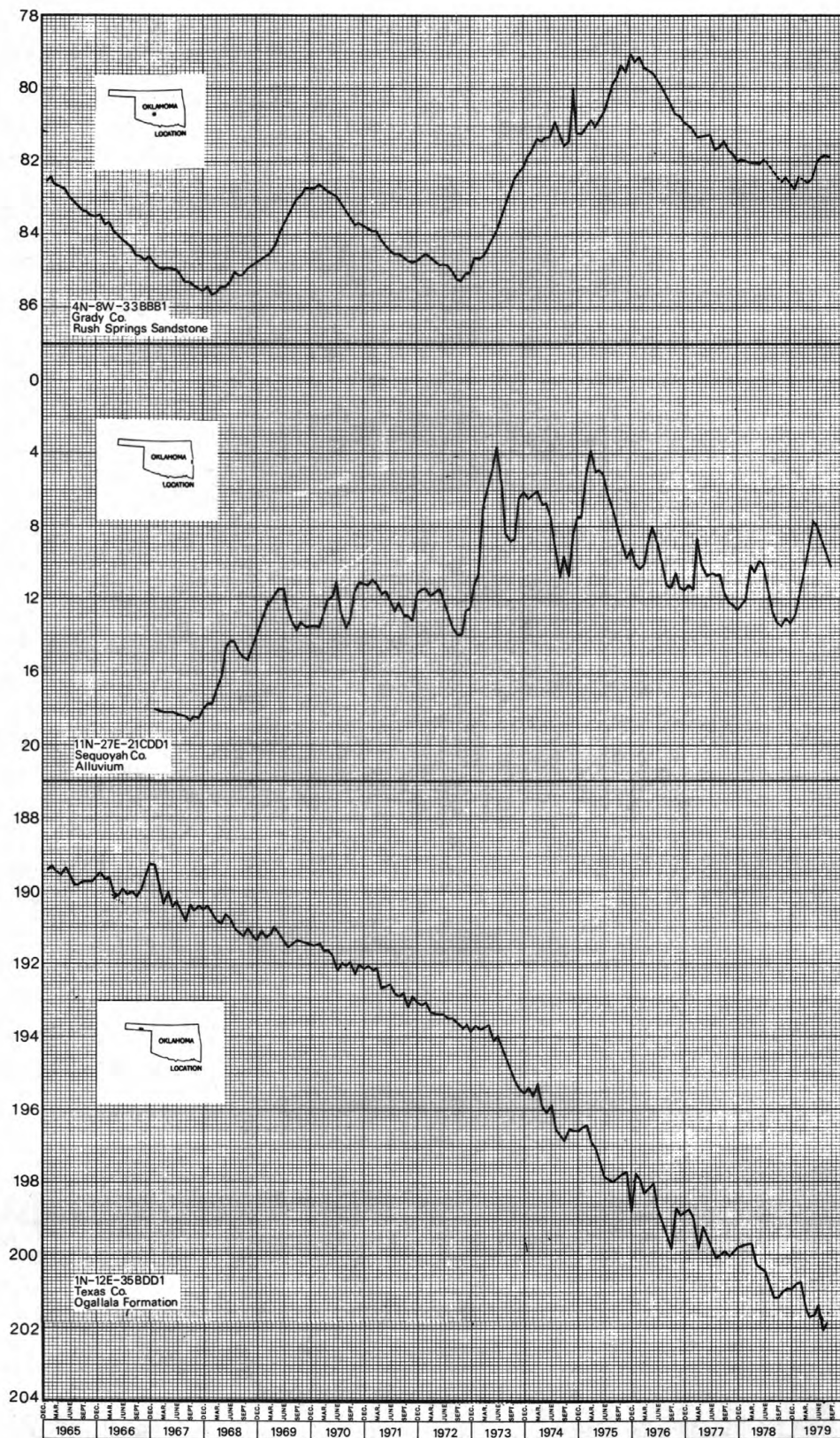


Figure 8.--Depth to water in selected wells in Oklahoma.

ARKANSAS RIVER BASIN

07148130 KAW LAKE NEAR PONCA CITY, OK

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

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

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

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

REMARKS.--Reservoir is formed by a rolled, earthfill dam. Spillway is concrete, gravity ogee-wier type controlled by 8, 50-foot (15.2 m) taintor gates. Outlet works consist of two sluice gates. Regulated storage began April 22, 1976; conservation pool first filled July 6, 1976. Capacity, 1,348,000 acre-ft (1.66 km³), at elevation 1,044.5 ft (318.36 m), top of flood control pool, 428,600 acre-ft (528 hm³), at elevation 1,010.0 ft (307.85 m), top of conservation pool, and 250,700 acre-ft (309 hm³), at elevation 997.5 ft (304.04 m), crest of controlled spillway. Dead storage 85,100 acre-ft (105 hm³) below elevation 978.0 ft (298.09 m). Figures given herein represent total contents. Reservoir is designed for flood control, water quality control, recreation, fish and wildlife, and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 520,800 acre-ft (642 hm³) June 12, 13, elevation, 1,015.04 ft (309.384 m); minimum, 341,300 acre-ft (421 hm³) Nov. 7, 8, elevation, 1,004.44 ft (306.153 m).

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

1,004	334,900	1,012	463,700
1,006	364,300	1,014	500,700
1,009	411,800	1,016	539,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423700	411000	352500	351600	349400	350100	396600	347200	350000	458200	444200	442400
2	423600	396500	352800	351300	349000	351300	385400	347200	347700	455700	443000	441900
3	420200	380600	351900	351000	348800	360900	374000	347400	345600	454100	439200	441400
4	418500	363900	351300	351200	348800	384100	361500	353100	344800	453900	435200	439000
5	418400	349100	352200	351000	348200	394900	356600	360100	345200	453400	430200	435500
6	418000	341400	351500	351000	348200	394900	353100	362800	346200	461900	427900	432600
7	417800	341400	350600	351000	347800	378900	351600	362800	349700	472300	427900	428600
8	417500	341900	349100	350900	347400	368200	349000	361500	353100	480200	427400	428600
9	417700	342200	348100	350700	346900	361000	348400	360600	372000	485600	425900	427800
10	417700	343000	347500	351200	346600	356900	350600	359700	427400	488400	425900	426900
11	417800	343000	347200	351300	346900	352200	352100	355800	492700	490400	426600	426400
12	420000	343300	347700	351300	347200	349500	355700	358000	520800	490400	427400	426100
13	417500	344500	347700	351500	347500	349300	357100	368300	503600	490800	428800	423700
14	417700	345800	348100	351300	348200	348400	355500	371200	481800	492700	431400	422700
15	417800	346500	348400	351200	349700	346900	352400	369500	466400	494000	431900	422400
16	417500	346800	348700	351000	350100	345900	348700	366800	453900	495500	432800	421700
17	417200	346900	348400	351200	351200	346400	347500	363900	445700	495100	434000	421000
18	418200	347800	348500	352800	351600	349400	348500	361000	441600	493200	434800	421000
19	417500	348100	348800	353700	352400	356300	349400	358200	439800	494200	435700	420700
20	417700	348500	349300	353100	353000	380500	350700	355800	437600	490200	435500	420500
21	417700	348400	349500	352200	353600	387400	351200	355700	435300	484600	437800	420500
22	419700	348800	350100	351600	354600	393300	353900	368500	437900	479400	437900	420200
23	417500	349100	350900	351200	355500	414700	354600	373500	437900	474500	437300	420200
24	416700	349400	350400	350000	356100	436400	354300	364600	461200	467200	436200	419900
25	417300	350700	351200	349500	358000	445700	354500	359500	477800	461200	436600	420200
26	417500	351900	350900	349500	357100	448000	353300	359200	479400	453900	435900	419900
27	417800	351900	351000	349700	355200	441400	352100	358200	475400	448200	434800	419500
28	417800	352100	350700	349700	353400	435700	350700	356900	471900	442800	433600	419700
29	417800	352700	351600	349800	---	427900	349800	355400	468300	437600	432600	419700
30	418200	352700	351900	349700	---	419500	348700	354600	463900	436700	431500	419700
31	418400	---	352200	349500	---	409000	---	351800	---	444200	438500	---
MAX	423700	411000	352800	353700	358000	448000	396600	373500	520800	495500	444200	442400
MIN	416700	341400	347200	349500	346600	345900	347500	347200	344600	436700	425900	419500
†	1009.89	1005.22	1005.19	1005.01	1005.27	1008.83	1004.95	1005.16	1012.01	1010.90	1010.57	1009.47
‡	-7,300	-65,700	-500	-2,700	+3,900	+55,600	-60,300	+3,100	+112,100	-19,700	-5,700	-18,800
CAL YR 1978	MAX	531800	MIN	341400	±-74700							
WTR YR 1979	MAX	520800	MIN	341400	±-6000							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07148140 ARKANSAS RIVER NEAR PONCA CITY, OK

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

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Daily discharge computed from releases.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,500 ft³/s (581 m³/s) June 13, no flow May 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	7360	560	280	540	4400	12600	2160	2670	4140	4460	1140
2	1400	8710	560	280	540	1980	12600	2160	2670	4130	4460	1140
3	1400	8580	560	280	540	1880	12600	2160	2670	2970	4460	1140
4	604	8400	560	280	540	1880	10800	2160	1950	2000	4460	1660
5	344	8300	560	280	540	9020	6290	2160	850	2000	4460	2280
6	280	1490	560	280	540	10900	5860	2160	850	2000	2200	2280
7	280	140	560	280	540	10900	5860	3650	850	2000	2200	1820
8	280	140	560	280	540	10900	5860	3840	850	2000	2200	1140
9	280	140	560	280	540	5230	2840	3840	850	2000	2200	1140
10	280	140	560	280	540	4900	2410	3840	2340	2000	1570	1140
11	280	140	309	280	540	4900	2660	3840	9410	2000	300	1140
12	160	140	280	280	540	2920	2660	2160	17100	2000	300	1140
13	140	140	280	280	540	2660	4290	.0	20400	1360	300	800
14	140	274	280	280	540	2660	4440	3760	17000	300	300	580
15	140	280	280	280	540	2660	4440	3840	12900	300	300	580
16	140	291	280	280	540	1530	2350	3840	10200	300	300	580
17	140	280	280	280	540	1340	2160	3840	6960	1290	300	580
18	140	280	280	280	540	1340	2160	3840	5030	3100	300	425
19	140	280	280	908	540	5020	2160	3840	3100	3700	300	290
20	140	280	280	1080	540	8120	2160	3840	3100	4460	755	290
21	140	280	280	1080	540	8340	2160	3840	3100	4460	1140	290
22	140	280	280	1080	1250	8340	2160	5200	2320	4460	1140	290
23	140	280	280	1080	2540	9970	2160	7540	1650	4460	1140	290
24	140	280	280	1080	2640	10200	2160	8000	1800	4460	1140	290
25	140	280	280	1080	2640	10200	2160	3500	4100	4460	1140	290
26	140	280	280	574	4200	10200	2160	2670	5570	4460	1140	290
27	140	280	280	540	4400	10200	2160	2670	6220	4460	1140	290
28	140	280	280	540	4400	12600	2160	2670	5000	4460	1140	290
29	140	540	280	540	---	12600	2160	2670	4140	4460	1140	290
30	140	560	280	540	---	12600	2160	2670	4140	4460	1140	290
31	140	---	280	540	---	12600	---	2670	---	4460	1140	---
TOTAL	9648	49125	11509	15702	33410	212990	128800	105030.0	159790	93110	48665	24185
MEAN	311	1638	371	507	1193	6871	4293	3388	5326	3004	1570	806
MAX	1400	8710	560	1080	4400	12600	12600	8000	20400	4460	4460	2280
MIN	140	140	280	280	540	1340	2160	.00	850	300	300	290
AC-FT	19140	97440	22830	31140	66270	422500	255500	208300	316900	184700	96530	47970
CAL YR 1978	TOTAL	826761.0	MEAN	2265	MAX	10500	MIN	92	AC-FT	1640000		
WTR YR 1979	TOTAL	891964.0	MEAN	2444	MAX	20400	MIN	.00	AC-FT	1769000		

ARKANSAS RIVER BASIN

25

07148140 ARKANSAS RIVER NEAR PONCA CITY, OK--Continued

WATER-QUALITY RECORDS

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

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 18...	0845	140	1000	7.8	13.0	2.0	10.2	99	13	246
NOV 28...	1700	280	700	8.0	9.0	3.0	12.8	113	--	--
DEC 28...	1105	280	1150	8.6	4.0	--	15.2	121	13	337
JAN 29...	1730	540	1650	7.8	.0	2.0	13.4	95	10	--
FEB 08...	1245	540	1650	8.1	.0	4.0	--	--	19	349
MAR 19...	1630	5020	1200	8.1	11.0	40	12.2	114	29	--
APR 24...	0750	2160	500	7.6	15.0	53	10.0	101	20	140
MAY 10...	0745	3840	600	7.5	17.0	--	12.1	124	12	--
JUN 14...	0825	17000	750	7.7	21.5	65	13.8	162	14	171
JUL 24...	1700	4460	625	8.9	29.5	8.0	7.8	106	10	--
AUG 06...	1900	2200	700	9.2	31.5	16	--	--	14	164
SEP 18...	1515	425	725	7.9	27.0	16	7.5	95	10	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT 18...	75	188	21	115	7.8	77	178	.3	2
NOV 28...	--	--	--	--	--	72	207	.4	<1
DEC 28...	100	250	21	145	7.9	88	197	.3	11
JAN 29...	--	--	--	--	--	111	338	.5	8
FEB 08...	101	253	23	210	7.4	--	333	.6	43
MAR 19...	--	--	--	--	--	85	272	.8	195
APR 24...	41	103	--	60	5.7	42	101	.3	61
MAY 10...	--	--	--	--	--	61	134	.2	30
JUN 14...	46	115	--	90	5.8	60	130	.3	115
JUL 24...	--	--	--	--	--	37	--	.2	14
AUG 06...	54	135	--	73	6.9	46	101	.3	25
SEP 18...	--	--	--	--	--	41	154	.4	64

NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
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DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
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[illegible]

ARKANSAS RIVER BASIN

27

07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK

LOCATION.--Lat 36°57'45", long 98°46'55", in NE¼SE¼ sec.26, T.29 N., R.13 W., Woods County, Hydrologic Unit 11060002, near left bank on downstream side of pier of county road bridge, 1 mi (2 km) northeast of Winchester, 2.5 mi (4.0 km) upstream from Greenwood Creek, 4.9 mi (7.9 km) downstream from Yellowstone Creek, 5 mi (8 km) downstream from State line, 19 mi (31 km) northwest of Alva, and at mile 156.2 (251 km).

DRAINAGE AREA.--856 mi² (2,220 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,410.05 ft (429.783 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--20 years, 84.8 ft³/s (2.402 m³/s), 61,440 acre-ft/yr (75.8 hm³/yr).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957 reached a stage of 15.4 ft (4.69 m), from information by county engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft³/s (439 m³/s) at 0700 May 10, gage height, 12.68 ft (3.865 m), no other peak above base of 5,000 ft³/s (142 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.26	.37	.83	1.5	27	48	31	71	5.3	127	2.7
2	.17	.31	.38	.68	2.0	29	49	470	69	5.3	106	26
3	.09	.31	.29	.72	1.9	39	51	302	69	4.0	92	3.6
4	.00	.32	.33	.90	2.0	37	53	126	64	2.7	79	2.7
5	.00	.35	.35	2.4	1.6	36	59	85	62	3.6	67	2.2
6	.00	1.1	.27	2.6	1.9	32	53	65	58	108	60	1.7
7	.00	.52	.20	.86	1.9	28	47	50	51	604	48	1.5
8	.00	.36	.15	.70	1.8	24	45	46	44	220	42	1.3
9	.03	.35	.10	1.1	1.7	22	42	51	137	100	32	1.1
10	.09	.39	.15	1.3	3.5	21	44	10700	178	71	21	.80
11	.04	.47	.25	1.5	9.0	22	51	2110	121	53	16	.69
12	.00	1.0	.50	1.8	7.0	22	50	911	84	34	15	.69
13	.00	.56	1.3	1.0	5.0	19	44	588	74	23	12	.56
14	.00	.61	1.0	.70	6.0	16	38	384	62	18	11	.54
15	.00	.78	.82	.86	4.5	14	38	261	44	20	10	.53
16	.00	.84	.24	1.2	3.5	14	37	186	39	151	9.2	.54
17	.01	.59	.24	2.3	3.2	20	36	158	36	805	7.0	.52
18	.01	.46	.27	2.2	4.0	128	52	144	40	699	5.3	.46
19	.03	.49	2.2	2.6	8.0	383	91	140	34	252	3.6	.45
20	.11	.46	3.6	2.3	12	221	66	147	28	108	3.3	.42
21	.08	.43	1.8	2.1	20	103	53	174	25	76	4.8	.40
22	.01	.61	1.6	1.6	39	640	46	162	21	58	2.2	.38
23	.00	.47	1.8	1.5	76	345	42	130	20	234	1.9	.36
24	.11	.48	2.3	1.3	45	113	39	114	18	966	34	.37
25	.21	.84	1.6	1.8	38	81	36	94	20	2320	106	.36
26	.19	1.9	2.5	2.2	35	68	35	92	18	2330	8.4	.35
27	.24	.44	2.8	1.7	32	61	33	108	15	1200	6.0	.37
28	.24	.35	3.5	1.4	30	60	30	106	13	514	4.5	.35
29	.22	.37	3.3	1.7	---	57	30	89	11	229	3.7	.37
30	.20	.36	3.0	1.5	---	49	31	79	7.6	162	3.0	.36
31	.23	---	.95	1.1	---	46	---	74	---	147	2.7	---
TOTAL	2.36	16.78	38.16	46.45	397.0	2777	1369	18177	1533.6	11522.9	943.6	52.67
MEAN	.076	.56	1.23	1.50	14.2	89.6	45.6	586	51.1	372	30.4	1.76
MAX	.24	1.9	3.6	2.6	76	640	91	10700	178	2330	127	26
MIN	.00	.26	.10	.68	1.5	14	30	31	7.6	2.7	1.9	.35
AC-FT	4.7	33	76	92	787	5510	2720	36050	3040	22860	1870	104
CAL YR 1978	TOTAL	19102.52	MEAN	52.3	MAX	3040	MIN	.00	AC-FT	37890		
WTR YR 1979	TOTAL	36876.52	MEAN	101	MAX	10700	MIN	.00	AC-FT	73140		

ARKANSAS RIVER BASIN

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

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

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

PERIOD OF RECORD.--Water years 1950-54, 1961, 1977 to September 1979 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 11...	0900	.30	2740	7.6	16.0	9.2	99	330
NOV 28...	1415	3.1	2300	8.0	10.0	11.2	104	--
DEC 19...	1215	2.1	2100	8.0	12.0	10.8	107	250
JAN 22...	1300	2.6	2000	7.9	3.5	17.1	137	310
FEB 21...	1150	41	1800	8.4	2.5	14.5	112	230
MAR 19...	1500	109	1800	8.1	14.0	8.1	83	260
APR 11...	1100	60	2120	7.2	14.0	10.1	105	210
MAY 15...	1100	148	2400	7.7	22.0	7.5	90	310
JUN 27...	1200	28	3100	7.9	33.0	5.8	84	300
JUL 17...	1200	682	1550	7.6	26.0	6.5	83	220
AUG 06...	1230	63	1790	7.2	30.0	5.7	79	210
SEP 11...	1000	4.7	2200	7.9	25.0	6.3	78	250

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 11...	120	1100	140	--	--	--	2330
NOV 28...	95	--	140	--	--	--	1800
DEC 19...	99	840	140	--	--	--	--
JAN 22...	93	810	120	--	--	--	--
FEB 21...	140	590	170	1270	1.73	141	--
MAR 19...	89	740	150	1400	1.90	412	--
APR 11...	180	580	300	1480	2.01	240	--
MAY 15...	200	790	320	1920	2.61	767	--
JUN 27...	--	860	430	2180	2.96	165	--
JUL 17...	64	--	110	1090	1.48	2010	--
AUG 06...	150	570	210	1290	1.75	219	--
SEP 11...	120	890	170	1690	2.30	21.4	--

ARKANSAS RIVER BASIN

29

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK

LOCATION.--Lat 36°49'18", long 98°21'35", in SW¼NW¼ sec.14, T.27 N., R.11 W., Alfalfa County, Hydrologic Unit 11060002, on downstream right bank near end of bridge on State Highways 8 and 58, 2.0 mi (3.2 km) upstream from Medicine Lodge River, 2.5 mi (4.0 km) northeast of Ingersoll and at mile 120.3 (193.6 km).

DRAINAGE AREA.--1,140 mi² (2,953 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1961 to September 1962, October 1973 to September 1979 (discontinued).

REVISED RECORDS.--WRD OK-79-1: 1974-75 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,170.30 ft (356.707 m) State Highway Department datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years (water years 1962, 1974-79) 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s), revised, Oct. 12, 1973, gage height, 11.5 ft (3.51 m) from graph based on wire-weight readings; no flow at times during 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,610 ft³/s (244 m³/s) at 1300 May 11, gage height, 10.91 ft (3.325 m), no other peak above base of 5,000 ft³/s (142 m³/s); minimum daily discharge, 0.11 ft³/s (0.003 m³/s) Oct. 16, 17.

REVISIONS.--The maximum discharges for the water years 1974 and 1975 have been revised to 11,300 ft³/s (320 m³/s) Oct. 12, 1973, gage height, 11.5 ft (3.51 m), and 4,380 ft³/s (124 m³/s) June 8, 1975, gage height 9.38 ft (2.859 m), superseding figures published in reports for 1974 and 1975.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.45	1.7	1.1	.72	45	89	38	125	23	219	15
2	.63	.38	1.5	.60	.90	45	83	70	118	21	152	80
3	.56	.40	.70	.80	.86	115	81	471	112	20	124	40
4	.49	.42	.90	1.3	.80	67	83	241	106	18	109	32
5	.47	.44	1.1	2.0	.70	59	80	167	99	19	96	26
6	.40	1.5	1.0	1.6	.90	56	80	114	95	21	87	20
7	.35	.55	.90	1.1	1.0	51	76	89	89	20	79	17
8	.30	.50	.70	.70	.94	47	72	71	86	133	72	15
9	.25	.45	.90	.90	.85	43	68	62	232	107	64	14
10	.23	.50	1.5	1.3	1.9	41	67	1110	512	74	58	13
11	.20	.54	2.0	1.5	4.0	40	76	6550	312	52	55	12
12	.15	1.0	2.5	1.8	3.0	39	71	1910	189	38	51	11
13	.13	.70	3.0	1.4	2.0	38	66	803	137	30	47	9.9
14	.15	.56	2.2	.80	2.5	37	60	608	106	24	45	9.5
15	.13	.86	1.8	1.0	2.2	37	55	489	86	19	51	9.7
16	.11	1.3	1.3	1.4	2.0	37	51	409	72	19	87	9.3
17	.11	1.2	1.1	1.8	1.7	36	50	350	63	483	45	8.9
18	.55	.56	1.0	1.7	2.1	277	49	323	56	415	33	8.8
19	.35	.54	.90	2.0	5.0	154	53	296	51	318	31	8.2
20	.25	.58	.87	1.8	13	172	78	283	46	184	28	8.1
21	.21	.54	1.2	1.7	35	154	80	274	42	134	27	7.9
22	.17	1.2	1.7	1.6	70	862	65	264	39	107	24	7.0
23	.15	1.5	2.5	1.4	125	536	55	246	37	132	24	7.0
24	.20	.80	2.0	1.1	90	271	52	219	34	435	30	6.5
25	.28	1.5	2.2	1.4	70	189	47	190	33	472	50	6.0
26	.25	.80	1.8	1.8	60	153	44	173	30	708	30	5.6
27	.30	.50	2.0	1.6	54	132	41	162	28	661	25	4.9
28	.35	.63	2.3	1.4	48	113	41	159	27	408	20	4.7
29	.32	2.6	2.6	1.0	---	104	40	154	26	273	17	4.6
30	.35	1.6	2.3	.80	---	101	38	143	24	216	15	4.3
31	.38	---	1.5	.60	---	90	---	131	---	252	13	---
TOTAL	9.47	25.10	49.67	41.00	599.07	4141	1891	16569	3012	5836	1808	425.9
MEAN	.31	.84	1.60	1.32	21.4	134	63.0	534	100	188	58.3	14.2
MAX	.70	2.6	3.0	2.0	125	862	89	6550	512	708	219	80
MIN	.11	.38	.70	.60	.70	36	38	38	24	18	13	4.3
AC-FT	19	50	99	81	1190	8210	3750	32860	5970	11580	3590	845

CAL YR 1978	TOTAL	24364.02	MEAN	66.8	MAX	2860	MIN	.00	AC-FT	48330
WTR YR 1979	TOTAL	34407.21	MEAN	94.3	MAX	6550	MIN	.11	AC-FT	68250

ARKANSAS RIVER BASIN

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to September 1962, October 1973 to September 1979 (discontinued).

WATER TEMPERATURE: October 1961 to September 1962, October 1973 to September 1979 (discontinued).

INSTRUMENTATION.--Water quality monitor since October 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. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

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, 3,260 micromhos Aug. 27, 1976; minimum daily, 551 micromhos May 21, 1977.

WATER TEMPERATURE: Maximum daily, 35.0°C on July 9, 1975; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
03...	1610	--	80020	.56	1550	8.3	18.0	--	--	--	--
15...	1640	--	80020	.13	2340	7.8	16.5	--	--	--	--
17...	1130	1028	9740	.11	2500	7.8	15.0	10	9.8	100	21
26...	1805	--	80020	.25	2540	7.8	16.0	--	--	--	--
NOV											
05...	1645	--	80020	.44	2540	8.0	16.5	--	--	--	--
26...	1600	--	80020	.80	2290	7.9	7.0	--	--	--	--
29...	1045	1028	9740	2.6	2000	8.5	6.0	5.0	11.9	100	7
29...	1745	--	80020	2.6	1860	7.0	8.0	--	--	--	--
DEC											
01...	1645	--	80020	1.7	2240	7.6	7.0	--	--	--	--
19...	1618	--	80020	.90	1650	7.8	4.0	--	--	--	--
24...	0900	--	80020	2.0	2170	7.7	3.0	--	--	--	--
28...	1445	1028	9740	2.3	2100	8.1	10.0	2.0	11.4	108	10
JAN											
30...	1200	1028	9740	.80	2150	7.5	.0	--	11.5	82	--
FEB											
09...	1140	1028	9740	.85	2800	8.1	.0	2.0	--	--	11
18...	1600	--	80020	2.1	1300	7.8	2.0	--	--	--	--
25...	1700	--	80020	70	1820	7.9	6.0	--	--	--	--
MAR											
01...	1600	--	80020	45	1840	8.4	10.0	--	--	--	--
20...	1015	1028	9740	169	1900	8.3	11.0	--	12.1	113	--
21...	1700	--	80020	137	367	--	10.0	--	--	--	--
28...	0715	--	80020	119	2050	--	11.0	--	--	--	--
APR											
01...	1500	--	80020	87	2050	8.1	12.0	--	--	--	--
16...	1600	--	80020	51	1670	7.6	19.0	--	--	--	--
22...	1900	--	80020	61	2900	8.0	22.0	--	--	--	--
23...	1315	1028	9740	55	1950	8.2	24.0	45	8.8	109	14
MAY											
02...	--	--	80020	70	1590	--	18.0	--	--	--	--
07...	1815	--	80020	79	2470	--	18.0	--	--	--	--
10...	1030	1028	9740	348	1300	7.7	15.5	>1000	9.1	91	67
18...	1800	--	80020	332	912	8.1	19.0	--	--	--	--
JUN											
11...	2145	--	80020	240	860	7.6	29.0	--	--	--	--
13...	1200	1028	9740	136	2020	7.9	25.0	75	8.3	104	10
25...	2145	--	80020	32	2470	8.0	29.0	--	--	--	--
27...	2200	--	80020	27	2060	7.9	27.0	--	--	--	--
JUL											
03...	2055	--	80020	18	2480	7.8	29.0	--	--	--	--
22...	1540	--	80020	102	2050	7.8	32.0	--	--	--	--
24...	1250	1028	9740	588	1000	7.4	27.0	>1000	9.8	127	107
31...	2105	--	80020	261	829	7.7	27.0	--	--	--	--
AUG											
02...	2100	--	80020	135	824	8.2	29.0	--	--	--	--
06...	1330	1028	9740	86	2100	9.2	31.5	45	--	--	14
09...	2110	--	80020	60	2070	--	32.0	--	--	--	--
15...	2115	--	80020	54	2060	7.9	30.0	--	--	--	--
SEP											
19...	1230	1028	9740	8.6	2050	8.2	22.0	--	--	--	5

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACU3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
UCT											
03...	780	680	--	250	--	--	37	--	61	14	1.0
15...	1000	860	--	290	--	--	76	--	140	22	1.9
17...	--	--	--	--	--	--	--	--	--	--	--
26...	1100	960	--	310	--	--	88	--	150	22	1.9
NOV											
05...	1200	1000	--	340	--	--	84	--	160	22	2.0
26...	950	840	--	260	--	--	73	--	140	24	2.0
29...	--	--	--	--	1475	140	--	--	--	--	--
29...	880	760	--	270	--	--	49	--	80	16	1.2
DEC											
01...	1100	860	--	320	--	--	66	--	130	21	1.7
19...	810	700	--	260	--	--	40	--	67	15	1.0
24...	890	710	--	240	--	--	71	--	150	27	2.2
28...	--	--	--	--	--	--	--	--	--	--	--
JAN											
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	--	--	--	--	--	--	--	--	--	--	--
18...	520	390	--	160	--	--	29	--	86	26	1.6
25...	690	550	--	210	--	--	41	--	140	30	2.3
MAR											
01...	660	510	--	200	--	--	39	--	130	30	2.2
20...	--	--	--	--	--	--	--	--	--	--	--
21...	150	77	--	45	--	--	8.0	--	15	22	.5
28...	760	610	--	240	--	--	40	--	150	35	2.4
APR											
01...	800	650	--	240	--	--	48	--	170	32	2.6
16...	620	510	--	180	--	--	42	--	150	34	2.6
22...	1000	830	--	310	--	--	55	--	210	31	2.9
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
02...	760	680	--	250	--	--	32	--	78	21	1.2
07...	960	820	--	290	--	--	57	--	210	38	3.0
10...	--	--	210	--	--	72	--	--	--	--	--
18...	450	400	--	150	--	--	19	--	28	12	.6
JUN											
11...	290	230	--	85	--	--	19	--	75	35	1.9
13...	--	--	--	--	--	--	--	--	--	--	--
25...	990	850	--	310	--	--	53	--	200	30	2.8
27...	880	730	--	260	--	--	57	--	140	25	2.1
JUL											
03...	950	810	--	290	--	--	54	--	210	32	3.0
22...	880	730	--	260	--	--	56	--	140	26	2.1
24...	--	--	270	--	675	70	--	23	--	--	--
31...	440	310	--	150	--	--	15	--	--	--	--
AUG											
02...	360	240	--	120	--	--	15	--	34	17	.8
06...	--	--	--	--	--	--	--	--	--	--	--
09...	880	730	--	260	--	--	57	--	140	25	2.1
15...	880	720	--	260	--	--	56	--	140	26	2.1
SEP											
19...	--	--	247	--	--	62	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
03...	--	--	8.3	120	0	98	1.0	680	77	--	1240
15...	--	--	22	220	0	180	5.6	810	230	--	1780
17...	--	--	--	--	--	--	--	--	--	.3	--
26...	--	--	22	210	0	170	5.3	910	250	--	1890
NOV											
05...	--	--	22	--	--	190	--	920	260	--	1890
26...	--	--	11	--	--	110	--	830	210	--	1780
29...	--	--	--	--	--	--	--	--	--	.3	--
29...	--	--	7.5	--	--	120	23	740	120	--	1490
DEC											
01...	--	--	9.4	--	--	210	--	860	180	--	1770
19...	--	--	5.4	--	--	110	--	690	110	--	1340
24...	--	--	10	--	--	180	--	840	180	--	1740
28...	--	--	--	--	--	--	--	--	--	.3	--
JAN											
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	--	--	--	--	--	--	--	--	--	.3	--
18...	89	--	3.4	--	--	130	--	390	110	--	913
25...	--	--	4.3	--	--	140	--	550	190	--	1300
MAR											
01...	130	--	4.2	--	--	150	--	540	190	--	1300
20...	--	--	--	--	--	--	--	--	--	--	--
21...	20	--	4.8	--	--	68	--	75	16	--	239
28...	150	--	4.8	--	--	150	--	620	240	--	1480
APR											
01...	180	--	5.0	--	--	150	--	650	230	--	1510
16...	160	--	4.9	--	--	110	--	550	220	--	1280
22...	220	--	6.3	--	--	170	--	820	300	--	1770
23...	--	--	--	--	--	--	--	--	--	.3	--
MAY											
02...	85	--	6.5	--	--	80	--	660	100	--	1300
07...	220	--	5.5	--	--	140	--	770	290	--	1850
10...	--	--	--	--	--	--	--	--	--	.3	--
18...	35	--	6.5	--	--	57	--	390	35	--	697
JUN											
11...	84	--	8.5	--	--	56	--	240	92	--	561
13...	--	--	--	--	--	--	--	--	--	.3	--
25...	210	--	6.0	--	--	140	--	840	290	--	1860
27...	150	--	7.3	--	--	150	--	760	180	--	1580
JUL											
03...	220	--	5.9	--	--	140	--	850	300	--	1860
22...	150	--	7.1	--	--	150	--	770	190	--	1580
24...	--	10	--	--	--	--	--	--	--	.1	--
31...	--	--	16	--	--	130	--	270	42	--	582
AUG											
02...	41	--	7.4	--	--	120	--	260	43	--	569
06...	--	--	--	--	--	--	--	--	--	.4	--
09...	150	--	6.4	--	--	150	--	780	190	--	1580

ARKANSAS RIVER BASIN

33

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT											
03...	1.69	1.87	--	--	--	--	--	--	--	--	--
15...	2.42	.62	--	--	--	--	--	--	--	--	--
17...	--	--	19	--	2.7	--	--	--	--	--	--
26...	2.57	1.28	--	--	--	--	--	--	--	--	--
NOV											
05...	2.57	2.25	--	--	--	--	--	--	--	--	--
26...	2.42	3.84	--	--	--	--	--	--	--	--	--
29...	--	--	5	.10	.46	.56	2.5	.081	--	--	--
29...	2.03	10.5	--	--	--	--	--	--	--	--	--
DEC											
01...	2.41	8.12	--	--	--	--	--	--	--	--	--
19...	--	3.26	--	--	--	--	--	--	--	--	--
24...	2.37	9.40	--	--	--	--	--	--	--	--	--
28...	--	--	2	.20	1.3	1.5	6.8	--	--	--	--
JAN											
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	--	--	7	--	1.7	2.0	--	.100	--	--	--
18...	1.24	5.18	--	--	--	--	--	--	--	--	--
25...	1.77	246	--	--	--	--	--	--	--	--	--
MAR											
01...	1.77	158	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	.33	88.4	--	--	--	--	--	--	--	--	--
28...	2.01	476	--	--	--	--	--	--	--	--	--
APR											
01...	2.05	355	--	--	--	--	--	--	--	--	--
16...	1.74	176	--	--	--	--	--	--	--	--	--
22...	2.41	292	--	--	--	--	--	--	--	--	--
23...	--	--	102	--	.95	1.1	--	.200	--	--	--
MAY											
02...	1.77	246	--	--	--	--	--	--	--	--	--
07...	2.52	395	--	--	--	--	--	--	--	--	--
10...	--	--	1485	.60	3.6	4.2	19	.660	--	--	--
18...	.95	625	--	--	--	--	--	--	--	--	--
JUN											
11...	.76	364	--	--	--	--	--	--	--	--	--
13...	--	--	--	.10	.98	1.0	4.8	.185	--	--	--
25...	2.53	161	--	--	--	--	--	--	--	--	--
27...	2.15	115	--	--	--	--	--	--	--	--	--
JUL											
03...	2.53	90.4	--	--	--	--	--	--	--	--	--
22...	2.15	435	--	--	--	--	--	--	--	--	--
24...	--	--	5722	<.50	6.6	6.6	--	3.400	<5	6	160
31...	.79	410	--	--	--	--	--	--	--	--	--
AUG											
02...	.77	207	--	--	--	--	--	--	--	--	--
06...	--	--	111	<.50	1.3	1.3	--	.200	--	--	--
09...	2.15	256	--	--	--	--	--	--	--	--	--
15...	2.15	230	--	--	--	--	--	--	--	--	--
SEP											
19...	--	--	10	<.50	1.4	1.4	--	.045	--	--	--

ARKANSAS RIVER BASIN

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
03...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	5.0
26...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
29...	--	370	--	180	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
30...	--	--	--	--	--	--	--	--	--	--
FEB										
09...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
01...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
10...	--	28000	--	920	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
JUN										
11...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
03...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
24...	72	270000	108	3900	<.5	220	<5	6	250	--
31...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
SEP										
19...	--	<100	--	70	--	--	--	--	--	--

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2160	2540	2240		---	1840	2050	937	---	2460	895	
2	2160	2520	1810		---	---	2050	1590	---	2460	824	
3	1550	2470	1850		---	---	2050	955	---	2480	907	
4	2240	2520	2230		---	2050	2000	914	2100	2470	824	
5	2280	2540	2240		---	2040	2040	939	2120	2470	2060	
6	2260	2070	2230		---	2050	2030	2400	2120	2480	2060	
7	2220	2100	---		---	2050	2020	2470	2120	2470	2060	
8	2140	2090	---		---	2040	2140	2470	2120	---	2060	
9	2200	2000	---		---	2040	2190	2380	2120	---	2070	
10	2360	2070	---		---	2040	2200	1000	925	---	2050	
11	2330	2120	---		---	1900	2220	2390	860	---	2060	
12	2320	2020	---		---	1900	2200	2300	2050	---	2070	
13	2350	2300	---		---	1910	2170	2360	2070	---	2060	
14	2320	2300	---		---	1910	2150	2420	2100	---	2000	
15	2340	2320	---		---	1900	1760	2450	2110	---	2060	
16	2360	2320	---		---	1900	1670	2300	2100	---	2060	
17	2420	2310	---		---	1900	1780	2470	2120	---	2060	
18	2420	2330	1620		1300	416	1790	912	2120	---	2060	
19	2420	2310	1090		1300	1760	1880	2450	2120	---	---	
20	2430	2300	1970		1300	1790	1800	2600	2120	---	---	
21	2420	2290	1520		1300	367	1720	2610	2470	---	---	
22	2420	2270	2100		1300	1470	2500	2620	---	2050	---	
23	2420	2280	1360		1300	1480	2480	2610	---	2050	---	
24	2530	2290	1980		1300	1470	2480	2610	---	2060	---	
25	2530	2280	---		1820	2040	2490	2610	2470	2070	---	
26	2540	2290	---		1820	2040	2470	2480	2070	2050	---	
27	2530	2250	---		1830	2040	2260	---	2060	2060	---	
28	2500	1950	---		1830	2050	889	---	2070	2070	---	
29	2530	1860	---		---	2040	2450	---	2080	2060	---	
30	2540	2360	---		---	2050	2140	---	2060	2060	---	
31	2530	---	---		---	2040	---	---	---	829	---	

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2160			---	---	1860	2050	---	2160	2110	960	1060
2	2150			---	---	1990	2040	---	2140	2500	884	1150
3	2180			---	---	2030	2010	---	2120	2530	877	1260
4	2220			---	---	2060	2000	---	2080	2470	784	1570
5	---			---	---	2030	2040	---	2130	---	1990	1830
6	---			---	---	2050	2000	---	---	2500	2020	1860
7	---			---	---	2050	2030	2450	2260	2500	2020	1990
8	---			---	---	2040	2130	2370	2150	2360	2030	1720
9	---			---	---	2030	2190	---	2130	2320	2030	1730
10	---			---	---	2020	2160	---	1360	2320	2070	1810
11	---			---	---	1880	2220	---	743	1840	2050	---
12	---			---	---	1900	2090	---	1980	1870	2050	---
13	---			---	---	1860	2180	---	2050	1940	2030	---
14	---			---	---	2000	2140	---	2090	1980	2000	---
15	---			---	---	1900	1770	---	2100	2030	2060	---
16	---			---	---	1900	1680	---	2070	2110	1820	---
17	---			---	---	1900	1780	---	2100	2180	2010	---
18	---			---	---	1140	1790	---	2120	2260	2050	---
19	---			---	---	1580	1860	---	2130	---	2050	---
20	---			---	---	1690	1590	---	---	2830	2040	---
21	---			---	---	1660	1750	---	2470	2280	2020	---
22	---			2260	1290	1480	2300	---	2480	2070	2020	---
23	---			1800	1330	1470	---	2590	2470	2060	2020	---
24	---			1780	1240	1460	---	2610	2480	2070	1900	---
25	---			1680	1790	2030	---	2610	2480	1950	1320	---
26	---			1680	1800	2050	---	2470	2060	2000	1880	---
27	---			1880	1820	2030	---	2460	2070	2160	1950	---
28	---			---	1580	1940	---	2420	2050	---	2000	---
29	---			---	---	2040	---	2320	2110	2070	2040	---
30	---			---	---	2050	---	2220	2150	2170	1990	---
31	---			---	---	2040	---	2190	---	1360	1530	---

ARKANSAS RIVER BASIN

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	16.0	7.0		---	10.0	12.0	23.0	---	30.0	28.0	
2	20.0	16.5	7.0		---	---	11.0	18.0	---	29.0	29.0	
3	18.0	16.5	4.0		---	---	13.0	19.0	---	29.0	29.0	
4	17.0	16.0	5.0		---	12.0	13.0	20.0	29.0	32.0	30.0	
5	14.0	16.5	4.0		---	12.0	14.0	21.0	30.0	31.0	30.0	
6	13.5	14.0	4.0		---	13.0	14.0	19.0	29.0	31.0	30.0	
7	15.0	10.0	---		---	12.0	16.0	18.0	23.0	30.0	31.0	
8	17.5	11.0	---		---	12.0	18.0	18.0	27.0	---	33.0	
9	17.0	10.0	---		---	12.0	17.0	17.0	28.0	---	32.0	
10	17.0	10.0	---		---	11.0	18.0	17.0	27.0	---	32.0	
11	17.0	11.0	---		---	11.0	19.0	18.0	29.0	---	33.0	
12	16.0	10.0	---		---	12.0	18.0	17.0	30.0	---	31.0	
13	16.0	10.0	---		---	12.0	20.0	18.0	29.0	---	31.0	
14	16.0	9.0	---		---	13.0	19.0	19.0	28.5	---	31.0	
15	16.5	7.0	---		---	11.0	19.0	19.0	29.0	---	30.0	
16	16.0	7.0	---		---	12.0	19.0	17.0	29.0	---	30.0	
17	16.0	7.0	---		---	12.0	20.0	18.0	29.0	---	31.0	
18	15.5	7.0	5.0	2.0	10.0	20.0	19.0	28.0	---	---	30.0	
19	15.0	6.0	4.0	4.0	11.0	21.0	20.0	27.0	---	---	---	
20	15.5	6.0	3.0	5.0	10.0	22.0	20.0	27.0	---	---	---	
21	16.0	---	3.0	5.0	10.0	23.0	21.0	28.0	---	---	---	
22	16.0	8.0	3.0	6.0	11.0	22.0	22.0	---	32.0	---	---	
23	15.0	8.0	2.0	7.0	12.0	23.0	23.0	---	31.0	---	---	
24	15.5	7.0	3.0	6.0	12.0	21.0	23.0	---	31.0	---	---	
25	16.0	7.0	---	6.0	13.0	22.0	19.0	29.0	32.0	---	---	
26	16.0	7.0	---	6.0	14.0	23.0	20.0	28.0	31.0	---	---	
27	16.0	6.0	---	7.0	12.0	23.0	---	27.0	33.0	---	---	
28	16.0	7.0	---	8.0	11.0	23.0	---	28.0	31.0	---	---	
29	16.0	8.0	---	---	12.0	24.0	---	29.0	30.0	---	---	
30	16.0	8.0	---	---	11.0	24.0	---	30.0	28.0	---	---	
31	15.0	---	---	---	11.0	---	---	---	27.0	---	---	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	750			---	---	650	710	---	750	740	340	380
2	750			---	---	690	710	---	750	870	320	410
3	760			---	---	710	700	---	740	880	320	450
4	770			---	---	720	700	---	720	860	280	550
5	---			---	---	710	710	---	740	---	690	640
6	---			---	---	710	700	---	---	870	700	650
7	---			---	---	710	710	850	790	870	700	690
8	---			---	---	710	740	820	750	820	710	600
9	---			---	---	710	760	---	740	810	710	610
10	---			---	---	700	750	---	480	810	720	630
11	---			---	---	660	770	---	270	640	710	---
12	---			---	---	660	730	---	690	650	710	---
13	---			---	---	650	760	---	710	680	710	---
14	---			---	---	700	750	---	730	690	700	---
15	---			---	---	660	620	---	730	710	720	---
16	---			---	---	660	590	---	720	740	640	---
17	---			---	---	660	620	---	730	760	700	---
18	---			---	---	400	630	---	740	790	710	---
19	---			---	---	550	650	---	740	---	710	---
20	---			---	---	590	560	---	---	980	710	---
21	---			---	---	580	610	---	860	790	700	---
22	---			790	460	520	800	---	860	720	700	---
23	---			630	470	520	---	900	860	720	700	---
24	---			630	440	510	---	910	860	720	660	---
25	---			590	630	710	---	910	860	680	470	---
26	---			590	630	710	---	860	720	700	660	---
27	---			660	640	710	---	850	720	750	680	---
28	---			---	550	680	---	840	710	---	700	---
29	---			---	---	710	---	810	740	720	710	---
30	---			---	---	710	---	770	750	760	690	---
31	---			---	---	710	---	760	---	480	540	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.42			---	---	79.0	171.0	---	253.0	46.0	201.0	15.4
2	1.28			---	---	83.8	159.0	---	239.0	49.3	131.0	88.6
3	1.15			---	---	220.0	153.0	---	224.0	47.5	107.0	48.6
4	1.02			---	---	130.0	157.0	---	206.0	41.8	82.4	47.5
5	---			---	---	113.0	153.0	---	198.0	---	179.0	44.9
6	---			---	---	107.0	151.0	---	---	49.3	164.0	35.1
7	---			---	---	97.8	146.0	204.0	190.0	47.0	149.0	31.7
8	---			---	---	90.1	144.0	157.0	174.0	294.0	138.0	24.3
9	---			---	---	82.4	140.0	---	464.0	234.0	123.0	23.1
10	---			---	---	77.5	136.0	---	664.0	162.0	113.0	22.1
11	---			---	---	71.3	158.0	---	227.0	89.9	105.0	---
12	---			---	---	69.5	140.0	---	352.0	66.7	97.8	---
13	---			---	---	66.7	135.0	---	263.0	55.1	90.1	---
14	---			---	---	69.9	121.0	---	209.0	44.7	85.0	---
15	---			---	---	65.9	92.1	---	170.0	36.4	99.1	---
16	---			---	---	65.9	81.2	---	140.0	38.0	150.0	---
17	---			---	---	64.2	83.7	---	124.0	991.0	85.0	---
18	---			---	---	299.0	83.3	---	112.0	885.0	63.3	---
19	---			---	---	229.0	93.0	---	102.0	---	59.4	---
20	---			---	---	274.0	118.0	---	---	487.0	53.7	---
21	---			---	---	241.0	132.0	---	97.5	286.0	51.0	---
22	---			3.41	86.9	1210.0	140.0	---	90.6	208.0	45.4	---
23	---			2.38	159.0	753.0	---	598.0	85.9	257.0	45.4	---
24	---			1.87	107.0	373.0	---	538.0	78.9	846.0	53.5	---
25	---			2.23	119.0	362.0	---	467.0	76.6	867.0	63.4	---
26	---			2.87	102.0	293.0	---	402.0	58.3	1340.0	53.5	---
27	---			2.85	93.3	253.0	---	372.0	54.4	1340.0	45.9	---
28	---			---	71.3	207.0	---	361.0	51.8	---	37.8	---
29	---			---	---	199.0	---	337.0	51.9	531.0	32.6	---
30	---			---	---	194.0	---	297.0	48.6	443.0	27.9	---
31	---			---	---	173.0	---	269.0	---	327.0	19.0	---

ARKANSAS RIVER BASIN

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210			---	---	170	200	---	210	210	62	75
2	210			---	---	190	200	---	210	250	53	86
3	210			---	---	200	190	---	210	260	52	100
4	220			---	---	200	190	---	200	250	40	140
5	---			---	---	200	200	---	210	---	190	170
6	---			---	---	200	190	---	---	250	190	170
7	---			---	---	200	200	250	220	250	190	190
8	---			---	---	200	210	240	210	240	200	160
9	---			---	---	200	220	---	210	230	200	160
10	---			---	---	190	210	---	110	230	200	170
11	---			---	---	180	220	---	35	170	200	---
12	---			---	---	180	200	---	190	180	200	---
13	---			---	---	170	210	---	200	180	200	---
14	---			---	---	190	210	---	200	190	190	---
15	---			---	---	180	160	---	200	200	200	---
16	---			---	---	180	150	---	200	210	170	---
17	---			---	---	180	160	---	200	210	190	---
18	---			---	---	85	170	---	210	220	200	---
19	---			---	---	140	170	---	210	---	200	---
20	---			---	---	150	140	---	---	300	200	---
21	---			---	---	150	160	---	250	230	190	---
22	---			220	100	130	230	---	250	200	190	---
23	---			170	110	130	---	270	250	200	190	---
24	---			170	97	120	---	270	250	200	180	---
25	---			150	170	200	---	270	250	190	110	---
26	---			150	170	200	---	250	200	190	180	---
27	---			180	170	200	---	250	200	210	190	---
28	---			---	140	180	---	240	200	---	190	---
29	---			---	---	200	---	230	210	200	200	---
30	---			---	---	200	---	220	210	210	190	---
31	---			---	---	200	---	220	---	110	130	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40			---	---	20.7	48.1	---	70.9	13.0	36.70	3.04
2	.36			---	---	23.1	44.8	---	66.9	14.2	21.80	18.60
3	.32			---	---	62.1	41.6	---	63.5	14.0	17.40	10.80
4	.29			---	---	36.2	42.6	---	57.2	12.2	11.80	12.10
5	---			---	---	31.9	43.2	---	56.1	---	49.20	11.90
6	---			---	---	30.2	41.0	---	---	14.2	44.60	9.18
7	---			---	---	27.5	41.0	60.1	52.9	13.5	40.50	8.72
8	---			---	---	25.4	40.8	46.0	48.8	86.2	38.90	6.48
9	---			---	---	23.2	40.4	---	132.0	66.4	34.60	6.05
10	---			---	---	21.0	38.0	---	152.0	46.0	31.30	5.97
11	---			---	---	19.4	45.1	---	29.5	23.9	29.70	---
12	---			---	---	19.0	38.3	---	97.0	18.5	27.50	---
13	---			---	---	17.4	37.4	---	74.0	14.6	25.40	---
14	---			---	---	19.0	34.0	---	57.2	12.3	23.10	---
15	---			---	---	18.0	23.8	---	46.4	10.3	27.50	---
16	---			---	---	18.0	20.7	---	38.9	10.8	39.90	---
17	---			---	---	17.5	21.6	---	34.0	274.0	23.10	---
18	---			---	---	63.6	22.5	---	31.8	247.0	17.80	---
19	---			---	---	58.2	24.3	---	28.9	---	16.70	---
20	---			---	---	69.7	29.5	---	---	149.0	15.10	---
21	---			---	---	62.4	34.6	---	28.3	83.2	13.90	---
22	---			.95	18.9	303.0	40.4	---	26.3	57.8	12.30	---
23	---			.64	37.1	188.0	---	179.0	25.0	71.3	12.30	---
24	---			.50	23.6	87.8	---	160.0	22.9	235.0	14.60	---
25	---			.57	32.1	102.0	---	139.0	22.3	242.0	14.80	---
26	---			.73	27.5	82.6	---	117.0	16.2	363.0	14.60	---
27	---			.78	24.8	71.3	---	109.0	15.1	375.0	12.80	---
28	---			---	18.1	54.9	---	103.0	14.6	---	10.30	---
29	---			---	---	56.2	---	95.6	14.7	147.0	9.18	---
30	---			---	---	54.5	---	84.9	13.6	122.0	7.69	---
31	---			---	---	48.6	---	77.8	---	74.8	4.56	---

07148450 SALT FORK ARKANSAS RIVER NEAR INGERSOLL, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610			---	---	1390	1530	---	1610	1580	729	803
2	1610			---	---	1490	1520	---	1600	1860	674	869
3	1630			---	---	1520	1500	---	1580	1890	668	950
4	1660			---	---	1540	1500	---	1550	1840	600	1180
5	---			---	---	1520	1520	---	1590	---	1490	1370
6	---			---	---	1530	1500	---	---	1860	1510	1390
7	---			---	---	1530	1520	1830	1690	1860	1510	1490
8	---			---	---	1520	1590	1770	1610	1760	1520	1290
9	---			---	---	1520	1640	---	1590	1730	1520	1300
10	---			---	---	1510	1610	---	1020	1730	1550	1360
11	---			---	---	1410	1660	---	570	1380	1530	---
12	---			---	---	1420	1560	---	1480	1400	1530	---
13	---			---	---	1390	1630	---	1530	1450	1520	---
14	---			---	---	1500	1600	---	1560	1480	1500	---
15	---			---	---	1420	1330	---	1570	1520	1540	---
16	---			---	---	1420	1260	---	1550	1580	1360	---
17	---			---	---	1420	1330	---	1570	1630	1500	---
18	---			---	---	862	1340	---	1580	1690	1530	---
19	---			---	---	1190	1390	---	1590	---	1530	---
20	---			---	---	1270	1190	---	---	2110	1520	---
21	---			---	---	1250	1310	---	1840	1700	1510	---
22	---			1690	973	1110	1720	---	1850	1550	1510	---
23	---			1350	1000	1110	---	1930	1840	1540	1510	---
24	---			1340	936	1100	---	1940	1850	1550	1420	---
25	---			1270	1340	1520	---	1940	1850	1460	995	---
26	---			1270	1350	1530	---	1840	1540	1500	1410	---
27	---			1410	1360	1520	---	1830	1550	1610	1460	---
28	---			---	1190	1450	---	1800	1530	---	1500	---
29	---			---	---	1520	---	1730	1580	1550	1520	---
30	---			---	---	1530	---	1660	1610	1620	1490	---
31	---			---	---	1520	---	1640	---	1020	1150	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.04			---	---	169.0	368.0	---	543.0	98.1	431.0	32.5
2	2.74			---	---	181.0	341.0	---	510.0	105.0	277.0	188.0
3	2.46			---	---	472.0	328.0	---	478.0	102.0	224.0	103.0
4	2.20			---	---	279.0	336.0	---	444.0	89.4	177.0	102.0
5	---			---	---	242.0	328.0	---	425.0	---	386.0	96.2
6	---			---	---	231.0	324.0	---	---	105.0	355.0	75.1
7	---			---	---	211.0	312.0	440.0	406.0	100.0	322.0	68.4
8	---			---	---	193.0	309.0	339.0	374.0	632.0	295.0	52.2
9	---			---	---	176.0	301.0	---	996.0	500.0	263.0	49.1
10	---			---	---	167.0	291.0	---	1410.0	346.0	243.0	47.7
11	---			---	---	152.0	341.0	---	480.0	194.0	227.0	---
12	---			---	---	150.0	299.0	---	755.0	144.0	211.0	---
13	---			---	---	143.0	290.0	---	566.0	117.0	193.0	---
14	---			---	---	150.0	259.0	---	446.0	95.9	182.0	---
15	---			---	---	142.0	198.0	---	365.0	78.0	212.0	---
16	---			---	---	142.0	174.0	---	301.0	81.1	319.0	---
17	---			---	---	138.0	180.0	---	267.0	2130.0	182.0	---
18	---			---	---	645.0	177.0	---	239.0	1890.0	136.0	---
19	---			---	---	495.0	199.0	---	219.0	---	128.0	---
20	---			---	---	590.0	251.0	---	---	1050.0	115.0	---
21	---			---	---	520.0	283.0	---	209.0	615.0	110.0	---
22	---			7.30	184.0	2580.0	302.0	---	195.0	448.0	97.8	---
23	---			5.10	337.0	1610.0	---	1280.0	184.0	549.0	97.8	---
24	---			3.98	227.0	805.0	---	1150.0	170.0	1820.0	115.0	---
25	---			4.80	253.0	776.0	---	995.0	165.0	1860.0	134.0	---
26	---			6.17	219.0	632.0	---	859.0	125.0	2870.0	114.0	---
27	---			6.09	198.0	542.0	---	800.0	117.0	2870.0	98.5	---
28	---			---	154.0	442.0	---	773.0	112.0	---	81.0	---
29	---			---	---	427.0	---	719.0	111.0	1140.0	69.8	---
30	---			---	---	417.0	---	641.0	104.0	945.0	60.3	---
31	---			---	---	369.0	---	580.0	---	694.0	40.4	---

ARKANSAS RIVER BASIN

07150000 GREAT SALT PLAINS LAKE NEAR JET, OK

LOCATION.--Lat 36°44'40", long 98°08'08", in NW¼SE¼ sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, at right end of Great Salt Plains Dam on Salt Fork Arkansas River, 4.5 mi (7.2 km) upstream from Wagon Creek, 5.5 mi (8.8 km) northeast of Jet, and at mile 103.3 (166.2 km).

DRAINAGE AREA.--3,200 mi² (8,288 km²), of which 8 mi² (20.7 km²) is probably noncontributing.

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

REVISED RECORDS.--WSP 1117: Drainage area.

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

REMARKS.--Reservoir is formed by earth dam. Outlet works consist of 310 ft (94.5 m) uncontrolled concrete spillway containing a series of three weirs to form a cascade. Storage began in June 1941; conservation pool was first filled Oct. 21, 1941. Capacity, 257,700 acre-ft (318 hm³) at elevation 1,138.5 ft (347.01 m), crest of upper weir, and 31,420 acre-ft (38.7 hm³) at elevation 1,125.0 ft (342.90 m), crest of intermediate weir and conservation pool. Reservoir is used for flood control and as a wildlife refuge. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 189,400 acre-ft (234 hm³) July 2, 1951, elevation, 1,134.38 ft (345.759 m); minimum, 17,180 acre-ft (21.2 hm³) Sept. 6, 1973, elevation, 1,123.16 ft (342.339 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 62,080 acre-ft (76.5 hm³) May 13, elevation 1,127.93 ft (343.793 m); minimum, 17,800 acre-ft (21.9 hm³) Nov. 6, elevation, 1,123.25 ft (342.367 m).

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

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

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22370	18720	21180	23510	27300	33540	40210	33630	36570	32650	39910	32920
2	22000	18790	22220	23510	27460	35270	38650	33900	36380	32560	39040	32470
3	22150	18720	21920	23510	27540	37510	39420	37130	36100	32470	37790	32560
4	22070	19000	21850	23510	27620	37220	38750	39620	36100	32210	37220	32560
5	21620	18440	20890	23510	27620	37130	34990	40210	35640	31080	36380	32560
6	21400	18930	20450	23580	27790	37030	37320	39720	35080	33540	35730	32300
7	21250	19080	21400	23660	27870	36570	37510	38560	35270	34080	34990	32210
8	20590	19220	21620	23660	28040	35450	36570	37600	35270	34540	34450	31950
9	21180	18650	21620	23660	28040	36380	36100	36850	37130	34720	34080	31860
10	21110	19650	21620	23660	28120	36010	35730	38460	38940	34450	33720	31600
11	20890	19080	21620	23660	28280	35820	38360	43610	39620	34170	33450	31420
12	19290	19150	21700	23810	28450	35540	36100	59760	39910	33990	33100	30560
13	20450	18720	21770	24120	28620	34990	36190	61710	39520	33630	33010	30560
14	20520	18720	22000	24050	28780	35080	35640	58440	38270	33270	32300	30730
15	20450	19360	22000	24050	29030	34810	35450	55730	37320	32920	32560	30820
16	19940	20520	22070	24050	29120	34540	35180	53090	36850	31860	32560	30560
17	20080	20370	22370	24200	29290	34720	35180	49530	36010	37790	32650	30470
18	19790	20080	22300	24670	29290	42390	34720	47370	35730	36940	32650	30300
19	19940	20080	22450	25140	29450	43710	34630	45890	35910	39420	32300	30130
20	19940	20080	22670	25450	29540	44530	34900	43410	34900	39230	31860	30130
21	19870	20300	22670	25610	29710	44230	34990	42490	34350	38750	30990	29880
22	19220	20670	22370	25610	29960	52300	34900	42090	33630	37510	31680	29710
23	19290	20740	22900	26010	30820	54230	34720	41090	33540	37410	31250	29450
24	19940	20740	22900	26010	31250	55380	34540	40010	33450	37510	31860	29290
25	19080	20890	22520	26170	31680	52640	34630	39420	33630	37700	31950	29030
26	19150	21620	22900	26410	32120	50080	34630	38750	33630	37790	32300	28870
27	19000	21550	22750	26650	32560	47910	34540	37980	33540	38270	32120	28780
28	18860	21550	23360	26730	33540	45570	34450	37220	33190	38840	32120	28620
29	18720	21330	22900	26970	---	43200	34260	37130	33010	38940	31860	28530
30	18720	21250	22900	27220	---	41290	34080	36850	32030	38170	31680	28450
31	18720	---	23510	27220	---	39330	---	36470	---	39720	31420	---
MAX	22370	21620	23510	27220	33540	55380	40210	61710	39910	39720	39910	32920
MIN	18720	18440	20450	23510	27300	33540	34080	33630	32030	31080	30990	28450
†	1123.38	1123.73	1124.03	1124.50	1125.24	1125.86	1125.30	1125.56	1125.07	1125.90	1125.00	1124.65
‡	-3,730	+2,530	+2,260	+3,710	+6,320	+5,790	-5,250	+2,390	-4,440	+7,690	-8,300	-2,970

CAL YR 1978 MAX 62570 MIN 18440 †-10570
WTR YR 1979 MAX 61710 MIN 18440 ‡+6000

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

41

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK

LOCATION.--Lat 36°45'11", long 98°07'44", in NE¼NE¼ sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, near center of span on downstream side of county road bridge, 0.6 mi (0.97 km) downstream from Great Salt Plains Dam, 4 mi (6.4 km) upstream from Wagon Creek, 6 mi (9.7 km) north-east of Jet, and at mile 102.7 (165.2 km).

DRAINAGE AREA.--3,202 mi² (8,293 km²), of which 8 mi² (20.7 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.20 ft (332.903 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 17, 1938, nonrecording gage at site 2.5 miles (4.0 km) upstream at datum 13.46 ft (4.103 m) higher. Mar. 17, 1938, to Apr. 26, 1953, water-stage recorder at site 200 ft (61.0 m) upstream, datum 5.00 ft (1.524 m) higher prior to Oct. 1, 1950.

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

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 38 years (water years 1942-79), 364 ft³/s (10.31 m³/s), 263,700 acre-ft/yr (325 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,790 ft³/s (107 m³/s) May 13, gage height, 7.22 ft (2.201 m); minimum daily discharge, 0.22 ft³/s (0.006 m³/s) Dec. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	3.9	1.2	2.6	14	650	86	303	40	646	71
2	16	5.4	3.6	1.0	2.6	49	590	116	290	36	564	74
3	17	5.2	3.2	1.0	2.0	261	441	189	272	33	464	78
4	16	5.2	3.2	1.0	2.1	270	492	435	267	19	394	85
5	16	5.0	2.7	1.2	2.2	254	417	613	225	43	325	86
6	16	6.2	3.0	1.3	2.3	271	325	649	208	207	277	72
7	16	5.1	2.7	1.3	1.9	252	361	538	194	186	215	54
8	16	4.9	2.3	1.3	1.7	201	315	463	188	179	172	48
9	16	4.9	2.0	1.5	1.9	194	245	354	344	187	142	45
10	16	5.3	1.7	1.5	1.7	210	208	427	437	154	107	36
11	16	5.3	1.7	1.5	1.7	194	324	675	597	132	98	28
12	16	5.5	1.4	1.5	3.3	184	302	2360	726	122	88	26
13	17	5.2	1.2	1.5	3.3	151	236	3700	735	110	83	23
14	16	6.1	1.0	1.5	3.3	139	206	3450	599	75	69	22
15	15	5.6	1.0	1.5	1.5	111	193	2900	497	52	67	21
16	16	5.4	.89	1.5	1.5	113	193	2420	419	64	75	22
17	15	5.0	.70	1.7	1.4	107	173	1990	291	627	91	42
18	15	4.9	.45	2.3	1.4	438	152	1760	245	660	84	27
19	15	5.3	.43	2.1	1.5	874	155	1480	275	636	58	27
20	16	5.2	.22	1.5	1.5	987	156	1270	166	565	49	29
21	16	5.0	.31	1.3	1.4	1000	152	1090	136	478	41	29
22	16	5.3	.25	1.4	1.4	1410	154	1030	86	380	42	28
23	16	5.0	.45	1.4	1.2	2090	149	923	91	391	33	28
24	14	5.2	.45	1.5	1.4	2430	139	780	77	417	32	28
25	14	5.7	.38	1.6	1.4	2240	137	660	83	436	54	27
26	15	5.1	.46	1.8	1.4	1810	122	567	82	442	70	27
27	16	4.9	.60	2.0	1.4	1570	104	520	84	481	65	27
28	16	4.5	.54	1.8	7.4	1360	119	440	57	544	62	28
29	14	4.0	.22	1.9	---	1150	109	380	49	538	57	28
30	15	4.2	.55	2.4	---	862	110	363	18	463	41	28
31	16	---	1.1	2.5	---	656	---	329	---	555	36	---
TOTAL	486	160.6	42.60	48.5	58.4	21852	7429	32957	8041	9252	4601	1194
MEAN	15.7	5.35	1.37	1.56	2.09	705	248	1063	268	298	148	39.8
MAX	17	11	3.9	2.5	7.4	2430	650	3700	735	660	646	86
MIN	14	4.0	.22	1.0	1.2	14	104	86	18	19	32	21
AC=FT	964	319	84	96	116	43340	14740	65370	15950	18350	9130	2370
CAL YR 1978 TOTAL	77349.20			MEAN 212	MAX 3920	MIN .22	AC=FT 153400					
WTR YR 1979 TOTAL	86122.10			MEAN 236	MAX 3700	MIN .22	AC=FT 170800					

ARKANSAS RIVER BASIN

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.

WATER TEMPERATURE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.

CHLORIDES: October 1955 to September 1959.

INSTRUMENTATION.--Water quality monitor since July 1968.

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

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, 57,000 micromhos Jan. 28, 1977; minimum daily, 1,350 micromhos July 3, 1957.

WATER TEMPERATURE: Maximum daily, 35.5°C July 28, 1974; minimum daily, 0.0 on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 55,100 micromhos Feb. 17; minimum daily, 2,430 micromhos June 12.

WATER TEMPERATURE: Maximum daily, 30.5°C July 28; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
04...	1700	--	80020	13	15700	6.9	21.0	--	--	--	--
06...	1054	--	810	16	--	--	--	--	--	--	--
15...	1700	--	80020	15	15900	6.9	19.0	--	--	--	--
17...	1330	1028	9740	15	--	8.4	17.0	31	8.9	97	92
25...	1700	--	80020	15	17000	6.7	15.0	--	--	--	--
NOV											
03...	1034	--	810	5.3	--	--	--	--	--	--	--
05...	1700	--	80020	4.9	19000	7.2	17.5	--	--	--	--
15...	1730	--	80020	5.8	20800	7.9	6.0	--	--	--	--
25...	1800	--	80020	6.2	24800	7.4	7.5	--	--	--	--
29...	1300	1028	9740	4.2	28000	8.0	11.0	5.0	11.0	116	45
DEC											
04...	1730	--	80020	3.3	33600	7.3	4.5	--	--	--	--
15...	1515	--	80020	2.7	20400	7.9	8.0	--	--	--	--
25...	1630	--	80020	.45	27000	7.6	9.0	--	--	--	--
28...	1510	1028	9740	.60	28000	8.4	9.0	2.0	14.4	146	39
JAN											
05...	1700	--	80020	1.2	5730	8.2	2.0	--	--	--	--
14...	1730	--	80020	1.5	21100	7.7	2.0	--	--	--	--
25...	1615	--	80020	1.8	21500	7.3	2.0	--	--	--	--
30...	1400	1028	9740	2.4	17000	8.1	5.0	--	12.6	109	--
FEB											
05...	1615	--	80020	2.4	21500	7.4	1.5	--	--	--	--
09...	1030	1028	9740	2.1	--	7.5	.0	--	--	--	--
15...	1700	--	80020	1.5	23300	7.8	1.0	--	--	--	--
25...	1745	--	80020	1.4	34200	7.3	8.0	--	--	--	--
MAR											
05...	1700	--	80020	262	12100	8.2	11.0	--	--	--	--
15...	1830	--	80020	125	12100	8.4	12.0	--	--	--	--
20...	1200	1028	9740	1009	12000	8.7	13.0	--	12.1	123	--
25...	1730	--	80020	2185	6480	8.2	12.5	--	--	--	--
APR											
05...	1810	--	80020	400	5710	7.6	11.5	--	--	--	--
15...	1630	--	80020	212	6650	7.4	20.0	--	--	--	--
23...	1430	1028	9740	146	6000	8.4	22.0	32	10.3	122	40
25...	1815	--	80020	98	6680	7.8	21.0	--	--	--	--
MAY											
05...	1830	--	80020	616	6250	7.4	18.0	--	--	--	--
10...	0915	1028	9740	552	5800	8.1	20.0	55	9.4	104	27
15...	1830	--	80020	2739	4940	7.3	21.0	--	--	--	--
25...	1950	--	80020	669	4790	7.6	22.0	--	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1979

		AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, (PERCENT SATURATION)	OXYGEN, DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	
JUN												
05...	2015	--	80020	200	4430	7.5	26.0	--	--	--	--	
13...	1045	1028	9740	752	2040	7.9	25.0	200	8.4	105	38	
15...	2115	--	80020	380	4370	7.4	26.0	--	--	--	--	
25...	1940	--	80020	84	5870	7.4	25.0	--	--	--	--	
JUL												
05...	1815	--	80020	86	5000	7.1	24.5	--	--	--	--	
15...	1930	--	80020	41	6420	7.4	28.5	--	--	--	--	
24...	1400	1028	9740	420	3850	8.9	30.0	53	8.8	121	32	
25...	2000	--	80020	420	5150	7.1	28.0	--	--	--	--	
AUG												
05...	1845	--	80020	307	5970	8.0	29.5	--	--	--	--	
06...	1130	1028	9740	302	5100	8.8	30.0	72	--	--	27	
15...	2030	--	80020	60	6460	7.7	25.0	--	--	--	--	
25...	1710	--	80020	63	7720	7.2	28.5	--	--	--	--	
SEP												
05...	2025	--	80020	75	9120	7.5	27.5	--	--	--	--	
14...	2025	--	80020	23	9560	7.3	28.0	--	--	--	--	
19...	1115	1028	9740	27	8400	7.1	20.0	26	--	--	40	
25...	1815	--	80020	27	9780	7.2	26.0	--	--	--	--	
DATE		HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
OCT												
04...	640	540	--	150	--	--	64	--	3400	92	59	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
15...	640	540	--	150	--	--	64	--	3500	92	60	--
17...	525	--	230	--	575	70	--	3700	--	--	--	--
25...	660	560	--	150	--	--	69	--	3800	92	64	--
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	880	740	--	240	--	--	69	--	4400	91	64	--
15...	1000	850	--	280	--	--	73	--	4800	91	66	--
25...	1000	890	--	290	--	--	78	--	5700	92	77	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	1300	1100	--	360	--	--	94	--	8000	93	97	--
15...	750	560	--	200	--	--	62	--	4500	93	71	--
25...	910	740	--	230	--	--	82	--	6700	94	97	--
28...	1200	--	330	--	825	91	--	5200	--	--	--	--
JAN												
05...	120	0	--	24	--	--	14	--	1200	96	48	--
14...	460	350	--	67	--	--	72	--	4700	96	95	--
25...	470	210	--	71	--	--	72	--	4800	96	96	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	900	660	--	240	--	--	72	--	4800	92	70	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
15...	910	680	--	240	--	--	76	--	5000	92	72	--
25...	1200	1100	--	330	--	--	100	--	8300	94	103	--
MAR												
05...	560	430	--	140	--	--	50	--	2500	94	46	--
15...	590	450	--	150	--	--	52	--	2600	90	47	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
25...	320	230	--	83	--	--	27	--	1200	89	29	--
APR												
05...	370	230	--	100	--	--	30	--	1100	86	25	--
15...	430	310	--	120	--	--	32	--	1300	87	27	--
23...	400	--	105	--	263	33	--	1220	--	--	--	--
25...	410	290	--	110	--	--	32	--	1300	87	28	--
MAY												
05...	440	310	--	110	--	--	39	--	1300	91	27	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
15...	400	290	--	110	--	--	31	--	950	88	21	--
25...	440	320	--	130	--	--	28	--	900	85	19	--
JUN												
05...	580	440	--	160	--	--	43	--	800	81	15	--
13...	420	--	160	--	400	41	--	370	--	--	--	--
15...	510	380	--	140	--	--	38	--	700	75	14	--
25...	510	390	--	140	--	--	39	--	1000	86	19	--
JUL												
05...	440	340	--	120	--	--	33	--	880	81	18	--

ARKANSAS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
JUL											
15...	530	410	--	150	--	--	38	--	1200	87	23
24...	--	--	--	--	--	--	--	--	--	--	--
25...	450	370	--	130	--	--	31	--	980	82	20
AUG											
05...	490	380	--	130	--	--	39	--	1100	88	22
06...	434	--	100	--	255	30	--	970	--	--	--
15...	490	390	--	140	--	--	35	--	1200	88	24
25...	500	400	--	140	--	--	37	--	1500	86	29
SEP											
05...	510	410	--	140	--	--	38	--	1900	92	37
14...	550	440	--	150	--	--	42	--	1900	91	35
19...	--	--	--	--	--	--	--	--	--	--	--
25...	560	460	--	150	--	--	45	--	2000	92	37
DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
04...	--	--	18	120	0	98	24	670	5000	--	9660
06...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	17	120	0	98	24	680	5100	--	9770
17...	--	18	--	--	--	--	--	--	5700	.3	--
25...	--	--	18	120	0	98	38	720	5700	--	10500
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	14	--	--	140	--	800	6600	--	12000
15...	--	--	23	--	--	150	--	880	7200	--	13300
25...	--	--	25	--	--	160	--	1000	8200	--	16000
29...	--	--	--	--	--	--	--	1000	10000	.4	--
DEC											
04...	--	--	21	--	--	140	--	880	13000	--	21900
15...	--	--	13	--	--	190	--	730	7000	--	11300
25...	--	--	15	--	--	170	--	990	9800	--	17500
28...	--	18	--	--	--	--	--	--	9000	.3	--
JAN											
05...	--	--	3.6	--	--	280	--	240	1600	--	3240
14...	--	--	14	--	--	110	--	880	6700	--	13000
25...	--	--	14	--	--	260	--	--	7500	--	13800
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	4800	--	11	--	--	240	--	730	--	--	13400
09...	--	--	--	--	--	--	--	--	--	--	--
15...	5000	--	1.8	--	--	230	--	870	7300	--	14200
25...	8300	--	14	--	--	150	--	480	13000	--	22900
MAR											
05...	2500	--	8.5	--	--	130	--	440	--	--	7040
15...	2600	--	8.3	--	--	140	--	450	4100	--	6880
20...	--	--	--	--	--	--	--	--	--	--	--
25...	1200	--	7.0	--	--	86	--	230	1800	--	--
APR											
05...	1100	--	7.3	--	--	140	--	270	1500	--	3150
15...	1300	--	7.6	--	--	120	--	320	2000	--	3710
23...	--	8.2	--	--	--	--	--	285	2000	.3	--
25...	1300	--	7.8	--	--	120	--	320	2000	--	3570
MAY											
05...	1300	--	7.4	--	--	130	--	320	1800	--	3340
10...	--	--	--	--	--	--	--	--	2100	.3	--
15...	950	--	4.2	--	--	110	--	290	1400	--	2670
25...	910	--	8.3	--	--	120	--	320	1300	--	2690
JUN											
05...	810	--	7.0	--	--	140	--	470	990	--	2710
13...	--	10	--	--	--	--	--	--	--	.2	--
15...	710	--	7.9	--	--	130	--	420	1100	--	2600
25...	1000	--	8.1	--	--	120	--	450	1700	--	3480
JUL											
05...	890	--	8.6	--	--	93	--	380	1400	--	2810

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CU3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JUL											
15...	1200	--	9.4	--	--	120	--	440	1800	--	3740
24...	--	--	--	--	--	--	--	296	1400	.3	--
25...	990	--	8.5	--	--	87	--	370	1500	--	2960
AUG											
05...	1100	--	8.5	--	--	110	--	380	1800	--	3420
06...	--	9.9	--	--	--	--	--	316	1400	--	--
15...	1200	--	9.3	--	--	100	--	510	1900	--	3750
25...	1500	--	9.4	--	--	100	--	450	2300	--	4510
SEP											
05...	1900	--	11	--	--	100	--	410	2800	--	5220
14...	1900	--	11	--	--	110	--	430	2900	--	5500
19...	--	--	--	--	--	--	--	395	3200	.4	--
25...	2000	--	11	--	--	100	--	450	3000	--	5690
	SOLIDS, DIS- SOLVED (TONS PER AC=FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROM- IUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT											
04...	13.1	342	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
15...	13.3	396	--	--	--	--	--	--	--	--	--
17...	--	--	65	12	2.7	15	67	,319	--	--	--
25...	14.3	425	--	--	--	--	--	--	--	--	--
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
05...	16.3	159	--	--	--	--	--	--	--	--	--
15...	18.1	208	--	--	--	--	--	--	--	--	--
25...	21.8	268	--	--	--	--	--	--	--	--	--
29...	--	--	--	<.10	.20	.21	--	.230	--	--	--
DEC											
04...	29.8	195	--	--	--	--	--	--	--	--	--
15...	15.4	82.4	--	--	--	--	--	--	--	--	--
25...	23.8	21.3	--	--	--	--	--	--	--	--	--
28...	--	--	21	<.10	2.5	2.5	--	<.001	--	--	--
JAN											
05...	4.41	10.5	--	--	--	--	--	--	--	--	--
14...	17.7	52.6	--	--	--	--	--	--	--	--	--
25...	18.8	67.1	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
FEB											
05...	18.2	86.8	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
15...	19.3	57.5	--	--	--	--	--	--	--	--	--
25...	31.1	86.6	--	--	--	--	--	--	--	--	--
MAR											
05...	9.57	4980	--	--	--	--	--	--	--	--	--
15...	9.36	2320	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	4.28	3400	--	--	--	--	--	--	--	--	--
15...	5.05	2130	--	--	--	--	--	--	--	--	--
23...	--	--	68	.10	1.4	1.5	7.0	,150	--	--	--
25...	4.86	945	--	--	--	--	--	--	--	--	--
MAY											
05...	4.54	5560	--	--	--	--	--	--	--	--	--
10...	--	--	119	.10	1.6	1.7	7.8	,205	--	--	--
15...	3.63	19700	--	--	--	--	--	--	--	--	--
25...	3.66	4860	--	--	--	--	--	--	--	--	--
JUN											
05...	3.69	1460	--	--	--	--	--	--	--	--	--
13...	--	--	--	.20	2.1	2.3	10	,375	--	--	--
15...	3.54	2670	--	--	--	--	--	--	--	--	--
25...	4.73	789	--	--	--	--	--	--	--	--	--
JUL											
05...	3.82	652	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15800	16200	24900	26300	17300	19400	6170	5630	5150	6110	4960	8420
2	15900	18600	26400	27000	19400	19300	5770	5800	5060	6100	5120	8380
3	15900	20200	24500	4750	15100	14800	5710	6130	5120	6200	4650	8400
4	15700	20100	33600	5480	21800	14700	5990	6150	5040	4940	4610	8730
5	15700	19000	33600	5730	21500	12100	5710	6250	4430	5000	5970	9120
6	15100	19100	27900	17500	19900	9560	5720	4380	4390	5800	5970	9120
7	14900	20000	17900	18000	19000	10400	5230	4390	5030	5570	5920	9100
8	15200	20000	26200	13500	14200	13800	5220	5410	4890	6820	5850	8520
9	15100	20600	24900	13500	25400	13800	5930	7160	4620	6060	5990	9140
10	15100	20300	21100	13400	23900	13200	6330	6750	4050	5360	6100	9280
11	15000	21900	21100	18200	14600	11500	6360	6740	3900	5680	6560	9410
12	15900	21100	20900	16100	7080	11800	6790	2830	2430	6190	6640	9440
13	16000	21000	20800	16000	18300	11800	6690	2840	3300	6270	6780	9720
14	15700	21200	24000	21100	16900	11800	6520	3590	4300	5610	6580	9560
15	15900	20800	20400	21100	23300	12100	6650	4940	4370	6420	6460	---
16	15800	21100	29300	16900	26400	12000	6340	3480	5210	7220	6780	9780
17	15700	19200	26200	14800	55100	11500	6190	2940	5340	6210	6820	9140
18	16000	19900	29600	14200	19500	11300	6240	3460	5160	6390	6880	9670
19	16000	20100	29400	20700	19200	11600	6180	4480	5010	6840	7500	9490
20	15400	20200	31400	17300	15200	11500	6180	4470	5320	6730	7700	9620
21	16100	19200	30400	10300	15400	11200	6450	4450	5320	6300	8230	9750
22	16300	18100	31400	17300	25500	9750	6440	4500	5350	4670	8510	9430
23	16800	21800	25100	15100	54700	7980	6580	4690	5300	4960	8320	9920
24	17100	21700	26800	15700	52800	8420	6590	4720	5460	5200	8300	9920
25	17000	24800	27000	21500	34200	6480	6680	4790	5870	5150	7720	9780
26	16000	24700	27500	20200	26400	7020	6700	3410	5930	6250	7710	9890
27	15500	20700	26200	11300	19000	6670	6580	4540	5490	6650	7760	9940
28	16200	29200	26800	14800	19700	5390	5590	4510	5390	5760	7660	9860
29	16400	29000	41000	15300	---	4340	5970	4680	5310	3750	7680	9790
30	16500	22000	28400	18900	---	4850	5600	5010	6020	4030	8360	9740
31	17100	---	25500	24500	---	6180	---	5230	---	4830	8610	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15400	17100	25800			---	6170	5720	5020	6220	4980	8460
2	16600	17900	30200			---	5900	6250	4710	6030	5110	8330
3	15800	18800	25800			---	5850	6260	5020	6320	5190	8690
4	16000	18900	23500			---	6010	7000	5290	4940	4710	8900
5	---	19700	26300			---	6140	6230	4380	5900	5820	9150
6	16100	20000	31200			---	5580	5210	4880	5900	5610	9170
7	15100	20000	28000			---	4980	4710	4900	5520	5930	9110
8	15500	19700	27800			---	5900	4960	4650	7150	5840	8530
9	---	20200	28000			---	5910	7030	5030	6130	5710	9170
10	---	20600	33500			---	6350	6660	3980	5710	6230	9400
11	---	21300	46000			---	5890	6750	4370	5760	6730	9430
12	16900	21200	43500			---	6370	4440	3040	6670	6640	9580
13	17200	20000	38000			---	6570	3380	2970	6290	6940	10200
14	16800	21800	34300			11800	6240	3170	3710	5590	6620	9660
15	16400	21900	26400			12200	6650	4640	4410	6380	6530	9690
16	16200	21000	31600			12300	6460	3990	5630	7100	6740	9820
17	16100	19000	32300			11600	6320	2950	5510	5900	6810	9360
18	16600	19300	26600			11200	5900	3440	5200	6350	6900	9630
19	16700	21300	27600			11300	6640	4380	5090	7010	7380	9620
20	16600	20800	28600			11600	6260	4320	5270	6640	7820	9610
21	16600	20600	30300			11300	6450	4490	5230	---	8230	9760
22	16700	18700	30400			9970	6430	4510	5420	---	8450	9520
23	16500	18800	23200			9380	6570	4400	5320	4950	8320	9970
24	16400	21400	28700			8100	6620	4700	5440	5310	8400	9890
25	16600	23500	26100			6510	6960	4700	5870	4910	7660	9840
26	16400	23200	26300			6710	6590	3370	5670	6020	7930	9870
27	16400	21400	33400			6700	6840	4540	5790	6630	7630	9950
28	16600	21100	28600			6100	5300	4500	5430	6160	7730	9900
29	16800	25700	37200			4070	5860	4320	5290	4610	7910	9960
30	16800	26500	---			4630	5800	4580	6040	3740	8290	9850
31	16800	---	---			5970	---	5700	---	4760	8700	---

ARKANSAS RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

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

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590	630	830			---	380	370	360	380	350	430
2	620	650	930			---	380	380	350	380	360	430
3	600	670	830			---	370	380	360	390	360	440
4	610	670	780			---	380	400	360	350	350	440
5	---	690	840			---	380	380	340	380	370	450
6	610	700	950			---	370	360	350	380	370	450
7	590	700	880			---	350	350	350	370	380	450
8	590	690	870			---	380	350	350	400	370	440
9	---	700	880			---	380	400	360	380	370	450
10	---	710	1000			---	390	390	330	370	380	460
11	---	730	1300			---	380	390	340	370	390	460
12	630	720	1200			---	390	340	310	390	390	460
13	630	700	1100			---	390	320	310	380	400	470
14	620	740	1000			510	380	310	330	370	390	460
15	610	740	840			520	390	350	340	390	390	460
16	---	720	960			520	390	330	370	400	390	460
17	610	670	980			510	390	310	370	380	400	450
18	620	680	850			500	380	320	360	390	400	460
19	620	730	870			500	390	340	360	400	410	460
20	620	710	900			510	380	340	360	390	420	460
21	620	710	930			500	390	340	360	---	430	460
22	620	670	930			470	390	340	360	---	430	460
23	620	670	770			450	390	340	360	350	430	470
24	610	730	890			430	390	350	360	360	430	470
25	620	780	840			390	400	350	370	350	420	470
26	610	770	840			390	390	320	370	380	420	470
27	610	730	1000			390	400	340	370	390	410	470
28	620	720	890			380	360	340	360	380	420	470
29	620	830	1100			330	370	340	360	350	420	470
30	620	840	---			350	370	350	380	330	430	470
31	620	---	---			380	---	370	---	350	440	---

SULFATE, DISSOLVED (TUNS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.5	18.70	8.74			---	667.0	85.9	295.0	41.0	610.0	82.4
2	26.8	9.48	9.04			---	605.0	119.0	274.0	36.9	548.0	85.9
3	27.5	9.41	7.17			---	441.0	194.0	264.0	34.7	451.0	92.7
4	26.4	9.41	6.74			---	505.0	470.0	260.0	18.0	372.0	101.0
5	---	9.31	6.12			---	426.0	629.0	207.0	44.1	325.0	104.0
6	26.4	11.70	7.69			---	325.0	631.0	197.0	212.0	277.0	87.5
7	25.5	9.64	6.42			---	341.0	508.0	183.0	186.0	221.0	65.6
8	25.5	9.13	5.40			---	323.0	438.0	178.0	193.0	172.0	57.0
9	---	9.26	4.75			---	251.0	382.0	334.0	192.0	142.0	54.7
10	---	10.20	4.59			---	219.0	450.0	389.0	154.0	110.0	44.7
11	---	10.40	5.97			---	332.0	711.0	548.0	132.0	103.0	34.8
12	27.2	10.70	4.54			---	318.0	2170.0	608.0	128.0	92.7	32.3
13	28.9	9.83	3.56			---	249.0	3200.0	615.0	113.0	89.6	29.2
14	26.8	12.20	2.70			191.0	211.0	2890.0	534.0	74.9	72.7	27.3
15	24.7	11.20	2.27			156.0	203.0	2740.0	456.0	54.8	70.6	26.1
16	---	10.50	2.31			159.0	203.0	2160.0	419.0	69.1	79.0	27.3
17	24.7	9.04	1.85			147.0	182.0	1670.0	291.0	643.0	98.3	51.0
18	25.1	9.00	1.03			591.0	156.0	1520.0	238.0	695.0	90.7	33.5
19	25.1	10.40	1.01			1180.0	163.0	1360.0	267.0	687.0	64.2	33.5
20	26.8	9.97	.53			1360.0	160.0	1170.0	161.0	595.0	55.6	36.0
21	26.8	9.58	.78			1350.0	160.0	1000.0	132.0	---	47.6	36.0
22	26.8	9.59	.63			1790.0	162.0	946.0	83.6	---	48.8	34.8
23	26.8	9.04	.94			2540.0	157.0	847.0	88.5	369.0	38.3	35.5
24	23.1	10.20	1.08			2820.0	146.0	737.0	74.8	405.0	37.2	35.5
25	23.4	12.00	.86			2360.0	148.0	624.0	82.9	412.0	61.2	34.3
26	24.7	10.60	1.04			1910.0	128.0	490.0	81.9	453.0	79.4	34.3
27	26.4	9.66	1.62			1650.0	112.0	477.0	83.9	506.0	72.0	34.3
28	26.8	8.75	1.30			1400.0	116.0	404.0	55.4	558.0	70.3	35.5
29	23.4	8.96	.65			1020.0	109.0	349.0	47.6	508.0	64.6	35.5
30	25.1	9.53	---			815.0	110.0	343.0	18.5	413.0	47.6	35.5
31	26.8	---	---			673.0	---	329.0	---	524.0	42.8	---

ARKANSAS RIVER BASIN

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

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5200	5800	9100			---	1800	1600	1400	1800	1300	2600
2	5700	6100	11000			---	1700	1800	1200	1700	1400	2600
3	5400	6500	9100			---	1700	1800	1400	1800	1400	2700
4	5400	6500	8200			---	1700	2100	1500	1300	1200	2800
5	---	6800	9300			---	1800	1800	1100	1700	1700	2900
6	5500	6900	11000			---	1600	1400	1300	1700	1600	2900
7	5100	6900	9900			---	1300	1200	1300	1500	1700	2900
8	5200	6800	9800			---	1700	1300	1200	2200	1700	2700
9	---	7000	9900			---	1700	2100	1400	1800	1600	2900
10	---	7100	12000			---	1900	2000	980	1600	1800	3000
11	---	7400	17000			---	1700	2000	1100	1600	2000	3000
12	5800	7400	16000			---	1900	1100	630	2000	2000	3100
13	5900	6900	14000			---	1900	760	600	1800	2100	3300
14	5700	7600	12000			3900	1800	680	880	1600	2000	3100
15	5600	7600	9300			4000	2000	1200	1100	1900	1900	3100
16	---	7300	11000			4100	1900	980	1600	2100	2000	3100
17	5500	6500	11000			3800	1800	600	1500	1700	2000	3000
18	5700	6700	9400			3700	1700	780	1400	1900	2100	3100
19	5700	7400	9700			3700	2000	1100	1400	2100	2200	3100
20	5700	7200	10000			3800	1800	1100	1500	2000	2400	3100
21	5700	7100	11000			3700	1900	1200	1400	---	2600	3100
22	5700	6400	11000			3200	1900	1200	1500	---	2600	3000
23	5600	6500	8100			3000	1900	1100	1500	1300	2600	3200
24	5600	7400	10000			2500	2000	1200	1500	1500	2600	3200
25	5700	8200	9200			1900	2100	1200	1700	1300	2300	3200
26	5600	8100	9300			2000	1900	750	1600	1700	2400	3200
27	5600	7400	12000			2000	2000	1200	1600	2000	2300	3200
28	5700	7300	10000			1800	1500	1200	1500	1800	2400	3200
29	5700	9000	13000			1000	1700	1100	1500	1200	2400	3200
30	5700	9300	---			1200	1700	1200	1700	890	2600	3200
31	5700	---	---			1700	---	1600	---	1300	2700	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225.0	172.0	95.80			---	3160.0	372.0	1150.0	194.0	2270.0	498.0
2	246.0	88.9	107.00			---	2710.0	564.0	940.0	165.0	2130.0	519.0
3	248.0	91.3	78.60			---	2020.0	919.0	1030.0	160.0	1750.0	569.0
4	233.0	91.3	70.80			---	2260.0	2470.0	1080.0	66.7	1280.0	643.0
5	---	91.8	67.80			---	2030.0	2980.0	668.0	197.0	1490.0	673.0
6	238.0	116.0	89.10			---	1400.0	2450.0	730.0	950.0	1200.0	564.0
7	220.0	95.0	72.20			---	1270.0	1740.0	681.0	753.0	987.0	423.0
8	225.0	90.0	60.90			---	1450.0	1630.0	609.0	1060.0	789.0	350.0
9	---	92.6	53.50			---	1120.0	2010.0	1300.0	909.0	613.0	352.0
10	---	102.0	55.10			---	1070.0	2310.0	1160.0	665.0	520.0	292.0
11	---	106.0	78.00			---	1490.0	3650.0	1770.0	570.0	529.0	227.0
12	251.0	110.0	60.50			---	1550.0	7010.0	1230.0	659.0	475.0	218.0
13	271.0	96.9	45.40			---	1210.0	7590.0	1190.0	535.0	471.0	205.0
14	246.0	125.0	32.40			1460.0	1000.0	6330.0	1420.0	324.0	373.0	184.0
15	227.0	115.0	25.10			1200.0	1040.0	9400.0	1480.0	267.0	344.0	176.0
16	---	106.0	26.40			1250.0	990.0	6400.0	1810.0	363.0	405.0	184.0
17	223.0	87.7	20.80			1100.0	841.0	3220.0	1180.0	2880.0	491.0	340.0
18	231.0	88.6	11.40			4380.0	698.0	3710.0	926.0	3390.0	476.0	226.0
19	231.0	106.0	11.30			6730.0	837.0	4400.0	1040.0	3610.0	345.0	226.0
20	246.0	101.0	5.94			10100.0	758.0	3770.0	672.0	3050.0	318.0	243.0
21	246.0	95.8	9.21			9990.0	780.0	3530.0	514.0	---	288.0	243.0
22	246.0	91.6	7.42			12200.0	790.0	3340.0	348.0	---	295.0	227.0
23	242.0	87.7	9.84			16900.0	764.0	2740.0	369.0	1370.0	232.0	242.0
24	212.0	104.0	12.20			16400.0	751.0	2530.0	312.0	1690.0	225.0	242.0
25	215.0	126.0	9.44			11500.0	777.0	2140.0	381.0	1530.0	335.0	233.0
26	227.0	112.0	11.60			9770.0	626.0	1150.0	354.0	2030.0	454.0	233.0
27	242.0	97.9	19.40			8480.0	562.0	1660.0	363.0	2600.0	404.0	233.0
28	246.0	88.7	14.60			6610.0	482.0	1430.0	231.0	2640.0	402.0	242.0
29	215.0	97.2	7.72			3110.0	500.0	1130.0	198.0	1740.0	369.0	242.0
30	231.0	105.0	---			2790.0	505.0	1180.0	82.6	1110.0	288.0	242.0
31	246.0	---	---			3010.0	---	1420.0	---	1950.0	262.0	---

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

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9530	10700	16400			---	3420	3120	2660	3450	2630	4940
2	10300	11200	19300			---	3240	3470	2450	3330	2720	4850
3	9800	11800	16400			---	3210	3480	2660	3520	2770	5090
4	9930	11900	14900			---	3320	3970	2840	2610	2450	5230
5	---	12400	16800			---	3400	3460	2240	3240	3190	5390
6	10000	12600	20000			---	3030	2790	2570	3240	3050	5410
7	9330	12600	17900			---	2630	2450	2580	2990	3260	5370
8	9600	12400	17700			---	3240	2620	2410	4070	3200	4980
9	---	12700	17900			---	3250	3990	2670	3390	3120	5410
10	---	13000	21500			---	3540	3750	1970	3120	3460	5560
11	---	13400	29800			---	3240	3810	2230	3150	3790	5580
12	10500	13400	28100			---	3550	2280	1350	3750	3730	5680
13	10700	12600	24500			---	3690	1570	1300	3500	3930	6090
14	10500	13800	22000			7150	3470	1430	1790	3040	3720	5730
15	10200	13800	16800			7410	3740	2410	2260	3560	3660	5750
16	10100	13200	20300			7480	3610	1980	3060	4040	3800	5840
17	10000	11900	20700			7020	3520	1290	2980	3240	3850	5530
18	10300	12100	17000			6750	3240	1610	2780	3540	3900	5710
19	10400	13400	17600			6820	3730	2240	2710	3980	4220	5710
20	10300	13100	18400			7020	3480	2200	2830	3730	4510	5700
21	10300	13000	19400			6820	3610	2310	2800	---	4790	5800
22	10400	11700	19500			5940	3590	2320	2920	---	4930	5640
23	10300	11800	14700			5550	3690	2250	2860	2610	4850	5940
24	10200	13500	18300			4700	3720	2450	2940	2850	4900	5880
25	10300	14900	16600			3650	3940	2450	3220	2590	4410	5850
26	10200	14700	16800			3780	3700	1570	3090	3320	4590	5870
27	10200	13500	21500			3770	3860	2340	3170	3730	4390	5920
28	10300	13300	18300			3370	2850	2320	2930	3410	4450	5890
29	10500	16400	24000			2030	3220	2200	2840	2390	4570	5930
30	10500	16900	---			2400	3180	2370	3340	1810	4830	5860
31	10500	---	---			3290	---	3110	---	2490	5100	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412.0	318.0	173.0			---	6000.0	724.0	2180.0	373.0	4590.0	947.0
2	445.0	163.0	188.0			---	5160.0	1090.0	1920.0	324.0	4140.0	969.0
3	450.0	166.0	142.0			---	3820.0	1780.0	1950.0	314.0	3470.0	1070.0
4	429.0	167.0	129.0			---	4410.0	4660.0	2050.0	134.0	2610.0	1200.0
5	---	167.0	122.0			---	3830.0	5730.0	1360.0	376.0	2800.0	1250.0
6	432.0	211.0	162.0			---	2660.0	4890.0	1440.0	1810.0	2280.0	1050.0
7	403.0	174.0	130.0			---	2560.0	3560.0	1350.0	1500.0	1890.0	783.0
8	415.0	164.0	110.0			---	2760.0	3280.0	1220.0	1970.0	1490.0	645.0
9	---	168.0	96.7			---	2150.0	3810.0	2480.0	1710.0	1200.0	657.0
10	---	186.0	98.7			---	1990.0	4320.0	2320.0	1300.0	1000.0	540.0
11	---	192.0	137.0			---	2830.0	6940.0	3590.0	1120.0	1000.0	422.0
12	454.0	199.0	106.0			---	2890.0	14500.0	2650.0	1240.0	886.0	399.0
13	491.0	177.0	79.4			---	2350.0	15700.0	2580.0	1040.0	881.0	378.0
14	454.0	227.0	59.4			2680.0	1930.0	13300.0	2890.0	616.0	693.0	340.0
15	413.0	209.0	45.4			2220.0	1950.0	18900.0	3030.0	500.0	662.0	326.0
16	436.0	192.0	48.8			2280.0	1680.0	12900.0	3460.0	698.0	769.0	347.0
17	405.0	161.0	39.1			2030.0	1640.0	6930.0	2340.0	5480.0	946.0	627.0
18	417.0	160.0	20.7			7980.0	1330.0	7650.0	1840.0	6310.0	885.0	416.0
19	421.0	192.0	20.4			16100.0	1560.0	8950.0	2010.0	6830.0	661.0	416.0
20	445.0	184.0	10.9			18700.0	1470.0	7540.0	1270.0	5690.0	597.0	446.0
21	445.0	176.0	16.2			18400.0	1480.0	6800.0	1030.0	---	530.0	454.0
22	449.0	167.0	13.2			22600.0	1490.0	6450.0	678.0	---	559.0	426.0
23	445.0	159.0	17.9			31300.0	1480.0	5610.0	703.0	2760.0	432.0	449.0
24	386.0	190.0	22.2			30600.0	1400.0	5160.0	611.0	3210.0	423.0	445.0
25	389.0	229.0	17.0			22100.0	1460.0	4370.0	722.0	3050.0	643.0	426.0
26	413.0	202.0	20.9			18500.0	1220.0	2400.0	684.0	3960.0	868.0	428.0
27	441.0	179.0	34.8			16000.0	1080.0	3290.0	719.0	4840.0	770.0	432.0
28	445.0	162.0	26.7			12400.0	916.0	2760.0	451.0	5010.0	745.0	445.0
29	397.0	177.0	14.3			6300.0	948.0	2260.0	376.0	3470.0	703.0	448.0
30	425.0	192.0	---			5590.0	944.0	2320.0	162.0	2260.0	535.0	443.0
31	454.0	---	---			5830.0	---	2760.0	---	3730.0	496.0	---

ARKANSAS RIVER BASIN

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

LOCATION.--Lat 36°40'13", long 97°18'33", in NW¼SE¼ sec.4, T.25 N., R.1 W., Kay County, Hydrologic Unit 11060004, near right bank on downstream side of pier of bridge on U.S. Highway 77 in Tonkawa, 4 mi (6 km) downstream from Thompson Creek, 7.8 mi (12.6 km) upstream from Chikaskia River, and at mile 33.8 (54.4 km).

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

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.22 ft (283.531 m) Corps of Engineers datum. September 1903 to October 1905, nonrecording gage near present site at different datum. Jan. 2, 1936, to Jan. 22, 1939 nonrecording gage, and Jan. 23, 1939, to June 20, 1960, water-stage recorder at site 100 ft (30.5 m) upstream at same datum.

REMARKS.--Records good except for period of no gage height record January 12 to February 21 which is poor. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 miles (111.8 km) upstream (station 07150000).

AVERAGE DISCHARGE.--(since regulation by Great Salt Plains Dam) 38 years (water years 1942-79), 723 ft³/s (20.48 m³/s), 523,800 acre-ft/yr (646 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,300 ft³/s (2,760 m³/s) Oct. 11, 1973, gage height, 28.98 ft (8.833 m); no flow Aug. 31 to Oct. 12, Oct. 14-16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923 reached a stage of 26.8 ft (8.17 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,060 ft³/s (228 m³/s) Mar. 23, gage height, 14.73 ft (4.49 m), no peak above base of 11,000 ft³/s (312 m³/s); minimum daily discharge, 12 ft³/s (0.34 m³/s) Jan. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	32	25	16	18	116	1150	286	549	170	3770	2930
2	36	31	24	16	21	121	1010	301	518	160	2260	3590
3	32	31	21	15	20	1100	986	341	488	153	1150	2310
4	33	30	24	15	19	1170	883	844	465	143	926	2930
5	31	28	19	14	18	1400	924	1400	441	138	780	1170
6	31	40	23	14	18	799	993	1540	433	1960	684	670
7	33	41	17	14	17	554	939	1100	396	4650	581	1100
8	36	41	26	13	16	466	768	953	374	1180	503	675
9	83	38	28	13	16	413	693	792	378	577	435	435
10	117	30	27	13	15	356	615	701	400	444	379	265
11	61	25	30	13	19	334	718	638	555	413	344	220
12	48	31	32	12	22	339	1260	685	644	354	347	175
13	39	34	30	12	25	311	1190	1110	755	306	283	131
14	37	38	35	12	35	297	910	2390	849	277	252	126
15	36	50	28	12	30	267	640	2930	826	257	277	118
16	35	55	26	13	27	255	502	2770	720	227	252	109
17	34	52	22	15	24	233	446	2500	642	1050	214	103
18	33	45	21	17	26	798	431	2230	569	2840	202	96
19	28	36	21	21	31	5420	410	1970	461	3340	203	93
20	30	33	19	25	40	4770	575	1780	407	1590	195	103
21	31	30	19	27	90	2530	4560	1590	415	1210	190	93
22	31	31	17	30	150	3330	1660	1410	361	993	181	89
23	35	32	17	29	344	7310	590	1250	345	794	180	85
24	36	31	17	28	206	7090	464	1140	330	696	189	81
25	34	35	17	26	164	4610	404	1020	243	699	981	77
26	33	41	17	25	143	3330	366	925	220	714	1050	74
27	35	42	18	23	123	2450	345	857	214	1110	332	71
28	33	37	18	22	94	2070	322	770	205	907	324	68
29	33	31	18	21	---	1840	299	704	188	782	225	67
30	32	26	17	20	---	1620	303	635	180	804	206	69
31	31	---	17	19	---	1400	---	576	---	2480	880	---
TOTAL	1215	1077	690	565	1771	57099	25356	38138	13571	31418	18775	18123
MEAN	39.2	35.9	22.3	18.2	63.3	1842	845	1230	452	1013	606	604
MAX	117	55	35	30	344	7310	4560	2930	849	4650	3770	3590
MIN	28	25	17	12	15	116	299	286	180	138	180	67
AC-FT	2410	2140	1370	1120	3510	113300	50290	75650	26920	62320	37240	35950
CAL YR 1978	TOTAL	120237	MEAN	329	MAX	3160	MIN	17	AC-FT	238500		
WTR YR 1979	TOTAL	207798	MEAN	569	MAX	7310	MIN	12	AC-FT	412200		

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952-63, 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 May 1969.

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

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, 14,800 micromhos June 30, 1972, Dec. 30, 1973; minimum daily, 193 micromhos Aug. 17, 1974.

WATER TEMPERATURE: Maximum daily, 36.0°C June 28, 1979; minimum daily, 0.0°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 12,300 micromhos Mar. 12; minimum daily, 432 micromhos July 7.

WATER TEMPERATURE: Maximum daily, 36.0°C June 28, minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT												
05...	1700	30	7840	8.3	23.0	480	290	110	50	1500	87	30
16...	1630	33	7920	7.7	21.0	480	270	110	49	1500	87	30
25...	1900	33	8620	7.9	17.5	520	300	120	53	1700	87	33
NOV												
05...	1800	26	8540	8.4	22.0	390	200	76	49	1600	90	35
15...	1745	50	5040	8.2	9.0	380	160	97	34	960	84	21
25...	1715	39	4970	8.4	13.0	400	200	100	36	940	83	21
DEC												
05...	0900	24	4740	8.2	5.0	380	130	88	38	870	83	20
15...	1700	24	4640	8.2	8.0	360	100	85	37	850	83	19
25...	1800	14	4260	8.1	12.0	330	74	76	35	780	83	19
JAN												
05...	1700	14	5070	7.2	1.0	310	0	39	51	930	87	23
15...	1300	12	3880	7.6	1.0	230	0	37	33	--	--	--
25...	1700	26	2290	7.5	2.0	220	54	55	21	400	79	12
FEB												
05...	1800	18	3460	8.1	3.0	310	88	69	33	570	80	14
15...	1700	30	945	7.4	.0	100	27	25	9.8	150	75	6.4
24...	1700	186	1400	7.4	7.0	140	43	36	13	230	77	8.4
MAR												
05...	1700	1280	3600	7.5	9.0	200	110	60	11	640	87	20
15...	1030	265	10700	8.3	12.0	540	410	140	46	1900	88	36
25...	1430	4320	3550	7.5	11.0	180	120	47	16	650	88	21
APR												
05...	1700	964	4900	7.8	15.0	340	220	88	28	900	85	21
15...	1815	597	4000	7.4	19.5	260	150	68	23	480	79	13
25...	1730	390	4780	7.7	22.0	380	230	98	32	900	84	20
MAY												
05...	1830	1500	2100	7.3	19.5	220	110	57	19	340	76	10
15...	1810	2970	2720	7.3	23.0	310	200	88	22	460	76	11
25...	1700	1010	4480	8.0	25.0	420	300	120	28	800	80	17
JUN												
05...	2000	431	4860	7.5	22.0	440	320	120	35	--	--	--
15...	0800	845	2620	7.4	25.0	420	300	120	30	420	68	8.9
25...	1330	243	3320	7.4	26.0	--	--	--	12	550	24	--
JUL												
05...	1700	138	5110	8.2	25.0	490	330	130	41	900	80	18
15...	1750	255	5330	7.4	34.0	510	380	140	39	930	79	18
25...	2000	710	4400	7.2	29.0	420	310	120	30	760	79	16
AUG												
05...	1300	769	4450	7.4	31.0	380	280	110	26	850	83	19
15...	1930	360	3670	7.4	27.0	360	190	100	27	650	84	15
25...	1930	1270	1960	7.3	30.0	180	97	46	16	330	85	11
SEP												
05...	1900	797	745	7.5	29.0	120	33	32	8.5	110	66	4.5
15...	1800	115	3760	7.5	24.0	360	150	90	32	670	86	15
25...	1900	76	4700	7.2	26.0	410	190	100	39	870	88	19

ARKANSAS RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM- DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAH- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
05...	--	10	230	0	190	1.8	360	--	4250	5.78	344
16...	--	9.8	250	0	210	8.0	360	2100	4310	5.86	384
25...	--	10	260	0	210	5.2	390	2300	4730	6.43	421
NOV											
05...	--	13	--	--	190	--	380	2300	4960	6.75	348
15...	--	13	--	--	220	--	230	1400	2710	3.69	366
25...	--	7.1	--	--	200	--	230	1400	2760	3.75	291
DEC											
05...	--	5.7	--	--	250	--	210	1300	2620	3.56	170
15...	--	5.3	--	--	260	--	200	1300	2580	3.51	167
25...	--	5.2	--	--	260	--	180	1100	2360	3.21	89.2
JAN											
05...	--	6.3	--	--	310	--	230	1300	2870	3.90	108
15...	--	5.1	--	--	320	--	200	1000	2190	--	71.0
25...	--	6.9	--	--	170	--	120	600	1280	1.74	89.9
FEB											
05...	570	4.3	--	--	220	--	180	820	1890	2.57	91.9
15...	160	5.3	--	--	76	--	53	210	520	.71	42.1
24...	230	4.6	--	--	100	--	70	330	765	1.04	384
MAR											
05...	650	7.5	--	--	84	--	140	980	2020	2.75	6980
15...	1900	8.2	--	--	130	--	400	2900	6170	8.39	4420
25...	660	6.3	--	--	64	--	130	990	1750	2.38	20400
APR											
05...	910	8.2	--	--	120	--	--	1100	--	--	--
15...	490	6.8	--	--	110	--	200	750	2130	2.90	3430
25...	910	7.9	--	--	150	--	260	1300	2670	3.63	2810
MAY											
05...	350	7.7	--	--	110	--	140	490	1150	1.56	4660
15...	470	8.2	--	--	110	--	240	--	1640	2.23	13200
25...	610	8.6	--	--	120	--	320	1200	2580	3.51	7040
JUN											
05...	810	7.7	--	--	120	--	390	1300	2720	--	3170
15...	430	8.7	--	--	120	--	350	--	1640	2.23	3740
25...	560	8.1	--	--	120	--	300	850	1900	2.58	1250
JUL											
05...	910	8.7	--	--	160	--	400	1400	2600	3.54	969
15...	940	10	--	--	130	--	430	1400	2940	4.00	2020
25...	770	8.4	--	--	110	--	360	1200	2400	3.26	4600
AUG											
05...	860	8.4	--	--	100	--	330	1300	2530	3.44	5250
15...	660	8.2	--	--	170	--	250	970	2080	2.83	2020
25...	340	5.7	--	--	84	--	130	490	1070	1.46	3670
SEP											
05...	120	7.3	--	--	82	--	45	190	431	.59	927
15...	680	7.4	--	--	210	--	200	1000	2120	2.88	658
25...	880	7.4	--	--	220	--	250	1300	2660	3.62	546

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

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6330	8370	4880	---	3350	1330	3570	5240	4110	5270	1090	504
2	6970	8560	4850	5160	3420	1280	5080	5010	---	5090	2020	621
3	7200	8590	4820	4960	3460	2220	5490	4030	4760	5060	3720	464
4	7560	8560	4900	5240	3420	2230	5310	1660	4810	5200	4260	466
5	7840	8540	4740	5070	3460	3600	4900	2100	4860	5110	4450	745
6	8040	7600	4730	4700	3420	5480	4710	2380	4760	5320	4140	1150
7	8090	7500	4810	4740	3420	8730	3500	---	4430	432	4290	1150
8	7860	7640	5030	1130	3510	9750	3740	3730	4020	1830	4930	1360
9	7960	7300	5250	1070	3490	4100	4770	4160	4120	2910	5020	1820
10	4170	6420	5240	---	3490	9800	4410	5640	4170	4110	4980	2790
11	7220	6410	5070	4340	3490	9830	3900	6370	4230	5460	5000	2790
12	7240	5930	4900	4380	2050	12300	2050	2760	4470	5270	4260	2800
13	7220	5760	4550	1470	1120	11800	3210	3790	4860	5100	4510	3500
14	7690	---	4510	1400	1170	11300	---	4040	3510	5070	4780	3610
15	7740	5040	4640	3880	945	10700	2020	2720	2620	5330	3670	3760
16	7920	4930	4660	---	---	10200	5080	3820	2540	5290	4400	3830
17	8150	5070	4550	1390	1680	10100	5000	4550	3850	1250	5010	3980
18	8240	883	4610	710	1670	5440	---	2930	4350	1860	5020	3970
19	8140	4960	4620	703	1670	1210	5390	3180	---	1240	5140	4040
20	8070	5070	4730	1260	1700	2840	3180	3460	4170	3170	5410	4140
21	8570	5130	4780	1270	1690	5220	690	3870	5060	4620	5490	---
22	8140	5180	4660	1260	997	4160	3280	4260	4680	5090	5420	4810
23	8170	5210	4590	1240	984	2610	4520	4200	4360	5720	5270	4620
24	8380	---	4250	1240	1400	3590	5380	4270	4440	4930	5350	4620
25	8620	4970	4260	2290	1400	3550	4780	4480	3320	4400	1960	4700
26	8490	4880	4350	2320	1250	5600	5010	4560	4880	4790	801	4800
27	8510	4860	4340	2850	1250	5890	5340	4400	4860	2880	2520	4890
28	8550	4960	4340	2870	1250	6340	5410	3420	5030	5520	525	4910
29	8540	4500	4380	2860	---	6370	5380	3920	5250	3900	2550	4980
30	---	4680	4600	3230	---	4690	5430	4060	5150	---	4420	5020
31	8410	---	4800	3250	---	4640	---	4400	---	1920	4430	---

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8520	4890	---	3340	1520	3200	5330	---	5370	1100	---
2	---	7610	---	---	3470	1370	5060	5000	---	5100	1860	---
3	---	8230	---	---	3520	2340	5400	4210	---	5250	3350	---
4	---	8370	4750	---	3440	1980	5350	2910	---	5300	3810	---
5	---	8990	4690	---	3510	3650	4890	1870	---	5260	4540	---
6	7990	7440	4710	---	3450	5150	4640	2490	---	2680	4300	---
7	8050	7570	---	---	3430	8170	3860	3980	---	397	4230	---
8	8120	7850	---	---	3520	9520	3590	4120	---	1440	4720	---
9	8120	7350	---	---	3480	---	4640	3880	---	2790	5160	---
10	5240	6750	5520	---	3530	---	4520	5700	---	3720	5030	---
11	7300	---	4990	---	3430	---	4250	6200	---	5130	4900	---
12	7440	---	4960	---	2620	---	2440	6630	---	5340	5150	---
13	---	---	4230	---	1130	---	2850	3460	---	5100	5340	---
14	---	5430	4420	---	1360	---	1900	---	---	5130	4750	3640
15	---	5090	4660	---	1110	10700	1700	---	---	5280	3580	3730
16	---	4870	4640	---	1150	10400	4900	---	---	5200	4220	3800
17	---	5150	4500	---	1600	10100	4900	---	---	3020	4530	3950
18	8770	5190	4570	---	1550	8440	5330	---	---	1010	---	3950
19	---	5060	4620	---	1570	1460	5520	---	---	1090	---	4040
20	7530	5050	4260	---	1690	2340	3780	---	4180	2950	---	4140
21	8740	5140	4800	---	1700	4620	927	---	5000	4260	---	4470
22	7430	5170	4650	---	1170	5570	3110	---	4870	5120	---	4880
23	8340	5240	4600	---	1000	2750	4680	---	4350	5610	---	4690
24	8560	5150	4260	---	1270	3030	5230	---	4460	5010	---	4610
25	9330	5110	4280	---	1150	3920	4520	---	3260	4750	---	4700
26	8670	5070	4340	---	1180	5430	4920	---	5010	4650	---	4760
27	7430	4820	4320	2780	1400	5620	5390	---	4920	3530	---	4860
28	7730	5110	4340	2560	1270	6130	5360	---	4980	5370	---	4940
29	7650	4470	4340	2730	---	6390	5440	---	5230	3550	---	4990
30	7980	4660	---	3170	---	5480	5380	---	5170	4400	---	5100
31	8840	---	---	3230	---	4630	---	---	---	3660	---	---

ARKANSAS RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.0	19.5	12.0	---	.0	11.0	17.0	21.0	25.0	29.0	30.0	26.0
2	28.0	24.0	12.0	2.0	1.0	10.0	17.0	20.0	---	29.0	27.0	25.0
3	23.0	24.0	11.0	2.0	3.0	3.0	9.5	15.0	27.0	32.0	31.0	26.0
4	24.0	23.5	4.0	2.0	2.0	5.0	11.0	17.0	24.0	31.0	32.0	26.0
5	23.0	22.0	5.0	1.0	3.0	9.0	15.0	19.5	22.0	25.0	31.0	29.0
6	23.0	14.0	5.0	2.0	2.0	9.0	15.0	21.0	29.0	25.0	32.0	27.0
7	23.0	14.0	5.0	2.0	.0	11.0	---	23.5	31.0	25.0	33.0	27.0
8	18.0	18.0	4.0	4.0	3.0	14.0	20.0	26.0	27.0	29.0	31.5	26.0
9	23.0	17.0	4.0	4.0	3.0	8.0	20.0	25.0	25.0	30.0	28.0	26.5
10	24.0	15.0	4.0	---	3.0	8.0	15.0	19.0	26.0	31.0	31.0	23.0
11	18.0	15.0	4.0	4.0	3.0	8.0	17.0	22.0	28.0	33.0	28.0	23.0
12	18.0	13.0	4.5	4.0	2.0	15.0	---	23.0	26.0	34.0	26.0	23.0
13	18.0	18.0	8.0	1.0	2.0	15.0	17.0	23.0	26.5	32.0	31.0	24.0
14	18.0	---	6.0	1.0	3.0	15.0	---	23.0	26.0	34.0	27.0	21.0
15	21.0	9.0	8.0	1.0	.0	12.0	19.5	23.0	25.0	34.0	27.0	24.0
16	21.0	9.0	8.0	---	---	10.0	24.0	24.0	25.0	33.0	28.0	24.0
17	20.0	10.0	8.0	4.0	8.0	9.0	20.0	23.0	27.0	25.0	31.0	23.0
18	20.0	13.0	6.0	1.0	8.0	6.0	---	24.0	26.0	21.0	31.5	25.0
19	20.5	11.0	9.0	1.0	8.0	15.0	22.0	25.0	---	26.0	31.0	26.0
20	24.0	9.0	14.5	1.0	8.0	14.0	19.0	28.0	27.0	29.0	29.0	23.0
21	17.0	9.0	10.0	1.0	8.0	15.0	19.0	22.0	28.0	30.0	27.5	---
22	24.0	13.0	9.0	3.0	3.0	15.0	24.0	24.0	31.0	30.0	28.0	21.0
23	16.0	9.0	6.0	1.0	3.0	13.0	21.0	24.0	29.0	29.0	30.0	---
24	18.0	---	10.0	1.0	7.0	11.0	20.0	23.0	29.0	30.0	31.0	---
25	17.5	13.0	12.0	2.0	7.0	11.0	22.0	25.0	26.0	29.0	30.0	26.0
26	20.0	14.0	5.0	2.0	7.0	13.0	22.5	24.0	27.0	31.0	---	25.0
27	19.0	14.0	12.0	1.0	7.0	13.0	19.0	27.0	32.0	31.0	30.0	25.0
28	20.0	10.0	10.0	1.0	7.0	17.0	17.5	27.0	36.0	32.0	25.0	26.0
29	20.0	11.5	3.0	1.0	---	17.0	17.0	28.0	30.0	31.0	30.5	26.0
30	---	12.0	3.0	.0	---	18.0	17.0	26.0	30.0	---	26.0	25.0
31	19.5	---	3.0	.0	---	17.0	---	26.0	---	26.0	26.0	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK--Continued
 SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	420	280	---	220	150	220	300	---	300	140	---
2	---	390	---	---	230	150	290	290	---	290	170	---
3	---	410	---	---	230	190	300	260	---	300	220	---
4	---	420	280	---	230	170	300	210	---	300	240	---
5	---	440	280	---	230	240	280	170	---	300	270	---
6	400	380	280	---	230	290	270	190	---	200	260	---
7	400	390	---	---	230	410	240	250	---	110	260	---
8	410	400	---	---	230	460	230	250	---	150	280	---
9	410	380	---	---	230	---	270	250	---	200	290	---
10	300	360	310	---	230	---	270	310	---	240	290	---
11	380	---	290	---	230	---	260	330	---	290	280	---
12	380	---	290	---	200	---	190	350	---	300	290	---
13	---	---	260	---	140	---	210	230	---	290	300	---
14	---	300	270	---	150	---	170	---	---	290	280	240
15	---	290	280	---	140	510	160	---	---	300	230	240
16	---	280	270	---	140	500	280	---	---	300	260	240
17	---	290	270	---	160	480	280	---	---	210	270	250
18	430	300	270	---	160	420	300	---	---	140	---	250
19	---	290	270	---	160	150	310	---	---	140	---	250
20	390	290	260	---	160	190	240	---	260	210	---	260
21	430	290	280	---	160	270	130	---	290	260	---	270
22	380	290	270	---	140	310	220	---	280	290	---	280
23	420	300	270	---	130	200	280	---	260	310	---	280
24	420	290	260	---	150	210	300	---	270	290	---	270
25	450	290	260	---	140	250	270	---	220	280	---	280
26	430	290	260	---	140	300	290	---	290	270	---	280
27	380	280	260	200	150	320	300	---	290	230	---	280
28	390	290	260	190	150	330	300	---	290	300	---	290
29	390	270	260	200	---	340	300	---	300	230	---	290
30	400	280	---	220	---	310	300	---	290	270	---	290
31	440	---	---	220	---	270	---	---	---	240	---	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	36.3	18.9	---	10.70	47.0	683.0	232.0	---	138.0	1430.0	---
2	---	32.6	---	---	13.00	49.0	791.0	236.0	---	125.0	1040.0	---
3	---	34.3	---	---	12.40	564.0	799.0	239.0	---	124.0	683.0	---
4	---	34.0	18.1	---	11.80	537.0	715.0	479.0	---	116.0	600.0	---
5	---	33.3	14.4	---	11.20	907.0	699.0	643.0	---	112.0	569.0	---
6	33.5	41.0	17.4	---	11.20	626.0	724.0	790.0	---	1060.0	480.0	---
7	35.6	43.2	---	---	10.60	613.0	608.0	742.0	---	1360.0	408.0	---
8	39.9	44.3	---	---	9.94	579.0	477.0	643.0	---	478.0	380.0	---
9	91.9	39.0	---	---	9.94	---	505.0	535.0	---	312.0	341.0	---
10	94.8	29.2	22.6	---	9.31	---	448.0	587.0	---	288.0	297.0	---
11	62.6	---	23.5	---	11.80	---	504.0	568.0	---	323.0	260.0	---
12	49.2	---	25.1	---	11.90	---	646.0	647.0	---	267.0	272.0	---
13	---	---	21.1	---	9.45	---	675.0	689.0	---	240.0	229.0	---
14	---	30.8	25.5	---	14.20	---	418.0	---	---	217.0	191.0	81.6
15	---	39.1	21.2	---	11.30	368.0	276.0	---	---	208.0	172.0	76.5
16	---	41.6	19.0	---	10.20	344.0	380.0	---	---	184.0	177.0	70.6
17	---	40.7	16.0	---	10.40	302.0	337.0	---	---	595.0	156.0	69.5
18	38.3	36.4	15.3	---	11.20	905.0	349.0	---	---	1070.0	---	64.8
19	---	28.2	15.3	---	13.40	2200.0	343.0	---	---	1260.0	---	62.8
20	31.6	25.8	13.3	---	17.30	2450.0	373.0	---	286.0	902.0	---	72.3
21	36.0	23.5	14.4	---	38.90	1840.0	1600.0	---	325.0	849.0	---	67.8
22	31.8	24.3	12.4	---	56.70	2790.0	986.0	---	273.0	778.0	---	67.3
23	39.7	25.9	12.4	---	121.00	3950.0	446.0	---	242.0	665.0	---	64.3
24	40.8	24.3	11.9	---	83.40	4020.0	376.0	---	241.0	545.0	---	59.0
25	41.3	27.4	11.9	---	62.00	3110.0	295.0	---	144.0	528.0	---	58.2
26	38.3	32.1	11.9	---	54.10	2700.0	287.0	---	172.0	521.0	---	55.9
27	35.9	31.8	12.6	12.4	49.80	2120.0	279.0	---	168.0	689.0	---	53.7
28	34.7	29.0	12.6	11.3	38.10	1840.0	261.0	---	161.0	735.0	---	53.2
29	34.7	22.6	12.6	11.3	---	1690.0	242.0	---	152.0	486.0	---	52.5
30	34.6	19.7	---	11.9	---	1360.0	245.0	---	141.0	586.0	---	54.0
31	36.8	---	---	11.3	---	1020.0	---	---	---	1610.0	---	---

ARKANSAS RIVER BASIN

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

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2300	1300	---	890	380	850	1400	---	1500	260	---
2	---	2100	---	---	920	340	1400	1300	---	1400	480	---
3	---	2200	---	---	940	610	1500	1100	---	1400	890	---
4	---	2300	1300	---	910	510	1400	770	---	1400	1000	---
5	---	2500	1300	---	930	970	1300	480	---	1400	1200	---
6	2200	2000	1300	---	920	1400	1200	650	---	700	1200	---
7	2200	2100	---	---	910	2200	1000	1100	---	69	1100	---
8	2200	2100	---	---	940	2600	960	1100	---	360	1300	---
9	2200	2000	---	---	930	---	1200	1000	---	730	1400	---
10	1400	1800	1500	---	940	---	1200	1500	---	990	1400	---
11	2000	---	1300	---	910	---	1100	1700	---	1400	1300	---
12	2000	---	1300	---	690	---	640	1800	---	1400	1400	---
13	---	---	1100	---	270	---	750	920	---	1400	1400	---
14	---	1500	1200	---	340	---	490	---	---	1400	1300	970
15	---	1400	1300	---	270	2900	430	---	---	1400	950	1000
16	---	1300	1200	---	280	2800	1300	---	---	1400	1100	1000
17	---	1400	1200	---	400	2800	1300	---	---	800	1200	1100
18	2400	1400	1200	---	390	2300	1400	---	---	240	---	1100
19	---	1400	1200	---	390	360	1500	---	---	260	---	1100
20	2100	1400	1100	---	430	610	1000	---	1100	780	---	1100
21	2400	1400	1300	---	430	1200	220	---	1300	1100	---	1200
22	2000	1400	1300	---	280	1500	820	---	1300	1400	---	1300
23	2300	1400	1200	---	240	720	1300	---	1200	1500	---	1300
24	2300	1400	1100	---	310	800	1400	---	1200	1400	---	1200
25	2600	1400	1100	---	280	1000	1200	---	860	1300	---	1300
26	2400	1400	1200	---	290	1500	1300	---	1400	1300	---	1300
27	2000	1300	1200	730	350	1600	1500	---	1300	940	---	1300
28	2100	1400	1200	670	310	1700	1400	---	1300	1500	---	1300
29	2100	1200	1200	720	---	1700	1500	---	1400	950	---	1300
30	2200	1300	---	840	---	1500	1500	---	1400	1200	---	1400
31	2400	---	---	860	---	1200	---	---	---	980	---	---

CHLORIDE, DISSOLVED (TUNS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	199.0	87.7	---	43.3	119.0	2640.0	1080.0	---	688.0	2650.0	---
2	---	176.0	---	---	52.2	111.0	3820.0	1060.0	---	605.0	2930.0	---
3	---	184.0	---	---	50.8	1810.0	3990.0	1010.0	---	578.0	2760.0	---
4	---	186.0	84.2	---	46.7	1610.0	3340.0	1750.0	---	541.0	2500.0	---
5	---	189.0	66.7	---	45.2	3670.0	3240.0	1810.0	---	522.0	2530.0	---
6	184.0	216.0	80.7	---	44.7	3020.0	3220.0	2700.0	---	3700.0	2220.0	---
7	196.0	232.0	---	---	41.8	3290.0	2540.0	3270.0	---	866.0	1730.0	---
8	214.0	232.0	---	---	40.6	3270.0	1990.0	2830.0	---	1150.0	1770.0	---
9	493.0	205.0	---	---	40.2	---	2250.0	2140.0	---	1140.0	1640.0	---
10	442.0	146.0	109.0	---	38.1	---	1990.0	2840.0	---	1190.0	1430.0	---
11	329.0	---	105.0	---	46.7	---	2130.0	2930.0	---	1560.0	1210.0	---
12	259.0	---	112.0	---	41.0	---	2180.0	3330.0	---	1340.0	1310.0	---
13	---	---	89.1	---	18.2	---	2410.0	2760.0	---	1160.0	1070.0	---
14	---	154.0	113.0	---	32.1	---	1200.0	---	---	1050.0	885.0	330.0
15	---	189.0	98.3	---	21.9	2090.0	743.0	---	---	971.0	711.0	319.0
16	---	193.0	84.2	---	20.4	1930.0	1760.0	---	---	858.0	748.0	294.0
17	---	197.0	71.3	---	25.9	1760.0	1570.0	---	---	2270.0	693.0	306.0
18	214.0	170.0	68.0	---	27.4	4960.0	1630.0	---	---	1840.0	---	285.0
19	---	136.0	68.0	---	32.6	5270.0	1660.0	---	---	2340.0	---	276.0
20	170.0	125.0	56.4	---	46.4	7860.0	1550.0	---	1210.0	3350.0	---	306.0
21	201.0	113.0	66.7	---	104.0	8200.0	2710.0	---	1460.0	3590.0	---	301.0
22	167.0	117.0	59.7	---	113.0	13500.0	3680.0	---	1270.0	3750.0	---	312.0
23	217.0	121.0	55.1	---	223.0	14200.0	2070.0	---	1120.0	3220.0	---	298.0
24	224.0	117.0	50.5	---	172.0	15300.0	1750.0	---	1070.0	2630.0	---	262.0
25	239.0	132.0	50.5	---	124.0	12400.0	1310.0	---	564.0	2450.0	---	270.0
26	214.0	155.0	55.1	---	112.0	13500.0	1280.0	---	832.0	2510.0	---	260.0
27	189.0	147.0	58.3	45.3	116.0	10600.0	1400.0	---	751.0	2820.0	---	249.0
28	187.0	140.0	58.3	39.8	78.7	9500.0	1220.0	---	720.0	3670.0	---	239.0
29	187.0	100.0	58.3	40.8	---	8450.0	1210.0	---	711.0	2010.0	---	235.0
30	190.0	91.3	---	45.4	---	6560.0	1230.0	---	680.0	2600.0	---	261.0
31	201.0	---	---	44.1	---	4540.0	---	---	---	6560.0	---	---

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

SOLIDS, RESIDUE UN EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	4710	2730	---	1890	897	1810	2970	---	2990	668	---
2	---	4210	---	---	1960	815	2830	2790	---	2850	1080	---
3	---	4550	---	---	1990	1340	3010	2360	---	2930	1490	---
4	---	4630	2660	---	1940	1150	2980	1650	---	2960	2140	---
5	---	4970	2620	---	1980	2060	2730	1090	---	2930	2540	---
6	4420	4120	2630	---	1950	2870	2600	1430	---	1530	2410	---
7	4450	4190	---	---	1940	4520	2170	2240	---	285	2370	---
8	4490	4340	---	---	1990	5250	2020	2310	---	853	2640	---
9	4490	4070	---	---	1960	---	2600	2180	---	1590	2880	---
10	2920	3750	3080	---	1990	---	2530	3170	---	2100	2810	---
11	4050	---	2790	---	1940	---	2380	3450	---	2860	2740	---
12	4120	---	2770	---	1500	---	1400	3680	---	2980	2870	---
13	---	---	2370	---	684	---	1620	1950	---	2850	2980	---
14	---	3030	2480	---	809	---	1100	---	---	2860	2660	2050
15	---	2840	2610	---	673	5900	995	---	---	2940	2020	2100
16	---	2720	2600	---	695	5730	2740	---	---	2900	2370	2140
17	---	2870	2520	---	940	5570	2740	---	---	1710	2540	2220
18	4850	2900	2560	---	913	4670	2970	---	---	619	---	2220
19	---	2840	2590	---	924	864	3080	---	---	662	---	2270
20	4170	2820	2390	---	989	1340	2130	---	2350	1680	---	2320
21	4830	2870	2680	---	995	2590	574	---	2790	2390	---	2500
22	4120	2890	2600	---	706	3100	1760	---	2720	2860	---	2730
23	4610	2920	2570	---	613	1570	2620	---	2440	3120	---	2620
24	4730	2870	2390	---	760	1720	2920	---	2500	2800	---	2580
25	5150	2850	2400	---	695	2200	2530	---	1840	2660	---	2630
26	4790	2830	2430	---	711	3030	2750	---	2800	2600	---	2660
27	4120	2690	2420	1580	831	3240	3000	---	2750	1990	---	2720
28	4280	2850	2430	1460	760	3410	2990	---	2780	2990	---	2760
29	4240	2500	2430	1560	---	3550	3030	---	2920	2000	---	2790
30	4420	2610	---	1800	---	3050	3000	---	2890	2470	---	2850
31	4880	---	---	1830	---	2590	---	---	---	2060	---	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	407.0	184.0	---	91.9	281.0	5620.0	2290.0	---	1370.0	6800.0	---
2	---	352.0	---	---	111.0	266.0	7720.0	2270.0	---	1230.0	6590.0	---
3	---	381.0	---	---	107.0	3980.0	8010.0	2170.0	---	1210.0	5870.0	---
4	---	375.0	172.0	---	99.5	3630.0	7100.0	3760.0	---	1140.0	5350.0	---
5	---	376.0	134.0	---	96.2	7790.0	6810.0	4120.0	---	1090.0	5350.0	---
6	370.0	445.0	163.0	---	94.8	6190.0	6970.0	5950.0	---	8100.0	4450.0	---
7	396.0	464.0	---	---	89.0	6760.0	5500.0	6650.0	---	3580.0	3720.0	---
8	436.0	480.0	---	---	86.0	6610.0	4190.0	5940.0	---	2720.0	3590.0	---
9	1010.0	418.0	---	---	84.7	---	4860.0	4660.0	---	2480.0	3380.0	---
10	922.0	304.0	225.0	---	80.6	---	4200.0	6000.0	---	2520.0	2880.0	---
11	667.0	---	226.0	---	99.5	---	4610.0	5940.0	---	3190.0	2540.0	---
12	534.0	---	239.0	---	89.1	---	4760.0	6810.0	---	2850.0	2690.0	---
13	---	---	192.0	---	46.2	---	5210.0	5840.0	---	2350.0	2280.0	---
14	---	311.0	234.0	---	76.5	---	2700.0	---	---	2140.0	1810.0	697.0
15	---	383.0	197.0	---	54.5	4250.0	1720.0	---	---	2040.0	1510.0	669.0
16	---	404.0	183.0	---	50.7	3950.0	3710.0	---	---	1780.0	1610.0	630.0
17	---	403.0	150.0	---	60.9	3500.0	3300.0	---	---	4850.0	1470.0	617.0
18	432.0	352.0	145.0	---	64.1	10100.0	3460.0	---	---	4750.0	---	575.0
19	---	276.0	147.0	---	77.3	12600.0	3410.0	---	---	5970.0	---	570.0
20	338.0	251.0	123.0	---	107.0	17300.0	3310.0	---	2580.0	7210.0	---	645.0
21	404.0	232.0	137.0	---	242.0	17700.0	7070.0	---	3130.0	7810.0	---	628.0
22	345.0	242.0	119.0	---	286.0	27900.0	7890.0	---	2650.0	7670.0	---	656.0
23	436.0	252.0	118.0	---	569.0	31000.0	4170.0	---	2270.0	6690.0	---	601.0
24	460.0	240.0	110.0	---	423.0	32900.0	3660.0	---	2230.0	5260.0	---	564.0
25	473.0	269.0	110.0	---	308.0	27400.0	2760.0	---	1210.0	5020.0	---	547.0
26	427.0	313.0	112.0	---	275.0	27200.0	2720.0	---	1660.0	5010.0	---	531.0
27	389.0	305.0	118.0	98.1	276.0	21400.0	2790.0	---	1590.0	5960.0	---	521.0
28	381.0	285.0	118.0	86.7	193.0	19100.0	2600.0	---	1540.0	7320.0	---	507.0
29	378.0	209.0	118.0	88.5	---	17600.0	2450.0	---	1480.0	4220.0	---	505.0
30	382.0	183.0	---	97.2	---	13300.0	2450.0	---	1400.0	5360.0	---	531.0
31	408.0	---	---	93.9	---	9790.0	---	---	---	13800.0	---	---

ARKANSAS RIVER BASIN

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

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

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

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.41 ft (29.487 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to April, 1952.

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

AVERAGE DISCHARGE.--44 years, 480 ft³/s (13.59 m³/s), 347,800 acre-ft/yr (429 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft³/s (2,410 m³/s), June 22, 1942, gage height, 33.3 ft (10.15 m), from floodmark, present site and datum; no flow at times in 1954, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923 reached a stage of about 34 ft (10.4 m), present site and datum, from information by local residents, discharge 100,000 ft³/s (2,830 m³/s).

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Mar. 19	1700	11,800	334	26.67	8.129	Apr. 20	2230	8,750	248	23.28	7.096
Mar. 23	1500	*15,700	445	*28.90	8.809						

Minimum, 6.6 ft³/s (0.187 m³/s) Sept. 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	37	84	54	76	352	503	199	167	120	151	491
2	53	37	77	54	74	360	566	225	167	110	106	192
3	48	39	70	53	72	4390	505	512	162	635	91	53
4	43	42	61	48	72	4750	545	1730	152	500	85	97
5	40	42	51	48	72	1120	873	897	152	400	73	90
6	34	48	56	53	71	524	760	492	152	320	59	53
7	26	50	59	59	71	379	502	366	146	270	49	58
8	29	50	56	59	71	310	406	303	138	210	39	45
9	30	50	48	59	72	278	346	265	162	190	35	31
10	32	50	43	59	73	247	343	255	182	160	33	23
11	34	48	42	60	84	233	2260	3460	296	140	28	20
12	34	45	47	60	92	217	2820	4220	309	117	29	19
13	35	51	52	58	140	204	701	1540	207	64	27	17
14	30	59	59	56	230	184	449	993	161	54	24	12
15	29	63	68	54	400	178	349	654	142	56	25	9.8
16	29	65	72	53	350	164	313	510	119	61	24	9.8
17	27	67	71	50	310	160	291	406	96	123	23	9.5
18	27	70	61	120	230	2160	280	364	90	1890	22	9.5
19	28	73	66	110	250	8840	279	344	91	427	21	9.3
20	28	73	70	97	221	6330	2980	704	95	221	20	8.9
21	28	69	69	92	418	1440	3900	1580	103	180	20	8.8
22	29	63	64	91	695	4850	636	669	122	143	19	8.6
23	30	64	61	88	1110	9400	381	406	1690	112	19	8.3
24	30	66	61	86	731	6100	311	308	3240	111	18	8.2
25	30	76	60	83	401	1920	282	266	853	115	305	8.0
26	30	89	54	82	301	1140	249	243	287	338	193	7.9
27	32	155	54	80	291	840	245	233	188	230	42	7.5
28	33	254	56	78	335	668	224	218	160	170	32	6.6
29	33	147	56	76	---	596	217	206	140	148	22	6.6
30	35	103	56	75	---	543	210	191	125	143	20	6.6
31	37	---	55	80	---	486	---	174	---	184	250	---
TOTAL	1046	2145	1859	2175	7313	59363	22726	22933	10094	7942	1904	1334.9
MEAN	33.7	71.5	60.0	70.2	261	1915	758	740	336	256	61.4	44.5
MAX	63	254	84	120	1110	9400	3900	4220	3240	1890	305	491
MIN	26	37	42	48	71	160	210	174	90	54	18	6.6
AC-FT	2070	4250	3690	4310	14510	117700	45080	45490	20020	15750	3780	2650
CAL YR 1978	TOTAL	126418.0	MEAN	346	MAX	7680	MIN	8.0	AC-FT	250800		
WTR YR 1979	TOTAL	140834.9	MEAN	386	MAX	9400	MIN	6.6	AC-FT	279300		

ARKANSAS RIVER BASIN

63

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-63, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT										
17...	1530	21	1900	7.8	17.0	23	9.3	99	14	465
NOV										
29...	0830	125	800	8.3	5.0	12	12.6	102	32	--
DEC										
28...	1105	47	1250	8.4	3.5	3.0	16.3	128	9	491
JAN										
30...	0900	225	950	7.8	.0	--	11.6	82	--	--
FEB										
08...	1450	71	1250	8.1	.0	5.0	--	--	14	491
MAR										
19...	1500	11500	185	8.2	13.0	>1000	11.2	110	304	--
APR										
23...	1615	352	650	7.6	20.5	74	8.6	98	--	222
MAY										
09...	1400	240	800	8.0	22.0	--	10.1	115	16	--
JUN										
13...	1452	176	1010	7.8	30.0	28	8.4	111	17	295
JUL										
24...	1040	87	635	8.1	27.0	--	7.8	100	--	--
AUG										
06...	1630	50	1500	9.2	32.0	10	--	--	20	359
SEP										
19...	0845	5.9	2800	7.1	18.0	8.0	10.6	115	20	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SU4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT									
17...	143	358	33	95	6.5	134	265	.2	42
NOV									
29...	--	--	--	--	--	63	114	.1	--
DEC									
28...	140	350	--	99	4.3	129	326	.2	8
JAN									
30...	--	--	--	--	--	--	--	--	--
FEB									
08...	140	350	34	90	4.3	145	430	.2	7
MAR									
19...	--	--	--	--	--	24	16	.5	2944
APR									
23...	52	130	22	45	5.1	81	89	.2	202
MAY									
09...	--	--	--	--	--	70	100	.3	63
JUN									
13...	77	193	27	69	5.0	94	101	.3	79
JUL									
24...	--	--	--	--	--	--	--	--	--
AUG									
06...	99	250	24	101	7.4	112	206	.3	52
SEP									
19...	--	--	--	--	--	249	767	.2	53

DATE	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CU)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CUPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 17...	--	1.5	--	--	.243	--	--	--	--
NOV 29...	.30	.34	.65	2.9	.230	--	--	--	--
DEC 28...	.50	1.4	1.9	8.6	<.001	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--
FEB 08...	1.9	2.1	4.0	18	.150	3	--	13	5
MAR 19...	.70	12	12	56	3.200	--	--	--	--
APR 23...	.70	1.5	2.2	10	.190	--	--	--	--
MAY 09...	.80	1.0	1.8	8.2	.150	--	--	--	--
JUN 13...	.30	1.3	1.6	7.1	.165	--	--	--	--
JUL 24...	--	--	--	--	--	--	--	--	--
AUG 06...	<.50	1.5	1.5	--	.190	<5	5	<10	5
SEP 19...	<.50	--	1.5	--	.110	--	--	--	--

[illegible]

ARKANSAS RIVER BASIN

65

07152260 SALT FORK ARKANSAS RIVER NEAR WHITE EAGLE, OK

LOCATION.--Lat 36°34'41", long 97°04'36", on west line NE¼ sec.10, T.24 N., R.2 E., Noble County, Hydrologic Unit 11060004, at bridge on U. S. Highway 177, 2 mi (3.2 km) south of White Eagle, and at mile 2.7 (4.3 km).

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

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)
OCT 18...	1000	4000	8.2	12.0	10	9.7	93	15	487	142	355	42
NOV 28...	1530	600	8.4	9.0	2.0	16.1	142	--	--	--	--	--
DEC 28...	1030	2050	8.3	3.0	1.0	13.9	110	11	532	140	350	44
JAN 29...	1500	1300	7.3	.0	15	11.3	80	20	--	--	--	--
FEB 08...	1200	1700	7.4	.0	4.0	--	--	16	467	130	325	34
MAR 19...	1330	1900	8.5	14.0	>1000	11.5	115	253	--	--	--	--
APR 24...	0930	1280	7.9	19.0	73	8.6	95	31	204	47	118	21
MAY 09...	1045	3600	7.9	22.5	--	8.1	94	30	--	--	--	--
JUN 14...	1048	3010	8.2	24.5	52	6.8	85	27	463	--	350	36
JUL 25...	1030	4850	7.6	28.0	--	9.3	122	--	--	--	--	--
AUG 07...	0900	3600	8.8	27.0	65	6.9	90	30	367	86	215	2.6
SEP 18...	1400	2830	7.8	26.0	32	9.7	124	--	--	--	--	--

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 18...	700	8.0	195	957	.3	19	--	1.7	--	--	.253	--
NOV 28...	--	--	162	542	.3	1	<.10	.69	.69	--	.230	--
DEC 28...	250	5.7	166	294	.2	<1	<.10	1.5	1.5	--	<.001	--
JAN 29...	--	--	102	229	.3	24	1.7	2.1	3.8	17	.250	--
FEB 08...	184	5.3	150	317	.3	8	1.5	1.9	3.4	15	.200	3
MAR 19...	--	--	92	421	.5	3120	1.1	7.1	8.2	36	2.100	--
APR 24...	208	6.3	95	353	.2	330	.40	1.7	2.1	9.3	.330	--
MAY 09...	--	--	202	1051	.2	228	.10	1.6	1.7	7.8	.285	--
JUN 14...	650	8.4	304	950	.3	100	.10	1.6	1.7	7.7	.195	--
JUL 25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	700	9.6	260	1011	.3	159	<.50	2.5	2.5	--	.300	<5
SEP 18...	--	--	177	223	.3	66	<.50	1.8	1.8	--	.250	--

07152260 SALT FORK ARKANSAS RIVER NEAR WHITE EAGLE, OK--Continued

[illegible]

07152500 ARKANSAS RIVER AT RALSTON, OK

LOCATION.--Lat 36°30'09", long 96°43'22", in NW¼ sec.1, T.23 N., R.5 E., Osage County, Hydrologic Unit 11060006, near left bank on downstream side of pier of bridge on State Highway 18 at Ralston, 2 mi (3.2 km) downstream from Salt Creek, 2 mi (3.2 km) upstream from Grayhorse Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--54,465 mi² (141,064 km²), of which 7,615 mi² (19,723 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft (236.738 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1925, to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft (366 m) downstream at same datum. Nov. 14, 1935, to Feb. 23, 1939, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi (96.1 km) upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941.

AVERAGE DISCHARGE.--(Prior to regulation by Kaw Dam) 50 years (water years 1926-75), 4,826 ft³/s (136.7 m³/s), 3,496,000 acre-ft/yr (4.31 km³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,400 ft³/s (1,000 m³/s) Mar. 25, gage height, 10.87 ft (3.313 m); minimum daily discharge, 106 ft³/s (3.00 m³/s) Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	115	545	358	640	5220	12700	2400	3570	4180	8220	2860
2	1300	106	628	360	630	5230	12100	2500	3490	4010	9930	9130
3	1160	6300	597	360	640	4720	11900	2620	3490	3930	8770	8690
4	1180	8350	568	350	630	3790	11800	3260	3480	3510	6570	7160
5	1130	9430	558	350	630	8100	11400	4350	3320	2340	5880	5360
6	717	9490	521	350	630	10400	9240	5760	2250	2450	5700	5000
7	505	7390	516	350	630	13100	7860	4790	2060	2230	4700	4280
8	422	1800	515	350	630	12000	7610	4520	1970	5970	3060	5060
9	437	943	481	360	630	11600	7100	5130	2800	4780	2810	3320
10	402	721	436	360	630	8490	5990	4880	2630	3010	2680	2430
11	343	563	674	360	630	5760	5500	4680	2110	2500	2530	2110
12	340	510	912	360	630	5620	4440	4590	8690	2290	1350	1900
13	289	480	641	360	650	4900	6450	7870	19000	2270	900	1700
14	265	446	473	360	660	3200	6600	4710	21300	2150	800	1520
15	215	571	429	360	770	3020	6610	4480	16500	1170	723	1250
16	198	606	404	360	1010	2960	6020	7370	13200	915	669	1130
17	189	572	404	350	1130	2790	5690	7280	10900	854	665	1050
18	179	504	396	350	1150	3020	5030	6990	7840	987	672	977
19	172	469	404	350	1110	3560	3540	6720	6490	4800	606	943
20	171	455	388	420	1040	12100	3300	6490	4010	8120	593	828
21	162	446	380	410	910	23300	3240	6320	3720	7210	588	747
22	155	420	372	1030	800	18000	8860	6630	3560	6020	1520	691
23	152	418	372	1200	930	20300	7810	7010	3390	5620	2390	668
24	148	413	364	1200	1910	31800	3950	8520	2330	5070	2390	636
25	143	415	364	1200	3730	32200	3110	10100	3320	4870	1420	622
26	140	444	356	1190	3450	22000	2880	7990	5510	5060	1380	602
27	147	445	356	1190	3480	18500	2710	4480	6100	5020	3230	577
28	142	403	364	1180	5130	17000	2610	4250	6170	5410	2490	567
29	124	391	342	670	---	14600	2510	3940	5510	5720	1630	556
30	120	398	350	640	---	13100	2440	3790	4330	5560	1400	550
31	119	---	352	630	---	12900	---	3730	---	7130	1290	---
TOTAL	12366	54014	14462	17718	35440	353280	191000	168150	183040	125156	87556	72914
MEAN	399	1800	467	572	1266	11400	6367	5424	6101	4037	2824	2430
MAX	1300	9490	912	1200	5130	32200	12700	10100	21300	8120	9930	9130
MIN	119	106	342	350	630	2790	2440	2400	1970	854	588	550
AC=FT	24530	107100	28690	35140	70300	700700	378800	333500	363100	248200	173700	144600
CAL YR 1978 TOTAL	1079663			MEAN 2958	MAX 15800	MIN 52	AC=FT 2142000					
WTR YR 1979 TOTAL	1315096			MEAN 3603	MAX 32200	MIN 106	AC=FT 2608000					

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1950 to September 1963, July 1968 to current year.

WATER TEMPERATURE: January 1950 to September 1963, July 1968 to current year.

INSTRUMENTATION.--Water quality monitor 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 concentrations, 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, 7,510 micromhos Sept. 14, 1955; minimum, 200 micromhos Aug. 16, 1974.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,840 micromhos Mar. 12; minimum daily, 360 micromhos Sept. 1.

WATER TEMPERATURE: Maximum daily, 31.0°C July 14, 16; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, (PER- CENT UM-MF SATUR- ATION)	STREP- TOGOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT												
04...	--	1250	--	--	--	--	--	--	--	--	--	--
04...	1700	1220	1260	8.3	21.5	--	--	--	--	--	240	88
15...	0930	215	1820	8.4	13.5	--	--	--	--	--	270	110
23...	1645	156	1820	8.2	15.0	4.0	10.3	104	60	160	280	110
25...	0730	146	1790	8.3	14.0	--	--	--	--	--	290	110
NOV												
03...	--	6950	--	--	--	--	--	--	--	--	--	--
05...	0800	9480	1100	8.2	16.5	--	--	--	--	--	230	77
14...	1345	421	1660	8.3	8.5	2.4	12.2	106	53	64	280	110
15...	0730	577	1470	8.3	6.0	--	--	--	--	--	240	90
25...	1200	413	1480	8.4	10.5	--	--	--	--	--	260	98
DEC												
05...	0730	598	1310	8.3	3.0	--	--	--	--	--	270	89
15...	0730	429	1430	8.4	2.5	--	--	--	--	--	290	110
24...	0930	356	1440	8.3	2.5	--	--	--	--	--	260	100
27...	1030	356	1250	8.6	1.0	1.0	13.6	98	65	K4	260	92
JAN												
05...	0830	350	1590	7.3	.0	--	--	--	--	--	140	0
15...	1730	360	1590	7.2	1.0	--	--	--	--	--	140	0
25...	0730	1200	1500	7.4	.0	--	--	--	--	--	170	0
FEB												
05...	0730	630	1630	8.1	.0	--	--	--	--	--	330	130
08...	1240	630	1540	8.4	.0	6.9	13.4	94	K3	--	310	130
15...	0730	770	1370	7.8	.5	--	--	--	--	--	300	130
25...	0930	3790	1280	7.6	.5	--	--	--	--	--	280	120
MAR												
05...	0730	6640	856	8.3	3.5	--	--	--	--	--	190	66
07...	1400	12800	1300	7.7	8.0	130	11.5	101	84	2000	260	100
15...	0730	34400	2250	8.5	9.0	--	--	--	--	--	280	120
25...	0830	3020	951	8.1	8.5	--	--	--	--	--	170	74
APR												
05...	0730	11400	734	8.1	10.5	--	--	--	--	--	150	53
15...	0730	6740	774	8.0	15.5	--	--	--	--	--	150	61
17...	1600	5670	900	7.6	21.0	99	12.3	141	K70	430	150	54
25...	0730	3200	786	8.3	20.0	--	--	--	--	--	150	57
MAY												
05...	1300	4410	1180	7.7	16.0	--	--	--	--	--	210	90
15...	0730	3170	1820	7.8	20.0	--	--	--	--	--	210	100
22...	1340	6670	1500	7.6	20.0	60	8.5	96	81	180	250	130
25...	0730	10200	1020	7.7	19.0	--	--	--	--	--	200	66

ARKANSAS RIVER BASIN

69

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
JUN												
05...	0730	3460	1460	7.5	24.0	--	--	--	--	--	230	91
15...	0730	18100	803	7.5	22.5	--	--	--	--	--	--	--
19...	1330	6640	4000	7.8	24.5	70	7.7	95	60	130	210	95
25...	0730	2280	1440	7.6	23.0	--	--	--	--	--	--	--
JUL												
05...	0730	2190	1000	7.6	26.0	--	--	--	--	--	170	50
10...	1000	3040	760	8.2	27.5	230	6.9	88	410	230	140	39
15...	0800	1220	1260	7.8	28.0	--	--	--	--	--	200	78
25...	0730	4910	1360	7.7	28.0	--	--	--	--	--	190	77
AUG												
05...	1000	5940	868	7.9	27.5	--	--	--	--	--	170	60
15...	0730	720	2170	8.1	23.0	--	--	--	--	--	290	150
21...	1430	556	1830	8.6	28.0	8.2	5.6	74	120	780	270	120
25...	1200	1350	876	7.8	24.0	--	--	--	--	--	160	65
SEP												
05...	0730	5360	555	7.6	26.0	--	--	--	--	--	120	22
15...	0730	1270	978	7.9	18.0	--	--	--	--	--	180	52
25...	0730	619	1570	7.8	21.5	--	--	--	--	--	240	91
25...	1320	630	1480	7.4	25.0	87	7.1	88	100	663	240	91

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	68	16	160	59	4.5	--	5.4	180	0	150	1.4	93
15...	76	20	260	67	6.9	--	6.8	190	6	170	1.3	100
23...	76	21	250	66	6.5	--	6.6	--	--	170	--	100
25...	80	21	250	65	6.4	--	6.7	210	0	170	1.7	100
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	66	15	140	56	4.0	--	6.4	--	--	150	--	77
14...	79	21	250	65	6.5	--	7.6	--	--	170	--	110
15...	68	17	210	65	5.9	--	7.4	--	--	150	--	97
25...	72	19	190	61	5.1	--	8.1	--	--	160	--	110
DEC												
05...	78	18	170	57	4.5	--	6.4	--	--	180	--	110
15...	84	19	180	57	4.6	--	6.5	--	--	180	--	110
24...	72	20	190	60	5.1	--	6.5	--	--	160	--	120
27...	72	20	190	60	5.1	--	6.4	--	--	170	--	110
JAN												
05...	24	19	210	76	7.8	--	4.9	--	--	190	--	100
15...	25	19	210	76	7.7	--	5.1	--	--	180	--	100
25...	34	20	190	70	6.4	--	7.1	--	--	170	--	120
FEB												
05...	94	22	220	59	5.3	230	6.4	--	--	200	--	130
08...	90	20	200	58	5.0	--	6.9	--	--	180	--	110
15...	89	20	170	54	4.2	180	5.6	--	--	170	--	130
25...	82	18	160	55	4.2	170	5.8	--	--	160	--	120
MAR												
05...	58	9.9	92	51	2.9	97	5.1	--	--	120	--	77
07...	76	17	180	59	4.9	--	6.5	--	--	160	--	100
15...	81	20	350	72	9.0	360	6.6	--	--	160	--	140
25...	49	12	130	61	4.3	140	5.2	--	--	98	--	66
APR												
05...	45	8.9	84	54	3.0	90	5.6	--	--	96	--	56
15...	45	10	110	67	3.9	120	5.3	--	--	93	1.8	53
17...	42	10	100	59	3.6	--	5.1	--	--	92	--	57
25...	45	9.3	100	58	3.5	110	5.5	--	--	94	--	58
MAY												
05...	61	14	160	69	4.8	170	5.3	--	--	120	--	72
15...	58	16	--	--	--	330	7.4	--	--	110	--	100
22...	75	16	180	60	4.9	--	6.4	--	--	120	--	130
25...	62	10	120	56	3.7	130	5.8	--	--	130	--	78
JUN												
05...	66	16	200	72	5.7	200	3.6	--	--	140	--	--
15...	--	10	82	--	--	87	5.4	--	--	120	--	69
19...	64	11	92	49	2.8	98	5.5	--	--	110	--	63
25...	--	14	180	--	--	190	6.0	--	--	130	--	140
JUL												
05...	50	11	--	--	--	120	6.0	--	--	120	--	78
10...	40	9.0	76	53	2.8	82	6.0	--	--	98	--	52
15...	58	13	160	63	4.9	170	6.5	--	--	120	--	92
25...	55	12	190	68	6.1	200	6.3	--	--	110	--	93
AUG												
05...	50	11	110	57	3.7	120	6.4	--	--	110	--	67
15...	85	19	340	71	8.7	350	7.5	--	--	140	--	150
15...	85	19	340	71	8.7	350	7.5	--	--	140	--	150
21...	75	19	270	68	7.2	280	7.1	--	--	150	--	150
25...	47	11	110	58	3.8	120	6.1	--	--	98	--	60
SEP												
05...	34	7.6	66	61	2.7	71	5.1	--	--	94	--	40
15...	53	12	120	65	3.9	130	6.4	--	--	130	--	69
25...	67	18	230	74	6.4	240	6.9	--	--	150	--	100
25...	67	18	220	66	6.2	230	7.3	--	--	150	--	100

ARKANSAS RIVER BASIN

71

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	260	--	--	705	--	.96	2320	--	--	--	--	--
15...	420	--	--	998	--	1.36	579	--	--	--	--	--
23...	410	.4	4.6	988	971	1.34	416	.00	.01	--	.67	.68
25...	410	--	--	--	--	1.34	389	--	--	--	--	--
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	200	--	--	623	--	.85	15900	--	--	--	--	--
14...	380	.3	5.7	954	956	1.30	1080	.16	.05	--	.43	.48
15...	330	--	--	827	--	1.12	1290	--	--	--	--	--
25...	300	--	--	824	--	1.12	919	--	--	--	--	--
DEC												
05...	260	--	--	752	--	1.02	1210	--	--	--	--	--
15...	290	--	--	820	--	1.12	950	--	--	--	--	--
24...	300	--	--	822	--	1.12	790	--	--	--	--	--
27...	300	.3	2.0	803	803	1.09	772	.08	.01	--	.27	.28
JAN												
05...	330	--	--	883	--	1.20	834	--	--	--	--	--
15...	330	--	--	882	--	1.20	857	--	--	--	--	--
25...	300	--	--	846	--	1.15	2740	--	--	--	--	--
FEB												
05...	320	--	--	935	--	1.27	1590	--	--	--	--	--
08...	310	.4	7.0	889	853	1.21	1510	.86	.86	--	.44	1.3
15...	250	--	--	784	--	1.07	1630	--	--	--	--	--
25...	230	--	--	735	--	1.00	7520	--	--	--	--	--
MAR												
05...	140	--	--	483	--	.66	8660	--	--	--	--	--
07...	260	.4	1.8	732	738	1.00	25300	.75	.18	--	1.1	1.3
15...	540	--	--	1270	--	1.73	118000	--	--	--	--	--
25...	200	--	--	524	--	.71	4270	--	--	--	--	--
APR												
05...	130	--	--	425	--	.58	13100	--	--	--	--	--
15...	--	--	--	415	--	.56	7550	--	--	--	--	--
17...	150	.3	6.8	462	427	.63	7070	1.3	.03	.04	.97	1.0
25...	150	--	--	466	--	.63	4030	--	--	--	--	--
MAY												
05...	240	--	--	653	--	.89	7780	--	--	--	--	--
15...	420	--	--	995	--	--	8520	--	--	--	--	--
22...	280	.4	5.7	792	766	1.08	14300	.98	.18	.22	1.1	1.3
25...	190	--	--	568	--	.77	15600	--	--	--	--	--
JUN												
05...	340	--	--	876	--	1.19	8180	--	--	--	--	--
15...	140	--	--	460	--	--	22500	--	--	--	--	--
19...	160	.3	6.6	492	469	.67	8820	.93	.04	.05	.69	.73
25...	320	--	--	824	--	--	5070	--	--	--	--	--
JUL												
05...	200	--	--	554	--	--	3280	--	--	--	--	--
10...	120	.3	7.4	378	370	.51	3100	.78	.05	.06	1.7	1.7
15...	260	--	--	697	--	.95	2300	--	--	--	--	--
25...	290	--	--	747	--	1.02	9900	--	--	--	--	--
AUG												
05...	160	--	--	491	--	.67	7880	--	--	--	--	--
15...	500	--	--	1180	--	1.60	2290	--	--	--	--	--
21...	420	.4	6.1	1010	1040	1.37	1520	.00	.35	.42	.35	.70
25...	170	--	--	483	--	.66	1760	--	--	--	--	--
SEP												
05...	87	--	--	315	--	.43	4560	--	--	--	--	--
15...	180	--	--	546	--	.74	1870	--	--	--	--	--
25...	330	--	--	871	--	1.18	1460	--	--	--	--	--
25...	360	.4	3.6	863	867	1.17	1470	.04	.01	.01	.72	.73

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
23...	.00	1.8	.68	3.0	.130	--	--	.140	5.1	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.06	.42	.64	2.8	.180	--	--	.150	--	3.0	.8	3000
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
27...	.00	.28	.36	1.6	.120	--	--	.120	--	--	--	--
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	--
08...	.00	1.3	2.2	9.6	.380	--	--	.380	6.4	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
07...	.56	.74	2.1	9.1	.330	--	--	.150	8.9	--	--	1600
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
17...	.07	.93	2.3	10	.230	.71	.71	.160	8.6	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	.00	1.3	2.3	10	.220	.67	.67	.120	--	7.0	1.7	1400
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
19...	.26	.47	1.7	7.3	.130	.40	.40	.160	6.8	--	--	160
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
10...	1.1	.65	2.5	11	.380	--	1.2	.190	8.9	--	--	4000
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
21...	.00	.75	.70	3.1	.140	--	.43	.100	--	8.8	--	270000
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.32	.41	.77	3.4	.110	--	.34	.010	--	--	--	--

73

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

[illegible][illegible]

ARKANSAS RIVER BASIN

75

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

DATE	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT										
04...	81	82	83	87	90	91	91	93	96	99
23...	--	--	--	--	--	100	--	--	--	--
NOV										
03...	47	49	57	67	80	89	92	94	95	96
14...	--	--	--	--	--	99	--	--	--	--
DEC										
27...	--	--	--	--	--	95	--	--	--	--
FEB										
08...	--	--	--	--	--	95	--	--	--	--
MAR										
07...	--	--	--	--	--	71	--	--	--	--
APR										
17...	--	--	--	--	--	95	--	--	--	--
MAY										
22...	--	--	--	--	--	88	--	--	--	--
JUN										
19...	--	--	--	--	--	96	--	--	--	--
JUL										
10...	--	--	--	--	--	93	--	--	--	--
AUG										
21...	--	--	--	--	--	93	--	--	--	--
SEP										
25...	--	--	--	--	--	93	--	--	--	--

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 14,78 1345	MAR 7,79 1400	MAY 22,79 1340	JUN 19,79 1330	JUL 11,79 1000	AUG 21,79 1000
TOTAL CELLS/ML	3000	1600	1400	160	4000	270000
DIVERSITY: DIVISION	1.6	1.4	1.2	0.9	1.7	1.1
..CLASS	1.6	1.4	1.2	0.9	1.7	1.1
...ORDER	2.6	1.9	1.8	0.9	2.1	2.1
...FAMILY	3.0	2.3	2.2	0.9	2.7	2.3
....GENUS	3.3	2.3	2.7	0.9	3.2	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	*	0	--	-	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE												
....CHLOROCOCCUM	--	-	--	-	--	-	--	-	--	-	*	0
...MICRACIACEAE												
....GOLENKINIA	24	1	--	-	--	-	--	-	--	-	*	0
...OOCYSTACEAE												
....ANKISTRODESMUS	97	3	--	-	52	4	--	-	87	2	8800	3
....CHLORELLA	--	-	--	-	--	-	--	-	--	-	3400	1
...CHODATELLA	--	-	--	-	--	-	--	-	*	0	*	0
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	100	3	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	7400	3
...OOCYSTIS	37	1	--	-	--	-	--	-	120	3	2500	1
...SELENASTRUM	--	-	--	-	52	4	--	-	--	-	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	140	3	2000	1
...SCENEDESMUS	320	11	31	2	420#	30	100#	67	1000#	25	3900	1
...TETRASTRUM	49	2	--	-	210	15	--	-	70	2	--	-
...TETRASPORALES												
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-	--	-	7800	3
...ULOTRICHALES												
...ULOTRICHACEAE												
...BINUCLEARIA	85	3	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	710#	23	--	-	100	7	--	-	*	0	--	-
...ZYGNEATALES												
...DESMIDIACEAE												
...STAURASTRUM	--	-	--	-	--	-	--	-	--	-	1500	1
CHRYSTOPHYTA												
..RACILLARIOPHYCEAE												
...CENTRALES												
...CUSCINODISCACEAE												
....CYCLOTETRA	130	4	340#	21	360#	26	--	-	1000#	25	24000	9
...SKELETONEMA	--	-	--	-	--	-	--	-	--	-	*	0
...PENNIALES												
...DIATOMACEAE												
....DIATOMA	--	-	31	2	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
...SYNEDRA	24	1	--	-	--	-	--	-	--	-	3400	1
...GOMPHONEMACEAE												
....GOMPHONEMA	--	-	61	4	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	*	0	150	9	--	-	52#	33	70	2	--	-
...NITZSCHIA	280	9	180	11	100	7	--	-	280	7	2500	1
...NITZSCHIA												
...SURIRELLACEAE												
....SURIRELLA	--	-	--	-	52	4	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROMONAS	--	-	--	-	52	4	--	-	--	-	--	-

ARKANSAS RIVER BASIN

77

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

CYANOPHYTA (BLUE-GREEN ALGAE)

.CYANOPHYCEAE									
..CHROOCOCCALES									
...CHROOCOCCACEAE									
....AGMENELLUM	73	2	--	-	--	-	--	-	16000 6
....ANACYSTIS	710#	23	120	8	--	-	--	-	83000# 31
..HORMOGONALES									
...NOSTOCACEAE									
....ANABAENOPSIS	210	7	--	-	--	-	--	-	2500 1
....APHANIZOMENON	--	-	--	-	--	-	--	-	-- -
...OSCILLATORIACEAE									
....OSCILLATORIA	180	6	--	-	--	-	--	-	-- -
....SCHIZOTHRIX	--	-	--	-	--	-	--	-	100000# 37

EUGLENOPHYTA (EUGLENIDS)

.EUGLENOPHYCEAE									
..EUGLENALES									
...EUGLENACEAE									
....EUGLENA	49	2	700#	43	--	-	--	-	52 1
....EUTREPTIA	--	-	--	-	--	-	--	-	* 0
....PHACUS	--	-	--	-	--	-	--	-	35 1
....TRACHELOMONAS	*	0	--	-	--	-	--	-	35 1

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

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

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1910	1600	1660	1630	1310	856	1260	1480	851	851	559
2	1170	1920	1360	1640	1620	1270	779	1270	1510	866	833	556
3	1220	1110	1280	1470	1640	1240	753	1210	---	872	727	---
4	1260	1090	1300	1460	1640	1170	748	1110	1540	822	742	555
5	---	1100	1310	1590	1630	856	734	1180	1460	1000	668	555
6	1220	1090	1310	1510	1620	786	738	1320	1520	1070	964	562
7	1310	1100	1330	1460	1620	1280	963	985	1870	862	976	628
8	1380	1320	1370	1580	1590	1300	737	1240	1880	1440	1440	647
9	1360	1460	1430	1580	1620	1320	972	1080	1620	536	1380	702
10	1410	1520	1400	1640	1620	1350	830	1280	1160	650	1380	778
11	1390	1630	1320	1570	1630	1640	1030	1080	1470	877	1370	883
12	1510	1660	1310	1560	1540	2840	1190	1170	1220	1020	1340	953
13	1750	1690	1280	1560	1390	1540	1280	1380	894	1210	1670	935
14	2060	1690	1380	---	1440	2040	863	912	916	1300	2070	967
15	1820	1470	1430	1590	1370	2280	841	1820	803	1260	2170	978
16	1730	1470	1490	1510	1130	2260	890	1520	660	1640	2160	1130
17	1600	1450	1520	1470	935	2170	801	1410	706	1850	1960	1200
18	1550	1510	1540	1420	1200	1910	912	1330	637	1930	1920	1240
19	1560	1520	1520	681	1270	1720	1180	1670	719	1360	2090	1250
20	1650	1540	1490	1080	1230	2130	1280	1570	1110	766	1800	1270
21	1710	1550	1450	884	1230	944	1320	1290	1080	817	1790	1350
22	1750	1530	1420	1270	1250	1080	1410	1390	1170	916	1100	1440
23	1740	1520	1430	1250	1260	1160	532	1300	1140	1030	1180	1500
24	1800	1510	1440	1410	1330	1180	732	1180	1350	1120	595	1560
25	1790	1480	1440	1500	1280	1320	786	1020	1440	1360	876	1570
26	1790	1420	1440	1580	1240	1080	1000	1030	787	1150	1010	1610
27	1840	1450	1430	1490	1230	1030	1150	1620	724	1090	1210	1650
28	1880	1460	1440	1490	1260	971	1220	1780	751	1000	703	1710
29	1840	1480	1430	1480	---	949	1250	1800	756	1150	677	1700
30	1850	1530	1430	1500	---	994	1280	1760	843	866	814	1700
31	1880	---	1480	1620	---	952	---	1520	---	966	1100	---

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1920	1550	1670	---	1330	---	1240	1560	---	665	360
2	1170	1920	1370	1640	---	1360	---	1320	1570	---	931	367
3	1230	1080	1290	1480	---	1530	---	1240	1560	---	705	417
4	1180	1080	1300	1460	---	1140	---	1120	1560	---	712	591
5	1200	1100	1320	1580	---	---	---	1180	1560	---	835	547
6	1260	1070	1330	1500	---	---	---	1090	1640	---	954	549
7	1330	1120	1300	1480	---	---	---	960	1950	---	978	657
8	1350	1370	1360	1560	---	---	---	1220	1840	---	1480	635
9	1370	1460	1440	1580	---	---	---	1040	---	---	1400	707
10	1390	1540	1400	1610	---	---	---	1550	---	---	1380	742
11	1410	1630	1310	1580	1610	---	---	1070	---	---	1370	837
12	1530	1560	1330	1570	1660	---	1230	1170	---	1060	1290	915
13	1780	1690	1250	1560	1320	---	1550	1250	---	1260	1690	888
14	1960	1680	1390	1560	1470	---	1200	979	---	1350	2300	885
15	1770	1390	1430	1560	1340	---	851	1910	---	1320	2180	975
16	---	1440	1360	1510	1090	---	990	1540	---	1820	2130	1140
17	1580	1590	1520	---	965	---	---	1400	---	1910	1940	1210
18	1570	1560	1530	---	1240	---	927	1380	---	1910	1910	1240
19	1550	1550	1520	---	1160	---	1210	1690	---	1280	2010	1250
20	1720	1560	1480	---	1280	---	---	1540	---	822	1740	1270
21	1740	1560	1450	---	1180	---	---	1300	1090	833	1810	1360
22	1730	1460	1430	---	1250	---	---	1400	1200	937	890	1450
23	1730	1760	1440	---	1160	---	---	1320	1120	1070	1260	1510
24	1790	1520	1440	---	1330	---	686	1110	1360	1210	704	1580
25	1810	1440	1470	---	1300	---	808	1030	1460	1170	886	1560
26	1790	1540	1460	---	1210	---	985	1050	781	1150	986	1600
27	1850	1470	1440	---	1120	---	1160	1650	725	1180	1340	1700
28	1870	1480	1420	---	1330	---	1240	1800	860	1030	683	1740
29	1840	1560	1440	---	---	---	1260	1810	763	1160	678	1710
30	1860	1530	1410	---	---	---	1260	1770	837	882	826	1710
31	1880	---	1490	---	---	---	---	1550	---	943	1130	---

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	130	110	120	---	96	---	91	110	---	57	39
2	87	130	99	110	---	98	---	96	110	---	73	39
3	90	82	94	110	---	110	---	91	110	---	59	42
4	87	81	95	100	---	85	---	84	110	---	60	52
5	89	83	96	110	---	---	---	87	110	---	67	50
6	92	81	96	110	---	---	---	82	110	---	74	50
7	96	84	95	110	---	---	---	74	130	---	75	56
8	98	99	98	110	---	---	---	90	130	---	110	55
9	99	100	100	110	---	---	---	79	---	---	100	59
10	100	110	100	110	110	---	---	110	---	---	99	61
11	100	110	95	110	110	---	---	81	---	---	99	67
12	110	110	96	110	120	---	90	87	---	80	94	72
13	120	120	92	110	96	---	110	92	---	92	120	70
14	130	120	100	110	100	---	89	75	---	98	150	70
15	120	100	100	110	97	---	68	130	---	96	150	75
16	---	100	98	110	82	---	76	110	---	130	140	85
17	110	110	110	---	75	---	---	100	---	130	130	89
18	110	110	110	---	91	---	72	99	---	130	130	91
19	110	110	110	---	86	---	89	120	---	93	140	92
20	120	110	110	---	93	---	---	110	---	66	120	93
21	120	110	100	---	87	---	---	95	82	67	120	98
22	120	100	100	---	92	---	---	100	89	73	70	100
23	120	120	100	---	86	---	---	96	84	81	92	110
24	120	110	100	---	96	---	---	83	98	89	59	110
25	120	100	100	---	95	---	65	78	100	87	70	110
26	120	110	100	---	89	---	76	80	64	86	76	110
27	130	100	100	---	84	---	86	120	60	87	97	120
28	130	110	100	---	96	---	91	120	68	78	58	120
29	130	110	100	---	---	---	92	120	63	86	58	120
30	130	110	100	---	---	---	92	120	67	70	66	120
31	130	---	110	---	---	---	---	110	---	73	84	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282.0	40.4	162.0	116.0	---	1350.0	---	590.0	1060.0	---	1270.0	301.0
2	305.0	37.2	168.0	107.0	---	1380.0	---	648.0	1040.0	---	1960.0	961.0
3	282.0	1390.0	152.0	107.0	---	1400.0	---	644.0	1040.0	---	1400.0	985.0
4	277.0	1830.0	146.0	94.5	---	870.0	---	739.0	1030.0	---	1060.0	1010.0
5	272.0	2110.0	145.0	104.0	---	---	---	1020.0	986.0	---	1060.0	724.0
6	178.0	2080.0	135.0	104.0	---	---	---	1280.0	668.0	---	1140.0	675.0
7	131.0	1680.0	132.0	104.0	---	---	---	957.0	723.0	---	952.0	647.0
8	112.0	481.0	136.0	104.0	---	---	---	1100.0	691.0	---	909.0	751.0
9	117.0	255.0	130.0	107.0	---	---	---	1090.0	---	---	759.0	529.0
10	109.0	214.0	118.0	107.0	187.0	---	---	1450.0	---	---	716.0	400.0
11	92.6	167.0	173.0	107.0	187.0	---	---	1020.0	---	---	676.0	382.0
12	101.0	151.0	236.0	107.0	204.0	---	1080.0	1080.0	---	495.0	343.0	369.0
13	93.6	156.0	159.0	107.0	168.0	---	1920.0	1950.0	---	564.0	292.0	321.0
14	93.0	145.0	128.0	107.0	178.0	---	1590.0	954.0	---	569.0	324.0	287.0
15	69.7	154.0	116.0	107.0	202.0	---	1210.0	1570.0	---	303.0	293.0	253.0
16	---	164.0	107.0	107.0	224.0	---	1240.0	2190.0	---	321.0	253.0	259.0
17	56.1	170.0	120.0	---	229.0	---	---	1970.0	---	300.0	233.0	252.0
18	53.2	150.0	118.0	---	283.0	---	978.0	1870.0	---	346.0	236.0	240.0
19	51.1	139.0	120.0	---	258.0	---	851.0	2180.0	---	1210.0	229.0	234.0
20	55.4	135.0	115.0	---	261.0	---	---	1930.0	---	1450.0	192.0	208.0
21	52.5	132.0	103.0	---	214.0	---	---	1620.0	824.0	1300.0	191.0	198.0
22	50.2	113.0	100.0	---	199.0	---	---	1790.0	855.0	1190.0	287.0	187.0
23	49.2	135.0	100.0	---	216.0	---	---	1820.0	769.0	1230.0	594.0	198.0
24	48.0	123.0	98.3	---	495.0	---	---	1910.0	617.0	1220.0	381.0	189.0
25	46.3	112.0	98.3	---	957.0	---	546.0	2130.0	896.0	1140.0	268.0	185.0
26	45.4	132.0	96.1	---	829.0	---	591.0	1730.0	952.0	1170.0	283.0	179.0
27	51.6	120.0	96.1	---	789.0	---	629.0	1450.0	988.0	1180.0	846.0	187.0
28	49.8	120.0	98.3	---	1330.0	---	641.0	1380.0	1130.0	1140.0	390.0	184.0
29	43.5	116.0	92.3	---	---	---	623.0	1280.0	937.0	1330.0	255.0	180.0
30	42.1	118.0	94.5	---	---	---	606.0	1230.0	783.0	1050.0	249.0	178.0
31	41.8	---	105.0	---	---	---	---	1110.0	---	1410.0	293.0	---

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	430	330	370	---	280	---	250	340	---	100	24
2	240	430	290	360	---	290	---	270	340	---	170	26
3	250	210	270	320	---	330	---	250	340	---	110	39
4	240	210	270	310	---	230	---	220	340	---	120	84
5	240	220	270	340	---	---	---	240	340	---	150	73
6	260	210	280	320	---	---	---	210	360	---	180	73
7	280	220	270	320	---	---	---	180	440	---	190	100
8	280	290	290	340	---	---	---	250	410	---	320	96
9	290	310	310	340	---	---	---	200	---	---	300	110
10	290	330	300	350	360	---	---	330	---	---	290	120
11	300	360	270	340	350	---	---	210	---	---	290	150
12	330	340	280	340	360	---	250	240	---	210	270	170
13	390	370	260	340	270	---	330	260	---	260	370	160
14	440	370	290	340	310	---	240	190	---	280	530	160
15	390	290	300	340	280	---	150	430	---	270	500	180
16	---	310	290	320	210	---	190	330	---	410	490	230
17	340	350	330	---	180	---	---	300	---	430	440	250
18	340	340	330	---	250	---	170	290	---	430	430	250
19	330	330	330	---	230	---	250	370	---	260	450	260
20	380	340	320	---	260	---	---	330	---	140	380	260
21	380	340	310	---	240	---	---	270	210	150	400	290
22	380	310	300	---	260	---	---	300	240	170	160	310
23	380	390	310	---	230	---	---	270	220	210	260	320
24	400	330	310	---	280	---	---	220	290	250	110	340
25	400	310	310	---	270	---	140	200	310	240	160	340
26	400	330	310	---	250	---	190	200	130	230	190	350
27	410	310	310	---	220	---	230	360	120	240	280	370
28	420	320	300	---	280	---	250	400	150	200	110	380
29	410	340	310	---	---	---	260	400	130	230	110	380
30	420	330	300	---	---	---	260	390	150	160	150	380
31	420	---	320	---	---	---	---	330	---	180	230	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	778	134	486	358	---	3950	---	1620	3280	---	2220	185
2	842	123	492	350	---	4100	---	1820	3200	---	4560	641
3	783	3570	435	311	---	4210	---	1770	3200	---	2600	915
4	765	4730	414	293	---	2350	---	1940	3190	---	2130	1620
5	732	5600	407	321	---	---	---	2820	3050	---	2380	1060
6	503	5380	394	302	---	---	---	3270	2190	---	2770	985
7	382	4390	376	302	---	---	---	2330	2450	---	2410	1160
8	319	1410	403	321	---	---	---	3050	2180	---	2640	1310
9	342	789	403	330	---	---	---	2770	---	---	2280	986
10	315	642	353	340	612	---	---	4350	---	---	2100	787
11	278	547	491	330	595	---	---	2650	---	---	1980	855
12	303	468	689	330	612	---	3000	2970	---	1300	984	872
13	304	480	450	330	474	---	5750	5520	---	1590	699	734
14	315	446	370	330	552	---	4280	2420	---	1630	1140	657
15	226	447	347	330	582	---	2680	5200	---	853	976	607
16	---	507	316	311	573	---	3090	6570	---	1010	885	702
17	174	541	360	---	549	---	---	5900	---	991	790	709
18	164	463	353	---	776	---	2310	5470	---	1150	780	659
19	153	418	360	---	689	---	2390	6710	---	3370	736	662
20	175	418	335	---	730	---	---	5780	---	3070	608	581
21	166	409	318	---	590	---	---	4610	2110	2920	635	585
22	159	352	301	---	562	---	---	5370	2310	2760	657	578
23	156	440	311	---	578	---	---	5110	2010	3190	1680	577
24	160	368	305	---	1440	---	---	5060	1820	3420	710	584
25	154	347	305	---	2720	---	1180	5450	2780	3160	613	571
26	151	396	298	---	2330	---	1480	4310	1930	3140	708	569
27	163	372	298	---	2070	---	1680	4350	1980	3250	2440	576
28	161	348	295	---	3880	---	1760	4590	2500	2920	740	582
29	137	359	286	---	---	---	1760	4260	1930	3550	484	570
30	136	355	283	---	---	---	1710	3990	1750	2400	567	564
31	135	---	304	---	---	---	---	3320	---	3470	801	---

ARKANSAS RIVER BASIN

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	665	1070	870	936	---	748	---	698	875	---	379	210
2	659	1070	770	919	---	764	---	742	881	---	527	214
3	692	615	726	831	---	859	---	698	875	---	401	242
4	665	609	731	820	---	642	---	631	875	---	407	336
5	676	620	742	886	---	---	---	665	875	---	473	314
6	709	604	748	842	---	---	---	615	919	---	539	315
7	748	631	731	831	---	---	---	543	1090	---	553	375
8	759	770	764	875	---	---	---	667	1030	---	831	363
9	770	820	809	886	---	---	---	587	---	---	792	403
10	781	864	787	903	919	---	---	870	---	---	775	422
11	792	914	737	886	903	---	---	604	---	---	770	475
12	859	875	748	881	931	---	---	692	659	---	598	518
13	997	947	703	875	742	---	---	870	703	---	709	503
14	1100	942	781	875	825	---	---	676	553	---	759	501
15	992	781	803	875	753	---	---	482	1070	---	742	551
16	---	809	764	847	615	---	---	559	864	---	1020	642
17	881	892	853	---	545	---	---	---	787	---	1070	681
18	881	875	859	---	698	---	---	524	775	---	1070	698
19	870	870	853	---	654	---	---	681	947	---	720	703
20	964	875	831	---	720	---	---	---	864	---	466	714
21	975	875	814	---	665	---	---	731	615	472	1010	764
22	969	820	803	---	703	---	---	787	676	530	504	814
23	969	986	809	---	654	---	---	742	631	604	709	847
24	1000	853	809	---	748	---	---	626	764	681	401	886
25	1010	809	825	---	731	---	---	458	581	820	659	875
26	1000	864	820	---	681	---	---	557	593	444	648	897
27	1040	825	809	---	631	---	---	654	925	412	665	953
28	1050	831	798	---	748	---	---	698	1010	487	581	975
29	1030	875	809	---	---	---	---	709	1010	434	654	958
30	1040	859	792	---	---	---	---	709	992	475	499	958
31	1050	---	836	---	---	---	---	---	870	---	533	637

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2150	332	1280	905	---	10500	---	4520	8430	---	8410	1620
2	2310	306	1310	893	---	10800	---	5010	8300	---	14100	5280
3	2170	10500	1170	808	---	10900	---	4940	8250	---	9500	5680
4	2120	13700	1120	775	---	6570	---	5550	8220	---	7220	6530
5	2060	15800	1120	837	---	---	---	7810	7840	---	7510	4540
6	1370	15500	1050	796	---	---	---	9560	5580	---	8300	4250
7	1020	12600	1020	785	---	---	---	7020	6060	---	7020	4330
8	865	3740	1060	827	---	---	---	8380	5480	---	6870	4960
9	909	2090	1050	861	---	---	---	8130	---	---	6010	3610
10	848	1680	926	878	1560	---	---	11500	---	---	5610	2770
11	733	1390	1340	861	1540	---	---	7630	---	---	5260	2710
12	789	1200	1840	856	1580	---	---	8300	8170	---	3700	2660
13	778	1230	1220	850	1300	---	---	15200	14900	---	4350	2310
14	787	1130	997	850	1470	---	---	12000	7030	---	4410	2060
15	576	1200	930	850	1570	---	---	8600	12900	---	2340	1860
16	---	1320	833	823	1680	---	---	9090	17200	---	2520	1960
17	450	1380	930	---	1660	---	---	---	15500	---	2470	1930
18	426	1190	918	---	2170	---	---	7120	14600	---	2850	1840
19	404	1100	930	---	1960	---	---	6510	17200	---	9330	1790
20	445	1070	871	---	2020	---	---	---	15100	---	10200	1600
21	426	1050	835	---	1630	---	---	12500	6180	9190	1600	1540
22	406	930	807	---	1520	---	---	14100	6500	8610	2070	1520
23	398	1110	813	---	1640	---	---	14000	5780	9170	4580	1530
24	400	951	795	---	3860	---	---	14400	4810	9320	2590	1520
25	390	906	811	---	7360	---	---	3850	15800	7350	8670	1470
26	378	1040	788	---	6340	---	---	4330	12800	6610	8850	1460
27	413	991	778	---	5930	---	---	4790	11200	6790	9010	1480
28	403	904	784	---	10400	---	---	4920	11600	8110	8490	1490
29	345	924	747	---	---	---	---	4800	10700	6460	10100	1440
30	337	923	748	---	---	---	---	4670	10200	5550	7490	1420
31	337	---	795	---	---	---	---	---	8760	---	10300	2220

ARKANSAS RIVER BASIN

83

07153000 BLACK BEAR CREEK AT PAWNEE, OK

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE¼NE¼ sec.31, T.22 N., R.5 E., Pawnee County Hydrologic unit 11060006, on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 300 ft (91.4 m) downstream from Skedee Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--576 mi² (1,492 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.73 ft (244.672 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1944, nonrecording gage at present site and datum except for Aug. 27, 1953, to Apr. 29, 1954, nonrecording gage at site 500 ft (152 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--35 years, 172 ft³/s (4.871 m³/s), 124,600 acre-ft/yr (153 hm³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft³/s (80.7 m³/s) Mar. 23, gage height, 9.61 ft (2.929 m), no peaks above base of 4,000 ft³/s (113 m³/s); no flow for part of each day Aug. 19, 20, 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.60	1.1	2.5	5.3	5.9	66	10	3.2	8.4	1.6	67
2	.29	.61	.93	1.7	5.2	6.6	51	20	2.0	4.9	.70	47
3	.14	.66	.80	1.1	4.7	25	80	862	3.2	2.8	4.1	79
4	.11	.78	.83	1.2	4.1	98	100	2490	8.4	1.5	5.5	149
5	.24	.75	.91	1.4	3.9	206	76	2140	3.7	5.9	2.7	81
6	.58	.87	.96	1.6	4.1	60	58	1000	3.6	972	1.2	48
7	.32	.82	.91	1.5	3.9	32	48	600	4.2	881	1.0	208
8	.85	.80	1.0	1.4	3.8	20	40	399	2.7	247	1.3	303
9	1.1	.78	.99	1.3	3.4	23	35	288	1200	129	2.4	145
10	233	.66	1.0	1.3	3.5	29	500	209	1110	79	3.7	93
11	55	.70	.95	1.3	4.0	22	1320	155	343	47	42	65
12	21	.78	1.1	1.4	4.3	16	721	141	148	26	25	49
13	8.5	.85	1.0	1.6	4.5	11	277	104	73	19	5.7	35
14	4.5	.99	1.0	1.4	4.7	6.2	159	62	38	9.7	1.1	26
15	3.0	283	.95	1.3	4.8	6.8	106	45	19	4.7	.35	20
16	1.8	111	1.0	1.2	4.9	7.9	71	34	8.8	2.4	.10	17
17	1.1	56	.97	1.5	5.0	6.9	45	22	4.3	9.5	.05	13
18	.91	30	.99	172	5.8	1150	37	19	2.6	1380	.02	12
19	.80	21	1.4	999	7.0	1810	29	17	1.4	341	.02	9.4
20	.91	13	1.4	849	10	900	29	20	.71	176	.05	8.6
21	.91	7.3	1.1	268	13	373	25	22	.32	107	.23	8.0
22	.80	4.9	1.1	103	18	932	46	15	.23	69	4.5	8.7
23	.91	2.8	1.1	69	21	2290	40	15	327	46	.39	15
24	.80	1.3	.95	48	28	1050	29	16	294	31	.10	16
25	.69	1.8	.92	31	24	476	26	10	305	39	.03	12
26	.59	3.1	.91	21	16	291	22	6.6	103	24	630	8.6
27	.50	2.9	1.3	14	12	187	20	4.4	61	10	440	6.3
28	.42	2.1	2.0	11	9.7	136	21	3.5	38	6.4	256	4.5
29	.35	1.8	2.0	9.5	---	105	17	3.5	24	3.8	201	2.7
30	.40	1.5	1.9	8.8	---	84	12	2.5	14	2.3	161	2.3
31	.51	---	2.9	6.4	---	66	---	2.0	---	3.9	123	---
TOTAL	341.32	554.15	36.37	2634.4	238.6	10432.3	4106	8737.5	4146.36	4689.2	1914.84	1559.1
MEAN	11.0	18.5	1.17	85.0	8.52	337	137	282	138	151	61.8	52.0
MAX	233	283	2.9	999	28	2290	1320	2490	1200	1380	630	303
MIN	.11	.60	.80	1.1	3.4	5.9	12	2.0	.23	1.5	.02	2.3
AC-FT	677	1100	72	5230	473	20690	8140	17330	8220	9300	3800	3090
CAL YR 1978	TOTAL	16414.20	MEAN	45.0	MAX	1450	MIN	.11	AC-FT	32560		
WTR YR 1979	TOTAL	39390.14	MEAN	108	MAX	2490	MIN	.02	AC-FT	78130		

ARKANSAS RIVER BASIN

07153000 BLACK BEAR CREEK AT PAWNEE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1956-59, 1961-71, 1978 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)
OCT 18...	1125	.14	400	7.2	16.0	205	9.2	94	15	108
NOV 28...	1250	2.0	600	7.9	8.0	53	10.4	89	26	--
DEC 28...	0915	2.0	800	7.7	4.5	6.0	12.2	96	--	159
JAN 29...	1230	9.5	850	7.7	.0	39	12.2	85	32	--
FEB 08...	1000	3.9	1400	7.1	1.0	9.0	--	--	32	349
MAR 19...	1200	1890	330	8.4	13.5	>1000	12.2	118	277	--
APR 24...	1045	30	670	7.9	20.5	48	10.0	114	28	188
MAY 09...	0945	294	380	8.0	21.0	62	7.8	87	34	--
JUN 14...	1230	38	400	7.7	25.0	180	7.0	86	29	--
JUL 25...	1210	42	340	7.5	31.5	67	8.8	122	17	--
AUG 07...	1100	1.0	610	--	28.0	30	7.2	92	22	149
SEP 18...	1230	12	508	6.2	20.0	--	7.8	87	26	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT 18...	33	82	15	25	5.1	27	47	.2	302
NOV 28...	--	--	--	--	--	17	180	.2	--
DEC 28...	60	150	1.8	77	7.6	41	116	.2	13
JAN 29...	--	--	--	--	--	34	204	.2	45
FEB 08...	93	232	28	150	7.9	30	363	.2	21
MAR 19...	--	--	--	--	--	24	44	.4	2960
APR 24...	47	118	17	71	5.9	23	137	.2	70
MAY 09...	--	--	--	--	--	--	55	.2	377
JUN 14...	25	62	11	29	5.3	18	51	.1	221
JUL 25...	--	--	--	--	--	18	73	.2	107
AUG 07...	42	104	4.9	54	6.3	15	95	.3	45
SEP 18...	--	--	--	--	--	11	136	.2	8

85

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 18...	--	2.6	--	--	.369	--	--	--	--
NOV 28...	.20	1.1	1.3	6.0	.320	--	--	--	--
DEC 28...	.10	1.6	1.7	7.7	.186	--	--	--	--
JAN 29...	.90	1.8	2.7	12	.200	--	--	--	--
FEB 08...	.90	1.8	2.7	12	.200	2	1	14	5
MAR 19...	1.0	7.9	8.9	39	--	--	--	--	--
APR 24...	.50	1.3	1.8	8.3	.160	--	--	--	--
MAY 09...	.60	1.7	2.3	10	.320	--	--	--	--
JUN 14...	.50	1.7	2.2	9.9	.270	--	--	--	--
JUL 25...	.70	1.4	2.1	9.7	.190	--	--	--	--
AUG 07...	<.50	1.6	1.6	--	.160	6	3	<10	4
SEP 18...	.70	2.6	3.3	15	.205	--	--	--	--

[illegible]

ARKANSAS RIVER BASIN

07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SE¼ sec. 4, T. 5 N., R. 1 E., Cimarron County, Hydrologic Unit 11040001, near right bank on downstream side of pier of county road bridge, 1.5 mi (2.4 km) upstream from North Carrizo Creek, 1.7 mi (2.7 km) northeast of Kenton, 2.2 mi (3.5 km) downstream from Carrizozo Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--1,106 mi² (2,865 km²), of which 68 mi² (176.1 km²) is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft (1,299.082 m) National Geodetic Vertical Datum of 1929, (levels by State Highway Department). April 1904 to July 1905 nonrecording gage at site 0.9 mi (1.45 km) upstream at different datum. Oct. 1, 1950, to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft (1.524 m) higher.

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

AVERAGE DISCHARGE.--29 years, (water years 1951-79), 23.1 ft³/s (0.654 m³/s), 16,740 acre-ft/yr (20.6 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft³/s (300 m³/s) at 0215 July 16, gage height, 16.15 ft (4.923 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.1	.17	.70	1.4	1.2	.13	2.7	.03	90	.00
2	.00	.00	1.1	.12	.96	1.2	.84	.10	2.1	.00	27	.00
3	.00	.00	.43	.04	1.3	1.2	2.4	.73	1.2	.00	11	.00
4	.00	36	.89	.02	1.4	1.4	2.6	1.8	.55	.00	4.0	.00
5	.00	15	1.5	.00	1.3	1.4	1.7	1.6	.58	.00	4.0	.00
6	.00	1.8	.26	.00	1.2	1.3	1.2	1.0	.42	.00	.75	.00
7	.00	.05	.22	.03	1.3	1.3	1.2	.60	.28	238	.28	.00
8	.00	.00	.19	.09	1.1	1.4	.60	.32	.72	30	.99	.00
9	.00	.00	.10	.10	1.9	1.2	.53	.22	2.4	10	.16	.00
10	.00	.00	.20	.10	2.2	1.2	1.1	.25	3.5	3.5	.01	.00
11	.00	.00	.60	.10	2.4	1.2	.31	.24	2.8	.30	.03	.00
12	.00	.00	1.5	.13	2.1	1.0	.40	.20	2.2	.00	.03	.00
13	.00	.00	2.2	.17	2.4	1.0	1.3	.16	1.4	.00	.00	.00
14	.00	.00	2.0	.15	2.6	.98	2.1	.12	.73	.00	.00	.00
15	.00	.00	2.3	.17	2.5	.85	1.6	.06	.30	82	.00	.17
16	.00	.00	1.6	.19	.95	.85	1.2	.01	.15	1740	.00	.04
17	.00	.00	1.2	.53	1.1	.85	.82	.00	.05	88	.70	.01
18	.00	.00	2.5	1.7	1.4	.79	.66	.00	.00	27	20	.00
19	.00	.00	2.4	3.1	2.0	.59	.51	.00	.00	172	3.4	.00
20	.00	.01	1.3	3.4	2.2	.57	.30	.04	.00	163	13	.00
21	.00	.05	.82	2.6	2.2	2.8	.33	1.6	.00	48	8.4	.00
22	.00	.10	1.0	2.6	2.2	5.7	.35	2.9	.00	16	5.6	.00
23	.00	.14	1.1	1.6	1.3	4.0	.50	2.5	.00	5.2	2.8	.00
24	.00	.18	.86	1.4	1.0	2.6	.80	2.7	430	2.5	1.2	.00
25	.00	.24	1.1	1.4	1.0	2.2	1.1	1.8	71	13	.74	.00
26	.00	.32	.61	1.6	1.2	1.9	2.5	1.1	8.7	38	.65	.00
27	.00	.44	1.0	1.3	1.2	1.3	1.7	.70	9.4	16	.30	.00
28	.00	1.0	1.4	1.0	1.3	.94	.55	.50	22	11	.12	.00
29	.00	1.1	.68	.80	---	.65	.31	.35	2.5	5.2	.02	.00
30	.00	1.1	.15	.60	---	.27	.20	.60	.20	86	.00	.00
31	.00	---	.15	.45	---	.59	---	.19	---	38	.00	---
TOTAL	.00	57.53	32.46	25.66	44.41	44.63	30.91	22.52	565.88	2832.73	195.18	.22
MEAN	.000	1.92	1.05	.83	1.59	1.44	1.03	.73	18.9	91.4	6.30	.007
MAX	.00	36	2.5	3.4	2.6	5.7	2.6	2.9	430	1740	90	.17
MIN	.00	.00	.10	.00	.70	.27	.20	.00	.00	.00	.00	.00
AC-FT	.00	114	64	51	88	89	61	45	1120	5620	387	.4
CAL YR 1978	TOTAL	9351.85	MEAN	25.6	MAX	4080	MIN	.00	AC-FT	18550		
WTR YR 1979	TOTAL	3852.13	MEAN	10.6	MAX	1740	MIN	.00	AC-FT	7640		

ARKANSAS RIVER BASIN

87

07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'45", long 100°29'39", in SE¼SE¼ sec.8, T.35 S., R.24 E., Mead County, Kans., Hydrologic Unit 11040006, near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mi (1.3 km) north of Oklahoma-Kansas State line, 7.8 mi (12.5 km) north of Forgan, and at mile 375.7 (604.5 km).

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

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

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

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

AVERAGE DISCHARGE.--14 years, 84.0 ft³/s (2.379 m³/s), 60,860 acre-ft/yr (75.0 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,470 ft³/s (70 m³/s) July 18, gage height, 4.67 ft (1.423 m), no peak above base of 3,000 ft³/s (85 m³/s); minimum daily discharge, 23 ft³/s (0.651 m³/s) Sept. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	45	52	40	37	51	65	65	75	35	45	26
2	36	44	51	31	43	58	66	930	64	37	49	26
3	33	44	40	33	50	69	73	117	58	36	48	29
4	36	44	50	39	56	62	73	81	55	37	40	26
5	36	45	75	42	62	65	72	66	53	40	38	24
6	36	48	64	45	70	58	66	63	54	41	36	24
7	35	50	56	40	78	55	68	60	52	45	33	25
8	35	49	45	34	100	55	66	57	55	38	32	23
9	34	50	35	40	130	59	67	61	71	38	29	23
10	34	54	45	50	170	58	66	65	62	36	32	23
11	35	54	70	48	80	58	68	56	58	32	33	23
12	35	54	175	45	61	58	64	53	56	31	31	25
13	35	52	152	40	59	61	64	52	52	31	31	26
14	36	54	133	34	61	61	57	55	46	31	32	26
15	40	61	93	40	58	62	54	58	41	33	36	26
16	40	58	53	54	45	61	52	56	39	70	40	27
17	38	58	52	70	47	64	53	54	39	68	34	26
18	35	55	52	100	80	79	62	63	40	1510	33	28
19	34	55	54	80	60	73	62	55	40	436	33	29
20	38	60	60	86	51	71	55	80	42	120	32	29
21	38	59	61	110	53	75	55	104	44	53	35	27
22	43	64	61	90	55	79	56	103	38	51	37	29
23	44	61	63	60	56	71	58	70	40	49	33	29
24	39	58	62	50	59	65	55	67	41	55	33	28
25	39	61	65	60	64	64	53	65	43	76	35	30
26	39	64	68	54	64	62	53	72	39	60	37	30
27	41	60	76	46	61	63	54	64	35	50	36	26
28	43	59	73	40	56	65	54	57	37	48	30	27
29	44	59	76	45	---	63	63	55	38	45	28	25
30	43	59	66	37	---	63	63	65	34	46	28	26
31	44	---	54	32	---	62	---	68	---	48	26	---
TOTAL	1172	1638	2132	1615	1866	1970	1837	2937	1441	3326	1075	791
MEAN	37.8	54.6	68.8	52.1	66.6	63.5	61.2	94.7	48.0	107	34.7	26.4
MAX	44	64	175	110	170	79	73	930	75	1510	49	30
MIN	33	44	35	31	37	51	52	52	34	31	26	23
AC-FT	2320	3250	4230	3200	3700	3910	3640	5830	2860	6600	2130	1570
CAL YR 1978	TOTAL	30921	MEAN 84.7	MAX 3970	MIN 21	AC-FT 61330						
WTR YR 1979	TOTAL	21800	MEAN 59.7	MAX 1510	MIN 23	AC-FT 43240						

ARKANSAS RIVER BASIN

07157000 CIMARRON RIVER NEAR MOCANE, OK

LOCATION.--Lat 36°58'31", long 100°18'49", on west line of NW¼ sec.24, T.6 N., R.25 E., Beaver County, Hydrologic Unit 11040006, at county road bridge 6.5 mi (10.4 km) northeast Mocane, 13 mi (21 km) upstream from Crooked Creek.

PERIOD OF RECORD.--Water years 1947-49, 1952-64, 1977 to September 1979 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 12...	1110	32	3500	7.8	15.5	9.8	108	86	530	210	890	1950
NOV 29...	1500	62	3400	8.4	11.0	10.2	101	210	470	210	820	2150
DEC 20...	0930	61	3300	8.5	2.5	12.5	101	94	470	200	760	--

ARKANSAS RIVER BASIN

89

07157950 CIMARRON RIVER NEAR BUFFALO, OK

LOCATION.--Lat 36°55'28", long 99°23'56", in NW¼SW¼ sec.7, T.28 N., R.20 W., Harper County, Hydrologic Unit 11050001, on left bank 800 ft (244 m) downstream from unnamed tributary, 6 miles (10 km) upstream from Keno Creek, 7 mi (11 km) upstream from bridge on U.S. Highway 64, 14 mi (23 km) northeast of Buffalo, and at mile 296.0 (476.3 km).

DRAINAGE AREA.--11,930 mi² (30,900 km²), of which 4,813 mi² (12,466 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 1,650 ft (502.9 m), from river profile map.

REMARKS.--Records fair except for winter periods which are poor. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--19 years, 154 ft³/s (4.361 m³/s), 111,600 acre-ft/yr (138 hm³/yr).

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

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 9	2100	4,130 117	3.72 1.134	July 25	0130	*22,900 649	*5.40 1.646
May 22	0200	3,550 101	3.61 1.100				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	.00	36	25	43	91	60	35	316	2.3	183	10
2	2.5	.00	35	28	50	125	55	1130	305	32	150	8.0
3	1.0	.00	9.5	40	48	110	64	2350	281	1.5	120	6.6
4	.50	.00	18	59	45	120	78	1250	222	.00	98	5.4
5	.29	.00	13	57	40	147	128	812	178	32	84	4.3
6	.21	1.0	11	43	46	263	130	470	151	1.9	80	3.3
7	.16	1.6	9.0	36	53	294	114	297	139	1.5	61	2.8
8	.12	1.2	8.0	29	59	200	93	210	139	.75	48	3.5
9	.08	.90	7.0	33	50	150	83	724	244	.00	34	3.0
10	.00	.60	11	35	60	110	100	1260	245	.00	25	2.5
11	.00	1.8	15	37	96	90	196	327	228	.00	21	2.0
12	.00	3.9	25	35	171	80	336	200	177	.00	18	1.7
13	.00	3.6	20	30	277	70	216	174	144	.00	16	1.5
14	.00	3.1	16	25	369	61	156	151	111	.00	14	1.3
15	.00	2.8	17	28	314	54	117	108	87	51	16	1.1
16	.00	4.9	15	35	120	55	92	91	64	176	13	1.0
17	.00	21	50	40	90	66	77	85	51	94	11	.90
18	.00	31	80	50	100	199	76	118	44	115	9.0	.96
19	.00	28	128	60	120	273	73	106	37	600	8.0	.86
20	.00	26	89	70	141	220	59	621	33	819	7.4	.80
21	.00	25	54	80	408	180	49	1430	29	372	6.8	.86
22	.00	24	45	92	412	297	46	2520	25	297	6.2	.80
23	.00	26	46	70	213	342	44	1040	22	460	5.6	.84
24	.00	33	45	60	119	292	39	489	19	1590	5.0	.80
25	.00	37	45	70	102	192	35	272	19	6420	29	.76
26	.00	40	49	80	99	144	35	272	19	945	21	.70
27	.00	42	46	60	102	115	37	370	18	355	13	.80
28	.00	45	50	50	85	117	40	316	16	259	10	.76
29	.00	43	52	54	---	122	41	269	14	166	15	.74
30	.00	38	42	45	---	81	36	269	8.0	123	29	.70
31	.00	---	30	35	---	70	---	309	---	184	16	---
TOTAL	11,56	484.40	1116.5	1491	3832	4730	2705	18075	3385.0	13097.95	1173.0	69.28
MEAN	.37	16.1	36.0	48.1	137	153	90.2	583	113	423	37.8	2.31
MAX	6.7	45	128	92	412	342	336	2520	316	6420	183	10
MIN	.00	.00	7.0	25	40	54	35	35	8.0	.00	5.0	.70
AC=FT	23	961	2210	2960	7600	9380	5370	35850	6710	25980	2330	137

CAL YR 1978	TOTAL	61947.18	MEAN 170	MAX 5060	MIN .00	AC=FT 122900
WTR YR 1979	TOTAL	50170.69	MEAN 137	MAX 6420	MIN .00	AC=FT 99510

ARKANSAS RIVER BASIN

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

WATER-QUALITY RECORDS

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

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1968 to current year.

WATER TEMPERATURE: July 1968 to current year.

INSTRUMENTATION.--Water quality monitor since Mar. 1969.

REMARKS.--Water quality monitor records were poor and were not published. 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, 99,100 micromhos July 26, 1977; minimum daily, 1,020 micromhos July 2, 1975.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT												
05...	1300	.29	24000	7.8	21.0	--	--	--	--	--	1100	870
11...	1130	.00	22000	7.8	18.0	.50	10.2	123	190	210	1300	1200
15...	1300	.00	18900	7.9	17.0	--	--	--	--	--	1100	800
22...	1400	.00	17800	7.7	21.0	--	--	--	--	--	1400	1100
NOV												
16...	1000	6.0	30800	8.2	3.5	--	--	--	--	--	990	830
24...	1000	33	12400	8.3	7.0	--	--	--	--	--	630	450
28...	1000	42	5880	8.3	1.5	--	--	--	--	--	490	300
29...	0930	44	5900	8.2	6.0	400	11.6	101	210	370	460	290
DEC												
05...	1400	14	7370	8.1	2.5	--	--	--	--	--	510	340
15...	1530	16	11900	8.2	7.5	--	--	--	--	--	600	430
19...	1600	167	5800	8.4	12.0	580	11.8	119	130	130	420	240
25...	2100	39	5600	8.1	.0	--	--	--	--	--	600	390
JAN												
16...	1700	35	53800	7.4	1.0	--	--	--	--	--	780	620
22...	0900	92	9240	8.0	1.0	--	--	--	--	--	340	150
22...	1550	92	10000	7.7	1.5	26	12.7	102	78	110	620	430
28...	1400	50	10100	7.9	.5	--	--	--	--	--	340	110
FEB												
03...	1300	48	15800	8.0	.5	--	--	--	--	--	770	680
15...	1600	297	10500	8.3	.0	--	--	--	--	--	420	280
21...	1430	585	5300	8.3	.5	900	13.6	101	76	130	400	200
25...	0900	101	5470	8.3	.0	--	--	--	--	--	530	390
MAR												
05...	1300	147	5870	8.5	12.0	--	--	--	--	--	440	270
14...	1030	62	5090	8.3	18.0	--	--	--	--	--	470	300
20...	0900	235	7300	8.2	9.5	960	10.3	96	>600	K1300	450	260
25...	1800	177	7240	8.0	16.0	--	--	--	--	--	530	350
APR												
05...	1620	172	10100	8.3	20.0	--	--	--	--	--	660	490
10...	1615	82	33000	8.2	14.0	66	8.5	101	34	72	880	700
15...	1415	111	7280	8.4	23.0	--	--	--	--	--	570	390
25...	1430	36	9750	8.0	25.0	--	--	--	--	--	630	440
MAY												
05...	1115	873	6650	7.7	12.5	--	--	--	--	--	410	260
15...	1530	111	14500	7.8	25.0	40	6.7	89	85	180	750	570
15...	1531	111	14300	8.0	25.5	--	--	--	--	--	480	290
25...	1600	255	7600	7.8	--	--	--	--	--	--	550	360
JUN												
05...	1600	162	7340	8.2	28.0	--	--	--	--	--	610	410
15...	1900	32	7490	8.0	28.0	--	--	--	--	--	630	440
25...	1500	.38	14300	8.2	28.0	--	--	--	--	--	900	730
27...	1600	19	15000	8.2	31.0	5.0	5.8	85	150	44	920	780
JUL												
17...	1530	188	57000	7.5	28.0	--	4.7	80	110	930	1400	1300
22...	1330	269	2000	7.7	25.0	--	--	--	--	--	370	170
26...	1545	635	5790	7.6	30.0	--	--	--	--	--	340	220

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PEP 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JUL												
29...	1215	167	8690	8.1	29.0	--	--	--	--	--	570	380
AUG												
05...	1530	79	8330	8.3	30.0	--	--	--	--	--	--	--
07...	1530	64	11000	8.3	31.0	150	5.1	75	32	100	--	--
15...	1415	16	17100	8.2	30.0	--	--	--	--	--	1000	850
25...	1700	32	38600	8.0	28.5	--	--	--	--	--	1300	1200
SEP												
05...	1530	4.3	29700	8.0	31.5	--	--	--	--	--	1400	1200
11...	1400	2.0	37000	7.5	24.0	2.8	5.5	78	44	30	1500	1300
15...	1415	1.1	33900	7.8	21.0	--	--	--	--	--	1400	1200
25...	0900	.76	28300	8.1	24.0	--	--	--	--	--	1300	1100
DATE		CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
05...	300	88	5300	91	69	--	12	300	0	250	7.6	--
11...	400	83	4500	88	53	--	10	--	--	180	--	1000
15...	290	79	4000	89	54	--	10	300	0	250	6.0	1300
22...	420	78	3800	86	45	--	10	290	0	240	9.3	1200
NOV												
16...	240	95	7200	94	100	--	13	--	--	160	--	670
24...	150	61	2600	90	45	--	14	--	--	180	--	390
28...	120	47	1100	82	22	--	13	--	--	190	--	300
29...	110	45	1000	82	20	--	8.6	--	--	170	--	300
DEC												
05...	120	51	1400	85	27	--	9.2	--	--	170	--	360
15...	150	55	2400	90	43	--	9.5	--	--	170	--	440
19...	100	41	1000	83	21	--	10	--	--	180	--	250
25...	160	49	990	78	18	--	9.3	--	--	210	--	330
JAN												
16...	98	130	14000	97	218	--	25	--	--	160	--	1000
22...	43	56	1900	92	45	--	10	--	--	190	--	350
22...	150	60	2100	88	37	--	8.3	--	--	190	--	16
28...	42	56	2200	93	52	--	12	--	--	230	--	340
FEB												
03...	180	77	3400	90	53	--	9.5	--	--	85	--	450
15...	100	42	2200	92	47	2200	8.3	--	--	140	--	230
21...	98	37	900	83	20	--	7.7	--	--	200	--	--
25...	140	44	970	80	18	980	6.7	--	--	140	--	250
MAR												
05...	110	40	1100	84	23	1100	6.4	--	--	170	--	250
14...	120	41	830	79	17	840	6.6	--	--	170	--	330
20...	130	30	1300	86	27	--	9.4	--	--	190	--	290
25...	130	50	1300	84	25	1300	8.0	--	--	180	--	310
APR												
05...	150	70	2000	87	34	2000	7.9	--	--	170	--	400
10...	210	86	7400	95	109	--	11	--	--	180	--	530
15...	130	60	1300	83	24	1300	9.8	--	--	180	--	360
25...	150	63	--	--	--	1900	8.8	--	--	190	--	--
MAY												
05...	100	38	1300	92	28	1300	10	--	--	150	--	230
15...	180	72	2900	89	46	--	12	--	--	180	--	600
15...	180	6.5	3200	94	64	3200	9.4	--	--	190	--	470
25...	130	54	1600	91	30	1600	5.5	--	--	190	--	330
JUN												
05...	140	63	1400	89	25	1400	10	--	--	200	--	410
15...	150	63	1500	83	26	1500	9.9	--	--	190	--	430
25...	220	84	3000	88	44	3000	12	--	--	170	--	670
27...	230	84	3000	87	43	3000	15	--	--	140	--	700
JUL												
17...	330	140	15000	96	174	15000	20	--	--	95	--	790
22...	100	28	320	73	7.3	330	10	--	--	200	--	150
26...	91	27	1200	92	28	1200	11	--	--	120	--	200
29...	150	48	1800	91	33	1800	13	--	--	190	--	340
AUG												
05...	--	--	--	--	--	--	--	--	--	200	--	410
07...	--	66	2100	--	--	2100	17	--	--	210	--	490
15...	260	86	3600	88	49	3600	13	--	--	150	--	760
25...	340	110	9600	94	116	9600	20	--	--	150	--	1100
SEP												
05...	360	110	6900	92	82	6900	15	--	--	120	--	1100
11...	430	110	8700	95	97	8700	20	--	--	180	--	1300
15...	400	94	7500	92	88	7500	13	--	--	190	--	1100
25...	380	87	6200	91	75	6000	12	--	--	190	--	1100

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	--	--	--	15600	--	--	--	--	--	--	--	--
11...	7100	.3	21	13400	13200	18.2	.00	.05	.06	--	.16	.22
15...	--	--	--	12000	--	16.3	.00	--	--	--	--	--
22...	5800	--	--	11200	--	15.2	.00	--	--	--	--	--
NOV												
16...	11000	--	--	19900	--	27.1	322	--	--	--	--	--
24...	4000	--	--	7320	--	9.96	652	--	--	--	--	--
28...	1700	--	--	2990	--	4.07	339	--	--	--	--	--
29...	1600	.8	18	3230	3180	4.39	384	.67	.06	--	1.1	1.2
DEC												
05...	2200	--	--	4070	--	5.54	154	--	--	--	--	--
15...	3800	--	--	7020	--	9.55	303	--	--	--	--	--
19...	1600	.7	20	3190	3130	4.34	1440	.84	.25	--	2.4	2.6
25...	1500	--	--	2910	--	3.96	306	--	--	--	--	--
JAN												
16...	--	--	--	37100	--	50.5	3510	--	--	--	--	--
22...	2800	--	--	5170	--	7.03	1280	--	--	--	--	--
22...	3500	.7	18	6130	5970	8.34	1520	.92	.20	--	1.3	1.5
28...	3200	--	--	5900	--	8.02	796	--	--	--	--	--
FEB												
03...	5300	--	--	9500	--	12.9	1230	--	--	--	--	--
15...	3400	--	--	6110	--	8.31	4900	--	--	--	--	--
21...	--	.7	--	--	--	--	--	.68	.11	--	2.5	2.6
25...	1500	--	--	3000	--	4.08	818	--	--	--	--	--
MAR												
05...	1700	--	--	3190	--	4.34	1270	--	--	--	--	--
14...	1200	--	--	2510	--	3.41	420	--	--	--	--	--
20...	2000	.9	15	3780	3890	5.14	2400	.61	.16	--	3.0	3.2
25...	2100	--	--	4100	--	5.58	1960	--	--	--	--	--
APR												
05...	3300	--	--	5650	--	7.68	2620	--	--	--	--	--
10...	12000	.8	14	18600	20400	25.3	4120	.05	.22	.27	.48	.70
15...	2100	--	--	3750	--	5.10	1120	--	--	--	--	--
25...	3300	--	--	5140	--	6.99	500	--	--	--	--	--
MAY												
05...	--	--	--	3730	--	5.07	8790	--	--	--	--	--
15...	4600	.8	17	8620	8490	11.7	2580	.03	.28	.34	1.2	1.5
15...	4600	--	--	8640	--	11.8	2590	--	--	--	--	--
25...	--	--	--	4220	--	5.74	2910	--	--	--	--	--
JUN												
05...	2300	--	--	4340	--	5.90	1900	--	--	--	--	--
15...	2400	--	--	4330	--	5.89	374	--	--	--	--	--
25...	4700	--	--	8760	--	11.9	8.99	--	--	--	--	--
27...	4800	.8	22	8430	8940	11.5	432	.03	.12	.15	.17	.29
JUL												
17...	--	.3	9.2	39600	--	53.9	20100	.08	.27	.33	1.3	1.6
22...	450	--	--	1150	--	1.56	835	--	--	--	--	--
26...	1800	--	--	3300	--	4.49	5660	--	--	--	--	--
29...	2700	--	--	4690	--	6.38	2120	--	--	--	--	--
AUG												
05...	2500	--	--	4910	--	--	1050	--	--	--	--	--
07...	3300	.8	25	6360	--	--	1100	.01	.06	.07	.54	.60
15...	5900	--	--	10700	--	14.6	462	--	--	--	--	--
25...	15000	--	--	25500	--	34.7	2200	--	--	--	--	--
SEP												
05...	11000	--	--	19200	--	26.1	223	--	--	--	--	--
11...	13000	.4	21	23900	23700	32.5	129	.10	.19	.23	.26	.45
15...	12000	--	--	22000	--	29.9	65.3	--	--	--	--	--
25...	10000	--	--	18500	--	25.2	38.0	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT												
05...	--	--	--	--	--	--	--	--	--	--	--	--
11...	.05	.17	.27	1.2	.020	--	--	.020	3.1	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
16...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.76	.44	1.9	8.3	.340	--	--	.020	--	2.9	2.7	1200
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
19...	2.1	.51	3.4	15	.610	--	--	.040	21	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	2.4	11	.280	--	--	.030	7.4	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
03...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	3.3	15	.070	--	--	--	--	3.1	19	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
20...	2.5	.69	3.8	17	.030	--	--	.010	21	--	--	3200
25...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
05...	--	--	--	--	--	--	--	--	--	--	--	--
10...	.26	.44	.75	3.3	.110	.34	.34	.040	6.7	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	1.5	6.8	.190	.58	.58	.020	--	4.8	--	1900
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	.32	1.4	.030	.09	.09	.010	3.2	--	--	27000
JUL												
17...	.88	.72	1.7	7.4	.030	--	.09	.020	7.1	--	--	5200
22...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
07...	.00	.66	.61	2.7	.030	--	.09	.110	--	8.1	3.2	30000
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
11...	.35	.10	.55	2.4	.030	--	.09	.020	1.7	--	--	3300
15...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

95

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
OCT										
11...	--	--	--	--	--	--	--	--	--	--
NOV										
29...	0	58	310	290	20	.0	.0	.0	7	2
DEC										
19...	--	--	--	--	--	--	--	--	--	--
JAN										
22...	--	--	--	--	--	--	--	--	--	--
FEB										
21...	23	1	720	690	30	.1	.1	.0	1	0
MAR										
20...	--	--	--	--	--	--	--	--	--	--
APR										
10...	--	--	--	--	--	--	--	--	--	--
MAY										
15...	32	0	200	150	50	.1	.1	.0	2	0
JUN										
27...	--	--	--	--	--	--	--	--	--	--
JUL										
17...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	5	0	230	200	30	.0	.0	.1	2	0
SEP										
11...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
11...	--	--	--	--	--	--	--	476	.00	96
NOV										
29...	5	1	1	0	60	20	40	687	82	99
DEC										
19...	--	--	--	--	--	--	--	1320	595	99
JAN										
22...	--	--	--	--	--	--	--	884	220	99
FEB										
21...	2	0	0	0	90	50	40	1180	1860	98
MAR										
20...	--	--	--	--	--	--	--	2110	1340	90
APR										
10...	--	--	--	--	--	--	--	1950	432	100
MAY										
15...	2	0	0	0	100	50	50	1390	417	99
JUN										
27...	--	--	--	--	--	--	--	1070	55	100
JUL										
17...	--	--	--	--	--	--	--	8380	4250	100
AUG										
07...	2	0	0	0	30	10	20	430	74	98
SEP										
11...	--	--	--	--	--	--	--	3020	16	100

ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	ND	--	ND	--	ND	--	ND	--	ND	--
MAR 20...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)
NOV 29...	ND	--	ND	--	ND	ND	--	--	ND	ND
MAR 20...	ND	--	ND	--	ND	ND	--	--	ND	ND
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	ND	--	ND	--	ND	ND	--	--	ND	ND

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
NOV 29...	--	ND	--	ND	--	ND	--	ND	--	ND
MAR 20...	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	--	ND	--	ND	--	ND	--	ND	--
MAR 20...	--	ND	--	ND	--	ND	--	ND	--
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 07...	--	ND	--	ND	--	ND	--	ND	--

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 29, 78 0930	MAR 20, 79 0900	MAY 15, 79 1530	JUN 27, 79 1430
TOTAL CELLS/ML	1200	3200	1900	27000
DIVERSITY: DIVISION	1.3	0.6	0.9	1.4
..CLASS	1.3	0.6	0.9	1.4
..ORDER	1.3	1.1	1.5	2.0
...FAMILY	1.7	2.6	2.1	2.6
....GENUS	2.0	2.6	2.1	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHAKACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...MICKACTINIACEAE								
...GOLENKINIA	--	-	--	-	--	-	--	-
...MICKACTINIUM	--	-	--	-	--	-	--	-
...NOCYSTACEAE								
...ANKISTRODESMUS	--	-	--	-	77	4	1500	5
...DICTYOSPHAERIUM	--	-	--	-	--	-	2500	9
...NOCYSTIS	--	-	--	-	--	-	500	2
...SELENASTRUM	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	2900	10
...CRUCIGENIA							--	-
...SCENEDESMUS	230#	20	--	-	150	8	7200#	26
...TETRASTRUM	160	13	--	-	--	-	--	-
...TETRASPORALES								
...PALMELLACEAE								
...GLOEOCYSTIS	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	--	-	520#	16	350#	19	1600	6
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...CHAETOCERACEAE								
...CHAETOCEROS	--	-	--	-	--	-	250	1
...COSCINODISCACEAE								
...CYCLOTELLA	--	-	390	12	120	6	3600	13
...PENNALES								
...CYMBELLACEAE								
...CYMBELLA	--	-	260	8	--	-	--	-
...DIATOMACEAE								
...DIATOMA	--	-	650#	20	--	-	--	-
...FRAGILARIACEAE								
...FRAGILARIA	--	-	--	-	--	-	--	-
...SYNEDRA	--	-	--	-	--	-	*	0
...GOMPHONEMACEAE								
...GOMPHONEMA	--	-	130	4	--	-	--	-
...NAVICULACEAE								
...NAVICULA	120	10	910#	28	230	13	--	-
...NITZSCHACEAE								
...NITZSCHIA	540#	47	390	12	930#	50	2900	10
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM								
...ANACYSTIS	120	10	--	-	--	-	750	3
...HORMOGONALES								
...NOSTOCACEAE								
...ANARAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
...OSCILLATORIA	--	-	--	-	--	-	3600	13
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	--	-	--	-	*	0

ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 17,79 1530	AUG 7,79 1530	SEP 11,79 1400
TOTAL CELLS/ML	5200	30000	3300
DIVERSITY: DIVISION	1.2	1.3	1.1
..CLASS	1.2	1.3	1.1
...ORDER	1.9	1.8	1.5
...FAMILY	2.4	2.7	2.0
....GENUS	2.4	3.3	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	* 0		--	-
...COELASTRACEAE						
....COELASTRUM	--	-	1100	4	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	180	1	--	-
...MICRACTINIUM	--	-	640	2	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	78	1	1500	5	--	-
...DICTYOSPHAERIUM	--	-	6000#	20	--	-
...OOCYSTIS	--	-	910	3	58	2
....SELENASTRUM	--	-	270	1	--	-
...TREUBARIA	--	-	640	2	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
...CRUCIGENIA	--	-	730	2	--	-
...SCENEDESMUS	440	8	1100	4	--	-
...TETRASTRUM	--	-	730	2	--	-
..TETRASPORALES						
...PALMELLACEAE						
...GLOEOCYSTIS	--	-	180	1	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	450	2	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...CHAETOCERACEAE						
...CHAETOCEROS	--	-	--	-	--	-
...COSCINODISCEACEAE						
...CYCLOTELLA	810#	16	550	2	450	13
...PENNALES						
...CYMBELLACEAE						
...CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
...DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
...FRAGILARIA	*	0	--	-	--	-
...SYNEDRA	*	0	--	-	--	-
...GOMPHONEMACEAE						
...GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
...NAVICULA	170	3	*	0	270	8
...NITZSCHACEAE						
....NITZSCHIA	140	3	1000	3	820#	25
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	620	12	--	-	--	-
...ANACYSTIS	--	-	3300	11	*	0
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	520	10	1100	4	120	3
...OSCILLATORIACEAE						
....OSCILLATORIA	2300#	45	9100#	31	1600#	48
EUGLENOPHYTA (EUGLENIIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	--	-	--	-

ARKANSAS RIVER BASIN

99

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE=DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27400	---	6720	---	13400	6440	27700	11000	11600	---	7730	20300
2	25100	---	---	---	13500	19000	12000	18400	7190	---	7700	27100
3	25400	---	12700	---	15800	19000	23400	6980	6670	---	7370	27400
4	25200	---	12800	---	---	7500	23500	4930	6650	---	7440	29200
5	24000	---	7370	---	---	5870	10100	6650	7340	---	8330	29700
6	24200	---	11800	---	---	6240	6530	5200	7350	---	---	30000
7	23400	---	12600	---	---	6640	8410	5760	8780	---	12100	32300
8	21700	---	---	---	---	6630	7060	6420	8740	---	12000	32700
9	20900	---	---	---	16200	5780	7050	8970	24300	---	13100	38100
10	---	---	---	---	16200	5750	29700	9910	12600	---	13100	38100
11	---	---	14000	---	14900	5340	27100	15300	7480	---	17300	37200
12	---	---	13900	---	14900	8190	4470	16800	7430	---	14200	34900
13	---	---	17400	---	10000	8190	4560	16500	7230	---	16000	38100
14	---	---	17400	---	11000	5090	6260	15600	7960	---	16400	33600
15	---	19300	11900	---	10500	5160	7280	14300	7490	---	17100	33900
16	---	30800	13100	53800	6100	7190	8460	14400	7920	---	17400	30200
17	---	31600	4930	44700	6820	8890	9970	12600	8940	---	18400	32000
18	---	9970	---	44400	10500	20000	26000	16500	9080	85000	18700	31800
19	---	9890	6210	35700	14100	7570	12700	16500	10200	84200	20200	31000
20	---	8070	6210	35600	7920	6890	8460	34900	10200	20400	20000	31300
21	---	10600	4680	28500	7750	30600	8430	17900	11100	20400	20400	---
22	---	11600	4630	9240	5680	30600	8400	8200	11400	20000	20400	---
23	---	11400	5750	12500	4200	4800	8590	6760	14400	36900	21400	---
24	---	12400	10100	11600	5180	4740	13100	7570	14200	35800	21600	33200
25	---	23400	5600	16300	5470	7240	9750	7600	14300	31900	38600	28300
26	---	23400	5400	11300	6160	6620	9750	18800	---	57900	38700	42200
27	---	5880	5400	11200	7300	7170	11000	8010	---	86000	31200	---
28	---	5880	6010	10100	8290	9750	11000	7980	---	58100	31700	28800
29	---	5780	8850	10000	---	10400	17100	7960	---	86900	30500	27600
30	---	6470	10400	12600	---	6900	11000	8020	---	29100	---	30200
31	---	---	---	---	---	6900	---	18100	---	29200	20400	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE=DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	---	11.0	---	1.0	7.5	10.0	19.5	27.0	---	27.0	32.0
2	18.0	---	---	---	1.0	3.0	13.0	18.0	26.0	---	---	32.0
3	22.0	---	3.0	---	.5	2.0	12.0	12.0	27.0	---	25.0	31.5
4	20.0	---	2.5	---	---	8.5	13.5	15.0	25.0	---	25.0	31.0
5	21.0	---	2.5	---	---	12.0	20.0	12.5	28.0	---	30.0	31.5
6	19.0	---	.0	---	---	14.5	16.0	21.0	29.0	---	---	32.0
7	21.0	---	.0	---	---	15.0	22.0	25.0	30.0	---	30.0	30.5
8	19.5	---	---	---	---	15.5	19.5	25.0	25.0	---	28.0	31.0
9	24.0	---	---	---	2.0	13.5	18.0	23.0	17.0	---	31.0	30.0
10	---	---	---	---	4.0	13.0	15.0	17.0	25.0	---	29.0	28.0
11	---	---	6.0	---	1.5	5.0	12.0	20.0	26.5	---	30.0	28.0
12	---	---	7.5	---	1.0	17.5	17.0	22.0	30.0	---	28.0	24.0
13	---	---	5.5	---	3.0	20.0	19.0	23.0	30.0	---	31.0	27.0
14	---	---	5.0	---	4.0	18.0	21.5	23.0	30.0	---	31.0	22.5
15	---	4.0	7.5	---	.0	25.0	23.0	25.5	28.0	---	30.0	21.0
16	---	3.5	.0	1.0	1.0	8.0	24.5	25.0	27.0	---	30.5	20.5
17	---	5.0	2.0	1.5	1.0	11.0	23.0	19.5	30.0	---	31.0	20.0
18	---	4.0	---	2.5	1.0	17.0	21.0	22.0	32.0	28.0	31.0	18.0
19	---	4.5	7.0	.5	1.5	14.0	19.5	25.0	30.5	29.0	30.5	17.0
20	---	3.0	5.0	.0	4.0	12.5	21.0	18.0	28.0	27.0	29.0	22.5
21	---	.0	---	.0	10.0	12.0	22.5	15.0	25.0	28.0	33.0	---
22	---	7.5	4.0	1.0	9.0	11.0	16.5	23.0	28.0	25.0	33.5	---
23	---	7.0	4.0	1.5	8.0	12.0	25.0	20.0	28.5	26.5	30.0	---
24	---	7.0	.0	1.5	5.0	15.0	25.5	24.0	28.0	29.0	29.0	25.0
25	---	8.0	.0	1.0	.0	16.0	25.0	---	28.0	23.0	28.5	24.0
26	---	9.0	1.0	1.5	10.5	16.5	25.5	21.0	---	30.0	29.0	22.0
27	---	8.5	.5	1.0	9.5	13.5	21.0	24.0	---	30.0	30.0	---
28	---	1.5	2.0	.5	5.0	15.5	22.5	26.0	---	25.5	29.0	19.0
29	---	10.0	.0	.0	---	19.0	24.0	27.5	---	29.0	31.0	23.0
30	---	11.5	.0	.0	---	16.5	22.5	22.5	---	27.0	---	23.5
31	---	---	---	---	---	11.5	---	23.0	---	24.0	31.5	---

ARKANSAS RIVER BASIN

07157960 BUFFALO CREEK NEAR LOVEDALE, OK

LOCATION.--Lat 36°46'08", long 99°21'58", in NW¼NW¼ sec.4, T.26 N., R.20 W., Harper County, Hydrologic Unit 11050001, near center of channel on downstream side of pier of bridge on State Highway 34, 1.2 mi (1.9 km) east of Lovedale, 1.3 mi (2.1 km) upstream from Sleeping Bear Creek, and at mile 7.6 (12.2 km).

DRAINAGE AREA.--408 mi² (1,057 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,602.56 ft (488.460 m) Oklahoma State Highway Department datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--13 years, 10.5 ft³/s (0.297 m³/s), 7,610 acre-ft/yr. (9.38 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 10	0400	*14,600 413	*16.17 4.929	July 31	0930	1,100 31.2	9.11 2.777
July 23	1600	3,140 88.9	11.65 3.551				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.00	.00	.40	.47	.84	1.1	.19	17	2.2	58	.78
2	.00	.00	.00	.36	.57	.92	1.1	1.5	16	2.0	23	.66
3	.00	.00	.00	.09	.62	1.4	1.2	1.5	15	1.6	15	.57
4	.00	.00	.01	.03	.54	1.2	1.3	3.0	14	1.4	9.2	.47
5	.00	.00	.00	.00	.48	1.1	1.2	3.5	13	1.3	6.6	.40
6	.00	.00	.00	.00	.48	.98	1.2	2.3	12	1.3	5.3	.35
7	.00	.00	.00	.02	.42	.98	.98	1.5	11	1.2	4.3	.29
8	.00	.00	.00	.04	.54	.83	.80	1.2	20	1.1	3.6	.25
9	.00	.00	.00	.05	.76	.91	.76	49	23	.94	3.0	.21
10	.00	.00	.00	.12	1.1	.67	.97	3780	31	1.0	2.5	.20
11	.00	.00	.00	.12	1.3	.60	1.0	171	26	.82	2.4	.18
12	.00	.00	.11	.14	1.4	.54	.79	76	20	.65	2.2	.17
13	.00	.00	.16	.13	1.5	.42	.71	52	15	.53	2.1	.14
14	.00	.00	.12	.11	1.8	.42	.59	39	12	.42	1.8	.13
15	.00	.00	.16	.13	1.7	.36	.53	30	9.3	.39	1.7	.16
16	.00	.00	.25	.15	1.2	.42	.48	23	7.6	.49	1.6	.16
17	.00	.00	.30	.17	1.2	.54	.44	20	6.7	.69	1.5	.14
18	.00	.00	.71	.23	1.2	3.3	.49	22	6.2	20	1.3	.13
19	.00	.00	.79	.44	1.4	3.5	.57	19	5.4	13	1.1	.12
20	.00	.00	.70	1.3	1.5	2.7	.45	19	4.6	6.2	.96	.11
21	.00	.00	.60	1.4	1.5	2.3	.33	24	4.4	2.9	.82	.10
22	.00	.00	.72	1.5	1.4	4.6	.28	50	5.2	2.4	.72	.10
23	.00	.00	.73	1.3	1.1	3.8	.28	47	5.1	1060	.69	.10
24	.00	.00	.80	1.0	.92	2.9	.30	35	21	634	.91	.10
25	.00	.00	.66	1.0	.76	2.2	.23	25	13	401	2.3	.09
26	.00	.00	.56	.98	.84	1.8	.20	22	5.6	125	4.4	.09
27	.00	.00	.99	.92	.76	1.5	.18	20	4.0	59	3.3	.08
28	.00	.00	.52	.81	.76	1.6	.19	17	3.3	38	2.2	.08
29	.00	.00	.73	.68	---	1.5	.21	16	2.9	26	1.6	.09
30	.00	.00	.46	.62	---	1.3	.21	15	2.5	18	1.2	.09
31	.00	---	.34	.60	---	1.1	---	18	---	353	1.0	---
TOTAL	.05	.00	10.42	14.84	28.22	47.23	19.07	4603.69	351.8	2776.53	166.30	6.54
MEAN	.002	.000	.34	.48	1.01	1.52	.64	149	11.7	89.6	5.36	.22
MAX	.05	.00	.99	1.5	1.8	4.6	1.3	3780	31	1060	58	.78
MIN	.00	.00	.00	.00	.42	.36	.18	.19	2.5	.39	.69	.08
AC-FT	.10	.00	21	29	56	94	38	9130	698	5510	330	13
CAL YR 1978	TOTAL	874.73	MEAN	2.40	MAX	110	MIN	.00	AC-FT	1740		
WTR YR 1979	TOTAL	8024.69	MEAN	22.0	MAX	3780	MIN	.00	AC-FT	15920		

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURE: October 1973 to current year.

INSTRUMENTATION.--Water quality monitor since October 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. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

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, 6,990 micromhos July 6, 1974; minimum daily, 349 micromhos Sept. 2, 1974.

WATER TEMPERATURE: Maximum daily, 34.0°C June 18, 1974, July 6, 1975, July 28, 1978; minimum daily, -1.0°C Feb. 16, 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
01...	1115	--	80020	.06	3710	8.3	20.0	--	--	--	--
10...	1915	--	80020	.00	4200	7.7	21.0	--	--	--	--
11...	1315	1028	9740	.00	3300	7.7	19.0	4.0	7.9	91	34
31...	1642	--	80020	.00	4690	7.7	16.0	--	--	--	--
NOV											
10...	1300	--	80020	.00	4760	7.4	12.0	--	--	--	--
15...	1630	--	80020	.00	4590	7.6	10.0	--	--	--	--
30...	1415	1028	9740	.00	4200	7.7	8.5	4.0	12.4	105	17
30...	1741	--	80020	.00	3900	7.9	8.0	--	--	--	--
DEC											
01...	1715	--	80020	.00	3900	7.8	8.5	--	--	--	--
21...	0930	1028	9740	.76	3500	8.5	2.5	4.0	11.8	91	18
25...	1013	--	80020	.68	3020	7.9	3.0	--	--	--	--
30...	1155	--	80020	.36	3230	7.7	1.0	--	--	--	--
JAN											
23...	1120	1028	9740	1.2	--	8.5	.0	3.0	14.8	108	13
FEB											
13...	1200	--	80020	1.6	3350	7.9	2.0	--	--	--	--
22...	0830	1028	9740	1.6	3000	8.2	3.5	7.0	13.6	108	13
22...	1350	--	80020	2.0	2870	8.1	4.0	--	--	--	--
27...	1000	--	80020	1.2	3010	7.6	6.0	--	--	--	--
MAR											
03...	1712	--	80020	1.8	3040	8.6	4.5	--	--	--	--
15...	1645	--	80020	.92	3480	8.1	9.0	--	--	--	--
21...	0945	1028	9740	3.2	3500	7.8	10.5	12	9.2	87	18
26...	1100	--	80020	2.8	3270	8.0	12.0	--	--	--	--
APR											
01...	1700	--	80020	1.7	3400	7.9	9.0	--	--	--	--
11...	1315	1028	9740	1.2	3600	8.3	15.0	15	10.3	108	20
15...	1830	--	80020	.57	3660	8.0	22.0	--	--	--	--
30...	1427	--	80020	.23	3950	8.1	19.0	--	--	--	--
MAY											
01...	1045	--	80020	.15	3890	8.0	17.0	--	--	--	--
10...	1745	--	80020	603	707	7.8	17.0	--	--	--	--
17...	0915	1028	9740	20	2800	8.1	20.0	14	7.2	83	19
24...	1829	--	80020	30	2300	8.1	24.0	--	--	--	--
JUN											
22...	1900	--	80020	6.6	3200	7.9	29.0	--	--	--	--
26...	1349	--	80020	5.2	1980	8.2	26.0	--	--	--	--
27...	1830	1028	9740	3.7	2500	8.1	31.0	11	6.0	84	--
30...	1100	--	80020	2.6	2610	7.8	26.0	--	--	--	--
JUL											
16...	1720	--	80020	.49	4220	7.5	29.5	--	--	--	--
19...	0800	1028	9740	13	2500	7.8	24.0	--	6.8	84	--
19...	1830	--	80020	13	2960	7.4	31.0	--	--	--	--
23...	1635	--	80020	1060	571	7.5	23.5	--	--	--	--
AUG											
01...	1640	--	80020	40	1120	8.2	29.0	--	--	--	--
07...	2040	--	80020	3.7	2520	7.8	30.0	--	--	--	--

ARKANSAS RIVER BASIN

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- VANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
AUG											
08...	1030	1028	9740	3.7	2100	7.9	25.5	2.0	6.2	79	20
24...	0630	--	80020	.65	3440	7.8	24.0	--	--	--	--
SEP											
01...	1130	--	80020	.78	3420	7.8	27.0	--	--	--	--
11...	1530	1028	9740	.20	4550	8.1	26.0	9.0	5.8	75	18
13...	1050	--	80020	.13	4340	8.1	21.0	--	--	--	--
29...	1313	--	80020	.10	5330	7.6	21.0	--	--	--	--
DATE		HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SURP- TION RATIO
OCT											
01...	1800		1700	--	470	--	--	160	--	230	2.3
10...	1500		1300	--	300	--	--	170	--	300	3.4
11...	--		--	--	--	--	--	--	--	--	--
31...	2100		1900	--	530	--	--	180	--	380	3.6
NOV											
10...	2100		1900	--	550	--	--	180	--	390	3.7
15...	2100		1900	--	540	--	--	180	--	360	3.4
30...	--		--	--	--	3000	290	--	--	--	--
30...	2100		2000	--	580	--	--	160	--	240	2.3
DEC											
01...	2000		1900	--	550	--	--	160	--	250	2.4
21...	--		--	--	--	--	--	--	--	--	--
25...	1700		1600	--	470	--	--	130	--	120	1.3
30...	1700		1600	--	460	--	--	140	--	140	1.5
JAN											
23...	--		--	560	--	1636	160	--	155	--	--
FEB											
13...	1800		1600	--	490	--	--	130	--	160	1.7
22...	--		--	--	--	--	--	--	--	--	--
22...	1600		1500	--	450	--	--	110	--	120	1.3
27...	1700		1600	--	480	--	--	110	--	130	1.4
MAR											
03...	1700		1600	--	480	--	--	110	--	130	1.4
15...	2000		1900	--	560	--	--	140	--	160	1.6
21...	--		--	530	--	1325	150	--	--	--	--
26...	1900		1700	--	530	--	--	130	--	150	1.5
APR											
01...	1900		1800	--	530	--	--	140	--	160	1.6
11...	--		--	--	--	--	--	--	--	--	--
15...	2000		1900	--	550	--	--	140	--	190	1.9
30...	2100		1900	--	590	--	--	150	--	230	2.2
MAY											
01...	2100		2000	--	600	--	--	150	--	220	2.1
10...	320		250	--	95	--	--	21	--	17	.4
17...	--		--	350	--	875	--	--	--	--	--
24...	1200		950	--	300	--	--	98	--	130	1.7
JUN											
22...	1700		1600	--	450	--	--	150	--	170	1.8
26...	1000		910	--	290	--	--	73	--	79	1.1
27...	--		--	--	--	--	--	--	--	--	--
30...	1400		1200	--	390	--	--	100	--	130	1.5
JUL											
16...	1900		1800	--	510	--	--	150	--	360	3.6
19...	--		--	--	--	--	--	--	--	--	--
19...	1600		1500	--	400	--	--	140	--	110	1.2
23...	270		190	--	83	--	--	16	--	8.4	.2
AUG											
01...	--		--	--	--	--	--	34	--	31	--
07...	1400		1200	--	390	--	--	97	--	110	1.3
08...	--		--	--	--	--	--	--	--	--	--
24...	1800		1600	--	510	--	--	120	--	200	2.1
SEP											
01...	2000		1900	--	550	--	--	150	--	160	1.6
11...	--		--	50	--	--	154	--	--	--	--
13...	2100		1900	--	550	--	--	170	--	330	3.2
29...	2300		2300	--	640	--	--	180	--	540	4.9

ARKANSAS RIVER BASIN

103

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
01...	--	--	12	150	0	120	1.2	1800	320	--	3340
10...	--	--	9.5	170	0	140	5.4	1400	420	--	3740
11...	--	--	--	--	--	--	--	1830	414	.3	--
31...	--	--	8.1	170	0	140	5.4	2000	530	--	4140
NOV											
10...	--	--	13	--	--	180	--	1900	560	--	4210
15...	--	--	14	--	--	170	--	2000	500	--	4080
30...	--	--	--	--	--	--	--	--	--	.3	--
30...	--	--	12	--	--	150	--	2000	330	--	3510
DEC											
01...	--	--	9.4	--	--	160	--	1800	360	--	3510
21...	--	--	--	--	--	--	--	--	--	.3	--
25...	--	--	6.9	--	--	160	--	1500	180	--	2730
30...	--	--	7.4	--	--	150	--	1600	210	--	3000
JAN											
23...	--	7.3	--	--	--	--	--	--	--	.2	--
FEB											
13...	170	--	5.7	--	--	110	--	1600	200	--	3020
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	4.7	--	--	66	--	1500	150	--	2560
27...	140	--	5.2	--	--	86	--	1600	170	--	2730
MAR											
03...	140	--	5.1	--	--	76	--	1500	190	--	2810
15...	170	--	6.3	--	--	110	--	1900	200	--	3300
21...	--	--	--	--	--	--	--	--	--	.4	--
26...	160	--	6.4	--	--	110	--	1800	170	--	3050
APR											
01...	170	--	7.0	--	--	110	--	--	180	--	3200
11...	--	--	--	--	--	--	--	--	--	.3	--
15...	200	--	7.3	--	--	90	--	1800	240	--	3390
30...	240	--	7.5	--	--	150	--	2000	320	--	3670
MAY											
01...	230	--	8.3	--	--	99	--	2000	330	--	3690
10...	24	--	6.6	--	--	71	--	250	18	--	510
17...	--	--	--	--	--	--	--	--	--	.3	--
24...	140	--	10	--	--	200	--	1000	140	--	1960
JUN											
22...	180	--	7.3	--	--	100	--	1600	210	--	2870
26...	85	--	6.3	--	--	110	--	930	100	--	1690
27...	--	--	--	--	--	--	--	--	--	.3	--
30...	140	--	6.7	--	--	160	--	1200	190	--	2240
JUL											
16...	370	--	8.6	--	--	140	--	1800	510	--	3630
19...	--	--	--	--	--	--	--	--	--	--	--
19...	120	--	12	--	--	110	--	1500	120	--	--
23...	14	--	5.2	--	--	83	--	200	12	--	385
AUG											
01...	37	--	5.9	--	--	100	--	440	39	--	800
07...	120	--	8.5	--	--	180	--	1300	140	--	2230
08...	--	--	--	--	--	--	--	--	--	.2	--
24...	210	--	8.3	--	--	150	--	1700	260	--	3110
SEP											
01...	170	--	8.9	--	--	130	--	1800	230	--	5150
11...	--	--	--	--	--	--	--	--	--	.4	--
13...	340	--	9.1	--	--	140	--	1900	470	--	3790
29...	550	--	9.6	--	--	--	--	2000	--	--	4440

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3710		---		---	3050	3400	3890	2880	---	1120	3420
2	---		---		---	---	3460	3540	2870	2900	1550	3490
3	---		---		---	3040	3430	3350	2890	3040	1710	3520
4	---		---		---	---	3400	---	2910	3190	---	3640
5	---		---		---	3120	3460	---	2880	3310	---	3710
6	---		---		---	3180	3500	---	2940	3370	---	3770
7	---		---		---	3220	3550	---	3010	3430	2520	3830
8	---		---		---	3250	3590	3290	2480	3420	2640	3920
9	---		---		---	---	3600	3260	2670	3520	2720	3990
10	---		---		---	3360	---	707	2800	3540	2810	---
11	---		---		---	3380	3460	1400	2680	3610	2840	4200
12	---		---		3320	3380	3520	1780	2640	3730	2890	4230
13	---		---		3350	3420	3590	2110	2680	3840	2930	4340
14	---		---		3150	3460	3600	2290	2630	3970	2990	4460
15	---		---		3020	3480	3660	2480	2790	4090	3030	4510
16	---		3480		---	3480	3710	2630	2830	4220	3050	4550
17	---		---		---	3460	3740	---	2860	4130	3100	4650
18	---		3280		---	3190	3720	2760	3040	3300	3150	4720
19	---		3330		---	3300	3700	2830	3150	2690	3210	4750
20	---		3350		2980	3350	3720	2830	2960	2280	3280	4850
21	---		---		3010	3330	3740	---	3180	2130	3290	4890
22	---		3330		2870	3100	3800	2700	3200	2220	---	---
23	---		3340		2960	3150	3820	2270	3160	571	3420	5010
24	---		---		2960	3170	3850	2300	3300	746	3440	5070
25	---		2260		---	3220	3880	2590	1790	700	---	5190
26	---		---		2980	3270	3870	2710	1980	---	3150	5190
27	---		2850		3010	3330	3920	2680	2020	1230	3300	---
28	---		2820		3010	---	---	2720	2190	1450	3360	5290
29	---		3270		---	3380	3930	2790	2390	1780	3360	5330
30	---		2860		---	3400	3950	2840	2610	---	3370	---
31	---		---		---	3470	---	2890	---	589	3370	---

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3630		---			---	3400	3860	2750	2780	1040	3410
2	---		---			2900	3460	3580	2800	2860	1450	3480
3	---		---			3060	---	3370	2870	2980	1650	3480
4	---		3500			3060	---	3420	2890	3140	1920	3690
5	---		---			3130	---	3430	2890	3270	2160	3760
6	---		---			3200	---	3350	2960	3370	2330	3720
7	---		---			3320	---	3340	2980	3430	2490	3800
8	---		---			3250	---	3280	2800	3450	2620	3980
9	---		---			3330	---	2640	2570	3470	2680	3950
10	---		---			3380	---	510	2840	3520	2820	4070
11	---		---			3400	---	1350	2680	3540	2880	4290
12	---		3580			3400	---	1730	2680	3710	2830	4160
13	---		3520			3560	---	2070	2630	3810	2880	4160
14	---		3470			3470	---	2280	2610	3900	2970	4190
15	---		3500			3480	---	2470	2760	3990	3020	4460
16	---		3490			3480	---	2620	2820	3990	3030	4670
17	---		3620			3460	---	2720	2850	4170	3030	4560
18	---		---			3190	---	2760	2990	3430	3080	4930
19	---		---			3290	---	2820	2970	2830	3170	4710
20	---		---			3310	---	2870	2930	2280	3240	4780
21	---		---			3360	---	2400	3160	2200	3260	4840
22	---		---			3110	---	---	3180	2240	3330	4900
23	---		---			3170	---	---	3140	1110	3390	4960
24	---		---			3180	---	2240	3270	643	3540	5100
25	---		---			3230	---	2550	2220	806	3400	5230
26	---		---			3270	3670	2730	1950	1020	3180	5270
27	---		---			3340	3960	2670	1980	1210	3280	5400
28	---		---			3380	3940	2720	2220	1440	3310	5230
29	---		---			3390	3980	2740	2410	1750	3330	5260
30	---		---			3410	3910	2850	2620	1680	3380	5110
31	---		---			3480	---	2850	---	823	3340	---

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

ARKANSAS RIVER BASIN

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700		---			---	1600	1800	1300	1300	610	1600
2	---		---			1400	1600	1700	1300	1400	790	1600
3	---		---			1500	---	1600	1400	1400	870	1600
4	---		1600			1500	---	1600	1400	1500	980	1700
5	---		---			1500	---	1600	1400	1500	1100	1700
6	---		---			1500	---	1600	1400	1600	1200	1700
7	---		---			1600	---	1600	1400	1600	1200	1800
8	---		---			1500	---	1500	1300	1600	1300	1800
9	---		---			1600	---	1300	1300	1600	1300	1800
10	---		---			1600	---	390	1400	1600	1400	1900
11	---		---			1600	---	740	1300	1700	1400	2000
12	---		1700			1600	---	900	1300	1700	1400	1900
13	---		1600			1700	---	1000	1300	1800	1400	1900
14	---		1600			1600	---	1100	1300	1800	1400	1900
15	---		1600			1600	---	1200	1300	1800	1400	2000
16	---		1600			1600	---	1300	1400	1800	1400	2100
17	---		1700			1600	---	1300	1400	1900	1400	2100
18	---		---			1500	---	1300	1400	1600	1500	2200
19	---		---			1600	---	1400	1400	1400	1500	2100
20	---		---			1600	---	1400	1400	1100	1500	2200
21	---		---			1600	---	1200	1500	1100	1500	2200
22	---		---			1500	---	---	1500	1100	1600	2200
23	---		---			1500	---	---	1500	640	1600	2200
24	---		---			1500	---	1100	1500	450	1700	2300
25	---		---			1500	---	1200	1100	520	1600	2400
26	---		---			1500	1700	1300	990	610	1500	2400
27	---		---			1600	1800	1300	1000	690	1500	2400
28	---		---			1600	1800	1300	1100	780	1600	2400
29	---		---			1600	1800	1300	1200	910	1600	2400
30	---		---			1600	1800	1400	1300	880	1600	2300
31	---		---			1600	---	1400	---	520	1600	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23		---			---	4.75	.92	59.70	7.72	95.50	3.37
2	---		---			3.48	4.75	6.88	56.20	7.56	49.10	2.85
3	---		---			5.67	---	6.48	56.70	6.05	35.20	2.46
4	---		.04			4.86	---	13.00	52.90	5.67	24.30	2.16
5	---		---			4.45	---	15.10	49.10	5.26	19.60	1.84
6	---		---			3.97	---	9.94	45.40	5.62	17.20	1.61
7	---		---			4.23	---	6.48	41.60	5.18	13.90	1.41
8	---		---			3.36	---	4.86	70.20	4.75	12.60	1.21
9	---		---			3.93	---	172.00	80.70	4.06	10.50	1.02
10	---		---			2.89	---	3980.00	117.00	4.32	9.45	1.03
11	---		---			2.59	---	342.00	91.30	3.76	9.07	.97
12	---		.50			2.33	---	185.00	70.20	2.98	8.32	.87
13	---		.69			1.93	---	140.00	52.60	2.58	7.94	.72
14	---		.52			1.81	---	116.00	42.10	2.04	6.80	.67
15	---		.69			1.56	---	97.20	32.60	1.90	6.43	.86
16	---		1.08			1.81	---	80.70	28.70	2.38	6.05	.91
17	---		1.38			2.33	---	70.20	25.30	3.54	5.67	.79
18	---		---			13.40	---	77.20	23.40	86.40	5.26	.77
19	---		---			15.10	---	71.80	20.40	49.10	4.45	.68
20	---		---			11.70	---	71.80	17.40	18.40	3.89	.65
21	---		---			9.94	---	77.80	17.80	8.61	3.32	.59
22	---		---			18.60	---	---	21.10	7.13	3.11	.59
23	---		---			15.40	---	---	20.70	1830.00	2.98	.59
24	---		---			11.70	---	104.00	85.00	770.00	4.18	.62
25	---		---			8.91	---	81.00	38.60	563.00	9.94	.58
26	---		---			7.29	.92	77.20	15.00	206.00	17.80	.58
27	---		---			6.48	.87	70.20	10.80	110.00	13.40	.52
28	---		---			6.91	.92	59.70	9.80	80.00	9.50	.52
29	---		---			6.48	1.02	56.20	9.40	63.90	6.91	.58
30	---		---			5.62	1.02	56.70	8.77	42.80	5.18	.56
31	---		---			4.75	---	68.00	---	496.00	4.32	---

ARKANSAS RIVER BASIN

109

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310		---			---	280	340	190	200	33	280
2	---		---			210	280	300	200	210	42	290
3	---		---			230	---	270	210	220	51	290
4	---		290			230	---	280	210	240	86	310
5	---		---			240	---	280	210	260	120	320
6	---		---			250	---	270	220	270	140	320
7	---		---			270	---	270	220	280	160	330
8	---		---			260	---	260	200	280	180	350
9	---		---			270	---	180	170	290	180	350
10	---		---			270	---	22	200	290	200	360
11	---		---			280	---	40	180	290	210	390
12	---		300			280	---	62	180	320	200	370
13	---		290			300	---	110	180	330	210	370
14	---		290			290	---	130	180	340	220	380
15	---		290			290	---	160	190	350	230	410
16	---		290			290	---	180	200	350	230	440
17	---		310			280	---	190	210	380	230	430
18	---		---			250	---	190	220	280	240	470
19	---		---			260	---	200	220	200	250	450
20	---		---			270	---	210	220	130	260	450
21	---		---			270	---	150	250	120	260	460
22	---		---			240	---	---	250	130	270	470
23	---		---			250	---	---	240	35	280	480
24	---		---			250	---	130	260	25	290	500
25	---		---			260	---	170	120	28	280	510
26	---		---			260	310	190	90	33	250	520
27	---		---			270	350	180	94	37	260	530
28	---		---			270	350	190	120	42	270	510
29	---		---			280	350	190	150	64	270	520
30	---		---			280	340	210	180	55	270	500
31	---		---			290	---	210	---	29	270	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04		---			---	.83	.17	8.72	1.19	5.17	.59
2	---		---			.52	.83	1.21	8.64	1.13	2.61	.52
3	---		---			.87	---	1.09	8.50	.95	2.07	.45
4	---		.01			.75	---	2.27	7.94	.91	2.14	.39
5	---		---			.71	---	2.65	7.37	.91	2.14	.35
6	---		---			.66	---	1.68	7.13	.95	2.00	.30
7	---		---			.71	---	1.09	6.53	.91	1.86	.26
8	---		---			.58	---	.84	10.80	.83	1.75	.24
9	---		---			.66	---	23.80	10.60	.74	1.46	.20
10	---		---			.49	---	225.00	16.70	.78	1.35	.19
11	---		---			.45	---	18.50	12.60	.64	1.36	.19
12	---		.09			.41	---	12.70	9.72	.56	1.19	.17
13	---		.13			.34	---	15.40	7.29	.47	1.19	.14
14	---		.09			.33	---	13.70	5.83	.39	1.07	.13
15	---		.13			.28	---	13.00	4.77	.37	1.06	.18
16	---		.20			.33	---	11.20	4.10	.46	.99	.19
17	---		.25			.41	---	10.30	3.80	.71	.93	.16
18	---		---			2.23	---	11.30	3.68	15.10	.84	.16
19	---		---			2.46	---	10.30	3.21	7.02	.74	.15
20	---		---			1.97	---	10.80	2.73	2.18	.67	.13
21	---		---			1.68	---	9.72	2.97	.94	.58	.12
22	---		---			2.98	---	---	3.51	.84	.52	.13
23	---		---			2.56	---	---	3.30	100.00	.52	.13
24	---		---			1.96	---	12.30	14.70	42.80	.71	.14
25	---		---			1.54	---	11.50	4.21	30.30	1.74	.12
26	---		---			1.26	.17	11.30	1.36	11.10	2.97	.13
27	---		---			1.09	.17	9.72	1.02	5.89	2.32	.11
28	---		---			1.17	.18	8.72	1.07	4.31	1.60	.11
29	---		---			1.13	.20	8.21	1.17	4.49	1.17	.13
30	---		---			.98	.19	8.50	1.21	2.67	.87	.12
31	---		---			.86	---	10.20	---	27.60	.73	---

ARKANSAS RIVER BASIN

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3320		---			---	3110	3530	2510	2540	950	3120
2	---		---			2650	3160	3270	2560	2620	1330	3180
3	---		---			2800	---	3080	2620	2720	1510	3180
4	---		3200			2800	---	3130	2640	2870	1760	3370
5	---		---			2860	---	3140	2640	2990	1970	3440
6	---		---			2930	---	3060	2710	3080	2130	3400
7	---		---			3040	---	3050	2720	3140	2280	3480
8	---		---			2970	---	3000	2560	3150	2400	3640
9	---		---			3050	---	2410	2350	3170	2450	3610
10	---		---			3090	---	465	2600	3220	2580	3720
11	---		---			3110	---	1230	2450	3240	2630	3920
12	---		3270			3110	---	1580	2450	3390	2590	3800
13	---		3220			3260	---	1890	2400	3480	2630	3800
14	---		3170			3170	---	2080	2390	3570	2720	3830
15	---		3200			3180	---	2260	2520	3650	2760	4080
16	---		3190			3180	---	2400	2580	3650	2770	4270
17	---		3310			3160	---	2490	2610	3810	2770	4170
18	---		---			2920	---	2520	2730	3140	2820	4510
19	---		---			3010	---	2580	2720	2590	2900	4310
20	---		---			3030	---	2620	2680	2080	2960	4370
21	---		---			3070	---	2190	2690	2010	2980	4430
22	---		---			2840	---	---	2910	2050	3050	4480
23	---		---			2900	---	---	2870	1010	3100	4540
24	---		---			2910	---	2050	2990	587	3240	4660
25	---		---			2950	---	2330	2030	736	3110	4780
26	---		---			2990	3360	2500	1780	932	2910	4820
27	---		---			3050	3620	2440	1810	1110	3000	4940
28	---		---			3090	3600	2490	2030	1320	3030	4780
29	---		---			3100	3640	2510	2200	1600	3050	4810
30	---		---			3120	3580	2610	2400	1540	3090	4670
31	---		---			3180	---	2610	---	752	3050	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45		---			---	9.24	1.81	115.0	15.10	149.00	6.57
2	---		---			6.58	9.39	13.20	111.0	14.10	82.60	5.67
3	---		---			10.60	---	12.50	106.0	11.80	61.20	4.89
4	---		.09			9.07	---	25.40	99.8	10.80	43.70	4.28
5	---		---			8.49	---	29.70	92.7	10.50	35.10	3.72
6	---		---			7.75	---	19.00	87.8	10.80	30.50	3.21
7	---		---			8.04	---	12.40	80.8	10.20	26.50	2.72
8	---		---			8.66	---	9.72	138.0	9.36	23.30	2.46
9	---		---			7.49	---	319.00	146.0	8.05	19.80	2.05
10	---		---			5.59	---	4750.00	218.0	8.69	17.40	2.01
11	---		---			5.04	---	568.00	172.0	7.17	17.00	1.91
12	---		.97			4.53	---	324.00	132.0	5.95	15.40	1.74
13	---		1.39			3.70	---	265.00	97.2	4.98	14.90	1.44
14	---		1.03			3.59	---	219.00	77.4	4.05	13.20	1.34
15	---		1.38			3.09	---	183.00	63.3	3.84	12.70	1.76
16	---		2.15			3.61	---	149.00	52.9	4.83	12.00	1.84
17	---		2.68			4.61	---	134.00	47.2	7.10	11.20	1.58
18	---		---			26.00	---	150.00	45.7	170.00	9.90	1.58
19	---		---			28.40	---	132.00	39.7	90.90	8.61	1.40
20	---		---			22.10	---	134.00	33.3	34.80	7.67	1.30
21	---		---			19.10	---	142.00	34.3	15.70	6.60	1.20
22	---		---			35.30	---	---	40.9	13.30	5.93	1.21
23	---		---			29.80	---	---	39.5	2890.00	5.78	1.23
24	---		---			22.80	---	194.00	170.0	1000.00	7.96	1.26
25	---		---			17.50	---	157.00	71.3	797.00	19.30	1.16
26	---		---			14.50	1.81	148.00	26.9	315.00	34.60	1.17
27	---		---			12.40	1.76	132.00	19.5	177.00	26.70	1.07
28	---		---			13.30	1.85	114.00	18.1	135.00	18.00	1.03
29	---		---			12.60	2.06	108.00	17.2	112.00	13.20	1.17
30	---		---			11.00	2.03	106.00	16.2	74.80	10.00	1.13
31	---		---			9.44	---	127.00	---	717.00	8.23	---

ARKANSAS RIVER BASIN

111

07157980 CIMARRON RIVER AT FREEDOM, OK

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

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

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year. Published as "near Freedom" prior to October 1975.

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

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

AVERAGE DISCHARGE.--6 years, 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (171 hm³/yr).

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.00	32	20	35	105	118	40	366	6.8	664	16
2	.00	.00	26	23	38	118	110	125	323	11	310	21
3	.00	.00	24	33	45	141	102	1330	310	9.9	234	16
4	.00	.00	22	42	45	150	110	1730	296	8.1	180	4.6
5	.00	.00	20	56	40	156	102	842	255	6.8	138	1.2
6	.00	.00	17	60	45	174	105	500	218	6.5	103	1.0
7	.00	1.2	15	45	50	150	110	314	167	5.4	80	.90
8	.00	.92	12	30	55	132	136	210	154	5.7	63	.82
9	.00	.36	10	38	60	110	146	168	440	6.8	46	.71
10	.00	.60	13	42	75	92	132	14800	437	5.7	36	.60
11	.00	1.4	15	44	90	123	123	1510	316	5.5	32	.52
12	.00	.92	24	40	105	132	192	630	255	5.0	28	.40
13	.00	1.2	15	30	128	141	218	344	194	4.5	26	.35
14	.00	2.2	17	25	180	99	128	290	160	4.0	24	.50
15	.00	3.1	12	28	141	83	86	255	140	3.5	26	.46
16	.00	10	13	30	99	79	76	185	120	284	25	.40
17	.00	8.3	8.6	33	89	79	76	142	95	107	25	.37
18	.00	19	43	36	146	462	79	185	75	67	27	.33
19	.00	14	66	71	214	250	83	170	57	61	31	.29
20	.00	18	71	76	214	156	64	150	50	517	18	.23
21	.00	21	57	50	150	234	57	1120	43	223	16	.16
22	.00	25	50	50	174	820	52	1670	65	204	13	.15
23	.00	19	46	43	274	322	48	1310	65	752	11	.12
24	.00	12	55	35	186	198	43	723	396	1300	18	.40
25	.00	26	51	83	174	192	42	446	190	7430	27	.20
26	.00	36	30	102	136	162	42	344	46	3760	25	.25
27	.00	42	33	70	118	146	36	330	18	880	24	.20
28	.00	33	47	55	102	136	35	323	12	481	18	.18
29	.00	38	47	45	---	132	36	303	11	323	9.9	.16
30	.00	40	38	40	---	132	40	303	9.0	244	6.8	.12
31	.00	---	30	33	---	128	---	272	---	2010	12	---
TOTAL	1.50	373.20	959.6	1408	3208	5534	2727	31064	5283.0	18738.2	2296.7	68.62
MEAN	.048	12.4	31.0	45.4	115	179	90.9	1002	176	604	74.1	2.29
MAX	1.5	42	71	102	274	820	218	14800	440	7430	664	21
MIN	.00	.00	8.6	20	35	79	35	40	9.0	3.5	6.8	.12
AC-FT	3.0	740	1900	2790	6360	10980	5410	61620	10480	37170	4560	136
CAL YR 1978	TOTAL	68184.00	MEAN	187	MAX	5740	MIN	.00	AC-FT	135200		
WTR YR 1979	TOTAL	71661.82	MEAN	196	MAX	14800	MIN	.00	AC-FT	142100		

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER AT FREEDOM, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1974 to current year.

PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURE: October 1973 to current year.

INSTRUMENTATION.--Water quality monitor since October 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. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

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, 176,000 micromhos Aug. 15, 1976, Oct. 26, 1977; minimum, 3,620 micromhos July 10, 1978.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 173,000 micromhos Nov. 12; minimum daily, 5,080 micromhos July 23.

WATER TEMPERATURE: Maximum daily, 38.0°C July 10, minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT												
01...	1900	1.5	155000	7.4	23.0	3200	3200	570	440	54000	97	413
NOV												
10...	1600	.92	164000	7.7	10.0	3600	3500	650	490	59000	97	426
26...	1655	36	103000	7.6	7.5	2000	1900	410	240	30000	97	291
30...	1730	40	41500	8.1	10.0	960	780	220	100	10000	96	140
DEC												
04...	1700	22	64500	7.8	2.0	1300	1100	260	160	17000	96	205
10...	1600	13	109000	7.7	6.0	2000	1800	400	250	34000	97	329
20...	1720	71	28400	7.9	6.5	820	630	200	78	6600	94	100
JAN												
07...	1600	45	140000	7.5	2.0	2000	1800	180	370	50000	98	490
19...	1330	71	89500	7.7	4.0	1100	1000	120	200	26000	98	338
28...	1800	55	41400	8.0	3.0	620	410	82	100	10000	97	175
FEB												
08...	1215	55	60500	7.7	1.5	1500	1400	310	170	17000	96	193
19...	1630	214	30600	7.8	4.5	810	670	180	87	7500	95	115
23...	1745	274	11600	8.0	8.5	360	210	110	20	2300	95	47
MAR												
01...	1755	105	25400	8.3	12.0	840	640	200	82	5700	94	86
24...	1720	198	14100	8.0	12.0	600	430	140	61	2800	91	50
31...	1700	128	36700	8.2	11.0	1100	890	250	110	9100	95	121
APR												
11...	1230	123	61400	8.0	22.0	1500	1300	350	150	17000	96	192
13...	1710	218	13400	7.9	19.0	580	420	130	61	2700	91	49
22...	1150	52	38600	8.3	25.0	1100	940	250	120	9300	95	121
MAY												
01...	1815	40	47600	8.2	22.0	1200	1000	270	130	12000	96	150
10...	1715	14800	8220	7.5	19.0	450	360	140	25	1600	88	33
27...	1840	330	27000	8.1	--	1100	900	280	96	6000	92	79
JUN												
03...	1930	310	18500	7.8	29.0	900	700	220	85	3800	90	55
20...	1540	50	39500	8.0	33.0	1600	1400	350	170	9200	93	101
30...	2115	9.0	52700	8.0	26.0	1200	1100	310	110	14000	96	174
JUL												
10...	1630	5.7	117000	7.0	38.0	3400	3300	790	350	37000	96	276
18...	2000	67	89000	7.2	27.0	2100	2100	530	200	26000	96	244
23...	1900	752	5260	7.3	26.0	520	500	180	18	830	77	16
AUG												
01...	1900	664	17100	7.6	31.0	900	780	260	61	3400	92	49
20...	1915	18	69600	8.0	31.0	--	--	--	200	20000	--	--
25...	1630	27	116000	7.3	31.0	3100	3000	770	280	39000	96	306
SEP												
04...	2000	4.6	125000	7.4	26.0	3700	3600	860	380	42000	96	300

ARKANSAS RIVER BASIN

113

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM- DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
01...	--	88	99	0	81	6.3	2600	84000	149000	203	603
NOV											
10...	--	99	--	--	98	--	300	91000	155000	211	385
26...	--	65	--	--	130	--	74	47000	80000	109	7780
30...	--	26	--	--	180	--	640	15000	27400	37.3	2960
DEC											
04...	--	32	--	--	160	--	960	26000	45600	62.0	2710
10...	--	38	--	--	180	--	1600	53000	85500	116	3000
20...	--	17	--	--	190	--	500	9800	17600	23.9	3370
JAN											
07...	--	63	--	--	130	--	23	77000	129000	--	--
19...	--	39	--	--	76	--	1200	--	67100	--	--
28...	--	22	--	--	210	--	740	15000	27400	37.3	4070
FEB											
08...	17000	17	--	--	84	--	120	27000	44800	60.9	6650
19...	7500	13	--	--	140	--	560	12000	19700	26.8	11400
23...	2300	6.6	--	--	150	--	250	3200	5570	7.58	4120
MAR											
01...	5700	9.6	--	--	200	--	500	9100	15800	21.5	4480
24...	2800	8.7	--	--	170	--	360	4600	8230	11.2	4400
31...	9100	11	--	--	190	--	690	14000	24000	32.6	8290
APR											
11...	17000	18	--	--	160	3.1	1300	26000	45100	61.3	15000
13...	2700	10	--	--	160	3.9	400	4300	7780	10.6	4580
22...	9300	15	--	--	180	1.8	740	15000	25400	34.5	3570
MAY											
01...	12000	17	--	--	170	--	320	19000	33500	45.6	3620
10...	1600	7.3	--	--	89	--	360	2400	4680	6.36	187000
27...	6000	14	--	--	190	--	820	9700	18300	24.9	16300
JUN											
03...	3800	12	--	--	200	--	650	6200	10700	14.6	8960
20...	9200	18	--	--	160	--	880	15000	26100	35.5	3520
30...	14000	21	--	--	100	--	--	23000	40200	54.7	977
JUL											
10...	37000	47	--	--	98	--	1600	63000	101000	137	1550
18...	26000	33	--	--	83	--	1500	41000	68000	92.5	12300
23...	840	6.5	--	--	21	--	430	1300	2930	3.98	5950
AUG											
01...	3400	12	--	--	120	--	--	5600	10400	--	--
20...	20000	35	--	--	98	--	2100	28000	53600	72.9	2610
25...	39000	11	--	--	88	--	2100	61000	101000	137	7360
SEP											
04...	42000	60	--	--	92	--	2400	68000	122000	166	1520

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14800	---	44100	---	53400	25000	36200	47600	29600	60900	16600	---
2	---	---	48200	106000	57700	25500	43100	---	25300	88100	17200	123000
3	---	---	51000	107000	54600	---	36200	13800	17900	84300	17800	115000
4	---	---	61600	119000	58900	32200	58000	13800	18700	83300	18700	123000
5	---	---	49600	124000	58500	19400	44400	18800	20500	84600	19600	125000
6	---	---	61000	124000	57700	19400	24400	11700	23200	94200	22200	128000
7	---	153000	60800	132000	60200	21700	24800	12700	26500	88700	25100	---
8	---	150000	83400	130000	60500	---	28200	16600	19100	101000	28400	---
9	---	150000	101000	127000	47600	23900	61400	18500	18900	101000	35000	---
10	---	151000	102000	128000	55700	23800	61200	7960	26200	106000	34400	---
11	---	149000	100000	127000	55400	21600	61400	19400	19000	---	---	---
12	---	173000	91200	127000	48300	21300	20200	19400	18400	---	41400	---
13	---	172000	82500	124000	41900	24600	13100	27300	19800	---	45100	---
14	---	---	72100	124000	35100	20800	16700	26900	21000	---	48700	---
15	---	160000	80300	120000	26600	23200	---	28400	22400	---	51300	---
16	---	145000	81300	124000	37000	25900	26500	28400	28600	90100	---	---
17	---	148000	64500	100000	37100	30500	28100	29400	22600	104000	50600	---
18	---	107000	39300	86000	27900	25500	43400	44400	28800	83600	---	---
19	---	69300	36800	86200	30500	25300	48300	---	36600	44800	72700	---
20	---	69300	27700	86200	28100	15500	43000	19900	35900	13100	68200	---
21	---	95300	---	77500	24200	26400	---	29200	39400	12600	85200	---
22	---	74900	32700	67000	11500	22900	37700	20000	33900	16200	80500	---
23	---	95500	---	55600	11300	---	41700	13600	36700	5080	85200	---
24	---	82700	38500	55400	---	13400	41600	17000	---	5510	86700	---
25	---	77400	43300	41700	19000	18900	46800	18200	22900	---	115000	---
26	---	96500	35700	45100	16700	18900	43500	21600	22600	8430	---	---
27	---	60200	35900	42500	23800	26600	47500	26800	30600	11100	80500	---
28	---	42700	40700	40200	26800	27500	60300	21000	40700	13700	101000	---
29	---	40300	39700	46200	---	29400	61100	20200	46600	15600	102000	---
30	---	38100	---	46200	---	---	45300	24700	52700	17600	105000	---
31	---	---	---	49500	---	36300	---	28300	---	---	107000	---

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	36900	93600	54100	24900	36200	52900	21700	57000		
2		---	49100	107000	56000	25200	43200	30700	23300	77600		
3		---	40900	107000	56000	30100	36300	12900	19700	77600		
4		---	48200	119000	61900	32300	61600	13900	18200	94500		
5		---	54400	124000	56200	19500	53300	18900	20300	107000		
6		---	60600	124000	60800	19400	26000	13500	24600	91100		
7		133000	60300	132000	59300	21500	24500	13300	27100	88400		
8		151000	83600	131000	61800	23200	27600	16600	15000	128000		
9		153000	101000	127000	49100	23100	62000	18200	17400	98600		
10		150000	103000	128000	58100	23400	60000	---	26000	102000		
11		150000	100000	130000	51100	20800	57700	---	19000	101000		
12		174000	91500	127000	48300	21100	20400	---	15300	97300		
13		164000	83200	120000	39600	24500	13000	---	19500	96800		
14		172000	73500	126000	33900	20800	16400	---	19700	94700		
15		164000	81700	122000	27300	23000	21200	---	21500	94400		
16		146000	82900	125000	35500	25800	26500	---	28300	87600		
17		149000	65500	99500	42400	30300	28200	---	22600	101000		
18		94600	39400	86500	29400	25200	47200	---	28300	84100		
19		70900	36800	86300	32800	25200	48600	---	35800	47400		
20		70000	27800	87900	27900	15500	41900	---	37900	27100		
21		95800	31400	77400	24300	27200	42800	---	43800	14400		
22		73200	33200	68100	11600	26000	37800	---	33200	14000		
23		116000	38900	56200	11200	17600	41500	---	39700	14900		
24		82700	40900	54400	15600	13300	41400	15400	20500	7110		
25		75600	43800	41700	19200	19000	47000	18200	21200	---		
26		94200	35800	44900	17200	18900	43900	21600	19100	---		
27		62700	36100	43900	24100	26700	42700	26100	25100	---		
28		40400	40800	41300	26900	27500	62000	22500	36600	---		
29		41000	40000	46400	---	29400	62400	20400	47500	---		
30		36100	53600	47900	---	33100	48300	24700	57600	---		
31		---	69200	57800	---	36400	---	30000	---	---		

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	---	10.0	---	2.0	12.0	9.0	22.0	27.0	29.5	31.0	---
2	---	---	10.0	.0	4.0	10.0	11.0	---	27.0	30.0	31.0	34.0
3	---	---	4.0	.0	2.0	---	---	19.0	29.0	28.0	30.5	35.0
4	---	---	2.0	.0	1.0	10.0	11.0	24.0	28.5	---	30.5	26.0
5	---	---	.0	.0	2.0	12.0	20.5	25.0	27.0	27.5	31.0	33.0
6	---	---	1.0	.0	2.0	13.0	16.0	23.0	28.0	28.5	30.0	33.0
7	---	14.0	.0	2.0	2.0	14.5	21.0	28.0	33.0	31.0	28.5	---
8	---	16.0	.0	2.0	1.5	---	15.0	26.0	34.0	36.0	27.0	---
9	---	15.0	.0	2.0	1.0	12.0	20.0	25.0	28.0	37.0	29.0	---
10	---	10.0	6.0	3.0	3.0	13.5	21.0	19.0	26.0	38.0	23.0	---
11	---	5.5	6.0	1.0	9.0	16.0	22.0	26.0	33.0	---	---	---
12	---	10.0	8.0	1.0	2.0	15.5	26.5	16.0	28.5	---	27.0	---
13	---	16.0	5.0	5.0	4.0	15.0	19.0	25.0	30.5	---	30.0	---
14	---	---	5.0	5.0	8.0	14.0	19.0	25.5	28.0	---	34.0	---
15	---	4.0	5.0	2.0	1.0	10.0	---	26.0	26.0	---	24.0	---
16	---	3.0	4.0	2.0	.0	7.0	22.5	23.0	27.0	31.0	---	---
17	---	9.0	3.5	5.0	.0	11.0	21.0	20.0	29.0	28.5	25.0	---
18	---	12.0	8.5	1.5	.5	17.0	20.0	29.0	28.0	27.0	---	---
19	---	5.0	16.0	4.0	4.5	14.0	22.5	---	27.0	23.5	29.0	---
20	---	3.0	6.5	5.0	6.0	13.0	22.0	---	33.0	27.5	31.0	---
21	---	2.0	---	5.0	4.5	12.0	---	16.5	27.0	29.0	31.0	---
22	---	5.0	6.5	3.5	7.0	17.0	25.0	26.0	32.5	36.5	30.0	---
23	---	13.0	---	.5	8.5	---	25.0	22.0	29.0	26.0	30.5	---
24	---	8.0	5.0	1.0	---	12.0	24.0	27.0	26.0	31.0	21.0	---
25	---	9.5	7.0	.0	10.0	16.0	24.0	21.0	25.0	---	31.0	---
26	---	7.5	4.5	1.0	5.0	15.0	23.0	18.0	23.0	32.0	---	---
27	---	6.0	4.5	.5	10.0	14.0	21.0	---	23.0	30.5	29.5	---
28	---	9.0	9.0	3.0	6.0	17.0	16.0	29.0	34.0	33.0	25.0	---
29	---	10.0	.0	3.0	---	21.0	20.0	27.0	36.0	31.0	27.0	---
30	---	10.0	---	2.0	---	---	23.5	25.0	26.0	27.0	28.0	---
31	---	---	---	3.0	---	11.0	---	23.5	---	---	33.0	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	740	1200	870	660	740	860	630	890		
2		---	830	1200	880	660	790	700	650	1000		
3		---	770	1200	880	690	740	570	620	1000		
4		---	820	1300	920	710	920	580	610	1200		
5		---	870	1400	880	620	860	610	620	1200		
6		---	910	1400	910	620	660	570	650	1100		
7	1400		910	1400	900	630	650	570	670	1100		
8	1600		1100	1400	920	640	680	600	590	1400		
9	1600		1200	1400	830	640	920	610	600	1200		
10	1600		1200	1400	900	650	910	---	660	1200		
11		1600	1200	1400	850	630	890	---	610	1200		
12		1700	1100	1400	820	630	620	---	590	1200		
13		1700	1100	1300	760	650	570	---	620	1200		
14		1700	1000	1400	720	630	600	---	620	1200		
15		1700	1100	1400	670	640	630	---	630	1200		
16		1500	1100	1400	730	660	670	---	680	1100		
17		1500	950	1200	780	700	680	---	640	1200		
18		1200	760	1100	690	660	820	---	680	1100		
19		990	740	1100	710	660	830	---	740	820		
20		980	680	1100	680	590	780	---	750	670		
21		1200	700	1000	650	670	790	---	790	580		
22		1000	720	970	560	660	750	---	720	580		
23		1300	760	880	560	600	780	---	760	580		
24		1100	770	870	590	570	780	590	630	530		
25		1000	790	780	620	610	820	610	630	---		
26		1200	740	800	600	610	790	630	620	---		
27		930	740	790	650	670	780	670	660	---		
28		770	770	770	670	680	920	640	740	---		
29		770	770	810	---	690	930	620	820	---		
30		740	660	820	---	720	820	660	890	---		
31		---	980	890	---	740	---	690	---	---		

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	63.9	64.8	82.2	187.0	236.0	92.9	623.0	16.3		
2		---	58.3	74.5	90.3	210.0	235.0	236.0	567.0	29.7		
3		---	49.9	107.0	107.0	263.0	204.0	2050.0	519.0	26.7		
4		---	48.7	147.0	112.0	288.0	273.0	2710.0	488.0	26.2		
5		---	47.0	212.0	95.0	261.0	237.0	1390.0	427.0	22.0		
6		---	41.8	227.0	111.0	291.0	187.0	769.0	383.0	19.3		
7	4.54		36.9	170.0	121.0	255.0	193.0	483.0	302.0	16.0		
8	3.97		35.6	113.0	137.0	228.0	250.0	340.0	245.0	21.5		
9	1.56		32.4	144.0	134.0	190.0	363.0	277.0	713.0	22.0		
10	2.59		42.1	159.0	182.0	161.0	324.0	---	779.0	18.5		
11		6.05	48.6	166.0	207.0	209.0	296.0	---	520.0	17.8		
12		4.22	71.3	151.0	232.0	225.0	321.0	---	406.0	16.2		
13		5.51	44.5	105.0	263.0	247.0	336.0	---	325.0	14.6		
14		10.10	45.9	94.5	350.0	168.0	207.0	---	268.0	13.0		
15		14.20	35.6	106.0	255.0	143.0	146.0	---	238.0	11.3		
16		40.50	38.6	113.0	195.0	141.0	137.0	---	220.0	843.0		
17		33.60	22.1	107.0	187.0	149.0	140.0	---	164.0	347.0		
18		61.60	88.2	107.0	272.0	823.0	175.0	---	138.0	199.0		
19		37.40	132.0	211.0	410.0	445.0	186.0	---	114.0	135.0		
20		47.60	130.0	226.0	393.0	249.0	135.0	---	101.0	935.0		
21		68.00	108.0	135.0	263.0	423.0	122.0	---	91.7	349.0		
22		67.50	97.2	131.0	263.0	1460.0	105.0	---	126.0	319.0		
23		66.70	94.4	102.0	414.0	522.0	101.0	---	133.0	1180.0		
24		35.60	114.0	82.2	296.0	305.0	90.6	1150.0	674.0	1860.0		
25		70.20	109.0	175.0	291.0	316.0	93.0	735.0	323.0	---		
26		117.00	59.9	220.0	220.0	267.0	89.6	585.0	77.0	---		
27		105.00	65.9	149.0	207.0	264.0	75.8	597.0	32.1	---		
28		68.60	97.7	114.0	185.0	250.0	86.9	558.0	24.0	---		
29		79.00	97.7	98.4	---	246.0	90.4	507.0	24.4	---		
30		79.90	88.2	88.6	---	257.0	88.6	540.0	21.6	---		
31		---	79.4	79.3	---	256.0	---	507.0	---	---		

ARKANSAS RIVER BASIN

117

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	15000	47000	25000	8700	15000	24000	6900	27000		
2		---	22000	55000	26000	8800	19000	12000	7800	38000		
3		---	18000	55000	26000	12000	15000	4000	5800	38000		
4		---	22000	62000	30000	13000	29000	4300	5400	48000		
5		---	25000	64000	26000	5800	25000	5600	6100	55000		
6		---	29000	64000	29000	5800	9300	4200	8500	46000		
7		70000	29000	69000	28000	6800	8400	4200	9900	44000		
8		80000	42000	68000	29000	7700	10000	5000	4600	67000		
9		81000	52000	66000	22000	7700	30000	5400	5200	50000		
10		79000	53000	67000	27000	7800	28000	---	9300	52000		
11		79000	51000	68000	23000	6400	27000	---	5600	52000		
12		93000	46000	66000	22000	6500	6100	---	4700	49000		
13		87000	42000	62000	17000	8400	4100	---	5800	49000		
14		92000	36000	66000	14000	6400	5000	---	5800	48000		
15		87000	41000	63000	10000	7600	6600	---	6800	48000		
16		77000	41000	65000	15000	9200	9600	---	11000	44000		
17		79000	32000	51000	19000	12000	11000	---	7400	52000		
18		48000	17000	43000	11000	8800	21000	---	11000	42000		
19		35000	15000	43000	13000	8800	22000	---	15000	21000		
20		34000	10000	44000	10000	4700	18000	---	16000	9900		
21		49000	12000	38000	8300	10000	19000	---	19000	4400		
22		36000	13000	33000	3700	9300	16000	---	13000	4300		
23		60000	17000	26000	3600	5300	18000	---	17000	4600		
24		41000	18000	25000	4800	4200	18000	4700	6200	2500		
25		37000	19000	18000	5700	5600	21000	5400	6600	---		
26		48000	15000	20000	5200	5600	19000	6800	5700	---		
27		30000	15000	19000	8200	9700	19000	9300	8800	---		
28		17000	18000	18000	9800	10000	30000	7300	15000	---		
29		18000	17000	21000	---	11000	30000	6100	21000	---		
30		15000	25000	22000	---	13000	22000	8600	27000	---		
31		---	34000	27000	---	15000	---	12000	---	---		

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1300.0	2540.0	2360.0	2470.0	4780.0	2590.0	6820.0	496.0		
2		---	1540.0	3420.0	2670.0	2800.0	5640.0	4050.0	6800.0	1130.0		
3		---	1170.0	4900.0	3160.0	4570.0	4130.0	14400.0	4850.0	1020.0		
4		---	1310.0	7030.0	3650.0	5260.0	8610.0	20100.0	4320.0	1050.0		
5		---	1350.0	9680.0	2810.0	2440.0	6880.0	12700.0	4200.0	1010.0		
6		---	1330.0	10400.0	3520.0	2720.0	2640.0	5670.0	5000.0	807.0		
7		227.0	1170.0	8380.0	3780.0	2750.0	2490.0	3560.0	4460.0	642.0		
8		199.0	1360.0	5510.0	4310.0	2740.0	3670.0	2840.0	1910.0	1030.0		
9		78.7	1400.0	6770.0	3560.0	2290.0	11800.0	2450.0	6180.0	918.0		
10		128.0	1660.0	7600.0	5470.0	1940.0	9980.0	---	11000.0	800.0		
11		299.0	2070.0	8080.0	5590.0	2130.0	8970.0	---	4780.0	772.0		
12		231.0	2980.0	7130.0	6240.0	2320.0	3160.0	---	3240.0	662.0		
13		282.0	1700.0	5020.0	5880.0	3200.0	2410.0	---	3040.0	595.0		
14		546.0	1650.0	4450.0	6800.0	1710.0	1730.0	---	2510.0	518.0		
15		728.0	1330.0	4760.0	3810.0	1700.0	1530.0	---	2570.0	454.0		
16		2080.0	1440.0	5260.0	4010.0	1960.0	1970.0	---	3560.0	33700.0		
17		1770.0	743.0	4540.0	4570.0	2560.0	2260.0	---	1900.0	15000.0		
18		2460.0	1970.0	4180.0	4340.0	11000.0	4480.0	---	2230.0	7600.0		
19		1320.0	2670.0	8240.0	7510.0	5940.0	4930.0	---	2310.0	3460.0		
20		1650.0	1920.0	9030.0	5780.0	1980.0	3110.0	---	2160.0	13800.0		
21		2780.0	1850.0	5130.0	3360.0	6320.0	2920.0	---	2210.0	2650.0		
22		2430.0	1760.0	4450.0	1740.0	20600.0	2250.0	---	2280.0	2370.0		
23		3080.0	2110.0	3020.0	2660.0	4610.0	2330.0	---	2980.0	9340.0		
24		1330.0	2670.0	2360.0	2410.0	2250.0	2090.0	9170.0	6630.0	8770.0		
25		2600.0	2620.0	4030.0	2680.0	2900.0	2380.0	6500.0	3390.0	---		
26		4670.0	1220.0	5510.0	1910.0	2450.0	2150.0	6320.0	708.0	---		
27		3400.0	1340.0	3590.0	2610.0	3820.0	1850.0	8290.0	428.0	---		
28		1510.0	2280.0	2670.0	2700.0	3670.0	2840.0	6370.0	486.0	---		
29		1850.0	2160.0	2550.0	---	3920.0	2920.0	4990.0	624.0	---		
30		1620.0	2570.0	2380.0	---	4630.0	2380.0	7040.0	656.0	---		
31		---	2750.0	2410.0	---	5180.0	---	8810.0	---	---		

ARKANSAS RIVER BASIN

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	16000	33700	21300	12200	15700	21000	11200	22200		
2		---	19800	37800	21900	12300	17900	14000	11700	28700		
3		---	17200	37800	21900	13800	15800	7040	10500	28700		
4		---	19500	41600	23800	14500	23700	7550	9770	33900		
5		---	21400	43100	22000	10400	21100	10100	10800	37800		
6		---	23400	43100	23400	10400	12600	7350	12100	32900		
7		45900	23300	45600	23000	11200	12100	7240	12900	32000		
8		51600	30500	45300	23700	11700	13100	8940	8120	44400		
9		52200	36000	44100	19800	11700	23800	9770	9350	35200		
10		51200	36600	44400	22600	11800	23200	---	12600	36300		
11		51200	35600	45000	20400	10900	22500	---	10200	36000		
12		58700	33000	44100	19500	11000	10800	---	8270	34800		
13		55600	30400	41900	16800	12100	7090	---	10400	34700		
14		58100	27400	43800	15000	10900	8840	---	10500	34000		
15		55600	29900	42500	13000	11600	11100	---	11200	33900		
16		50000	30300	43400	15500	12500	12700	---	13300	31800		
17		50900	24900	35500	17700	13900	13300	---	11500	36000		
18		34000	16700	31400	13600	12300	19200	---	13300	30700		
19		26600	15900	31400	14700	12300	19600	---	15600	19200		
20		26300	13100	31900	13200	8380	17500	---	16300	12900		
21		34300	14200	28600	12000	12900	17800	---	18100	7810		
22		27300	14800	25700	6370	12600	16200	---	14800	7600		
23		40600	16600	22000	6160	9460	17400	---	16800	8070		
24		30300	17200	21400	8430	7240	17400	8320	10800	4060		
25		28000	18100	17500	10300	10200	19100	9770	11100	---		
26		33800	15600	18500	9250	10100	18100	11200	10200	---		
27		24000	15700	18100	12000	12800	17800	12600	12300	---		
28		17100	17200	17300	12800	13000	23800	11500	15900	---		
29		17200	16900	18900	---	13600	23900	10800	19300	---		
30		15700	21200	19400	---	14800	19500	12200	22400	---		
31		---	26000	22500	---	15800	---	13800	---	---		

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1380.0	1820.0	2010.0	3460.0	5000.0	2270.0	11100.0	408.0		
2		---	1390.0	2350.0	2250.0	3920.0	5320.0	4720.0	10200.0	852.0		
3		---	1110.0	3370.0	2660.0	5250.0	4350.0	25300.0	8790.0	767.0		
4		---	1160.0	4720.0	2890.0	5870.0	7040.0	35300.0	7810.0	741.0		
5		---	1160.0	6520.0	2380.0	4380.0	5810.0	23000.0	7440.0	694.0		
6		---	1070.0	6980.0	2840.0	4890.0	3570.0	9920.0	7120.0	577.0		
7		149.0	944.0	5540.0	3110.0	4540.0	3590.0	6140.0	5820.0	467.0		
8		128.0	988.0	3670.0	3520.0	4170.0	4810.0	5070.0	3380.0	683.0		
9		50.7	972.0	4520.0	3210.0	3470.0	9380.0	4430.0	11100.0	646.0		
10		62.9	1280.0	5030.0	4580.0	2930.0	8270.0	---	14900.0	559.0		
11		194.0	1440.0	5350.0	4960.0	3620.0	7470.0	---	8700.0	535.0		
12		146.0	2140.0	4760.0	5530.0	3920.0	5600.0	---	5690.0	470.0		
13		180.0	1230.0	3390.0	5810.0	4610.0	4170.0	---	5450.0	422.0		
14		345.0	1260.0	2960.0	7290.0	2910.0	3060.0	---	4540.0	367.0		
15		465.0	969.0	3210.0	4950.0	2600.0	2580.0	---	4230.0	320.0		
16		1350.0	1060.0	3520.0	4140.0	2670.0	2610.0	---	4310.0	24400.0		
17		1140.0	578.0	3160.0	4250.0	2960.0	2730.0	---	2950.0	10400.0		
18		1740.0	1940.0	3050.0	5360.0	15300.0	4100.0	---	2690.0	5550.0		
19		1010.0	2830.0	6020.0	8490.0	8300.0	4390.0	---	2400.0	3160.0		
20		1280.0	2510.0	6550.0	7630.0	3530.0	3020.0	---	2200.0	18000.0		
21		1940.0	2190.0	3860.0	4860.0	8150.0	2740.0	---	2100.0	4700.0		
22		1840.0	2000.0	3470.0	2990.0	27900.0	2270.0	---	2600.0	4190.0		
23		2080.0	2060.0	2550.0	4560.0	8220.0	2260.0	---	2950.0	16400.0		
24		982.0	2550.0	2020.0	4230.0	3870.0	2020.0	16200.0	11500.0	14300.0		
25		1970.0	2490.0	3920.0	4840.0	5290.0	2170.0	11800.0	5690.0	---		
26		3290.0	1260.0	5090.0	3400.0	4420.0	2050.0	10400.0	1270.0	---		
27		2720.0	1400.0	3420.0	3820.0	5050.0	1730.0	11200.0	598.0	---		
28		1520.0	2180.0	2570.0	3530.0	4770.0	2250.0	10000.0	515.0	---		
29		1760.0	2140.0	2300.0	---	4850.0	2320.0	8840.0	573.0	---		
30		1700.0	2180.0	2100.0	---	5270.0	2110.0	9980.0	544.0	---		
31		---	2110.0	2000.0	---	5460.0	---	10100.0	---	---		

07158000 CIMARRON RIVER NEAR WAYNOKA, OK

LOCATION.--Lat 36°31'02", long 98°52'45", in NW¼NE¼ sec.35, T.24 N., R.16 W., Woods County, Hydrologic Unit 11050001, near left bank on downstream side of bridge on U.S. Highway 281, 4 mi (6 km) south of Waynoka, and at mile 247.0 (397.4 km).

DRAINAGE AREA.--13,334 mi² (34,535 km²), of which 4,830 mi² (12,510 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 897: 1939. WSP 1341: Drainage area. WSP 1731: 1950(M). WSP 1921: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,367.35 ft (416.768 m) National Geodetic Vertical Datum of 1929. September 1903 to December 1905, nonrecording gage at the Atchison, Topeka and Santa Fe Railway Co. bridge 5 mi (8 km) upstream at different datum. Feb. 4, to Mar. 3, 1938, nonrecording gage and Mar. 4, 1938, to Oct. 24, 1956, water-stage recorder, on former highway bridge 50 ft (15.2 m) downstream at present datum.

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

AVERAGE DISCHARGE.--42 years (water years 1938-79), 341 ft³/s (9.657 m³/s), 247,100 acre-ft/yr (305 hm³/yr).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 14 ft (4.3 m) occurred probably in 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 10	1400	*48,200 1,370	*11.70 3.566	July 25	1015	24,300 688	9.53 2.905

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	.00	43	18	40	105	177	73	282	35	1950	22
2	.40	.00	41	21	45	111	161	256	418	40	563	27
3	.20	.00	36	41	48	142	149	1690	358	34	402	37
4	.10	.00	38	48	50	145	158	2410	352	30	308	30
5	.00	.00	28	58	52	119	151	1130	278	29	238	25
6	.00	.00	25	58	59	124	132	697	323	40	188	20
7	.00	.00	31	51	64	130	149	399	222	32	145	15
8	.00	.00	17	55	69	113	154	291	176	27	114	13
9	.00	.00	9.6	51	54	102	140	221	782	23	85	11
10	.00	.00	12	47	67	98	141	25300	924	20	72	9.0
11	.00	.00	23	40	93	96	174	2900	420	18	64	8.0
12	.00	.00	21	36	97	95	161	1240	397	16	56	7.0
13	.00	.00	19	28	94	97	188	793	297	15	51	6.0
14	.00	.00	21	33	108	91	204	708	198	16	46	8.0
15	.00	.00	23	35	137	86	168	604	144	14	64	6.6
16	.00	.00	23	39	115	84	145	479	122	25	52	5.6
17	.00	.00	23	55	82	87	123	348	102	457	39	4.5
18	.00	8.2	24	40	106	397	123	500	86	152	34	3.5
19	.00	7.5	42	60	163	528	119	617	76	57	30	2.9
20	.00	14	62	78	156	247	120	439	60	54	25	2.5
21	.00	20	80	63	130	252	106	1030	56	376	27	2.3
22	.00	24	67	56	185	1450	90	2160	60	192	24	2.0
23	.00	27	55	50	233	758	83	2380	70	1970	21	1.7
24	.00	30	48	45	183	406	79	1070	91	5200	30	3.5
25	.00	33	44	57	140	320	71	681	252	11800	108	2.3
26	.00	44	46	98	121	255	67	500	189	4070	52	2.7
27	.00	52	45	70	112	209	64	478	80	1820	43	2.3
28	.00	44	46	54	110	192	64	435	60	804	36	2.0
29	.00	43	48	50	---	182	69	361	50	527	31	1.7
30	.00	43	36	41	---	160	74	295	40	316	27	1.5
31	.00	---	13	34	---	151	---	276	---	3260	25	---
TOTAL	1.34	389.70	1089.6	1510	2913	7332	3804	50761	6965	31469	4950	285.6
MEAN	.043	13.0	35.1	48.7	104	237	127	1637	232	1015	160	9.52
MAX	.64	52	80	98	233	1450	204	25300	924	11800	1950	37
MIN	.00	.00	9.6	18	40	84	64	73	40	14	21	1.5
AC-FT	2.7	773	2160	3000	5780	14540	7550	100700	13820	62420	9820	566

CAL YR 1978 TOTAL 62237.33 MEAN 171 MAX 7880 MIN .00 AC-FT 123400
WTR YR 1979 TOTAL 111470.24 MEAN 305 MAX 25300 MIN .00 AC-FT 221100

ARKANSAS RIVER BASIN

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-63, 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 March 1969.

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

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, 102,000 micromhos Oct. 10, 1970; minimum, 1,260 micromhos May 11, 1973.

WATER TEMPERATURE: Maximum daily, 36.0°C July 7, 1978; minimum daily, -1.0°C Nov. 26, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 82,500 micromhos Jan. 11; minimum daily, 5,210 micromhos July 31.

WATER TEMPERATURE: Maximum daily, 35.5°C July 14; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT
NOV											
15...	1000	.42	17000	8.1	4.5	1300	1100	340	100	3400	85
22...	1500	44	57600	8.0	7.5	1500	1300	340	160	15000	95
28...	1910	90	75500	7.7	7.5	1800	1700	400	200	21000	96
DEC											
05...	0900	50	49500	7.3	1.0	1200	1000	270	130	13000	96
15...	1120	42	64200	8.0	5.0	1600	1100	340	180	18000	96
25...	1845	84	38300	8.1	5.5	980	850	210	110	9600	95
JAN											
05...	1605	126	71800	7.6	.0	1100	880	130	180	20000	98
15...	0800	68	77300	7.3	.0	1300	1100	150	230	22000	97
25...	1640	140	44500	7.5	.5	760	580	88	130	13000	97
FEB											
05...	1730	87	50800	7.6	1.0	1400	1200	310	150	13000	95
15...	1430	299	34700	7.6	6.0	710	550	120	100	8800	96
25...	0900	299	14400	7.8	5.0	560	390	140	52	2900	92
MAR											
05...	1245	256	40600	8.7	9.5	1100	960	270	110	9800	95
15...	1045	184	24000	8.7	9.0	910	740	200	100	5400	96
25...	0930	668	17000	8.2	7.0	750	570	180	74	3700	91
APR											
05...	1815	299	44300	8.1	18.5	1400	1400	340	130	11000	94
15...	0550	365	18600	7.7	24.0	770	590	180	79	4100	92
25...	1800	149	39600	8.0	17.0	1300	1100	300	130	10000	94
MAY											
05...	1220	1880	13700	7.4	17.0	470	300	140	30	2900	95
15...	2000	1400	24800	7.9	25.5	1200	1000	330	87	5600	91
25...	1930	604	16100	7.8	21.0	810	630	210	69	3300	93
JUN											
05...	1945	242	19500	7.6	27.5	930	730	230	87	4300	91
15...	2145	126	24100	7.8	23.0	1200	960	280	110	5400	94
25...	1450	315	24600	7.5	29.5	1300	1200	350	96	5800	93
JUL											
05...	2320	80	50200	7.9	30.0	1800	1600	450	160	12000	96
17...	1415	568	16100	7.5	26.5	950	860	290	54	3400	88
25...	1700	17700	10200	7.8	24.0	410	310	120	26	2000	91
AUG											
05...	1630	224	20700	8.0	29.5	1100	950	300	89	4500	93
15...	0855	74	32600	7.8	28.5	1500	1400	400	130	7600	91
25...	1510	80	36800	7.4	28.5	1400	1300	390	110	8700	93
SEP											
05...	0800	30	48600	7.7	23.0	1700	1600	420	160	12000	94
15...	1750	14	50100	7.9	29.0	1700	1600	420	160	11000	93
25...	1820	9.2	44200	7.8	29.5	1500	1400	370	150	11000	96

ARKANSAS RIVER BASIN

121

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM AD- SORP- TION RATIO	SODIUM+ PUTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV										
15...	42	--	18	210	--	1100	5000	10000	13.6	11.3
22...	168	--	37	180	--	91	24000	41900	57.0	4980
28...	214	--	48	160	--	86	33000	57200	77.8	13900
DEC										
05...	163	--	28	170	--	1200	20000	34500	46.9	4660
15...	196	--	33	460	--	4.2	28000	47800	65.0	5420
25...	134	--	22	130	--	700	15000	25600	34.8	5810
JAN										
05...	267	--	32	190	--	1200	33000	53300	72.5	18100
15...	263	--	40	230	--	1400	36000	58600	79.7	10800
25...	206	--	24	180	--	820	19000	30500	41.5	11500
FEB										
05...	152	13000	21	180	--	860	22000	35800	48.7	8410
15...	144	8800	12	160	--	660	14000	23100	31.4	18600
25...	53	2900	7.4	170	--	22	4700	8470	11.5	6840
MAR										
05...	127	9800	12	170	--	740	15000	27500	37.4	19000
15...	78	5400	10	170	--	570	8300	16600	22.6	8250
25...	59	3700	9.2	180	--	470	5700	10400	14.1	18800
APR										
05...	129	11000	15	--	--	1300	13000	--	--	--
15...	64	4100	13	180	--	510	6000	10200	13.9	10100
25...	121	10000	16	180	3.5	1200	--	27100	36.9	10900
MAY										
05...	58	2900	9.7	170	--	360	--	8120	11.0	41200
15...	71	5600	13	180	--	950	8600	16200	22.0	61200
25...	51	3300	12	180	--	770	--	10200	13.9	16600
JUN										
05...	61	4300	12	200	--	550	7000	12300	16.7	8040
15...	69	5400	14	190	--	860	--	--	--	--
25...	71	5800	15	120	--	1300	--	--	--	--
JUL										
05...	124	12000	24	160	--	--	21000	35900	48.8	7770
17...	48	3400	13	88	--	760	5300	10000	13.6	15300
25...	43	2000	9.8	100	--	240	--	5910	8.04	282000
AUG										
05...	59	4500	19	170	--	900	7100	12900	17.5	7800
15...	84	7600	21	130	--	--	11000	--	--	--
25...	100	9600	21	98	--	1000	--	25000	34.0	5410
SEP										
05...	126	11000	27	130	--	1300	18000	33800	46.0	2740
15...	116	11000	28	130	--	1400	--	34800	47.3	1320
25...	122	11000	24	120	--	1200	18000	30100	40.9	748

ARKANSAS RIVER BASIN

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	46900	44300	49700	25600	---	49600	22300	43100	10300	58600
2		---	44400	46000	51100	27500	---	32400	26100	41800	14700	58200
3		---	---	57000	50500	24000	---	19600	24300	44900	15100	36800
4		---	49000	62900	48400	41900	---	13200	20300	50600	15900	45900
5		---	49500	71800	50800	40600	44300	13700	19500	50200	20700	48600
6		---	51300	---	49100	---	---	11600	17800	45300	20600	51600
7		---	58600	---	50900	---	38500	11200	25700	39700	22900	53100
8		---	65300	---	49900	---	25800	11200	26600	44500	25500	53300
9		---	54300	79400	52100	23700	27600	13600	22600	48000	26200	53800
10		---	48100	80900	50300	24800	28900	14900	18500	49400	29800	53600
11		---	50300	82500	40700	25000	28200	---	---	50400	33000	51900
12		---	55200	75400	41300	25300	50100	13100	20800	50400	34600	51200
13		---	58300	---	47300	23900	45300	19200	18800	---	37400	---
14		---	61300	73300	40300	23900	16600	22800	20700	50400	37300	49900
15		---	64200	77300	34700	26000	18600	24800	24100	49800	32600	50100
16		---	62800	75400	35900	24000	21600	26700	27300	---	33600	49200
17		---	63000	79600	35500	25100	27000	28300	28800	16100	35500	47700
18		66500	65800	71100	36200	---	27100	25800	29400	47200	42200	48000
19		65900	66800	68800	36700	23400	30900	38100	31300	53000	44900	47900
20		67600	44000	71200	30800	26700	37100	32500	36000	64400	46800	45300
21		67200	38300	---	28100	18900	42200	28900	34600	15500	49200	46300
22		57600	29000	71800	29800	14800	39100	22700	34800	12200	---	45300
23		61600	27900	68500	16700	25700	37400	15900	36400	10300	43600	44500
24		62700	34200	59300	13100	30100	38300	13300	32500	11400	48900	44700
25		67000	38300	44500	14400	17000	39600	16100	24600	10200	36800	44200
26		64400	39600	52500	18800	32200	41400	18000	17500	7920	49900	44100
27		64500	39100	46800	21000	20100	42600	20100	22700	8320	56700	42900
28		75500	---	47600	23000	21100	---	27800	28000	10400	52600	---
29		60100	37600	48400	---	---	43300	19800	30900	13900	59700	---
30		48600	42400	50800	---	30200	40500	21500	---	15500	60200	42600
31		---	40600	51800	---	30200	---	28500	---	5210	---	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	25500	35200	49500	22200	42900	9580	58200
2					---	27500	38500	32200	26500	41700	14200	58800
3					---	24100	40800	19700	24600	45200	15000	39100
4					---	42100	43100	18400	20200	50700	16000	47000
5					---	40600	44800	13800	19200	50300	20600	49000
6					---	37100	38800	11500	17900	45700	20600	51900
7					---	32600	40900	10100	25200	39700	22800	53200
8					---	28200	26000	10000	26400	45500	25400	53200
9					---	23600	27300	13900	24900	48100	26700	53700
10					---	24700	28000	16400	18900	48100	29900	53400
11					---	24900	28200	14500	21600	50400	33200	51800
12					---	25300	49900	13700	21200	51200	34500	50800
13					46300	23700	46300	16900	19200	49500	36800	50300
14					41800	23700	15800	22400	19600	51900	35300	49700
15					35200	26000	19400	23000	24500	50900	31000	50200
16					36100	24000	19900	27100	27100	52600	34900	49300
17					34600	26300	26500	28100	28100	17700	36200	47900
18					36200	25400	26100	25600	29500	45400	42200	48000
19					31500	18500	32900	35300	31200	51900	44700	48000
20					30200	30300	38400	31900	35800	63600	46600	45200
21					28200	21200	42300	26100	35000	21500	49300	46400
22					29600	18300	39700	22000	35100	13700	46600	45300
23					16500	25900	37400	18800	36200	9800	44200	44300
24					13300	27100	38300	15600	32200	12000	50100	44400
25					14300	18100	39700	15100	21600	9820	34400	44100
26					18800	33700	41300	15900	17400	8350	43200	43800
27					21000	17800	42900	12500	22500	8000	53400	42500
28					22900	28200	42500	29000	28200	10300	53700	39700
29					---	26600	43200	21600	31000	13700	59300	37200
30					---	28900	39700	21900	36800	15500	60000	37100
31					---	30600	---	27600	---	7680	58900	---

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	12.0	.5	.0	14.0	---	16.5	21.0	32.0	31.5	32.0
2		---	8.0	.0	1.0	8.0	---	16.5	26.0	24.0	32.5	21.5
3		---	---	.5	1.5	3.0	---	13.0	25.5	24.0	30.5	26.0
4		---	6.0	.5	1.0	5.5	---	16.5	22.0	35.0	25.5	31.0
5		---	1.0	.0	1.0	9.5	18.5	17.0	27.5	30.0	29.5	23.0
6		---	2.0	---	.5	---	---	14.0	22.5	23.0	30.0	24.5
7		---	.0	---	2.0	---	24.5	15.5	29.0	27.0	30.5	26.0
8		---	.0	---	.5	---	18.5	27.5	22.5	27.0	30.0	29.0
9		---	.0	3.5	2.0	8.0	9.5	25.0	19.0	26.0	24.0	29.0
10		---	.0	3.0	6.0	7.0	13.0	15.5	24.0	29.0	29.0	25.0
11		---	2.5	3.5	8.0	12.0	15.0	---	---	35.0	31.5	28.0
12		---	11.0	2.0	1.0	19.0	13.5	15.0	29.5	26.0	28.0	22.0
13		---	1.5	---	5.5	10.0	20.0	23.5	28.0	---	29.5	---
14		---	6.0	.0	11.0	7.0	12.0	24.0	24.5	35.5	28.5	17.0
15		---	5.0	.0	6.0	9.0	24.0	25.5	23.0	28.0	28.5	29.0
16		---	8.5	.0	.0	8.5	25.5	22.0	27.0	---	29.0	27.0
17		---	3.0	.0	.0	10.0	23.5	20.0	25.0	26.5	26.0	24.0
18	13.0	14.0	.0	.0	.0	---	16.5	23.5	32.5	24.0	29.0	27.5
19	7.0	14.0	.0	3.0	14.0	14.0	22.5	26.5	22.0	24.0	28.5	25.0
20	4.0	6.0	1.0	8.0	13.0	25.0	20.5	20.5	24.0	29.5	31.0	19.5
21		1.5	.0	---	7.0	11.0	22.0	18.5	26.0	29.0	29.0	22.0
22		7.5	1.0	.5	8.0	14.5	13.5	18.0	23.0	24.5	---	25.0
23		10.0	4.5	2.0	7.0	10.0	24.0	20.0	21.5	22.5	21.0	29.0
24		10.0	6.5	2.5	5.0	7.0	16.0	24.5	26.0	24.5	21.0	27.0
25		11.0	5.5	.5	5.0	7.0	17.0	21.0	29.5	24.0	28.5	29.5
26		8.0	7.0	1.0	2.0	14.0	28.0	25.0	30.0	30.5	26.0	28.0
27		9.5	3.0	2.0	4.0	6.0	20.5	26.0	32.0	31.0	28.5	17.0
28		7.5	---	2.0	7.0	16.0	---	28.0	24.0	30.5	29.0	---
29		8.0	3.0	1.5	---	---	21.0	22.5	24.0	30.5	30.0	---
30		11.0	.0	2.0	---	15.5	17.0	22.0	---	25.0	27.0	28.5
31		---	.0	1.5	---	11.0	---	21.0	---	28.0	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

ARKANSAS RIVER BASIN

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	750	800	870	730	840	670	920
2					---	760	820	780	750	830	690	920
3					---	740	830	720	740	850	700	820
4					---	830	840	710	720	860	700	860
5					---	830	850	690	720	870	720	870
6					---	810	820	680	710	850	720	880
7					---	790	830	670	750	820	740	890
8					---	760	750	670	750	850	750	890
9					---	740	760	690	750	860	760	890
10					---	740	760	700	720	860	770	890
11					---	750	760	690	730	880	790	880
12					---	750	870	690	730	880	790	880
13					850	740	850	710	720	870	810	870
14					830	740	700	730	720	880	800	870
15					800	750	720	740	740	880	780	870
16					800	740	720	760	760	890	800	870
17					800	750	750	760	760	710	800	860
18					800	750	750	750	770	850	830	860
19					780	710	790	800	780	880	850	860
20					770	770	810	780	800	940	860	850
21					760	730	830	750	800	730	870	860
22					770	710	820	730	800	690	860	850
23					700	750	810	710	800	670	840	840
24					690	760	810	700	780	680	870	840
25					690	710	820	700	730	670	790	840
26					710	790	830	700	710	660	840	840
27					730	710	840	680	730	660	890	840
28					740	760	840	770	760	670	890	820
29					---	750	840	730	780	690	920	810
30					---	770	820	730	810	700	920	810
31					---	770	---	760	---	660	920	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	213.0	382.0	171.0	556.0	79.4	3530.0	54.60
2					---	228.0	356.0	539.0	846.0	89.6	1050.0	67.10
3					---	284.0	334.0	3290.0	715.0	78.0	760.0	81.90
4					---	325.0	358.0	4620.0	684.0	71.3	582.0	69.70
5					---	267.0	347.0	2110.0	540.0	68.1	463.0	58.70
6					---	271.0	292.0	1280.0	619.0	91.8	365.0	47.50
7					---	277.0	334.0	722.0	450.0	70.8	290.0	36.00
8					---	232.0	312.0	526.0	356.0	62.0	231.0	31.20
9					---	204.0	287.0	412.0	1580.0	53.4	174.0	26.40
10					---	196.0	289.0	47800.0	1800.0	46.4	150.0	21.60
11					---	194.0	357.0	5400.0	828.0	42.8	137.0	19.00
12					---	192.0	378.0	2310.0	782.0	38.0	119.0	16.60
13					216.0	194.0	431.0	1520.0	577.0	35.2	112.0	14.10
14					242.0	182.0	386.0	1400.0	385.0	38.0	99.4	18.80
15					296.0	174.0	327.0	1210.0	288.0	33.3	135.0	15.50
16					246.0	168.0	282.0	983.0	250.0	60.1	112.0	13.20
17					177.0	176.0	249.0	714.0	209.0	876.0	84.2	10.40
18					229.0	804.0	249.0	1010.0	179.0	349.0	76.2	8.13
19					343.0	1010.0	254.0	1330.0	160.0	135.0	68.8	6.73
20					324.0	514.0	262.0	925.0	130.0	137.0	58.0	5.74
21					267.0	497.0	238.0	2090.0	121.0	741.0	63.4	5.34
22					385.0	2760.0	199.0	4260.0	130.0	358.0	55.7	4.59
23					440.0	1530.0	182.0	4560.0	151.0	3560.0	47.6	3.86
24					341.0	833.0	173.0	2020.0	192.0	9550.0	70.5	7.94
25					261.0	613.0	157.0	1290.0	497.0	21300.0	230.0	5.22
26					232.0	544.0	150.0	945.0	362.0	7250.0	118.0	6.12
27					221.0	401.0	145.0	878.0	158.0	3240.0	103.0	5.22
28					220.0	394.0	145.0	904.0	123.0	1450.0	86.5	4.43
29					---	369.0	156.0	712.0	105.0	982.0	77.0	3.72
30					---	333.0	164.0	581.0	87.5	597.0	67.1	3.28
31					---	314.0	---	566.0	---	5810.0	62.1	---

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	8900	13000	20000	7400	17000	1500	24000
2					---	9900	15000	12000	9400	17000	3700	24000
3					---	8300	16000	6200	8500	18000	4000	15000
4					---	17000	17000	5600	6500	21000	4500	19000
5					---	16000	18000	3500	6000	21000	6700	20000
6					---	14000	15000	2400	5400	18000	6700	21000
7					---	12000	16000	1700	8800	16000	7700	22000
8					---	10000	9200	1700	9400	18000	8900	22000
9					---	8100	9800	3500	8700	20000	9500	22000
10					---	8600	10000	4700	5900	20000	11000	22000
11					---	6700	10000	3800	7100	21000	13000	21000
12					---	8800	20000	3400	6900	21000	13000	21000
13					19000	8100	19000	4900	6000	20000	14000	21000
14					17000	8100	4400	7500	6200	21000	14000	20000
15					13000	9200	6100	7800	8500	21000	12000	20000
16					14000	8200	6300	9700	9700	22000	13000	20000
17					13000	9300	9400	10000	10000	5300	14000	19000
18					14000	8900	9200	9000	11000	18000	17000	19000
19					12000	5700	12000	14000	12000	21000	18000	19000
20					11600	11000	15000	12000	14000	27000	19000	18000
21					10000	6900	17000	9200	13000	7100	20000	19000
22					11000	5600	16000	7300	13000	3400	19000	18000
23					4700	9100	15000	5800	14000	1600	18000	18000
24					3200	9700	15000	4300	12000	2600	20000	18000
25					3700	5500	16000	4100	7100	1600	13000	18000
26					5800	13000	16000	4500	5200	930	17000	17000
27					6800	5300	17000	2900	7500	760	22000	17000
28					7700	10000	17000	11000	10000	1800	22000	16000
29					---	9500	17000	7100	12000	3400	25000	14000
30					---	11000	16000	7300	14000	4300	25000	14000
31					---	11000	---	9900	---	610	25000	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	2520.0	6210.0	3940.0	5630.0	1610.0	7900.0	1430.0
2					---	2970.0	6520.0	8290.0	10600.0	1840.0	5620.0	1750.0
3					---	3160.0	6440.0	28300.0	8220.0	1650.0	4340.0	1500.0
4					---	6660.0	7250.0	36400.0	6180.0	1700.0	3740.0	1540.0
5					---	5140.0	7340.0	10700.0	4500.0	1640.0	4310.0	1350.0
6					---	4690.0	5350.0	4520.0	4710.0	1940.0	3400.0	1130.0
7					---	4210.0	6440.0	1830.0	5270.0	1380.0	3010.0	891.0
8					---	3050.0	3830.0	1340.0	4470.0	1310.0	2740.0	772.0
9					---	2230.0	3700.0	2090.0	18400.0	1240.0	2180.0	653.0
10					---	2280.0	3810.0	321000.0	14700.0	1080.0	2140.0	535.0
11					---	2260.0	4700.0	29800.0	8050.0	1020.0	2250.0	454.0
12					---	2260.0	8690.0	11400.0	7400.0	907.0	1970.0	397.0
13					4820.0	2120.0	9640.0	10500.0	4810.0	810.0	1930.0	340.0
14					4960.0	1990.0	2420.0	14300.0	3310.0	907.0	1740.0	432.0
15					4810.0	2140.0	2770.0	12700.0	3300.0	794.0	2070.0	356.0
16					4350.0	1860.0	2470.0	12500.0	3200.0	1490.0	1830.0	302.0
17					2880.0	2180.0	3120.0	9400.0	2750.0	6540.0	1470.0	231.0
18					4010.0	9540.0	3060.0	12200.0	2550.0	7390.0	1560.0	180.0
19					5280.0	8130.0	3860.0	23300.0	2460.0	3230.0	1460.0	149.0
20					4630.0	7340.0	4860.0	14200.0	2270.0	3940.0	1280.0	121.0
21					3510.0	4690.0	4870.0	25600.0	1970.0	7210.0	1460.0	118.0
22					5490.0	21900.0	3890.0	42600.0	2110.0	1760.0	1230.0	97.2
23					2960.0	18600.0	3360.0	37300.0	2650.0	6510.0	1020.0	82.6
24					1580.0	10600.0	3200.0	12400.0	2950.0	36500.0	1620.0	170.0
25					1400.0	4750.0	3070.0	7540.0	4630.0	51000.0	3790.0	112.0
26					1890.0	8950.0	2890.0	6070.0	2650.0	10200.0	2390.0	124.0
27					2060.0	2990.0	2940.0	3740.0	1620.0	3730.0	2550.0	106.0
28					2290.0	5180.0	2940.0	12900.0	1620.0	3910.0	2140.0	86.4
29					---	4670.0	3170.0	6920.0	1620.0	4840.0	2090.0	64.3
30					---	4750.0	3200.0	5810.0	1510.0	3670.0	1820.0	56.7
31					---	4480.0	---	7380.0	---	5370.0	1690.0	---

ARKANSAS RIVER BASIN

07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	15900	23700	35100	13300	29800	3220	42000
2					---	17500	26300	21300	16700	28900	6410	42500
3					---	14800	28200	11300	15200	31700	7550	26800
4					---	29200	30000	10300	11700	36100	8350	33100
5					---	26000	31300	6590	10900	35700	12000	34700
6					---	25200	26600	4760	9670	32100	12000	37000
7					---	21600	28200	3640	15700	27300	13800	38100
8					---	18100	16300	3560	16700	31900	15900	38100
9					---	14400	17400	6670	15500	34000	16900	38500
10					---	15300	17900	8670	10700	34000	19400	38200
11					---	15500	18100	7150	12800	35800	22100	36900
12					---	15800	35400	6510	12500	36500	23100	36100
13					32500	14500	32500	9070	10900	35100	25000	35700
14					28900	14500	8190	13500	11200	37000	23800	35300
15					23700	16300	11100	13900	15100	36200	20300	35700
16					24400	14700	11500	17200	17200	37600	23400	34900
17					23200	16600	16700	18000	18000	9710	24500	33800
18					24500	15900	16400	16000	19100	31800	29300	33900
19					20700	10300	21800	23800	20500	37000	31300	33900
20					19700	14800	26200	21000	24200	46400	32600	31700
21					18100	12500	29300	16400	23500	12700	34900	32600
22					19200	10200	27300	13100	23600	6510	32800	31700
23					8750	16300	25400	10600	24500	3400	30900	30900
24					6190	17200	26200	8030	21300	5160	35600	31000
25					6990	10000	27300	7630	12800	3410	23000	30800
26					10600	22500	28500	8270	9470	2240	30100	30500
27					12300	4790	29800	5550	13500	1960	38200	29500
28					13900	18100	29500	18700	18100	3800	38500	27300
29					---	16800	30100	12800	20300	6510	42900	25300
30					---	18600	27300	13100	25000	7950	43500	25200
31					---	20000	---	17600	---	1710	42600	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	4510	11300	6920	10100	2820	17000	2490
2					---	5240	11400	14700	18800	3120	10500	3100
3					---	5670	11300	51600	14700	2910	8190	2680
4					---	11400	12800	67000	11100	2920	6940	2680
5					---	9000	12800	20100	8180	2800	7710	2340
6					---	8440	9480	8960	8610	3470	6090	2000
7					---	7580	11300	3920	9410	2360	5400	1540
8					---	5520	6780	2800	7940	2330	4890	1340
9					---	3970	6580	3980	32700	2110	3880	1140
10					---	4050	6810	592000	26700	1840	3770	928
11					---	4020	8500	56000	14500	1740	3820	797
12					---	4050	15400	21800	13400	1580	3490	682
13					8250	3800	16500	19400	8740	1420	3440	578
14					8430	3560	4510	25800	5990	1600	2960	762
15					8770	3780	5030	22700	5870	1370	3510	636
16					7580	3330	4500	22200	5670	2540	3290	528
17					5140	3900	5550	16900	4960	12000	2580	411
18					7010	17000	5450	21600	4440	13100	2690	320
19					9110	14700	7000	39600	4210	5690	2540	265
20					8300	13200	8490	24900	3920	6770	2210	214
21					6350	8500	8390	45600	3550	12900	2540	202
22					9590	39900	6630	76400	3820	3370	2130	171
23					5500	33400	5690	68100	4630	18100	1750	142
24					3060	18900	5590	23200	5230	72400	2880	293
25					2640	8640	5230	14000	8710	109000	6710	191
26					3460	15500	5160	11200	4830	24600	4230	222
27					3720	5520	5150	7160	2920	9630	4440	183
28					4130	9380	5100	22000	2930	8250	3740	147
29					---	6260	5610	12500	2740	9260	3590	116
30					---	8040	5450	10400	2700	6780	3170	102
31					---	8150	---	13100	---	15100	2880	---

ARKANSAS RIVER BASIN

127

07158400 SALT CREEK NEAR OKEENE, OK

LOCATION.--Lat 36°06'11", long 98°11'36", in SW¼ sec.20, T.19 N., R.9 W., Kingfisher County, Hydrologic Unit 11050002, near left bank on downstream wingwall of country bridge, 2.2 mi (3.5 km) downstream from Spring Creek, 7.0 mi (11.3 km) east of Okeene, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--196 mi² (508 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1961 to September 1967, December 1973 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,085.25 ft (330.784 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--11 years (water years 1962-67, 1975-79) 38.8 ft³/s (1.100 m³/s), 28,110 acre-ft/yr (34.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Sept. 19, 1974, gage height, 16.90 ft (5.151 m); minimum daily, 0.90 ft³/s (0.003 m³/s) July 13, 14, 1966.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 18	1545	*3,720 105	*13.03 3.972	Mar. 22	1100	2,890 81.8	10.77 3.283

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	6.8	7.4	5.6	5.2	9.0	17	12	11	8.6	19	48
2	1.9	6.8	7.4	4.5	5.4	236	15	574	12	8.2	7.6	420
3	1.9	6.7	7.2	5.2	5.0	167	17	694	13	7.7	5.9	34
4	1.7	6.5	7.3	6.4	5.4	21	27	717	11	7.4	5.0	14
5	2.7	6.1	7.5	6.8	4.8	15	16	185	11	7.3	4.4	9.4
6	2.7	6.5	7.7	6.4	5.4	10	13	27	11	189	4.1	242
7	2.8	7.5	7.4	5.6	6.0	9.7	12	14	11	22	3.7	198
8	3.2	5.9	6.6	4.4	9.0	9.6	11	12	12	13	3.5	16
9	3.7	5.4	6.0	5.0	14	9.8	11	12	152	11	3.3	11
10	3.8	5.2	6.8	6.0	20	9.1	18	16	61	10	3.3	8.3
11	5.0	4.9	7.6	6.6	8.4	8.5	27	15	20	9.4	292	7.4
12	5.3	4.9	8.2	7.6	8.7	7.5	14	14	16	8.6	20	6.8
13	6.2	7.1	7.5	6.4	6.1	7.7	12	14	12	18	11	5.6
14	4.5	5.6	7.3	5.0	6.0	7.4	12	12	11	12	9.1	5.3
15	6.1	27	7.1	6.0	6.5	7.7	11	12	10	8.6	7.8	5.0
16	6.8	13	7.1	10	5.6	7.7	11	11	10	7.7	7.6	4.8
17	6.9	11	7.1	20	7.2	8.8	11	10	10	24	6.9	4.5
18	7.1	8.5	6.9	40	8.4	1850	11	16	10	19	6.3	4.2
19	7.1	7.6	6.8	68	9.7	206	11	15	10	102	5.8	4.0
20	7.1	7.4	6.8	31	8.4	29	274	14	10	16	5.4	4.0
21	7.1	7.4	6.8	15	6.9	32	14	14	17	11	5.5	3.8
22	7.0	7.4	6.8	6.5	7.4	1320	11	14	18	89	8.8	3.6
23	6.8	7.8	6.8	5.2	7.4	127	10	14	11	113	6.4	3.1
24	6.8	8.1	7.1	5.0	7.0	37	10	12	200	18	6.8	2.7
25	7.1	7.7	7.4	7.0	7.2	25	10	12	30	116	20	2.4
26	7.1	10	7.4	5.4	7.2	21	10	12	12	16	8.6	2.4
27	7.1	7.9	7.6	5.9	8.0	18	11	12	11	7.5	6.3	2.4
28	7.4	7.4	7.8	5.4	55	17	11	12	10	5.8	5.8	2.2
29	7.4	7.4	8.0	7.8	---	16	11	12	9.3	5.1	5.1	2.2
30	7.4	7.4	7.0	5.0	---	15	12	12	8.9	4.9	4.6	2.2
31	6.7	---	6.4	4.6	---	14	---	11	---	78	65	---
TOTAL	166.3	238.9	222.8	329.3	261.3	4278.5	661	2533	751.2	973.8	574.6	1079.3
MEAN	5.36	7.96	7.19	10.6	9.33	138	22.0	81.7	25.0	31.4	18.5	36.0
MAX	7.4	27	8.2	68	55	1850	274	717	200	189	292	420
MIN	1.7	4.9	6.0	4.4	4.8	7.4	10	10	8.9	4.9	3.3	2.2
AC-FT	330	474	442	653	518	8490	1310	5020	1490	1930	1140	2140

CAL YR 1978	TOTAL	5456.2	MEAN	14.9	MAX	1870	MIN	1.2	AC-FT	10820
WTR YR 1979	TOTAL	12070.0	MEAN	33.1	MAX	1850	MIN	1.7	AC-FT	23940

07158400 SALT CREEK NEAR OKEENE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURE: October 1973 to current year.

INSTRUMENTATION.--Water quality monitor since October 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. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

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, 51,600 micromhos Sept. 9, 1976; minimum daily, 373 micromhos Nov. 3, 1974.

WATER TEMPERATURE: Maximum, 38.0°C Aug. 31, 1977; minimum, -1.0°C Jan 19, 20, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 41,700 micromhos Nov. 26; minimum, 678 micromhos Sept. 6.

WATER TEMPERATURE: Maximum 33.0°C Aug. 4, 7-10; minimum daily, -0.5°C on several days during January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
01...	2050	--	80020	27	16600	8.0	27.0	--	--	--	--
10...	1100	1028	9740	3.8	--	7.9	19.0	8.0	8.5	96	21
17...	1920	--	80020	7.1	5680	7.6	19.0	--	--	--	--
31...	1745	--	80020	6.8	12800	8.0	18.0	--	--	--	--
NOV											
12...	1705	--	80020	5.0	12500	8.2	9.5	--	--	--	--
20...	1720	--	80020	7.4	26300	8.0	6.0	--	--	--	--
21...	1015	1028	9740	7.4	20000	7.7	3.5	7.0	11.4	93	--
26...	1600	--	80020	10	41700	8.0	11.0	--	--	--	--
DEC											
01...	1800	--	80020	7.4	21000	7.9	11.0	--	--	--	--
10...	1730	--	80020	8.0	15000	7.8	1.0	--	--	--	--
18...	1500	1028	9740	6.8	13000	8.1	7.5	6.0	--	--	--
30...	1730	--	80020	7.1	17500	7.9	2.0	--	--	--	--
JAN											
04...	1720	--	80020	6.4	25600	7.7	.5	--	--	--	--
13...	1730	--	80020	6.4	36200	7.4	1.0	--	--	--	--
19...	1740	--	80020	89	9190	7.5	3.5	--	--	--	--
25...	1410	1028	9740	6.8	21000	7.9	.0	9.0	13.8	108	33
FEB											
01...	1300	1028	9740	5.2	34000	7.9	2.0	2.0	15.5	128	--
03...	1710	--	80020	5.0	30200	7.9	1.5	--	--	--	--
11...	1740	--	80020	9.3	20200	8.0	1.5	--	--	--	--
25...	1730	--	80020	7.1	22100	7.8	5.0	--	--	--	--
MAR											
03...	1815	--	80020	42	7100	8.0	12.0	--	--	--	--
13...	1820	--	80020	6.5	12600	8.6	14.0	--	--	--	--
22...	1730	--	80020	1750	1390	8.2	15.0	--	--	--	--
23...	1130	1028	9740	147	2600	7.9	14.0	--	13.7	145	--
APR											
04...	1830	--	80020	23	28300	7.8	9.0	--	--	--	--
10...	1810	--	80020	22	10500	7.3	20.5	--	--	--	--
25...	1145	1028	9740	10	16000	8.1	24.0	14	7.1	92	27
28...	1830	--	80020	11	15200	7.8	15.0	--	--	--	--
MAY											
02...	1145	1028	9740	894	1400	8.3	20.0	>1000	7.5	86	137
02...	1850	--	80020	729	1840	8.0	16.5	--	--	--	--
12...	1950	--	80020	14	12100	8.0	21.0	--	--	--	--
21...	2010	--	80020	14	21200	7.8	23.0	--	--	--	--
JUN											
03...	2020	--	80020	13	18300	7.8	27.5	--	--	--	--
05...	1045	1028	9740	11	17500	8.1	24.0	7.0	13.1	161	43
12...	2030	--	80020	16	12300	7.7	26.0	--	--	--	--
24...	2010	--	80020	133	6280	7.3	27.0	--	--	--	--
JUL											
10...	2015	--	80020	10	14200	7.5	31.0	--	--	--	--
22...	1910	--	80020	310	22300	7.3	31.0	--	--	--	--
25...	1130	1028	9740	86	8300	7.9	25.5	>1000	6.4	84	152

07158400 SALT CREEK NEAR OKEENE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, CHEMICAL (LOW LEVEL) (MG/L)		
JUL	25...	2020	--	80020	98	5370	7.5	30.0	--	--		
AUG	13...	1345	1028	9740	10	5700	8.3	29.0	27	8.6		
	13...	2020	--	80020	10	6080	7.6	31.0	--	--		
	26...	1420	--	80020	8.0	23000	7.7	27.0	--	--		
	29...	2030	--	80020	5.0	13900	7.6	29.0	--	--		
SEP	05...	1000	1028	9740	9.4	5200	8.1	25.0	--	--		
	06...	1630	--	80020	342	748	7.8	28.0	--	--		
	10...	2010	--	80020	8.3	6000	8.0	29.0	--	--		
	29...	1910	--	80020	2.2	7870	7.8	29.0	--	--		
DATE	TIME	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
UCT	01...	800	670	--	190	--	--	79	--	3400	90	52
	10...	--	--	470	--	1175	110	--	--	--	--	--
	17...	1400	1300	--	450	--	--	56	--	810	56	9.6
	31...	980	920	--	270	--	--	75	--	2500	85	35
NOV	12...	1400	1300	--	450	--	--	73	--	2500	79	29
	20...	1700	1500	--	510	--	--	100	--	5900	88	63
	21...	--	--	1200	--	3000	250	--	--	--	--	--
	26...	2000	1900	--	600	--	--	120	--	9100	91	89
DEC	01...	1300	1200	--	360	--	--	100	--	4700	89	57
	10...	1100	910	--	310	--	--	84	--	3000	85	39
	18...	--	--	--	--	--	--	--	--	--	--	--
	30...	1200	1100	--	340	--	--	96	--	3700	87	46
JAN	04...	790	650	--	120	--	--	120	--	5900	94	91
	13...	1100	840	--	180	--	--	150	--	8400	94	112
	19...	150	81	--	32	--	--	18	--	1900	96	67
	25...	--	--	450	--	1125	99	--	2600	--	--	--
FEB	01...	--	--	--	--	--	--	--	--	--	--	--
	03...	1800	1700	--	490	--	--	130	--	7000	90	73
	11...	1300	1100	--	360	--	--	87	--	4300	88	53
	25...	1400	1300	--	390	--	--	100	--	4600	88	54
MAR	03...	--	--	--	150	--	--	--	--	1300	--	--
	13...	--	--	--	340	--	--	--	--	2400	--	--
	22...	--	--	--	45	--	--	--	--	230	--	--
	23...	--	--	--	--	--	--	--	--	--	--	--
APR	04...	2000	1800	--	570	--	--	140	--	--	--	--
	10...	890	760	--	250	--	--	64	--	2000	83	29
	25...	--	--	--	--	--	--	--	--	--	--	--
	28...	1200	1000	--	320	--	--	98	--	3200	85	40
MAY	02...	--	--	53	--	133	57	--	--	--	--	--
	02...	180	100	--	49	--	--	13	--	330	85	11
	12...	900	680	--	320	--	--	25	--	2500	87	36
	21...	1500	1300	--	400	--	--	110	--	4400	87	50
JUN	03...	1300	1100	--	350	--	--	100	--	3800	90	46
	05...	--	--	--	--	--	--	--	--	--	--	--
	12...	1000	830	--	280	--	--	77	--	2600	85	36
	24...	420	320	--	120	--	--	29	--	1200	86	26
JUL	10...	1200	1100	--	350	--	--	71	--	2800	84	36
	22...	1500	1400	--	440	--	--	86	--	4900	88	56
	25...	--	--	170	--	425	50	--	1450	--	--	--
	25...	440	350	--	130	--	--	28	--	940	82	20
AUG	13...	--	--	--	--	--	--	--	--	--	--	--
	13...	1000	910	--	340	--	--	46	--	950	66	13
	26...	1300	1200	--	390	--	--	91	--	5300	89	63
	29...	1200	1100	--	370	--	--	70	--	2700	83	34
SEP	05...	--	--	234	--	585	50	--	--	--	--	--
	06...	190	55	--	56	--	--	11	--	85	49	2.7
	10...	1000	860	--	330	--	--	47	--	940	67	13
	29...	920	780	--	270	--	--	59	--	1400	82	20

07158400 SALT CREEK NEAR OKEENE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
01...	--	--	11	160	0	130	2.6	990	4800	--	10500
10...	--	--	--	--	--	--	--	--	--	.3	--
17...	--	--	7.0	91	0	75	3.7	1500	1100	--	4110
31...	--	--	10	73	0	60	1.2	1500	3600	--	8450
NOV											
12...	--	--	14	--	--	120	--	1200	3800	--	8100
20...	--	--	11	--	--	180	--	990	9400	--	17500
21...	--	--	--	--	--	--	--	--	--	.2	--
26...	--	--	28	--	--	130	--	--	15000	--	26900
DEC											
01...	--	--	12	--	--	160	--	1100	7500	--	14400
10...	--	--	9.2	--	--	210	--	1100	4400	--	9220
18...	--	--	--	--	--	--	--	--	--	.2	--
30...	--	--	9.7	--	--	190	--	1000	5800	--	10600
JAN											
04...	--	--	6.7	--	--	140	--	1200	9000	--	17300
13...	--	--	15	--	--	230	--	1400	12000	--	26200
19...	--	--	9.9	--	--	73	--	310	2800	--	5340
25...	--	7.9	--	--	--	--	--	--	--	.3	--
FEB											
01...	--	--	--	--	--	--	--	--	--	.3	--
03...	7000	--	13	--	--	62	--	1400	11000	--	20200
11...	--	--	8.8	--	--	150	--	1000	6800	--	12900
25...	4600	--	8.7	--	--	74	--	1200	7700	--	14300
MAR											
03...	--	--	--	--	--	--	--	350	2000	--	4140
13...	--	--	--	--	--	--	--	1100	3600	--	7770
22...	--	--	--	--	--	--	--	120	330	--	784
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	6000	--	12	--	--	160	4.9	1500	10000	--	18900
10...	2000	--	7.5	--	--	130	13	690	3200	--	5900
25...	--	--	--	--	--	--	--	--	--	.3	--
28...	3200	--	8.8	--	--	180	--	1000	4600	--	9650
MAY											
02...	--	--	--	--	--	--	--	--	--	.2	--
02...	340	--	6.3	--	--	75	--	110	440	--	1030
12...	2500	--	9.0	--	--	220	--	1000	3500	--	7430
21...	4400	--	11	--	--	190	--	1100	6900	--	14100
JUN											
03...	3800	--	9.3	--	--	190	--	1200	6200	--	--
05...	--	--	--	--	--	--	--	--	--	.3	--
12...	2600	--	8.8	--	--	190	--	1000	4000	--	8050
24...	1200	--	9.7	--	--	96	--	410	1800	--	3640
JUL											
10...	2800	--	11	--	--	110	--	1100	4400	--	8900
22...	4900	--	15	--	--	96	--	300	8000	--	14700
25...	--	--	--	--	--	--	--	--	--	.0	--
25...	950	--	8.3	--	--	94	--	240	1500	--	3010
AUG											
13...	--	--	--	--	--	--	--	--	--	.3	--
13...	960	--	8.3	--	--	130	--	1000	1400	--	4020
26...	5300	--	11	--	--	120	--	880	--	--	14700
29...	2700	--	8.8	--	--	150	--	1000	4400	--	8650
SEP											
05...	--	--	--	--	--	--	--	--	--	.2	--
06...	90	--	4.7	--	--	130	--	110	110	--	471
10...	860	--	8.8	--	--	160	--	680	1500	--	3900
29...	1400	--	7.5	--	--	140	--	910	2200	--	4990

131

07158400 SALT CREEK NEAR OKEENE, OK--Continued

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NU3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
UCT											
01...	14.3	765	--	--	--	--	--	--	--	--	--
10...	--	--	23	--	1.2	--	--	--	--	--	--
17...	5.59	78.8	--	--	--	--	--	--	--	--	--
31...	11.5	155	--	--	--	--	--	--	--	--	--
NOV											
12...	11.0	109	--	--	--	--	--	--	--	--	--
20...	23.8	350	--	--	--	--	--	--	--	--	--
21...	--	--	31	.30	.11	.41	1.8	.111	--	--	--
26...	36.6	726	--	--	--	--	--	--	--	--	--
DEC											
01...	19.6	288	--	--	--	--	--	--	--	--	--
10...	12.5	199	--	--	--	--	--	--	--	--	--
18...	--	--	35	1.0	1.5	1.5	11	<.001	--	--	--
30...	14.4	203	--	--	--	--	--	--	--	--	--
JAN											
04...	23.5	299	--	--	--	--	--	--	--	--	--
13...	35.6	453	--	--	--	--	--	--	--	--	--
19...	7.26	1280	--	--	--	--	--	--	--	--	--
25...	--	--	26	1.4	1.2	2.6	12	.200	<1	7	7
FEB											
01...	--	--	2	1.7	1.2	1.9	13	.200	--	--	--
03...	27.5	273	--	--	--	--	--	--	--	--	--
11...	17.5	324	--	--	--	--	--	--	--	--	--
25...	19.4	274	--	--	--	--	--	--	--	--	--
MAR											
03...	5.63	469	--	--	--	--	--	--	--	--	--
13...	10.6	136	--	--	--	--	--	--	--	--	--
22...	1.07	3700	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	--	1170	--	--	--	--	--	--	--	--	--
10...	8.02	350	--	--	--	--	--	--	--	--	--
25...	--	--	44	.30	1.2	1.5	6.8	.105	--	--	--
28...	13.1	287	--	--	--	--	--	--	--	--	--
MAY											
02...	--	--	3232	--	6.2	6.9	--	2.100	--	--	--
02...	1.40	2030	--	--	--	--	--	--	--	--	--
12...	10.1	281	--	--	--	--	--	--	--	--	--
21...	19.2	533	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	7	.10	1.2	1.3	5.8	.045	--	--	--
12...	10.9	348	--	--	--	--	--	--	--	--	--
24...	4.95	1310	--	--	--	--	--	--	--	--	--
JUL											
10...	12.1	240	--	--	--	--	--	--	--	--	--
22...	20.0	12300	--	--	--	--	--	--	--	--	--
25...	--	--	3098	<.50	6.3	6.3	--	2.050	22	13	11
25...	4.09	796	--	--	--	--	--	--	--	--	--
AUG											
13...	--	--	--	<.50	1.2	1.2	--	.200	--	--	--

07158400 SALT CREEK NEAR OKEENE, OK--Continued

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07158400 SALT CREEK NEAR OKEENE, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16600	13600	21000	19500	29500	7370	12100	16800	---	11200	13400	780
2	16200	13600	18300	32900	29800	6280	---	1840	16400	---	13200	2360
3	16100	13800	18200	27200	30200	7100	16100	2180	18300	---	13400	3180
4	15600	13800	20600	25400	30200	7620	28300	2200	16900	---	13500	5050
5	15700	13700	20500	33000	23900	14000	21600	2860	16900	---	---	---
6	14000	37600	20100	33500	23900	12300	18500	6860	17800	7240	10400	748
7	14000	37900	20100	33500	25900	11300	15800	7800	17600	10200	10800	2020
8	---	21000	15200	32300	30200	11200	15800	8460	12600	12500	10800	4120
9	13100	21000	15100	31600	30200	11200	14700	9080	9730	14400	10700	5100
10	13200	19100	15000	31200	22400	11300	10500	9690	9410	14200	10600	6000
11	17600	17200	15200	31200	20200	12100	22600	13000	11000	12600	8950	5980
12	17500	12500	15200	32000	24800	12500	18400	12100	12300	12400	---	6520
13	12400	14800	15400	36200	24800	12600	14900	12100	13000	18300	6080	6540
14	12400	---	15400	36200	24800	12000	11600	12200	12900	18000	6100	7040
15	6640	19500	16300	---	24700	12000	10800	12200	12500	16700	6370	7010
16	6600	19600	16400	---	20800	---	10800	12300	11700	16800	6480	7160
17	5680	36900	---	10500	20600	---	11200	12400	11700	21700	7310	7380
18	5710	37100	16600	10200	20300	2180	10800	18900	11200	21000	7320	7140
19	9080	35600	16600	9190	18600	2680	10700	19300	11200	10500	7730	7190
20	9060	26300	17200	17700	18500	5040	13600	---	---	---	---	7220
21	10800	26500	17300	17800	21600	5780	---	21200	8580	22000	7830	7250
22	10900	25800	---	24200	---	1390	15000	21000	9120	22300	7870	7310
23	9420	28100	19100	24300	21700	2760	16000	18600	14000	6850	7980	7400
24	---	27800	19200	18800	22200	4110	16000	18700	6280	5380	22400	7620
25	13500	38300	20300	19800	22100	7600	14900	16900	10300	5370	22800	7620
26	13500	41700	19800	---	---	9090	14900	16900	12600	8940	23000	7700
27	10200	29500	19800	26200	---	7980	15500	14800	12300	11300	18200	7700
28	10300	29500	20800	26900	9360	8420	15200	14800	12600	11300	15200	7850
29	11500	27300	16600	30800	---	10400	15200	14200	11000	---	13900	7870
30	13000	27400	17500	30000	---	11400	15200	14200	10800	11600	2210	7850
31	12800	---	19800	30200	---	11800	---	16400	---	11600	721	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16800	13300	22700	19600	29600	---	11400	16800	16300	11000	13400	2010
2	16200	12800	19500	32500	---	---	11300	4280	16200	10200	13200	4180
3	16200	13700	18300	26700	---	---	15000	2480	17400	9470	13300	3120
4	15800	13700	21000	24300	---	---	24700	3030	16600	8710	13700	5020
5	18700	13700	21000	32700	---	---	20600	2700	17100	7840	11900	3650
6	14000	37500	20600	33600	---	---	19000	6460	18000	7080	10300	678
7	14000	37900	19400	33100	---	---	16000	7470	17300	10000	10900	2060
8	13600	21000	15600	32000	---	11200	16500	8180	13200	12300	10800	2020
9	13200	21000	15200	31500	---	11500	14900	8930	11400	14200	10800	5020
10	13200	19300	15100	30800	---	11300	10700	9550	9130	14100	10600	5920
11	17700	17200	15300	31300	---	12200	19500	12400	10600	12400	8730	5920
12	17700	12300	14300	31800	---	12300	17600	11800	12100	12200	7300	6470
13	12700	14900	15500	36900	---	12600	15900	12100	12800	18300	6320	6520
14	12600	10200	15300	37300	---	12100	11800	12200	12700	17300	6280	7030
15	6740	17000	16100	27300	---	12100	11400	12100	12300	16400	6530	6960
16	6700	21200	16400	20400	---	11800	10800	12500	11600	16500	6540	7110
17	5880	32300	16500	11000	---	11800	11100	12400	10900	21800	7430	7340
18	5900	36300	16600	15300	---	3940	10800	18700	11100	20900	7400	7150
19	9280	36100	16400	11000	---	2530	10500	18800	11000	10200	7890	7200
20	9360	27100	17300	17600	---	4840	15000	20400	10100	16200	7880	7230
21	11000	27000	17100	16100	---	5420	15900	21300	8880	22000	7930	7240
22	11000	29900	17600	24000	---	1730	15500	20900	8000	22000	8010	7290
23	9720	28100	18800	23100	---	2590	15700	18500	13800	6950	17000	7380
24	11500	27100	19700	20300	---	4510	16000	19800	4440	5340	22400	7570
25	13600	38600	20300	20000	---	7260	14400	17100	10200	5530	22500	7570
26	12200	40300	19900	23400	---	9720	14600	17000	12000	12000	21700	7610
27	9600	29200	19500	27000	---	7310	15500	14700	12100	10800	18100	7610
28	10800	31700	20500	26000	---	8620	15400	14900	12400	11000	15600	8050
29	11500	27500	16700	30200	---	10100	15500	14000	11400	11600	14200	7900
30	13000	27200	17400	30600	---	10900	15500	14400	10700	11600	2110	7960
31	13100	---	19800	30400	---	11400	---	16700	---	11200	3090	---

ARKANSAS RIVER BASIN

07158400 SALT CREEK NEAR OKEENE, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	18.0	11.0	1.0	1.0	13.0	13.0	17.0	---	29.0	31.5	28.5
2	21.0	19.0	9.0	.5	1.5	12.5	---	16.5	27.5	---	32.0	29.0
3	28.0	20.0	2.0	.0	1.5	12.0	10.5	17.0	27.5	---	32.5	29.0
4	28.0	19.5	4.0	.5	1.0	12.0	9.0	16.5	27.0	---	33.0	29.0
5	24.0	19.0	5.0	1.0	1.0	12.0	19.5	19.0	27.0	---	---	---
6	24.5	18.0	3.0	1.0	1.5	12.5	16.0	21.0	26.5	27.0	32.5	28.0
7	24.5	15.0	.5	1.0	1.5	12.5	19.0	21.0	26.5	26.5	33.0	28.0
8	---	16.0	.0	1.0	1.0	12.0	16.0	23.0	25.0	28.0	33.0	29.0
9	23.5	15.5	.0	.5	.0	13.0	16.5	23.0	23.5	31.0	33.0	29.0
10	24.0	14.0	.0	1.0	2.0	14.0	20.5	20.0	23.0	31.0	33.0	29.0
11	25.5	10.0	2.0	1.5	1.5	15.0	14.0	20.0	25.0	31.0	31.0	29.0
12	25.0	9.5	3.0	.5	.0	14.5	20.0	21.0	26.0	31.0	---	28.5
13	21.0	17.0	4.0	1.0	.0	14.0	21.0	21.0	26.5	31.0	31.0	27.5
14	20.0	---	3.0	2.0	.0	13.5	21.5	27.0	27.0	31.0	31.0	27.0
15	19.0	7.0	3.0	---	.0	13.0	22.0	22.0	27.5	30.5	30.5	27.0
16	18.0	6.0	2.0	---	.0	---	23.0	22.5	27.5	31.0	30.0	28.0
17	19.0	6.0	---	.0	.0	---	24.0	22.0	28.0	30.5	29.5	28.0
18	20.0	9.0	6.0	3.0	.0	13.0	24.0	22.0	27.0	30.0	29.5	28.5
19	20.0	6.0	8.0	3.5	1.0	12.0	23.5	21.0	27.5	30.5	29.0	28.0
20	21.0	6.0	7.0	3.0	1.5	14.0	23.0	---	---	---	---	28.0
21	20.5	4.0	6.0	4.0	2.5	15.0	---	23.0	28.0	30.5	---	27.5
22	20.0	5.5	---	3.0	---	15.0	17.0	23.5	27.0	31.0	28.0	28.0
23	12.5	8.5	2.0	1.5	5.5	11.5	20.5	23.5	27.0	31.0	27.5	28.0
24	---	9.5	.5	.0	6.0	7.0	22.0	24.0	27.0	30.0	28.5	28.5
25	19.0	12.0	6.0	5.0	5.0	10.0	18.0	25.0	27.0	30.0	28.0	28.0
26	19.0	11.0	7.0	---	---	13.0	15.0	26.0	28.0	31.0	27.0	28.0
27	18.0	9.0	1.0	.0	---	13.5	19.0	26.5	28.5	31.0	28.5	28.0
28	18.0	9.0	9.0	.5	13.5	14.5	15.0	27.0	29.0	32.0	28.5	28.5
29	18.0	15.0	7.0	.5	---	14.0	18.0	27.0	28.0	---	29.0	29.0
30	18.5	11.0	2.0	1.0	---	13.0	19.0	26.5	28.0	32.0	29.0	29.0
31	18.0	---	10.0	1.0	---	13.0	---	27.0	---	32.0	28.5	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	15.0	10.0	.5	.0	---	14.0	21.5	21.0	27.0	27.5	26.0
2	23.0	16.5	8.5	.5	---	---	12.5	20.0	23.0	27.5	28.0	24.0
3	22.5	19.0	2.5	.0	---	---	9.5	16.0	24.5	28.0	29.0	27.5
4	20.5	19.5	2.5	.0	---	---	12.0	14.0	26.0	29.0	29.0	28.0
5	20.0	18.0	5.0	-0.5	---	---	17.0	18.5	25.5	28.0	29.0	28.5
6	18.5	14.0	3.5	-0.5	---	---	17.5	21.5	25.5	25.0	29.5	24.5
7	18.0	11.0	1.5	-0.5	---	---	20.5	24.0	27.5	25.5	29.0	26.0
8	19.0	12.5	1.0	-0.5	---	17.5	21.0	25.0	24.0	29.0	28.5	26.0
9	18.0	14.0	.5	.0	---	13.0	19.0	24.5	21.0	28.0	27.5	25.5
10	18.0	14.5	1.0	-0.5	---	13.0	16.5	20.0	22.0	28.0	27.5	25.0
11	21.5	11.0	1.5	.0	---	14.0	17.5	17.0	24.5	30.0	25.0	24.5
12	22.5	10.0	3.0	.0	---	15.0	19.0	20.5	25.5	29.5	24.0	25.5
13	19.5	13.5	3.5	.0	---	16.0	20.5	22.5	26.0	29.0	26.0	22.5
14	15.5	10.0	2.5	.0	---	15.0	22.0	24.0	26.5	29.5	28.0	19.5
15	14.5	6.0	3.5	.0	---	13.0	23.5	24.5	26.5	29.0	27.5	20.5
16	16.0	6.0	3.5	-0.5	---	11.5	24.0	24.0	25.0	29.0	26.0	20.5
17	15.0	7.5	2.0	.0	---	13.0	23.0	22.0	25.5	27.0	27.5	20.5
18	16.0	8.5	6.0	.0	---	15.0	21.5	24.5	27.0	26.0	28.0	21.0
19	17.0	8.5	12.0	.5	---	14.0	22.5	26.5	25.5	25.5	27.5	21.0
20	17.0	7.0	10.0	1.0	---	14.0	20.0	24.5	27.0	27.0	27.0	21.5
21	18.0	5.0	5.0	1.5	---	15.5	21.5	19.5	27.5	27.5	26.0	20.5
22	18.5	7.0	4.5	2.0	---	16.0	22.0	21.0	26.0	26.5	26.0	19.0
23	17.0	11.0	4.0	.5	---	13.0	23.5	21.5	26.0	24.5	28.0	21.0
24	12.0	11.0	3.0	.5	---	12.0	24.5	22.0	24.5	26.0	26.5	22.0
25	15.5	12.0	4.0	.5	---	13.5	22.5	20.5	25.0	27.5	25.0	22.5
26	14.0	13.0	3.5	1.5	---	13.5	22.5	22.5	26.5	28.5	25.5	21.0
27	13.5	8.5	2.5	.5	---	13.0	18.5	26.0	28.0	29.0	26.0	21.0
28	14.5	7.5	5.0	.5	---	17.0	16.0	25.5	28.5	30.0	27.5	21.5
29	15.0	8.5	5.5	.0	---	20.0	19.5	25.5	30.0	30.5	28.5	21.0
30	15.5	10.0	.5	.0	---	18.5	21.5	24.0	28.0	29.0	28.5	22.0
31	16.5	---	.0	.0	---	16.5	---	22.0	---	26.5	26.5	---

07158400 SALT CREEK NEAR OKEENE, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	960	860	1100	1000	1300	---	800	960	950	790	860	530
2	950	850	1000	1400	---	---	800	590	950	770	860	590
3	950	870	1000	1300	---	---	910	540	980	750	860	560
4	930	870	1100	1200	---	---	1200	560	960	720	870	620
5	1000	870	1100	1400	---	---	1100	550	970	700	820	570
6	880	1600	1100	1500	---	---	1000	660	1000	680	770	490
7	880	1600	1100	1400	---	---	940	690	980	760	790	530
8	870	1100	930	1400	---	800	960	710	860	830	790	530
9	860	1100	920	1400	---	810	910	730	800	890	790	620
10	860	1000	910	1400	---	800	780	750	740	880	780	640
11	990	980	920	1400	---	830	1000	830	780	830	730	640
12	990	830	690	1400	---	830	990	820	830	830	680	660
13	840	910	930	1600	---	840	940	830	850	1000	650	660
14	840	770	920	1600	---	830	820	830	840	980	650	670
15	670	970	940	1300	---	830	800	830	830	950	660	670
16	660	1100	950	1100	---	820	790	840	810	960	660	680
17	640	1400	960	790	---	820	800	830	790	1100	690	680
18	640	1500	960	920	---	580	790	1000	800	1100	690	680
19	740	1500	950	790	---	540	780	1000	790	770	700	680
20	740	1300	980	990	---	610	910	1100	770	950	700	680
21	790	1300	970	940	---	630	940	1100	730	1100	700	680
22	790	1400	990	1200	---	520	930	1100	700	1100	700	680
23	750	1300	1000	1200	---	540	930	1000	880	670	970	690
24	810	1300	1100	1100	---	600	940	1100	600	620	1100	690
25	870	1600	1100	1100	---	680	890	970	770	630	1100	690
26	830	1700	1100	1200	---	750	900	970	820	820	1100	690
27	750	1300	1000	1300	---	680	930	900	830	790	1000	690
28	790	1400	1100	1200	---	720	920	910	830	790	930	700
29	810	1300	960	1400	---	770	930	880	800	810	890	700
30	850	1300	980	1400	---	790	930	890	780	810	530	700
31	850	---	1100	1400	---	800	---	960	---	800	560	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.92	15.8	22.0	15.1	18.3	---	36.7	31.1	28.2	18.3	44.10	68.70
2	4.87	15.6	20.0	17.0	---	---	32.4	914.0	30.8	17.0	17.60	669.00
3	4.87	15.7	19.4	18.3	---	---	41.8	1010.0	34.4	15.6	13.70	51.40
4	4.27	15.3	21.7	20.7	---	---	87.5	1060.0	28.5	14.4	11.70	23.40
5	7.29	14.3	22.3	25.7	---	---	47.5	275.0	28.8	13.8	9.74	14.50
6	6.42	28.1	22.9	25.9	---	---	35.1	48.1	29.7	347.0	8.52	320.00
7	6.65	32.4	22.0	21.2	---	---	30.5	26.1	29.1	45.1	7.89	283.00
8	7.52	17.5	16.6	16.6	---	20.7	28.5	23.0	27.9	29.1	7.47	22.90
9	8.59	16.0	14.9	18.9	---	21.4	27.0	23.7	328.0	26.4	7.04	18.40
10	8.82	14.0	16.7	22.7	---	19.7	37.9	32.4	122.0	23.8	6.95	14.30
11	13.40	13.0	18.9	24.9	---	19.0	72.9	33.6	42.1	21.1	576.00	12.80
12	14.20	11.0	19.7	28.7	---	16.8	37.4	31.0	35.9	19.3	36.70	12.10
13	14.10	17.4	18.8	27.6	---	17.5	30.5	31.4	27.5	48.6	19.30	9.98
14	10.20	11.6	18.1	21.6	---	16.6	26.6	26.9	24.9	31.8	16.00	9.59
15	11.00	70.7	18.0	21.1	---	17.3	23.8	26.9	22.4	22.1	13.90	9.04
16	12.10	38.6	18.2	29.7	---	17.0	23.5	24.9	21.9	20.0	13.50	8.81
17	11.90	41.6	18.4	42.7	---	19.5	23.8	22.4	21.3	71.3	12.90	8.26
18	12.30	34.4	17.9	99.4	---	2900.0	23.5	43.2	21.6	56.4	11.70	7.71
19	14.20	30.8	17.4	145.0	---	300.0	23.2	40.5	21.3	212.0	11.00	7.34
20	14.20	26.0	18.0	82.9	---	47.8	673.0	41.6	20.8	41.0	10.20	7.34
21	15.10	26.0	17.8	38.1	---	54.4	35.5	41.6	33.5	32.7	10.40	6.98
22	14.90	28.0	18.2	21.1	---	1850.0	27.6	41.6	34.0	264.0	16.60	6.61
23	13.80	27.4	18.4	16.8	---	185.0	25.1	37.8	26.1	204.0	16.80	5.78
24	14.90	28.4	21.1	14.8	---	59.9	25.4	35.6	324.0	30.1	20.20	5.03
25	16.70	33.3	22.0	20.8	---	45.9	24.0	31.4	62.4	197.0	59.40	4.47
26	15.90	45.9	22.0	17.5	---	42.5	24.3	31.4	26.6	35.4	25.50	4.47
27	14.40	27.7	20.5	20.7	---	33.0	27.6	29.2	24.7	16.0	17.00	4.47
28	15.80	28.0	23.2	17.5	---	33.0	27.3	29.5	22.4	12.4	14.60	4.16
29	16.20	26.0	20.7	29.5	---	33.3	27.6	28.5	20.1	11.2	12.30	4.16
30	17.00	26.0	18.5	18.9	---	32.0	30.1	28.8	18.7	10.7	6.58	4.16
31	15.40	---	19.0	17.4	---	30.2	---	28.5	---	168.0	98.30	---

ARKANSAS RIVER BASIN

07158400 SALT CREEK NEAR OKEENE, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5500	4200	7700	6600	10000	---	3500	5500	5400	3400	4300	82
2	5300	4100	6500	11000	---	---	3500	920	5300	3100	4200	880
3	5300	4400	6100	9200	---	---	4900	260	5800	2800	4200	490
4	5200	4400	7100	8300	---	---	8500	460	5500	2600	4400	1200
5	6200	4400	7100	11000	---	---	6900	340	5700	2200	3700	690
6	4500	13000	6900	12000	---	---	6400	1700	6000	2000	3100	4.3
7	4500	13000	6700	12000	---	---	5200	2100	5700	3000	3400	100
8	4400	7100	5100	11000	---	3500	5400	2400	4200	3900	3300	85
9	4200	7100	5000	11000	---	3600	4800	2600	3500	4600	3300	1200
10	4200	6500	4900	11000	---	3500	3300	2900	2700	4500	3300	1500
11	5900	5700	5000	11000	---	3800	6500	3900	3300	3900	2600	1500
12	5900	3900	4600	11000	---	3900	5800	3700	3800	3800	2000	1700
13	4000	4800	5100	13000	---	4000	5200	3800	4100	6100	1700	1700
14	4000	3100	5000	13000	---	3800	3700	3800	4000	5700	1700	1900
15	1800	5600	5300	9400	---	3800	3500	3800	3900	5400	1700	1900
16	1800	7200	5400	6900	---	3700	3300	4000	3600	5400	1800	2000
17	1500	11000	5400	3400	---	3700	3400	3900	3400	7400	2100	2000
18	1500	13000	5500	5000	---	790	3300	6200	3400	7100	2100	2000
19	2800	13000	5400	3400	---	270	3200	6300	3400	3100	2300	2000
20	2800	9300	5700	5800	---	1100	4900	6900	3100	5300	2200	2000
21	3400	9300	5700	5300	---	1300	5200	7200	2600	7500	2300	2000
22	3400	10000	5800	8200	---	63	5100	7100	2300	7500	2300	2000
23	2900	9700	6300	7900	---	300	5100	6200	4400	1900	5600	2100
24	3600	9300	6600	6800	---	1000	5200	6600	980	1300	7600	2100
25	4400	14000	6800	6700	---	2000	4700	5700	3100	1400	7600	2100
26	3800	14000	6700	8000	---	2900	4700	5600	3800	3800	7300	2100
27	2900	10000	6500	9300	---	2000	5100	4800	3800	3300	6000	2100
28	3300	11000	6900	8900	---	2500	5000	4800	3900	3400	5100	2300
29	3600	9500	5500	10000	---	3100	5100	4500	3500	3600	4600	2300
30	4100	9400	5800	11000	---	3400	5100	4700	3300	3600	120	2300
31	4200	---	6600	11000	---	3500	---	5500	---	3500	480	---

CHLORIDE, DISSOLVED (TUNS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.2	77.1	154.0	99.8	140.0	---	161.0	178.0	160.0	78.9	221.00	10.60
2	27.2	75.3	130.0	134.0	---	---	142.0	1430.0	172.0	68.6	86.20	998.00
3	27.2	79.6	119.0	129.0	---	---	225.0	487.0	204.0	58.2	66.90	45.00
4	23.9	77.2	140.0	143.0	---	---	620.0	891.0	163.0	51.9	59.40	45.40
5	45.2	72.5	144.0	202.0	---	---	298.0	170.0	169.0	43.4	44.00	17.50
6	32.8	228.0	143.0	207.0	---	---	225.0	124.0	178.0	1020.0	34.30	2.81
7	34.0	263.0	134.0	181.0	---	---	168.0	79.4	169.0	178.0	34.00	53.50
8	38.0	113.0	90.9	131.0	---	90.7	160.0	77.8	136.0	137.0	31.20	3.67
9	42.0	104.0	81.0	148.0	---	95.3	143.0	84.2	1440.0	137.0	29.40	35.60
10	43.1	91.3	90.0	178.0	---	86.0	160.0	125.0	445.0	121.0	29.40	33.60
11	79.6	75.4	103.0	196.0	---	87.2	474.0	158.0	178.0	99.0	2050.00	30.00
12	84.4	51.6	102.0	226.0	---	79.0	219.0	140.0	164.0	88.2	108.00	31.20
13	67.0	92.0	103.0	225.0	---	83.2	168.0	144.0	133.0	296.0	50.50	25.70
14	48.6	46.9	98.5	175.0	---	75.9	120.0	123.0	119.0	185.0	41.80	27.20
15	29.6	408.0	102.0	152.0	---	79.0	104.0	123.0	105.0	125.0	35.80	25.60
16	33.0	253.0	104.0	186.0	---	76.9	98.0	119.0	97.2	112.0	36.90	25.90
17	27.9	327.0	104.0	184.0	---	87.9	101.0	105.0	91.8	460.0	39.10	24.30
18	28.8	298.0	102.0	540.0	---	3950.0	98.0	268.0	91.8	364.0	35.70	22.70
19	53.7	267.0	99.1	624.0	---	150.0	95.0	255.0	91.8	854.0	36.00	21.60
20	53.7	186.0	105.0	485.0	---	86.1	3630.0	261.0	83.7	229.0	32.10	21.60
21	65.2	186.0	105.0	215.0	---	112.0	197.0	272.0	119.0	223.0	34.20	20.50
22	64.3	200.0	106.0	144.0	---	225.0	151.0	268.0	112.0	1800.0	54.60	19.40
23	53.2	204.0	116.0	111.0	---	103.0	138.0	234.0	131.0	580.0	96.80	17.60
24	66.1	203.0	127.0	91.8	---	99.9	140.0	214.0	529.0	63.2	140.00	15.30
25	84.3	291.0	136.0	127.0	---	135.0	127.0	185.0	251.0	438.0	410.00	13.60
26	72.8	378.0	134.0	117.0	---	164.0	127.0	181.0	123.0	164.0	170.00	13.60
27	55.6	213.0	133.0	148.0	---	97.2	151.0	156.0	113.0	66.8	102.00	13.60
28	65.9	220.0	145.0	130.0	---	115.0	148.0	156.0	105.0	53.2	79.90	13.70
29	71.9	190.0	119.0	211.0	---	134.0	151.0	146.0	87.9	49.6	63.30	13.70
30	81.9	188.0	110.0	149.0	---	138.0	165.0	152.0	79.3	47.6	1.49	13.70
31	76.0	---	114.0	137.0	---	132.0	---	163.0	---	737.0	84.20	---

07158400 SALT CREEK NEAR OKEENE, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10900	8550	15000	12800	19700	---	7260	10900	10600	6990	8620	1060
2	10500	8210	12800	21600	---	---	7190	2400	10500	6440	8490	2340
3	10500	8830	12000	17700	---	---	9710	1340	11300	5940	8550	1710
4	10300	8830	13800	16100	---	---	16300	1650	10800	5420	8830	2910
5	12200	8830	13800	21800	---	---	13500	1460	11100	4830	7600	2010
6	9030	25100	13500	22400	---	---	12400	3890	11800	4310	6510	295
7	9030	25300	13100	22100	---	---	10400	4580	11300	6300	6920	1090
8	8760	13800	10100	21300	---	7120	10700	5060	8490	7870	6850	1070
9	8490	13800	9850	21000	---	7330	9640	5570	7260	9170	6850	2910
10	8490	12600	9780	20500	---	7190	6780	6000	5710	9100	6710	3520
11	11600	11200	9920	20800	---	7800	12800	7940	6710	7940	5440	3520
12	11600	7870	9240	21200	---	7870	11500	7530	7740	7800	4460	3900
13	8140	9640	10100	24600	---	8080	10300	7740	8210	12000	3800	3930
14	8080	6440	9920	24900	---	7740	7530	7800	8140	11300	3770	4280
15	4080	11100	10500	18100	---	7740	7260	7740	7870	10700	3940	4230
16	4050	13900	10700	13400	---	7530	6850	8010	7390	10700	3950	4330
17	3500	21500	10700	6990	---	7530	7050	7940	6920	14300	4550	4490
18	3510	24200	10800	9920	---	2180	6850	12200	7050	13700	4530	4360
19	5810	24100	10700	6990	---	1360	6650	12300	6990	6440	4870	4400
20	5870	18000	11300	11500	---	2790	9710	13400	6370	10500	4860	4420
21	6990	17900	11100	10500	---	3180	10300	14000	5540	14500	4890	4420
22	6990	19900	11500	15800	---	903	10100	13700	4940	14500	4950	4460
23	6110	18600	12300	15200	---	1400	10200	12100	8890	4230	11100	4520
24	7330	18000	12900	13300	---	2560	10400	13000	2510	3130	14800	4650
25	8760	25800	13300	13100	---	4440	9300	11100	6440	3260	14800	4650
26	7800	27000	13100	15400	---	6110	9440	11100	7670	7670	14300	4670
27	6030	19400	12800	17900	---	4470	10100	9510	7740	6850	11800	4670
28	6850	21100	13500	17200	---	5360	9990	9640	7940	6990	10100	4970
29	7330	18200	10900	20100	---	6370	10100	9030	7260	7390	9170	4870
30	8350	18000	11300	20300	---	6920	10100	9300	6780	7390	1120	4910
31	8420	---	13000	20200	---	7260	---	10900	---	7120	1690	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.9	157.0	300.0	194.0	277.0	---	333.0	353.0	315.0	162.0	442.0	137.0
2	53.9	151.0	256.0	262.0	---	---	291.0	3720.0	340.0	143.0	174.0	2650.0
3	53.9	160.0	233.0	249.0	---	---	446.0	2510.0	397.0	123.0	136.0	157.0
4	47.3	155.0	272.0	278.0	---	---	1190.0	3190.0	321.0	108.0	119.0	110.0
5	86.9	145.0	279.0	400.0	---	---	583.0	729.0	330.0	95.2	90.3	51.0
6	65.8	441.0	281.0	387.0	---	---	435.0	284.0	350.0	2200.0	72.1	193.0
7	68.3	512.0	262.0	334.0	---	---	337.0	173.0	336.0	374.0	69.1	583.0
8	75.7	220.0	180.0	253.0	---	185.0	318.0	164.0	275.0	276.0	64.7	46.2
9	84.8	201.0	160.0	283.0	---	194.0	286.0	180.0	2980.0	272.0	61.0	86.4
10	87.1	177.0	180.0	332.0	---	177.0	330.0	259.0	940.0	246.0	59.8	78.9
11	157.0	148.0	204.0	371.0	---	179.0	933.0	322.0	362.0	202.0	4290.0	70.3
12	166.0	104.0	205.0	435.0	---	159.0	435.0	285.0	334.0	181.0	241.0	71.6
13	136.0	185.0	205.0	425.0	---	168.0	334.0	293.0	266.0	583.0	113.0	59.4
14	98.2	97.4	196.0	336.0	---	155.0	244.0	253.0	242.0	366.0	92.6	61.2
15	67.2	809.0	201.0	293.0	---	161.0	216.0	251.0	212.0	248.0	83.0	57.1
16	74.4	488.0	205.0	362.0	---	157.0	203.0	238.0	200.0	222.0	81.1	56.1
17	65.2	639.0	205.0	377.0	---	179.0	209.0	214.0	187.0	927.0	84.8	54.6
18	67.3	555.0	201.0	1070.0	---	10900.0	203.0	527.0	190.0	703.0	77.1	49.4
19	111.0	495.0	196.0	1280.0	---	756.0	198.0	498.0	189.0	1770.0	76.3	47.5
20	113.0	360.0	207.0	963.0	---	218.0	7180.0	507.0	172.0	454.0	70.9	47.7
21	134.0	358.0	204.0	425.0	---	275.0	389.0	529.0	254.0	431.0	72.6	45.3
22	132.0	398.0	211.0	277.0	---	3220.0	300.0	518.0	240.0	3480.0	118.0	43.4
23	112.0	392.0	226.0	213.0	---	480.0	275.0	457.0	264.0	1290.0	192.0	37.8
24	135.0	394.0	247.0	180.0	---	256.0	281.0	421.0	1360.0	152.0	272.0	33.9
25	168.0	536.0	266.0	248.0	---	300.0	251.0	360.0	522.0	1020.0	799.0	30.1
26	150.0	729.0	262.0	225.0	---	346.0	255.0	360.0	249.0	331.0	332.0	30.3
27	116.0	414.0	263.0	285.0	---	217.0	300.0	308.0	230.0	139.0	201.0	30.3
28	137.0	422.0	284.0	251.0	---	246.0	297.0	312.0	214.0	109.0	158.0	29.5
29	146.0	364.0	235.0	423.0	---	275.0	300.0	293.0	182.0	102.0	126.0	28.9
30	167.0	360.0	214.0	274.0	---	280.0	327.0	301.0	163.0	97.8	13.9	29.2
31	152.0	---	225.0	251.0	---	274.0	---	324.0	---	1500.0	297.0	---

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06", long 97°54'51", in SW¼NE¼ sec.14, T.17 N., R.7 W., Kingfisher County, Hydrologic Unit 11050002, near right bank on downstream bridge on U.S. Highway 81, 1.0 mi (1.6 km) downstream from Turkey Creek, 2.0 mi (3.2 km) south of Dover, 2.5 mi (4.0 km) upstream from Kingfisher Creek, and at mile 160.6 (258.4 km).

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records fair.

AVERAGE DISCHARGE.--6 years, 760 ft³/s (21.52 m³/s), 550,600 acre-ft/yr (679 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s (1,760 m³/s) Oct. 11, 1973, gage height, 21.81 ft (6.648 m) from high-water mark; minimum daily, 24 ft³/s (0.68 m³/s) July 28, 1974.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 19	0945	12,300 348	16.52 5.035	July 26	1915	13,200 374	16.67 5.081
May 11	1215	*24,900 705	*18.52 5.645	Aug. 1	1345	13,000 368	16.64 5.072

Minimum daily discharge, 39 ft³/s (1.10 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	45	92	52	100	349	830	245	776	226	8840	3190
2	60	45	89	50	120	294	832	432	727	176	7330	5900
3	54	46	86	72	115	2150	753	5800	662	179	2860	2900
4	53	46	82	80	110	1310	832	8350	577	166	1430	592
5	51	48	80	84	97	1160	844	8150	623	156	961	318
6	48	58	86	88	110	642	741	6100	638	275	797	279
7	48	59	82	85	120	476	715	2770	607	795	679	874
8	50	61	87	76	115	372	638	1780	533	818	570	393
9	50	61	67	86	110	322	568	1400	703	368	465	227
10	68	57	63	100	160	310	586	1210	782	245	442	182
11	57	51	70	120	359	287	876	13300	3250	202	675	154
12	50	56	75	138	457	268	799	7080	2650	168	820	139
13	45	63	75	126	468	252	653	3360	1120	160	386	125
14	43	72	80	117	309	242	581	1770	862	192	309	113
15	42	97	72	143	271	233	534	1260	600	140	274	108
16	42	125	69	166	170	230	527	1030	562	121	261	105
17	44	101	67	173	130	234	571	930	471	115	246	101
18	45	89	63	218	140	1950	520	892	422	241	266	98
19	42	82	65	734	170	10100	485	885	361	1870	246	96
20	43	77	65	771	271	5710	698	885	318	950	245	96
21	44	74	63	409	275	3110	1600	1020	324	407	263	92
22	42	73	63	305	350	4730	533	1040	1090	283	212	90
23	39	74	62	450	314	9930	376	1240	604	398	256	88
24	40	76	80	300	269	7090	334	2100	342	641	242	84
25	41	80	96	250	369	2850	293	2190	422	2610	1500	82
26	42	93	97	210	384	1470	269	1460	408	7810	1200	79
27	43	94	95	160	312	1220	259	1380	318	6250	252	77
28	45	93	92	100	323	1100	255	1020	394	3410	216	74
29	45	88	86	110	---	975	253	953	324	2270	181	72
30	46	89	84	94	---	876	252	826	275	1730	147	72
31	45	---	53	84	---	803	---	848	---	2390	265	---
TOTAL	1476	2173	2386	5951	6498	61045	18007	81706	21745	35762	32836	16800
MEAN	47.6	72.4	77.0	192	232	1969	600	2636	725	1154	1059	560
MAX	69	125	97	771	468	10100	1600	13300	3250	7810	8840	5900
MIN	39	45	53	50	97	230	252	245	275	115	147	72
AC=FT	2930	4310	4730	11800	12890	121100	35720	162100	43130	70930	65130	33320
CAL YR 1978 TOTAL	158148		MEAN 433	MAX 20000	MIN 31	AC=FT 313700						
WTR YR 1979 TOTAL	286385		MEAN 785	MAX 13300	MIN 39	AC=FT 568000						

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years, 1951, 1953, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURE: October 1973 to current year.

INSTRUMENTATION.--Water quality monitor since October 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. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

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, 33,100 micromhos Sept. 21, 1976; minimum daily, 1,160 micromhos Nov. 4, 1974.

WATER TEMPERATURE: Maximum daily, 35.0°C July 10, 1978; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
02...	1600	--	80020	66	19500	7.7	28.0	--	--	--	--
10...	0900	1028	9740	71	--	8.0	17.0	33	8.6	96	123
13...	1800	--	80020	44	17000	7.9	18.0	--	--	--	--
29...	1300	--	80020	46	14100	7.8	17.0	--	--	--	--
NOV											
08...	1800	--	80020	62	15600	8.0	16.0	--	--	--	--
15...	1530	--	80020	97	11400	7.9	5.0	--	--	--	--
21...	0915	1028	9740	75	--	7.8	4.0	11	10.5	86	--
30...	1630	--	80020	92	21900	8.3	12.0	--	--	--	--
DEC											
07...	1230	--	80020	82	23000	8.1	.0	--	--	--	--
15...	1200	--	80020	71	17400	8.2	3.5	--	--	--	--
18...	1345	1028	9740	62	15000	8.1	6.0	3.0	--	--	--
25...	1700	--	80020	99	29500	8.2	7.0	--	--	--	--
JAN											
26...	1030	1028	9740	210	--	8.4	.0	34	14.7	104	30
FEB											
01...	1000	1028	9740	185	29000	8.0	.0	7.0	12.5	96	177
26...	1730	--	80020	381	21100	7.7	9.0	--	--	--	--
MAR											
10...	1130	--	80020	318	24000	8.2	9.0	--	--	--	--
13...	1000	1028	9740	255	19000	8.5	12.0	--	11.5	119	--
24...	0900	--	80020	7720	3270	7.7	9.0	--	--	--	--
31...	1730	--	80020	783	12900	8.4	17.0	--	--	--	--
APR											
05...	1230	--	80020	848	12700	7.8	13.0	--	--	--	--
17...	1800	--	80020	556	26600	8.2	22.0	--	--	--	--
25...	0930	1028	9740	308	19500	8.1	20.5	14	7.7	95	30
30...	1700	--	80020	249	19700	7.8	23.5	--	--	--	--
MAY											
02...	1030	1028	9740	283	17800	7.9	15.0	18	8.8	93	21
05...	1145	--	80020	8390	6930	7.4	14.0	--	--	--	--
23...	1800	--	80020	1720	22700	7.6	22.5	--	--	--	--
28...	1000	--	80020	1280	13500	7.9	22.0	--	--	--	--
JUN											
05...	0935	1028	9740	825	21000	8.6	25.0	65	9.0	123	31
09...	1000	--	80020	870	16700	7.8	20.0	--	--	--	--
13...	1130	--	80020	1650	13900	7.6	23.5	--	--	--	--
22...	1430	--	80020	3580	2180	7.1	24.0	--	--	--	--
JUL											
12...	1900	--	80020	160	15600	7.8	32.0	--	--	--	--
20...	1900	--	80020	631	4960	7.6	29.0	--	--	--	--
24...	1730	--	80020	607	26100	7.5	30.5	--	--	--	--
25...	1000	1028	9740	1650	10400	7.9	26.0	>1000	6.0	80	471
AUG											
05...	1800	--	80020	615	9500	7.1	31.0	--	--	--	--
13...	1140	1028	9740	338	12000	8.3	25.0	140	7.3	94	32
26...	1300	--	80020	818	2000	7.1	23.0	--	--	--	--
29...	1600	--	80020	172	18600	8.0	30.0	--	--	--	--

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	
SEP												
02...	1400	--	80020	8390	628	7.5	23.0	--	--	--	--	
04...	1300	1028	9740	541	4500	8.0	29.0	--	--	--	48	
09...	1730	--	80020	211	9920	7.7	28.0	--	--	--	--	
17...	1800	--	80020	100	15500	7.5	25.0	--	--	--	--	
DATE	TIME	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM DISSOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
OCT												
02...	780	640	--	180	--	--	81	--	4300	92	67	
10...	--	--	360	--	900	140	--	--	--	--	--	
13...	740	570	--	160	--	--	82	--	3700	91	59	
29...	970	830	--	270	--	--	73	--	2900	86	40	
NOV												
08...	930	790	--	250	--	--	73	--	3200	88	46	
15...	730	520	--	200	--	--	56	--	2300	87	37	
21...	--	--	550	--	1375	190	--	--	--	--	--	
30...	1000	870	--	260	--	--	89	--	5100	91	70	
DEC												
07...	1000	850	--	260	--	--	95	--	5000	91	67	
15...	830	650	--	200	--	--	80	--	3800	91	57	
18...	--	--	--	--	--	--	--	--	--	--	--	
25...	990	820	--	230	--	--	100	--	7100	94	98	
JAN												
26...	--	--	240	--	600	84	--	6200	--	--	--	
FEB												
01...	--	--	--	--	--	--	--	--	--	--	--	
26...	450	--	--	180	--	--	--	--	4700	205	--	
MAR												
10...	920	760	--	230	--	--	85	--	--	--	--	
13...	--	--	--	--	--	--	--	--	--	--	--	
24...	260	170	--	76	--	--	17	--	550	82	15	
31...	760	560	--	200	--	--	63	--	2600	92	41	
APR												
05...	730	530	--	190	--	--	62	--	2700	89	44	
17...	1000	830	--	240	--	--	100	--	5800	92	79	
25...	--	--	--	--	--	--	--	--	--	--	--	
30...	980	780	--	240	--	--	92	--	4200	90	58	
MAY												
02...	--	--	220	--	550	79	--	--	--	--	--	
05...	450	340	--	130	--	--	31	--	1500	91	31	
23...	1100	970	--	290	--	--	100	--	5200	91	67	
28...	--	--	--	200	--	--	--	--	2900	--	--	
JUN												
05...	--	--	--	--	--	--	--	--	--	--	--	
09...	890	730	--	220	--	--	83	--	3500	93	51	
13...	--	--	--	220	--	--	--	--	2700	--	--	
22...	200	91	--	59	--	--	13	--	400	80	12	
JUL												
12...	880	740	--	250	--	--	62	--	3300	89	48	
20...	560	480	--	180	--	--	28	--	800	79	15	
24...	1100	990	--	310	--	--	82	--	5800	92	76	
25...	--	--	--	--	1125	64	--	2500	--	--	--	
AUG												
05...	--	--	--	230	--	--	--	--	1800	--	--	
13...	--	--	--	--	--	--	--	--	--	--	--	
26...	170	100	--	46	--	--	13	--	350	81	12	
29...	1100	910	--	290	--	--	83	--	4100	89	55	
SEP												
02...	90	8	--	26	--	--	6.2	--	96	69	4.4	
04...	--	--	85	--	213	29	--	--	--	--	--	
09...	590	430	--	160	--	--	47	--	2100	88	38	
17...	890	700	--	230	--	--	76	--	3300	89	48	

ARKANSAS RIVER BASIN

141

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
02...	--	--	16	180	0	150	5.7	690	--	--	12100
10...	--	--	--	--	--	--	--	--	--	.4	--
13...	--	--	14	210	0	170	4.2	640	5700	--	10500
29...	--	--	11	180	0	150	4.6	850	4600	--	8710
NOV											
08...	--	--	13	--	--	140	--	780	4900	--	9630
15...	--	--	10	--	--	210	--	540	3600	--	6710
21...	--	--	--	--	--	--	--	--	--	.3	--
30...	--	--	16	--	--	150	--	750	8000	--	13700
DEC											
07...	--	--	12	--	--	190	--	750	--	--	14500
15...	--	--	11	--	--	180	--	--	5500	--	10800
18...	--	--	--	--	--	--	--	--	--	.3	--
25...	--	--	9.9	--	--	170	--	800	11000	--	19600
JAN											
26...	--	12	--	--	--	--	--	--	--	.3	--
FEB											
01...	--	--	--	--	--	--	--	--	--	.4	--
26...	4700	--	9.5	--	--	160	--	570	7200	--	13200
MAR											
10...	4900	--	9.8	--	--	160	--	630	8200	--	15300
13...	--	--	--	--	--	--	--	--	--	--	--
24...	560	--	6.1	--	--	88	--	200	830	--	1840
31...	2600	--	8.7	--	--	200	--	500	4200	--	7490
APR											
05...	2700	--	8.0	--	--	200	--	490	4000	--	7510
17...	5800	--	14	--	--	180	--	770	9500	--	17300
25...	--	--	--	--	--	--	--	--	--	.5	--
30...	4200	--	11	--	--	200	--	690	6900	--	12400
MAY											
02...	--	--	--	--	--	--	--	--	--	.4	--
05...	1500	--	9.3	--	--	110	--	--	2000	--	3800
23...	5200	--	11	--	--	170	--	780	7600	--	14500
28...	2900	--	11	--	--	190	--	550	4200	--	7670
JUN											
05...	--	--	--	--	--	--	--	--	--	.5	--
09...	3500	--	10	--	--	160	--	660	--	--	10600
13...	2700	--	12	--	--	110	--	580	4500	--	8130
22...	410	--	12	--	--	110	--	110	--	--	1250
JUL											
12...	3300	--	12	--	--	140	--	680	5100	--	9720
20...	810	--	8.7	--	--	84	--	630	1300	--	2980
24...	5800	--	16	--	--	120	--	890	9400	--	17000
25...	--	2500	--	--	--	--	--	--	--	.4	--
AUG											
05...	1800	--	10	--	--	120	--	610	2900	--	5700
13...	--	--	--	--	--	--	--	--	--	.4	--
26...	360	--	6.8	--	--	--	--	97	500	--	--
29...	4100	--	12	--	--	160	--	800	6100	--	11800
SEP											
02...	100	--	4.3	--	--	82	--	34	140	--	375
04...	--	--	--	--	--	--	--	--	--	.2	--
09...	2100	--	11	--	--	160	--	490	3100	--	5820
17...	3300	--	11	--	--	190	--	620	5100	--	9270

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19300	14200	22300		---	11300	13200	19300	18800	176000	2490	787
2	19500	14900	24300		---	---	12900	17800	17400	186000	---	628
3	19400	14900	23900		---	3560	14600	3970	16900	199000	5020	1180
4	---	14500	---		---	6610	14900	---	18500	202000	7630	5360
5	19500	13700	24600		---	8860	12700	6930	21200	---	9500	10200
6	19400	13700	24800		---	10600	14000	---	20700	112000	11700	10200
7	19200	14000	23000		---	14800	14100	9150	20600	158000	11700	5550
8	18700	15600	---		---	22500	17600	9350	18100	89400	12300	---
9	18200	14200	---		---	22400	---	9270	16700	---	13400	9920
10	15700	14000	---		---	24000	17700	7400	12300	---	14200	---
11	15700	18000	---		---	20800	14700	7430	---	---	12700	13800
12	16000	15900	---		---	19100	13600	6440	14000	156000	13000	14300
13	17000	14000	---		---	19500	14400	6270	8240	175000	13100	15300
14	17200	14500	17800		---	20300	16100	9910	---	158000	14600	---
15	17400	11400	17400		---	20500	17400	11600	13000	142000	15600	15400
16	17300	15000	19700		---	20600	20400	13900	17400	182000	16100	15400
17	18300	---	19300		---	17800	26600	15000	17000	178000	16400	15500
18	17100	13800	19200		---	17800	17200	16200	16900	169000	17800	15300
19	15900	15400	19800		---	3330	15400	16200	18200	76400	15600	---
20	14900	15300	19600		---	---	17400	17100	18800	49600	15900	15100
21	14700	15900	19800		---	---	3770	18000	---	93000	12000	15300
22	14800	16000	19600		---	9170	13100	18200	21800	138000	17000	---
23	15100	15800	20600		23700	4110	16600	22700	13500	158000	13700	14800
24	15200	15200	22800		24500	3270	18100	20700	15400	261000	13400	14800
25	15000	14800	29500		24700	24700	19800	22400	13200	87000	9050	15400
26	15300	15000	26000		21100	8610	20800	12800	---	---	2000	---
27	15000	16900	21100		16100	16100	20500	12700	---	91600	9430	---
28	14900	19900	21000		15100	11900	20500	13500	---	87600	15100	---
29	14100	20700	---		---	11000	19800	16600	---	77400	18600	---
30	15500	21900	---		---	11600	19700	16700	---	83300	---	---
31	14500	---	---		---	12900	---	18700	---	51700	17000	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19400				---	11400	13200	19200	19100	17800	2440	781
2	19600				---	8050	12600	17700	17400	18400	3760	500
3	19500				---	1550	14600	6220	16800	19600	5030	1060
4	20400				---	6630	14600	3430	18100	19700	7670	5360
5	19600				---	9190	12100	8230	20800	17300	9380	10100
6	19700				---	10800	13900	10200	20200	12800	12500	10100
7	---				---	14900	14700	8710	20300	15000	12000	5550
8	---				---	22200	17300	8750	18300	8560	12400	7630
9	---				---	22200	17300	9170	16100	9340	12700	9830
10	---				---	24100	17500	7300	12500	10900	13600	11900
11	---				---	20100	13200	7640	13900	12900	13100	14000
12	---				---	18900	13200	5830	13900	15100	13600	15400
13	---				---	19100	13900	6370	7930	17100	13000	15200
14	---				---	19800	16700	9010	10200	15600	14100	15400
15	---				---	20300	16900	10700	12800	14100	15500	15500
16	---				---	20600	19800	13100	17600	17800	16000	15400
17	---				---	18000	26200	14800	17100	17700	16300	15600
18	---				---	15100	17100	15700	16500	16800	17800	15400
19	---				---	---	15600	17400	18200	8070	15300	15300
20	---				---	---	15800	17000	19000	5180	17300	15200
21	---				---	4210	5170	18000	20600	9460	12200	15400
22	---				---	7540	12900	17900	19900	13900	17400	15100
23	---				23700	---	16400	22300	13300	15500	13800	14800
24	---				---	---	17800	20600	15900	25600	13400	14800
25	---				---	5440	17700	22200	13100	8940	8720	15200
26	---				---	7890	20600	13100	13800	8920	2060	15200
27	---				16500	12700	20500	12600	14800	9190	9470	15300
28	---				15300	12500	20600	13500	16300	8630	15000	15500
29	---				---	11000	20000	16500	16600	7890	18400	15100
30	---				---	11200	19500	16200	17100	6030	17800	15600
31	---				---	12500	---	18200	---	5160	17000	---

ARKANSAS RIVER BASIN

145

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	12.0	19.0				
2						---	10.0	19.5				
3						---	7.5	15.0				
4						---	9.0	12.5				
5						---	13.0	14.5				
6						---	14.5	17.5				
7						---	17.0	20.0				
8						13.5	18.0	22.5				
9						10.0	16.0	22.0				
10						9.5	13.5	18.5				
11						11.5	14.0	15.0				
12						13.0	15.0	15.5				
13						13.0	16.5	18.5				
14						12.5	18.0	20.5				
15						10.5	20.0	22.0				
16						8.5	20.5	22.0				
17						10.0	20.5	21.0				
18						14.0	18.5	21.5				
19						11.5	19.0	24.5				
20						11.5	18.0	24.5				
21						13.5	18.0	19.5				
22						15.0	19.0	19.0				
23						11.0	21.0	19.0				
24						9.5	21.5	---				
25						10.5	20.0	---				
26						12.5	19.0	---				
27						11.5	16.5	---				
28						15.0	13.5	---				
29						18.5	16.0	---				
30						17.5	18.5	---				
31						14.5	---	---				

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	690				---	500	540	690	680	650	280	240
2	690				---	420	530	650	640	670	320	240
3	690				---	260	580	370	630	690	350	250
4	710				---	380	580	310	600	700	410	350
5	690				---	450	520	420	720	640	450	470
6	700				---	480	560	470	710	530	530	470
7	---				---	580	580	430	710	560	510	360
8	---				---	760	640	440	660	430	520	410
9	---				---	760	640	450	610	450	530	460
10	---				---	800	640	400	530	490	550	510
11	---				---	710	540	410	560	530	540	560
12	---				---	680	540	370	560	590	540	590
13	---				---	680	560	380	420	640	540	590
14	---				---	700	630	440	470	600	560	590
15	---				---	710	630	480	530	560	600	600
16	---				---	720	700	540	650	650	610	590
17	---				---	660	850	580	640	650	620	600
18	---				---	590	640	600	620	630	650	590
19	---				---	---	600	640	660	420	590	590
20	---				---	---	600	630	680	350	640	590
21	---				---	330	350	660	720	450	520	590
22	---				---	410	530	650	700	560	640	590
23	---				790	---	620	760	540	600	560	560
24	---				---	---	650	720	610	840	550	580
25	---				---	360	700	760	540	440	430	590
26	---				---	410	720	540	560	440	280	590
27	---				620	530	720	530	580	450	450	590
28	---				590	530	720	550	620	430	580	600
29	---				---	490	700	620	620	410	670	590
30	---				---	490	690	610	640	420	650	600
31	---				---	530	---	660	---	350	630	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129.0				---	471.0	1210.0	456.0	1420.0	397.0	6680.0	2070.0
2	112.0				---	333.0	1190.0	758.0	1260.0	318.0	6330.0	3820.0
3	101.0				---	1510.0	1180.0	5790.0	1130.0	333.0	2700.0	1960.0
4	102.0				---	1340.0	1300.0	6990.0	1030.0	314.0	1580.0	559.0
5	95.0				---	1410.0	1180.0	9240.0	1210.0	270.0	1170.0	404.0
6	90.7				---	832.0	1120.0	7740.0	1220.0	394.0	1140.0	354.0
7	---				---	745.0	1120.0	3220.0	1160.0	1240.0	935.0	850.0
8	---				---	763.0	1100.0	2110.0	950.0	950.0	800.0	435.0
9	---				---	661.0	982.0	1700.0	1160.0	447.0	665.0	282.0
10	---				---	670.0	1010.0	1310.0	1120.0	324.0	656.0	251.0
11	---				---	550.0	1280.0	14700.0	4910.0	289.0	984.0	233.0
12	---				---	492.0	1160.0	7070.0	4010.0	268.0	1200.0	221.0
13	---				---	463.0	987.0	3450.0	1270.0	276.0	563.0	199.0
14	---				---	457.0	988.0	2100.0	1090.0	311.0	467.0	180.0
15	---				---	447.0	908.0	1630.0	859.0	212.0	444.0	175.0
16	---				---	447.0	996.0	1500.0	986.0	212.0	430.0	167.0
17	---				---	417.0	1310.0	1460.0	814.0	202.0	412.0	164.0
18	---				---	3110.0	899.0	1450.0	706.0	410.0	467.0	156.0
19	---				---	---	786.0	1530.0	643.0	2120.0	392.0	153.0
20	---				---	---	1130.0	1510.0	584.0	898.0	423.0	153.0
21	---				---	2770.0	1510.0	1820.0	630.0	495.0	369.0	147.0
22	---				---	5240.0	763.0	1830.0	2060.0	428.0	366.0	143.0
23	---				670.0	---	629.0	2540.0	881.0	645.0	387.0	138.0
24	---				---	---	586.0	4080.0	563.0	1450.0	359.0	132.0
25	---				---	2770.0	554.0	4490.0	615.0	3100.0	1740.0	131.0
26	---				---	1630.0	523.0	2130.0	617.0	9280.0	907.0	126.0
27	---				522.0	1750.0	503.0	1970.0	498.0	7590.0	306.0	123.0
28	---				515.0	1570.0	496.0	1510.0	660.0	3960.0	338.0	120.0
29	---				---	1290.0	478.0	1600.0	542.0	2510.0	327.0	115.0
30	---				---	1160.0	469.0	1360.0	475.0	1960.0	258.0	117.0
31	---				---	1150.0	---	1510.0	---	2260.0	451.0	---

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6600				---	3700	4300	6600	6500	6100	350	120
2	6700				---	2400	4100	6000	5900	6300	840	100
3	6700				---	160	4900	1800	5700	6700	1300	130
4	7000				---	1900	4900	720	6200	6800	2300	1400
5	6700				---	2900	3900	2500	7200	5900	2900	3200
6	6800				---	3500	4600	3200	6900	4200	4100	3200
7	---				---	5000	4900	2700	7000	5000	3900	1500
8	---				---	7700	5900	2700	6200	2600	4000	2300
9	---				---	7700	5900	2800	5400	2900	4200	3100
10	---				---	8400	5900	2200	4100	3500	4500	3900
11	---				---	6900	4300	2300	4600	4200	4300	4600
12	---				---	6500	4300	1600	4600	5000	4300	5200
13	---				---	6500	4600	1800	2400	5800	4300	5100
14	---				---	6800	5600	2800	3200	5200	4700	5200
15	---				---	7000	5700	3400	4200	4700	5200	5200
16	---				---	7100	6800	4300	6000	6100	5400	5200
17	---				---	6100	9200	4900	5800	6000	5500	5200
18	---				---	5000	5600	5300	5600	5700	6100	5200
19	---				---	---	5200	5900	6200	2400	5100	5100
20	---				---	---	5300	5800	6500	1400	5900	5100
21	---				---	1000	1400	6100	7100	3000	4000	5200
22	---				---	2200	4200	6100	6800	4600	5900	5000
23	---				8200	---	5500	7700	4400	5200	4600	4900
24	---				---	---	6100	7100	5300	8900	4400	4900
25	---				---	1500	6800	7700	4300	2800	2700	5100
26	---				---	2400	7100	4300	4600	2800	210	5100
27	---				5600	4200	7100	4100	4900	2900	3000	5100
28	---				5100	4100	7100	4500	5500	2600	5000	5200
29	---				---	3500	6900	5600	5600	2400	6300	5000
30	---				---	3600	6700	5500	5800	2400	6100	5200
31	---				---	4100	---	6200	---	1400	5800	---

CHLORIDE, DISSOLVED (TUNS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230				---	3490	9640	4370	13600	3720	8350	1030
2	1090				---	1910	9210	7000	11600	2990	16600	1590
3	977				---	929	9960	28200	10200	3240	10000	1020
4	1000				---	6720	11000	16200	9660	3050	8880	2240
5	923				---	9080	8890	55000	12100	2490	7520	2750
6	881				---	6070	9200	52700	11900	3120	8820	2410
7	---				---	6430	9460	20200	11500	10700	7150	3540
8	---				---	7730	10200	13000	8920	5740	6160	2440
9	---				---	6690	9050	10600	10200	2880	5270	1900
10	---				---	7030	9330	7190	8660	2320	5370	1920
11	---				---	5350	10200	82600	40400	2290	7840	1910
12	---				---	4700	9280	30600	32900	2270	9520	1950
13	---				---	4420	8110	16300	7260	2510	4480	1720
14	---				---	4440	8780	13400	7450	2700	3920	1590
15	---				---	4400	8220	11600	6800	1780	3850	1520
16	---				---	4410	9680	12000	9100	1990	3810	1470
17	---				---	3850	14200	12300	7380	1860	3650	1420
18	---				---	26300	8140	12800	6380	3710	4380	1380
19	---				---	---	6810	14100	6040	12100	3390	1320
20	---				---	---	9990	13900	5580	3590	3900	1320
21	---				---	8400	6050	16800	6210	3300	2840	1240
22	---				---	28100	6040	17160	20000	3510	3380	1220
23	---				6950	---	5580	25800	7180	5590	3180	1160
24	---				---	---	5500	40300	4890	15400	2870	1110
25	---				---	11500	5380	45500	4900	19700	10900	1130
26	---				---	9530	5160	17000	5070	59000	680	1090
27	---				4720	13800	15300	4970	4210	48900	2040	1060
28	---				4450	12200	4890	12400	5850	23900	2920	1040
29	---				---	9210	4710	14400	4900	14700	3080	972
30	---				---	8510	4560	12300	4310	11200	2420	1010
31	---				---	8890	---	14200	---	9030	4150	---

ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12200				---	6930	8120	12100	12000	11200	999	376
2	12400				---	4710	7720	11100	10900	11600	1870	300
3	12300				---	586	9040	3500	10500	12400	2710	452
4	12900				---	3770	9040	1650	11400	12400	4460	2930
5	12400				---	5460	7390	4830	13100	10800	5590	6070
6	12400				---	6530	8580	6130	12700	7850	7650	6070
7	---				---	9240	9110	5150	12800	9310	7320	3060
8	---				---	14100	10800	5170	11500	5050	7590	4430
9	---				---	14100	10800	5450	10000	5560	7790	5890
10	---				---	15300	11000	4210	7650	6600	8380	7260
11	---				---	12700	8120	4440	8580	7920	8050	8650
12	---				---	11900	8120	3240	8580	9370	7990	9570
13	---				---	12000	8580	3600	4630	10700	7990	9440
14	---				---	12500	10400	5350	6130	9710	8710	9570
15	---				---	12800	10600	6460	7850	8710	9640	9640
16	---				---	13000	12500	8050	11000	11200	9970	9570
17	---				---	11300	16700	9180	10700	11100	10200	9710
18	---				---	9370	10700	9770	10300	10500	11200	9570
19	---				---	---	9710	10900	11400	4720	9510	9510
20	---				---	---	9840	10600	12000	2810	10600	9440
21	---				---	2170	2810	11300	13000	5640	7460	9570
22	---				---	4570	7920	11200	12600	8580	10900	9370
23	---				15100	---	10200	14100	8180	9640	8510	9180
24	---				---	---	11200	13000	9900	16300	8250	9180
25	---				---	2980	12400	14100	8050	5300	5150	9440
26	---				---	4600	13000	8050	8510	5290	748	9440
27	---				10300	7790	12900	7720	9180	5460	5650	9510
28	---				9510	7650	13000	8320	10200	5090	9310	9640
29	---				---	6660	12600	10300	10400	4600	11600	9370
30	---				---	6790	12300	10100	10700	4700	11200	9710
31	---				---	7650	---	11400	---	2800	10600	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270				---	6530	18200	8000	25100	6830	23800	3240
2	2010				---	3740	17300	12900	21400	5510	37000	4780
3	1790				---	3400	18400	54800	18800	5990	20900	3540
4	1850				---	13300	20300	37200	17800	5560	17200	4680
5	1710				---	17100	16800	106000	22000	4550	14500	5210
6	1610				---	11300	17200	101000	21900	5830	16500	4570
7	---				---	11900	17600	38500	21000	20000	13400	7220
8	---				---	14200	18600	24800	16500	11200	11700	4700
9	---				---	12300	16600	20600	19000	5520	9780	3610
10	---				---	12800	17400	13800	16200	4370	10000	3570
11	---				---	9840	19200	159000	75300	4320	14700	3600
12	---				---	8610	17500	61900	61400	4250	17700	3590
13	---				---	8160	15100	32700	14000	4620	8330	3190
14	---				---	8170	16300	25600	14300	5030	7270	2920
15	---				---	8050	15300	22000	12700	3290	7130	2810
16	---				---	8070	17800	22400	16700	3660	7030	2710
17	---				---	7140	25700	23100	13600	3450	6770	2650
18	---				---	49300	15000	23500	11700	6830	8040	2530
19	---				---	---	12700	26000	11100	23800	6320	2460
20	---				---	---	18500	25300	10300	7210	7140	2450
21	---				---	18200	12100	31100	11400	6200	5300	2380
22	---				---	55800	11400	31400	37100	6560	6240	2280
23	---				12800	---	10400	47200	13300	10400	5880	2180
24	---				---	---	10100	73700	9140	28200	5390	2080
25	---				---	22900	9810	83400	9170	37300	20900	2090
26	---				---	18300	9440	31700	9370	112000	2420	2010
27	---				8680	25700	9020	26800	7880	92100	3840	1980
28	---				8290	22700	8950	22900	10900	46900	5430	1930
29	---				---	17500	26500	9100	28200	5670	1820	1820
30	---				---	16100	8370	22500	7940	22000	4450	1890
31	---				---	16600	---	26100	---	18100	7580	---

ARKANSAS RIVER BASIN

149

07159720 COTTONWOOD CREEK NEAR NAVINA, OK

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

DRAINAGE AREA.--247 mi² (640 km²).

WATER-DISCHARGE RECORDS

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,890 ft³/s (81.8 m³/s) May 29, 1978 gage height, 20.34 ft (6.200 m); minimum daily, 8.0 ft³/s (0.23 m³/s) Oct. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft³/s (62 m³/s) at 1700 May 4, gage height, 20.28 ft (6.181 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily discharge, 8.4 ft³/s (0.24 m³/s) Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	15	12	16	23	56	31	26	56	54	239
2	14	12	15	13	16	20	48	30	24	46	31	147
3	14	13	15	13	16	32	36	595	24	41	25	99
4	12	14	20	12	16	43	40	1890	26	35	22	35
5	11	18	17	13	17	35	38	977	25	32	16	33
6	12	17	15	14	17	31	36	237	26	66	20	89
7	11	30	17	16	17	28	28	162	91	109	14	107
8	35	15	15	16	17	25	30	122	59	58	11	51
9	136	15	14	17	17	22	29	99	463	44	9.3	35
10	53	15	14	18	18	22	75	87	593	36	9.4	29
11	32	15	16	19	21	20	1010	72	128	32	10	25
12	26	15	17	19	37	19	377	62	87	28	15	29
13	18	17	18	19	40	21	197	55	48	24	16	26
14	15	18	19	18	27	22	122	50	39	19	9.6	20
15	14	50	20	20	39	18	87	45	29	19	8.6	21
16	12	75	16	21	35	17	68	38	31	18	8.8	19
17	11	47	15	23	29	18	51	36	32	43	8.5	18
18	11	25	16	114	26	21	41	35	28	58	10	22
19	9.9	18	16	587	23	28	48	48	26	75	13	20
20	9.3	16	17	112	26	24	221	42	27	64	14	16
21	8.4	15	17	48	28	22	96	64	375	38	23	15
22	9.4	15	14	32	29	428	79	138	834	28	37	16
23	10	15	13	25	34	551	60	87	1110	25	24	15
24	11	16	13	18	31	159	48	57	380	29	19	14
25	11	17	13	22	23	91	43	45	630	30	12	14
26	12	38	12	21	22	64	38	37	626	28	109	19
27	11	64	12	19	21	48	33	33	202	24	52	22
28	11	25	12	18	22	43	38	30	123	20	24	21
29	11	19	13	17	---	43	35	29	93	17	15	20
30	15	19	13	17	---	37	34	32	72	15	11	22
31	13	---	13	17	---	31	---	30	---	29	12	---
TOTAL	592.0	700	472	1350	680	2006	3142	5295	6277	1186	663.2	1258
MEAN	19.1	23.3	15.2	43.5	24.3	64.7	105	171	209	38.3	21.4	41.9
MAX	136	75	20	587	40	551	1010	1890	1110	109	109	239
MIN	8.4	12	12	12	16	17	28	29	24	15	8.5	14
AC-FT	1170	1390	936	2680	1350	3980	6230	10500	12450	2350	1320	2500
CAL YR 1978	TOTAL	20908.0	MEAN	57.3	MAX	2320	MIN	8.4	AC-FT	41470		
WTR YR 1979	TOTAL	23621.2	MEAN	64.7	MAX	1890	MIN	8.4	AC-FT	46850		

ARKANSAS RIVER BASIN

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURE: October 1977 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT											
30...	1400	16	1310	7.2	15.0	4.3	44	300	130	63	34
NOV											
14...	1130	18	1300	7.1	11.0	3.1	29	280	150	61	32
DEC											
19...	1615	16	1400	6.9	10.0	11.8	109	340	140	78	36
JAN											
18...	1524	114	1100	7.3	--	6.0	59	290	150	67	30
FEB											
22...	1050	28	1130	7.5	5.0	8.4	67	340	160	80	33
MAR											
27...	1715	47	990	7.3	13.5	9.0	86	310	130	75	30
APR											
11...	1500	1210	492	7.9	14.0	7.3	77	150	69	36	14
MAY											
08...	1530	117	1000	7.4	22.5	6.6	78	330	130	80	32
JUN											
13...	0915	50	930	7.6	22.0	3.0	35	290	110	66	30
JUL											
02...	1345	47	1300	7.7	26.0	4.2	53	470	200	120	41
AUG											
06...	1515	20	1400	7.8	28.0	4.7	62	410	200	95	43
SEP											
10...	1050	30	798	7.6	21.5	4.9	58	230	110	55	22

DATE	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)
OCT											
30...	150	51	3.8	--	12	210	0	170	21	210	180
NOV											
14...	140	50	3.6	--	12	160	0	130	20	240	160
DEC											
19...	150	48	3.5	--	11	--	--	200	--	260	160
JAN											
18...	100	42	2.6	--	8.0	--	--	140	--	200	130
FEB											
22...	100	39	2.4	--	6.3	--	--	180	--	240	99
MAR											
27...	88	38	2.2	--	6.1	--	--	180	--	190	94
APR											
11...	39	36	1.4	--	4.2	--	--	79	--	97	37
MAY											
08...	78	33	1.9	--	5.2	--	--	200	--	170	84
JUN											
13...	77	36	2.0	82	5.4	--	--	180	--	170	79
JUL											
02...	92	30	1.9	98	6.3	--	--	270	--	240	110
AUG											
06...	150	57	3.2	160	8.3	--	--	210	--	--	150
SEP											
10...	76	41	2.2	84	7.9	--	--	120	--	160	77

ARKANSAS RIVER BASIN

151

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
UCT											
30...	.5	11	785	778	1.07	33.9	.95	4.2	.15	.49	1.1
NOV											
14...	.5	11	800	738	1.09	38.9	.61	2.7	.01	.03	.62
DEC											
19...	.4	11	827	843	1.12	35.7	1.1	4.8	.12	.39	1.2
JAN											
18...	.4	9.8	683	640	.93	210	.38	1.7	.13	.43	.51
FEB											
22...	.4	13	711	689	.97	53.8	.42	1.9	.03	.10	.45
MAR											
27...	.4	11	611	627	.83	77.5	4.4	19	.10	.33	4.5
APR											
11...	.3	8.5	302	288	.41	987	.46	2.0	.06	.20	.52
MAY											
08...	.3	11	636	586	.87	201	.66	2.9	.11	.36	.77
JUN											
13...	.4	14	607	554	.83	81.9	.62	2.7	.15	.49	.77
JUL											
02...	.4	18	796	795	1.08	101	.80	3.5	.30	.99	1.1
AUG											
06...	.5	16	826	--	1.12	44.6	.58	2.6	.36	1.2	.94
SEP											
10...	.4	12	510	488	.69	41.3	.75	3.3	.21	.69	.96

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
OCT											
30...	6.7	8.6	4.3	11	--	6.100	0	2	440	2	0
NOV											
14...	.04	.05	7.6	7.6	--	3.700	--	--	--	--	--
DEC											
19...	8.8	11	.00	8.6	9.8	4.800	--	--	--	--	--
JAN											
18...	6.8	8.8	1.3	8.1	8.6	3.200	--	--	--	--	--
FEB											
22...	5.3	6.8	1.0	6.3	6.8	3.700	0	2	450	0	0
MAR											
27...	2.9	3.7	1.0	3.9	8.4	1.700	0	4	390	<1	0
APR											
11...	1.2	1.5	1.5	2.7	3.2	.200	300	2	200	1	0
MAY											
08...	1.2	1.5	.70	1.9	2.7	.640	100	5	370	0	20
JUN											
13...	1.7	2.2	.80	2.5	3.3	.360	0	6	380	10	10
JUL											
02...	1.9	2.4	2.4	4.3	5.4	.950	--	--	--	--	--
AUG											
06...	--	--	--	5.0	5.9	4.000	0	4	480	0	0
SEP											
10...	2.9	3.7	1.7	4.6	5.6	.050	300	4	320	<1	10

ARKANSAS RIVER BASIN

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
OCT 30...	4	0	0	200	.0	7	--	0	--	8.8	2.5
NOV 14...	--	--	--	--	--	--	--	--	--	13	1.2
DEC 19...	--	--	--	--	--	--	--	--	--	10	1.5
JAN 18...	--	--	--	--	--	--	--	--	--	11	5.2
FEB 22...	10	40	0	250	.0	0	1	20	--	--	--
MAR 27...	<10	30	<10	200	.0	0	1	5	--	--	--
APR 11...	17	40	<10	40	.1	0	1	10	--	8.6	2.3
MAY 08...	0	50	0	130	.2	0	1	20	9.3	--	.7
JUN 13...	14	80	<10	200	.1	0	1	20	--	6.1	--
JUL 02...	--	--	--	--	--	--	--	--	--	8.6	--
AUG 06...	0	130	<10	390	.2	0	1	10	16	--	--
SEP 10...	<10	10	<10	190	.1	0	1	<3	--	--	--

07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHDS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1240	1250	1210	---	---	1240	767	1310	1310	1190	1100	494
2	1240	1270	1210	---	---	1240	1110	1290	1360	1250	1130	393
3	1280	---	1250	---	---	---	---	---	1380	1320	1280	574
4	1280	1280	1260	---	---	1160	1140	336	1380	---	1330	677
5	1280	1310	1290	---	---	1120	1160	---	1380	1340	1350	---
6	1280	---	---	---	---	1170	1200	---	1420	1240	1370	212
7	1280	1320	1280	---	---	1190	1220	931	843	813	---	648
8	1220	1190	1260	---	---	---	1270	1020	---	936	1370	670
9	---	1120	1270	---	---	1220	1280	1050	538	1130	1380	730
10	789	1260	1320	---	---	---	---	---	565	1190	---	862
11	869	1280	1340	---	---	---	527	1160	777	1190	1380	910
12	919	1270	1330	---	---	1270	653	1230	880	1280	1390	1020
13	976	1280	1350	---	---	1290	701	1280	961	1260	1330	1170
14	1040	1270	1330	---	1080	1300	773	1290	1090	1350	1280	1190
15	1100	---	1320	---	---	1280	898	1340	1180	1380	1250	1200
16	1160	---	1300	---	1020	1290	966	1340	1200	1380	1330	1210
17	1190	903	1320	---	---	1310	1020	---	---	1380	1360	1250
18	1220	942	1340	---	---	---	1100	---	1190	803	1390	1210
19	1220	1030	1320	---	---	1330	1100	---	1180	934	1370	1300
20	1260	1110	1340	---	---	1320	463	---	---	942	1380	1240
21	1270	1170	1350	820	1170	1260	597	1290	311	988	1370	1230
22	---	---	1340	898	1120	1260	932	909	375	---	---	1300
23	1260	1220	1320	---	1140	469	1020	1040	495	1210	1290	1330
24	1290	1250	1330	---	1150	789	1130	1130	662	1180	---	1320
25	1290	1260	1350	---	1160	839	1200	1200	534	1260	---	1340
26	1310	---	1360	1040	1180	932	---	1240	560	1290	680	1300
27	1300	707	1380	---	1230	988	1260	1290	---	1310	899	1270
28	1310	983	1390	---	1260	1040	---	1330	895	1340	1050	1180
29	1320	---	1360	---	---	1080	1250	1360	1030	1330	1140	1160
30	1350	1150	---	---	---	1100	1330	1390	1120	1380	1220	1140
31	1340	---	---	---	---	1150	---	1280	---	1360	1240	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

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

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR. -Maximum discharge, 4,480 ft³/s (127 m³/s) at 0715 May 4, gage height, 20.22 ft (6.163 m), no other peaks above base of 3,000 ft³/s (85.0 m³/s); minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 7.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	25	20	29	33	63	41	41	82	63	468
2	16	19	23	21	21	31	72	42	40	70	48	212
3	16	19	23	22	20	38	51	677	38	62	44	176
4	15	18	23	21	30	65	48	3300	38	58	37	81
5	14	18	25	21	26	49	53	1950	38	53	32	64
6	14	26	21	24	26	42	46	364	37	87	32	79
7	13	44	21	24	27	39	42	228	153	142	28	154
8	17	34	21	24	27	35	39	171	96	82	26	75
9	197	24	22	23	26	33	41	139	702	63	24	50
10	79	22	20	24	26	31	60	117	1240	55	23	39
11	44	22	20	24	27	29	1120	105	263	49	23	34
12	37	22	22	28	69	29	589	90	134	45	28	33
13	27	23	23	29	71	29	230	81	89	42	29	38
14	23	22	24	31	51	30	136	74	67	36	24	29
15	21	80	26	27	53	29	98	68	54	35	23	30
16	20	111	24	32	66	27	77	61	47	35	23	27
17	19	89	22	32	58	27	64	56	50	42	22	26
18	19	60	21	124	35	29	59	55	44	74	23	27
19	19	38	22	901	40	36	66	65	43	72	26	27
20	18	31	23	194	48	38	271	65	41	79	27	25
21	17	29	23	82	42	34	715	85	427	54	31	24
22	16	29	21	59	42	408	145	211	1120	46	74	24
23	16	29	20	49	43	860	90	121	1480	44	46	24
24	18	29	20	43	47	207	69	82	574	45	37	27
25	20	28	20	38	40	111	59	66	943	48	28	24
26	18	29	19	40	34	79	54	58	973	45	90	28
27	18	105	18	38	34	64	46	52	283	40	74	30
28	18	42	19	33	33	60	47	49	169	37	42	30
29	18	29	18	28	---	60	49	46	127	32	32	28
30	18	27	18	26	---	54	42	45	102	30	27	29
31	26	---	18	27	---	47	---	47	---	35	65	---
TOTAL	848	1118	665	2109	1091	2683	4541	8611	9453	1719	1151	1962
MEAN	27.4	37.3	21.5	68.0	39.0	86.5	151	278	315	55.5	37.1	65.4
MAX	197	111	26	901	71	860	1120	3300	1480	142	90	468
MIN	13	18	18	20	20	27	39	41	37	30	22	24
AC-FT	1680	2220	1320	4180	2160	5320	9010	17080	18750	3410	2280	3890
CAL YR 1978	TOTAL	27728	MEAN	76.0	MAX	3360	MIN	13	AC-FT	55000		
WTR YR 1979	TOTAL	35951	MEAN	98.5	MAX	3300	MIN	13	AC-FT	71310		

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1973 to current year.

WATER TEMPERATURE: February 1973 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, 1,610 micromhos Jan. 3, 1974; minimum daily, 132 micromhos Nov. 4, 1974.

WATER TEMPERATURE: Maximum daily, 28.0°C July 15, 1978; minimum daily, 0.0°C Jan. 7, 8, 9, 11, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,430 micromhos Jan. 4-5, 9-10; minimum daily, 203 micromhos May 4.

WATER TEMPERATURE: Maximum daily, 27.0°C July 16, 30; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
OCT											
10...	0735	--	80020	87	524	7.3	18.0	--	--	--	--
18...	0825	--	80020	18	1110	8.0	15.0	--	--	--	--
30...	1100	--	80020	18	1500	7.2	14.0	--	7.0	69	43
30...	1101	1028	9740	17	1500	7.2	14.0	34	7.0	69	45
31...	0735	--	80020	23	1300	7.1	13.0	--	--	--	--
NOV											
08...	0755	--	80020	36	1350	7.0	13.0	--	--	--	--
11...	0755	--	80020	22	1180	7.0	13.0	--	--	--	--
14...	1030	1028	9740	22	1200	7.3	11.0	21	3.8	35	--
16...	0845	--	80020	108	704	7.6	8.0	--	--	--	--
DEC											
01...	0840	--	80020	27	1140	7.3	9.0	--	--	--	--
12...	0810	--	80020	21	1250	6.9	1.0	--	--	--	--
16...	1500	1028	9740	24	1300	--	12.5	4.0	10.3	101	36
16...	1501	--	80020	24	1300	--	12.5	--	10.3	101	53
29...	0750	--	80020	18	1370	7.7	7.0	--	--	--	--
JAN											
04...	0840	--	80020	21	1430	8.0	.0	--	--	--	--
18...	1320	1028	9740	114	1450	7.5	2.0	11	6.9	51	56
18...	1321	--	80020	114	1450	7.5	2.0	--	6.9	51	68
19...	0745	--	80020	1120	350	7.1	3.0	--	--	--	--
28...	0845	--	80020	28	1050	8.1	1.0	--	--	--	--
FEB											
05...	1645	--	--	34	--	--	.0	--	--	--	--
09...	0800	--	80020	40	1260	6.9	.0	--	--	--	--
16...	0835	--	80020	66	1000	7.7	.0	--	--	--	--
21...	1340	1028	9740	42	1300	--	5.0	--	10.7	84	50
21...	1341	--	80020	42	1300	--	5.0	7.0	10.7	84	34
25...	0800	--	80020	44	1130	7.5	4.0	--	--	--	--
MAR											
06...	0735	--	80020	42	1150	8.8	6.0	--	--	--	--
12...	1555	--	--	29	--	--	12.0	--	--	--	--
20...	0745	--	80020	42	1300	8.6	12.0	--	--	--	--
23...	0725	--	80020	1170	608	8.0	13.0	--	--	--	--
27...	1530	--	80020	64	950	7.5	13.0	--	8.2	77	39
27...	1531	1028	9740	63	950	7.5	13.0	59	8.2	77	48
APR											
04...	0715	--	80020	45	1150	8.4	9.0	--	--	--	--
09...	1525	--	--	39	--	--	16.0	--	--	--	--
11...	0710	--	80020	996	335	7.8	14.0	--	--	--	--
11...	1715	1028	9740	1430	320	7.6	14.0	--	6.8	71	59
21...	0630	--	80020	1130	375	7.9	14.0	--	--	--	--
MAY											
01...	1600	--	--	38	--	--	17.0	--	--	--	--
04...	0735	--	80020	4480	203	7.2	14.0	--	--	--	--
08...	1320	1028	9740	169	920	7.6	22.0	--	6.3	75	43

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
MAY												
08...	1321	--	80020	169	920	7.6	22.0	59	6.3	75	28	--
20...	0710	--	80020	67	1390	8.2	21.0	--	--	--	--	--
23...	0740	--	80020	130	866	7.9	19.0	--	--	--	--	--
JUN												
06...	0745	--	80020	37	1420	7.9	21.0	--	--	--	--	--
13...	0730	--	80020	97	831	7.4	21.0	--	--	--	--	--
13...	1045	1028	9740	90	840	7.6	24.0	--	3.6	44	--	34
13...	1046	--	80020	90	840	7.6	24.0	110	3.6	44	30	--
26...	0750	--	80020	1150	311	7.6	22.0	--	--	--	--	--
JUL												
02...	0710	--	80020	68	1170	7.6	25.0	--	--	--	--	--
02...	1230	1028	9740	71	1200	7.7	27.0	38	4.8	62	27	--
02...	1231	--	80020	71	1200	7.7	27.0	--	4.8	62	--	29
05...	1300	--	--	54	--	--	26.0	--	--	--	--	--
08...	0700	--	80020	92	786	7.3	25.0	--	--	--	--	--
18...	0645	--	80020	91	1360	7.2	26.0	--	--	--	--	--
AUG												
06...	0650	--	80020	28	1340	8.1	26.0	--	--	--	--	--
06...	1120	--	80020	27	1400	7.9	26.5	--	3.2	42	--	40
06...	1121	1028	9740	27	1400	7.9	26.5	56	3.2	42	33	--
06...	1530	--	--	36	--	--	27.0	--	--	--	--	--
23...	0735	--	80020	48	1060	7.2	23.0	--	--	--	--	--
27...	0750	--	80020	78	706	7.6	23.0	--	--	--	--	--
SEP												
01...	0740	--	80020	492	225	7.4	22.0	--	--	--	--	--
10...	0740	--	80020	39	742	7.6	22.0	--	--	--	--	--
10...	1355	--	80020	37	850	7.5	23.0	--	4.5	54	--	44
10...	1445	1028	9740	37	--	--	23.0	--	--	--	--	--
28...	0745	--	80020	30	1310	7.0	21.0	--	--	--	--	--

DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DIS-SOLVED (MG/L AS Ca)	CALCIUM DIS-SOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
OCT											
10...	140	62	--	36	--	--	13	--	48	41	1.7
18...	260	140	--	59	--	--	27	--	120	49	3.2
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	280	160	--	61	--	--	31	--	140	51	3.6
NOV											
08...	290	170	--	64	--	--	32	--	160	53	4.1
11...	290	150	--	62	--	--	32	--	130	48	3.3
14...	--	--	--	--	375	--	--	--	--	--	--
16...	130	40	--	24	--	--	18	--	120	64	4.5
DEC											
01...	300	140	--	67	--	--	31	--	120	46	3.0
12...	310	150	--	69	--	--	34	--	130	47	3.2
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
29...	330	170	--	73	--	--	36	--	140	47	3.4
JAN											
04...	--	--	--	--	--	--	38	--	160	--	--
18...	--	--	93	--	233	40	--	145	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	8.5	--	28	--	--
28...	--	--	--	--	--	--	30	--	97	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
09...	360	190	--	86	--	--	35	--	120	41	2.8
16...	290	140	--	71	--	--	28	--	97	41	2.5
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
25...	340	160	--	83	--	--	33	--	110	41	2.6
MAR											
06...	340	160	--	83	--	--	33	--	95	37	2.2
12...	--	--	--	--	--	--	--	--	--	--	--
20...	340	140	--	76	--	--	37	--	130	45	3.1
23...	200	91	--	51	--	--	18	--	47	33	1.4
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	57	--	187	40	--	--	--	--	--

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ALU- MINI- UM RATIO
APR											
04...	350	150	--	81	--	--	35	--	100	38	2.3
09...	--	--	--	--	--	--	--	--	--	--	--
11...	100	32	--	26	--	--	9.2	--	26	34	1.1
11...	--	--	--	--	--	--	--	--	--	--	--
21...	130	41	--	32	--	--	11	--	27	31	1.1
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	77	--	--	35	--	--	--	--	--
20...	460	190	--	110	--	--	46	--	120	36	2.4
23...	280	110	--	64	--	--	29	--	--	--	--
JUN											
06...	440	180	--	100	--	--	45	--	130	39	2.7
13...	280	99	--	67	--	--	27	--	64	33	1.7
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
26...	100	27	--	26	--	--	8.9	--	20	29	.9
JUL											
02...	400	140	--	94	--	--	39	--	92	33	2.0
02...	--	--	77	--	192	41	--	102	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
08...	260	95	--	61	--	--	25	--	62	34	1.7
18...	410	170	--	95	--	--	41	--	120	39	2.6
AUG											
06...	360	150	--	81	--	--	39	--	140	45	3.2
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
23...	250	130	--	58	--	--	26	--	120	50	3.3
27...	220	86	--	57	--	--	18	--	62	48	1.7
SEP											
01...	67	11	--	17	--	--	5.9	--	17	44	.9
10...	220	76	--	52	--	--	21	--	71	53	2.1
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
28...	290	140	--	64	--	--	31	--	140	50	3.6
DATE	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
UCT											
10...	--	--	5.5	99	0	81	7.9	110	58	--	327
18...	--	--	11	150	0	120	2.4	180	150	--	687
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	.7	--
31...	--	--	13	150	0	120	19	200	180	--	791
NOV											
08...	--	--	11	--	--	120	--	220	200	--	818
11...	--	--	13	--	--	140	--	220	150	--	728
14...	--	--	--	--	--	--	--	--	--	.7	--
16...	--	--	9.1	--	--	94	--	140	130	--	432
DEC											
01...	--	--	9.4	--	--	160	--	200	140	--	714
12...	--	--	9.8	--	--	160	--	200	160	--	766
16...	--	--	--	--	--	--	--	--	--	.5	--
16...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	11	--	--	160	--	240	170	--	845
JAN											
04...	--	--	12	--	--	160	--	260	170	--	908
18...	--	10	--	--	--	--	--	--	--	.5	--
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	5.9	--	--	64	--	43	29	--	203
28...	--	--	7.7	--	--	170	--	180	110	--	698
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	8.5	--	--	170	--	240	130	--	794
16...	--	--	6.6	--	--	150	--	180	110	--	628
21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	.4	--
25...	120	--	6.9	--	--	180	--	210	110	--	711

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM- DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECQV- FABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAR											
06...	100	--	7.0	--	--	180	--	220	120	--	763
12...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	8.5	--	--	200	--	230	140	--	847
23...	52	--	4.5	--	--	110	--	140	44	--	382
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	.4	--
APR											
04...	110	--	7.7	--	--	200	--	210	120	--	722
09...	--	--	--	--	--	--	--	--	--	--	--
11...	30	--	3.9	--	--	71	--	55	23	--	196
11...	--	--	--	--	--	--	--	--	--	--	--
21...	32	--	4.7	--	--	84	--	--	32	--	229
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	48	--	18	14	--	135
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	.3	--
20...	130	--	7.6	--	--	270	--	240	150	--	889
23...	27	--	4.9	--	--	170	--	140	76	--	539
JUN											
06...	140	--	6.3	--	--	260	--	270	150	--	914
13...	69	--	4.6	--	--	180	--	150	71	--	509
13...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	.3	--
26...	25	--	4.7	--	--	75	--	37	23	--	187
JUL											
02...	98	--	6.2	--	--	260	--	200	110	--	760
02...	--	7.0	--	--	--	--	--	--	--	.3	--
02...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
08...	67	--	5.0	--	--	160	--	140	70	--	483
18...	130	--	8.2	--	--	240	--	260	150	--	867
AUG											
06...	150	--	9.1	--	--	210	--	240	160	--	844
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	.5	--
06...	--	--	--	--	--	--	--	--	--	--	--
23...	130	--	9.7	--	--	120	--	190	130	--	667
27...	67	--	5.3	--	--	130	--	160	51	--	448
SEP											
01...	21	--	4.2	--	--	56	--	17	20	--	146
10...	77	--	6.2	--	--	140	--	110	73	--	441
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
28...	150	--	11	--	--	150	--	190	170	--	796

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	SOLIDS, DIS- SOLVED (TONS PER AC=FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NH2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PU4)
OCT											
10...	.44	76.8	--	--	--	--	--	--	1.000	--	--
18...	.93	33.4	--	--	--	--	--	--	3.700	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	79	--	--	10	--	--	--	--	--
31...	1.08	49.1	--	--	--	--	--	--	5.300	--	--
NOV											
08...	1.11	79.5	--	--	--	--	--	--	7.400	--	--
11...	.99	43.2	--	--	--	--	--	--	4.300	--	--
14...	--	--	34	1.3	--	9.4	11	47	--	--	--
16...	.59	126	--	--	--	--	--	--	2.000	--	--
DEC											
01...	.97	52.1	--	--	--	--	--	--	--	--	--
12...	1.04	43.4	--	--	--	--	--	--	--	--	--
16...	--	--	5	>10	--	10	--	--	--	--	--
16...	--	--	--	--	1.9	--	--	--	4.500	--	--
29...	1.15	41.1	--	--	--	--	--	--	--	--	--
JAN											
04...	--	51.5	--	--	--	--	--	--	--	--	--
18...	--	--	46	.50	--	15	15	69	--	--	--
18...	--	--	--	--	1.0	--	--	--	6.700	--	--
19...	--	614	--	--	--	--	--	--	--	--	--
28...	--	52.8	--	--	--	--	--	--	--	--	--
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
09...	1.08	85.8	--	--	--	--	--	--	--	--	--
16...	.85	112	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	1.1	--	--	--	3.400	--	--
21...	--	--	18	1.2	--	7.8	9.0	40	--	--	--
25...	.97	84.5	--	--	--	--	--	--	--	--	--
MAR											
06...	1.04	86.5	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
20...	1.15	96.0	--	--	--	--	--	--	--	--	--
23...	.52	1210	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	1.5	--	--	--	1.400	--	--
27...	--	--	302	1.2	--	4.1	5.3	23	--	--	--
APR											
04...	.98	87.7	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
11...	.27	527	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	.87	--	--	--	.610	1.9	1.9
21...	.31	699	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	1.1	--	--	--	--	.760	2.3	2.3
08...	--	--	172	1.5	--	2.4	4.0	17	--	--	--
20...	1.21	161	--	--	--	--	--	--	--	--	--
23...	--	189	--	--	--	--	--	--	--	--	--
JUN											
06...	1.24	91.3	--	--	--	--	--	--	--	--	--
13...	.69	133	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	1.2	--	--	--	.400	1.2	1.2
13...	--	--	151	1.9	--	2.7	4.6	20	--	--	--
26...	.25	581	--	--	--	--	--	--	--	--	--
JUL											
02...	1.03	140	--	--	--	--	--	--	--	--	--
02...	--	--	117	1.7	--	3.0	4.7	21	--	--	--
02...	--	--	--	--	1.5	--	--	--	.040	--	.12
05...	--	--	--	--	--	--	--	--	--	--	--
08...	.66	120	--	--	--	--	--	--	--	--	--
18...	1.18	213	--	--	--	--	--	--	--	--	--
AUG											
06...	1.15	63.8	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	3.0	--	--	--	4.100	--	13
06...	--	--	110	3.6	--	2.8	6.4	28	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
23...	.91	86.4	--	--	--	--	--	--	--	--	--
27...	.61	94.3	--	--	--	--	--	--	--	--	--
SEP											
01...	.20	194	--	--	--	--	--	--	--	--	--
10...	.60	46.4	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	2.5	--	--	--	3.500	--	11
10...	--	--	--	--	--	--	--	--	--	--	--
28...	1.08	64.5	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

DATE	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
NOV									
14...	--	--	--	--	--	--	--	--	--
DEC									
16...	6.0	--	--	--	--	95	--	--	--
JAN									
18...	--	--	--	--	--	--	--	--	--
18...	40	--	--	--	--	89	--	--	--
FEB									
05...	23	--	--	--	--	92	--	--	--
21...	18	--	--	--	--	70	--	--	--
MAR									
12...	20	--	--	--	--	60	--	--	--
27...	51	--	--	--	--	92	--	--	--
27...	--	--	--	--	--	--	--	--	--
APR									
09...	29	--	--	--	--	95	--	--	--
11...	7880	--	--	--	--	75	--	--	--
MAY									
01...	20	--	--	--	--	96	--	--	--
08...	79	--	--	--	--	90	--	--	--
08...	--	--	--	--	--	--	--	--	--
JUN									
13...	49	--	--	--	--	97	--	--	--
JUL									
02...	--	--	--	--	--	--	--	--	--
02...	40	--	--	--	--	96	--	--	--
AUG									
06...	22	--	--	--	--	94	--	--	--
06...	12	--	--	--	--	96	98	99	100
SEP									
10...	27	--	--	--	--	100	--	--	--
10...	--	74	73	88	92	97	99	100	--

DATE	TIME	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)
OCT									
30...	1100	.0	.00	.0	.00	.00	.00	.61	.01
FEB									
21...	1340	.0	.00	.0	.00	.00	.00	.08	.00
MAY									
08...	1320	.0	.00	.0	.00	.00	.00	.06	.00
AUG									
06...	1120	.0	.00	.0	.00	.00	.00	.19	.00

DATE	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT									
30...	.00	.00	.00	.00	.00	.13	.02	.00	.00
FEB									
21...	.00	.00	.00	.00	.00	.01	.00	.00	.00
MAY									
08...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG									
06...	.00	.00	.00	.00	.00	.01	.00	.00	.00

DATE	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT								
30...	.00	.00	.00	0	.00	.00	.00	.00
FEB								
21...	.00	.00	.00	0	.00	.08	.02	.04
MAY								
08...	.00	.00	.00	0	.00	.00	.02	.04
AUG								
06...	.00	.00	.00	0	.00	.00	.00	.00

ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1270	1140	1340	1220	1230	1090	1320	1330	1110	1340	225
2	1230	1270	1160	1410	1240	1250	842	1330	1330	1170	1160	535
3	1240	1250	1180	1420	1230	1220	1170	955	1370	1160	1140	554
4	1240	1270	1200	1430	1230	1230	1150	203	1380	1260	1280	567
5	1260	1290	1220	1430	1230	1200	1190	394	1400	1300	1320	623
6	1270	1260	1220	1420	1210	1150	1210	682	1420	1290	1340	815
7	1260	1290	1240	1420	1220	1190	1240	816	1410	1170	1320	361
8	1250	1350	1220	1420	1230	1200	1250	946	734	788	1320	654
9	776	1310	1230	1430	1260	1180	1260	1000	538	905	1270	680
10	524	1100	1230	1430	1240	1180	1250	1080	368	1060	1290	742
11	744	1180	1230	1420	1240	1170	320	1140	593	1110	1270	810
12	824	1260	1250	1420	1220	1180	557	1180	734	1180	1300	870
13	874	1270	1250	1350	1240	1200	674	1250	831	1170	1320	966
14	903	1270	1290	1360	1020	1220	717	1290	909	1180	1340	1100
15	972	1210	1300	1380	1040	1260	801	1310	1020	1220	1310	1140
16	1040	704	1340	1400	1000	1260	915	1340	1140	1280	1220	1180
17	1100	978	1330	1350	1020	1250	980	1360	1170	1320	1280	1200
18	1110	1000	1320	1280	1100	1280	1020	1370	1190	1360	1310	1210
19	1150	953	1340	350	1120	1280	1080	1370	1180	930	1340	1240
20	1160	986	1340	644	1110	1300	1140	1390	1250	1060	1310	1240
21	1150	1020	1320	746	1140	1300	375	1330	1250	1040	1340	1220
22	1170	1090	1340	782	1140	970	690	1240	488	1000	983	1230
23	1200	1100	1340	851	1090	608	868	866	357	1130	1060	1250
24	1200	1120	1320	927	1090	734	943	981	596	1230	1250	1250
25	1170	1130	1320	964	1130	786	1040	1060	366	1200	1260	1210
26	1250	1160	1320	969	1160	853	1120	1120	311	1220	1130	1290
27	1270	1160	1330	997	1160	921	1150	1180	634	1250	706	1300
28	1280	782	1360	1050	1210	965	1210	1250	788	1260	856	1310
29	1280	973	1370	1120	---	1020	1240	1290	939	1290	994	1240
30	1280	1080	1360	1140	---	1060	1300	1170	1050	1300	1060	1200
31	1300	---	1370	1190	---	1090	---	1340	---	1280	1120	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

07160000 CIMARRON RIVER NEAR GUTHRIE, OK

LOCATION.--Lat 35°55'10", long 97°25'35", in NE¼SE¼ sec.29, T.17 N., R.2 W., Logan County, Hydrologic Unit 11050002, on left bank 125 ft (38.1 m) upstream from the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.2 mi (1.9 km) downstream from Cottonwood Creek, 2.5 mi (4.0 km) north of Guthrie, 6.5 mi (10.5 km) upstream from Skeleton Creek, and at mile 121.8 (196.0 km).

DRAINAGE AREA.--16,892 mi² (48,750 km²) of which 4,926 mi² (12,758 km²) is probably noncontributing..

PERIOD OF RECORD.--Water years 1949, 1953-63, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)
OCT 31...	1230	4030	8.1	19.0	13	9.4	103	63	1105	287	718	93
NOV 15...	0900	2000	7.5	5.0	40	12.0	98	89	--	--	--	--
DEC 19...	1330	9950	8.5	13.0	5.0	10.9	110	98	830	210	525	74
JAN 18...	1115	8600	7.4	.0	3.0	11.7	85	31	--	--	--	--
FEB 21...	1120	20000	--	2.0	30	13.1	103	29	895	210	525	72
MAR 27...	1440	6500	7.7	14.0	26	10.4	102	84	--	--	--	--
APR 17...	1700	9500	8.5	22.5	13	10.1	120	35	804	210	525	67
MAY 08...	1040	5800	8.0	22.0	>1000	8.5	106	103	--	--	--	--
JUN 13...	1230	6400	8.2	27.0	70	7.6	100	46	496	230	575	93
JUL 02...	0945	13000	9.3	24.5	36	7.7	96	29	--	--	--	--
AUG 06...	1235	7500	8.3	30.0	200	7.8	108	34	570	124	310	29
SEP 14...	1115	8700	8.2	18.5	45	8.7	98	24	--	--	--	--

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 31...	1820	12	482	1782	.5	--	--	2.5	--	--	1.30	--
NOV 15...	--	--	257	1953	--	817	.10	3.0	3.1	14	.200	--
DEC 19...	1650	14	490	3284	.4	31	--	2.5	--	--	1.32	--
JAN 18...	--	--	390	2395	.4	9	.50	4.8	5.2	23	1.70	--
FEB 21...	4700	8.8	467	6292	.3	104	.60	1.5	2.1	9.7	.350	3
MAR 27...	--	--	270	1642	.3	1020	.90	3.1	4.0	18	1.00	--
APR 17...	1810	10	370	2846	.4	63	.30	1.5	1.8	8.0	.305	--
MAY 08...	--	--	--	1914	.4	1560	.60	3.5	4.1	18	1.20	--
JUN 13...	--	12	406	2328	.3	1228	.40	<.11	.40	--	--	--
JUL 02...	--	--	653	4543	.3	106	<.50	1.5	--	--	.340	--
AUG 06...	1100	9.5	448	2142	.4	504	.50	2.7	3.2	14	.470	11
SEP 14...	--	--	334	2696	.3	112	.70	1.7	2.4	11	--	--

[illegible]

ARKANSAS RIVER BASIN

165

07160500 SKELETON CREEK NEAR LOVELL, OK

LOCATION.--Lat 36°03'36", long 97°35'05", in NW¼SW¼ sec.1, T.18 N., R.4 W., Logan County, Hydrologic Unit 11050002, near right bank on downstream side of pier of bridge on State Highway 74, 2 mi (3 km) upstream from Otter Creek, 2.8 mi (4.5 km) east of Lovell, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--410 mi² (1,062 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 914.76 ft (278.819 m) Oklahoma State Highway Department datum. Prior to Dec. 5, 1949, nonrecording gage at site 60 ft (18.3 m) downstream at datum 0.30 ft (91.4 mm) lower.

REMARKS.--Records good.

AVERAGE DISCHARGE.--30 years, 114 ft³/s (3.228 m³/s), 82,590 acre-ft/yr (102 hm³/yr).

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

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

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 20	0015	2,980 84.4	20.87 6.361	May 4	1545	*4,440 126	*25.04 7.632

Minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.0	5.9	3.7	5.6	29	25	20	18	8.0	140	540
2	5.0	3.7	5.2	2.8	6.4	30	99	121	18	6.0	48	672
3	5.7	6.2	6.7	3.5	6.0	918	44	2530	17	17	20	567
4	3.8	5.2	6.3	4.5	5.6	724	76	4100	17	10	13	70
5	7.2	11	6.2	5.4	5.0	66	119	2900	16	13	8.8	36
6	11	17	5.0	5.0	6.0	38	46	539	14	110	10	671
7	11	12	5.1	4.1	6.6	31	30	112	14	127	8.1	740
8	11	15	5.1	3.1	7.0	25	25	68	13	30	6.6	94
9	12	16	4.5	3.8	6.6	22	22	54	130	19	7.6	36
10	42	7.9	5.0	5.0	10	22	60	55	70	14	5.4	24
11	18	9.3	8.0	5.8	25	18	420	103	50	11	9.4	19
12	9.5	8.1	20	6.2	66	15	179	80	30	12	7.2	15
13	12	8.7	11	5.0	45	15	51	46	20	11	8.4	14
14	10	11	6.0	3.2	33	15	30	38	17	10	5.4	13
15	8.8	20	7.0	3.5	25	14	25	34	16	10	6.8	12
16	12	24	6.6	4.5	20	15	23	29	14	9.6	5.8	13
17	8.1	26	6.0	5.6	22	15	19	24	13	10	6.7	12
18	5.8	19	5.8	6.8	20	172	18	24	13	9.5	5.1	9.2
19	13	14	5.7	50	35	2110	20	25	12	682	6.8	11
20	14	8.3	7.7	22	54	1310	300	30	11	270	6.9	9.2
21	12	6.7	8.5	12	34	72	426	32	11	48	8.0	12
22	10	6.0	6.2	8.0	25	559	97	43	62	26	15	11
23	17	5.7	2.8	6.6	18	2010	44	36	45	14	9.1	11
24	12	7.5	3.3	5.0	14	374	31	27	30	13	4.9	10
25	9.9	7.9	5.0	6.0	12	75	27	23	22	17	418	10
26	8.0	8.7	6.8	7.0	14	50	21	20	17	14	973	8.2
27	12	16	4.5	9.0	13	38	21	21	14	16	115	7.4
28	9.0	16	3.5	7.0	9.4	33	19	28	13	12	33	11
29	9.2	8.7	3.6	8.0	---	30	19	28	15	8.5	21	12
30	7.7	5.8	4.6	6.4	---	29	21	21	13	8.5	15	9.3
31	12	---	4.2	4.5	---	24	---	21	---	9.2	17	---
TOTAL	342.4	335.4	191.8	233.0	549.2	8898	2357	11232	765	1575.3	1965.0	3679.3
MEAN	11.0	11.2	6.19	7.52	19.6	287	78.6	362	25.5	50.8	63.4	123
MAX	42	26	20	50	66	2110	426	4100	130	682	973	740
MIN	3.7	3.7	2.8	2.8	5.0	14	18	20	11	6.0	4.9	7.4
AC-FT	679	665	380	462	1090	17650	4680	22260	1520	3120	3900	7300

CAL YR 1978	TOTAL	15947.6	MEAN 43.7	MAX 1890	MIN 2.0	AC-FT 31630
WTR YR 1979	TOTAL	32123.4	MEAN 88.0	MAX 4100	MIN 2.8	AC-FT 63720

ARKANSAS RIVER BASIN

07160500 SKELETON CREEK NEAR LOVELL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-55, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1950 to September 1955.

WATER TEMPERATURE: October 1950 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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)
OCT												
31...	1045	10	3000	7.6	14.0	54	6.9	68	44	1042	321	803
NOV												
14...	1335	5.7	2000	7.5	10.0	46	9.0	82	43	--	--	--
DEC												
19...	1115	5.7	2550	7.7	6.5	3.0	13.4	112	35	--	270	675
JAN												
18...	0940	6.8	2650	7.6	2.0	63	10.0	75	43	--	--	--
FEB												
21...	0955	34	2000	--	10.0	27	13.6	96	35	456	110	275
MAR												
27...	1315	38	1250	7.7	13.0	72	10.6	100	30	--	--	--
APR												
17...	1545	19	1600	8.3	22.5	50	9.5	113	33	442	120	300
MAY												
08...	1205	66	1250	7.8	22.0	66	8.1	96	32	--	--	--
JUN												
13...	1430	20	1400	9.0	27.5	105	8.7	110	29	322	73	223
JUL												
02...	1100	6.0	1800	8.5	27.5	60	9.0	117	46	--	--	--
AUG												
06...	1345	10	1100	8.2	31.0	88	7.6	106	25	259	75	189
SEP												
14...	1015	12	1100	7.9	19.5	34	7.7	86	24	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
31...	56	410	26	558	386	--	115	--	2.7	--	--	2.85
NOV												
14...	--	--	--	662	440	--	86	5.1	2.0	7.1	32	3.36
DEC												
19...	42	300	22	684	323	2.1	17	--	7.3	--	--	4.68
JAN												
18...	--	--	--	426	424	2.0	10	6.6	12	19	82	4.90
FEB												
21...	29	214	11	401	--	.7	40	3.5	8.6	12	54	2.00
MAR												
27...	--	--	--	146	222	.4	203	2.6	3.0	5.6	25	.750
APR												
17...	34	190	8.6	187	244	.5	123	2.0	2.3	4.3	19	1.00
MAY												
08...	--	--	--	177	199	.3	239	2.3	1.9	4.2	19	.520
JUN												
13...	30	181	--	157	243	.4	123	1.5	<.11	1.5	--	.755
JUL												
02...	--	--	--	178	320	.6	168	<.50	2.7	2.7	--	--
AUG												
06...	16	126	9.3	205	137	.4	153	2.5	2.1	4.6	21	.805
SEP												
14...	--	--	--	99	145	.5	90	2.0	1.9	3.9	17	.810

167

07160500 SKELETON CREEK NEAR LOVELL, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK

LOCATION.--Lat 35°57'32", long 97°01'49", in SW¼SW¼ sec.7, T.17 N., R.3 E., Payne County, Hydrologic Unit 11050003, near right bank at downstream side of bridge on U.S. Highway 177, 1.0 mi (1.6 km) south of Perkins, 1.5 mi (2.4 km) upstream from Dugout Creek, 4.0 mi (6.4 km) downstream from Wildhorse Creek, and at mile 87.3 (140.5 km).

DRAINAGE AREA.--17,852 mi² (46,237 km²) of which 4,926 mi² (12,758 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 814.88 ft (248.375 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 26, 1940, and Jan. 9 to Apr. 7, 1957, nonrecording gage at same site and datum 5.00 ft (1.524 m) higher. Prior to Oct. 1, 1977, at same site and datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair except for January and February which are poor.

AVERAGE DISCHARGE.--40 years, 1,158 ft³/s (32.79 m³/s), 839,000 acre-ft/yr (1.03 km³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,100 ft³/s (513 m³/s) at 0345 May 5, gage height, 14.84 ft (4.523 m), no other peaks above base of 16,000 ft³/s (4.53 m³/s); minimum daily, 40 ft³/s (1.13 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	42	153	96	240	382	751	358	769	491	1130	446
2	129	44	134	90	230	357	698	394	758	418	2640	3220
3	111	49	120	85	230	465	799	4010	695	358	5230	6020
4	92	48	118	80	220	1530	764	12800	655	317	2770	4910
5	84	44	124	76	210	2000	653	16400	633	343	1610	1890
6	72	64	117	72	210	1140	749	9680	622	707	1060	1050
7	68	68	115	68	200	915	662	5100	627	519	825	1930
8	99	77	100	64	200	652	569	2910	695	798	672	1570
9	114	79	87	60	260	528	520	1770	1810	875	541	1190
10	89	90	100	64	280	435	579	1280	2470	738	469	793
11	189	80	117	66	250	384	2210	1060	1980	523	463	564
12	173	69	136	68	200	358	3580	8180	1530	392	454	457
13	120	73	118	72	230	329	2290	4100	2260	317	467	394
14	92	78	111	76	250	297	1230	2950	1410	275	659	349
15	79	359	118	80	270	285	926	1850	959	249	415	324
16	68	457	113	84	281	273	762	1420	758	243	333	295
17	58	624	115	88	228	275	666	1210	616	282	293	276
18	53	462	117	300	255	426	597	1070	536	577	265	263
19	52	330	116	1730	324	638	568	1000	470	312	240	252
20	47	256	108	2070	460	7820	551	919	420	669	229	247
21	46	206	101	1340	429	4770	1220	938	407	1400	263	238
22	43	183	104	959	425	3510	1770	978	529	882	546	226
23	48	170	100	684	395	6160	1140	1100	1510	565	723	222
24	46	153	103	365	429	10500	718	1030	2200	424	373	212
25	46	146	98	456	429	5520	558	1110	1220	388	303	204
26	45	151	97	410	382	2820	473	1410	1360	499	1610	196
27	40	152	100	330	374	1580	430	1430	1490	2250	3450	185
28	43	150	120	300	425	1210	401	1310	896	4760	1310	177
29	41	188	129	260	---	985	384	1060	650	2390	668	178
30	42	175	126	250	---	868	369	901	544	1640	465	171
31	42	---	100	240	---	786	---	808	---	1220	374	---
TOTAL	2418	5067	3517	10983	8316	58198	27577	90536	31479	25821	30850	28449
MEAN	78.0	169	113	354	297	1877	919	2921	1049	833	995	948
MAX	189	624	153	2070	460	10500	3580	16400	2470	4760	5230	6020
MIN	40	42	87	60	200	273	369	358	407	243	229	171
AC-FT	4800	10050	6980	21780	16490	115400	54700	179600	62440	51220	61190	56430
CAL YR 1978	TOTAL	188827	MEAN	517	MAX	23200	MIN	40	AC-FT	374500		
WTR YR 1979	TOTAL	323211	MEAN	886	MAX	16400	MIN	40	AC-FT	641100		

ARKANSAS RIVER BASIN

169

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1952 to September 1963, June 1965 to current year.

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

INSTRUMENTATION.--Water quality monitor since April 1969.

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

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, 32,400 micromhos Mar. 18, 1957; minimum, 353 micromhos Apr. 30, 1970.

WATER TEMPERATURE: Maximum, 39.0°C June 18, 1974; minimum, 1.0°C several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 18,500 micromhos May 28; minimum daily, 1,070 micromhos Sept. 4.

WATER TEMPERATURE: Maximum, 34.5°C June 8; minimum daily, -0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DTS- SOLVED (MG/L)	CULI- DIS- FORM, FECAL, 0.7 HUM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT												
05...	0915	81	12200	7.7	16.0	--	--	--	--	--	620	420
15...	0730	81	7220	7.8	12.0	--	--	--	--	--	510	340
23...	1215	49	8700	8.7	13.0	9.8	11.6	115	95	75	560	410
24...	0740	46	8460	7.3	12.0	--	--	--	--	--	530	380
NOV												
04...	0730	49	8190	8.0	17.0	--	--	--	--	--	620	410
09...	1030	78	7600	8.8	12.0	4.1	11.9	117	130	210	580	410
17...	0730	584	1870	7.5	5.0	--	--	--	--	--	180	84
25...	0730	150	6450	8.2	12.0	--	--	--	--	--	510	300
DEC												
05...	0730	126	9890	8.3	2.0	--	--	--	--	--	580	430
15...	0745	114	10700	8.3	2.0	--	--	--	--	--	620	400
25...	0815	95	9920	8.2	1.0	--	--	--	--	--	600	400
26...	1430	97	10000	8.0	7.0	9.9	13.7	123	K1360	K97	680	470
JAN												
05...	1015	157	8360	7.6	.0	--	--	--	--	--	380	130
15...	1000	204	9050	7.6	.0	--	--	--	--	--	330	87
25...	1000	378	4050	7.6	.0	--	--	--	--	--	150	45
FEB												
05...	1030	848	16400	8.1	.0	--	--	--	--	--	780	570
08...	0830	433	15000	8.3	.0	18	13.6	102	25	--	730	510
15...	0815	505	16400	7.6	.0	--	--	--	--	--	760	580
25...	0730	442	15300	8.3	1.0	--	--	--	--	--	700	520
MAR												
05...	0730	2420	3510	8.0	5.0	--	--	--	--	--	--	--
08...	1000	667	5000	6.5	7.5	650	11.9	102	830	5600	310	200
15...	0730	293	14300	8.3	10.0	--	--	--	--	--	710	510
25...	0730	6120	2960	7.0	10.0	--	--	--	--	--	240	130
APR												
05...	0730	655	7590	8.2	10.0	--	--	--	--	--	590	460
15...	0730	971	4800	8.3	17.0	--	--	--	--	--	370	160
17...	1020	667	7300	7.2	20.5	66	13.1	152	241	160	470	310
25...	0730	584	4850	8.2	20.0	--	--	--	--	--	380	230
MAY												
05...	0730	17800	1290	7.3	13.0	--	--	--	--	--	150	49
15...	0730	1970	5180	7.5	20.0	--	--	--	--	--	410	300
22...	0950	977	10700	7.6	18.5	60	7.9	90	K650	K3300	680	510
25...	0730	1010	12200	7.8	19.0	--	--	--	--	--	580	390
JUN												
05...	0730	600	14500	7.9	25.0	--	--	--	--	--	820	610

ARKANSAS RIVER BASIN
 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	CULI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML)	STREP- TOCUCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
JUN												
15...	0730	1760	7920	7.6	24.0	--	--	--	--	--	610	490
19...	0930	480	14000	8.3	24.5	50	7.2	90	150	48	810	620
25...	0730	1300	1780	7.4	23.0	--	--	--	--	--	190	81
JUL												
05...	0730	362	10600	7.8	27.0	--	--	--	--	--	710	530
10...	1500	730	5200	8.9	31.0	660	6.6	93	2200	460	340	210
15...	0730	251	9260	7.8	28.0	--	--	--	--	--	630	440
25...	0730	378	5830	7.6	27.0	--	--	--	--	--	600	470
AUG												
05...	0730	1820	3890	7.7	27.0	--	--	--	--	--	390	320
15...	0700	438	5660	7.7	26.0	--	--	--	--	--	400	300
21...	1000	259	13000	8.3	26.5	100	5.8	77	22	220	--	--
25...	0700	293	4990	7.7	24.0	--	--	--	--	--	410	280
SEP												
05...	0700	2150	1180	7.7	26.0	--	--	--	--	--	150	56
15...	0700	328	7410	8.2	18.0	--	--	--	--	--	550	360
25...	0700	204	9430	7.5	21.0	--	--	--	--	--	610	450
25...	0845	204	9510	7.6	22.5	6.6	7.3	89	110	151	630	470

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	RICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
05...	150	59	2500	90	44	--	13	240	0	200	7.7	490
15...	130	46	1400	85	27	--	12	210	0	170	5.3	330
23...	130	56	1600	86	30	--	11	--	--	150	--	330
24...	120	56	1600	86	30	--	12	180	0	150	14	430
NOV												
04...	160	53	1600	85	28	--	16	--	--	210	--	430
09...	150	49	1300	83	24	--	7.5	--	--	170	--	370
17...	50	14	310	78	10	--	4.2	--	--	99	--	110
25...	140	40	1200	83	23	--	13	--	--	210	--	330
DEC												
05...	140	57	2000	88	36	--	9.9	--	--	150	--	400
15...	150	59	2200	88	39	--	11	--	--	220	--	--
25...	140	60	2000	88	36	--	11	--	--	200	--	430
26...	170	62	2100	87	35	--	12	--	--	210	--	470
JAN												
05...	50	61	1800	91	40	--	12	--	--	250	--	25
15...	42	54	1800	92	43	--	11	--	--	240	--	22
25...	24	23	730	90	26	--	9.9	--	--	110	--	190
FEB												
05...	200	68	3600	91	56	3600	9.1	--	--	210	--	470
08...	190	63	3100	90	50	--	13	--	--	220	--	470
15...	190	69	3600	91	57	3600	9.6	--	--	180	--	480
25...	170	66	3300	91	54	--	7.9	--	--	180	--	460
MAR												
05...	74	--	580	--	--	590	6.4	--	--	130	--	160
08...	83	26	900	86	22	--	7.6	--	--	110	--	220
15...	180	63	2900	90	47	2900	8.6	--	--	200	--	440
25...	69	16	500	82	14	510	6.1	--	--	110	--	150
APR												
05...	150	53	1500	84	27	1500	9.2	--	--	130	--	350
15...	97	31	850	83	19	860	8.4	--	--	210	--	240
17...	120	41	1300	86	26	1300	7.1	--	--	160	--	--
25...	96	35	890	83	20	900	8.0	--	--	150	--	220
MAY												
05...	43	10	210	80	7.5	220	5.6	--	--	100	--	58
15...	120	26	1000	87	22	1000	9.2	--	--	110	--	280
22...	180	55	2100	87	35	--	9.0	--	--	170	--	420
25...	200	20	2600	92	47	2600	9.7	--	--	190	--	510
JUN												
05...	210	71	3000	89	46	3000	11	--	--	210	--	590

ARKANSAS RIVER BASIN

171

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SUPP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCU3)	CAR- BONATE (MG/L AS CU3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)
JUN												
15...	170	46	1600	85	28	1600	9.5	--	--	120	--	370
19...	210	70	2700	88	41	2700	12	--	--	190	--	560
25...	50	16	290	82	9.1	300	8.2	--	--	110	--	110
JUL												
05...	190	57	2000	86	33	2000	9.9	--	--	180	--	480
10...	89	28	980	90	23	990	8.2	--	--	130	--	260
15...	170	50	1900	90	33	1900	11	--	--	190	--	430
25...	180	37	990	78	18	1000	9.2	--	--	130	--	460
AUG												
05...	120	23	690	79	15	700	9.1	--	--	77	--	330
15...	110	30	1000	84	22	1000	8.8	--	--	100	--	300
21...	240	--	2400	--	--	2400	11	--	--	180	--	590
25...	110	34	920	82	20	930	9.7	--	--	130	--	300
SEP												
05...	42	11	190	79	6.7	200	5.8	--	--	94	--	57
15...	150	42	1400	89	26	1400	9.1	--	--	190	--	300
25...	150	57	1900	91	34	1900	9.4	--	--	160	--	400
25...	160	56	1800	90	31	1800	10	--	--	160	--	370

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTIT- UENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TUNS AC-FT)	SOLIDS, DIS- SOLVED (TUNS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	3600	--	--	7050	--	9.59	1540	--	--	--	--	--
15...	2100	--	--	4190	--	5.70	916	--	--	--	--	--
23...	2500	.4	2.1	4810	4720	6.54	636	.01	.01	--	1.9	1.9
24...	--	--	--	4970	--	6.76	617	--	--	--	--	--
NOV												
04...	2500	--	--	4830	--	6.57	639	--	--	--	--	--
09...	2200	.4	7.0	4280	4190	5.82	901	.29	.28	--	.92	1.2
17...	460	--	--	1030	--	1.40	1620	--	--	--	--	--
25...	1900	--	--	3710	--	5.05	1500	--	--	--	--	--
DEC												
05...	3200	--	--	5730	--	7.79	1950	--	--	--	--	--
15...	3400	--	--	6270	--	8.53	1930	--	--	--	--	--
25...	3100	--	--	5510	--	7.49	1410	--	--	--	--	--
26...	3100	.5	7.0	6190	6050	8.42	1620	1.7	.54	--	.86	1.4
JAN												
05...	2800	--	--	5320	--	7.24	2260	--	--	--	--	--
15...	2800	--	--	5280	--	7.18	2910	--	--	--	--	--
25...	1000	--	--	2240	--	3.05	2290	--	--	--	--	--
FEB												
05...	5600	--	--	10100	--	13.7	23100	--	--	--	--	--
08...	4500	.3	10	9250	8480	12.6	10800	.81	1.5	--	.60	2.1
15...	5200	--	--	10000	--	13.6	13600	--	--	--	--	--
25...	4900	--	--	9260	--	12.6	11100	--	--	--	--	--
MAR												
05...	930	--	--	1910	--	2.60	12500	--	--	--	--	--
08...	1400	.3	7.5	2790	2710	3.79	5030	1.4	.60	--	3.2	3.8
15...	4500	--	--	8450	--	11.5	6690	--	--	--	--	--
25...	750	--	--	1620	--	2.20	26800	--	--	--	--	--
APR												
05...	2300	--	--	4100	--	5.58	7250	--	--	--	--	--
15...	1300	--	--	2670	--	3.63	7000	--	--	--	--	--
17...	2000	.4	8.1	3930	--	5.34	7080	.04	.36	.44	1.0	1.4
25...	1400	--	--	2680	--	3.64	4230	--	--	--	--	--
MAY												
05...	290	--	--	723	--	.98	34700	--	--	--	--	--
15...	1500	--	--	2910	--	3.96	15500	--	--	--	--	--
22...	3200	.4	9.0	6000	6080	8.16	15800	.21	.33	.40	1.1	1.4
25...	3600	--	--	7190	--	9.78	19600	--	--	--	--	--
JUN												
05...	4800	--	--	8760	--	11.9	14200	--	--	--	--	--

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
JUN												
15...	2400	--	--	4680	--	6.36	22200	--	--	--	--	--
19...	4500	.5	9.6	8310	8180	11.3	10800	.01	.28	.34	.68	.96
25...	440	--	--	1000	--	1.36	3510	--	--	--	--	--
JUL												
05...	3300	--	--	6120	--	8.32	6310	--	--	--	--	--
10...	1400	.4	9.4	2850	2850	3.88	5620	1.1	.26	.31	2.9	3.2
15...	2800	--	--	4970	--	6.76	3370	--	--	--	--	--
25...	1600	--	--	3400	--	4.62	3470	--	--	--	--	--
AUG												
05...	1100	--	--	2230	--	3.03	11000	--	--	--	--	--
15...	--	--	--	3210	--	4.37	3800	--	--	--	--	--
21...	3800	.4	12	7040	--	--	4920	.08	.81	.98	.69	1.5
25...	1300	--	--	2820	--	3.84	2230	--	--	--	--	--
SEPT												
05...	280	--	--	651	--	.89	3780	--	--	--	--	--
15...	2300	--	--	4320	--	5.88	3830	--	--	--	--	--
25...	3000	--	--	5750	--	7.82	3170	--	--	--	--	--
25...	3000	.3	7.1	5710	5500	7.77	3150	.02	.03	.04	.97	1.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
OCT 23...	--	--	--	--	--	--	--	--	--	--
NOV 09...	0	20	80	30	50	.1	.0	.2	1	0
DEC 26...	--	--	--	--	--	--	--	--	--	--
FEB 08...	3	1	140	20	120	.0	.0	.0	1	0
MAR 08...	--	--	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--	--	--
MAY 22...	18	2	110	100	10	.2	.0	.2	1	0
JUN 19...	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
AUG 21...	39	2	260	250	10	.2	.1	.1	1	0
SEP 25...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	--	--	--	--	--	--	--	167	22	96
NOV 09...	1	0	0	0	30	20	10	152	32	98
DEC 26...	--	--	--	--	--	--	--	568	149	70
FEB 08...	1	1	1	0	50	0	60	923	1080	98
MAR 08...	--	--	--	--	--	--	--	1470	2650	93
APR 17...	--	--	--	--	--	--	--	360	648	98
MAY 22...	1	0	0	0	50	30	20	749	1980	99
JUN 19...	--	--	--	--	--	--	--	747	968	98
JUL 10...	--	--	--	--	--	--	--	1140	2250	99
AUG 21...	1	0	0	0	50	30	20	1060	741	99
SEP 25...	--	--	--	--	--	--	--	441	243	98

07161000 CIMARRON RIVER AT PERKINS, OK--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 9,78 1030	MAR 8,79 1000	MAY 22,79 0950	JUN 19,79 0930
TOTAL CELLS/ML	7400	3600	14000	14000
DIVERSITY: DIVISION	1.7	0.9	1.6	1.5
..CLASS	1.7	0.9	1.6	1.5
...ORDER	2.7	1.7	2.3	1.9
...FAMILY	2.9	2.4	2.4	2.2
....GENUS	3.1	2.4	2.4	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
...MICRACTINIUM	--	-	--	-	--	-	210	2
...OOCYSTACEAE								
...ANKISTRODESMUS	160	2	--	-	*	0	310	2
...CHLORELLA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	810	6	1000	8
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	520	4
...TETRAEDRON	41	1	--	-	--	-	--	-
...WESTELLA	320	4	--	-	270	2	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	--	-	1000#	29	--	-	--	-
...SCENEDESMUS	650	9	--	-	130	1	930	7
...TETRASTRUM	160	2	--	-	--	-	210	2
..TETRASPORALES								
...PALMELLACEAE								
...GLUEOCYSTIS	--	-	--	-	--	-	--	-
...TETRASPORACEAE								
...TETRASPORA	160	2	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	810	11	260	7	1100	8	310	2
...PLATYMONAS	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...CYCLOTELLA	1800#	24	520	14	2600#	18	880	6
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	81	1	--	-	--	-	--	-
...DIATOMACEAE								
...DIATOMA	--	-	260	7	--	-	--	-
...NAVICULACEAE								
...NAVICULA	320	4	1000#	29	130	1	--	-
...NITZSCHIACEAE								
...NITZSCHIA	41	1	520	14	2700#	19	210	2
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	100	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	1100	14	--	-	270	2	720	5
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	1600#	22	--	-	--	-	--	-
...ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
...OSCILLATORIA	--	-	--	-	6100#	42	7800#	57
...SCHIZOTHRIX	--	-	--	-	--	-	--	-
...RIVULARIACEAE								
...RAPHIIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENDIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	120	2	--	-	130	1	--	-
...TRACHELONAS	41	1	--	-	--	-	--	-

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

PYRRHOPHYTA (FIRE ALGAE)

.DINOPHYCEAE							
..GYMNODINIALES							
...GYMNODINIACEAE							
....GYMNODINIUM	--	-	--	-	130	1	-- -
..PERIDINIALES							
...GLENODINIACEAE							
....GLENODINIUM	--	-	--	-	--	-	520 4

DATE	JUL 10,79	AUG 21,79	SEP 25,79
TIME	1500	1000	0845
TOTAL CELLS/ML	9700	300000	280000
DIVERSITY: DIVISION	1.6	0.2	1.1
..CLASS	1.6	0.2	1.1
...ORDER	2.4	0.7	1.3
....FAMILY	2.8	1.1	1.4
.....GENUS	3.2	1.1	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	*	0
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	3900	1
...MICRACTINIACEAE						
....MICRACTINIUM	140	1	--	-	--	-
...DUCYSTACEAE						
....ANKISTRODESMUS	140	1	--	-	--	-
....CHLORELLA	--	-	*	0	--	-
...DICTYOSPHAERIUM	870	9	--	-	--	-
...KIRCHNERIELLA	1300	13	--	-	--	-
...DUCYSTIS	140	1	3100	1	--	-
...TETRAEDRON	--	-	--	-	--	-
...WESTELLA	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	580	6	2900	1	1900	1
...TETRASTRUM	--	-	--	-	--	-
...TETRASPORALES						
...PALMELLACEAE						
...GLOEOCYSTIS	140	1	--	-	--	-
...TETRASPORACEAE	--	-	--	-	--	-
...TETRASPORA	--	-	--	-	--	-
...VULVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	140	1	--	-	--	-
...PLATYMONAS	--	-	*	0	--	-
CHRYSTOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCEACEAE						
....CYCLOTELLA	2900#	30	*	0	130000#	45
...PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	430	4	--	-	--	-
...NITZSCHIA						
....NITZSCHIA	1000	10	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	--	-	--	-

ARKANSAS RIVER BASIN

177

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

CYANOPHYTA (BLUE-GREEN ALGAE)

.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	1000	10	36000	12	11000	4
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	14000	5	--	-
....ANABAENOPSIS	--	-	1800	1	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	140000#	48
....SCHIZOTHRIX	--	-	240000#	80	--	-
...RIVULARIACEAE						
....RAPHIIDIOPSIS	580	6	--	-	--	-

EUGLENOPHYTA (EUGLENIDS)

.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	290	3	*	0	--	-
....TRACHELOMONAS	--	-	--	-	--	-

PYRRHOPHYTA (FIRE ALGAE)

.DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	--	-	--	-	--	-
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

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

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

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13600	8130	6320	16100	14100	17700	7550	11100	11600	7970	7740	6720
2	13500	8180	7410	11600	15800	15900	8020	10800	12500	11200	7500	4210
3	13100	8090	8620	13800	15600	12000	8300	6870	14200	12500	3020	1230
4	12700	8190	8830	11600	15600	9850	8060	1500	15300	11400	3410	1070
5	12200	7890	9890	8360	16400	3510	7590	1290	14300	10600	3890	1180
6	12100	7390	10600	9640	15200	2620	8250	1660	13700	3610	4690	1440
7	11800	7460	10700	10400	14000	5150	10000	5400	13400	5660	6630	2250
8	11400	7460	11800	11000	14800	5180	9880	6470	15200	7630	7360	1390
9	7390	7670	12500	10900	14900	5930	9670	5150	9680	4780	8380	3860
10	9860	7640	12500	9830	15700	7210	10400	5520	4660	8980	9180	4730
11	10300	7300	11600	9460	14200	9140	5090	6290	3890	4400	9150	3170
12	4710	6390	10700	8990	15500	10500	2350	8450	6170	5510	9570	3970
13	4800	6730	10300	8810	16500	13400	2140	6850	13400	6300	10100	5260
14	5610	7150	11200	9060	15900	14800	3820	5930	6670	8740	9500	6450
15	7220	6360	10700	9050	16400	14300	4800	5180	7920	9260	5660	7410
16	8090	2620	10000	9010	15900	12800	5890	7060	10400	8770	5780	7810
17	8100	1870	9540	8930	13600	12500	6840	8170	11300	9620	8590	8320
18	8830	1710	10300	8140	16800	10800	8090	8890	13200	6800	10300	8970
19	8850	1840	10900	1210	16100	8730	8780	9910	13500	4480	11400	8830
20	8610	3360	10300	1700	10100	3680	11500	10900	13000	7090	11900	9080
21	8390	4670	9620	1940	12900	2380	13200	11300	12500	8280	12200	9150
22	8580	5540	9720	3520	13300	2150	3370	10300	12400	6660	11000	9330
23	8670	5880	10300	3340	15900	1770	5600	10700	4300	5480	4320	9400
24	8460	6190	10200	3920	16200	1860	3550	11000	4250	4310	3070	9480
25	8460	6450	9920	4050	15300	2960	4850	12200	1780	5830	4990	9430
26	8510	7080	10000	5070	15500	2360	7260	18000	3480	10100	5940	9460
27	9010	7190	10700	5920	15000	3070	9040	17300	4560	15400	2370	9650
28	9220	7540	10700	10100	15300	5000	9750	18500	3220	10600	1540	9470
29	8910	7140	11300	13800	---	6340	10500	13200	5950	9420	1860	9440
30	8440	5840	13300	17300	---	8790	11000	10600	7790	8280	3700	9340
31	8260	---	15300	15500	---	9280	---	10500	---	8530	5060	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13600	8080	6340	16000	14100	17000	7530	10800	11600	---	7690	6900
2	13500	8040	7450	10900	15700	15500	8050	10800	12400	---	7450	4000
3	13100	7990	8860	13600	15600	10500	8370	6900	13400	---	2490	1220
4	12700	8090	8860	11300	15500	9460	7990	---	16900	---	3430	1160
5	12200	7890	9890	8450	16400	3600	7660	---	13600	---	3850	1290
6	12100	7340	10600	9680	15200	2770	8490	---	14500	---	4710	1760
7	---	7440	10500	10400	14100	5910	9940	---	13000	---	6730	2270
8	---	7480	11700	11000	14700	3560	9910	---	15200	---	7400	1480
9	---	7820	---	10800	15000	---	9770	---	9700	---	8440	4170
10	---	7560	---	9800	15700	---	9140	---	4980	---	8570	4630
11	---	6120	---	9460	14200	---	5010	5860	4070	---	9130	3160
12	4640	6500	---	8990	15400	---	2260	7060	5300	4920	9570	4030
13	5110	6210	10600	8810	16500	---	2140	6740	13500	6120	10100	5330
14	5740	7160	11200	9030	15900	---	3830	5870	7030	8910	9470	6530
15	7480	6470	10500	9060	16300	15400	4810	5300	8160	9170	5480	7490
16	8960	2110	10000	9030	---	12200	5460	7270	10400	8700	5900	7910
17	7850	1560	9620	9000	---	12100	6830	8220	11500	10400	8520	8330
18	8850	1880	10400	6910	16900	9510	8130	8950	13400	6290	9960	9050
19	8710	2010	10700	1250	16100	4890	8940	9890	13900	4630	11400	8390
20	8700	4150	10200	---	10100	3570	11600	10800	12000	7030	11800	9210
21	8710	4530	9640	2080	13000	2380	12900	10500	12300	8520	12200	9280
22	8460	5520	9820	3400	12800	2060	3230	10200	12600	6770	11000	9560
23	8600	6460	10300	3260	15800	1830	5520	10800	4760	5320	4090	9620
24	8390	7190	10200	3840	16400	1790	3770	11100	4520	4220	3260	9780
25	8400	4830	9910	4090	15100	2920	4170	12000	1890	5970	5030	9600
26	8490	6420	10100	4920	15200	2360	7020	18100	3710	10500	4880	9190
27	8990	7350	10700	6070	15200	3110	9010	17300	---	15800	1660	9780
28	9120	7690	10800	10300	15200	5110	10100	18000	---	9320	1540	9540
29	8850	7180	11700	14300	---	6630	10100	14800	---	9280	1910	9260
30	8350	6060	13400	17200	---	8770	10900	10200	---	8190	3840	9290
31	8030	---	15400	15300	---	9160	---	9290	---	8500	5150	---

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	17.0						---	23.0	---	27.5	26.5
2	22.0	16.5						---	25.0	---	29.0	27.0
3	21.0	18.5						---	27.5	---	29.0	27.0
4	19.0	20.0						---	25.0	---	29.5	26.5
5	18.5	18.5						---	25.5	---	30.0	28.0
6	17.0	14.0						---	28.0	---	30.5	28.5
7	---	11.0						---	25.5	---	30.5	27.5
8	---	12.0						---	34.5	---	30.5	25.0
9	---	13.0						---	29.5	---	30.0	25.0
10	---	14.0						---	29.0	---	30.0	25.5
11	---	---						17.0	26.5	---	29.0	25.5
12	26.0	---						16.5	28.0	33.0	26.5	25.5
13	17.5	---						19.0	30.5	31.5	27.0	26.0
14	18.0	---						22.0	33.0	31.5	28.5	22.0
15	20.5	5.5						24.0	23.5	31.0	30.0	20.5
16	23.0	5.5						22.5	22.5	31.5	28.5	22.0
17	16.0	5.0						23.0	12.5	29.5	30.0	22.0
18	15.5	8.0						25.5	14.0	27.0	29.0	22.5
19	16.5	7.5						25.5	15.5	27.0	28.0	23.5
20	18.0	8.5						21.0	19.5	28.0	26.0	23.5
21	19.0	6.0						20.5	19.5	28.5	27.0	22.5
22	19.5	10.0						22.0	26.0	29.5	27.0	23.0
23	16.5	---						21.5	24.0	28.0	28.0	23.0
24	14.5	13.0						23.5	22.5	28.0	28.0	24.0
25	16.5	---						22.5	22.0	31.0	26.5	24.5
26	14.5	---						25.5	25.5	31.5	25.5	24.5
27	14.0	---						25.0	---	30.0	24.0	24.5
28	15.0	---						26.0	---	29.5	26.0	24.0
29	15.0	---						25.5	---	30.5	28.5	24.0
30	16.0	---						24.5	---	30.5	29.5	24.5
31	17.0	---						23.5	---	29.5	29.0	---

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	490	330	280	560	500	590	320	410	430	---	320	300
2	490	330	320	410	550	540	330	410	460	---	320	220
3	480	330	360	490	550	400	340	300	480	---	170	140
4	460	330	360	420	540	370	330	---	580	---	200	140
5	450	330	380	340	570	210	320	---	490	---	210	140
6	450	310	400	380	540	180	340	---	520	---	240	150
7	---	310	400	400	500	270	390	---	470	---	290	170
8	---	320	440	420	520	200	380	---	540	---	310	150
9	---	330	---	410	530	---	380	---	380	---	340	220
10	---	320	---	380	550	---	360	---	240	---	350	240
11	---	280	---	370	510	---	250	270	220	---	360	190
12	240	290	---	360	540	---	170	300	250	240	380	220
13	250	280	400	350	570	---	160	290	490	280	390	250
14	270	310	420	360	550	---	210	270	300	360	370	290
15	320	290	400	360	570	540	240	250	340	360	260	320
16	360	160	390	360	---	450	260	310	400	350	270	330
17	330	150	380	360	---	450	300	340	430	400	350	340
18	350	160	400	300	580	370	330	360	480	280	390	360
19	350	160	410	140	560	240	360	380	500	240	430	340
20	350	220	390	---	390	200	430	410	440	300	440	370
21	350	230	380	160	470	170	470	400	450	350	450	370
22	340	260	380	200	470	160	200	390	460	300	420	380
23	350	290	400	200	550	160	260	410	240	250	220	380
24	340	310	390	210	570	150	210	420	230	220	200	380
25	340	240	380	220	530	190	220	440	160	270	250	380
26	340	290	390	240	540	170	300	620	210	400	240	360
27	360	310	410	280	540	190	360	590	---	550	150	380
28	360	320	410	400	540	250	390	610	---	370	150	370
29	350	310	440	510	---	290	390	520	---	370	160	370
30	340	280	480	590	---	350	410	390	---	340	210	370
31	330	---	540	540	---	360	---	370	---	340	250	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194.0	37.4	116.0	145.0	324.0	609.0	649.0	396.0	893.0	---	976.0	361.0
2	171.0	39.2	116.0	99.6	342.0	521.0	622.0	436.0	941.0	---	2280.0	1910.0
3	144.0	43.7	117.0	112.0	342.0	502.0	733.0	3250.0	901.0	---	2400.0	2280.0
4	114.0	42.8	115.0	90.7	321.0	1530.0	681.0	---	1030.0	---	1500.0	1860.0
5	102.0	39.2	127.0	69.8	323.0	1130.0	564.0	---	837.0	---	913.0	714.0
6	87.5	53.6	126.0	73.9	306.0	554.0	688.0	---	873.0	---	687.0	425.0
7	---	56.9	124.0	73.4	270.0	667.0	697.0	---	796.0	---	646.0	866.0
8	---	66.5	119.0	72.6	281.0	352.0	584.0	---	1010.0	---	562.0	636.0
9	---	70.4	---	66.4	372.0	---	534.0	---	1860.0	---	497.0	707.0
10	---	77.8	---	65.7	416.0	---	563.0	---	1600.0	---	443.0	514.0
11	---	60.5	---	65.9	344.0	---	1490.0	773.0	1180.0	---	450.0	289.0
12	112.0	54.0	---	66.1	292.0	---	1640.0	6630.0	1030.0	254.0	466.0	271.0
13	81.0	55.2	127.0	68.0	354.0	---	989.0	3210.0	2990.0	240.0	492.0	266.0
14	67.1	65.3	126.0	73.9	371.0	---	697.0	2150.0	1140.0	267.0	658.0	273.0
15	68.3	281.0	127.0	77.8	416.0	416.0	600.0	1250.0	880.0	242.0	291.0	280.0
16	66.1	197.0	119.0	81.6	---	332.0	535.0	1190.0	819.0	230.0	243.0	263.0
17	51.7	253.0	118.0	85.5	---	334.0	531.0	1110.0	715.0	305.0	277.0	253.0
18	50.1	200.0	126.0	243.0	399.0	426.0	532.0	1040.0	695.0	436.0	279.0	256.0
19	49.1	143.0	128.0	654.0	490.0	413.0	552.0	1030.0	634.0	202.0	279.0	231.0
20	44.4	152.0	114.0	---	484.0	4220.0	640.0	1020.0	499.0	542.0	272.0	247.0
21	43.5	128.0	104.0	579.0	544.0	2190.0	1550.0	1010.0	495.0	1320.0	320.0	238.0
22	39.5	128.0	107.0	518.0	539.0	1520.0	956.0	1030.0	657.0	714.0	619.0	232.0
23	45.4	133.0	108.0	369.0	587.0	2660.0	800.0	1220.0	978.0	361.0	429.0	228.0
24	42.2	128.0	108.0	207.0	660.0	4250.0	407.0	1170.0	1370.0	252.0	201.0	218.0
25	42.2	94.6	101.0	271.0	614.0	2830.0	331.0	1320.0	527.0	283.0	205.0	209.0
26	41.3	118.0	102.0	266.0	557.0	1290.0	383.0	2360.0	771.0	539.0	1040.0	191.0
27	38.9	127.0	111.0	249.0	545.0	811.0	418.0	2280.0	---	3340.0	1400.0	190.0
28	41.8	130.0	133.0	324.0	620.0	817.0	422.0	2160.0	---	4760.0	531.0	177.0
29	38.7	157.0	153.0	358.0	---	771.0	404.0	1490.0	---	2390.0	289.0	178.0
30	38.6	132.0	163.0	398.0	---	820.0	408.0	949.0	---	1510.0	264.0	171.0
31	37.4	---	146.0	350.0	---	764.0	---	807.0	---	1120.0	252.0	---

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4300	2400	1900	5100	4500	5400	2300	3400	3600	---	2300	2100
2	4300	2400	2200	3400	5000	4900	2400	3400	3900	---	2200	1100
3	4100	2400	2700	4300	4900	3300	2500	2100	4200	---	590	170
4	4000	2500	2700	3500	4900	2900	2400	---	5400	---	900	150
5	3800	2400	3100	2600	5200	960	2300	---	4300	---	1000	190
6	3800	2200	3300	3000	4600	680	2600	---	4600	---	1300	350
7	---	2200	3300	3200	4500	1700	3100	---	4100	---	2000	520
8	---	2200	3700	3400	4700	950	3100	---	4800	---	2200	250
9	---	2400	---	3400	4700	---	3000	---	3000	---	2600	1100
10	---	2300	---	3000	5000	---	2800	---	1400	---	2600	1300
11	---	1800	---	2900	4500	---	1400	1700	1100	---	2800	810
12	1300	1900	---	2800	4900	---	510	2100	1500	1400	2900	1100
13	1500	1800	3300	2700	5200	---	470	2000	4300	1800	3100	1500
14	1700	2100	3500	2800	5000	---	1000	1700	2100	2700	2900	1900
15	2200	1900	3300	2800	5200	4900	1400	1500	2500	2800	1600	2300
16	2700	460	3100	2800	---	3800	1600	2200	3200	2700	1700	2400
17	2400	280	3000	2800	---	3800	2000	2500	3600	3200	2600	2500
18	2700	390	3200	2100	5400	2900	2500	2700	4200	1900	3100	2800
19	2700	430	3300	180	5100	1400	2700	3100	4400	1300	3600	2600
20	2700	1100	3200	---	3100	950	3600	3400	3800	2100	3700	2800
21	2700	1300	3000	450	4100	550	4100	3300	3900	2600	3800	2800
22	2600	1600	3000	890	4000	450	840	3200	4000	2000	3400	2900
23	2600	1900	3200	850	5000	370	1600	3400	1300	1500	1100	3000
24	2600	2200	3200	1000	5200	360	1000	3500	1300	1200	850	3000
25	2600	1400	3100	1100	4800	730	1100	3800	390	1700	1400	3000
26	2600	1900	3100	1400	4800	550	2100	5800	1000	3300	1400	2800
27	2800	2200	3300	1800	4800	800	2800	5500	---	5000	310	3000
28	2800	2300	3400	3200	4800	1500	3100	5700	---	2900	270	2900
29	2700	2100	3700	4500	---	2000	3100	4700	---	2800	400	2800
30	2500	1800	4200	5500	---	2700	3400	3200	---	2500	1000	2900
31	2400	---	4900	4800	---	2800	---	2900	---	2600	1500	---

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	272	785	1320	2920	5570	4660	3290	7470	---	7020	2530
2	1500	285	796	826	3110	4720	4520	3620	7980	---	15700	9560
3	1230	318	875	987	3040	4140	5390	22700	7880	---	8330	2760
4	994	324	860	756	2910	12000	4950	---	9550	---	6730	1990
5	862	285	1040	534	2950	5180	4060	---	7350	---	4350	970
6	739	380	1040	583	2720	2090	5260	---	7730	---	3720	992
7	---	404	1020	588	2430	4200	5540	---	6940	---	4450	2710
8	---	457	999	588	2540	1670	4760	---	9010	---	3990	1060
9	---	512	---	551	3300	---	4210	---	14700	---	3400	3530
10	---	559	---	518	3780	---	4380	---	9340	---	3290	2780
11	---	389	---	517	3040	---	8350	4870	5880	---	3500	1230
12	607	354	---	514	2650	---	4930	46400	6200	1480	3550	1360
13	486	355	1050	525	3230	---	2910	22100	26200	1540	3910	1600
14	422	442	1050	575	3380	---	3320	13500	7990	2000	5160	1790
15	469	1840	1050	605	3790	3770	3500	7490	6470	1880	1790	2010
16	496	568	946	635	---	2800	3290	8430	6550	1770	1530	1910
17	376	472	931	665	---	2820	3540	8170	5990	2440	2060	1860
18	396	486	1010	1700	3720	3340	4030	7800	6080	2960	2220	1990
19	379	383	1030	841	4460	2410	4140	8370	5580	1100	2330	1770
20	343	760	933	---	3850	20100	5360	8440	4310	3790	2290	1870
21	335	723	818	1630	4750	7080	13500	8360	4290	9830	2700	1800
22	302	791	842	2300	4590	4260	4010	8450	5710	4760	5010	1770
23	337	872	864	1570	5330	6150	4920	10100	5300	2290	2150	1800
24	323	909	890	985	6020	10200	1940	9730	7720	1370	856	1720
25	323	552	826	1350	5560	10900	1660	11400	1280	1780	1150	1650
26	316	775	812	1550	4950	4190	2680	22100	3670	4450	6090	1480
27	302	903	891	1600	4850	3410	3250	21200	---	30400	2890	1500
28	325	931	1100	2590	5510	4900	3360	20200	---	37300	955	1390
29	299	1070	1290	3160	---	5320	3210	13500	---	18100	721	1350
30	283	850	1430	3710	---	6330	3390	7780	---	11100	1260	1340
31	272	---	1320	3110	---	5940	---	6330	---	8560	1510	---

ARKANSAS RIVER BASIN

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8070	4700	3640	9540	8380	10100	4360	6360	6850	---	4460	3980
2	8010	4680	4320	6420	9350	9230	4680	6360	7340	---	4320	2210
3	7770	4650	5180	8070	9290	6180	4880	3980	7950	---	1290	511
4	7520	4710	5180	6670	9230	5540	4650	---	10100	---	1660	475
5	7220	4580	5810	4930	9780	1960	4440	---	8070	---	2120	554
6	7160	4250	6240	5680	9050	1460	4950	---	8620	---	2640	841
7	---	4310	6180	6120	8380	3380	5840	---	7700	---	3880	1150
8	---	4330	6910	6480	8740	1940	5820	---	9050	---	4290	670
9	---	4540	---	6360	8930	---	5730	---	5690	---	4920	2310
10	---	4380	---	5750	9350	---	5350	---	2810	---	5000	2590
11	---	3500	---	5540	8440	---	2830	3340	2250	---	5340	1700
12	2600	3740	---	5260	9170	---	1150	4080	3000	2770	5610	2230
13	2890	3560	6240	5150	9840	---	1070	3880	8010	3500	5930	3020
14	3270	4140	6610	5280	9480	---	2110	3350	4060	5210	5550	3750
15	4330	3720	6180	5300	9720	9170	2700	3000	4750	5370	3110	4340
16	5240	1050	5870	5280	---	7220	3100	4210	6120	5080	3370	4600
17	4560	719	5640	5260	---	7160	3940	4790	6120	4970	4850	4850
18	5170	914	6120	3990	10100	5570	4730	5230	7950	3610	5850	5290
19	5090	994	6300	530	9600	2750	5230	5810	8250	2590	6730	4890
20	5080	2300	6000	---	5930	1950	6850	6360	7090	4060	6970	5390
21	5090	2530	5650	1040	7700	1220	7640	6180	7280	4970	7220	5430
22	4930	3140	5760	1840	7580	1020	1740	6000	7460	3900	6480	5600
23	5020	3710	6060	1760	9410	884	3140	6360	2670	3020	2260	5640
24	4890	4160	6000	2110	9780	859	2070	6540	2530	2340	1760	5740
25	4900	2720	5820	2260	8990	1550	2310	7090	920	3410	2840	5630
26	4950	3690	5930	2770	9050	1210	4050	10800	2030	6180	2750	5380
27	5260	4250	6300	3470	9050	1670	5270	10300	---	9410	780	5740
28	5340	4460	6360	6060	9050	2890	5930	10800	---	5460	707	5590
29	5170	4150	6910	8500	---	3820	5930	8800	---	5430	933	5420
30	4870	3470	7950	10300	---	5120	6420	6000	---	4770	2110	5440
31	4670	---	9170	9110	---	5360	---	5440	---	4960	2910	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	533	1500	2470	5430	10400	8840	6150	14200	---	13600	4790
2	2790	556	1560	1560	5810	8900	8820	6770	15000	---	30800	19200
3	2330	615	1680	1850	5770	7760	10500	43100	14900	---	18200	8310
4	1870	610	1650	1440	5480	22900	9590	---	17900	---	13900	6300
5	1640	544	1950	1010	5550	10600	7830	---	13800	---	9220	2830
6	1390	734	1970	1100	5130	4490	10000	---	14500	---	7560	2380
7	---	791	1920	1120	4530	8350	10400	---	13000	---	8640	5990
8	---	900	1870	1120	4720	3420	8940	---	17000	---	7780	2840
9	---	968	---	1030	6270	---	8040	---	27800	---	7190	7420
10	---	1060	---	994	7070	---	8360	---	18700	---	6330	5550
11	---	756	---	987	5700	---	16900	9560	12000	---	6680	2590
12	1210	697	---	966	4950	---	11100	90100	12400	2930	6880	2750
13	936	702	1990	1000	6110	---	6620	43000	48900	3000	7480	3210
14	812	872	1980	1080	6400	---	7010	26700	15500	3870	9880	3530
15	924	3610	1970	1140	7090	7060	6750	15000	12300	3610	3480	3800
16	962	1300	1790	1200	---	5320	6380	16100	12500	3330	3030	3660
17	714	1210	1750	1250	---	5320	6980	15600	11300	4660	3930	3610
18	740	1140	1930	3230	6950	6410	7620	15100	11500	5620	4190	3760
19	715	886	1970	2480	8400	4740	8020	15700	10500	2180	4360	3330
20	645	1590	1750	---	7370	41200	10200	15800	8040	7330	4310	3590
21	632	1410	1540	3760	8920	15700	25200	15700	8000	18800	5130	3490
22	572	1550	1620	4760	8700	9670	8320	15800	10700	9290	9550	3420
23	651	1700	1640	3250	10000	14700	9660	18900	10900	4610	4410	3380
24	607	1720	1670	2080	11300	24400	4010	18200	15000	2680	1770	3290
25	609	1070	1540	2780	10400	23100	3480	21200	3030	3570	2320	3100
26	601	1500	1550	3070	9330	9210	5170	41100	7450	8330	12000	2850
27	568	1740	1700	3090	9140	7120	6120	39800	---	57200	7270	2870
28	620	1810	2060	4910	10400	9440	6420	38200	---	70200	2500	2670
29	572	2110	2410	5970	---	10200	6150	25200	---	35000	1680	2600
30	552	1640	2700	6950	---	12000	6400	14600	---	21100	2650	2510
31	530	---	2480	5900	---	11400	---	11900	---	16300	2940	---

07163000 COUNCIL CREEK NEAR STILLWATER, OK

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

DRAINAGE AREA.--31 mi² (80.3 km²).

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

REVISED RECORDS.--WSP 1211: Drainage area.

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

REMARKS.--Records good.

AVERAGE DISCHARGE.--45 years, 10.9 ft³/s (0.309 m³/s), 4.78 in/yr (121 mm/yr), 7,900 acre-ft/yr (9.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Oct. 2, 1959, gage height, 18.9 ft (5.76 m), from floodmarks, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurements at gage heights 13.4 ft (4.08 m) and 17.5 ft (5.33 m); no flow at times in each year except 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 27, 1912, reached a stage of 16.6 ft (5.06 m) at gage, based on floodmarks set by local resident at site 900 ft (274 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 18	1900	1,680	47.6	6.78	2.067	Apr. 10	2245	1,350	38.2	5.98	1.823
Mar. 18	1400	*1,980	56.1	*7.55	2.301	July 6	0215	1,580	44.7	6.55	1.996

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.14	.59	1.2	2.3	1.5	.76	.71	.00
2	.00	.00	.00	.00	.22	.72	1.3	56	1.3	.66	.35	.00
3	.00	.00	.00	.00	.24	3.4	1.4	504	1.4	.52	.18	.00
4	.00	.00	.00	.00	.17	1.7	1.8	192	1.2	.41	.11	.00
5	.00	.00	.00	.00	.16	1.7	1.9	23	1.1	.35	.06	.00
6	.00	.00	.00	.00	.23	1.3	1.3	9.8	2.0	434	.03	.00
7	.00	.00	.00	.00	.23	1.4	1.1	5.9	2.7	11	.00	.00
8	.00	.00	.00	.00	.21	1.3	.96	4.4	1.0	4.2	.00	.00
9	.00	.00	.00	.00	.17	1.4	.81	3.6	432	2.6	.00	.00
10	.00	.00	.00	.00	.21	1.3	194	3.2	92	1.9	.00	.00
11	.00	.00	.00	.00	.35	1.3	173	3.0	9.0	1.4	.00	.00
12	.00	.00	.00	.00	.74	1.3	8.8	2.7	4.2	1.1	.00	.00
13	.00	.00	.00	.00	.44	1.4	4.4	2.5	2.7	.82	.00	.00
14	.00	.00	.00	.00	1.9	.98	3.7	2.1	2.2	.55	.00	.00
15	.00	.00	.00	.00	3.6	.80	3.2	1.9	1.6	.42	.00	.00
16	.00	.00	.00	.00	.60	.93	2.4	1.5	.99	.37	.00	.00
17	.00	.00	.00	.65	.21	1.3	2.2	1.2	.75	.44	.00	.00
18	.00	.00	.00	383	.27	444	2.0	1.3	.62	.51	.00	.00
19	.00	.00	.00	62	.47	22	2.1	1.3	.51	.51	.00	.00
20	.00	.00	.00	3.9	.75	7.7	1.9	1.2	.64	.46	.00	.00
21	.00	.00	.00	1.5	.74	4.7	2.2	2.5	.69	.40	.00	.00
22	.00	.00	.00	.77	.99	221	1.5	4.8	7.3	.34	.00	.00
23	.00	.00	.00	.65	1.3	15	1.5	2.8	3.3	.28	.00	.00
24	.00	.00	.00	.44	.65	4.7	1.7	1.4	2.4	.28	.00	.00
25	.00	.00	.00	.39	.37	2.9	1.8	1.2	1.7	.28	.00	.00
26	.00	.00	.00	.46	.33	2.6	1.6	1.4	1.6	.22	.00	.00
27	.00	.00	.00	.41	.34	1.7	1.7	1.5	1.3	.17	.00	.00
28	.00	.00	.00	.26	.48	1.6	1.9	1.4	1.3	.13	.00	.00
29	.00	.00	.00	.17	---	1.5	2.1	1.4	1.4	.09	.00	.00
30	.00	.00	.00	.24	---	1.2	2.2	1.7	.92	.05	.00	.00
31	.00	---	.00	.18	---	.99	---	3.9	---	1.5	.00	---
TOTAL	.00	.00	.00	455.02	16.51	754.41	427.67	846.9	581.32	501.37	1.44	.00
MEAN	.000	.000	.000	14.7	.59	24.3	14.3	27.3	19.4	16.2	.046	.000
MAX	.00	.00	.00	383	3.6	444	194	504	432	434	.71	.00
MIN	.00	.00	.00	.00	.14	.59	.81	1.2	.51	.05	.00	.00
AC=FT	.00	.00	.00	903	33	1500	848	1680	1150	994	2.9	.00
CAL YR 1978	TOTAL	1593.01	MEAN	4.36	MAX	357	MIN	.00	AC=FT	3160		
WTR YR 1979	TOTAL	3584.64	MEAN	9.82	MAX	504	MIN	.00	AC=FT	7110		

ARKANSAS RIVER BASIN

07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK

LOCATION.--Lat 36°09'05", long 96°15'05", in SW¼SE¼ sec.4, T.19 N., R.10 E., Tulsa County, Hydrologic Unit 11110101, in stair tower of intake structure near left end of Keystone Dam on Arkansas River, 8.5 mi (13.7 km) west of Sand Springs, and at mile 538.8 (866.9 km).

DRAINAGE AREA.--74,506 mi² (192,971 km²), of which 12,541 mi² (32,481 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1964, nonrecording gage nearby at same datum.

REMARKS.--Reservoir is formed by rolled-fill earth dam. Spillway is concrete ogee weir controlled by 18 40-foot (12.2 m) taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power pool was first filled Nov. 20, 1964. Capacity, 1,836,000 acre-ft (2.26 km³), at elevation 754.0 ft (229.82 m), top of flood control pool, 618,000 acre-ft (762 hm³), at elevation 723.0 ft (220.37 m) top of power pool, 520,700 acre-ft (354 hm³) at elevation 706.0 ft (215.19 m), minimum power pool. Figures given herein represent total contents. Reservoir is designed for flood control, power development, and conservation. Revised capacity table, based on survey in 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 863,300 acre-ft (1.06 km³) Mar. 29, elevation 731.72 ft (223.028 m); minimum, 482,100 acre-ft (594 hm³) Nov. 2, elevation 717.22 ft (218.609 m).

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

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

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484800	484400	539500	507600	537600	567600	795600	604100	639000	705000	685900	656700
2	488400	482300	540700	503000	534200	581100	771000	602000	636400	701300	688100	663800
3	488000	484200	540900	499600	536200	593900	748500	621600	645200	698100	691800	671300
4	490500	493900	537900	495400	539000	600800	725100	662100	642800	699800	695000	691600
5	489700	509800	536000	491400	538600	611300	718100	686700	640400	695000	694700	695500
6	491800	527200	534400	492000	539000	617500	716900	703000	640400	715100	691000	691800
7	491100	540400	531100	493000	538300	628400	722500	707900	636400	717500	685300	685300
8	493000	549700	525400	490900	534400	628200	716000	704700	639800	716300	678000	689300
9	494700	551100	524700	489900	530000	627100	706400	697000	662700	720400	669600	688100
10	493700	553000	525400	487300	532300	622700	705000	714600	677200	719200	668200	678300
11	495000	553000	524400	486100	534600	610800	708800	728000	666300	715700	674900	671600
12	494300	553700	522600	483300	532300	602600	705900	744600	652000	711900	679400	664400
13	494500	554000	521900	485200	529500	604300	700100	752100	657200	706400	676900	655300
14	493300	553500	520700	485200	528800	605600	696400	753000	678300	701300	668500	646600
15	494300	551100	519300	484000	528100	606600	688700	742300	695000	690700	662400	644700
16	494300	551100	520700	483100	523000	607900	677700	734900	701600	676900	656400	643900
17	492600	546000	521400	482700	525800	615400	667400	728000	709300	663500	649000	635300
18	493700	548100	518200	489200	528100	636600	656900	723600	708800	655800	649600	632400
19	492000	547400	515700	503000	526300	648700	641700	740500	713100	653600	651700	626600
20	492600	549500	513000	518200	527700	642000	638200	738700	713100	658800	644100	622400
21	490300	550700	510500	529100	530000	667100	635000	733100	709300	670200	637200	611800
22	492000	550000	508700	537200	536500	701800	633400	720700	706400	677700	632400	610200
23	491800	548100	511800	544800	541100	711700	648200	711400	705300	684200	634800	608700
24	489500	544400	511000	545300	546700	739600	648500	701600	703000	684800	640100	605100
25	490500	543900	512100	549500	551800	777400	644100	697300	700400	681100	644700	602600
26	487800	547600	509600	548600	556100	792500	636400	693000	700700	677700	648200	596700
27	488000	544800	507200	551400	556600	806600	628400	682500	703900	675200	649800	590900
28	485900	543000	505700	554400	559200	844500	623200	671300	707000	672400	661600	587100
29	486100	542300	505700	551600	---	859400	617200	656400	709300	678300	661600	585300
30	486500	540400	506700	547400	---	839300	611000	649600	707900	684800	657200	583100
31	484600	---	507800	541600	---	816400	---	641200	---	683600	655600	---
MAX	495000	554000	540900	554400	559200	859400	795600	753000	713100	720400	695000	695500
MIN	484600	482300	505700	482700	523000	567600	611000	602000	636400	653600	632400	583100
†	717.34	719.85	718.43	719.90	720.65	729.56	722.73	723.88	726.27	725.42	724.41	721.63
‡	+2,500	+55,800	-32,600	+33,800	+17,600	+257,200	-205,400	+30,200	+66,700	-24,300	-28,000	-72,500

CAL YR 1978 MAX 793100 MIN 478100 ± -81600
WTR YR 1979 MAX 859400 MIN 482300 ± +101000

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

07164500 ARKANSAS RIVER AT TULSA, OK

LOCATION.--Lat 36°08'37", long 96°00'13", in NW¼ sec.11, T.19 N., R.12 E., Tulsa County, Hydrologic Unit 11110101, near left bank on downstream side of pier of 11th Street bridge on U.S. Highway 66 in Tulsa, 10.1 mi (16.3 km) upstream from Polecat Creek, 15.1 mi (24.3 km) downstream from Keystone Dam, and at mile 523.7 (842.6 km).

DRAINAGE AREA.--74,615 mi² (193,253 km²), of which 12,541 mi² (32,481 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft (187.522 m) Corps of Engineers datum. Prior to Feb. 2, 1939, nonrecording gage and Feb. 2, 1939, to Sept. 30, 1952, water-stage recorder at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records fair. Except for 109 mi² (282 km²) intervening area, flow completely regulated by Keystone Lake (station 07164200) since September 1964. Prior to September 1964 minor regulation by John Martin Lake in Colorado and by Great Salt Plains Lake (station 07150000).

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

AVERAGE DISCHARGE.--(Prior to regulation by Keystone Lake) 39 years (water years 1926-64), 6,554 ft³/s (185.6 m³/s), 4,745,000 acre-ft/yr (5.85 km³/yr); (Since regulation by Keystone Lake) 15 years (water years 1965-79), 6,979 ft³/s (197.6 m³/s), 5,056,000 acre-ft/yr (6.23 km³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,500 ft³/s (949 m³/s) Mar. 31, maximum gage height, 7.78 ft (2.371 m) Mar. 25, 26; minimum daily discharge, 115 ft³/s (3.26 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	1520	3500	150	3500	4100	31900	8250	6170	6840	12000	4570
2	211	224	484	1500	3500	1770	30600	8580	5560	6920	12400	2290
3	172	1570	1180	4870	2360	957	29900	7060	2950	6880	13600	14200
4	1890	206	1790	3040	215	176	29200	8120	3410	5260	16000	2910
5	270	1520	2380	4200	1550	1020	24000	12400	6240	5090	13400	15900
6	1950	201	2690	400	2170	7800	16700	15200	6440	6760	14300	16500
7	815	178	2290	200	2130	12100	7830	15300	5010	6030	13800	15700
8	1150	1390	5060	1500	3000	17600	16400	15600	5770	6240	11500	8020
9	194	212	3060	1200	5120	20700	16500	15800	11900	6070	12000	11900
10	115	1080	384	2500	2180	20800	16600	6930	4580	6030	9890	15200
11	1440	1100	1550	200	238	21200	17500	560	15100	6240	5400	10000
12	201	201	1640	4250	1070	18500	16300	479	15200	5690	200	10900
13	1420	144	2730	300	3580	10600	16300	7280	15200	6800	1410	12400
14	195	2580	2390	200	4320	8080	16300	15600	15300	5660	7090	10600
15	1420	4040	2370	900	3680	4420	16300	14800	15300	7370	6760	4510
16	195	3410	1050	1200	4500	5340	16400	14800	15000	8570	6280	3980
17	116	4240	201	447	2300	2770	16300	15100	11000	8610	6390	5850
18	1390	3240	1150	1280	200	323	16700	15500	10800	6350	3880	6610
19	195	324	3670	218	1100	4730	16700	3910	7620	4930	719	6160
20	1460	2450	3360	1150	2780	16100	10700	5940	7000	4810	2480	5480
21	195	218	2740	213	2020	19700	7740	14700	6920	2880	6310	10400
22	1440	172	2560	126	1160	19700	7520	14800	6350	4660	6860	2390
23	218	2290	1210	1010	175	23700	7460	15100	8960	4630	3000	2360
24	116	3540	211	300	932	30700	9770	15300	6960	6560	986	2660
25	1330	2540	144	1090	164	31000	9370	15400	6920	7490	1690	2780
26	178	1960	947	1750	1440	30900	8770	15600	6880	8880	200	4650
27	1500	212	2730	500	3750	26200	6410	16000	6840	9640	940	4210
28	195	2020	1980	200	5300	1910	4500	15600	7160	9870	2550	4520
29	1520	3080	1930	1300	---	4590	6330	15400	6880	9820	4620	2500
30	201	564	1000	3500	---	29600	8450	12400	6840	7700	8280	1880
31	127	---	250	4000	---	32900	---	11300	---	12200	7590	---
TOTAL	23739	46426	58631	43694	64434	429986	455450	368809	256260	211480	212525	222030
MEAN	766	1548	1891	1409	2301	13870	15180	11900	8542	6822	6856	7401
MAX	1950	4240	5060	4870	5300	32900	31900	16000	15300	12200	16000	16500
MIN	115	144	144	126	164	176	4500	479	2950	2880	200	1880
AC-FT	47090	92090	116300	86670	127800	852900	903400	731500	508300	419500	421500	440400

CAL YR 1978 TOTAL 1703964 MEAN 4668 MAX 22000 MIN 115 AC-FT 3380000
WTR YR 1979 TOTAL 2393464 MEAN 6557 MAX 32900 MIN 115 AC-FT 4747000

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1977 to current year.

WATER TEMPERATURE: March 1977 to current year.

INSTRUMENTATION.--Water quality monitor since March 1977.

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

Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month.

An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations and loads for those parameters were calculated from specific conductance values.

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 7,820 micromhos Feb. 16, 1978; minimum daily 518 micromhos July 27, 1977.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	pH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	DOXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	CULI- FURN, FECAL, 0.7 UM-MF (CULS./ 100 ML)	STREP- TUOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT												
05...	1745	178	1780	7.4	24.0	--	--	--	--	--	240	110
15...	1730	510	1780	7.8	18.0	--	--	--	--	--	240	110
24...	0800	133	1700	8.5	13.5	2.0	10.1	99	K7200	K970	260	140
25...	1730	447	1910	7.4	18.0	--	--	--	--	--	240	110
NOV												
05...	1630	489	326	7.6	18.0	--	--	--	--	--	95	37
15...	0745	2430	2010	8.8	9.0	4.0	10.2	90	K20000	3800	260	120
15...	1635	6350	1820	8.0	16.0	--	--	--	--	--	240	99
25...	1610	759	1660	7.9	13.0	--	--	--	--	--	220	93
DEC												
06...	1706	4330	2040	8.3	10.0	--	--	--	--	--	230	100
15...	1651	3580	2060	8.2	9.0	--	--	--	--	--	240	100
25...	1731	138	1750	8.3	5.0	--	--	--	--	--	260	120
27...	1700	1900	2200	8.3	4.0	3.5	13.6	106	660	100	270	130
JAN												
03...	1718	6760	2410	7.9	2.0	--	--	--	--	--	--	--
07...	1623	378	1870	7.7	3.0	--	--	--	--	--	--	--
11...	1418	40600	2050	8.3	1.5	--	--	--	--	--	--	--
FEB												
06...	1450	341	2080	8.6	1.5	2.5	12.3	92	--	--	260	100
26...	1801	5960	3130	7.9	5.0	--	--	--	--	--	310	160
MAR												
05...	1734	1900	843	8.5	11.0	--	--	--	--	--	120	59
07...	0930	10200	4050	8.2	6.0	6.7	12.0	99	106	K44	340	190
07...	1413	16300	3920	8.5	12.0	--	--	--	--	--	320	170
12...	1300	16500	2220	8.6	12.0	--	--	--	--	--	270	120
APR												
10...	1432	15100	1590	7.5	15.0	--	--	--	--	--	190	81
18...	0930	15900	1900	8.5	14.5	1.0	11.8	118	780	4750	190	92
MAY												
14...	1040	14700	1680	7.4	18.0	--	--	--	--	--	180	81
23...	0730	14800	2480	8.1	19.0	--	--	--	--	--	230	130
23...	1000	15000	2800	8.2	18.5	44	7.8	85	24	K10	190	88
30...	0745	6800	2410	7.9	20.0	--	--	--	--	--	240	130
JUN												
05...	0740	3340	4080	7.7	22.0	--	--	--	--	--	320	210
14...	0715	15200	2580	7.5	22.0	--	--	--	--	--	260	140
20...	0831	2330	1900	8.5	23.5	16	7.2	89	355	154	210	98
25...	0700	3790	1990	7.9	23.0	--	--	--	--	--	210	100
JUL												
01...	1130	950	2830	7.7	24.5	--	--	--	--	--	230	110
04...	0730	3160	2420	7.5	24.5	--	--	--	--	--	270	150
11...	0800	3190	1910	7.2	25.0	--	--	--	--	--	240	120
11...	1200	916	1900	8.2	25.5	10	6.2	78	K1000	305	230	110
AUG												
04...	0800	11000	2760	8.2	26.0	--	--	--	--	--	280	170
14...	1640	1000	2500	7.7	30.0	--	--	--	--	--	260	150
22...	1200	1000	2100	7.8	26.0	14	5.8	74	24500	4000	220	110
25...	0800	1500	2260	7.6	25.0	--	--	--	--	--	260	140
SEP												
05...	0730	12400	2160	7.4	25.0	--	--	--	--	--	240	120
14...	1030	10500	1510	7.8	23.0	--	--	--	--	--	200	88
24...	0735	1330	1710	7.6	22.5	--	--	--	--	--	210	92
26...	0930	2200	1780	7.5	23.0	8.3	7.0	83	K78	K22	200	85

ARKANSAS RIVER BASIN

187

07164500 ARKANSAS RIVER AT TULSA, OK--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SUPP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	PHOSPHORUS (MG/L AS P)	CAR- BONATE (MG/L AS CO ₃)	ALKA- LITY (MG/L AS CaCO ₃)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂)	SULFATE DIS- SOLVED (MG/L AS SO ₄)
OCT												
05...	70	17	290	71	8.1	--	7.7	170	0	140	11	110
15...	67	17	270	70	7.6	--	8.0	160	0	130	4.1	120
24...	74	19	300	71	8.1	--	8.0	--	--	120	--	130
25...	67	18	300	72	8.4	--	8.3	160	0	130	10	120
NOV												
05...	32	3.6	28	38	1.3	--	3.0	--	--	58	--	28
15...	71	19	310	72	8.4	--	8.4	--	--	140	--	120
15...	66	18	270	70	7.6	--	8.9	--	--	140	--	110
25...	63	16	250	70	7.3	--	7.7	--	--	130	--	100
DEC												
06...	59	20	320	74	9.2	--	8.0	--	--	130	--	100
15...	66	19	320	73	8.9	--	8.0	--	--	140	--	100
25...	76	18	260	68	7.0	--	6.7	--	--	140	--	120
27...	74	21	350	73	9.2	--	8.4	--	--	140	--	130
JAN												
03...	--	19	400	--	--	--	8.2	--	--	150	--	130
07...	--	18	280	--	--	--	7.5	--	--	120	--	130
11...	--	19	320	--	--	--	7.4	--	--	150	--	130
FEB												
06...	76	18	340	73	9.1	--	7.3	--	--	160	--	130
26...	87	23	590	85	15	600	7.4	--	--	150	--	180
MAR												
05...	36	7.7	120	74	4.4	120	2.5	--	--	63	--	56
07...	93	25	680	81	16	--	7.0	--	--	150	--	170
07...	87	25	700	82	17	710	6.5	--	--	150	--	160
12...	75	20	350	73	9.3	360	6.0	--	--	150	--	120
APR												
10...	55	13	250	73	7.9	260	5.8	--	--	110	--	92
18...	53	14	340	84	11	350	6.4	--	--	98	--	--
MAY												
14...	51	13	260	75	8.4	270	5.7	--	--	100	--	89
23...	64	16	420	80	12	430	6.7	--	--	100	--	130
23...	48	16	420	83	13	--	6.2	--	--	98	--	130
30...	67	17	410	78	12	420	6.7	--	--	110	--	140
JUN												
05...	86	25	750	88	18	760	6.0	--	--	110	--	210
14...	73	19	460	79	12	470	6.2	--	--	120	--	170
20...	57	16	310	76	9.4	--	6.4	--	--	110	--	130
25...	59	16	300	81	8.9	310	5.9	--	--	110	--	140
JUL												
01...	64	16	--	--	--	350	6.0	--	--	120	--	140
04...	75	20	500	80	13	510	6.5	--	--	120	--	160
11...	68	18	410	78	11	420	6.3	--	--	120	--	150
11...	65	16	300	73	8.6	310	5.8	--	--	120	--	140
AUG												
04...	81	18	470	78	12	480	7.1	--	--	110	--	160
14...	76	16	420	78	11	430	7.0	--	--	110	--	160
22...	65	15	300	74	8.7	310	6.8	--	--	110	--	140
25...	75	17	400	82	11	410	6.5	--	--	120	--	150
SEP												
05...	68	17	360	81	10	370	7.0	--	--	120	--	130
14...	56	14	230	77	7.1	240	6.5	--	--	110	--	94
24...	60	15	270	79	8.1	280	6.4	--	--	120	--	100
26...	55	14	280	81	8.7	290	7.0	--	--	110	--	97

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	420	--	--	981	--	1.33	471	--	--	--	--	--
15...	420	--	--	978	--	1.33	1350	--	--	--	--	--
24...	450	.9	3.4	1160	1060	1.58	417	.49	.35	--	.49	.84
25...	460	--	--	1030	--	1.40	1240	--	--	--	--	--
NOV												
05...	46	--	--	186	--	.25	246	--	--	--	--	--
15...	470	.4	1.3	1110	1080	1.51	7280	.32	.08	--	.50	.58
15...	410	--	--	1010	--	1.37	17300	--	--	--	--	--
25...	390	--	--	923	--	1.26	1890	--	--	--	--	--
DEC												
06...	500	--	--	1130	--	1.54	13200	--	--	--	--	--
15...	490	--	--	1140	--	1.55	11000	--	--	--	--	--
25...	400	--	--	949	--	1.29	354	--	--	--	--	--
27...	540	.3	2.3	1220	1210	1.66	6260	.40	.01	--	.40	.41
JAN												
03...	600	--	--	1330	--	1.81	24300	--	--	--	--	--
07...	420	--	--	1030	--	--	1050	--	--	--	--	--
11...	490	--	--	1120	--	--	123000	--	--	--	--	--
FEB												
06...	490	.5	2.9	1140	1160	1.55	1050	.38	.25	--	.75	1.0
26...	950	--	--	1740	--	2.37	27500	--	--	--	--	--
MAR												
05...	220	--	--	459	--	.62	2360	--	--	--	--	--
07...	1100	.3	3.6	2110	2170	2.87	58100	.57	.43	--	.57	1.0
07...	1100	--	--	2100	--	2.86	92400	--	--	--	--	--
12...	540	--	--	1210	--	1.65	53900	--	--	--	--	--
APR												
10...	380	--	--	860	--	1.17	35100	--	--	--	--	--
16...	450	.3	5.8	1040	--	1.41	44600	1.1	.16	.19	.57	.73
MAY												
14...	400	--	--	918	--	1.25	36400	--	--	--	--	--
23...	650	--	--	1350	--	1.84	53900	--	--	--	--	--
23...	630	.3	6.1	1370	1320	1.86	55500	1.2	.07	.08	.71	.78
30...	620	--	--	1340	--	1.82	24600	--	--	--	--	--
JUN												
05...	--	--	--	2360	--	3.21	21300	--	--	--	--	--
14...	680	--	--	1440	--	1.96	59100	--	--	--	--	--
20...	460	.3	6.2	1050	1050	1.43	6610	.73	.04	.05	.37	.41
25...	480	--	--	1080	--	1.47	11100	--	--	--	--	--
JUL												
01...	--	--	--	--	--	--	--	--	--	--	--	--
04...	730	--	--	1500	--	2.04	12800	--	--	--	--	--
11...	610	--	--	1330	--	1.81	11500	--	--	--	--	--
11...	430	.4	5.8	984	1040	1.34	2430	.59	.36	.44	.74	1.1
AUG												
04...	720	--	--	1520	--	2.07	45100	--	--	--	--	--
14...	620	--	--	1370	--	1.86	3700	--	--	--	--	--
22...	440	.8	5.8	1010	1040	1.37	2730	.33	.81	.98	.49	1.3
25...	--	--	--	1220	--	1.66	4940	--	--	--	--	--
SEP												
05...	530	--	--	1190	--	1.62	39800	--	--	--	--	--
14...	340	--	--	807	--	1.10	22900	--	--	--	--	--
24...	410	--	--	930	--	1.26	3340	--	--	--	--	--
26...	450	.3	3.0	964	975	1.31	5730	.66	.06	.07	.79	.85

ARKANSAS RIVER BASIN

189

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHURUS, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
UCT											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
24...	.00	.95	1.3	5.9	.140	--	.100	6.0	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
15...	.02	.56	.90	4.0	.090	--	.070	--	4.4	--	2700
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
27...	.01	.40	.81	3.6	.100	--	.090	4.1	--	--	--
JAN											
03...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
06...	.09	.91	1.4	6.1	.140	--	.110	6.5	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
07...	.00	1.1	1.6	7.0	.130	--	.110	6.6	--	--	3100
07...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
18...	.07	.66	1.8	8.1	.130	--	.100	7.3	--	--	--
MAY											
14...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	.24	.54	2.0	8.8	.150	.46	.060	--	7.3	2.2	1000
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
20...	.07	.34	1.1	5.0	.130	.40	.100	5.2	--	--	340
25...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	.11	.99	1.7	7.5	.190	--	.140	5.3	--	--	39000
AUG											
04...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
22...	.00	1.3	1.6	7.2	.270	--	.200	--	5.2	1.0	22000
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	.08	.77	1.5	6.7	.110	--	.060	--	--	--	700

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

ARKANSAS RIVER BASIN

191

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
OCT 24...	--	--	--	--	--	--	--	--	--	--
NOV 15...	130	3	40	30	10	.0	.0	.1	--	--
DEC 27...	--	--	--	--	--	--	--	--	--	--
FEB 06...	160	1	60	30	30	.0	.0	.0	1	0
MAR 07...	--	--	--	--	--	--	--	--	--	--
APR 18...	--	--	--	--	--	--	--	--	--	--
MAY 23...	13	2	50	40	10	.1	.0	.2	1	0
JUN 20...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 22...	17	0	230	60	170	.2	.0	.3	1	0
SEP 26...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	--	--	--	--	--	--	--	54	19	97
NOV 15...	1	0	0	0	50	30	20	98	643	99
DEC 27...	--	--	--	--	--	--	--	56	287	79
FEB 06...	1	1	0	1	50	20	30	48	44	84
MAR 07...	--	--	--	--	--	--	--	331	9120	98
APR 18...	--	--	--	--	--	--	--	97	4160	96
MAY 23...	1	0	0	0	20	0	20	220	8910	91
JUN 20...	--	--	--	--	--	--	--	168	1060	98
JUL 11...	--	--	--	--	--	--	--	124	307	96
AUG 22...	1	0	0	0	50	10	40	220	594	96
SEP 26...	--	--	--	--	--	--	--	67	398	97

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 15, 78 0745	MAR 7, 79 0930	MAY 25, 79 1000	JUN 20, 79 0831
TOTAL CELLS/ML	2700	3100	1000	340
DIVERSITY: DIVISION	1.4	0.9	1.5	1.4
..CLASS	1.4	0.9	1.5	1.4
..ORDER	2.3	1.3	1.9	1.8
...FAMILY	2.6	1.5	1.9	1.9
....GENUS	3.1	1.5	2.2	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE								
...CHLOROCOCCUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	430#	41	--	-
...MICRACTINIACEAE								
...MICRACTINIUM	--	-	--	-	--	-	--	-
...UOCYSTACEAE								
...ANKISTRODESMUS	62	2	56	2	--	-	--	-
...CHLORELLA	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	150	6	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...UOCYSTIS	54	2	--	-	--	-	--	-
...TETRAEDRON	*	0	--	-	--	-	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	31	1	110	4	--	-	--	-
...SCENEDESMUS	120	5	--	-	--	-	52#	15
...TETRASPORALES								
...CUCCOMYXACEAE								
...ELAKATOTHRIX	23	1	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	31	1	--	-	39	4	13	4
...CHLOROGONIUM	--	-	--	-	--	-	--	-
...PLATYMONAS	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
...COSCINODISCUS	--	-	--	-	--	-	--	-
...CYCLOTELLA	190	7	2400#	77	270#	26	180#	54
...MELOSIRA	77	3	--	-	160	15	--	-
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	15	1	--	-	--	-	--	-
...COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
...SYNEDRA	15	1	--	-	--	-	--	-
...GOMPHONEMATAACEAE								
...GOMPHONEMA	--	-	84	3	--	-	--	-
...NAVICULACEAE								
...NAVICULA	190	7	140	5	39	4	13	4
...NITZSCHIA	77	3	28	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	--	-	39	4	--	-
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	490#	18	--	-	--	-	--	-
....ANACYSTIS	220	8	56	2	78	7	--	-
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	65#	19
...OSCILLATORIA								
....LYNGBYA	--	-	--	-	--	-	--	-
...OSCILLATORIA	930#	34	--	-	--	-	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 15, 78 0745		MAR 7, 79 0930		MAY 25, 79 1000		JUN 20, 79 0831	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	56	2	--	-	--	-
....EUTREPTIA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	84	3	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	110	4	--	-	--	-

DATE TIME	JUL 11, 79 1200		AUG 22, 79 1200		SEP 26, 79 0930	
TOTAL CELLS/ML	39000		22000		700	
DIVERSITY: DIVISION	0.9		1.3		1.3	
..CLASS	0.9		1.3		1.3	
...ORDER	1.7		2.2		1.7	
...FAMILY	1.7		2.6		2.6	
....GENUS	1.8		2.9		2.8	

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCUCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	290	1	--	-
...CHLOROCOCCACEAE						
....CHLOROCOCCUM	--	-	140	1	--	-
...COELASTRACEAE						
....COELASTRUM	--	-	1200	5	210#	30
...MICRACTINIACEAE						
....MICRACTINIUM	--	-	290	1	--	-
...UOCYSTACEAE						
....ANKISTRODESMUS	--	-	140	1	--	-
...CHLORELLA	--	-	290	1	--	-
...CHODATELLA	--	-	*	0	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-
...KIRCHNERIELLA	*	0	220	1	--	-
...OOCYSTIS	--	-	--	-	39	6
...TETRAEDRON	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
...SCENEDESMUS	*	0	1000	5	130#	19
...TETRASPORALES						
...COCOCOMYXACEAE						
....ELAKATOTHRIX	--	-	--	-	--	-
...VULVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	1500	4	2300	11	--	-
...CHLOROGONIUM	*	0	--	-	--	-
...PLATYMONAS	--	-	140	1	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....COSCINODISCUS	--	-	--	-	100	15
...CYCLOTELLA	5400	14	2100	10	52	7
...MEIOSIRA	*	0	--	-	--	-
...PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
...CUCONEIS	--	-	*	0	--	-
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATAACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	*	0	220	1	65	9
...NITZSCHACEAE						
....NITZSCHIA	*	0	220	1	52	7

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

CRYPTOPHYTA (CRYPTOMONADS)					
.CRYPTOPHYCEAE					
..CRYPTOMONADALES					
...CRYPTOCHRYSIDACEAE					
....CHROMONAS	--	-	--	-	--
...CRYPTOMONADACEAE					
....CRYPTOMONAS	*	0	--	-	--
CYANOPHYTA (BLUE-GREEN ALGAE)					
.CYANOPHYCEAE					
..CHROOCOCCALES					
...CHROOCOCCACEAE					
....AGMENELLUM	11000#	29	2900	13	--
....ANACYSTIS	--	-	860	4	52
...HORMOGONALES					
...NOSTOCACEAE					
....ANABAENA	--	-	--	-	--
...OSCILLATORIACEAE					
....LYNGBYA	20000#	51	--	-	--
....OSCILLATORIA	--	-	--	-	--
....SCHIZOTHRIX	--	-	9400#	43	--
DATE					
TIME					
	JUL 11,79		AUG 22,79		SEP 26,79
	1200		1200		0930
ORGANISM					
	CELLS	PER-	CELLS	PER-	CELLS
	/ML	CENT	/ML	CENT	/ML
EUGLENOPHYTA (EUGLENDIDS)					
.EUGLENOPHYCEAE					
..EUGLENALES					
...EUGLENACEAE					
....EUGLENA	--	-	--	-	--
....EUTREPTIA	--	-	*	0	--
....TRACHELOMONAS	--	-	--	-	--
PYRRHOPHYTA (FIRE ALGAE)					
.DINOPHYCEAE					
..PERIDINIALES					
...GLENODINIACEAE					
....GLENODINIUM	--	-	--	-	--

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1880	1890	---	---	---	3300	---	---	2680	2830	---	---
2	1870	248	---	---	---	3160	1470	---	3070	2720	---	2500
3	1870	363	---	2410	---	3130	---	---	---	---	2360	2390
4	1870	352	---	1980	---	3740	---	---	3180	2420	2760	---
5	1780	326	---	1960	---	843	---	---	4080	2530	---	2160
6	1750	320	2040	1950	---	3730	1540	---	---	---	2740	2040
7	1760	326	2060	1870	---	3920	---	---	3790	1930	2710	---
8	1770	398	2050	2040	---	2900	---	---	3750	1910	---	1780
9	1770	1820	2040	2040	---	2480	---	---	---	---	2610	1860
10	1760	1830	2050	2060	---	2470	1590	---	2640	1930	2520	---
11	1770	1830	2050	2050	---	2290	---	---	2600	1910	---	---
12	1780	1820	2060	---	---	2220	---	---	---	---	1220	1660
13	1770	1830	2050	---	---	1830	---	---	2910	---	1440	---
14	1770	1830	2040	---	---	1960	---	1680	2580	---	2500	1510
15	1780	1820	2060	---	---	1910	---	---	---	---	---	---
16	1800	1660	2070	1260	---	1830	---	---	2170	---	2090	1530
17	1780	1660	2060	2220	---	1680	---	---	2270	---	---	1540
18	1770	1650	1740	1780	---	---	---	---	---	---	2260	1520
19	1900	1660	2060	---	---	---	---	2160	2070	---	2130	---
20	1900	1670	2050	1760	---	---	---	---	1930	---	---	1520
21	1900	1660	1880	1760	---	---	---	2390	---	---	2420	1660
22	1910	1670	1740	---	---	---	---	---	1910	---	2160	---
23	1900	1670	1750	---	---	---	---	2480	1870	---	---	1680
24	1900	1680	1740	---	---	---	---	2450	---	---	1960	1710
25	1910	1660	1750	---	2870	---	---	---	1990	---	2260	---
26	1900	1670	1760	---	3130	---	---	2350	1880	---	---	---
27	1900	1680	2180	---	3910	---	---	2210	---	---	2100	1780
28	1890	1660	1230	---	3640	---	---	---	1990	---	2510	1690
29	1890	1670	1290	---	---	---	---	2420	---	---	---	1700
30	1900	---	---	---	---	---	---	2410	2880	---	2620	1700
31	1870	---	---	---	---	---	---	---	---	---	2360	---

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1840	1820	1930	1890	---	---	1590	2020	2480	---	---	2720
2	1780	218	1920	1610	---	---	1500	1800	3040	---	---	2350
3	1890	463	1910	2400	---	---	1550	1620	3390	---	---	2270
4	1840	342	1970	1990	---	---	1480	1540	---	---	---	2020
5	1770	336	2010	---	---	---	1490	1790	3020	---	---	2080
6	1760	360	2010	---	---	---	1520	1990	3010	---	---	1920
7	1740	286	2020	---	---	---	1550	2040	4060	---	---	1860
8	1790	378	2050	---	---	---	1640	1910	3840	---	---	1810
9	1910	1810	2050	---	---	---	1550	1870	3540	---	---	1810
10	1650	1950	2070	---	---	---	1520	1920	3340	---	---	1720
11	1920	1840	2020	---	---	---	1420	---	2800	---	---	1600
12	2110	1780	1900	---	---	---	1610	---	2960	---	---	1490
13	1730	1860	1990	---	---	---	1610	1760	3100	---	---	1530
14	1790	1540	2000	---	---	---	1660	1680	2770	---	---	1510
15	1860	1670	2040	---	---	1870	1700	1590	2540	---	---	1530
16	1810	1620	2080	---	---	1720	1800	1630	2350	---	1960	1540
17	1790	1520	2030	---	---	---	1920	1840	2410	---	2060	1550
18	1500	1650	1740	---	---	---	1980	2090	2340	---	2190	1640
19	1980	1660	2070	---	---	---	---	2160	2180	---	1730	1520
20	1640	1710	2070	---	---	1470	---	---	2350	---	2100	1730
21	1950	1650	1960	---	---	1540	---	2390	1440	---	2400	1850
22	1950	1690	1770	---	---	1420	---	2410	2040	---	2430	1560
23	1980	1750	1790	---	---	1420	---	2480	---	---	2260	1350
24	1560	1620	1820	---	---	1440	---	2380	---	---	2180	1670
25	2130	1880	1780	---	---	1490	2030	2360	---	---	2270	1740
26	1840	1710	1640	---	---	1570	1930	2310	---	---	2080	---
27	1960	1680	1990	---	---	1480	1700	2200	---	---	2250	---
28	1790	1710	1250	---	---	1450	1780	2260	---	---	2570	---
29	1850	1780	1270	---	---	---	1950	2460	---	---	2540	---
30	1980	1810	1340	---	---	1740	2080	2460	---	---	2530	---
31	2000	---	1440	---	---	1630	---	2550	---	---	3290	---

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	18.0	---	---	---	9.0	---	---	20.5	24.5	---	---
2	26.0	18.0	---	---	---	10.0	---	---	21.5	25.0	---	25.5
3	26.0	18.0	---	2.0	---	10.0	---	---	---	---	26.0	25.0
4	26.0	19.0	---	2.0	---	10.0	---	---	22.0	24.5	26.0	---
5	24.0	18.0	---	10.0	---	11.0	---	---	22.0	26.0	---	25.0
6	23.0	19.0	10.0	3.0	---	20.0	---	---	---	---	26.0	25.0
7	23.0	19.0	10.0	3.0	---	12.0	---	---	22.0	25.0	26.5	---
8	23.0	20.0	9.0	3.0	---	9.0	---	---	23.0	25.0	---	24.5
9	22.0	15.0	8.0	2.0	---	12.0	---	---	---	---	26.0	24.5
10	21.0	17.0	7.0	1.5	---	15.0	15.0	---	20.5	25.5	26.0	---
11	21.0	17.0	7.0	1.5	---	13.0	---	---	21.0	25.0	---	---
12	18.0	17.0	6.0	---	---	12.0	---	---	---	---	22.0	25.0
13	18.0	16.0	8.0	---	---	12.0	---	---	22.0	---	22.0	---
14	18.0	16.0	8.0	---	---	13.0	---	18.0	22.0	---	30.0	23.0
15	18.0	16.0	9.0	---	---	14.0	---	---	---	---	---	---
16	18.0	16.0	10.0	3.0	---	10.0	---	---	22.5	---	25.0	22.0
17	19.0	16.0	10.0	4.0	---	13.0	---	---	22.5	---	---	22.5
18	18.0	15.0	9.0	5.0	---	---	---	---	---	---	26.0	23.5
19	19.0	13.0	7.0	---	---	---	---	22.0	23.0	---	25.5	---
20	19.0	13.0	6.0	4.0	---	---	---	---	23.0	---	---	23.5
21	19.0	13.0	7.0	4.0	---	---	---	19.5	---	---	25.0	22.5
22	19.0	14.0	8.0	---	---	---	---	---	23.5	---	24.5	---
23	19.0	14.0	6.0	---	---	---	---	19.0	23.0	---	---	22.0
24	18.0	13.0	5.0	---	---	---	---	19.0	---	---	25.0	22.5
25	18.0	13.0	5.0	---	4.0	---	---	---	23.0	---	25.0	---
26	19.0	13.0	6.0	---	5.0	---	---	19.0	23.0	---	---	---
27	18.0	12.0	5.0	---	8.0	---	---	20.0	---	---	24.5	22.5
28	18.0	12.0	5.0	---	6.0	---	---	---	23.5	---	25.0	22.0
29	18.0	12.0	5.0	---	---	---	---	19.5	---	---	---	22.0
30	18.0	---	---	---	---	---	---	20.0	24.5	---	26.0	23.0
31	19.0	---	---	---	---	---	---	---	---	---	26.0	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO₄), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	110	120	120		---	100	120	140		---	150
2	110	52	120	110		---	100	110	160		---	130
3	120	61	120	140		---	100	110	170		---	130
4	110	56	120	120		---	100	100	---		---	120
5	110	56	120	---		---	100	110	160		---	120
6	110	57	120	---		---	100	120	160		---	120
7	110	54	120	---		---	100	120	200		---	120
8	110	58	120	---		---	110	120	190		---	110
9	120	110	120	---		---	100	120	180		---	110
10	110	120	120	---		---	100	120	170		---	110
11	120	110	120	---		---	98	---	150		---	110
12	120	110	120	---		---	110	---	160		---	100
13	110	120	120	---		---	110	110	160		---	100
14	110	100	120	---		---	110	110	150		---	100
15	120	110	120	---		120	110	100	140		---	100
16	110	110	120	---		110	110	110	130		120	100
17	110	100	120	---		---	120	110	140		120	100
18	100	110	110	---		---	120	120	130		130	110
19	120	110	120	---		---	---	130	130		110	100
20	110	110	120	---		100	---	---	130		120	110
21	120	110	120	---		100	---	140	99		140	110
22	120	110	110	---		98	---	140	120		140	100
23	120	110	110	---		98	---	140	---		130	96
24	100	110	110	---		99	---	140	---		130	110
25	130	120	110	---		100	120	130	---		130	110
26	110	110	110	---		100	120	130	---		120	---
27	120	110	120	---		100	110	130	---		130	---
28	110	110	92	---		99	110	130	---		140	---
29	110	110	92	---		---	120	140	---		140	---
30	120	110	95	---		110	120	140	---		140	---
31	120	---	99	---		110	---	140	---		170	---

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570.0	451.0	1130.0	48.6		---	8610.0	2670.0	2330.0		---	1850.0
2	62.7	31.4	157.0	445.0		---	8260.0	2550.0	2400.0		---	804.0
3	55.7	259.0	382.0	1840.0		---	8070.0	2100.0	1350.0		---	4980.0
4	561.0	31.1	580.0	985.0		---	7880.0	2190.0	---		---	943.0
5	80.2	230.0	771.0	---		---	6480.0	3680.0	2700.0		---	5150.0
6	579.0	30.9	872.0	---		---	4510.0	4920.0	2780.0		---	5350.0
7	242.0	26.0	742.0	---		---	2110.0	4960.0	2710.0		---	5090.0
8	342.0	218.0	1640.0	---		---	4870.0	5050.0	2960.0		---	2380.0
9	62.9	63.0	991.0	---		---	4450.0	5120.0	5780.0		---	3530.0
10	34.2	350.0	124.0	---		---	4480.0	2250.0	2100.0		---	4510.0
11	467.0	327.0	502.0	---		---	4630.0	---	6120.0		---	2970.0
12	65.1	59.7	531.0	---		---	4840.0	---	6570.0		---	2940.0
13	422.0	46.7	885.0	---		---	4840.0	2160.0	6570.0		---	3350.0
14	57.9	697.0	774.0	---		---	4840.0	4630.0	6200.0		---	2860.0
15	460.0	1200.0	768.0	---		1430.0	4840.0	4000.0	5780.0		---	1220.0
16	57.9	1010.0	340.0	---		1590.0	4870.0	4400.0	5260.0		2030.0	1070.0
17	34.5	1140.0	65.1	---		---	5280.0	4480.0	4160.0		2070.0	1580.0
18	375.0	962.0	342.0	---		---	5410.0	5020.0	3790.0		1360.0	1960.0
19	63.2	96.2	1190.0	---		---	---	1370.0	2670.0		214.0	1660.0
20	434.0	728.0	1090.0	---		4350.0	---	---	2460.0		804.0	1630.0
21	63.2	64.7	888.0	---		5320.0	---	5560.0	1850.0		2390.0	3090.0
22	467.0	51.1	760.0	---		5210.0	---	5590.0	2060.0		2590.0	645.0
23	70.6	680.0	359.0	---		6270.0	---	5710.0	---		1050.0	612.0
24	31.3	1050.0	62.7	---		8210.0	---	5780.0	---		346.0	790.0
25	467.0	823.0	42.8	---		8370.0	3040.0	5410.0	---		593.0	826.0
26	52.9	562.0	281.0	---		8340.0	2640.0	5480.0	---		64.8	---
27	486.0	63.0	885.0	---		7070.0	1900.0	5620.0	---		330.0	---
28	57.9	600.0	492.0	---		511.0	1340.0	5480.0	---		964.0	---
29	451.0	915.0	479.0	---		---	2050.0	5820.0	---		1750.0	---
30	65.1	168.0	256.0	---		8790.0	2740.0	4690.0	---		3130.0	---
31	41.1	---	66.8	---		9770.0	---	4270.0	---		3480.0	---

ARKANSAS RIVER BASIN

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	440	480	460		---	380	500	640		---	710
2	430	38	470	380		---	350	440	810		---	600
3	460	81	470	620		---	360	380	910		---	580
4	450	60	490	490		---	340	360	---		---	500
5	430	59	500	---		---	350	430	800		---	520
6	430	63	500	---		---	350	490	800		---	470
7	420	50	500	---		---	360	510	1100		---	460
8	430	66	510	---		---	390	470	1000		---	440
9	470	440	510	---		---	360	460	960		---	440
10	390	480	520	---		---	350	470	900		---	410
11	470	450	500	---		---	320	---	740		---	380
12	530	430	470	---		---	380	---	780		---	350
13	420	460	490	---		---	380	430	830		---	360
14	430	360	500	---		---	400	400	730		---	350
15	460	400	510	---		460	410	380	660		---	360
16	440	380	520	---		410	440	390	600		490	360
17	430	350	510	---		---	470	450	620		520	360
18	350	390	420	---		---	490	520	600		550	390
19	490	400	520	---		---	---	550	550		420	350
20	390	410	520	---		340	---	---	600		530	420
21	480	390	490	---		360	---	610	330		620	450
22	480	410	430	---		320	---	620	510		630	370
23	490	420	430	---		320	---	640	---		570	300
24	370	380	440	---		330	---	610	---		550	400
25	540	460	430	---		350	510	600	---		580	420
26	450	410	390	---		370	480	590	---		520	---
27	490	400	490	---		340	410	560	---		570	---
28	430	410	270	---		330	430	570	---		670	---
29	450	430	280	---		---	480	630	---		660	---
30	490	440	300	---		420	520	630	---		660	---
31	500	---	330	---		390	---	660	---		880	---

CHLORIDE, DISSOLVED (TUNS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2330.0	1810.0	4540.0	186.0		---	32700.0	11100.0	10700.0		---	8760.0
2	245.0	23.0	614.0	1540.0		---	28900.0	10200.0	12200.0		---	3710.0
3	214.0	343.0	1500.0	8150.0		---	29100.0	7240.0	7250.0		---	22200.0
4	2300.0	33.4	2370.0	4020.0		---	26800.0	7890.0	---		---	3930.0
5	313.0	242.0	3210.0	---		---	22700.0	14400.0	13500.0		---	22300.0
6	2260.0	34.2	3630.0	---		---	15800.0	20100.0	13900.0		---	20900.0
7	924.0	24.0	3090.0	---		---	7610.0	21100.0	14900.0		---	19500.0
8	1340.0	248.0	6970.0	---		---	17300.0	19800.0	15600.0		---	9530.0
9	246.0	252.0	4210.0	---		---	16000.0	19600.0	30800.0		---	14100.0
10	121.0	1400.0	539.0	---		---	15700.0	8790.0	11100.0		---	16800.0
11	1830.0	1340.0	2090.0	---		---	15100.0	---	30200.0		---	10300.0
12	288.0	233.0	2080.0	---		---	16700.0	---	32000.0		---	10300.0
13	1610.0	179.0	3610.0	---		---	16700.0	8450.0	34100.0		---	12100.0
14	226.0	2510.0	3230.0	---		---	17600.0	16800.0	30200.0		---	10000.0
15	1760.0	4360.0	3260.0	---		5490.0	18000.0	15200.0	27300.0		---	4380.0
16	232.0	3500.0	1470.0	---		5910.0	19500.0	15600.0	24300.0		8310.0	3870.0
17	135.0	4010.0	277.0	---		---	20700.0	18300.0	18400.0		8970.0	5690.0
18	1310.0	3410.0	1300.0	---		---	22100.0	21800.0	17500.0		5760.0	6960.0
19	258.0	350.0	5150.0	---		---	---	5810.0	11300.0		815.0	5820.0
20	1540.0	2710.0	4720.0	---		14800.0	---	---	11300.0		3550.0	6210.0
21	253.0	230.0	3630.0	---		19100.0	---	24200.0	6170.0		10600.0	12600.0
22	1870.0	190.0	2970.0	---		17000.0	---	24800.0	8740.0		11700.0	2390.0
23	288.0	2600.0	1400.0	---		20500.0	---	26100.0	---		4620.0	1910.0
24	116.0	3630.0	251.0	---		27400.0	---	25200.0	---		1460.0	2870.0
25	1940.0	3150.0	167.0	---		29300.0	12900.0	24900.0	---		2650.0	3150.0
26	216.0	2170.0	997.0	---		30900.0	11400.0	24900.0	---		281.0	---
27	1980.0	229.0	3610.0	---		24100.0	7100.0	24200.0	---		1450.0	---
28	226.0	2240.0	1440.0	---		1700.0	5220.0	24000.0	---		4610.0	---
29	1850.0	3580.0	1460.0	---		---	8200.0	26200.0	---		8230.0	---
30	266.0	670.0	810.0	---		33600.0	11900.0	21100.0	---		14800.0	---
31	171.0	---	223.0	---		34600.0	---	20100.0	---		18000.0	---

ARKANSAS RIVER BASIN

199

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SOLIDS, RESIDUE UN EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	1010	1070	1050		---	885	1120	1370		---	1500
2	988	142	1060	896		---	857	999	1670		---	1300
3	1050	275	1060	1320		---	864	902	1860		---	1250
4	1020	209	1090	1100		---	826	858	---		---	1120
5	983	206	1110	---		---	831	994	1660		---	1150
6	978	219	1110	---		---	848	1100	1660		---	1060
7	967	179	1120	---		---	864	1130	2220		---	1030
8	994	228	1130	---		---	913	1060	2110		---	1000
9	1060	1000	1130	---		---	864	1040	1940		---	1000
10	918	1080	1150	---		---	848	1060	1830		---	956
11	1060	1020	1120	---		---	793	---	1540		---	891
12	1170	988	1050	---		---	896	---	1630		---	831
13	961	1030	1100	---		---	896	978	1700		---	853
14	994	858	1110	---		---	923	934	1530		---	842
15	1030	929	1130	---		1040	945	885	1400		---	853
16	1000	902	1150	---		956	999	907	1300		1090	858
17	994	848	1120	---		---	1060	1020	1330		1140	864
18	837	918	967	---		---	1100	1160	1290		1210	913
19	1100	923	1150	---		---	---	1190	1210		961	848
20	913	950	1150	---		820	---	---	1300		1160	961
21	1080	918	1090	---		858	---	1320	804		1320	1030
22	1080	940	983	---		793	---	1330	1130		1340	869
23	1100	972	994	---		793	---	1370	---		1250	755
24	869	902	1010	---		804	---	1310	---		1210	929
25	1180	1040	988	---		831	1120	1300	---		1250	967
26	1020	950	913	---		875	1070	1280	---		1150	---
27	1090	934	1100	---		826	945	1220	---		1240	---
28	994	950	701	---		810	988	1250	---		1420	---
29	1030	968	712	---		---	1080	1360	---		1400	---
30	1100	1000	750	---		967	1150	1360	---		1390	---
31	1110	---	804	---		907	---	1410	---		1810	---

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5290.0	4150.0	10100.0	425.0		---	76200.0	24900.0	22800.0		---	18500.0
2	563.0	85.9	1390.0	3630.0		---	69200.0	23100.0	25100.0		---	8040.0
3	488.0	1170.0	3380.0	17400.0		---	69800.0	17200.0	14800.0		---	47900.0
4	5210.0	116.0	5270.0	9030.0		---	65100.0	18800.0	---		---	8800.0
5	717.0	845.0	7130.0	---		---	53600.0	33300.0	28000.0		---	49400.0
6	5150.0	119.0	8060.0	---		---	38200.0	45100.0	28900.0		---	47200.0
7	2130.0	86.0	6920.0	---		---	18300.0	46700.0	30000.0		---	43700.0
8	3090.0	856.0	15400.0	---		---	40400.0	44600.0	32900.0		---	21700.0
9	555.0	572.0	9340.0	---		---	38500.0	44400.0	62300.0		---	32100.0
10	285.0	3150.0	1190.0	---		---	38000.0	19800.0	22600.0		---	39200.0
11	4120.0	3030.0	4690.0	---		---	37500.0	---	62800.0		---	24100.0
12	635.0	536.0	4650.0	---		---	39400.0	---	66900.0		---	24500.0
13	3680.0	400.0	8110.0	---		---	39400.0	19200.0	69800.0		---	28600.0
14	523.0	5980.0	7160.0	---		---	40600.0	39300.0	63200.0		---	24100.0
15	3950.0	10100.0	7230.0	---		12400.0	41600.0	35400.0	57800.0		---	10400.0
16	526.0	8300.0	3260.0	---		13800.0	44200.0	36200.0	52700.0		18500.0	9220.0
17	311.0	9710.0	608.0	---		---	46700.0	41600.0	39500.0		19700.0	13600.0
18	3140.0	8030.0	3000.0	---		---	49600.0	48500.0	37600.0		12700.0	16300.0
19	579.0	807.0	11400.0	---		---	---	12600.0	24900.0		1870.0	14100.0
20	3600.0	6280.0	10400.0	---		35600.0	---	---	24600.0		7770.0	14200.0
21	569.0	540.0	8060.0	---		45600.0	---	52400.0	15000.0		22500.0	28900.0
22	4200.0	437.0	6790.0	---		42200.0	---	53100.0	19400.0		24800.0	5610.0
23	647.0	6010.0	3250.0	---		50700.0	---	55900.0	---		10100.0	4810.0
24	272.0	8620.0	575.0	---		66600.0	---	54100.0	---		3220.0	6670.0
25	4240.0	7130.0	384.0	---		69600.0	28300.0	54100.0	---		5700.0	7260.0
26	490.0	5030.0	2330.0	---		73000.0	25300.0	53900.0	---		621.0	---
27	4410.0	535.0	8110.0	---		58400.0	16400.0	52700.0	---		3150.0	---
28	523.0	5180.0	3750.0	---		4180.0	12000.0	52700.0	---		9780.0	---
29	4230.0	8220.0	3710.0	---		---	18500.0	56500.0	---		17500.0	---
30	597.0	1520.0	2030.0	---		77300.0	26200.0	45500.0	---		31100.0	---
31	381.0	---	543.0	---		80600.0	---	43000.0	---		37100.0	---

ARKANSAS RIVER BASIN

07165000 HEYBURN LAKE NEAR HEYBURN, OK

LOCATION.--Lat 35°56'52", long 96°17'55", in SE¼ sec.13, T.17 N., R.9 E., Creek County, Hydrologic Unit 11110101, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 mi (4.0 km) northwest of Heyburn, 3.4 mi (5.5 km) upstream from bridge on U.S. Highway 66, 11.0 mi (17.7 km) southwest of Sapulpa, and at mile 48.6 (28.2 km).

DRAINAGE AREA.--123 mi² (318.6 km²).

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

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

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

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,630 acre-ft (23.0 hm³) May 4, elevation, 770.68 ft (234.903 m); minimum, 5,070 acre-ft (6.25 hm³) Nov. 12, 13, elevation, 759.48 ft (231.490 m).

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

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

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5530	5160	5280	5140	5780	5910	6960	6870	6710	6980	6590	6890
2	5510	5160	5290	5140	5770	5950	6920	8320	6710	6930	6560	6870
3	5490	5140	5280	5130	5770	6010	6900	17310	6710	6880	6540	6830
4	5470	5140	5260	5130	5760	6000	6860	16950	6690	6840	6530	6790
5	5440	5140	5260	5130	5750	6000	6830	14050	6680	6810	6510	6770
6	5420	5140	5270	5130	5770	6000	6800	11180	6870	7990	6480	6750
7	5410	5130	5270	5130	5770	5990	6780	9420	6960	7910	6460	6720
8	5390	5120	5260	5120	5770	5990	6770	8490	6940	7590	6450	6690
9	5420	5100	5250	5120	5770	5990	6750	7940	13700	7370	6410	6660
10	5420	5090	5250	5120	5760	5980	7530	7620	10950	7210	6630	6650
11	5420	5090	5240	5120	5760	5980	8630	7410	9280	7090	6960	6640
12	5410	5070	5240	5120	5750	5970	8080	7240	8380	7010	6890	6630
13	5380	5090	5240	5120	5760	5970	7700	7130	7850	6960	6830	6580
14	5360	5120	5230	5120	5810	5950	7460	7050	7530	6910	6800	6550
15	5350	5150	5220	5120	5890	5950	7270	6990	7310	6870	6770	6540
16	5330	5220	5220	5120	5900	5950	7160	6950	7160	6830	6740	6510
17	5320	5230	5210	5120	5900	5980	7050	6900	7060	6800	6720	6500
18	5310	5220	5210	5370	5900	6550	7140	6870	6990	6770	6680	6480
19	5300	5230	5210	5700	5890	6830	7120	6840	6940	6760	6670	6470
20	5280	5220	5200	5730	5910	7000	7960	6830	6900	6730	6660	6470
21	5260	5220	5200	5730	5910	6970	7790	6860	6870	6710	6700	6460
22	5270	5220	5200	5740	5930	7460	7540	6870	6840	6690	6720	6460
23	5260	5220	5200	5770	5940	7330	7370	6840	7200	6680	6700	6440
24	5240	5220	5180	5760	5940	7200	7220	6820	7220	6660	6690	6420
25	5240	5260	5180	5780	5920	7080	7110	6800	7140	6690	6660	6400
26	5220	5310	5170	5780	5910	7000	7030	6780	7050	6680	6640	6390
27	5210	5310	5160	5780	5910	6940	6990	6770	6990	6680	6690	6370
28	5200	5300	5150	5780	5920	6920	6960	6770	7170	6640	6700	6360
29	5190	5300	5150	5780	---	6900	6930	6770	7120	6630	6680	6340
30	5180	5290	5140	5780	---	6870	6900	6760	7030	6600	6670	6330
31	5170	---	5160	5780	---	6840	---	6740	---	6610	6910	---
MAX	5530	5310	5290	5780	5940	7460	8630	17310	13700	7990	6960	6890
MIN	5170	5070	5140	5120	5750	5910	6750	6740	6680	6600	6410	6330
†	759.63	759.81	759.62	760.50	760.68	761.74	761.80	761.63	761.94	761.49	761.81	761.17
‡	-380	+120	-130	+620	+140	+920	+60	-160	+290	-420	+300	-580

CAL YR 1978 MAX 13960 MIN 5070 ‡-230
WTR YR 1979 MAX 17310 MIN 5070 ‡+780

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

201

07165500 POLECAT CREEK BELOW HEYBURN LAKE, NEAR HEYBURN, OK

LOCATION.--Lat 35°56'42", long 96°17'39", in NW¼NW¼ sec.19, T.17 N., R.10 E., Creek County, Hydrologic Unit 11110101, on right bank of outlet channel, 1,100 ft (335 m) downstream from Heyburn Dam, 3.2 mi (5.1 km) upstream from bridge on U.S. Highway 66, 11 mi (17.7 km) southwest of Sapulpa, and at mile 48.4 (77.9 km).

DRAINAGE AREA.--123 mi² (319 km²).

PERIOD OF RECORD.--October 1943 to September 1979 (discontinued). Prior to October 1956, published as Polecat Creek at Heyburn and October 1956 to September 1970 as Polecat Creek below Heyburn Reservoir near Heyburn.

REVISED RECORDS.--WSP 1411: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 718.00 ft (218.846 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 22, 1949, nonrecording gage and Feb. 22, 1949, to Feb. 16, 1956, water-stage recorder at site 3.2 mi (5.1 km) downstream at datum 706.47 ft (215.332 m). Mar. 8, 1958 to Sept. 30, 1971, water-stage recorder at outlet structure at right abutment of Heyburn Dam 1,100 ft (335 m) upstream at datum 760.00 ft (231.648 m), present site used as supplementary gage.

REMARKS.--Records poor. Flow regulated since September 1950 by Heyburn Lake (station 07165000) with occasional prior regulation from March 1959 by lake construction operations.

AVERAGE DISCHARGE.--Prior to regulation by Heyburn Dam) 7 years (water years 1944-50) 66.9 ft³/s (1.895 m³/s), 48,470 acre-ft/yr (59.8 hm³/yr), (since regulation by Heyburn Dam) 29 years (water years 1951-79) 48.5 ft³/s (1.374 m³/s), 35,140 acre-ft/yr (43.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/s) June 23, 1948 and May 19, 1949, from rating curve extended above 6,100 ft³/s (173 m³/s); maximum gage height, 28.53 ft (8.696 m) May 19, 1949, site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1940, reached a stage of 31.5 ft (9.60 m), from flood mark, at former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) May 3, gage height, 13.31 ft (4.057 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.40	.00	.00	.00	.00	16	13	1.3	24	.00	20
2	.35	.40	.00	.00	.00	.00	20	51	1.0	18	.00	18
3	.35	.40	.00	.00	.00	.00	16	1220	.76	13	.00	13
4	.35	.40	.00	.00	.00	.00	14	1770	.27	8.9	.00	9.5
5	.35	.40	.00	.00	.00	.00	9.9	1690	.27	6.9	.00	6.6
6	.35	.40	.00	.00	.00	.00	7.6	1550	2.8	156	.00	4.8
7	.35	.40	.00	.00	.00	.00	6.1	884	23	191	.00	2.8
8	.35	.40	.00	.00	.00	.00	6.1	457	95	136	.00	1.6
9	.35	.40	.00	.00	.00	.00	3.9	264	1430	81	.00	.91
10	.35	.40	.00	.00	.00	.00	9.8	151	1470	51	.00	.51
11	.35	.40	.00	.00	.00	.00	406	90	784	34	26	.18
12	.40	.40	.00	.00	.00	.00	326	62	401	26	21	.11
13	.40	.40	.00	.00	.00	.00	191	46	221	19	14	1.8
14	.40	.40	.00	.00	.00	.00	112	37	119	12	7.1	1.3
15	.40	.40	.00	.00	.00	.00	74	29	71	8.4	4.7	.62
16	.40	.40	.00	.00	.00	.00	52	23	46	6.6	2.9	.32
17	.40	.00	.00	.00	.00	.00	40	18	33	4.0	1.8	.16
18	.40	.00	.00	.03	.00	.00	40	14	25	2.2	1.3	.06
19	.40	.00	.06	.00	.00	1.0	46	12	18	1.5	.95	.00
20	.40	.00	.00	.00	.00	23	84	11	14	1.0	.63	.03
21	.40	.00	.00	.00	.00	25	198	13	13	.93	1.2	.12
22	.40	.00	.00	.00	.00	48	134	15	11	.88	2.9	.15
23	.40	.00	.00	.00	.00	89	88	15	20	.46	2.8	.10
24	.40	.00	.00	.00	.00	66	62	11	51	.33	1.3	.00
25	.40	.00	.00	.00	.00	44	46	8.2	45	.35	.87	.00
26	.40	.00	.00	.00	.00	31	34	6.4	35	1.0	.50	.00
27	.40	.00	.00	.00	.00	24	27	6.2	27	.49	1.3	.00
28	.40	.00	.00	.00	.00	18	22	5.8	31	.37	2.3	.00
29	.40	.00	.00	.00	---	17	20	4.6	42	.11	1.6	.02
30	.40	.00	.00	.00	---	16	16	4.5	32	.00	.73	.05
31	.40	---	.00	.00	---	11	---	2.5	---	.00	6.1	---
TOTAL	11.85	6.40	.06	.03	.00	413.00	2127.4	8484.2	5063.40	805.42	101.98	82.74
MEAN	.38	.21	.002	.001	.000	13.3	70.9	274	169	26.0	3.29	2.76
MAX	.40	.40	.06	.03	.00	89	406	1770	1470	191	26	20
MIN	.35	.00	.00	.00	.00	.00	3.9	2.5	.27	.00	.00	.00
AC-FT	24	13	.1	.06	.00	819	4220	16830	10040	1600	202	164
CAL YR 1978 TOTAL	13841.56			MEAN 37.9	MAX 1560	MIN .00	AC-FT 27450					
WTR YR 1979 TOTAL	17096.48			MEAN 46.8	MAX 1770	MIN .00	AC-FT 33910					

ARKANSAS RIVER BASIN

07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'23", long 95°38'39", in NE¼ sec.31, T.16 N., R.16 E., Muskogee County, Hydrologic Unit 11110101, near right bank on downstream side of bridge on State Highway 104, 2 mi (3.2 km) east of Haskell, 23.5 mi (37.8 km) upstream from Verdigris River, and at mile 483.7 (778.3 km).

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records fair, except for winter periods January and February which are poor. Flow regulated by Keystone Lake (station 07164200), 55.1 mi (88.7 km) upstream.

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

AVERAGE DISCHARGE.--7 years, 9,685 ft³/s (274.3 m³/s), 7,017,000 acre-ft/yr (8.65 km³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,500 ft³/s (864 m³/s) May 4, gage height, 11.00 ft (3.353 m); minimum daily, 265 ft³/s (7.505 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	597	328	1230	950	3500	3460	28900	7090	9470	7100	9420	5620
2	1040	576	1460	650	3500	3260	27600	7200	7020	7030	8900	3520
3	570	568	1190	450	3200	1380	26400	11500	6380	6990	9040	2290
4	331	727	864	800	2800	1750	26000	25700	3470	6890	10100	9230
5	811	568	689	1500	1300	832	25500	18500	3430	4880	11400	3020
6	560	701	1510	2400	700	586	17500	18600	5740	6300	10100	10400
7	945	608	1690	2200	1700	4120	13700	16000	6130	8870	10600	10900
8	587	361	1530	1500	1900	7930	7140	15100	4970	7790	10200	9980
9	914	600	2950	600	2700	11300	13700	14300	14100	6600	8880	5350
10	544	560	2450	1200	3500	12500	13600	13500	23300	6280	8960	8000
11	298	521	1040	1200	3200	12700	18500	5660	13700	6190	8780	10000
12	557	807	630	1200	1600	12700	17400	2150	17000	6290	4410	6950
13	499	576	1040	1700	800	11300	14600	1630	14700	5790	1320	7320
14	628	409	1560	1700	2700	7060	14100	6280	14300	6450	1060	7970
15	508	814	1480	800	2500	5480	13900	13600	14100	5700	4750	7030
16	599	2510	1450	400	2300	3480	13800	13000	14000	7490	4800	3320
17	482	2840	1330	800	3000	3740	13600	13000	12500	8470	4570	2650
18	265	2630	631	900	4500	2810	13800	13100	11000	8510	4660	3800
19	468	2730	411	900	2240	1820	14300	12200	10500	5950	3230	4340
20	482	801	1500	500	857	4910	13500	3480	7800	4910	1120	3770
21	608	1290	1950	800	2000	13500	8840	6870	10000	5180	1530	3870
22	513	716	1780	550	1710	14400	7000	13500	7680	3200	4620	6700
23	650	445	1740	400	1460	15300	6680	13100	10100	4290	4920	2780
24	560	911	1420	673	758	20100	6640	13100	12300	4440	2900	1680
25	308	1830	667	550	810	23800	8420	13200	8560	6340	1100	1740
26	521	2550	410	850	667	24400	8000	13300	7590	7360	1360	2350
27	514	1740	309	650	518	24700	8060	13600	7310	8000	662	2760
28	675	791	1210	2480	2050	17700	8380	15800	7170	7910	551	3120
29	544	1080	1360	1680	---	3490	6990	17700	7400	7990	1540	3210
30	710	1360	1250	942	---	7850	7010	13600	7100	7820	2920	2560
31	568	---	1210	2840	---	26000	---	10500	---	6390	5470	---
TOTAL	17856	32948	39941	34765	58470	304658	423560	375860	298820	203400	163873	156230
MEAN	576	1098	1288	1121	2088	9828	14120	12120	9961	6561	5286	5208
MAX	1040	2840	2950	2840	4500	26000	28900	25700	23300	8870	11400	10900
MIN	265	328	309	400	518	586	6640	1630	3430	3200	551	1680
AC-FT	35420	65350	79220	68960	116000	604300	840100	745500	592700	403400	325000	309900
CAL YR 1978	TOTAL	1716883	MEAN	4704	MAX	21800	MIN	265	AC-FT	3405000		
WTR YR 1979	TOTAL	2110381	MEAN	5782	MAX	28900	MIN	265	AC-FT	4186000		

ARKANSAS RIVER BASIN

203

07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 24...	1145	472	1700	8.4	15.0	2.0	8.6	87	17	277	76	190
NOV 07...	1130	531	1200	8.0	11.0	3.0	11.0	100	15	--	--	--
DEC 28...	1015	1460	1800	8.4	3.5	5.0	12.9	99	17	--	90	225
FEB 22...	1730	1590	3200	8.0	12.0	8.0	--	--	19	317	--	--
MAR 14...	1410	7460	2250	8.1	11.0	14	11.6	107	22	--	--	--
APR 24...	1200	5050	1900	7.9	20.0	32	8.6	97	18	200	55	138
MAY 23...	1510	13200	2400	8.2	21.0	31	9.3	106	--	--	--	--
JUN 21...	1430	14300	--	7.7	26.0	48	6.9	80	66	191	41	103
JUL 18...	1400	8020	2050	7.2	27.5	--	--	--	--	--	--	--
AUG 09...	1430	11200	2900	8.7	31.0	3.0	8.3	114	18	259	68	170
SEP 19...	1230	3540	1350	8.0	26.0	4.0	7.5	94	13	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 24...	21	370	8.3	121	--	.4	13	--	.98	--	--	.448
NOV 07...	--	--	--	114	370	.4	<1	--	1.6	--	--	.417
DEC 28...	22	248	9.1	126	--	.6	20	2.1	1.8	3.9	18	.637
FEB 22...	25	460	7.5	133	831	.3	28	.80	2.1	2.9	13	.350
MAR 14...	--	--	--	109	483	.4	41	.90	3.1	4.0	18	.350
APR 24...	15	290	6.5	89	521	.3	52	1.3	1.3	2.6	12	.200
MAY 23...	--	--	--	--	556	.3	36	.90	<.11	.90	--	.200
JUN 21...	20	210	6.9	82	339	.3	1158	.70	3.4	4.1	18	.500
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	21	460	7.3	131	707	.3	33	<.50	1.7	1.7	--	.145
SEP 19...	--	--	--	83	410	.3	24	.60	--	2.1	--	.170

07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

[illegible]

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'05", long 95°35'06", at center of sec.3, T.27 N., R.16 E., Nowata County, Hydrologic Unit 11070103, near right bank on downstream side of pier of county road bridge, 2.8 mi (4.5 km) east of Lenapah, 4.5 mi (7.2 km) upstream from Cedar Creek, and at mile 144.6 (232.7 km).

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

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 644.89 ft (196.562 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except December through March which are poor. Some regulation, by dams in Kansas, since April 1949.

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

AVERAGE DISCHARGE.--(prior to regulation) 11 years (water years 1939-49); 2,599 ft³/s (73.60 m³/s), 1,833,000 acre-ft/yr (2.32 km³/yr); (since regulation) 13 years (water years 1967-79), 2,608 ft³/s (73.86 m³/s), 1,889,000 acre-ft/yr (2.33 km³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,300 ft³/s (462 m³/s) June 10, gage height, 18.21 ft (5.550 m); minimum daily, 7.8 ft³/s (0.22 m³/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	140	33	175	3000	1780	545	1270	1140	1280	140
2	18	15	115	33	160	9950	1600	558	811	1060	747	148
3	19	12	95	34	150	4000	1900	1050	329	965	566	148
4	19	9.4	80	35	140	1600	1630	2120	203	826	1870	134
5	28	8.4	65	35	134	4000	2370	1440	156	777	1600	140
6	41	7.8	50	36	125	7000	1850	1040	148	1910	840	131
7	54	8.9	45	36	115	2000	1590	1420	148	3090	725	109
8	51	20	55	35	105	2300	1400	1370	169	3410	791	95
9	39	25	90	35	100	2700	824	1270	7690	2200	823	94
10	32	25	70	35	90	2700	512	970	15100	7160	831	112
11	26	24	45	35	90	2600	10900	858	15400	6250	808	117
12	21	24	40	35	90	2400	10600	773	9820	5730	699	117
13	17	27	40	35	90	2300	6680	463	9990	4600	541	116
14	16	33	40	35	98	2300	4900	373	13700	2950	510	113
15	15	61	40	37	250	2220	4150	351	15200	4930	1370	87
16	16	84	39	37	650	2200	2400	338	15700	5990	1400	66
17	20	88	39	36	900	2260	1780	318	15800	6340	965	51
18	21	94	40	101	600	5940	1690	251	15600	7580	660	50
19	20	87	40	1300	470	9000	1710	167	14700	4190	497	54
20	18	87	40	2000	350	3500	1700	1190	13400	1610	361	57
21	16	77	40	1400	1000	1690	1660	11100	13000	1440	253	58
22	15	65	40	900	2300	1240	1380	4870	12200	1330	182	59
23	15	61	40	800	3500	1940	1070	1780	9700	1150	160	59
24	15	56	37	620	4500	2150	926	2240	5330	1080	153	60
25	15	52	37	500	3700	1900	825	2810	3870	677	143	62
26	12	82	37	400	2700	1400	410	2530	3580	341	136	62
27	21	325	27	310	1600	1090	280	2360	4090	265	134	62
28	17	225	47	270	1100	1180	230	2250	3970	195	121	62
29	17	271	38	230	---	1610	189	2210	3260	162	107	61
30	18	180	35	210	---	1770	288	1810	1980	150	110	59
31	18	---	34	190	---	1750	---	1460	---	1920	124	---
TOTAL	687	2152.5	1620	9828	25282	91690	69224	52285	226514	81418	19507	2683
MEAN	22.2	71.8	52.3	317	903	2958	2307	1687	7550	2626	629	89.4
MAX	54	325	140	2000	4500	9950	10900	11100	15800	7580	1870	148
MIN	12	7.8	27	33	90	1090	189	167	148	150	107	50
AC=FT	1360	4270	3210	19490	50150	181900	137300	103700	449300	161500	38690	5320
CAL YR 1978 TOTAL	591954.5		MEAN 1622	MAX 22300	MIN 7.8	AC=FT 1174000						
WTR YR 1979 TOTAL	582690.5		MEAN 1597	MAX 15800	MIN 7.8	AC=FT 1156000						

ARKANSAS RIVER BASIN

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-64, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1951 to September 1964.

WATER TEMPERATURE: October 1951 to September 1964.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 24...	1130	11	620	7.8	14.0	10	7.3	72	21	289	89	223
NOV 14...	1115	32	750	7.6	11.0	<1.0	9.4	86	23	--	--	--
DEC 28...	1056	43	610	8.3	3.5	6.0	11.8	91	28	229	70	175
MAR 14...	1030	2300	390	7.1	8.0	50	11.2	96	23	--	--	--
APR 24...	1115	926	500	7.2	19.0	20	8.3	91	17	196	59	148
MAY 24...	1030	2090	260	7.3	23.0	210	7.5	90	42	--	--	--
JUN 21...	1000	13000	270	7.0	25.0	76	7.6	94	23	118	32	80
JUL 12...	0940	5600	280	6.9	24.0	67	7.0	85	--	--	--	--
AUG 23...	0940	161	250	7.2	25.0	69	4.9	60	20	144	30	75
SEP 27...	0930	62	460	7.9	20.0	6.0	8.6	97	10	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 24...	16	74	5.5	76	70	.7	20	.80	2.0	2.8	12	.479
NOV 14...	--	--	--	75	73	1.1	--	--	2.2	--	--	.554
DEC 28...	13	59	6.3	68	61	.5	5	1.8	2.0	3.8	17	--
MAR 14...	--	--	--	30	38	.3	102	1.5	2.0	3.5	15	.350
APR 24...	12	30	2.9	35	55	.2	52	.90	1.3	2.2	10	.150
MAY 24...	--	--	--	--	22	.2	472	1.1	2.1	3.3	15	.500
JUN 21...	6.4	15	3.1	16	20	.2	294	.50	1.5	2.0	8.9	.185
JUL 12...	--	--	--	23	21	.1	393	.60	2.1	2.7	12	.400
AUG 23...	5.4	14	4.9	16	19	.3	147	1.0	1.9	2.9	13	.250
SEP 27...	--	--	--	36	42	.6	--	<.50	2.7	2.7	--	.305

ARKANSAS RIVER BASIN

207

07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT												
24...	--	--	--	--	390	--	80	--	--	--	--	--
DEC												
28...	--	--	--	--	190	--	130	--	--	--	--	--
APR												
24...	--	--	--	--	1800	--	110	--	--	--	--	--
JUN												
21...	--	--	--	--	--	--	280	--	--	--	--	--
AUG												
23...	<10	<2	<10	8	5380	<20	500	<.5	<10	<5	<2	100

ARKANSAS RIVER BASIN

07171300 OOLOGAH LAKE NEAR OOLOGAH, OK

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

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

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

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

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 7 taintor gates. Storage began May 15, 1963, conservation pool was first filled Apr. 4, 1964. Capacity 1,519,000 acre-ft (1.87 km³) at elevation 661.0 ft (201.47 m), top of flood control pool, 553,400 acre-ft (682 hm³) at elevation 638.0 ft (194.46 m), conservation pool. Dead storage 9,260 acre-ft (11.4 hm³) below elevation 592.0 ft (180.44 m). Figures given herein represent total contents. Reservoir is used for flood control and conservation.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 671,100 acre-ft (827 hm³) June 23, elevation, 641.77 ft (195.611 m); minimum, 445,800 acre-ft (550 hm³) Nov. 10, elevation, 634.12 ft (193.280 m).

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

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

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	470200	453200	461600	457300	504800	569700	575800	547700	574600	619400	570600	546800
2	468300	453200	462700	457300	505100	574000	572500	545700	574900	614200	566300	548800
3	469100	453000	460800	457000	504800	584700	567600	558300	573700	609600	565700	548500
4	466200	452200	458600	458100	505100	593900	560900	562000	564200	607100	565700	548500
5	467200	452200	465400	457300	504500	592400	559200	563300	546200	606500	567600	548200
6	466200	453800	463700	457600	505700	584100	556300	560900	534400	606800	566900	548500
7	465600	451900	462900	457300	505400	577400	553400	563300	534400	608000	566000	547700
8	464000	450000	460200	457000	505100	570300	557700	560600	541600	609200	564800	546500
9	462700	448900	458600	457300	505100	564800	554900	560600	560300	609600	563000	545900
10	462900	449500	458600	456700	505100	562700	556300	561800	584700	616300	568200	545400
11	462400	450600	458900	457300	505100	560900	587200	557400	599100	622700	566300	545400
12	465100	448700	458900	457000	505100	557200	611700	554300	596700	627100	563900	545400
13	462700	451900	459200	457300	505700	560900	619400	551100	591500	631000	562700	546800
14	462100	454600	458400	457000	506300	560300	621500	550000	592400	632600	562000	543400
15	461600	455400	458900	456200	510000	560600	621800	550000	598500	635900	558600	542800
16	460800	455400	458900	455700	513700	560600	619700	549700	605600	640400	554900	542500
17	458600	455900	456500	456200	515500	562000	612000	549400	612900	643700	552300	541900
18	459400	455900	457300	462100	517500	582300	604000	548800	620300	646900	551100	541300
19	458600	457800	457600	479100	518100	615700	596100	548200	631600	646900	551100	540800
20	459100	458100	458600	490900	520100	620300	589300	551700	646300	640800	549700	541300
21	457000	457600	457800	494900	524400	618700	580100	567300	658400	634600	550500	540800
22	459400	454900	457800	497400	532400	614500	571200	571200	665900	628000	550500	539600
23	457800	454900	460500	499800	544800	612900	564800	567300	671100	622400	549700	538500
24	454900	454900	456200	500900	553400	610200	559200	559700	661600	615100	549700	537900
25	457800	457300	458900	502000	556900	605000	562000	559200	650200	611100	549100	538500
26	455900	458900	457000	502800	558900	603700	557200	562400	641100	608900	548000	537300
27	455100	458900	455400	503700	561200	592400	556300	564800	636200	603100	547700	536700
28	455100	458600	453800	504500	564200	585000	554000	568800	634600	594500	547100	536700
29	454300	460800	458400	504500	---	581400	552000	571900	632600	584700	547100	536700
30	454300	461100	458900	504500	---	582300	549700	573700	628700	578600	546800	536200
31	454300	---	460200	504800	---	578000	---	574600	---	576100	547700	---
MAX	470200	461100	465400	504800	564200	620300	621800	574600	671100	646900	570600	548800
MIN	454300	448700	453800	455700	504500	557200	549700	545700	534400	576100	546800	536200
†	634.44	634.69	634.66	636.31	638.37	638.82	637.87	638.71	640.47	638.76	637.80	637.40
‡	-17,000	+6,800	-900	+44,600	+59,400	+13,800	-28,300	+24,900	+54,100	-52,600	-28,400	-11,500

CAL YR 1978 MAX 715400 MIN 448700 †-103400

WTR YR 1979 MAX 671100 MIN 448700 ‡ +64900

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK

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

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records good. Some regulation by several dams in Kansas prior to May 1963 and completely regulated thereafter by Oologah Lake (station 07171300).

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

AVERAGE DISCHARGE.--(Since regulation by Oologah Lake) 15 years (water years 1965-79), 2,864 ft³/s (81.11 m³/s), 2,075,000 acre-ft/yr (2.56 km³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s (331 m³/s) June 11, 12, gage height, 22.66 ft (6.907 m); minimum daily discharge, 0.01 ft³/s (0.0003 m³/s) Feb. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	38	6.4	1.4	57	3.8	4090	678	880	4090	4110	2.4
2	56	38	6.9	1.5	57	1100	4070	678	879	4080	2270	2.2
3	58	38	6.5	1.9	57	3360	4060	680	872	3120	844	2.2
4	57	38	8.1	2.1	57	3260	4040	685	4370	2180	844	2.2
5	56	38	9.3	1.6	57	4860	4040	683	11300	2180	844	2.1
6	55	37	7.1	1.4	57	6130	2930	673	7250	2190	838	2.2
7	55	37	5.9	1.7	57	6090	2020	1470	158	2190	838	1.9
8	53	33	4.7	1.9	58	6070	2010	2140	141	2190	828	1.8
9	52	16	4.3	86	58	4290	2010	2110	140	2180	823	1.8
10	53	5.3	3.7	55	58	3040	2010	2100	140	2180	823	1.4
11	53	4.9	3.2	15	58	3030	2010	2070	6340	2180	818	1.5
12	49	5.3	2.9	20	58	3030	2010	2070	11600	2190	818	1.4
13	50	5.4	2.9	71	58	1690	2690	2080	11500	2190	649	1.6
14	48	5.8	1.8	72	60	785	4130	979	11500	2190	1200	1.7
15	49	6.5	2.6	71	60	781	4120	183	11500	2180	2470	1.6
16	47	6.4	1.7	69	58	782	4110	179	11500	3140	2470	1.9
17	48	5.9	1.7	68	57	782	5260	177	11500	4190	1670	2.0
18	49	5.6	1.8	65	57	782	5990	173	11500	4180	1070	2.0
19	47	5.6	1.7	62	57	782	5970	168	8730	4180	1070	2.2
20	46	5.7	1.6	60	58	782	5950	168	5060	4150	619	2.2
21	43	6.4	1.6	59	58	2750	5930	1480	5080	4150	129	3.2
22	42	6.1	1.6	59	43	4150	5910	3420	7910	4140	65	3.8
23	43	6.1	1.3	59	17	4150	4460	3990	9810	4140	55	3.9
24	42	6.1	.95	59	16	4120	3000	5250	9820	4140	47	3.9
25	42	6.5	1.2	58	16	4100	1720	2790	9790	3240	47	4.5
26	40	6.5	2.4	58	9.3	4090	703	900	8400	2180	48	4.4
27	40	6.5	1.4	58	.01	4090	688	889	6010	3000	38	4.2
28	40	6.5	1.3	58	1.4	4080	683	920	5050	4140	11	4.2
29	40	6.6	1.6	58	---	4100	678	903	4090	4140	11	4.2
30	41	7.1	1.3	58	---	4120	678	885	4090	4130	9.1	4.4
31	39	---	1.9	58	---	4070	---	882	---	4130	3.7	---
TOTAL	1488	439.8	101.35	1369.5	1314.71	95249.8	97970	42453	196910	98880	26379.8	79.0
MEAN	48.0	14.7	3.27	44.2	47.0	3073	3266	1369	6564	3190	851	2.63
MAX	58	38	9.3	86	60	6130	5990	5250	11600	4190	4110	4.5
MIN	39	4.9	.95	1.4	.01	3.8	678	168	140	2180	3.7	1.4
AC-FT	2950	872	201	2720	2610	188900	194300	84210	390600	196100	52320	157
CAL YR 1978 TOTAL	764279.15			2094		13200		.95	AC-FT	1516000		
WTR YR 1979 TOTAL	562634.96			1541		11600		.01	AC-FT	1116000		

ARKANSAS RIVER BASIN

07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-63, 1965 to current year.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 24...	1240	43	410	7.9	16.0	12	7.6	78	13	223	68	171
NOV 14...	1215	5.4	340	7.7	11.0	15	10.0	92	13	--	--	--
DEC 28...	1206	1.2	505	8.0	4.0	4.0	11.8	92	17	--	80	200
FEB 14...	1330	59	400	7.0	7.0	--	10.0	85	11	229	70	175
MAR 14...	1230	782	400	7.1	7.0	3.0	11.0	92	12	--	--	--
APR 24...	1230	3000	380	7.4	15.0	19	9.9	100	12	144	44	110
MAY 24...	1145	5250	390	7.5	20.0	34	8.9	100	--	--	--	--
JUN 21...	1110	5090	390	6.9	25.0	30	7.9	98	11	167	45	113
JUL 12...	1100	2180	380	7.2	26.0	31	7.5	95	12	--	--	--
AUG 23...	1100	55	320	7.4	27.0	8.0	5.3	68	10	175	38	95
SEP 27...	1045	4.4	700	7.7	23.0	6.0	6.6	78	35	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 24...	12	34	2.7	49	28	.2	24	--	1.1	--	--	.130
NOV 14...	--	--	--	33	24	.2	--	--	1.9	--	--	.157
DEC 28...	13	26	4.9	84	38	.2	23	.20	1.4	1.6	7.2	<.001
FEB 14...	13	18	3.2	43	28	.2	24	.20	1.9	2.1	9.3	.100
MAR 14...	--	--	--	58	26	.3	<1	.30	1.1	1.4	6.2	.070
APR 24...	8.2	18	3.2	38	26	.2	28	1.2	1.3	2.5	11	.075
MAY 24...	--	--	--	--	38	.2	27	1.2	1.4	2.6	12	.110
JUN 21...	8.5	21	3.2	48	28	.2	34	1.1	1.0	2.1	9.6	.050
JUL 12...	--	--	--	36	--	.1	47	1.0	1.2	2.2	10	.150
AUG 23...	7.3	13	3.7	25	22	.2	19	.60	1.6	2.2	9.7	.065
SEP 27...	--	--	--	--	--	.7	17	.70	3.6	4.3	19	.090

211

07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07172500 HULAH LAKE NEAR HULAH, OK

LOCATION.--Lat 36°55'44", long 96°05'18", in SE¼ sec.2, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, in stair tower at right end of Hulah Dam on Caney River, 0.5 mi (.8 km) downstream from Hickory Creek, 2.0 mi (3.2 km) west of Hulah, 15.7 mi (25.3 km) upstream from Little Caney River, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--732 mi² (1,896 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Feb. 15, 1951, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Spillway is 472-ft (143.9 m) concrete ogee-type weir controlled by 10 taintor gates. Outlet works consist of nine rectangular sluices, two 24-inch (0.61 m) gated pipes, and one 10-inch (254 mm) water-supply pipe. Closure for diversion made Feb. 6, 1950; regulated storage began Oct. 25, 1950; conservation pool was first filled Sept. 24, 1951. Capacity, 292,600 acre-ft (361 hm³) at elevation 765.0 ft (233.17 m), top of taintor gates, 65,600 acre-ft (80.9 hm³) at elevation 740.0 ft (225.55 m), crest of spillway, and 34,660 acre-ft (42.7 hm³) at elevation 733.0 ft (223.42 m) conservation pool. Dead storage, 506 acre-ft (.62 hm³) below elevation 706.0 ft (215.19 m) invert of sluices. Figures given herein represent total contents. Reservoir is used for flood control, conservation, and municipal water supply. Revised capacity table, based on survey in 1958, used since Oct. 1, 1958.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 44,120 acre-ft (54.4 hm³) June 11, elevation, 736.32 ft (224.430 m), minimum, 15,880 acre-ft (19.6 hm³) Jan. 18, elevation, 727.93 ft (221.873 m).

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

727	13,750	734	34,790
730	21,400	737	47,070

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21260	18740	18340	16920	21030	27260	31580	30760	30970	30410	38400	28710
2	21120	18660	18420	16860	21000	27860	31150	31050	30870	30300	38520	28810
3	21000	18610	18260	16810	20970	29740	31480	31690	30800	30230	37920	28670
4	20970	18580	18210	16790	20970	30690	31620	32490	30760	30340	36520	28570
5	20770	18550	18260	16710	20890	31300	31660	32970	30650	30410	35060	28430
6	20690	18740	18150	16690	20910	31760	31580	33190	30510	30760	33520	28370
7	20600	18450	18100	16620	20860	32200	31690	33150	30620	31760	31840	28200
8	20540	18340	17890	16540	20830	32450	31760	32930	31940	32310	31050	28030
9	20370	18260	17810	16470	20830	32420	31800	32600	39000	32640	30510	27930
10	20370	18210	17760	16390	20770	32050	36790	32560	43190	32860	30940	27790
11	20320	18070	17710	16340	20860	31660	42430	32050	44080	32930	30620	27690
12	20540	18000	17710	16270	21290	31620	42600	31660	43480	32970	30410	27590
13	20460	18070	17630	16220	21670	31690	41230	31220	42430	32930	30270	27360
14	20090	18660	17710	16120	22110	31690	39720	31120	41190	32820	30270	27260
15	19950	18420	17680	16050	23580	31580	38080	31080	40090	32710	30230	27090
16	19870	18800	17600	15980	24020	31580	36520	31010	38400	33410	30190	26960
17	19840	18500	17550	15930	24300	31580	34830	30970	36940	33480	30050	26830
18	19780	18450	17500	17790	24480	34190	33560	30970	34940	33370	29880	26730
19	19700	18370	17480	19120	24550	35290	32490	30970	33190	33300	29840	26670
20	19620	18290	17450	20040	24800	35740	31980	31150	31730	33260	29710	26570
21	19510	18210	17370	20430	25150	35480	31940	31260	30940	33110	29600	26370
22	19560	18210	17320	20800	25560	35630	32050	31370	31120	32970	29460	26240
23	19420	18150	17450	20940	25850	35940	31910	31370	30970	32860	29290	26180
24	19340	18130	17220	21000	26180	35740	31760	31330	30940	32750	29190	26050
25	19260	18550	17170	21060	26340	35360	31800	31330	30870	32640	29010	26010
26	19150	18740	17070	21120	26470	35020	31580	31300	30720	32450	29010	25880
27	19100	18500	17020	21120	26600	34450	31440	31260	30580	32340	28840	25720
28	19010	18450	16920	21120	26960	33820	31150	31220	30550	32160	28880	25690
29	18990	18420	16940	21120	---	33190	30800	31150	30480	32020	28710	25560
30	18880	18420	16940	21120	---	32670	30650	31150	30510	32160	28600	25430
31	18850	---	16990	21120	---	32020	---	31050	---	38080	28670	---
MAX	21260	18800	18420	21120	26960	35940	42600	33190	44080	38080	38520	28810
MIN	18850	18000	16920	15930	20770	27260	30650	30760	30480	30230	28600	25430
†	729.09	728.93	728.38	729.90	731.79	733.25	732.87	732.98	732.83	734.85	732.30	731.32
‡	-2,550	-430	-1,430	+4,130	+5,840	+5,060	-1,370	+400	-540	+7,010	-9,410	-3,240

CAL YR 1978 MAX 107600 MIN 16920 †-14130
WTR YR 1979 MAX 44080 MIN 15930 ‡ +4030

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

07173000 CANEY RIVER NEAR HULAH, OK

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

DRAINAGE AREA.--733 mi² (1,898 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 699.00 ft (213.055 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 18, 1939 nonrecording gage. Feb. 18, 1939 to Sept. 30, 1948, water-stage recorder, at county road bridge, 0.2 mi (0.3 km) upstream at datum 14.04 ft (4.279 m) lower. Oct. 1, 1948 to Sept. 30, 1972 at site 0.6 mi (1.0 km) downstream at datum 17.04 ft (5.194 m) lower.

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

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

AVERAGE DISCHARGE.--(Prior to regulation by Hulah Dam) 13 years (water years 1938-50), 413 ft³/s (11.70 m³/s), 299,200 acre-ft/yr (369 hm³/yr); (since regulation by Hulah Dam) 29 years (water years 1951-79), 334 ft³/s (9.459 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) Apr. 13, gage height, 4.67 ft (1.423 m); minimum daily discharge, 17 ft³/s (0.48 m³/s) Oct. 13-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	21	20	19	26	28	512	41	44	38	26	34
2	18	21	20	19	26	28	353	41	44	34	388	33
3	20	21	20	21	25	30	165	44	44	32	688	33
4	22	21	20	25	25	29	164	45	44	31	682	33
5	22	21	20	25	25	29	300	40	44	30	667	33
6	22	21	20	24	25	32	279	40	44	29	667	33
7	22	21	20	24	25	32	168	84	49	29	772	32
8	22	21	20	24	25	34	168	262	46	29	407	32
9	22	21	20	23	25	232	168	262	45	29	37	32
10	22	21	22	23	25	391	178	262	45	29	32	32
11	22	21	22	23	25	393	48	262	317	29	35	32
12	20	21	20	23	25	229	494	262	1000	29	37	32
13	17	21	20	23	25	108	1100	262	1000	29	36	32
14	17	21	20	23	26	108	1080	84	1000	29	34	32
15	17	22	20	23	27	108	1060	52	995	29	37	32
16	17	21	19	23	27	108	1040	52	991	29	36	32
17	17	21	19	23	27	108	1040	52	995	29	34	32
18	17	21	19	29	27	114	1040	44	984	29	34	32
19	17	21	19	25	27	113	1040	39	976	29	34	32
20	19	21	19	24	27	113	635	48	849	29	34	32
21	21	21	19	24	27	378	262	44	448	29	34	32
22	21	20	19	24	27	519	262	39	88	29	33	32
23	21	20	19	24	27	519	262	39	96	29	33	32
24	21	20	19	24	27	519	262	38	96	29	33	32
25	21	20	19	24	27	519	262	40	88	29	33	32
26	21	20	19	24	27	519	262	44	85	29	33	31
27	21	20	19	24	27	519	262	44	58	29	33	30
28	21	20	19	24	28	518	262	44	32	29	33	30
29	21	20	19	24	---	520	262	43	32	29	33	29
30	21	20	19	24	---	516	141	44	34	29	33	29
31	21	---	19	25	---	512	---	44	---	37	33	---
TOTAL	621	622	608	731	732	7925	13531	2741	10613	927	5081	956
MEAN	20.0	20.7	19.6	23.6	26.1	256	451	88.4	354	29.9	164	31.9
MAX	22	22	22	29	28	520	1100	262	1000	38	772	34
MIN	17	20	19	19	25	28	48	38	32	29	26	29
AC-FT	1230	1230	1210	1450	1450	15720	26840	5440	21050	1840	10080	1900
CAL YR 1978 TOTAL	144086			395	3010	13	AC-FT	285800				
WTR YR 1979 TOTAL	45088			124	1100	17	AC-FT	89430				

ARKANSAS RIVER BASIN

07173000 CANEY RIVER NEAR HULAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1956, 1958, 1960, 1963-64, 1976 to current year.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 25...	1100	22	380	7.7	15.0	47	9.0	93	18	170	54	135
NOV 07...	1050	21	360	7.8	13.0	43	10.1	97	17	--	--	--
DEC 20...	1041	19	370	7.5	4.0	14	12.8	100	14	194	60	150
JAN 09...	1059	23	390	7.5	2.0	7.0	12.6	93	13	--	--	--
FEB 16...	0930	27	500	7.4	.0	--	13.3	91	19	--	61	153
MAR 07...	1100	32	390	--	8.0	14	10.2	89	12	--	--	--
APR 03...	1030	165	435	7.8	11.5	22	11.2	104	17	162	51	128
MAY 17...	1030	52	--	7.9	20.5	55	13.7	152	17	--	--	--
JUN 13...	1000	1000	420	7.7	23.5	90	11.9	142	12	165	49	139
JUL 19...	0830	30	370	7.2	25.5	33	7.7	95	--	--	--	--
AUG 02...	0950	26	--	7.2	26.0	95	6.3	78	38	140	46	115
SEP 05...	1000	33	--	7.0	26.0	46	6.2	80	18	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 25...	8.2	20	2.9	26	--	.2	72	.10	1.4	1.5	6.7	--
NOV 07...	--	--	--	27	--	.2	30	--	2.4	--	--	.229
DEC 20...	10	16	3.1	15	22	.2	22	.10	.68	.78	3.5	<.001
JAN 09...	--	--	--	--	25	.2	12	.30	1.4	1.7	7.8	.124
FEB 16...	10	25	3.6	--	--	--	--	1.0	1.2	2.2	10	--
MAR 07...	--	--	--	24	26	.2	24	.80	1.6	2.4	11	.110
APR 03...	8.2	16	2.7	31	27	.2	187	.70	1.3	2.0	8.9	.100
MAY 17...	--	--	--	24	--	.3	30	.40	.89	1.2	5.7	.030
JUN 13...	8.3	18	--	20	29	.2	52	.40	.98	1.3	6.1	.090
JUL 19...	--	--	--	20	22	.2	53	<.50	1.3	1.3	--	.080
AUG 02...	5.9	10	3.3	17	15	.1	177	.60	3.3	3.9	17	.215
SEP 05...	--	--	--	--	21	.2	59	<.50	1.4	1.4	--	.075

215

07173000 CANEY RIVER NEAR HULAH, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07174200 LITTLE CANEY RIVER BELOW COTTON CREEK NEAR COPAN, OK

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

DRAINAGE AREA.--502 mi² (1,300 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 11 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--21 years, 271 ft³/s (7.675 m³/s), 196,300 acre-ft/yr (242 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s (671 m³/s) May 9, 1961, gage height, 24.94 ft (7.602 m); no flow at times in 1962-66, 1971, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1944 reached a stage of 29.3 ft (8.93 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,190 ft³/s (90.3 m³/s) Apr. 11, gage height, 18.60 ft (5.669 m), no peak above base of 5,000 ft³/s (142 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.00	7.0	1.4	6.9	204	59	35	25	22	539	12
2	.26	.00	5.2	1.1	5.6	342	59	32	21	22	126	16
3	.16	.00	3.7	.90	7.7	943	69	29	17	21	150	14
4	.04	.00	2.6	.80	5.7	1050	69	264	15	19	569	17
5	.00	.00	1.5	.70	5.0	602	55	259	17	21	328	16
6	.00	.14	.81	.60	5.4	357	50	183	15	243	207	14
7	.00	.39	.78	.52	33	347	45	136	14	562	113	11
8	.00	.67	.95	.37	21	314	40	107	13	548	59	8.8
9	.00	1.0	1.0	.30	14	186	37	88	268	396	35	6.5
10	.00	1.6	.91	.30	3.9	149	34	75	1130	270	23	4.8
11	.00	2.5	.77	.30	6.1	124	2450	62	1460	184	20	3.8
12	.00	3.6	.62	.26	150	92	2430	51	1070	120	18	3.0
13	.00	5.9	.50	.40	338	67	948	42	724	92	14	2.5
14	.00	8.3	.54	.57	349	64	438	34	489	66	11	2.3
15	.00	15	.51	.60	846	53	273	29	327	49	8.7	2.8
16	.00	25	.51	.60	795	44	188	26	200	37	6.3	3.0
17	.00	15	.50	.65	495	38	90	22	120	269	5.1	3.2
18	.00	7.0	.57	59	322	760	60	19	80	113	8.6	3.2
19	.00	5.0	.56	1320	206	1730	80	17	50	34	13	3.2
20	.00	4.0	1.1	685	185	598	120	18	35	21	12	2.8
21	.00	3.0	1.3	320	351	310	110	24	22	22	11	2.5
22	.00	2.5	4.2	209	518	218	100	179	15	18	9.2	2.0
23	.00	2.5	2.5	110	490	289	90	127	29	13	7.5	2.1
24	.00	2.0	1.5	79	300	335	80	95	110	9.3	6.3	1.7
25	.00	2.0	1.6	56	208	262	70	79	71	6.7	6.0	1.5
26	.00	78	1.6	38	144	191	60	56	57	5.3	5.2	1.3
27	.00	98	2.0	26	109	138	54	52	48	4.5	4.6	1.1
28	.00	43	2.5	21	89	86	50	50	40	3.8	10	.90
29	.00	23	2.3	16	---	99	45	43	23	3.4	14	.70
30	.00	12	2.0	11	---	80	40	35	21	3.8	15	.60
31	.00	---	1.7	8.8	---	68	---	29	---	619	14	---
TOTAL	.80	361.10	53.83	2969.17	6009.3	10140	8293	2297	6526	3817.8	2368.5	164.30
MEAN	.026	12.0	1.74	95.8	215	327	276	74.1	218	123	76.4	5.48
MAX	.34	98	7.0	1320	846	1730	2450	264	1460	619	569	17
MIN	.00	.00	.50	.26	3.9	38	34	17	13	3.4	4.6	.60
AC-FT	1.6	716	107	5890	11920	20110	16450	4560	12940	7570	4700	326
CAL YR 1978	TOTAL	114443.09	MEAN	314	MAX	4930	MIN	.00	AC-FT	227000		
WTR YR 1979	TOTAL	43000.80	MEAN	118	MAX	2450	MIN	.00	AC-FT	85290		

07174200 LITTLE CANEY RIVER BELOW COTTON CREEK NEAR COPAN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to September 1968.

WATER TEMPERATURE: October 1966 to September 1968.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CAC(13))	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CAC(3))
OCT 25...	1000	.00	750	7.6	16.0	17	8.2	86	23	289	86	215
NOV 07...	1010	.40	800	7.1	11.0	8.0	6.1	56	34	--	--	--
DEC 20...	1007	1.1	625	6.9	6.5	40	7.3	61	27	256	80	200
JAN 09...	1026	.30	380	7.1	.0	9.0	8.1	56	31	--	--	--
FEB 16...	0830	930	300	7.6	.0	--	12.9	88	48	--	29	95
MAR 07...	1000	287	360	--	7.5	68	9.8	84	25	--	--	--
APR 03...	0930	70	535	7.7	12.0	65	10.9	102	26	165	53	132
MAY 17...	0920	22	--	7.7	21.0	23	--	--	20	--	--	--
JUN 13...	0840	758	340	7.4	22.5	125	9.8	115	30	124	36	90
JUL 19...	0930	37	170	6.9	25.0	>1000	6.1	74	--	--	--	--
AUG 02...	0845	136	--	7.2	25.0	160	5.1	61	36	100	32	80
SEP 05...	0900	16	--	7.4	25.0	57	5.8	72	21	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 25...	15	80	4.6	38	53	.2	15	.20	1.5	1.7	7.6	--
NOV 07...	--	--	--	53	162	.2	8	--	2.6	--	--	.202
DEC 20...	12	56	6.0	27	100	--	45	.50	1.1	1.6	7.3	.343
JAN 09...	--	--	--	--	152	.2	10	3.0	3.0	3.3	27	.334
FEB 16...	5.4	24	4.1	--	--	--	--	1.5	2.7	4.2	19	--
MAR 07...	--	--	--	24	42	.1	4	1.2	1.9	3.1	14	.200
APR 03...	8.2	35	3.0	24	57	.2	208	.50	1.8	2.3	10	.250
MAY 17...	--	--	--	26	--	.3	65	.10	1.4	1.5	6.9	.080
JUN 13...	6.0	18	2.7	13	29	.2	300	.30	1.7	2.1	9.1	.185
JUL 19...	--	--	--	12	15	.1	400	.80	2.4	3.2	14	.390
AUG 02...	4.8	25	4.0	12	47	.1	141	<.50	3.0	3.0	--	.265
SEP 05...	--	--	--	--	58	.1	99	<.50	1.7	1.7	--	.165

07174200 LITTLE CANEY RIVER BELOW COTTON CREEK NEAR COPAN, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

219

07174600 SAND CREEK AT OKESA, OK

LOCATION.--Lat 36°43'10", long 96°07'56", in NW¼NW¼ sec.21, T.26 N., R.11 E., Osage County, Hydrologic Unit 11070106, on downstream side of left abutment of county road bridge, 0.5 mi (0.8 km) northeast of Oksa, 9 mi (14 km) southwest of Bartlesville, and at mile 17.2 (27.7 km).

DRAINAGE AREA.--139 mi² (360 km²).

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

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

REMARKS.--Records fair.

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

AVERAGE DISCHARGE.--20 years, 68.5 ft³/s (1.940 m³/s), 49,630 acre-ft/yr (61.2 hm³/yr).

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

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 19	0330	3,550 101	12.16 3.706	Apr. 11	0300	*4,460 126	*13.55 4.13

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	5.5	25	18	11	2.8	2.4	248	43
2	.00	.00	.00	.00	5.1	28	17	12	2.4	2.2	86	26
3	.00	.00	.00	.00	4.5	72	17	83	2.1	2.0	44	13
4	.00	.00	.00	.00	4.0	80	23	714	1.7	1.6	29	8.2
5	.00	.00	.00	.00	3.6	52	28	207	1.2	1.7	19	5.7
6	.00	.00	.00	.00	3.1	34	29	105	1.1	3.9	14	4.8
7	.00	.00	.00	.00	2.7	24	27	67	1.1	21	11	3.4
8	.00	.00	.00	.00	2.6	18	22	47	1.4	18	7.9	2.5
9	.00	.00	.00	.00	2.4	15	17	34	56	14	6.0	1.8
10	.00	.00	.00	.00	2.2	13	96	26	180	10	5.0	1.2
11	.00	.00	.00	.00	2.2	12	1920	21	66	7.0	5.5	.72
12	.00	.00	.00	.00	2.3	9.6	250	17	33	5.0	5.0	.50
13	.00	.00	.00	.00	32	8.6	105	15	20	3.9	4.2	.43
14	.00	.00	.00	.00	37	7.6	64	14	14	3.1	3.1	.40
15	.00	.00	.00	.00	89	7.9	46	12	11	2.7	2.6	.40
16	.00	.00	.00	.00	72	7.9	34	11	8.2	2.5	2.0	.39
17	.00	.00	.00	.00	35	7.9	28	8.5	6.1	2.1	1.7	.34
18	.00	.00	.00	133	18	460	70	7.4	4.9	1.9	1.4	.25
19	.00	.00	.00	1850	14	412	175	6.5	4.1	1.6	1.1	.20
20	.00	.00	.00	332	14	130	99	8.3	3.6	1.3	.98	.20
21	.00	.00	.00	99	16	77	66	9.0	2.9	1.1	1.5	.17
22	.00	.00	.00	50	44	85	49	7.4	2.5	1.2	5.2	.14
23	.00	.00	.00	29	45	191	38	5.6	3.2	.91	5.3	.10
24	.00	.00	.00	21	31	116	31	5.0	2.8	.67	4.1	.04
25	.00	.00	.00	16	22	68	26	4.9	2.5	.46	3.4	.00
26	.00	.00	.00	14	16	48	20	5.1	2.7	.34	2.6	.00
27	.00	.00	.00	12	14	37	16	4.9	2.5	.20	2.2	.00
28	.00	.00	.00	9.6	14	29	15	4.5	2.4	.20	1.8	.00
29	.00	.00	.00	7.6	---	25	13	4.3	2.2	.15	1.4	.00
30	.00	.00	.00	7.5	---	22	12	3.7	2.1	.15	.81	.00
31	.00	---	.00	6.2	---	19	---	3.2	---	519	1.5	---
TOTAL	.00	.00	.00	2586.90	553.2	2141.5	3371	1484.3	446.5	632.28	527.29	113.88
MEAN	.000	.000	.000	83.4	19.8	69.1	112	47.9	14.9	20.4	17.0	3.80
MAX	.00	.00	.00	1850	89	460	1920	714	180	519	248	43
MIN	.00	.00	.00	.00	2.2	7.6	12	3.2	1.1	.15	.81	.00
AC-FT	.00	.00	.00	5130	1100	4250	6690	2940	886	1250	1050	226
CAL YR 1978	TOTAL	25346.58	MEAN	69.4	MAX	1910	MIN	.00	AC-FT	50270		
WTR YR 1979	TOTAL	11856.85	MEAN	32.5	MAX	1920	MIN	.00	AC-FT	23520		

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK

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

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

WATER-DISCHARGE RECORDS

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

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

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

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

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

AVERAGE DISCHARGE.--37 years, 952 ft³/s (26.96 m³/s), 689,700 acre-ft/yr (850 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,210 ft³/s (261 m³/s) at 0500 Mar. 19, gage height, 25.23 ft (7.69 m), no other peak above base of 7,500 ft³/s (212 m³/s); minimum daily discharge, 16 ft³/s (0.45 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	61	24	115	295	699	467	102	68	2440	60
2	23	23	51	23	100	303	682	334	110	61	1200	103
3	23	23	44	25	85	877	628	460	95	60	792	129
4	24	24	38	26	80	1360	467	3210	91	60	1060	99
5	27	24	33	25	75	1370	464	2610	74	57	1360	82
6	28	26	33	24	74	880	522	988	70	68	1210	88
7	29	29	33	26	70	598	547	599	70	100	1080	72
8	29	31	32	32	70	447	455	454	665	380	998	60
9	28	29	31	43	65	361	398	481	2910	453	725	51
10	28	28	30	38	65	338	458	459	1610	406	253	47
11	26	28	29	33	62	485	4400	423	1690	304	122	45
12	23	28	29	33	91	483	6110	398	1780	224	100	37
13	22	26	29	32	150	441	3990	378	2070	171	72	37
14	22	31	30	31	211	257	2640	365	1780	139	69	39
15	22	58	29	30	517	221	1890	331	1510	112	66	38
16	20	98	27	37	900	213	1580	185	1330	91	61	35
17	16	69	25	42	850	213	1430	136	1200	83	56	33
18	17	62	25	250	575	3560	1530	132	1100	127	57	33
19	18	42	25	3000	390	8620	1640	128	1040	222	50	33
20	18	35	25	3590	333	4470	1640	135	979	122	46	30
21	18	33	26	1720	320	1540	1280	137	896	74	49	28
22	18	33	27	831	401	1070	769	125	599	55	58	31
23	20	36	28	523	634	1470	693	140	256	53	57	31
24	21	49	28	350	650	1390	646	178	281	51	54	32
25	24	47	27	300	477	1170	609	153	221	49	49	34
26	24	50	26	265	339	993	574	133	199	42	47	34
27	23	79	26	200	282	889	552	128	158	38	47	34
28	23	119	25	170	251	789	530	201	140	34	46	34
29	23	121	25	140	---	719	510	336	106	29	45	33
30	23	78	25	130	---	717	497	194	74	29	44	32
31	23	---	25	130	---	694	---	133	---	117	47	---
TOTAL	707	1382	947	12123	8232	37233	38830	14531	23206	3879	12360	1474
MEAN	22.8	46.1	30.5	391	294	1201	1294	469	774	125	399	49.1
MAX	29	121	61	3590	900	8620	6110	3210	2910	453	2440	129
MIN	16	23	25	23	62	213	398	125	70	29	44	28
AC=FT	1400	2740	1880	24050	16330	73850	77020	28820	46030	7690	24520	2920
CAL YR 1978	TOTAL	402034	MEAN	1101	MAX	7220	MIN	16	AC=FT	797400		
WTR YR 1979	TOTAL	154904	MEAN	424	MAX	8620	MIN	16	AC=FT	307300		

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to current year.

WATER TEMPERATURE: October 1966 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month. 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, 1,880 micromhos Feb. 5 1967; minimum daily, 114 micromhos Oct. 20, 1973.

WATER TEMPERATURE: Maximum daily, 35.0°C Aug. 6, 1970, Aug. 26, 1971, July 21, 1974; minimum daily, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR--

SPECIFIC CONDUCTANCE: Maximum daily, 884 micromhos Dec. 24; minimum daily, 162 micromhos Jan. 19.

WATER TEMPERATURE: Maximum daily, 30.0°C on June 29, July 2-3, 5, Aug. 10, 17, 30; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	pH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)
OCT										
05...	1330	--	80020	28	647	8.0	20.0	--	--	--
15...	1000	--	80020	22	699	8.2	15.0	--	--	--
25...	0845	1028	9740	24	600	7.2	15.0	10	7.4	23
25...	1300	--	80020	25	718	7.8	17.0	--	--	--
NOV										
05...	1000	--	80020	24	750	7.5	15.0	--	--	--
07...	0900	1028	9740	28	700	7.6	10.0	6.0	8.3	27
15...	0930	--	80020	55	707	7.6	10.0	--	--	--
25...	1400	--	80020	47	654	8.1	9.0	--	--	--
DEC										
05...	1500	--	80020	32	653	7.6	9.0	--	--	--
15...	1315	--	80020	29	665	8.2	5.0	--	--	--
20...	0850	1028	9740	25	750	7.6	6.0	2.0	9.5	21
25...	1230	--	80020	26	869	7.9	5.0	--	--	--
JAN										
05...	1500	--	80020	25	745	8.1	.0	--	--	--
09...	0904	1028	9740	43	--	7.1	.0	--	13.1	91
15...	1130	--	80020	30	747	7.6	2.0	--	--	--
25...	1330	--	80020	300	345	7.0	2.0	--	--	--
FEB										
05...	1600	--	80020	75	491	7.6	5.0	--	--	--
15...	1400	--	80020	570	588	7.6	.0	--	--	--
16...	1200	1028	9740	900	700	7.9	.0	--	15.1	103
25...	1330	--	80020	462	483	6.9	3.0	--	--	--
MAR										
05...	1000	--	80020	1451	394	8.2	7.0	--	--	--
06...	1700	1028	9740	789	365	--	7.0	--	9.5	80
15...	1300	--	80020	221	444	8.4	13.0	--	--	--
25...	0930	--	80020	1195	405	8.2	10.0	--	--	--
APR										
03...	1200	1028	9740	651	510	7.8	12.5	--	10.8	103
05...	1230	--	80020	466	485	8.1	13.0	--	--	--
15...	1105	--	80020	1890	371	7.5	17.0	--	--	--
25...	1340	--	80020	608	473	7.9	22.0	--	--	--
MAY										
05...	0830	--	80020	2610	372	7.8	14.0	--	--	--
15...	0800	--	80020	356	498	7.8	22.0	--	--	--
16...	1645	1028	9740	161	--	8.1	24.0	47	--	24
27...	0930	--	80020	128	705	7.2	21.0	--	--	--
JUN										
05...	1430	--	80020	74	667	7.6	27.0	--	--	--
13...	1245	1028	9740	2070	380	7.6	23.5	120	7.9	94
15...	1330	--	80020	1510	388	7.5	25.0	--	--	--
25...	1330	--	80020	158	428	7.5	27.0	--	--	--
JUL										
05...	1045	--	80020	57	465	7.3	30.0	--	--	--
15...	1000	--	80020	115	379	7.8	29.0	--	--	--
19...	1115	1028	9740	164	470	6.9	28.0	31	6.9	88

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

		AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	
DATE	TIME										
JUL 25...	1100	--	80020	49	435	7.6	29.0	--	--	--	
AUG 01...	1535	1028	9740	2920	--	7.6	27.0	25	4.1	51	
05...	1000	--	80020	1412	356	7.6	23.0	--	--	83	
15...	1300	--	80020	66	356	7.8	25.0	--	--	--	
25...	0830	--	80020	49	476	7.8	26.0	--	--	--	
SEP 04...	1530	1028	9740	93	500	7.1	29.0	15	5.7	76	
05...	1400	--	80020	80	533	7.7	29.0	--	--	23	
15...	0800	--	80020	40	504	7.8	21.0	--	--	--	
25...	1430	--	80020	33	538	7.4	24.0	--	--	--	
DATE	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM TOTAL RECOVERABLE (MG/L AS Mg)	MAGNESIUM DISSOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
UCT 05...	210	47	--	68	--	--	10	--	43	30	1.3
15...	220	62	--	69	--	--	11	--	49	32	1.4
25...	--	--	--	--	--	--	--	--	--	--	--
25...	210	58	--	69	--	--	10	--	52	34	1.5
NOV 05...	230	70	--	74	--	--	11	--	54	33	1.6
07...	--	--	87	--	218	--	--	--	--	--	--
15...	220	68	--	69	--	--	11	--	52	33	1.5
25...	200	54	--	65	--	--	10	--	46	32	1.4
DEC 05...	210	59	--	67	--	--	10	--	46	32	1.4
15...	220	60	--	70	--	--	11	--	42	29	1.2
20...	--	--	--	--	--	--	--	--	--	--	--
25...	260	91	--	83	--	--	13	--	62	34	1.7
JAN 05...	240	83	--	79	--	--	11	--	55	32	1.5
09...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	11	--	52	--	--
25...	--	--	--	--	--	--	5.0	--	30	--	--
FEB 05...	150	74	--	49	--	--	7.6	--	--	--	--
15...	180	86	--	57	--	--	9.1	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
25...	130	66	--	39	--	--	7.0	--	43	42	1.7
MAR 05...	100	44	--	31	--	--	5.9	--	34	41	1.5
06...	--	--	--	--	--	--	--	--	--	--	--
15...	140	15	--	42	--	--	7.4	--	27	30	1.0
25...	110	24	--	35	--	--	6.6	--	31	36	1.3
APR 03...	--	--	--	--	--	--	--	--	--	--	--
05...	160	60	--	49	--	--	8.2	--	28	28	1.0
15...	120	11	--	38	--	--	6.4	--	20	26	.8
25...	140	25	--	45	--	--	7.8	--	28	29	1.0
MAY 05...	99	33	--	30	--	--	5.9	--	22	32	1.0
15...	160	33	--	52	--	--	8.1	--	29	27	1.0
16...	--	--	55	--	135	--	--	--	--	--	--
27...	--	--	--	64	--	--	--	--	50	--	--
JUN 05...	210	61	--	68	--	--	10	--	47	32	1.4
13...	--	--	--	--	--	--	--	--	--	--	--
15...	140	23	--	46	--	--	6.9	--	19	22	.7
25...	160	27	--	50	--	--	7.9	--	23	24	.8
JUL 05...	150	27	--	47	--	--	7.3	--	29	29	1.0
15...	120	18	--	38	--	--	5.5	--	22	28	.9
19...	--	--	43	--	108	6.9	--	30	--	--	--
25...	140	--	--	45	--	--	6.6	--	24	27	.9
AUG 01...	--	--	--	--	--	--	--	--	--	--	--
05...	130	20	--	41	--	--	6.6	--	17	22	.7
15...	140	26	--	43	--	--	7.0	--	18	26	.7
25...	160	33	--	52	--	--	8.0	--	28	27	1.0
SEP 04...	--	--	58	--	145	9.0	--	--	--	--	--
05...	180	57	--	57	--	--	8.4	--	36	35	1.2
15...	180	46	--	57	--	--	8.2	--	31	31	1.0
25...	180	36	--	56	--	--	8.7	--	37	36	1.2

ARKANSAS RIVER BASIN

223

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECUV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RINE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
UCT											
05...	--	--	5.3	200	0	160	3.2	30	85	--	383
15...	--	--	5.2	190	0	160	1.9	44	100	--	412
25...	--	--	--	--	--	--	--	--	--	.3	--
25...	--	--	5.9	190	0	160	4.8	44	100	--	419
NOV											
05...	--	--	6.8	--	--	160	--	39	110	--	428
07...	--	--	--	--	--	--	--	--	--	.3	--
15...	--	--	6.7	--	--	150	--	38	110	--	408
25...	--	--	6.1	--	--	150	--	38	96	--	377
DEC											
05...	--	--	5.0	--	--	150	--	39	91	--	390
15...	--	--	4.2	--	--	160	--	34	93	--	381
20...	--	--	--	--	--	--	--	--	--	.3	--
25...	--	--	5.1	--	--	170	--	43	140	--	504
JAN											
05...	--	--	5.0	--	--	160	--	58	97	--	421
09...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	5.6	--	--	160	--	54	89	--	422
25...	--	--	3.1	--	--	52	--	22	50	--	192
FEB											
05...	42	--	4.3	--	--	80	--	36	72	--	281
15...	51	--	4.3	--	--	94	--	45	87	--	345
16...	--	--	--	--	--	--	--	--	--	--	--
25...	46	--	3.4	--	--	60	--	32	82	--	278
MAR											
05...	37	--	2.7	--	--	58	--	38	50	--	243
06...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	2.9	--	--	120	--	30	37	--	258
25...	34	--	2.8	--	--	91	--	32	42	--	231
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
05...	31	--	2.9	--	--	96	--	37	46	--	281
15...	23	--	2.7	--	--	110	--	30	28	--	213
25...	31	--	3.0	--	--	120	--	34	47	--	275
MAY											
05...	25	--	2.7	--	--	66	--	25	46	--	226
15...	32	--	3.0	--	--	130	--	32	53	--	292
16...	--	--	--	--	--	--	--	--	--	.3	--
27...	54	--	4.3	--	--	140	--	55	95	--	424
JUN											
05...	51	--	3.8	--	--	150	--	48	88	--	399
13...	--	--	--	--	--	--	--	--	--	.2	--
15...	22	--	2.9	--	--	120	--	25	31	--	230
25...	26	--	3.2	--	--	130	--	27	38	--	252
JUL											
05...	33	--	3.9	--	--	120	--	26	48	--	274
15...	26	--	3.7	--	--	100	--	21	39	--	227
19...	--	4.9	--	--	--	--	--	--	--	.0	--
25...	28	--	3.8	--	--	--	--	22	44	--	258
AUG											
01...	--	--	--	--	--	--	--	--	--	.1	--
05...	21	--	3.5	--	--	110	--	22	27	--	197
15...	21	--	3.4	--	--	110	--	22	25	--	204
25...	32	--	4.0	--	--	130	--	34	48	--	270
SEP											
04...	--	--	--	--	--	--	--	--	--	.2	--
05...	40	--	4.3	--	--	120	--	39	61	--	312
15...	35	--	4.0	--	--	130	--	30	55	--	270
25...	41	--	4.2	--	--	140	--	29	62	--	290

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

	SOLIDS, DIS- SOLVED (TONS PER AC=FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUB- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
UCT											
05...	.52	29.0	--	--	--	--	--	--	--	--	--
15...	.56	24.5	--	--	--	--	--	--	--	--	--
25...	--	--	25	.20	1.6	1.8	8.1	--	--	--	--
25...	.57	28.4	--	--	--	--	--	--	--	--	--
NOV											
05...	.58	27.8	--	--	--	--	--	--	--	--	--
07...	--	--	3	--	2.2	--	--	.239	--	--	--
15...	.55	60.7	--	--	--	--	--	--	--	--	--
25...	.51	47.8	--	--	--	--	--	--	--	--	--
DEC											
05...	.53	34.2	--	--	--	--	--	--	--	--	--
15...	.52	29.8	--	--	--	--	--	--	--	--	--
20...	--	--	1	1.0	--	2.2	--	.343	--	--	--
25...	.69	35.8	--	--	--	--	--	--	--	--	--
JAN											
05...	.57	28.4	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
15...	--	34.2	--	--	--	--	--	--	--	--	--
25...	--	156	--	--	--	--	--	--	--	--	--
FEB											
05...	--	56.9	--	--	--	--	--	--	--	--	--
15...	--	531	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	2.4	3.7	--	--	--	--	--
25...	.38	346	--	--	--	--	--	--	--	--	--
MAR											
05...	.33	952	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
15...	.35	154	--	--	--	--	--	--	--	--	--
25...	.31	745	--	--	--	--	--	--	--	--	--
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
05...	.38	353	--	--	--	--	--	--	--	--	--
15...	.29	1090	--	--	--	--	--	--	--	--	--
25...	.37	451	--	--	--	--	--	--	--	--	--
MAY											
05...	.31	1590	--	--	--	--	--	--	--	--	--
15...	.40	280	--	--	--	--	--	--	--	--	--
16...	--	--	100	.30	1.3	1.6	7.3	.160	--	--	--
27...	.58	147	--	--	--	--	--	--	--	--	--
JUN											
05...	.54	79.7	--	--	--	--	--	--	--	--	--
13...	--	--	684	.60	2.3	3.0	13	.450	--	--	--
15...	.31	938	--	--	--	--	--	--	--	--	--
25...	.34	107	--	--	--	--	--	--	--	--	--
JUL											
05...	.37	42.2	--	--	--	--	--	--	--	--	--
15...	.31	70.3	--	--	--	--	--	--	--	--	--
19...	--	--	71	1.0	1.7	2.7	12	.220	10	6	<10
25...	.35	34.1	--	--	--	--	--	--	--	--	--
AUG											
01...	--	--	1156	<.50	4.5	4.5	--	.790	--	--	--
05...	.27	751	--	--	--	--	--	--	--	--	--
15...	.28	36.4	--	--	--	--	--	--	--	--	--
25...	.37	35.7	--	--	--	--	--	--	--	--	--
SEP											
04...	--	--	48	<.50	2.3	2.3	--	.190	--	--	--
05...	.42	67.4	--	--	--	--	--	--	--	--	--
15...	.37	29.2	--	--	--	--	--	--	--	--	--
25...	.39	26.5	--	--	--	--	--	--	--	--	--

225

[illegible]

ARKANSAS RIVER BASIN

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	651	724	670	744	416	416	459	476	591	496	383	557
2	655	725	686	721	434	436	453	468	706	493	352	493
3	645	728	657	727	474	457	468	441	654	470	356	422
4	646	734	647	736	479	698	473	374	644	461	342	516
5	647	750	653	745	491	394	485	372	667	465	356	533
6	647	746	645	760	512	346	533	418	658	474	291	530
7	638	766	638	763	527	364	571	485	656	484	334	530
8	896	772	657	756	553	392	545	642	636	518	329	529
9	642	775	674	736	589	400	489	572	211	506	340	516
10	643	768	667	733	608	422	539	518	326	465	350	617
11	659	769	664	730	601	441	317	541	421	336	348	662
12	671	766	669	730	588	432	299	493	360	320	350	552
13	680	760	665	730	552	441	258	501	377	438	354	516
14	692	757	668	729	596	437	340	501	392	422	349	501
15	699	707	665	747	588	444	371	498	388	379	356	504
16	709	678	696	748	688	455	387	496	390	383	366	512
17	701	690	733	741	604	466	397	510	351	401	374	516
18	686	681	780	721	545	252	397	515	391	410	383	521
19	667	669	803	162	456	251	434	521	385	423	389	521
20	654	669	831	313	441	273	399	527	372	440	406	525
21	650	668	843	234	405	316	394	443	374	446	415	523
22	662	656	862	247	425	370	421	557	390	461	426	526
23	680	662	882	292	457	413	441	569	383	452	438	534
24	698	652	884	335	512	418	461	596	398	440	472	537
25	718	654	869	345	483	405	473	610	428	435	476	538
26	733	666	769	374	444	431	471	630	448	441	474	538
27	737	671	776	404	433	444	471	705	368	457	466	539
28	738	661	794	449	405	442	475	514	587	470	466	543
29	740	674	828	419	---	450	481	234	556	482	466	534
30	732	679	852	413	---	451	481	360	491	492	469	523
31	726	---	750	410	---	468	---	496	---	492	475	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

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

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

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) June 13, gage height, 15.21 ft (4.636 m); minimum daily, 35 ft³/s (0.99 m³/s) Nov. 13, Dec. 28, 29, Sept. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	72	104	48	140	300	5500	994	988	4750	5710	65
2	66	72	84	44	142	1520	5500	967	960	4770	5070	84
3	67	70	71	44	140	4300	5400	993	938	3860	1620	114
4	68	68	60	44	142	4700	5240	3520	2410	2280	1570	124
5	68	67	53	42	137	4900	5110	4630	10500	2290	1930	110
6	68	74	49	42	123	7740	4030	2440	8890	2310	2020	92
7	69	76	56	42	125	7330	2610	2140	428	2290	1840	102
8	71	75	54	42	118	7080	2580	2810	518	2320	1720	86
9	77	72	51	48	113	5590	2430	2680	9580	2720	1630	74
10	78	61	47	149	111	3610	2430	2700	4250	2770	1280	61
11	80	43	44	102	116	3680	9080	2620	6860	2620	992	55
12	79	37	43	66	117	3820	9300	2560	12800	2500	923	53
13	73	35	41	81	134	2730	7920	2530	13000	2460	866	48
14	73	44	41	116	199	1170	7680	1740	12800	2400	961	41
15	74	64	44	116	436	1000	6710	518	12600	2340	2620	41
16	75	93	45	122	691	973	6320	452	12400	3270	2590	42
17	71	129	43	119	1230	966	6940	337	12300	4910	1970	40
18	70	95	38	152	788	1750	7710	293	12200	4950	1090	37
19	72	83	36	2890	630	9870	7890	282	10800	5000	1080	36
20	71	62	38	4550	394	9340	8020	295	6710	5020	852	36
21	68	47	37	2970	400	5560	7840	1010	6690	4900	226	36
22	65	42	37	1210	440	6100	7250	3740	8170	4820	155	35
23	69	42	37	735	650	6360	5910	4130	9890	4790	137	36
24	67	42	40	445	665	6310	3820	5880	9650	4770	118	38
25	69	59	44	342	495	6090	2720	3920	9660	3970	109	40
26	73	80	43	303	350	5870	1140	1010	9080	2510	106	40
27	75	68	38	255	285	5700	1090	989	6790	3120	103	39
28	74	87	35	191	255	5570	1060	1910	6150	4800	86	38
29	73	125	35	179	---	5490	1030	4310	4870	4770	62	40
30	72	146	37	172	---	5670	1010	1420	4800	4760	58	40
31	72	---	44	154	---	5460	---	1090	---	4780	61	---
TOTAL	2216	2130	1469	15815	9566	146549	151270	64910	227682	113820	39555	1723
MEAN	71.5	71.0	47.4	510	342	4727	5042	2094	7589	3672	1276	57.4
MAX	80	146	104	4550	1230	9870	9300	5880	13000	5020	5710	124
MIN	65	35	35	42	111	300	1010	282	428	2280	58	35
AC=FT	4400	4220	2910	31370	18970	290700	300000	128700	451600	225800	78460	3420
CAL YR 1978	TOTAL	1211464	MEAN	3319	MAX	15900	MIN	35	AC=FT	24030		

ARKANSAS RIVER BASIN

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-54, 1959, 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1959.

WATER TEMPERATURE: October 1947 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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 25...	0715	67	480	7.5	17.0	11	7.3	78	15	219	69	173
NOV 07...	0730	74	500	7.3	14.0	11	9.0	88	18	--	--	--
DEC 20...	0744	38	600	7.8	7.0	2.0	8.0	68	20	280	90	225
JAN 09...	0800	48	620	8.1	.0	2.0	15.0	104	19	--	--	--
FEB 15...	1400	468	550	6.6	3.0	--	14.4	108	24	--	56	140
MAR 06...	1400	7700	450	--	6.5	83	10.3	85	25	--	--	--
APR 02...	1545	5480	450	7.8	12.5	15	10.1	96	19	165	50	125
MAY 16...	1245	450	360	7.9	24.5	30	9.3	112	21	--	--	--
JUN 12...	1245	12800	400	7.4	24.0	80	8.4	100	14	152	43	108
JUL 18...	1730	4710	400	7.3	27.5	30	7.8	100	--	--	--	--
AUG 01...	1140	5000	--	7.8	27.5	19	7.7	98	14	149	42	105
SEP 04...	1230	131	--	7.2	29.5	--	5.1	69	19	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 25...	13	35	3.8	61	--	.3	24	--	1.5	--	--	--
NOV 07...	--	--	--	53	60	.2	<1	--	.99	--	--	.122
DEC 20...	13	48	5.8	62	79	.3	6	.90	1.2	2.1	9.5	<.001
JAN 09...	--	--	--	--	97	.3	5	.10	1.5	1.6	7.4	.150
FEB 15...	8.8	32	4.2	--	--	--	--	1.4	2.6	4.0	18	--
MAR 06...	--	--	--	50	34	.2	298	.40	1.9	2.3	10	.300
APR 02...	9.5	22	3.3	46	30	.2	63	.60	1.3	1.9	8.4	.100
MAY 16...	--	--	--	35	--	.2	57	.70	1.4	2.1	9.5	.170
JUN 12...	8.2	22	3.2	41	34	.2	101	1.2	1.1	2.4	10	.105
JUL 18...	--	--	--	35	23	.2	42	.90	1.5	2.4	11	.085
AUG 01...	--	14	3.3	28	23	.1	27	.80	1.6	2.4	11	.090
SEP 04...	--	--	--	23	46	.2	29	<.50	1.6	1.6	--	.090

229

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07176460 BIRCH LAKE NEAR BARNSDALL, OK

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

DRAINAGE AREA.--66.0 mi² (170.9 km²).

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

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

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Storage began Mar. 18, 1977; conservation pool was first filled Mar. 23, 1978. The outlet work is a gated intake structure. Capacity, 58,180 acre-ft (71.7 hm³) at elevation 774.0 ft (235.92 m), crest of uncontrolled spillway and 19,180 acre-ft (23.7 hm³) at elevation 750.5 ft (228.75 m), top of conservation pool. Dead storage, 3,360 acre-ft (4.14 hm³) below elevation 730.0 ft (222.50 m). Figures given herein represent total contents. Reservoir is used for flood control, water supply, water quality, recreation, and fish and wildlife.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents 21,470 acre-ft (26.5 hm³) May 7, elevation, 752.46 ft (229.350 m); minimum, 14,720 acre-ft (18.1 hm³) Dec. 30 to Jan. 18, elevation, 746.35 ft (227.487 m).

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

746	14,370	750	18,620
748	16,430	753	22,120

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15990	15280	15260	14720	16640	16870	19100	18970	18590	20090	18770	18760
2	15940	15260	15260	14720	16640	16950	19040	18930	18560	19760	18770	18770
3	15930	15250	15250	14720	16640	16990	19020	19580	18510	19620	18770	18770
4	15880	15240	15240	14720	16640	17010	19040	21170	18470	19550	18760	18770
5	15850	15210	15200	14720	16640	17010	19070	21360	18440	19560	18750	18770
6	15830	15190	15160	14720	16640	17010	19070	21450	18410	19730	18710	18760
7	15800	15190	15160	14720	16660	17010	19070	21350	18380	19740	18660	18730
8	15780	15180	15140	14720	16660	17010	19070	21050	19090	19740	18650	18690
9	15770	15150	15150	14720	16660	17010	19070	20730	20800	19720	18600	18660
10	15760	15130	15150	14720	16670	17010	19520	20400	21220	19660	18590	18650
11	15740	15120	15130	14720	16670	17010	20160	20070	21240	19600	18620	18630
12	15680	15110	15100	14720	16670	17010	20190	19740	20890	19550	18590	18600
13	15660	15110	15080	14720	16670	17020	20190	19420	20570	19470	18560	18550
14	15640	15130	15080	14720	16670	17010	20190	19270	20240	19400	18550	18500
15	15630	15150	15080	14720	16710	17010	20190	19240	19910	19330	18500	18480
16	15580	15230	15020	14720	16710	17010	20190	19190	19590	19240	18480	18450
17	15570	15240	15020	14720	16720	17010	20180	19150	19270	19200	18480	18440
18	15530	15240	14990	16060	16720	19420	20310	19100	19090	19140	18480	18410
19	15520	15240	14990	16510	16730	19640	20390	19060	19110	19080	18480	18390
20	15510	15260	15000	16580	16730	19670	20240	19030	19090	19020	18480	18370
21	15460	15260	14970	16580	16750	19680	20040	18990	19070	18990	18510	18350
22	15450	15260	14960	16600	16810	19850	19810	18970	19040	18930	18510	18300
23	15430	15260	14930	16600	16820	19850	19580	18920	21170	18900	18500	18280
24	15430	15260	14920	16600	16820	19790	19330	18890	21180	18870	18480	18270
25	15400	15260	14910	16610	16820	19660	19190	18630	21190	18840	18470	18240
26	15380	15260	14900	16620	16820	19500	19150	18820	21190	18820	18460	18220
27	15360	15260	14870	16640	16820	19370	19100	18780	21170	18780	18430	18200
28	15340	15260	14840	16640	16850	19260	19070	18760	21060	18750	18290	18170
29	15310	15260	14840	16640	---	19170	19030	18740	20710	18740	18370	18160
30	15310	15260	14720	16640	---	19170	18990	18710	20380	18760	18360	18130
31	15300	---	14720	16640	---	19140	---	18650	---	18760	18630	---
MAX	15990	15280	15260	16640	16850	19850	20390	21450	21240	20090	18770	18770
MIN	15300	15110	14720	14720	16640	16870	18990	18650	18380	18740	18290	18130
†	746.92	746.88	746.35	748.20	748.39	750.46	750.33	750.03	751.54	750.13	750.01	749.56
‡	+710	-40	-540	+1,920	+210	+2,290	-150	-340	+1,730	-1,620	-130	-500

CAL YR 1978 MAX 25140 MIN 14020 † +630
WTR YR 1979 MAX 21450 MIN 14720 ‡ +2120

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

231

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	8.0	4.1	3.6	3.5	4.7	12	5.0	12	177	5.0	5.0
2	4.1	7.7	4.1	3.3	4.0	4.7	13	1.8	12	178	5.0	5.0
3	4.1	8.0	4.1	3.8	4.0	4.7	13	2.2	12	85	5.0	5.0
4	4.1	8.0	4.2	3.8	4.0	5.0	13	2.2	12	30	5.0	5.0
5	4.1	8.0	4.3	4.2	4.0	4.7	13	1.8	12	29	5.0	5.0
6	3.6	7.6	4.9	4.1	4.0	5.0	13	2.0	12	28	5.0	5.0
7	3.6	7.6	4.7	3.8	4.5	4.7	13	120	12	27	5.0	5.0
8	3.5	7.6	4.7	3.6	4.5	4.7	13	170	13	27	5.0	4.7
9	3.8	7.2	4.5	3.7	4.5	5.0	13	168	13	26	5.0	4.7
10	4.2	7.2	4.6	3.8	4.5	4.7	15	166	13	26	5.0	4.7
11	5.0	7.2	7.5	3.8	5.0	4.7	14	166	62	26	5.0	4.7
12	5.1	6.8	5.8	3.6	5.0	4.4	14	166	167	25	5.0	4.7
13	5.8	6.8	4.4	3.8	5.0	4.4	14	166	167	25	5.0	4.7
14	5.5	6.6	4.4	3.6	4.9	4.4	14	78	167	25	5.0	5.0
15	5.5	6.4	4.4	3.8	4.7	5.0	14	14	166	24	5.0	5.0
16	6.2	6.2	4.4	3.6	4.6	4.1	17	14	165	25	5.0	5.0
17	6.3	6.0	4.4	3.7	4.7	4.1	26	14	166	24	5.0	5.0
18	6.4	5.8	3.5	8.0	4.7	5.4	28	14	85	23	5.0	5.0
19	6.6	5.6	3.7	4.6	4.7	4.4	80	14	2.7	23	5.0	5.0
20	7.2	5.4	3.6	3.4	4.7	4.4	90	14	2.5	19	5.0	5.0
21	6.9	5.0	3.5	3.1	4.7	4.5	90	15	2.6	15	5.0	5.0
22	7.6	5.2	3.6	3.4	4.7	76	90	15	2.8	15	5.0	5.0
23	8.0	5.4	3.4	3.3	4.7	77	90	15	3.7	9.6	5.0	5.0
24	8.4	5.0	3.6	3.3	4.7	76	90	15	2.8	5.2	5.0	5.0
25	8.2	4.8	3.5	3.4	5.0	73	20	14	15	5.0	5.0	5.0
26	8.7	4.9	3.5	3.4	5.0	73	10	15	25	5.2	5.0	5.5
27	8.9	4.7	3.6	3.2	5.0	73	10	15	23	5.0	5.0	5.5
28	8.9	4.4	3.7	3.3	5.4	72	10	15	111	5.0	5.0	5.5
29	8.9	4.4	3.6	3.2	---	39	10	15	178	5.0	5.0	5.5
30	8.4	4.2	3.5	3.2	---	13	10	13	178	5.0	4.7	5.5
31	8.4	---	3.7	3.5	---	13	---	12	---	5.0	4.7	---
TOTAL	190.1	187.7	129.5	115.9	128.7	723.2	872	1458.0	1815.1	952.0	154.4	150.7
MEAN	6.13	6.26	4.18	3.74	4.60	23.3	29.1	47.0	60.5	30.7	4.98	5.02
MAX	8.9	8.0	7.5	8.0	5.4	77	90	170	178	178	5.0	5.5
MIN	3.5	4.2	3.4	3.1	3.5	4.1	10	1.8	2.5	5.0	4.7	4.7
AC=FT	377	372	257	230	255	1430	1730	2890	3600	1890	306	299
CAL YR 1978	TOTAL	12531.3	MEAN	34.3	MAX	623	MIN	3.4	AC=FT	24860		
WTR YR 1979	TOTAL	6877.3	MEAN	18.8	MAX	178	MIN	1.8	AC=FT	13640		

ARKANSAS RIVER BASIN

07176500 BIRD CREEK NEAR AVANT, OK

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

DRAINAGE AREA.--364 mi² (943 km²).

WATER-DISCHARGE RECORDS

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

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

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

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

AVERAGE DISCHARGE.--34 years, 194 ft³/s (5.494 m³/s), 140,600 acre-ft/yr (173 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,310 ft³/s (235 m³/s) at 1600 Mar. 18, gage height, 15.05 ft (4.587 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 2.2 ft³/s (.062 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.8	8.8	4.8	16	45	49	62	18	173	634	106
2	5.2	5.8	8.0	4.8	16	52	49	60	18	173	143	124
3	5.0	6.0	5.2	4.8	15	91	47	487	18	156	74	70
4	4.4	6.8	3.8	4.8	12	122	65	2600	16	44	42	51
5	4.3	8.0	5.1	5.2	11	79	78	717	16	28	27	30
6	4.0	11	5.8	5.2	11	54	69	262	16	286	18	20
7	3.7	11	5.8	5.2	11	41	57	185	16	219	14	15
8	3.7	13	5.8	6.7	11	33	51	262	18	156	10	12
9	3.7	14	5.9	5.8	11	27	42	243	1620	114	8.7	9.5
10	3.8	14	6.5	5.8	10	20	114	232	1680	97	7.9	8.0
11	4.3	13	6.3	5.8	10	18	2680	220	302	85	12	7.0
12	4.5	13	6.5	5.4	19	17	611	219	229	81	12	6.0
13	4.3	15	6.8	4.0	81	16	284	219	198	78	9.2	5.5
14	4.0	17	6.3	4.0	90	14	185	194	178	74	7.9	5.0
15	3.8	40	6.3	3.4	143	13	137	79	168	72	7.4	5.0
16	3.8	46	6.3	3.4	171	12	112	72	168	72	7.3	5.0
17	4.1	39	5.8	3.2	81	14	98	68	168	71	6.7	5.0
18	4.1	23	5.2	568	45	3520	263	64	154	57	6.3	5.0
19	4.0	16	5.5	2510	31	1300	435	63	37	39	6.3	4.5
20	3.7	11	5.8	439	29	314	323	63	9.3	32	7.0	4.0
21	3.5	9.5	5.3	184	30	174	260	68	7.7	23	37	3.5
22	3.7	8.7	5.2	101	66	315	228	68	6.5	18	37	3.3
23	3.7	8.0	5.2	70	102	423	208	66	894	18	20	3.3
24	3.7	7.6	4.9	43	70	270	197	49	382	13	13	3.2
25	4.2	7.7	4.8	39	48	183	173	33	115	8.1	10	3.0
26	4.3	11	4.8	32	33	152	78	26	77	7.0	8.7	2.7
27	4.5	11	4.5	27	25	133	68	26	59	6.3	7.5	2.5
28	4.8	10	4.3	22	23	124	63	26	61	6.2	6.8	2.4
29	5.0	11	4.3	21	---	114	63	33	167	5.8	6.3	2.3
30	5.5	10	4.8	21	---	62	63	30	173	6.0	6.3	2.2
31	5.8	---	4.8	16	---	50	---	24	---	264	7.7	---
TOTAL	132.9	422.9	174.4	4175.3	1221	7802	7150	6820	6989.5	2482.4	1221.0	525.9
MEAN	4.29	14.1	5.63	135	43.6	252	236	220	233	80.1	39.4	17.5
MAX	5.8	46	8.8	2510	171	3520	2680	2600	1680	286	634	124
MIN	3.5	5.8	3.8	3.2	10	12	42	24	6.5	5.8	6.3	2.2
AC=FT	264	839	346	8280	2420	15480	14180	13530	13860	4920	2420	1040
CAL YR 1978 TOTAL	67393.2		MEAN 185	MAX 4960	MIN 2.8	AC=FT 133700						
WTR YR 1979 TOTAL	39117.3		MEAN 107	MAX 3520	MIN 2.2	AC=FT 77590						

ARKANSAS RIVER BASIN

233

07176500 BIRD CREEK AT AVANT, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-66, 1976 to current year.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 25...	1230	4.3	400	7.3	17.0	7.0	6.9	74	17	137	41	103
NOV 07...	1240	11	380	7.1	15.0	5.0	7.0	69	21	--	--	--
DEC 20...	1218	5.8	390	7.9	8.0	2.0	9.4	82	21	175	50	125
JAN 09...	1354	5.8	420	7.4	3.0	2.0	11.6	87	26	--	--	--
FEB 15...	1600	150	400	7.6	.0	--	12.2	85	29	--	26	65
MAR 06...	1530	52	490	--	9.0	40	9.3	82	21	--	--	--
APR 02...	1715	49	320	8.1	16.0	22	9.8	100	24	82	22	55
MAY 16...	1430	72	240	8.0	23.0	16	--	--	23	--	--	--
JUN 12...	1445	229	220	7.0	24.0	130	7.0	83	30	109	20	50
JUL 19...	1330	39	380	6.9	28.0	7.0	6.0	77	--	--	--	--
AUG 01...	1340	388	--	7.6	27.0	53	7.3	91	22	125	39	97
SEP 04...	1345	49	--	7.9	29.0	15	5.5	73	21	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 25...	8.5	35	4.0	4.0	103	--	26	.40	1.7	2.1	9.5	--
NOV 07...	--	--	--	49	56	.1	5	--	1.4	--	--	.111
DEC 20...	12	40	5.7	27	--	.2	7	<.10	.91	.91	--	<.001
JAN 09...	--	--	--	--	59	.1	6	<.10	1.5	1.5	--	.098
FEB 15...	7.5	27	3.8	--	--	--	--	--	3.0	--	--	--
MAR 06...	--	--	--	31	75	.2	41	1.0	1.3	2.3	10	.240
APR 02...	6.6	20	3.8	16	42	.1	189	.50	1.5	2.0	8.9	.100
MAY 16...	--	--	--	20	--	.2	27	.10	1.1	1.2	5.4	.030
JUN 12...	4.7	13	3.2	18	39	.1	279	.20	1.2	1.4	6.2	.465
JUL 19...	--	--	--	12	36	.1	18	<.50	1.3	1.3	--	.060
AUG 01...	6.6	17	3.7	15	27	.1	69	<.50	2.0	2.0	--	.140
SEP 04...	--	--	--	16	35	.1	25	<.50	1.6	--	--	.075

[illegible]

ARKANSAS RIVER BASIN

235

07176800 CANDY CREEK NEAR WOLCO, OK

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

DRAINAGE AREA.--30.6 mi² (79.3 km²).

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

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

REMARKS.--Records good except for January to April which is poor.

COOPERATION.--Gage-height record, 10 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--10 years, 27.9 ft³/s (0.790 m³/s), 20,210 acre-ft/yr (24.9 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,960 ft³/s (197 m³/s) at 1515 Mar. 18, gage height, 15.79 ft (4.813 m), no other peak above base of 2,500 ft³/s (70.8 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.29	1.4	9.4	10	1.4	1.9	1.1	.00	.00
2	.00	.00	.04	.22	1.4	8.2	5.0	2.3	1.1	.87	.00	.00
3	.00	.00	.04	.11	1.4	82	4.0	329	1.0	.68	.00	.00
4	.00	.00	.04	.00	1.3	29	30	442	.89	.48	.00	.00
5	.00	.00	.04	.00	1.3	10	19	103	.79	.44	.00	.00
6	.00	.00	.02	.00	1.3	5.3	13	38	.77	.46	.00	.00
7	.00	.00	.11	.00	1.2	3.7	9.0	18	.77	.48	.00	.00
8	.00	.00	.11	.00	1.2	3.2	6.0	9.1	19	.44	.00	.00
9	.00	.00	.11	.00	1.2	2.2	2.3	4.9	618	.42	.00	.00
10	.00	.00	.11	.00	1.2	2.1	2.0	2.6	283	.33	.00	.00
11	.00	.00	.05	.00	1.2	1.9	386	1.4	32	.31	.00	.00
12	.00	.00	.11	.00	3.0	1.6	95	1.1	16	.30	.00	.00
13	.00	.00	.11	.00	3.7	1.5	40	1.1	10	.33	.00	.00
14	.00	.00	.11	.00	7.9	1.4	28	.99	6.1	.30	.00	.00
15	.00	.00	.11	.00	41	1.3	22	.86	4.1	.22	.00	.00
16	.00	.00	.11	.00	10	1.1	14	.77	2.8	.13	.00	.00
17	.00	.00	.11	.00	3.2	1.8	12	.76	1.9	.22	.00	.00
18	.00	.00	.11	20	1.9	1550	44	.66	1.4	.33	.00	.00
19	.00	.00	.11	300	1.5	195	88	.66	1.2	.27	.00	.00
20	.00	.00	.11	100	1.5	42	27	.69	.97	.14	.00	.00
21	.00	.00	.22	20	1.9	14	18	.66	.74	.10	.00	.00
22	.00	.00	.22	4.5	2.6	176	11	.71	.58	.06	.00	.00
23	.00	.00	.11	3.5	5.2	141	6.4	.66	2.6	.00	.00	.00
24	.00	.00	.11	2.8	5.0	34	4.7	.66	15	.00	.00	.00
25	.00	.00	.11	2.3	2.4	16	3.4	.73	5.0	.00	.00	.00
26	.00	.00	.11	2.0	1.8	9.2	2.8	.77	3.0	.00	.00	.00
27	.00	.00	.11	1.8	1.5	5.5	2.7	.82	2.0	.00	.00	.00
28	.00	.00	.11	1.6	1.6	4.0	2.0	72	1.4	.00	.00	.00
29	.00	.00	.22	1.6	---	3.3	1.5	62	1.1	.00	.00	.00
30	.00	.00	.22	1.5	---	2.6	1.5	15	.98	.00	.00	.00
31	.00	---	.26	1.5	---	2.4	---	4.7	---	.00	.00	---
TOTAL	.00	.00	3.46	463.72	109.8	2360.7	910.3	1118.00	1036.09	8.41	.00	.00
MEAN	.000	.000	.11	15.0	3.92	76.2	30.3	36.1	34.5	.27	.000	.000
MAX	.00	.00	.26	300	41	1550	386	442	618	1.1	.00	.00
MIN	.00	.00	.00	.00	1.2	1.1	1.5	.66	.58	.00	.00	.00
AC-FT	.00	.00	6.9	920	218	4680	1810	2220	2060	17	.00	.00
CAL YR 1978	TOTAL	6737.74	MEAN	18.5	MAX	664	MIN	.00	AC-FT	13360		
WTR YR 1979	TOTAL	6010.48	MEAN	16.5	MAX	1550	MIN	.00	AC-FT	11920		

ARKANSAS RIVER BASIN

07177000 HOMINY CREEK NEAR SKIATOOK, OK

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

DRAINAGE AREA.--340 mi² (881 km²).

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

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

REMARKS.--Records poor prior to March and fair thereafter.

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

AVERAGE DISCHARGE.--35 years, 183 ft³/s (5.183 m³/s), 132,600 acre-ft/yr (163 hm³/yr).

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

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

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Jan. 19	1545	*5,760	163	*26.34	8.028	Mar. 18	1930	5,200	147	25.10	7.65

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.44	1.6	5.5	27	38	17	14	11	.23	5.4
2	.00	.00	.38	1.7	5.0	40	40	17	11	7.4	.08	91
3	.00	.00	5.4	1.8	4.7	66	34	178	9.2	2.7	.05	43
4	.00	.00	4.8	1.5	4.5	86	34	2490	8.0	1.7	.00	28
5	.00	.00	3.1	1.3	4.2	71	42	1610	7.1	1.6	.00	11
6	.00	.05	1.5	1.1	4.0	46	45	237	6.9	56	.00	4.8
7	.00	.28	1.1	.90	3.8	34	38	113	6.0	84	7.0	2.6
8	.00	.50	.82	.78	3.6	26	31	70	6.5	31	2.9	1.6
9	.05	.71	.57	.78	3.5	22	26	49	2360	12	1.4	.97
10	.29	.92	.40	.80	3.4	19	40	37	4000	4.7	1.2	.43
11	.57	1.2	.31	.80	3.3	17	2700	30	508	7.1	2.2	.04
12	1.1	1.4	.29	.80	12	15	869	26	102	4.4	.54	.00
13	.49	1.7	.28	.80	33	14	164	24	59	11	.23	.00
14	.01	1.5	.28	.80	50	12	88	22	39	1.8	.35	.00
15	.00	8.0	.35	.80	150	13	62	21	28	1.0	.59	.00
16	.00	16	.39	.80	75	11	49	19	20	.97	.77	.00
17	.00	33	3.0	.80	50	12	38	18	7.2	4.2	1.4	.00
18	.00	150	6.1	197	40	2210	105	16	6.5	36	2.2	.00
19	.04	20	3.7	4590	33	3900	352	15	6.8	20	3.0	.00
20	.21	13	2.2	1660	29	472	158	13	7.5	8.3	3.5	.00
21	.45	9.2	1.4	209	32	165	144	11	7.5	4.9	4.0	.00
22	.71	6.5	.99	95	48	225	86	9.8	7.4	3.7	4.4	.00
23	1.2	5.7	3.2	50	68	436	57	8.3	1080	3.1	2.8	.00
24	1.5	4.9	3.0	30	67	163	44	7.1	1060	4.2	2.3	.00
25	1.5	4.6	2.6	20	45	88	37	6.8	81	3.6	2.3	.00
26	1.5	4.9	2.1	15	32	62	30	9.6	36	2.4	3.0	1.2
27	1.4	39	1.7	12	25	48	25	10	22	1.6	3.9	1.6
28	1.4	22	1.4	9.0	24	41	22	15	4.9	.89	3.1	.78
29	1.1	9.5	1.1	8.0	---	36	21	132	36	.43	2.3	.20
30	.55	1.7	1.0	7.0	---	33	19	40	14	.19	1.8	.00
31	.13	---	1.4	6.0	---	31	---	20	---	.33	1.9	---
TOTAL	14.20	356.26	55.30	6925.86	858.5	8441	5438	5291.6	9561.5	332.41	59.44	192.62
MEAN	.46	11.9	1.78	223	30.7	272	181	171	319	10.7	1.92	6.42
MAX	1.5	150	6.1	4590	150	3900	2700	2490	4000	84	7.0	91
MIN	.00	.00	.28	.78	3.3	11	19	6.8	4.9	.19	.00	.00
AC=FT	28	707	110	13740	1700	16740	10790	10500	18970	659	118	382

CAL YR 1978	TOTAL	58661.18	MEAN 161	MAX 5950	MIN .00	AC=FT 116400
WTR YR 1979	TOTAL	37526.69	MEAN 103	MAX 4590	MIN .00	AC=FT 74430

ARKANSAS RIVER BASIN

237

07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW¼NW¼ sec.29, T.21 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, on downstream side of right pier of county road bridge, 1.5 mi (2.4 km) upstream from Delaware Creek, 2.4 mi (3.9 km) downstream from Hominy Creek, 2.5 mi (4.0 km) southeast of Sperry, and at mile 25.0 (40.2 km).

DRAINAGE AREA.--905 mi² (2,344 km²).

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

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1921: 1943.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft (176.610 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

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

AVERAGE DISCHARGE.--41 years, 490 ft³/s (13.88 m³/s), 355,000 acre-ft/yr (438 hm³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft³/s (348 m³/s) at 1300 Mar.19, gage height, 23.29 ft (7.099 m), no other peak above base of 11,000 ft³/s (312 m³/s); minimum, 2.2 ft³/s (0.062 m³/s, Oct. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	8.7	21	14	50	68	119	98	64	193	515	15
2	8.7	8.7	16	15	46	101	133	109	48	182	252	114
3	6.9	8.7	12	16	43	205	126	237	42	175	118	166
4	5.8	9.0	14	15	39	324	112	4840	39	131	71	109
5	5.0	9.5	18	15	37	253	153	5590	35	52	48	85
6	4.4	9.1	11	15	37	170	152	1360	32	86	36	57
7	3.6	8.7	8.6	15	37	118	136	555	31	344	28	41
8	3.5	8.7	7.5	15	36	91	111	425	54	318	30	31
9	3.5	9.4	7.2	15	35	73	92	390	2920	186	30	25
10	3.7	12	7.5	16	35	61	192	330	7060	125	23	21
11	4.1	13	7.9	16	36	53	6060	293	4200	89	26	18
12	4.1	12	8.3	16	44	47	5150	275	650	88	29	14
13	3.2	13	8.7	16	56	43	948	265	451	79	23	20
14	2.5	16	9.1	16	167	39	495	257	342	91	20	13
15	2.9	38	9.9	17	359	36	332	180	291	72	18	11
16	4.3	73	10	17	500	33	248	101	261	64	14	11
17	4.1	62	10	19	399	34	200	92	229	62	13	11
18	4.9	55	10	181	199	2070	221	83	199	85	13	11
19	5.8	125	17	4450	120	11200	1100	82	164	110	13	11
20	5.8	41	19	5040	104	4790	871	78	73	70	15	9.5
21	5.6	30	17	798	96	728	566	86	50	45	26	8.7
22	5.2	25	14	300	108	572	491	86	37	34	41	7.2
23	7.6	22	12	180	168	1360	368	84	389	27	50	7.2
24	7.7	19	10	135	198	809	313	80	3170	24	34	7.2
25	6.9	18	14	110	151	450	281	61	602	27	25	7.2
26	6.2	20	17	95	107	306	208	45	231	224	21	6.5
27	5.8	27	15	73	80	240	134	44	153	28	19	6.5
28	5.8	71	13	70	70	203	118	256	112	19	18	7.9
29	5.8	49	13	63	---	238	109	424	98	16	17	10
30	6.1	30	13	55	---	296	103	230	226	14	15	10
31	7.6	---	14	45	---	127	---	101	---	12	14	---
TOTAL	166.3	851.5	384.7	11863	3357	25138	19642	17137	22253	3072	1615	871.9
MEAN	5.36	28.4	12.4	383	120	811	655	553	742	99.1	52.1	29.1
MAX	9.2	125	21	5040	500	11200	6060	5590	7060	344	515	166
MIN	2.5	8.7	7.2	14	35	33	92	44	31	12	13	6.5
AC=FT	330	1690	763	23530	6660	49860	38960	33990	44140	6090	3200	1730

CAL YR 1978 TOTAL 189279.9 MEAN 519 MAX 9410 MIN 1.8 AC=FT 375400
WTR YR 1979 TOTAL 106351.4 MEAN 291 MAX 11200 MIN 2.5 AC=FT 210900

ARKANSAS RIVER BASIN

07178050 BIRD CREEK NEAR CATOOSA, OK

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

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

PERIOD OF RECORD.--Water years 1965 to current year.

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO ₃)
OCT											
25...	1345	--	80020	550	6.9	17.0	--	6.0	65	--	140
25...	1346	1028	9740	550	6.9	17.0	4.0	6.0	65	35	--
NOV											
07...	1350	--	80020	540	6.9	15.0	--	5.8	58	--	140
07...	1351	1028	9740	540	6.9	15.0	17	5.8	58	56	--
DEC											
20...	1307	--	80020	640	7.5	11.0	--	8.0	74	--	160
20...	1308	1028	9740	640	7.5	11.0	7.0	8.0	74	30	217
JAN											
09...	1447	--	80020	540	7.2	6.0	--	12.3	100	--	150
09...	1448	1028	9740	540	7.2	6.0	6.0	12.3	100	36	--
FEB											
15...	1230	--	80020	600	7.4	4.5	56	8.8	69	--	150
15...	1231	1028	9740	600	7.4	4.5	--	8.8	69	41	--
MAR											
06...	1230	--	80020	620	--	10.0	72	10.4	93	--	--
06...	1231	1028	9740	620	--	10.0	64	10.4	93	30	--
APR											
02...	1415	--	80020	545	7.1	16.0	130	9.2	94	--	130
02...	1416	1028	9740	545	7.1	16.0	80	9.2	94	42	134
MAY											
16...	1120	--	80020	420	7.4	21.5	24	--	--	--	--
16...	1121	1028	9740	420	--	21.5	25	--	--	28	1
JUN											
12...	1100	--	80020	340	7.5	22.0	140	6.2	71	--	110
12...	1101	1028	9740	340	7.5	22.0	110	6.2	71	37	77
JUL											
18...	1445	--	80020	620	7.4	29.5	8.0	6.7	87	--	160
18...	1446	1028	9740	620	7.4	29.5	7.0	6.7	87	23	--
AUG											
01...	1030	--	80020	432	7.4	25.5	64	3.8	45	--	120
01...	1031	1028	9740	432	7.4	25.5	96	3.8	45	55	118
SEP											
04...	1100	--	80020	622	7.8	27.5	4.5	5.1	65	--	160
04...	1101	1028	9740	622	7.8	27.5	13	5.1	65	21	--

07178050 BIRD CREEK NEAR CATOOSA, OK--Continued

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AU- SORP- TION RATIO
OCT										
25...	35	--	46	130	--	6.6	--	45	39	1.6
25...	--	52	--	--	7.0	--	48	--	--	--
NOV										
07...	22	--	43	--	--	7.1	--	47	41	1.8
07...	--	--	--	--	--	--	--	--	--	--
DEC										
20...	71	--	51	--	--	8.8	--	58	42	2.0
20...	--	62	--	155	11	--	62	--	--	--
JAN										
09...	60	--	48	--	--	8.3	--	48	39	1.7
09...	--	--	--	--	--	--	--	--	--	--
FEB										
15...	73	--	46	--	--	9.5	--	46	39	1.6
15...	--	48	--	120	9.9	--	45	--	--	--
MAR										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
APR										
02...	45	--	36	--	--	8.5	--	43	42	1.7
02...	--	37	--	93	9.9	--	42	--	--	--
MAY										
16...	--	--	40	--	--	8.8	--	33	--	--
16...	--	--	--	--	--	--	--	--	--	--
JUN										
12...	39	--	32	--	--	6.6	--	24	32	1.0
12...	--	28	--	70	7.6	--	27	--	--	--
JUL										
18...	35	--	51	--	--	9.1	--	49	38	1.7
18...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	40	--	35	--	--	6.8	--	41	48	1.7
01...	--	36	--	90	6.8	--	34	--	--	--
SEP										
04...	40	--	48	--	--	9.7	--	50	40	1.7
04...	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT										
25...	--	--	7.4	130	0	110	26	43	54	--
25...	--	7.5	--	--	--	--	--	--	--	.9
NOV										
07...	--	--	7.4	140	0	110	28	49	56	--
07...	--	--	--	--	--	--	--	33	58	.9
DEC										
20...	--	--	7.3	--	--	93	--	47	100	--
20...	--	8.4	--	--	--	--	--	51	100	.8
JAN										
09...	--	--	6.8	--	--	94	--	48	73	--
09...	--	--	--	--	--	--	--	40	69	.8
FEB										
15...	--	--	3.8	--	--	81	--	46	90	--
15...	--	4.6	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	90	--	--	--	--
06...	--	--	--	--	--	--	--	58	96	.3
APR										
02...	--	--	4.5	--	--	80	--	45	74	--
02...	--	4.7	--	--	--	--	--	48	78	.3
MAY										
16...	38	--	4.6	--	--	89	--	39	51	--
16...	--	--	--	--	--	--	--	35	54	.5
JUN										
12...	28	--	3.7	--	--	68	--	28	41	--
12...	--	3.9	--	--	--	--	--	--	22	.2
JUL										
18...	55	--	5.7	--	--	130	--	38	68	--
18...	--	--	--	--	--	--	--	43	69	.5
AUG										
01...	47	--	6.0	--	--	75	--	42	49	--
01...	--	6.7	--	--	--	--	--	38	44	.2
SEP										
04...	55	--	5.0	--	--	120	--	29	97	--
04...	--	--	--	--	--	--	--	25	100	.2

ARKANSAS RIVER BASIN

07178050 BIRD CREEK NEAR CATOOSA, OK--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECUV- ERABLE (UG/L AS CD)
OCT										
25...	314	.43	--	--	--	--	--	--	--	--
25...	--	--	9	.50	10	10	47	3.86	--	--
NOV										
07...	331	.45	--	--	--	--	--	--	--	--
07...	--	--	44	--	11	--	--	4.36	--	--
DEC										
20...	355	.48	--	--	--	--	--	--	--	--
20...	--	--	14	.50	9.3	9.8	44	3.21	--	--
JAN										
09...	325	.44	--	--	--	--	--	--	--	--
09...	--	--	12	--	9.1	--	--	4.20	--	--
FEB										
15...	309	.42	--	--	--	--	--	--	--	--
15...	--	--	--	1.0	4.2	5.2	23	--	<2	1
MAR										
06...	345	.47	--	--	--	--	--	--	--	--
06...	--	--	105	.90	4.6	5.5	24	1.30	--	--
APR										
02...	310	.42	--	--	--	--	--	--	--	--
02...	--	--	37	.70	4.0	4.7	21	.650	--	--
MAY										
16...	258	.35	--	--	--	--	--	--	--	--
16...	--	--	48	--	2.9	3.9	17	1.25	--	--
JUN										
12...	204	.28	--	--	--	--	--	--	--	--
12...	--	--	73	.50	2.3	2.8	12	.110	--	--
JUL										
18...	332	.45	--	--	--	--	--	--	--	--
18...	--	--	2421	1.1	4.9	6.0	27	1.90	--	--
AUG										
01...	254	.35	--	--	--	--	--	--	--	--
01...	--	--	155	.80	8.0	8.8	39	2.70	<5	8
SEP										
04...	348	.47	--	--	--	--	--	--	--	--
04...	--	--	25	.70	3.4	4.1	18	1.65	--	--

[illegible]

07178400 BIRD CREEK AT CATOOSA, OK

LOCATION.--Lat 36°12'14", long 95°45'41", on west line NW¼, sec.19, T.20 N., R.14 E., Rogers County, Hydrologic Unit 11070107, at county road bridge, 1 mi (1.6 km) northwest of Catoosa.

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

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
OCT 25...	1500	540	7.0	19.0	4.0	5.8	64	32	160	51	128	7.6
NOV 07...	1430	590	7.0	14.0	4.0	6.1	60	29	--	--	--	--
DEC 20...	1343	630	7.4	10.0	--	8.5	77	30	227	70	175	12
JAN 09...	1524	600	7.7	2.0	7.0	12.6	93	29	--	--	--	--
FEB 15...	1130	300	7.1	5.5	--	7.8	62	37	--	35	87	9.2
MAR 06...	1100	590	--	9.5	64	9.9	88	30	--	--	--	--
APR 02...	1315	420	7.2	14.5	80	9.8	97	36	137	40	100	8.9
MAY 16...	1000	360	7.4	21.0	30	7.6	84	25	--	--	--	--
JUN 12...	1000	360	7.3	22.0	130	5.9	68	40	114	27	67	7.5
JUL 18...	1300	550	7.5	29.0	13	4.0	53	--	--	--	--	--
AUG 01...	0845	545	7.3	27.5	55	3.9	49	25	132	36	90	--
SEP 04...	1000	--	7.6	27.0	26	5.8	75	22	--	--	--	--

DATE	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 25...	60	8.3	38	103	.9	11	.30	11	12	53	4.24	--
NOV 07...	--	--	52	68	.9	3	--	9.4	--	--	3.95	--
DEC 20...	61	8.0	48	82	.7	15	.80	8.6	9.4	42	3.05	--
JAN 09...	--	--	--	78	.7	12	--	10	--	--	2.61	--
FEB 15...	12	4.1	--	--	--	--	1.9	2.1	4.0	18	--	<2
MAR 06...	--	--	55	84	.3	590	1.4	3.9	5.3	23	1.05	--
APR 02...	23	4.0	51	36	.4	366	1.2	3.1	4.3	19	.750	--
MAY 16...	--	--	35	--	.3	68	.90	1.5	2.4	11	.555	--
JUN 12...	26	4.1	16	47	.1	373	.60	2.4	3.0	13	--	--
JUL 18...	--	--	41	55	.4	43	1.6	3.0	4.6	21	1.50	--
AUG 01...	42	6.3	36	61	.3	61	1.2	4.8	6.0	27	2.20	<5
SEP 04...	--	--	26	52	.2	76	1.0	4.8	5.8	26	--	--

[illegible]

07178620 VERDIGRIS RIVER NEAR INOLA, OK

(National stream-quality accounting network station)

LOCATION.--Lat 36°09'43", long 95°37'07", in NW¼NW¼ sec.4, T.9 N., R.16 E., Rogers County, Hydrologic Unit 11070105, at bridge on State Highway 33, 6.0 mi (9.6 km) west of Inola, and at navigation channel mile 36.6 (58.9 km).

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

PERIOD OF RECORD.--Water years 1972 to current year. Prior to October 1976, published as Newt Graham Lock and Dam near Inola.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1971 to September 1976.

WATER TEMPERATURE: December 1971 to September 1976.

REMARKS.--Prior to January 1977, sampling site was 9.9 mi (15.9 km) downstream, in the same pool, at Newt Graham Lock and Dam. Samples were collected on a monthly basis and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED SATURATION (PER-CENT)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)
OCT 24...	1230	640	8.4	17.0	18	8.8	92	80	120	170	38
NOV 15...	1400	700	8.3	12.0	7.1	10.7	100	100	180	180	51
DEC 28...	1215	575	7.3	5.0	9.6	12.3	99	360	K6	160	54
FEB 06...	1140	328	8.4	10.0	140	12.8	91	--	--	94	42
MAR 06...	1330	455	7.6	5.0	90	12.5	101	620	270	180	71
APR 19...	0910	460	7.7	17.0	2.0	10.9	114	130	110	130	39
MAY 24...	0945	470	7.8	21.5	39	8.0	90	110	190	160	59
JUN 21...	0900	409	7.4	25.0	42	7.1	87	130	160	140	45
JUL 12...	1000	475	7.9	31.0	64	5.9	80	84	310	140	42
AUG 23...	1000	430	8.0	26.5	28	5.8	78	1170	330	130	34
SEP 27...	0925	488	6.8	23.0	27	6.8	80	K21	--	150	38

DATE	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)
OCT 24...	51	9.8	41	34	1.4	5.2	130	57	55	.5	1.6
NOV 15...	56	10	53	38	1.7	6.1	130	75	64	.5	1.1
DEC 28...	50	9.5	48	38	1.6	5.3	110	60	66	.4	2.8
FEB 06...	29	5.2	27	37	1.2	4.0	--	36	36	.2	4.3
MAR 06...	57	9.4	25	23	.8	3.5	110	61	46	.2	2.3
APR 19...	41	7.7	21	25	.8	3.1	95	--	32	.2	3.3
MAY 24...	48	8.5	21	22	.7	3.2	96	49	--	.2	2.6
JUN 21...	44	8.5	23	25	.8	3.1	100	49	30	.2	4.5
JUL 12...	44	7.9	21	24	.8	3.9	100	38	32	.3	4.7
AUG 23...	40	8.4	17	21	.6	3.5	100	35	25	.3	5.6
SEP 27...	46	8.0	36	34	1.3	5.0	110	48	43	.3	5.9

ARKANSAS RIVER BASIN

07178620 VERDIGRIS RIVER NEAR INOLA, OK--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
UCT 24...	326	299	.44	1.6	--	.10	--	--	.85	--	.95
NOV 15...	362	344	.49	2.7	--	.19	--	--	1.2	--	1.4
DEC 28...	328	308	.45	1.1	--	1.4	--	--	.80	--	2.2
FEB 06...	181	174	.25	1.1	--	1.3	--	--	1.1	--	2.4
MAR 06...	275	271	.37	.66	--	.23	--	--	1.3	--	1.5
APR 19...	227	--	.31	1.1	--	.06	--	.07	1.1	--	1.2
MAY 24...	241	--	.33	1.4	--	--	--	--	--	--	--
JUN 21...	241	222	.33	.92	--	.03	--	.04	.58	--	.61
JUL 12...	228	212	.31	.66	--	.12	--	.15	.98	--	1.1
AUG 23...	213	195	.29	.65	--	.07	--	.08	.61	--	.68
SEP 27...	268	265	.36	1.7	1.5	.03	.03	.04	.52	.48	.55

DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
UCT 24...	.00	2.0	2.6	11	.420	--	--	.370	--	--	--
NOV 15...	.40	1.0	4.1	18	.870	--	--	.800	3	3	0
DEC 28...	.30	1.9	3.3	15	.740	--	--	.660	--	--	--
FEB 06...	.50	1.9	3.5	16	.530	--	--	.250	2	2	100
MAR 06...	.71	.79	2.2	9.6	.200	--	--	.050	--	--	--
APR 19...	.20	1.0	2.3	10	.180	.55	.55	.090	--	--	--
MAY 24...	--	--	--	--	.160	.49	.49	.070	3	2	100
JUN 21...	.21	.40	1.5	6.8	.020	.06	.06	.060	--	--	--
JUL 12...	.41	.69	1.8	7.8	.190	.58	.58	.070	--	--	--
AUG 23...	.08	.60	1.3	5.9	.140	.43	.43	.130	2	1	100
SEP 27...	.04	.51	2.3	10	.390	1.2	1.2	.300	--	--	--

245

07178620 VERDIGRIS RIVER NEAR INOLA, OK--Continued

[illegible]

07178620 VERDIGRIS RIVER NEAR INOLA, OK--Continued

[illegible][illegible]

ARKANSAS RIVER BASIN

07178620 VERDIGRIS RIVER NEAR INOLA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 15, 78 1400	MAR 6, 79 1330	MAY 24, 79 0945	JUN 21, 79 0900
TOTAL CELLS/ML	13000	2300	3600	1700
DIVERSITY: DIVISION	1.5	1.6	0.7	0.9
..CLASS	1.5	1.6	0.7	0.9
..ORDER	1.7	2.0	0.8	1.0
...FAMILY	2.0	2.2	0.9	1.4
....GENUS	3.0	2.5	2.2	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
...PEDIASTRUM	--	-	--	-	--	-	210	12
...DUCYSTACEAE								
...ANKISTRODESMUS	730	6	--	-	26	1	--	-
...CHLORELLA	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	*	0	--	-	--	-	--	-
...DUCYSTIS	160	1	180	8	--	-	52	3
...TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	1900	15	--	-	--	-	210	12
...SCENEDESMUS	3300#	25	140	6	100	3	--	-
...TETRASTRUM	490	4	--	-	100	3	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	530	4	91	4	26	1	--	-
...PLATYMONAS	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	1300	10	230	10	620#	17	140	8
...MELOSIRA	2400#	18	950#	42	910#	25	1000#	58
...SKELETONEMA	--	-	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	1600#	43	78	5
...PENNALES								
...NAVICULACEAE								
...NAVICULA	--	-	45	2	--	-	--	-
...NITZSCHIACEAE								
...NITZSCHIA	--	-	91	4	52	1	13	1
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROMONAS	*	0	--	-	--	-	--	-
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	26	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	--	-	--	-	--	-	--	-
...ANACYSTIS	1900	14	450#	20	160	4	--	-
...GOMPHOSPHERA	320	2	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	--	-	--	-	13	1
...PHACUS	*	0	--	-	--	-	--	-
...TRACHELUMONAS	--	-	91	4	--	-	13	1
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
...GYMNODINIUM	--	-	--	-	--	-	--	-
...PERIDINIALES								
...PERIDINIACEAE								
...PERIDINIUM	--	-	--	-	--	-	--	-

07178620 VERDIGRIS RIVER NEAR INOLA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 12, 79 1000	AUG 23, 79 1000	SEP 27, 79 0925
TOTAL CELLS/ML	12000	13000	1100
DIVERSITY: DIVISION	1.8	1.5	0.9
..CLASS	1.8	1.5	0.9
..ORDER	2.3	0.0	1.7
...FAMILY	2.6	0.0	2.0
....GENUS	3.2	0.0	2.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHARACIACEAE						
....SCHROEDERIA	69	1	--	-	26	2
....HYDRODICTYACEAE						
....PEDIASTRUM	--	-	--	-	--	-
....DOCYSTACEAE						
....ANKISTRODESMUS	140	1	--	-	--	-
....CHLORELLA	--	-	67	1	--	-
....CHODATELLA	--	-	*	0	--	-
....KIRCHNERIELLA	210	2	*	0	--	-
....DOCYSTIS	550	5	--	-	26	2
....TETRAEDRON	--	-	*	0	--	-
....SCENEDESMACEAE						
....CRUCIGENIA	280	2	--	-	--	-
....SCENEDESMUS	1300	11	600	5	26	2
....TETRASTRUM	280	2	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	690	6	*	0	13	1
....PLATYMONAS	--	-	270	2	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	3300#	28	970	8	140	13
....MELOSIRA	1100	9	1400	11	210#	20
....SKELETONEMA	--	-	170	1	--	-
....STEPHANODISCUS	--	-	--	-	--	-
..PENNALES						
...NAVICULACEAE						
....NAVICULA	140	1	--	-	26	2
...NITZSCHACEAE						
....NITZSCHIA	690	6	400	3	490#	46
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE	--	-	100	1	--	-
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHROMONAS	--	-	--	-	13	1
....CRYPTOMONADACEAE						
....CRYPTOMONAS	140	1	--	-	90	9
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....AGMENELLUM	--	-	8100#	62	--	-
....ANACYSTIS	2600#	22	67	1	--	-
....GOMPHOSPHERIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-
....TRACHELOMONAS	280	2	100	1	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
....GYMNODINIACEAE						
....GYMNODINIUM	210	2	500	4	--	-
...PERIDINIALES						
....PERIDINIACEAE						
....PERIDINIUM	--	-	*	0	--	-

ARKANSAS RIVER BASIN

07185000 NEOSHO RIVER NEAR COMMERCE, OK

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

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

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft (228.286 m) Corps of Engineers datum.

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

AVERAGE DISCHARGE.--40 years, 3,530 ft³/s (99.97 m³/s), 2,557,000 acre-ft/yr (3.15 km³/yr).

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

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 21	1645	21,400 606	15.46 4.712	July 10	0630	21,600 612	15.61 4.758
June 12	0145	*22,400 634	*16.00 4.877				

Minimum daily discharge, 19 ft³/s (0.538 m³/s) Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	19	197	45	150	8200	4880	1080	1140	9540	4690	518
2	39	22	152	45	130	7000	4510	1060	981	2990	5780	420
3	37	22	129	45	120	8000	4920	1300	684	2180	3500	336
4	38	22	105	43	230	13000	4680	3490	519	1820	2850	297
5	38	22	88	43	400	11000	4370	3660	417	1610	3010	283
6	41	22	78	43	650	6650	4550	2260	386	3620	2740	265
7	43	34	74	43	450	5330	3330	1690	390	14400	2500	250
8	46	34	86	43	200	5040	2510	1420	504	18800	2380	240
9	46	34	71	43	110	4850	2170	1280	6950	20600	2190	225
10	47	34	63	43	100	4630	2090	1160	18600	21000	1380	210
11	46	34	59	45	90	4360	10000	1180	21900	18400	969	205
12	45	34	58	45	85	4130	14300	1060	22300	17500	698	195
13	44	34	57	45	80	3850	7760	940	18100	10500	564	190
14	35	48	56	45	80	3530	3930	883	11400	8690	470	180
15	27	66	54	48	250	3250	2900	829	10500	8490	392	175
16	27	66	56	52	900	2760	2920	820	8990	8510	756	170
17	31	115	54	62	800	2000	2810	750	6010	8520	442	165
18	33	115	52	305	650	2310	2690	575	4410	8160	346	165
19	33	88	52	6770	500	12300	2500	486	4030	8170	317	160
20	34	88	54	7870	1000	7720	2040	4040	3870	8440	307	160
21	31	88	52	5240	3000	3800	1850	20200	3540	8270	302	155
22	25	66	49	3430	7500	2680	1550	15900	2820	7320	288	155
23	24	66	49	2270	12000	5220	1330	4330	2590	4220	264	155
24	28	66	50	1700	15000	7310	1270	2020	8820	3140	268	155
25	30	66	47	1100	8000	6930	1240	1280	14200	2860	262	154
26	31	160	47	750	5090	5620	1190	878	6350	4180	306	154
27	31	770	46	550	3890	5230	1160	716	3470	5950	364	154
28	29	699	44	400	4200	5080	1140	1100	3180	3640	552	157
29	28	490	43	300	---	5080	1130	1200	8270	2960	1210	159
30	25	293	45	230	---	5470	1090	1180	16300	2800	838	159
31	21	---	45	180	---	5250	---	1220	---	4270	637	---
TOTAL	1073	3717	2112	31873	65655	177580	102810	80007	211621	251550	41572	6366
MEAN	34.6	124	68.1	1028	2345	5728	3427	2581	7054	8115	1341	212
MAX	47	770	197	7870	15000	13000	14300	20200	22300	21000	5780	518
MIN	21	19	43	43	80	2000	1090	486	386	1610	262	154
AC-FT	2130	7370	4190	63220	130200	352200	203900	158700	419800	498900	82460	12630
CAL YR 1978	TOTAL	812787	MEAN	2227	MAX	27900	MIN	19	AC-FT	1612000		
WTR YR 1979	TOTAL	975936	MEAN	2674	MAX	22300	MIN	19	AC-FT	1936000		

07185000 NEOSHO RIVER NEAR COMMERCE,OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-54, 1960-73, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1954.

WATER TEMPERATURE: November 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 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	
DATE	TIME												
OCT 24...	1000	28	500	7.5	15.0	18	7.1	72	16	317	65	163	
NOV 14...	0930	48	480	7.8	11.0	15	9.6	88	14	--	--	--	
DEC 28...	0918	45	560	8.0	3.0	4.0	13.0	99	19	333	90	225	
FEB 14...	0905	80	420	7.1	3.0	9.0	11.2	85	21	250	70	175	
MAR 14...	0900	3580	320	7.3	7.0	80	12.1	101	28	--	--	--	
APR 24...	0930	1290	450	7.4	17.0	32	9.1	97	20	216	60	150	
MAY 24...	0900	2120	380	6.7	20.0	135	8.2	92	--	--	--	--	
JUN 21...	0830	3700	380	7.2	26.0	75	7.2	91	19	173	44	110	
JUL 12...	0820	18200	140	6.5	25.0	200	6.0	74	40	--	--	--	
AUG 23...	0810	260	380	7.8	26.0	5.0	6.2	78	15	267	53	133	
SEP 27...	0800	154	480	8.1	19.0	9.0	7.1	78	9	--	--	--	
		MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
DATE													
OCT 24...	37	32	4.2	128	19	--	37	.40	1.3	1.7	7.7	.168	
NOV 14...	--	--	--	90	19	.2	--	--	1.8	--	--	.157	
DEC 28...	26	32	5.8	148	23	.2	6	.10	1.8	1.9	8.7	--	
FEB 14...	18	--	4.5	114	24	.1	13	1.7	1.4	3.1	14	.200	
MAR 14...	--	--	--	43	9.0	.2	162	1.9	2.5	4.4	19	.400	
APR 24...	16	15	3.9	75	13	.2	79	--	2.4	--	--	.155	
MAY 24...	--	--	--	--	16	.2	300	.90	2.0	2.9	13	.355	
JUN 21...	12	13	4.1	41	10	.1	199	.90	1.4	2.3	10	.200	
JUL 12...	--	--	--	14	8.0	.1	5640	.60	2.6	3.2	15	--	
AUG 23...	15	12	4.8	51	9.0	.3	53	<.50	1.6	1.6	--	.075	
SEP 27...	--	--	--	44	25	.4	--	<.50	2.6	2.6	--	.090	

[illegible]

07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'45", in NE¼SW¼ sec.5, T.28 N., R.24 E., Ottawa County, Hydrologic Unit 11070207, near center of span on downstream side of pier of county road bridge, 0.1 mi (0.2 km) upstream from Rock Creek, 3.0 mi (4.8 km) southeast of Quapaw, and at mile 13.9 (22.4 km). Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 mi² (6,501 km²), includes that of Rock Creek.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft (227.457 m) National Geodetic Vertical Datum of 1929. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

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

AVERAGE DISCHARGE.--40 years, 1,948 ft³/s (55.17 m³/s), 10.54 in/yr (268 m/yr), 1,411,000 acre-ft/yr (1.74 km³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,600 ft³/s (867 m³/s) at 0415 May 22, gage height, 19.76 ft (6.023 m), no other peaks above base of 18,000 ft³/s (510 m³/s); minimum, 254 ft³/s (7.19 m³/s) Nov. 6, 7, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	258	786	453	800	3810	1660	1390	1800	4090	2850	659
2	332	262	702	600	730	3420	2020	1410	1650	2690	2300	1440
3	323	262	652	510	644	3550	2560	1490	1500	1920	1650	5130
4	304	266	597	450	699	5600	2140	4230	1400	1650	1200	3330
5	291	262	552	410	642	4570	1910	5850	1300	1450	991	1730
6	287	266	514	400	630	3180	1760	4150	1200	1410	859	1200
7	287	258	520	380	590	2140	1600	2640	1150	1400	801	1060
8	291	262	514	365	570	2100	1490	2250	2620	1260	724	982
9	296	262	425	355	560	2020	1410	2050	3170	1880	659	859
10	291	266	459	345	549	1860	1370	1760	8300	1810	631	638
11	287	258	447	335	527	1720	8110	1900	5600	1380	945	650
12	287	258	436	325	559	1570	17100	2550	2900	770	850	630
13	274	270	430	315	624	1460	12900	2160	2240	673	673	809
14	270	337	430	305	822	1360	7030	1820	1860	731	597	617
15	274	527	436	300	3170	1200	4030	1560	1260	717	778	490
16	274	597	436	298	4660	1040	3330	1400	1170	673	680	440
17	270	724	441	296	4090	1120	2960	1320	1230	652	638	400
18	266	666	441	392	2690	1160	2630	1240	1370	666	552	540
19	262	571	447	4900	2140	2460	2430	1170	762	673	508	600
20	270	501	447	6860	2270	3010	2290	7120	945	624	533	546
21	274	441	441	4620	5530	2340	2030	25200	884	571	624	508
22	274	408	441	2970	8110	2070	2510	27800	842	425	520	450
23	274	397	430	2200	7720	3050	2340	11600	2320	430	893	410
24	278	376	408	2000	4510	3840	2010	4570	7070	453	972	370
25	274	376	403	1700	1750	2890	1910	2800	7990	500	565	453
26	270	842	392	1540	2180	2300	1830	2400	4490	471	495	584
27	270	1590	381	1400	1940	1820	1840	1950	2010	527	786	533
28	266	1800	381	1300	2070	1760	2530	3010	3030	471	3810	356
29	266	1350	366	1170	---	1680	1880	2570	13900	1080	2080	346
30	266	965	351	1010	---	1650	1440	2690	9520	1780	910	351
31	262	---	381	900	---	1790	---	2080	---	1960	818	---
TOTAL	8747	15878	14487	39404	61776	73540	101050	136130	95483	35787	31892	27111
MEAN	282	529	467	1271	2206	2372	3368	4391	3183	1154	1029	904
MAX	337	1800	786	6860	8110	5600	17100	27800	13900	4090	3810	5130
MIN	262	258	351	296	527	1040	1370	1170	762	425	495	346
CFSM	.11	.21	.19	.51	.88	.95	1.34	1.75	1.27	.46	.41	.36
IN.	.13	.24	.21	.58	.92	1.09	1.50	2.02	1.42	.53	.47	.40
AC=FT	17350	31490	28730	78160	122500	145900	200400	270000	189400	70980	63260	53770
CAL YR 1978 - TOTAL	627385			1719	MAX 27500	MIN 258	CFSM .69	IN 9.30	AC=FT	1244000		
WTR YR 1979 - TOTAL	641285			1757	MAX 27800	MIN 258	CFSM .70	IN 9.50	AC=FT	1272000		

ARKANSAS RIVER BASIN

07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-58, 1960-63, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1949.

WATER TEMPERATURE: October 1947 to September 1949.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECUV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT												
24...	0845	274	360	7.6	15.0	5.0	7.7	78	7	229	81	203
NOV												
14...	0840	327	370	7.5	12.0	6.0	7.9	74	5	--	--	--
DEC												
28...	0830	387	340	7.5	5.0	3.0	10.8	87	5	185	65	163
FEB												
14...	0815	694	375	7.3	4.0	2.0	10.5	82	5	200	69	123
MAR												
14...	0815	1370	290	7.4	10.0	10	9.7	87	6	--	--	--
APR												
24...	0845	2030	280	7.1	18.0	17	8.0	86	8	57	40	42
MAY												
24...	0810	5960	220	6.8	19.0	170	8.9	98	--	--	--	--
JUN												
21...	0730	893	330	7.1	25.0	21	7.0	86	5	163	49	123
JUL												
12...	0710	778	320	7.0	26.0	37	5.9	75	7	--	--	--
AUG												
23...	0710	533	360	7.3	26.0	1.0	5.2	66	7	200	77	193
SEP												
27...	0700	546	350	7.9	20.0	1.0	7.8	88	6	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
24...	6.3	16	1.9	40	12	.1	13	--	.78	--	--	.309
NOV												
14...	--	--	--	26	9.0	.1	--	--	1.1	--	--	.347
DEC												
28...	5.3	--	2.3	38	11	.1	--	2.6	1.3	3.9	17	.186
FEB												
14...	6.6	--	2.1	46	12	.1	5	4.6	1.9	6.5	29	.300
MAR												
14...	--	--	--	27	8.0	.2	18	2.9	1.3	4.2	19	.390
APR												
24...	3.6	<10	2.2	21	7.0	.1	36	2.8	1.2	4.0	18	.160
MAY												
24...	--	--	--	--	14	.1	88	1.4	1.7	3.1	14	.320
JUN												
21...	4.6	10	1.9	30	9.0	.1	39	2.7	1.0	3.7	16	.140
JUL												
12...	--	--	--	46	--	.1	47	2.3	1.1	3.4	15	.250
AUG												
23...	7.4	<10	2.2	31	8.0	.2	23	3.3	1.5	4.8	21	.185
SEP												
27...	--	--	--	33	--	.3	13	2.7	1.2	3.9	18	.120

255

07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

[illegible]

07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'50", long 94°35'12", in NE¼ sec.22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, on downstream side of right pier of bridge on State Highway 43, 0.8 mi (13. km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3.0 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--872 mi² (2,258 km²).

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

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 750.61 ft (228.786 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 6, 1960 to Aug. 24, 1961, at site 100 ft (30.5 m) downstream.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--40 years, 798 ft³/s (22.60 m³/s), 12.42 in/yr (315 mm/yr), 578,200 acre-ft/yr (713 hm³/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,600 ft³/s (583 m³/s) at 1115 Apr. 12, gage height, 16.91 ft (5.154 m), no other peak above base of 9,000 ft³/s (255 m³/s); minimum, 87 ft³/s (2.46 m³/s) Oct. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	107	93	493	150	546	1100	1250	611	474	300	4660	234		
2	104	92	427	140	522	1370	2750	570	484	408	2170	226		
3	101	93	391	130	471	1610	2370	884	541	377	1340	230		
4	97	92	352	120	440	2420	1910	4080	601	327	941	225		
5	94	92	317	130	358	2150	1580	3950	530	295	702	212		
6	92	93	294	140	328	1690	1340	2620	492	334	579	202		
7	92	97	355	150	326	1400	1170	1960	623	402	515	189		
8	92	97	377	140	318	1200	1050	1560	993	382	469	179		
9	95	96	356	130	312	1040	961	1310	989	353	433	171		
10	94	97	331	120	301	915	885	1130	821	321	446	163		
11	92	97	307	130	293	811	1890	1040	694	297	389	157		
12	91	97	288	140	306	730	12600	1010	606	275	407	153		
13	88	108	270	170	348	669	5130	900	544	259	375	149		
14	89	144	255	160	442	618	3210	826	491	239	343	144		
15	98	190	242	160	788	569	2350	763	450	224	322	140		
16	99	236	230	169	1050	528	1870	705	415	212	310	136		
17	97	292	216	171	992	505	1560	661	387	224	302	133		
18	96	300	206	282	884	499	1340	619	356	256	289	133		
19	95	271	199	889	787	1110	1180	585	333	254	278	133		
20	95	238	194	1460	716	2660	1050	595	315	231	274	133		
21	95	210	190	1370	678	2270	1090	611	309	210	266	140		
22	93	204	184	1120	669	1870	1180	613	304	194	261	138		
23	96	202	178	948	746	1680	965	584	393	175	258	133		
24	97	196	173	845	960	1630	875	542	404	165	256	130		
25	98	201	169	742	1000	1470	810	505	370	168	247	126		
26	97	513	163	652	945	1310	756	469	332	168	240	125		
27	96	1200	159	602	893	1170	729	451	303	184	239	122		
28	97	933	155	574	906	1060	702	439	287	375	521	120		
29	95	709	153	569	---	968	666	503	292	516	322	117		
30	95	582	156	562	---	921	633	577	298	419	262	117		
31	94	---	140	553	---	852	---	518	---	2730	244	---		
TOTAL	2961	7865	7920	13618	17325	38795	55852	32191	14431	11274	18660	4710		
MEAN	95.5	262	255	439	619	1251	1862	1038	481	364	602	157		
MAX	107	1200	493	1460	1050	2660	12600	4080	993	2730	4660	234		
MIN	88	92	140	120	293	499	633	439	287	165	239	117		
CFSM	.11	.30	.29	.50	.71	1.44	2.14	1.19	.55	.42	.69	.18		
IN.	.13	.34	.34	.58	.74	1.66	2.38	1.37	.62	.48	.80	.20		
AC-FT	5870	15600	15710	27010	34360	76950	110800	63850	28620	22360	37010	9340		
CAL YR 1978	TOTAL	331953	MEAN	909	MAX	20100	MIN	88	CFSM	1.04	IN	14.16	AC-FT	658400
WTR YR 1979	TOTAL	225602	MEAN	618	MAX	12600	MIN	88	CFSM	.71	IN	9.62	AC-FT	447500

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'17", long 95°02'19", in SW¼ sec.14, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 mi (15.9 km) upstream from Big Cabin Creek, and at mile 77.0 (123.9 km).

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

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft (0.335 m) Corps of Engineers datum. Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch concrete dam, with top of taintor-type spillway gates at gage height 755.0 ft (230.12 m). Storage began Mar. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft (207.87 m), sill of powerhouse penstock, and 745.0 ft (227.08 m), maximum power pool is 1,492,000 acre-ft (1.84 km³). Capacity between gage heights 745.0 ft (227.08 m), and 755.0 ft (230.12 m) is 525,000 acre-ft (647 hm³) and is reserved for flood control. Dead storage below gage height 682.0 ft (207.87 m) is 180,200 acre-ft (222 hm³). Figures given herein represent total contents. Reservoir is utilized for power development and flood control.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,213,000 acre-ft (2.73 km³), May 25, 1957, gage height, 755.27 ft (230.206 m), minimum since power-pool was first filled, 642,900 acre-ft (793 hm³) Sept. 28, 1954, gage height, 713.41 ft (217.447 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,741,000 acre-ft (2.15 km³) June 13, gage height, 746.46 ft (227.521 m); minimum, 1,213,000 acre-ft (1.50 km³) Nov. 14, gage height, 733.78 ft (223.656 m).

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

733	1,186,000	740	1,452,000
735	1,257,000	743	1,581,000
737	1,332,000	746	1,719,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1279000	1221000	1264000	1247000	1397000	1564000	1483000	1551000	1621000	1722000	1662000	1442000
2	1274000	1220000	1268000	1244000	1400000	1572000	1481000	1549000	1628000	1711000	1663000	1443000
3	1273000	1221000	1269000	1242000	1403000	1578000	1478000	1557000	1632000	1695000	1654000	1453000
4	1272000	1221000	1267000	1244000	1408000	1600000	1474000	1560000	1630000	1678000	1641000	1451000
5	1272000	1222000	1267000	1242000	1410000	1616000	1470000	1564000	1628000	1663000	1628000	1445000
6	1268000	1222000	1262000	1243000	1412000	1621000	1461000	1578000	1631000	1655000	1612000	1437000
7	1268000	1218000	1262000	1244000	1420000	1622000	1450000	1578000	1654000	1665000	1594000	1427000
8	1268000	1217000	1260000	1244000	1422000	1616000	1440000	1576000	1659000	1684000	1578000	1424000
9	1268000	1218000	1256000	1244000	1421000	1609000	1426000	1572000	1668000	1710000	1559000	1418000
10	1260000	1218000	1257000	1245000	1424000	1600000	1416000	1567000	1696000	1723000	1542000	1407000
11	1259000	1219000	1256000	1245000	1432000	1593000	1446000	1570000	1722000	1722000	1540000	1397000
12	1257000	1219000	1256000	1246000	1434000	1584000	1524000	1579000	1733000	1718000	1526000	1385000
13	1252000	1223000	1258000	1246000	1436000	1574000	1567000	1589000	1740000	1700000	1515000	1371000
14	1252000	1216000	1259000	1247000	1442000	1561000	1578000	1595000	1728000	1690000	1506000	1361000
15	1252000	1216000	1261000	1241000	1452000	1548000	1578000	1599000	1721000	1686000	1500000	1357000
16	1252000	1216000	1263000	1242000	1464000	1533000	1574000	1600000	1720000	1682000	1493000	1349000
17	1250000	1220000	1264000	1245000	1477000	1519000	1566000	1601000	1712000	1682000	1486000	1346000
18	1249000	1224000	1264000	1253000	1489000	1507000	1558000	1596000	1700000	1676000	1478000	1341000
19	1249000	1226000	1264000	1278000	1493000	1514000	1548000	1596000	1684000	1670000	1469000	1337000
20	1248000	1227000	1261000	1311000	1491000	1524000	1537000	1606000	1671000	1665000	1473000	1334000
21	1247000	1227000	1254000	1335000	1497000	1521000	1524000	1662000	1662000	1658000	1473000	1329000
22	1247000	1226000	1252000	1354000	1514000	1513000	1523000	1718000	1653000	1650000	1465000	1324000
23	1242000	1229000	1252000	1362000	1540000	1510000	1519000	1719000	1656000	1635000	1464000	1320000
24	1239000	1231000	1252000	1366000	1570000	1514000	1516000	1703000	1662000	1618000	1462000	1313000
25	1235000	1233000	1254000	1370000	1578000	1517000	1512000	1687000	1685000	1604000	1460000	1310000
26	1231000	1244000	1251000	1379000	1570000	1518000	1515000	1671000	1687000	1598000	1457000	1306000
27	1232000	1250000	1244000	1381000	1565000	1510000	1522000	1655000	1677000	1601000	1458000	1301000
28	1232000	1255000	1244000	1387000	1565000	1503000	1529000	1640000	1671000	1600000	1459000	1297000
29	1222000	1259000	1246000	1392000	---	1497000	1538000	1627000	1690000	1601000	1456000	1293000
30	1222000	1263000	1244000	1395000	---	1494000	1544000	1612000	1720000	1603000	1448000	1287000
31	1222000	---	1248000	1396000	---	1487000	---	1618000	---	1655000	1446000	---
MAX	1279000	1263000	1269000	1396000	1578000	1622000	1578000	1719000	1740000	1723000	1663000	1453000
MIN	1222000	1216000	1244000	1241000	1397000	1487000	1416000	1549000	1621000	1598000	1446000	1287000
†	734.04	735.16	734.74	738.62	742.63	740.84	742.15	743.81	746.03	744.63	739.85	735.82
‡	-58,000	+41,000	-15,000	+148,000	+169,000	-78,000	+57,000	+74,000	+102,000	-65,000	-209,000	-159,000

CAL YR 1978 MAX 1884000 MIN 1216000 ‡-239000
WTR YR 1979 MAX 1740000 MIN 1216000 ‡ +7000

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'15", long 95°02'44", in SE¼ sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi (0.8 km) upstream from bridge on State Highway 82, 1.5 mi (2.4 km) south of Langley, 3.6 mi (5.8 km) downstream from Pensacola Dam, 6.3 mi (10.1 km) upstream from Big Cabin Creek, and at mile 73.4 (118.1 km).

DRAINAGE AREA.--10,335 mi² (26,768 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. datum of gage is 607.65 ft (185.212 m) Corps of Engineers datum. Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mile (0.2 km) upstream at same datum. Feb. 10, 1954, to Sept. 30, 1963, water-stage recorder at site 0.5 mi (0.8 km) downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi (3.2 and 4.8 km) upstream at same datum.

REMARKS.--Records good. Low flow values of 25 ft³/s (0.71 m³/s) consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (station 07190000).

AVERAGE DISCHARGE.--40 years, 7,002 ft³/s (198.3 m³/s), 5,073,000 acre-ft/yr (6.26 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300,000 ft³/s (8,500 m³/s) May 20, 1943, gage height, 45.5 ft (13.87 m), from floodmarks, from computation of outflow from Lake O' The Cherokees; minimum daily, 9 ft³/s (0.25 m³/s), Mar. 25, 1940 (caused by closure of Pensacola Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,800 ft³/s (589 m³/s) June 13, gage height, 16.19 ft (4.935 m); minimum daily discharge, 25 ft³/s (0.708 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	998	1550	242	25	12200	12100	550	2100	12700	12600	3240
2	4080	394	25	1670	1180	11800	12100	1660	959	12600	12600	2590
3	28	57	264	1640	25	11700	12100	5570	213	12700	12500	441
4	25	27	2340	175	35	11300	12200	7990	3300	12600	12600	5420
5	588	27	3300	2030	275	12400	12100	12300	2790	12600	12700	5470
6	1960	1510	2380	33	25	12200	12200	3330	3280	12600	12400	6480
7	25	1290	1240	35	1010	11300	12200	7910	6250	12600	12300	5170
8	28	66	1820	668	726	12200	12100	7080	8340	12600	12400	2730
9	330	57	2830	619	770	12300	12200	7280	12600	12600	12300	3620
10	4430	30	30	147	25	12400	12000	8060	12800	16500	12500	5730
11	608	28	2190	29	35	11700	12100	2290	14500	20600	7710	6980
12	3240	26	131	25	25	10700	12300	25	19000	20600	7860	4090
13	943	1080	27	760	462	12100	12400	35	20800	20000	8190	7000
14	25	5710	67	440	25	12300	12400	505	19300	14600	6560	5780
15	26	66	25	2970	1110	12200	12400	2080	15100	12700	4680	2550
16	25	1320	25	25	3120	12100	12400	890	12500	12600	4780	3430
17	1050	894	25	25	1070	12400	12400	2390	12500	12600	4820	3060
18	1120	25	857	814	25	10500	12300	4630	12500	12500	5210	3470
19	26	25	993	25	3550	12100	12200	1240	12500	12600	4900	2340
20	504	677	2720	638	6140	12100	12200	3190	12300	12500	1840	3100
21	617	1010	4560	25	6780	12000	12100	12100	12200	12500	3180	2880
22	94	515	1640	2100	10300	12000	7410	13300	7770	12600	3510	2660
23	3950	25	1330	2490	11900	12000	6980	16900	7350	12500	2970	2700
24	904	25	31	1290	12000	12000	5670	14200	12600	12500	2910	3010
25	1430	25	31	4090	11700	12100	6380	12500	12700	12100	2690	2720
26	1140	68	2080	85	11700	12000	1420	11900	12700	5810	2090	2800
27	1780	954	4180	25	11700	12000	100	12200	12600	6120	2930	2940
28	25	964	57	35	11300	12000	231	11700	8030	5890	4830	3040
29	25	1160	30	25	---	12100	35	12400	12600	3550	5970	3340
30	5110	715	2220	960	---	12000	660	12200	12600	4870	6740	2700
31	192	---	28	25	---	12000	---	1730	---	7620	3090	---
TOTAL	34363	19768	39026	24160	107038	370200	285386	210135	314782	377460	222360	111481
MEAN	1108	659	1259	779	3823	11940	9513	6779	10490	12180	7173	3716
MAX	5110	5710	4560	4090	12000	12400	12400	16900	20800	20600	12700	7000
MIN	25	25	25	25	25	10500	35	25	213	3550	1840	441
AC=FT	68160	39210	77410	47920	212300	734300	566100	416800	624400	748700	441100	221100
CAL YR 1978 TOTAL	2180361	MEAN	5974	MAX	36500	MIN	25	AC=FT	4325000			
WTR YR 1979 TOTAL	2116159	MEAN	5798	MAX	20800	MIN	25	AC=FT	4197000			

ARKANSAS RIVER BASIN

259

07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-59, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1951 to September 1954, May 1956 to September 1959.

WATER TEMPERATURE: October 1951 to September 1954, May 1956 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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT 23...	0745	15	240	7.2	17.0	3.0	6.7	70	12	146	47	118
NOV 13...	0800	19	300	6.8	16.0	3.0	6.2	64	8	--	--	--
DEC 27...	0750	15	300	7.2	6.5	3.0	8.2	67	8	154	51	128
JAN 23...	0752	2490	300	7.2	4.0	9.0	9.8	78	6	--	--	--
FEB 13...	0750	462	300	7.7	2.0	2.0	11.5	84	8	152	49	123
MAR 13...	0800	12500	290	7.4	4.0	4.0	11.1	87	7	--	--	--
APR 23...	0810	9990	290	7.1	14.0	22	10.0	99	11	122	39	97
MAY 23...	0800	15700	290	7.4	18.0	7.0	8.0	86	8	--	--	--
JUN 20...	0800	12500	290	6.9	21.0	13	5.9	68	9	128	39	97
JUL 11...	0720	20600	290	6.8	24.0	5.0	5.9	72	6	--	--	--
AUG 22...	0745	15	250	6.8	24.0	3.0	3.9	48	9	170	32	80
SEP 26...	0730	15	220	7.6	23.0	2.0	4.9	58	5	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 23...	6.6	16	2.4	32	12	.1	5	--	1.1	--	--	.117
NOV 13...	--	--	--	21	4.0	.1	--	--	1.0	--	--	.163
DEC 27...	6.4	<10	3.4	31	7.0	.1	27	.30	1.1	1.4	6.2	<.001
JAN 23...	--	--	--	35	1.0	.1	65	.60	1.3	1.9	8.4	.100
FEB 13...	7.0	--	2.9	27	7.0	.1	11	.40	1.1	1.5	6.6	.050
MAR 13...	--	--	--	37	6.0	.2	15	.70	1.2	1.9	8.4	.150
APR 23...	5.9	<10	3.1	31	10	.1	84	1.8	1.3	3.1	14	.120
MAY 23...	--	--	--	88	16	.1	7	1.9	1.0	2.9	13	.100
JUN 20...	5.7	10	2.8	36	7.0	.1	--	1.4	1.0	2.4	11	.060
JUL 11...	--	--	--	41	9.0	.1	5	1.4	--	2.6	--	.100
AUG 22...	--	<10	2.9	22	5.0	.1	13	.60	1.1	1.7	7.5	.070
SEP 26...	--	--	--	27	--	.4	1	<.50	1.8	1.8	--	.050

[illegible]

ARKANSAS RIVER BASIN

261

07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE¼NE¼ sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near downstream side of right bank end of county road bridge, 4.9 mi (7.9 km) north-east of Big Cabin, 0.9 mi (1.5 km) downstream from White Oak Creek, 6.8 mi (10.9 km) upstream from Mustang Creek and at mile 13.0 (20.9 km).

DRAINAGE AREA.--450 mi² (1,165 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft (189.586 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi (7.2 km) downstream at same datum and present site used as supplemental gage.

REMARKS.--Records fair. Low flow sustained by sewage from City of Vinita.

AVERAGE DISCHARGE.--32 years, 320 ft³/s (9.062 m³/s), 9.32 in/yr (237 mm/yr), 231,800 acre-ft/yr (286 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft³/s (1,470 m³/s) Oct. 3, 1959, gage height, 34.55 ft (10.531 m), at former site; maximum gage height, 44.58 ft (13.588 m) Nov. 4, 1974; minimum, 0.10 ft³/s (0.003 m³/s) at times in 1954, 1956 and 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft (10.656 m) at former site, discharge, 63,000 ft³/s (1,780 m³/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft³/s (218 m³/s) Apr. 11, gage height, 29.60 ft (9.022 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum, 1.1 ft³/s (0.031 m³/s) Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.9	25	7.3	28	595	267	38	10	12	1110	4.8
2	1.2	1.8	16	6.0	29	273	465	32	35	7.7	199	8.6
3	1.2	1.8	18	5.5	30	2040	207	41	61	6.4	87	9.0
4	1.2	1.6	17	5.5	32	867	142	729	41	5.3	47	8.2
5	1.2	1.5	15	5.5	30	316	124	580	36	4.4	21	5.5
6	1.2	1.5	13	5.5	29	213	104	249	40	390	16	3.8
7	1.3	1.9	14	5.5	29	178	89	147	111	825	13	3.0
8	1.5	2.1	14	5.5	29	142	76	95	129	105	10	2.6
9	1.6	2.1	9.8	5.5	29	114	68	67	935	106	8.8	2.2
10	1.6	2.0	8.9	5.5	28	95	62	53	468	61	8.9	1.8
11	1.6	1.9	8.4	5.5	30	81	4880	171	213	41	1300	1.7
12	1.7	2.0	8.2	5.6	47	70	3350	205	98	28	218	1.7
13	1.6	2.7	8.2	6.4	51	64	498	102	59	17	61	1.9
14	1.6	6.5	8.0	6.3	152	57	295	68	42	9.8	36	1.8
15	1.6	16	8.0	5.7	938	52	212	49	33	7.8	27	1.8
16	1.6	14	8.2	5.7	132	48	165	38	27	6.9	22	1.7
17	1.9	32	8.0	15	40	47	137	28	22	6.6	21	1.7
18	2.0	32	8.0	406	35	279	118	21	17	11	20	1.7
19	2.0	22	7.8	3580	40	1550	106	18	11	12	19	1.6
20	2.1	19	7.8	659	60	1040	98	16	4.7	9.6	18	1.6
21	2.3	15	7.8	128	170	536	91	17	19	5.8	17	1.5
22	2.2	12	7.3	48	296	385	83	50	46	4.0	17	1.7
23	2.1	10	7.1	37	382	907	72	54	57	3.4	22	2.1
24	2.3	9.2	7.1	26	233	470	63	41	281	3.0	26	2.1
25	2.3	9.6	7.1	28	127	266	61	31	91	2.7	23	2.1
26	2.5	1270	7.1	30	89	181	58	22	132	2.6	21	2.1
27	2.8	428	7.1	29	72	142	55	15	45	3.1	18	2.0
28	2.8	151	7.1	27	364	120	50	12	37	3.2	31	1.8
29	2.8	67	6.9	27	---	105	46	12	63	2.9	22	1.7
30	2.3	41	7.1	28	---	138	42	11	28	2.5	9.3	1.6
31	1.9	---	7.3	29	---	123	---	11	---	2420	6.4	---
TOTAL	57.2	2179.1	310.3	5189.5	3551	11494	12084	3023	3191.7	4125.7	3475.4	85.4
MEAN	1.85	72.6	10.0	167	127	371	403	97.5	106	133	112	2.85
MAX	2.8	1270	25	3580	938	2040	4880	729	935	2420	1300	9.0
MIN	1.2	1.5	6.9	5.5	28	47	42	11	4.7	2.5	6.4	1.5
CFSM	.004	.16	.02	.37	.28	.82	.90	.22	.24	.30	.25	.006
IN.	.00	.18	.03	.43	.29	.95	1.00	.25	.26	.34	.29	.01
AC=FT	113	4320	615	10290	7040	22800	23970	6000	6330	8180	6890	169

CAL YR 1978 TOTAL 109374.3 MEAN 300 MAX 9130 MIN 1.1 CFSM .67 IN 9.04 AC=FT 216900
 WTR YR 1979 TOTAL 48766.3 MEAN 134 MAX 4880 MIN 1.2 CFSM .30 IN 4.03 AC=FT 96730

ARKANSAS RIVER BASIN

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'24", in NE¼NW¼ sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi (2.9 km) upstream from Cherokee Creek, 4.8 mi (7.7 km) northeast of Row, 6.5 mi (10.5 km) southeast of Sycamore, and at mile 35.0 (56.3 km).

DRAINAGE AREA.--133 mi² (344 km²).

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

REVISED RECORDS.--WSP 2121: 1965(M).

GAGE.--Water-stage recorder. Altitude of gage is 875 ft (266.7 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--18 years, 112 ft³/s (3.172 m³/s), 11.44 in/yr (291 mm/yr), 81,140 acre-ft/yr (100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s (1,130 m³/s), July 27, 1975, gage height, 22.07 ft (6.727 m); minimum, 1.2 ft³/s (34.0 l/s) Aug. 9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, a flood of approximately the same magnitude as the July 27, 1975 flood occurred in the early 1880's.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) May 4, gage height, 8.52 ft (2.597 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 13 ft³/s (0.37 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	20	52	24	45	102	203	87	65	46	261	29
2	23	19	50	24	44	109	298	85	67	45	122	29
3	23	19	47	23	42	140	260	808	71	45	96	28
4	22	19	44	23	43	233	221	1310	71	44	83	27
5	21	19	41	23	42	223	188	637	71	43	72	26
6	21	20	39	23	41	194	162	425	69	42	65	25
7	21	20	38	23	39	167	146	323	70	41	60	23
8	20	20	36	23	39	147	134	255	69	43	55	23
9	20	20	35	23	38	132	124	206	85	45	51	22
10	20	20	34	22	38	120	117	173	85	48	48	21
11	20	20	33	22	38	113	368	162	80	47	46	19
12	20	20	32	21	38	105	572	151	75	46	44	18
13	20	20	31	21	39	99	406	138	69	44	42	18
14	21	21	30	22	42	94	306	126	65	43	40	17
15	21	23	29	22	48	91	240	116	62	42	39	17
16	21	25	28	23	74	87	196	107	59	40	37	17
17	22	28	27	24	93	85	167	100	57	40	35	17
18	22	32	27	28	89	85	149	97	55	39	33	16
19	21	33	27	37	81	235	138	92	53	46	32	15
20	21	35	26	43	76	427	142	89	51	59	31	14
21	21	35	26	66	71	386	164	90	49	59	29	15
22	21	34	26	72	74	316	135	94	48	56	28	15
23	21	32	26	67	83	271	122	91	47	53	29	16
24	21	31	26	62	92	233	114	86	48	49	28	16
25	20	30	25	60	97	203	110	82	51	45	27	16
26	20	33	25	57	96	180	105	78	53	43	26	14
27	21	36	24	55	94	161	100	75	53	42	27	14
28	21	41	24	54	96	148	96	72	52	40	28	14
29	20	48	23	51	---	138	93	69	50	41	28	13
30	20	53	23	49	---	129	90	68	48	47	27	13
31	20	---	24	48	---	121	---	67	---	93	28	---
TOTAL	650	826	978	1135	1732	5274	5666	6359	1848	1456	1597	567
MEAN	21.0	27.5	31.5	36.6	61.9	170	189	205	61.6	47.0	51.5	18.9
MAX	24	53	52	72	97	427	572	1310	85	93	261	29
MIN	20	19	23	21	38	85	90	67	47	39	26	13
CFSM	.16	.21	.24	.28	.47	1.28	1.42	1.54	.46	.35	.39	.14
IN.	.18	.23	.27	.32	.48	1.48	1.58	1.78	.52	.41	.45	.16
AC-FT	1290	1640	1940	2250	3440	10460	11240	12610	3670	2890	3170	1120
CAL YR 1978 TOTAL	46286			127	MAX 4530	MIN 19	CFSM .96	IN 12.95	AC-FT 91810			
WTR YR 1979 TOTAL	28088			MEAN 77.0	MAX 1310	MIN 13	CFSM .58	IN 7.86	AC-FT 55710			

ARKANSAS RIVER BASIN

263

07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'54", long 95°11'36", in SE¼NW¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, at left side of Robert S. Kerr dam on Neosho River, 2.0 mi (3.2 km) northwest of Locust Grove, 3.5 mi (5.6 km) downstream from Salina Creek, and at mile 47.3 (76.1 km).

DRAINAGE AREA.--11,534 mi² (29,873 km²).

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

GAGE.--Remote-controlled indicator and non-recording gage. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam and concrete spillway controlled by 17 22-foot (6.706 m) taintor gates. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft (548 hm³) at elevation 636.0 ft (193.85 m), top of taintor gates, 200,300 acre-ft (247 hm³) at elevation 619.0 ft (188.67 m) power pool, and 48,630 acre-ft (60.0 hm³) at elevation 599.0 ft (182.58 m), top of spillway crest. Figures given herein represent total contents. Reservoir was designed for flood control and power development.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 436,300 acre-ft (538 hm³) Nov. 9, 1974, elevation, 635.56 ft (193.719 m); minimum since power pool first filled, 183,100 acre-ft (226 hm³) Dec. 24, 1967, elevation, 617.38 ft (188.177 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 232,000 acre-ft (286 hm³/s) June 14, elevation, 621.79 ft (189.522 m); minimum, 189,600 acre-ft (234 hm³/yr) June 21, elevation, 618.00 (188.366 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	619.50	205,800	--
Oct. 31	619.18	202,300	-3,500
Nov. 30	619.70	208,000	+5,700
Dec. 31	619.55	206,300	-1,700
CAL YR 78	--	--	-5,500
Jan. 31	619.45	205,200	-1,100
Feb. 28	618.90	199,200	-6,000
Mar. 31	618.97	200,000	+800
Apr. 30	619.04	200,700	+700
May 31	618.89	199,100	-1,600
June 30	619.67	207,700	+8,600
July 31	619.16	202,000	-5,700
Aug. 31	619.19	202,400	+400
Sept. 30	619.30	203,600	+1,200
WTR YR 79	--	--	-2,200

ARKANSAS RIVER BASIN

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'45", long 95°10'59", in SE¼NW¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 300 ft (91.4 m) downstream from Robert S. Kerr Dam, 2.2 mi (3.5 km) northwest of Locust Grove, and 10 mi (16.1 km) northeast of Chouteau, and at mile 47.2 (75.9 km).

DRAINAGE AREA.--11,534 mi² (29,873 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 554.00 ft (168.859 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 3, 1941 nonrecording gage at bridge on State Highway 33, 8.2 mi (13.2 km) downstream, at datum 17.63 ft (5.374 m) lower. Apr. 3, 1941 to Sept. 30, 1950; Oct. 1963 to Apr. 6, 1964 at site 2.5 mi (4.0 km) downstream at datum 2.17 ft (0.661 m) lower (now used as supplementary gage). Supplemental water-stage recorder Oct. 4, 1963, to July 10, 1973 at site 8.2 mi (13.2 km) downstream.

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

AVERAGE DISCHARGE.--(Since regulation by Lake Hudson), 16 years (water years 1964-79), 8,046 ft³/s (227.9 m³/s), 5,829,000 acre-ft/yr (7.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft³/s (11,328 m³/s) May 20, 1943, gage height 45.00 ft (13.716 m), site and datum then in use, from rating curve extended above 140,000 ft³/s (3,965 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 12 ft³/s (.32 m³/s) Nov. 13, 1963 (caused by closure of Robert S. Kerr Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,800 ft³/s (986 m³/s) Aug. 8, gage height, 17.80 ft (5.425 m); minimum daily discharge, 116 ft³/s (3.29 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	473	618	530	893	13600	13200	275	1180	23800	24800	1050
2	3360	185	219	297	698	13300	13400	1300	828	25300	30000	2380
3	280	175	198	577	424	17900	13900	13100	1340	25600	27900	349
4	122	175	335	163	179	8590	12600	9700	3180	24200	18900	5680
5	536	175	4450	4460	511	16700	13400	17600	597	24400	25100	5580
6	1610	1340	1840	279	1350	11700	14100	1240	6930	20900	27700	8130
7	176	1170	237	177	2110	14500	14600	8270	5380	28100	10600	2520
8	118	192	4910	1130	312	13800	10400	10200	11400	20900	13500	1980
9	118	246	1430	256	355	7690	13600	9730	9910	21700	11500	2470
10	5070	192	2740	149	196	15400	15500	6300	14000	31600	7580	6410
11	384	187	510	149	448	4460	16400	2150	16900	34000	9310	9100
12	3790	187	197	149	196	15300	16400	296	21500	34600	8720	9600
13	874	374	187	147	206	13800	22400	285	21200	47700	10100	2710
14	125	6290	300	147	203	12700	12200	276	20400	31700	9560	7610
15	117	211	190	2700	1480	17700	13500	6060	20100	26500	3630	306
16	165	1170	188	190	5790	6830	14600	1400	17400	24600	1920	1660
17	116	398	301	161	717	7540	17000	4150	16700	25200	5620	2700
18	117	187	194	432	325	14400	14400	4460	14100	23000	5240	2910
19	117	188	193	5210	2690	18400	16700	384	13400	23500	5300	2850
20	310	186	1860	4820	6820	16000	20300	3350	18100	25300	413	3340
21	206	187	4650	170	12900	12800	17500	16400	9280	23000	5880	3560
22	224	195	620	1420	12200	14100	17000	15600	12000	22000	2830	2070
23	3000	194	188	1620	12900	13700	13200	17700	4610	26800	1140	2570
24	862	191	190	3780	13300	13700	2450	19900	22400	25600	2380	3060
25	1280	192	187	478	10100	11100	6760	12100	22800	23300	335	3410
26	1190	202	1280	286	9300	12200	2490	5990	26200	10700	584	2120
27	2030	3830	8230	350	16100	12900	305	13200	28600	13800	5140	894
28	177	535	218	197	10000	10500	293	12700	19400	19000	7960	3290
29	175	2420	172	1130	---	14600	291	14700	25600	7840	3290	6460
30	3730	702	758	1030	---	15100	282	11300	17800	8730	9730	3280
31	191	---	216	1880	---	11300	---	2830	---	18100	729	---
TOTAL	30788	22349	37806	34464	122903	402310	359171	242946	423235	741470	297391	110049
MEAN	993	745	1220	1112	4389	12980	11970	7837	14110	23920	9593	3668
MAX	5070	6290	8230	5210	16100	18400	22400	19900	28600	47700	30000	9600
MIN	116	175	172	147	179	4460	282	275	597	7840	335	306
AC=FT	61070	44330	74990	68360	243800	798000	712400	481900	839500	1471000	589900	218300
CAL YR 1978	TOTAL	2510025	MEAN	6877	MAX	40400	MIN	116	AC=FT	4979000		
WTR YR 1979	TOTAL	2824882	MEAN	7739	MAX	47700	MIN	116	AC=FT	5603000		

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

LOCATION.--Samples collected at county road bridge 2.5 mi (4.0 km) downstream from gaging station.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-58, 1960, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1950 to September 1951.

WATER TEMPERATURE: October 1950 to September 1951.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)
OCT												
23...	1400	16200	300	7.3	16.0	6.0	8.2	84	7	144	46	116
NOV												
13...	1400	2810	320	7.4	16.0	4.0	9.3	96	8	--	--	--
DEC												
27...	1319	16100	275	8.0	6.0	8.0	12.2	98	11	138	45	112
JAN												
23...	1146	383	340	7.6	.0	7.0	10.1	71	6	--	--	--
FEB												
13...	1351	206	300	7.7	3.0	2.0	11.9	89	7	153	50	125
MAR												
13...	1345	14700	320	7.6	6.0	10	11.9	98	10	--	--	--
APR												
23...	1345	5400	270	7.4	16.0	11	8.4	86	9	124	40	100
MAY												
23...	1330	15400	300	7.0	20.0	85	8.0	89	--	--	--	--
JUN												
20...	1500	17500	295	7.3	24.0	16	7.2	88	12	128	40	100
JUL												
11...	1310	31500	280	7.1	26.0	2.0	6.1	77	9	--	--	--
AUG												
22...	1345	279	260	7.7	29.0	5.0	7.3	97	8	113	33	82
SEP												
26...	1300	267	275	7.0	24.0	3.0	7.6	90	4	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
23...	6.6	24	2.4	32	25	.1	10	--	1.0	--	--	--
NOV												
13...	--	--	--	23	20	.1	--	--	.97	--	--	.133
DEC												
27...	--	10	3.6	28	--	.0	34	<.10	1.4	1.4	--	<.001
JAN												
23...	--	--	--	34	20	.1	23	.10	1.2	1.3	5.8	.050
FEB												
13...	6.8	12	2.8	37	17	.1	6	.20	.80	1.0	4.4	.050
MAR												
13...	--	--	--	30	6.0	.3	20	.60	1.0	1.6	7.1	.150
APR												
23...	5.7	10	2.9	27	10	.1	25	1.8	1.3	3.1	14	.070
MAY												
23...	--	--	--	--	20	.1	27	1.5	1.1	2.6	12	.100
JUN												
20...	5.7	10	2.6	32	7.0	.1	22	1.5	.90	2.4	11	.050
JUL												
11...	--	--	--	39	9.0	.1	7	1.0	1.5	2.5	11	--
AUG												
22...	5.6	<10	3.0	24	7.0	.1	12	.70	1.4	2.1	9.3	.075
SEP												
26...	--	--	--	32	18	.5	--	<.50	1.7	1.7	--	.050

[illegible]

07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°52'16", long 95°13'43", in NW¼NW¼ sec.18, T.16 N., R.20 E., Cherokee County, Hydrologic Unit 11070209, in control tower near left end of Fort Gibson Dam on Neosho River, 4.0 mi (6.4 km) north of Fort Gibson, and at mile 7.7 (12.4 km).

DRAINAGE AREA.--12,492 km² (32,354 km²).

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1970 published as Fort Gibson Reservoir near Fort Gibson.

REVISED RECORDS.--WSP 1731: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Jan. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-gravity and earth-fill dam. Spillway is concrete ogee-type weir controlled by thirty 40-foot (12.2 m) taintor gates, outlet works consists of ten 5'8" x 7.0 ft sluice gates. Regulated storage began Sept. 5, 1949; power pool was first maintained in 1953. Capacity, 1,284,000 acre-ft (1,583 hm³) at elevation 582.0 ft (177.39 m), flood-control pool, 365,200 acre-ft (450 hm³) at elevation 554.0 ft (168.86 m), maximum power pool, and 311,300 acre-ft (384 hm³) at elevation 551.0 ft (167.94 m) (minimum power pool). Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,278,000 acre-ft (1.58 km³) May 12, 1961, elevation, 581.88 ft (177.357 m); minimum since first use of power pool, 303,800 acre-ft (375 hm³) May 26, 1955, elevation, 550.56 ft (167.811 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 438,600 acre-ft (541 hm³) Apr. 14, elevation, 557.62 ft (169.963 m); minimum, 336,800 acre-ft (415 hm³) Dec. 5, elevation, 552.46 ft (168.390 m).

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

552	328,500	556	404,500
554	365,200	558	447,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351500	355500	342200	357000	352300	382100	394100	338900	365200	396500	375100	355300
2	355300	353800	344700	350100	349600	381500	394100	344000	369600	395500	380100	358700
3	352100	352800	343400	348300	349400	402100	398300	382500	373800	395900	384900	358600
4	349200	351900	339500	347400	350100	396500	394900	386900	373000	398500	378500	361400
5	348300	350800	346100	356300	349400	402900	396100	400900	368000	401500	380900	362900
6	348700	353000	346900	354400	351900	395300	394100	378500	377200	399300	387300	369400
7	348700	353800	347400	353200	354400	392100	396500	374300	379100	401900	380500	361800
8	348500	351900	350600	353800	352300	386500	392300	381900	392100	400100	383300	352700
9	344000	350500	352500	352500	348700	374100	393700	386500	411300	396700	380500	347000
10	351700	350100	357200	350100	349200	379100	400100	386100	421800	394100	377000	350300
11	349400	350100	352700	347000	350500	364200	422500	370300	410900	390100	371300	356500
12	357200	349400	349700	346000	350100	368800	427300	367100	404100	390100	371700	365200
13	354400	350100	347200	346000	348700	373200	437300	364800	394100	408200	379900	359100
14	354400	361800	345100	344200	347900	373200	427500	364600	384100	405700	380700	364100
15	354400	358700	343100	348300	352500	383900	418900	373600	385900	398100	365400	359300
16	351700	353800	343400	344000	359500	370900	413400	370300	388100	393300	349600	353800
17	349700	349600	342400	345100	353800	364200	410500	373600	393900	398500	345200	351500
18	348300	348700	340000	349600	353800	373800	406900	375100	400500	399100	345200	350600
19	348300	349000	338600	364100	351000	397700	403300	362200	406300	399500	350600	349700
20	347200	347600	340700	371800	355700	403300	396300	371700	418700	400900	348500	350600
21	346900	345100	346300	360400	365200	399100	382900	390900	409000	399900	353800	353400
22	347900	344300	342200	356800	370500	396100	371300	403500	408800	398300	348800	352500
23	352500	344900	343600	358200	373800	394500	373000	403900	394100	401700	346500	355100
24	351900	343400	342200	361000	378900	396500	364400	408800	398100	400500	345100	355900
25	354200	345100	342900	357600	374700	390900	367500	395900	394500	402900	342900	357600
26	353800	349000	343600	355700	370900	390500	356100	376600	403300	388500	341100	355900
27	356800	345100	359500	355700	377000	389100	342500	384100	410700	382500	348700	351900
28	354900	337900	355700	355100	376200	381900	342700	386900	409000	386100	356800	352300
29	353000	340600	352800	353000	---	383900	343400	394100	410700	376600	356800	360600
30	359900	342200	355700	352300	---	390100	338600	396100	402100	365200	363700	362900
31	357600	---	357000	353200	---	384900	---	377600	---	369000	357600	---
MAX	359900	361800	359500	371800	378900	403300	437300	408800	421800	408200	387300	369400
MIN	344000	337900	338600	344000	347900	364200	338600	338900	365200	365200	341100	347000
†	553.60	552.76	553.57	553.37	554.58	555.02	552.56	554.65	555.88	554.20	553.60	553.88
‡	+1,900	-15,400	+14,800	-3,800	+23,000	+8,700	-46,300	+39,000	+24,500	-33,100	-11,400	+5,300

CAL YR 1978 MAX 503900 MIN 337900 ‡+8200
WTR YR 1979 MAX 437300 MIN 337900 ‡+7200

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°51'15", long 95°13'45", in SE¼NW¼ sec.19, T.16 N., R.19 E., Cherokee County, Hydrologic Unit 11070209, on left bank 1.1 mi (1.8 km) downstream from Fort Gibson Dam, 4.5 mi (7.2 km) north of Fort Gibson, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--12,495 mi² (32,362 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 483.75 ft (147.447 m) National Geodetic Vertical Datum of 1929. May 11, 1950, to Aug. 20, 1951, nonrecording gage and Aug. 21, 1951, to June 11, 1952, water-stage recorder, at site 4.4 mi (7.1 km) downstream at datum 8.00 ft (2.438 m) lower and used as auxiliary gage since June 10, 1971.

REMARKS.--Records fair. Flow completely regulated by Fort Gibson Lake (station 07193000).

COOPERATION.--Gage-height record and 7 discharge measurements furnished by Corps of Engineers, records computed by Geological Survey.

AVERAGE DISCHARGE.--29 years, 7,825 ft³/s (221.6 m³/s), 5,669,000 acre-ft/yr (6.99 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 223,000 ft³/s (6,320 m³/s) May 26, 1957, gage height, 37.60 ft (11.460 m); minimum, 12 ft³/s (0.34 m³/s), Oct. 10, 1957, Aug. 23, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 43.0 ft (13.11 m), from high-water profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,300 ft³/s (773 m³/s) June 11, 12, gage height, 13.15 ft (4.008 m); minimum daily, 15 ft³/s (0.42 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1780	1500	73	15	1480	11800	13600	15	7530	14500	11600	1460
2	1890	878	53	3710	2700	11900	13600	168	266	14500	12100	1150
3	924	887	464	1700	478	11800	13600	4470	15	13600	13000	1210
4	1320	699	1980	910	194	11700	13700	12300	3920	12800	13000	3800
5	1200	963	1350	360	980	14600	13600	14000	2700	12600	13100	4690
6	1200	969	1190	1100	887	16800	13700	13900	3490	12400	13100	5390
7	15	979	1490	726	767	16800	14000	12500	6270	12300	13100	6020
8	19	997	3280	728	1560	16900	14100	7760	7860	12300	13000	5350
9	1910	955	51	977	2180	15000	14100	8090	11100	14800	12500	5380
10	1240	744	500	1980	15	13000	14100	8350	13900	19800	11300	4090
11	1700	289	3100	1460	27	13000	15200	11100	23500	19500	11300	5950
12	751	420	2040	981	718	13000	18700	2320	26600	19600	7730	4660
13	854	659	1530	484	1260	12300	18600	1560	26600	19900	6840	5150
14	15	936	1420	730	1290	11900	18600	762	26200	19900	8850	4800
15	15	2470	1380	1490	1240	11900	18600	1520	21800	19700	11300	2640
16	1380	4540	15	2470	1420	11900	18500	3600	17400	15600	10000	2640
17	844	2450	725	15	3300	12000	18500	2420	15100	12800	6770	4670
18	547	744	1540	15	579	12000	18400	3900	11000	12900	4400	3300
19	22	17	1330	15	4350	11800	18300	7590	11100	12800	3580	2880
20	752	1040	1300	3420	4910	14700	18200	90	11100	12900	1800	2880
21	37	1400	2210	5400	7180	16900	17000	7350	13800	12800	3950	2800
22	49	841	2950	3460	11500	16700	13600	10100	13200	12800	4480	2020
23	749	42	15	2450	11400	15500	12000	18500	8760	12900	2850	1470
24	1500	1040	15	2450	11800	13600	7600	18500	10900	12800	2970	2840
25	900	68	15	2310	11700	13700	7600	18400	11400	12900	1350	2810
26	1360	15	737	1980	11900	13600	7670	16000	11500	11800	1160	2560
27	744	6120	859	477	12000	13800	7710	11200	11500	8490	1670	2820
28	941	4500	1950	481	11800	13700	211	11700	11500	8530	1680	2740
29	958	908	2460	2580	---	14200	15	11500	13200	7220	4090	2700
30	709	768	15	1960	---	14200	2840	11600	14400	9140	5350	1540
31	1390	---	15	1460	---	13700	---	11500	---	7080	5280	---
TOTAL	27715	38838	36052	48294	119615	424400	395946	262765	367611	421660	233200	102410
MEAN	894	1295	1163	1558	4272	13690	13200	8476	12250	13600	7523	3414
MAX	1910	6120	3280	5400	12000	16900	18700	18500	26600	19900	13100	6020
MIN	15	15	15	15	15	11700	15	15	15	7080	1160	1150
AC-FT	54970	77040	71510	95790	237300	841800	785400	521200	729200	836400	462600	203100
CAL YR 1978 TOTAL	2783506			7626		44800	15	AC-FT	5521000			
WTR YR 1979 TOTAL	2478506			6790		26600	15	AC-FT	4916000			

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to current year.

WATER TEMPERATURE: October 1951 to September 1963, October 1973 to current year.

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

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, 496 micromhos Sept. 7, 1975; minimum daily, 188 micromhos Oct. 18, 1974.

WATER TEMPERATURE: Maximum daily, 31.5°C July 31, Aug. 1, 1955; minimum daily, 0.0°C Jan. 23-25, 1962.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 467 micromhos May 3; minimum daily, 244 micromhos June 30.

WATER TEMPERATURE: Maximum daily, 29.0°C Aug. 3-6, Sept. 1-2; minimum daily, 1.0°C Feb. 1, 17-18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRON- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (PER- CENT)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, COLI- FORM, FECAL, KF AGAR 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCO FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)
OCT												
30...	1330	709	301	7.9	17.5	1.3	9.2	96	250	520	120	29
NOV												
16...	0830	4540	293	8.5	13.0	2.0	12.1	110	45	92	120	28
DEC												
15...	0850	1380	303	8.4	5.5	2.7	12.6	102	89	115	120	26
JAN												
11...	0920	1460	306	7.8	1.0	1.9	--	--	--	--	120	29
FEB												
28...	0850	11800	319	8.2	3.0	2.2	14.1	104	--	--	120	27
MAR												
27...	1000	13800	310	7.9	10.5	9.9	10.9	97	106	112	130	31
APR												
25...	1130	7600	280	7.3	23.5	11	8.3	100	60	5	120	42
MAY												
09...	1400	8090	270	7.6	20.0	16	8.0	97	141	255	120	46
JUN												
12...	1130	26600	302	7.6	24.5	7.7	6.8	82	121	69	120	37
JUL												
02...	1200	14500	289	7.8	25.0	7.0	5.4	66	73	140	120	34
AUG												
01...	1200	11600	277	8.0	29.0	4.4	8.0	105	22	137	--	--
SEP												
04...	1330	3800	264	6.8	28.0	7.5	6.4	83	128	78	110	32

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, DIS- SOLVED (MG/L AS F)
OCT											
30...	40	5.5	9.9	15	.4	--	3.3	94	31	11	.1
NOV											
16...	39	5.6	9.8	15	.4	--	2.9	93	32	14	.1
DEC											
15...	39	5.4	9.6	14	.4	--	3.3	94	34	14	.1
JAN											
11...	40	5.5	11	16	.4	--	3.5	94	31	16	.1
FEB											
28...	39	5.5	12	17	.5	--	2.9	93	34	15	.2
MAR											
27...	42	5.6	11	15	.4	--	3.3	97	37	13	.2
APR											
25...	38	5.3	8.9	14	.4	12	3.0	75	44	11	.2
MAY											
09...	40	5.0	8.0	13	.3	12	2.9	74	35	--	.2
JUN											
12...	38	5.3	11	17	.4	--	3.5	80	40	14	.2
JUL											
02...	38	5.5	9.3	14	.4	12	2.9	84	35	9.0	.2
AUG											
01...	--	5.4	--	--	--	11	3.0	76	40	8.8	.2
SEP											
04...	36	5.2	8.5	14	.4	12	3.5	79	35	7.9	.2

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
QCT											
30...	.5	163	158	.22	312	.12	.08	--	.77	.85	.37
NOV											
16...	.8	172	161	.23	2110	.09	.11	--	.29	.40	.05
DEC											
15...	.7	176	163	.24	656	.01	.03	--	.36	.39	.07
JAN											
11...	1.2	177	165	.24	698	.02	.04	--	.51	.55	.02
FEB											
28...	.9	181	166	.25	5770	.15	.18	--	.34	.52	.16
MAR											
27...	1.7	165	172	.22	6150	.51	.09	--	.42	.51	.11
APR											
25...	4.5	158	160	.21	3240	1.2	.18	.22	.43	.61	.00
MAY											
09...	3.1	166	--	.23	3630	1.1	.18	.22	.36	.54	.00
JUN											
12...	2.0	178	162	.24	12800	.98	.38	.46	.82	1.2	1.2
JUL											
02...	3.2	171	154	.23	6700	.89	.07	.08	.33	.40	.23
AUG											
01...	3.1	163	--	.22	5110	.66	.06	.07	.34	.40	.00
SEP											
04...	4.1	153	149	.21	1570	.36	.03	.04	.96	.99	.36

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PU4)	PHOS- PHORUS, TOTAL (MG/L AS PU4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
UCT											
30...	.48	.97	4.3	.050	--	--	.040	3.3	--	--	--
NOV											
16...	.35	.49	2.2	.040	--	--	.030	--	4.0	.6	5100
DEC											
15...	.32	.40	1.8	.030	--	--	.020	4.3	--	--	--
JAN											
11...	.53	.57	2.5	.030	--	--	.030	4.6	--	--	--
FEB											
28...	.36	.67	3.0	.030	--	--	.010	--	4.8	3.3	--
MAR											
27...	.40	1.0	4.5	.020	--	--	.010	4.9	--	--	11000
APR											
25...	.61	1.8	8.0	.070	.21	.21	.040	4.5	--	--	--
MAY											
09...	.54	1.6	7.3	.060	.18	.18	.040	--	5.8	.3	3300
JUN											
12...	.01	2.2	9.7	.060	.18	.18	.040	8.9	--	--	3900
JUL											
02...	.17	1.3	5.7	.040	.12	.12	.020	3.3	--	--	5600
AUG											
01...	.47	1.1	4.7	.030	--	.09	.050	--	87	1.2	41000
SEP											
04...	.63	1.4	6.0	.370	--	1.1	.170	--	--	--	--

271

[illegible][illegible]

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
OCT 30...	--	--	--	--	--	--	--	--	--	--
NOV 16...	0	420	40	40	5	.1	.1	.0	1	1
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--
FEB 28...	24	2	50	50	0	.1	.1	.0	0	0
MAR 27...	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--
MAY 09...	25	0	60	40	20	.2	.1	.1	1	1
JUN 12...	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--
AUG 01...	6	0	70	50	20	.1	.0	.1	0	0
SEP 04...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 30...	--	--	--	--	--	--	--	8	15	90
NOV 16...	0	0	0	0	10	0	10	23	282	89
DEC 15...	--	--	--	--	--	--	--	20	75	89
JAN 11...	--	--	--	--	--	--	--	30	118	96
FEB 28...	0	0	0	0	30	20	10	28	892	90
MAR 27...	--	--	--	--	--	--	--	36	1340	90
APR 25...	--	--	--	--	--	--	--	21	431	96
MAY 09...	0	0	0	0	40	20	20	68	1490	91
JUN 12...	--	--	--	--	--	--	--	41	2950	90
JUL 02...	--	--	--	--	--	--	--	60	2350	96
AUG 01...	0	0	0	0	10	6	4	35	1100	90
SEP 04...	--	--	--	--	--	--	--	35	359	94

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 16,78 0830	MAR 27,79 1000	MAY 9,79 1400	JUN 12,79 1130	JUL 2,79 1200	AUG 1,79 1200				
TOTAL CELLS/ML	5100	11000	3300	3900	5600	41000				
DIVERSITY: DIVISION	1.5	0.1	0.8	1.3	0.9	0.4				
..CLASS	1.5	0.1	0.8	1.3	0.9	0.4				
..ORDER	2.1	0.3	1.8	1.7	1.4	1.1				
...FAMILY	2.4	0.3	2.3	2.3	1.7	1.6				
....GENUS	3.0	0.7	2.7	3.0	2.7	1.8				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
...SCHROEDERIA	--	-		* 0	--	-	--	-	* 0	
...COELASTRACEAE										
...COELASTRUM	--	-	--	-	140	4	--	-	670	2
...HYDRODICTYACEAE										
...PEDIASTRUM	140	3	--	-	--	-	190	5	--	-
...MICRACTINIACEAE										
...GOLENKINIA	*	0	--	-	--	-	--	-	--	-
...DUCYSTACEAE										
...ANKISTRODESMUS	78	2	100	1	26	1	73	2	--	-
...DICTYOSPHAERIUM	--	-	--	-	130	4	290	8	--	-
...GLOEOACTINIUM	--	-	--	-	160	5	240	6	130	2
...KIRCHNERIELLA	92	2	--	-	--	-	--	-	--	-
...DUCYSTIS	28	1	--	-	--	-	97	3	130	2
...SELENASTRUM	--	-	--	-	*	0	--	-	67	1
...TETRAEDRON	*	0	--	-	--	-	24	1	--	-
...SCENEDESMACEAE										
...CRUCIGENIA	230	4	--	-	--	-	--	-	--	-
...SCENEDESMUS	760	15	--	-	780#	23	630#	16	940#	17
...TETRASTRUM	--	-	--	-	--	-	97	3	--	-
...TETRASPORALES										
...PALMELLACEAE										
...SPHAEROCYSTIS	--	-	--	-	140	4	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	*	0	--	-	--	-	220	6	100	2
...CHLOROGONTUM	--	-	--	-	--	-	--	-	34	1
...VOLVOCAEAE										
...PANDORINA	--	-	--	-	1200#	37	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...CUSCINODISCACEAE										
...CYCLOTELLA	200	4	9500#	89	52	2	1500#	38	540	10
...MELOSIRA	930#	18	810	8	390	12	170	4	1100#	19
...STEPHANODISCUS	--	-	--	-	210	6	--	-	1900#	34
...PENNIALES										
...CYMBELLACEAE										
...CYMBELLA	--	-	100	1	--	-	--	-	--	-
...FRAGILARIACEAE										
...SYNEDRA	*	0	200	2	--	-	--	-	67	1
...NAVICULACEAE										
...NAVICULA	*	0	--	-	--	-	--	-	34	1
...NITZSCHACEAE										
...NITZSCHIA	*	0	--	-	--	-	120	3	470	8
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	--	-	--	-	26	1	--	-	34	1
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	*	0	150	4	34	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	890#	17	--	-	--	-	--	-	--	-
...ANACYSTIS	610	12	--	-	--	-	--	-	6600#	16
...HORMOGONALES							73	2	--	-
...OSCILLATORIACEAE										
...OSCILLATORIA	1100#	21	--	-	--	-	--	-	--	-
...RIVULARIACEAE									26000#	64
...RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOTIDS)									4200	10
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	*	0	--	-	--	-	--	-	--	-
...TRACHELOMONAS	--	-	--	-	*	0	--	-	--	-

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	290	300	---	314	312	300	280	279	296	279	266
2	286	292	---	303	310	312	299	282	259	292	276	266
3	289	292	---	304	319	309	294	467	299	288	278	263
4	286	293	294	307	326	298	299	272	348	287	278	264
5	287	293	295	306	317	296	304	271	275	287	278	264
6	289	294	296	313	309	296	305	277	280	289	279	259
7	---	294	297	407	309	299	304	277	286	287	278	259
8	374	335	304	330	313	295	302	276	---	288	280	255
9	289	293	300	311	314	296	---	276	277	288	279	259
10	290	295	320	308	316	---	302	276	275	287	276	---
11	287	294	301	307	---	299	301	273	---	281	273	258
12	290	297	339	307	---	299	296	266	272	279	272	255
13	292	375	307	308	320	299	298	270	289	282	275	256
14	290	302	301	310	317	299	288	274	292	279	274	256
15	292	293	298	315	316	301	295	275	288	283	273	257
16	---	294	296	307	313	299	297	277	287	281	271	259
17	---	295	304	307	310	299	293	278	279	273	271	258
18	---	295	301	344	314	298	287	276	276	276	273	258
19	298	304	306	428	313	298	284	277	277	274	270	260
20	299	326	303	333	312	293	282	274	272	275	269	256
21	325	294	302	312	313	296	277	269	288	277	270	258
22	394	292	306	311	313	303	---	276	---	279	270	259
23	320	295	303	312	315	302	275	279	288	281	267	260
24	292	297	318	312	312	301	273	276	283	281	---	260
25	294	332	248	311	311	305	282	279	287	277	267	---
26	292	458	331	312	314	304	278	---	---	288	267	262
27	294	294	320	312	312	305	280	284	277	280	266	262
28	295	297	276	313	309	304	281	281	280	273	267	263
29	294	296	248	313	---	304	287	286	279	279	266	264
30	295	297	296	312	---	303	307	290	244	275	---	263
31	291	---	362	318	---	---	---	287	---	278	265	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

275

07194500 ARKANSAS RIVER NEAR MUSKOGEE, OK

LOCATION.--Lat 35°46'10", long 95°17'55", in NW¼ sec.21, T.15 N., R.19 E., Muskogee County, Hydrologic Unit 11110102, at bridge on U.S. Highway 62, 3.5 miles (5.6 km) northeast of Muskogee, and at mile 457.8 (736.6 km).

DRAINAGE AREA.--96,674 mi² (250,386 km²).

PERIOD OF RECORD.--Water years 1957, 1962-63, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)
OCT 24...	1400	1400	8.7	19.0	5.0	9.3	101	21	242	69	173	18
NOV 07...	1315	1400	8.4	17.0	4.0	12.0	126	19	--	--	--	--
DEC 28...	0845	1400	8.3	5.0	2.0	12.6	101	11	242	70	175	16
FEB 22...	1600	600	7.9	6.5	16	--	--	14	153	45	113	7.8
MAR 14...	1215	1250	7.9	11.0	18	13.0	115	19	--	--	--	--
APR 24...	1045	635	7.7	18.5	18	9.0	97	15	130	40	100	7.3
MAY 23...	1145	900	7.9	20.5	23	7.4	82	--	--	--	--	--
JUN 21...	1230	--	7.9	25.0	16	7.6	92	10	118	35	87	5.0
JUL 18...	1108	735	7.3	27.0	--	--	--	14	--	--	--	--
AUG 09...	1200	1600	8.6	29.5	4.0	7.6	103	17	181	55	138	10
SEP 19...	1040	820	8.4	23.5	23	8.5	96	28	--	--	--	--

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 24...	210	6.9	93	316	.4	19	--	1.0	--	--	.258	--
NOV 07...	--	--	76	272	.4	<1	--	1.3	--	--	.260	--
DEC 28...	195	7.2	81	163	.3	11	.10	1.6	1.7	7.8	.028	--
FEB 22...	65	4.1	50	122	.2	45	.20	1.3	1.5	6.6	.100	--
MAR 14...	--	--	73	288	.2	60	.60	2.4	3.0	13	.300	--
APR 24...	65	3.9	40	114	.1	28	1.3	1.5	2.8	13	.090	--
MAY 23...	--	--	--	187	.1	33	1.0	<.11	1.0	--	.125	--
JUN 21...	14	3.2	32	--	.1	26	1.2	1.0	2.2	10	.050	--
JUL 18...	--	--	50	112	.1	6	.70	1.5	2.2	9.9	.100	--
AUG 09...	227	5.5	78	350	.2	28	<.50	1.5	1.5	--	.100	<5
SEP 19...	--	--	49	184	.2	115	<.50	--	2.7	--	.210	--

[illegible]

ARKANSAS RIVER BASIN

277

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'12", in NE¼ sec.18, T.19 N., R.26 E., Adair County, Hydrologic Unit 11110103, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 mi (2.4 km) north of Watts, 4.5 mi (7.2 km) downstream from Cincinnati Creek, and at mile 106.2 (170.9 km).

DRAINAGE AREA.--635 mi² (1,645 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 893.78 ft (272.424 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulations at low flow by Lake Francis Dam, 0.8 mile (1.29 km) above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

AVERAGE DISCHARGE.--24 years, 594 ft³/s (16.82 m³/s), 12.71 in/yr (323 mm/yr), 430,400 acre-ft/yr (531 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft³/s (1,930 m³/s) July 25, 1960, gage height, 25.96 ft (7.913 m), from rating curve extended above 51,000 ft³/s (1,440 m³/s); minimum, 8.6 ft³/s (0.24 m³/s) Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 6,500 ft³/s (184 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 12	0315	*22,400 634	*20.76 6.328	May 4	1200	9,600 272	13.68 4.170

Minimum daily discharge; 106 ft³/s (3.00 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	111	236	146	222	1990	1080	420	323	197	1100	164
2	132	113	220	157	221	1410	1650	418	378	419	676	149
3	121	114	201	156	217	1470	1080	2460	525	309	496	139
4	122	114	201	148	208	1790	901	6950	485	236	404	131
5	118	115	197	140	203	1240	786	2910	416	229	345	127
6	117	115	181	140	213	1010	685	1780	383	293	299	126
7	117	117	184	133	213	873	616	1300	391	287	267	123
8	119	123	188	125	209	771	546	1050	455	252	245	120
9	124	127	191	119	201	678	517	871	439	217	229	123
10	125	128	182	117	196	614	489	753	389	202	214	129
11	121	115	172	120	201	556	3600	1200	376	192	243	128
12	120	116	167	127	209	509	12100	1370	336	184	244	134
13	115	119	160	146	334	471	2920	902	309	175	217	137
14	128	111	159	148	469	441	2000	724	289	169	196	136
15	128	123	153	146	728	412	1400	635	265	165	188	134
16	120	149	151	152	695	388	1090	568	250	166	189	132
17	117	205	153	169	548	371	936	514	239	186	183	127
18	116	255	150	239	467	385	822	474	230	214	175	125
19	115	213	144	341	414	495	735	445	221	218	169	127
20	116	160	148	486	379	892	719	456	213	192	164	130
21	116	161	145	423	356	1030	1230	507	211	176	156	138
22	116	159	141	363	402	851	960	527	209	166	152	140
23	111	158	145	330	1250	1010	752	569	215	156	158	134
24	113	156	135	316	1080	1000	698	493	218	152	151	125
25	123	171	134	296	1100	824	656	434	211	150	145	117
26	118	349	129	290	1300	705	585	397	202	149	141	114
27	118	551	128	279	1190	638	543	372	195	218	135	112
28	116	410	134	262	1440	591	511	354	190	180	135	107
29	114	312	122	248	---	559	477	339	184	150	138	106
30	111	262	123	244	---	532	441	334	183	150	139	108
31	110	---	142	232	---	532	---	339	---	713	146	---
TOTAL	3690	5452	5016	6738	14665	25038	41525	30865	8930	6862	7839	3842
MEAN	119	182	162	217	524	808	1384	996	298	221	253	128
MAX	133	551	236	486	1440	1990	12100	6950	525	713	1100	164
MIN	110	111	122	117	196	371	441	334	183	149	135	106
CFSM	.19	.29	.26	.34	.83	1.27	2.18	1.57	.47	.35	.40	.20
IN.	.22	.32	.29	.39	.86	1.47	2.43	1.81	.52	.40	.46	.23
AC-FT	7320	10810	9950	13360	29090	49660	82360	61220	17710	13610	15550	7620

CAL YR 1978	TOTAL	211762	MEAN	580	MAX	12500	MIN	110	CFSM	.91	IN	12.41	AC-FT	420000
WTR YR 1979	TOTAL	160462	MEAN	440	MAX	12100	MIN	106	CFSM	.69	IN	9.40	AC-FT	318300

ARKANSAS RIVER BASIN

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-61, 1963, 1969-73, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)
OCT												
23...	1000	112	260	7.3	18.0	13	7.2	76	10	147	55	138
NOV												
13...	0955	123	270	8.1	15.0	--	6.9	70	16	--	--	--
DEC												
27...	0953	129	250	7.7	4.0	6.0	9.7	75	6	136	51	--
JAN												
23...	0940	322	260	7.9	6.0	6.0	8.8	74	5	--	--	--
FEB												
13...	0930	317	260	7.3	3.0	2.0	12.2	93	5	140	55	138
MAR												
13...	1010	491	230	7.2	10.5	11	8.9	82	7	--	--	--
APR												
23...	1015	761	190	6.8	18.0	22	8.1	87	10	--	29	--
MAY												
23...	1030	583	240	7.0	20.0	20	8.8	99	--	--	--	--
JUN												
20...	1120	214	260	7.5	26.0	22	6.9	87	6	117	44	110
JUL												
11...	0915	195	210	7.0	28.0	<1.0	5.0	65	10	--	--	--
AUG												
22...	1020	151	250	7.6	27.0	1.0	6.0	77	12	174	40	100
SEP												
26...	0945	115	230	7.2	21.0	2.0	6.2	71	9	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
23...	2.2	10	2.6	10	13	.1	32	.60	2.3	2.9	13	.290
NOV												
13...	--	--	--	<3.0	9.0	.1	42	1.6	1.6	3.2	14	.406
DEC												
27...	2.0	10	2.6	<1.0	10	.0	315	1.4	1.5	2.9	13	.147
JAN												
23...	--	--	--	13	1.0	.1	13	2.3	1.4	3.7	16	.300
FEB												
13...	2.9	--	2.5	15	11	.0	3	2.7	1.2	3.9	17	.250
MAR												
13...	--	--	--	5.0	6.0	.2	23	3.3	1.1	4.4	19	.300
APR												
23...	1.8	<10	3.1	6.0	6.0	<.0	37	2.5	1.3	3.8	17	.290
MAY												
23...	--	--	--	29	18	.0	161	2.4	1.2	3.6	16	.215
JUN												
20...	2.2	10	2.5	11	10	.0	41	1.2	1.3	2.5	11	.185
JUL												
11...	--	--	--	19	10	.0	8	.70	1.6	2.3	10	--
AUG												
22...	1.9	<10	2.5	8.0	9.0	<.0	27	.60	1.8	2.4	11	.170
SEP												
26...	--	--	--	16	--	.4	4	<.50	2.6	2.6	--	.100

279

[illegible]

ARKANSAS RIVER BASIN

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'54", long 94°42'30", in SW 1/4 sec.24, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at bridge on State Highway 33, 6.0 mi (9.7 km) southeast of Kansas, 6.0 mi (9.7 km) downstream from Sager Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--110 mi² (285 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1955 to September 1976, April to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft (260.479 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--21 years (water years 1956-76), 121 ft³/s (3.427 m³/s), 14.93 in/yr (379 mm/yr), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s (668 m³/s) Aug. 14, 1961, gage height, 15.66 ft (4.773 m), from rating curve extended above 7,200 ft³/s (204 m³/s); minimum daily, 0.6 ft³/s (0.017 m³/s) Oct. 11-13, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 1,790 ft³/s (50.7 m³/s) May 3, gage height, 8.44 ft (2.573 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 18 ft³/s (0.51 m³/s) Sept. 9, 10, 15-18, 24, 28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							121	68	52	40	274	24
2							130	71	70	40	92	25
3							126	537	100	38	52	22
4							121	876	83	37	43	21
5							113	358	72	34	32	21
6							105	256	68	35	31	21
7							98	208	76	36	28	20
8							93	171	79	37	27	19
9							88	144	274	36	26	18
10							86	124	196	36	25	18
11							432	132	143	34	45	19
12							416	113	115	33	52	19
13							306	101	96	32	30	19
14							241	92	83	31	29	19
15							200	86	73	31	27	18
16							167	80	65	31	26	18
17							144	75	59	41	25	18
18							128	71	55	49	24	18
19							118	68	53	41	25	19
20							109	72	52	38	24	20
21							102	78	50	37	23	21
22							95	82	48	37	23	20
23							90	80	54	37	32	19
24							89	71	53	36	25	18
25							85	68	50	35	23	19
26							81	64	48	35	22	20
27							77	62	45	37	21	19
28							75	57	43	86	22	18
29							71	56	41	39	22	19
30							69	57	40	36	21	18
31							---	54	---	35	21	---
TOTAL							4176	4432	2336	1180	1192	587
MEAN							139	143	77.9	38.1	38.5	19.6
MAX							432	876	274	86	274	25
MIN							69	54	40	31	21	18
CFSM							1.26	1.30	.71	.35	.35	.18
IN.							1.41	1.50	.79	.40	.40	.20
AC=FT							8280	8790	4630	2340	2360	1160

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 36°11'54", long 94°42'30", in SW 1/4 sec.24, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at bridge on State Highway 33, 6.0 mi (9.7 km) southeast of Kansas, 6.0 mi (9.7 km) downstream from Sager Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--Water years 1955-61, 1963, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECUM- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT												
23...	0900	--	200	6.9	18.0	1.0	8.0	85	1	120	45	113
NOV												
13...	0910	--	240	6.9	15.5	<1.0	8.8	90	0	--	--	--
DEC												
27...	0909	--	220	8.2	5.0	1.0	8.7	69	3	112	42	105
JAN												
23...	0908	--	250	6.9	6.0	1.0	8.0	68	<1	--	--	--
FEB												
13...	0900	--	250	7.4	4.0	1.0	11.0	86	0	117	44	110
MAR												
13...	0910	--	220	7.0	10.0	1.0	10.2	94	1	--	--	--
APR												
23...	0930	91	200	6.9	16.5	19	8.6	90	<1	43	15	37
MAY												
23...	0930	81	210	7.2	18.0	5.0	9.1	98	--	--	--	--
JUN												
20...	1040	52	230	6.8	22.0	3.0	8.2	95	2	95	36	90
JUL												
11...	0830	35	250	6.9	24.0	<1.0	6.5	79	<1	--	--	--
AUG												
22...	0900	23	240	6.7	24.0	1.0	7.3	89	3	160	43	108
SEP												
26...	0900	21	250	7.7	20.0	<1.0	7.3	82	0	--	--	--

DATE	MAGNE- SIUM, TOTAL RECUM- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECUM- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECUM- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
23...	1.9	12	1.9	8.0	10	--	5	.20	1.2	1.3	6.4	.207
NOV												
13...	--	--	--	12	16	.0	23	--	.97	--	--	.229
DEC												
27...	1.7	<10	2.1	<1.0	11	--	8	1.6	1.2	2.8	12	<.001
JAN												
23...	--	--	--	13	10	.1	4	2.0	1.3	3.3	15	.150
FEB												
13...	1.8	--	2.0	8.0	10	<.0	2	2.1	.90	3.0	13	.100
MAR												
13...	--	--	--	1.0	6.0	.1	<1	2.8	1.1	3.9	17	.250
APR												
23...	1.4	<10	2.1	8.0	6.0	<.0	7	2.0	.80	7.8	12	.130
MAY												
23...	--	--	--	13	12	.0	6	1.7	.76	2.4	11	.205
JUN												
20...	1.7	<10	2.2	7.0	6.0	<.0	7	1.1	.56	1.6	7.3	.120
JUL												
11...	--	--	--	18	10	--	5	.90	1.0	1.9	8.6	.175
AUG												
22...	1.9	<10	2.5	8.0	9.0	.1	3	.60	.95	1.5	6.9	.190
SEP												
26...	--	--	--	14	--	.3	2	.60	1.0	1.6	7.2	.180

[illegible]

ARKANSAS RIVER BASIN

283

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'17", long 94°55'15", in SE¼ sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of span on downstream side of pier of bridge 0.2 mi (0.3 km) downstream from U.S. Highway 62, 2.2 mi (3.5 km) northeast of Tahlequah, 6.5 mi (10.5 km) upstream from Baron Fork, and at mile 55.8 (89.8 km).

DRAINAGE AREA.--959 mi² (2,482 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 664.14 ft (202.430 m) Corps of Engineers datum. Prior to Feb. 23, 1939, nonrecording gage.

REMARKS.--Records good.

AVERAGE DISCHARGE.--44 years, 897 ft³/s (25.40 m³/s), 12.70 in/yr (323 mm/yr), 649,900 acre-ft/yr (801 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) May 10, 1950, gage height, 27.94 ft (98.516 m), from rating curve extended above 77,000 ft³/s (2,180 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 10-14, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1916 reached a stage of about 26 ft (7.9 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,100 ft³/s (484 m³/s) at 1100 Apr. 13, gage height, 14.85 ft (4.526 m), no other peak above base of 9,000 ft³/s (255 m³/s); minimum, 133 ft³/s (3.77 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	145	394	216	345	1810	951	642	472	297	300	200
2	173	144	353	220	333	2470	1260	620	561	291	370	208
3	167	145	319	233	320	2170	2080	953	652	357	340	215
4	163	147	298	257	312	2190	1680	2870	777	413	308	205
5	155	148	279	264	300	2550	1420	3720	790	408	294	196
6	152	149	271	257	292	2000	1250	3720	712	482	280	186
7	150	153	281	248	289	1660	1120	2900	724	401	268	178
8	150	154	268	244	282	1420	1000	2150	730	408	252	172
9	152	155	265	237	279	1250	904	1770	1740	388	240	166
10	152	159	269	227	275	1100	836	1480	1800	358	231	164
11	152	163	265	221	278	987	964	1320	1380	323	380	161
12	153	166	260	218	280	896	3560	1510	1150	301	360	163
13	150	164	247	217	288	819	12700	1770	948	284	330	160
14	148	156	244	214	327	746	4500	1340	796	269	300	163
15	146	165	236	215	483	693	2970	1110	683	257	285	166
16	150	177	231	218	715	652	2200	972	592	252	330	166
17	152	193	226	226	880	619	1780	871	526	287	310	162
18	152	212	223	250	795	614	1510	785	477	544	290	160
19	149	254	222	294	699	983	1320	719	437	488	270	158
20	148	274	224	390	626	1680	1170	692	413	429	260	160
21	146	252	221	538	570	2100	1070	698	480	376	240	168
22	146	235	221	583	544	2180	1410	717	416	337	239	166
23	148	221	222	547	637	1890	1380	743	388	316	263	168
24	150	214	220	505	1180	1830	1130	767	400	298	241	169
25	148	225	220	470	1600	1790	1020	714	389	284	234	165
26	146	256	214	449	1470	1550	948	653	369	271	226	155
27	149	284	212	428	1690	1330	858	600	349	262	219	148
28	151	513	209	410	1660	1190	795	556	331	252	211	143
29	151	551	208	392	---	1090	738	520	316	243	202	139
30	149	462	209	372	---	1000	687	492	303	232	199	136
31	147	---	216	358	---	924	---	483	---	225	197	---
TOTAL	4726	6636	7747	9918	17749	44183	55211	38857	20101	10333	8469	5066
MEAN	152	221	250	320	634	1425	1840	1253	670	333	273	169
MAX	181	551	394	583	1690	2550	12700	3720	1800	544	380	215
MIN	146	144	208	214	275	614	687	483	303	225	197	136
CFSM	.16	.23	.26	.33	.66	1.49	1.92	1.31	.70	.35	.29	.18
IN.	.18	.26	.30	.38	.69	1.71	2.14	1.51	.78	.40	.33	.20
AC-FT	9370	13160	15370	19670	35210	87640	109500	77070	39870	20500	16800	10050

CAL YR 1978	TOTAL	333608	MEAN	914	MAX	15500	MIN	144	CFSM	.95	IN	12.94	AC-FT	661700
WTR YR 1979	TOTAL	228996	MEAN	627	MAX	12700	MIN	136	CFSM	.65	IN	8.88	AC-FT	454200

ARKANSAS RIVER BASIN

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT												
23...	1230	150	220	7.1	17.0	2.0	7.7	80	2	104	39	97
NOV												
13...	1215	167	240	7.1	17.0	2.0	9.3	98	2	--	--	--
DEC												
27...	1157	214	230	7.9	6.0	1.0	12.4	101	3	105	39	97
FEB												
13...	1242	288	240	7.5	4.0	1.0	12.0	93	0	127	47	118
MAR												
13...	1300	830	200	7.2	12.0	6.0	10.8	103	3	--	--	--
APR												
23...	1215	1370	200	7.1	17.0	9.0	8.3	87	1	87	32	80
MAY												
23...	1220	739	210	6.8	20.0	5.0	8.3	93	--	--	--	--
JUN												
20...	1315	402	210	7.1	25.0	8.0	6.7	83	1	95	35	87
JUL												
11...	1120	324	240	6.9	26.0	<1.0	6.3	80	--	--	--	--
AUG												
22...	1240	239	240	7.0	25.0	1.0	8.0	99	3	120	34	85
SEP												
26...	1145	156	240	7.4	22.0	1.0	7.7	88	1	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
23...	2.0	12	1.9	6.0	10	--	9	--	.56	--	--	.130
NOV												
13...	--	--	--	<3.0	13	.0	4	--	1.0	--	--	.187
DEC												
27...	--	<10	3.1	<1.0	11	<.0	2	--	1.2	--	--	<.001
FEB												
13...	2.2	<10	2.1	8.0	10	.0	3	1.9	1.5	3.4	15	.100
MAR												
13...	--	--	--	1.0	6.0	.2	11	2.8	.90	3.7	16	.200
APR												
23...	1.8	<10	2.2	10	6.0	<.0	18	2.6	2.2	9.8	21	.100
MAY												
23...	--	--	--	17	12	.0	8	1.6	.98	2.5	11	.100
JUN												
20...	1.7	<10	2.1	5.0	5.0	.0	20	.70	.73	1.4	6.3	.070
JUL												
11...	--	--	--	18	9.0	<.0	14	.80	.99	1.7	7.9	.080
AUG												
22...	2.2	<10	2.4	8.0	7.0	<.0	14	.50	1.3	1.8	8.0	.075
SEP												
26...	--	--	--	14	14	.3	--	<.50	1.2	1.2	--	.060

285

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in SE¼ sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream side of second pier from left bank of bridge on State Highway 51, 0.4 mi (0.6 km) southeast of Eldon, 6.0 mi (9.7 km) downstream from Tyner Creek, and at mile 8.8 (14.2 km).

DRAINAGE AREA.--307 mi² (795 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 701.14 ft (213.707 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gaging at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years, 294 ft³/s (8.326 m³/s), 12.99 in/yr (330 mm), 213,000 acre-ft/yr (263 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s (1,070 m³/s) Apr. 3, 1957, gage height, 20.33 ft (6.197 m), maximum gage height, 22.73 ft (6.928 m), Apr. 20, 1976; minimum, 1.7 ft³/s (0.048 m³/s) Oct. 25, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1945, reached a stage of 23.8 ft (7.25 m), from information by local resident.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 12	0100	*16,900 479	*17.79 5.422	May 4	0430	10,900 309	14.80 4.511

Minimum, 14 ft³/s (0.40 m³/s) Sept. 17-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	61	36	64	810	514	175	142	68	199	32
2	23	23	56	40	63	610	1120	165	151	65	153	31
3	22	25	53	38	62	602	860	1380	217	61	129	31
4	21	25	80	35	61	892	703	5780	241	61	113	30
5	21	25	90	33	59	648	553	2210	235	59	100	29
6	20	28	81	45	58	501	439	1420	216	101	88	26
7	20	28	129	42	57	419	374	1060	218	92	78	24
8	20	29	200	38	56	355	326	836	524	83	69	22
9	21	29	150	35	56	308	287	681	598	74	63	22
10	21	29	60	34	55	263	252	561	584	68	57	21
11	20	29	50	33	54	228	1460	529	493	63	56	20
12	20	31	46	38	54	203	5450	582	403	57	56	19
13	20	31	43	35	59	183	1530	475	336	52	53	18
14	21	31	42	37	108	160	1080	399	285	48	51	17
15	21	36	42	35	255	144	875	344	242	46	47	16
16	21	41	41	34	306	131	715	299	209	80	45	15
17	21	54	39	33	225	122	597	260	180	73	42	14
18	20	61	37	51	176	121	503	231	156	71	44	14
19	20	61	37	66	146	215	432	1380	139	73	44	15
20	20	61	37	97	127	401	376	5780	128	66	42	15
21	20	56	36	118	113	598	402	244	127	55	42	15
22	20	53	37	111	105	559	385	356	111	49	39	15
23	22	51	36	88	235	583	353	391	112	42	43	17
24	22	50	36	83	299	599	335	320	110	37	42	18
25	23	63	36	79	351	501	309	261	102	34	40	18
26	23	68	34	75	492	420	277	225	95	33	39	18
27	22	69	34	72	483	361	257	208	87	36	40	18
28	23	70	32	71	586	316	235	191	80	135	40	19
29	23	70	32	70	---	285	210	175	74	187	36	18
30	23	67	32	68	---	270	191	158	70	126	32	17
31	23	---	37	65	---	272	---	152	---	117	32	---
TOTAL	661	1317	1756	1735	4765	12080	21400	27228	6665	2212	1954	604
MEAN	21.3	43.9	56.6	56.0	170	390	713	878	222	71.4	63.0	20.1
MAX	24	70	200	118	586	892	5450	5780	598	187	199	32
MIN	20	23	32	33	54	121	191	152	70	33	32	14
CFSM	.07	.14	.18	.18	.55	1.27	2.32	2.86	.72	.23	.21	.07
IN.	.08	.16	.21	.21	.58	1.46	2.59	3.30	.81	.27	.24	.07
AC-FT	1310	2610	3480	3440	9450	23960	42450	54010	13220	4390	3880	1200

CAL YR 1978	TOTAL	124306	MEAN	341	MAX	7610	MIN	20	CFSM	1.11	IN	15.06	AC-FT	246600
WTR YR 1979	TOTAL	82377	MEAN	226	MAX	5780	MIN	14	CFSM	.74	IN	9.98	AC-FT	163400

ARKANSAS RIVER BASIN

287

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-60, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)
OCT 23...	1130	22	170	6.8	18.0	<1.0	7.4	79	1	90	33	83
NOV 13...	1120	31	180	7.0	17.0	<1.0	7.1	75	0	--	--	--
DEC 27...	1100	34	180	7.1	8.0	<1.0	10.2	87	--	89	33	83
FEB 13...	1041	56	180	7.1	5.0	<1.0	12.3	98	1	100	37	92
MAR 13...	1130	185	180	7.4	9.0	1.0	9.0	86	1	--	--	--
APR 23...	1130	135	180	7.0	14.0	1.0	9.1	90	<1	76	28	70
MAY 23...	1145	392	200	6.9	19.0	2.0	9.2	101	0	--	--	--
JUN 20...	1230	126	190	7.0	23.0	2.0	7.4	88	10	84	28	52
JUL 11...	1030	63	190	6.8	25.0	<1.0	7.5	92	<1	--	--	--
AUG 22...	1145	39	200	6.8	24.0	1.0	8.2	100	1	113	31	77
SEP 26...	1100	18	200	7.7	22.0	1.0	7.1	82	7	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 23...	1.7	<10	1.0	<1.0	5.0	.2	3	.10	.89	.98	4.4	--
NOV 13...	--	--	--	<3.0	6.0	<.0	<1	--	.97	--	--	.110
DEC 27...	1.6	<10	1.2	<1.0	4.0	<.0	1	.20	.89	1.0	4.8	<.001
FEB 13...	1.9	11	1.5	8.0	7.0	<.0	1	.90	1.0	1.9	8.4	.050
MAR 13...	--	--	--	1.0	4.0	.2	3	3.2	1.2	4.5	19	.100
APR 23...	1.4	<10	1.4	8.0	5.0	<.0	4	2.5	.96	3.4	15	.030
MAY 23...	--	--	--	13	12	<.0	2	1.4	.87	2.3	10	.045
JUN 20...	1.4	<10	1.4	7.0	4.0	.0	4	.80	.62	1.4	6.3	.040
JUL 11...	--	--	--	16	5.0	<.0	--	.60	1.3	1.9	8.7	.025
AUG 22...	1.9	<10	1.4	8.0	4.0	<.0	2	.60	1.2	1.8	8.0	.035
SEP 26...	--	--	--	14	30	.5	<1	--	2.3	2.3	--	.030

07197000 BARON FORK AT ELDON, OK--Continued

[illegible]

07197500 TENKILLER FERRY LAKE NEAR GORE, OK

LOCATION.--Lat 35°35'43", long 95°02'57", in SE¼SW¼ sec.14, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, at gage tower on right bank, 0.6 mi (1.0 km) upstream from Tenkiller Ferry Dam on Illinois River, 6.0 mi (9.7 km) northeast of Gore, and at mile 12.8 (20.6 km).

DRAINAGE AREA.--1,610 mi² (4,170 km²).

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970 published as Tenkiller Ferry Reservoir near Gore.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam. Spillway consists of 590-ft (179.8 m) concrete modified ogee weir in right abutment controlled by 10 tainter gates. Outlet works consist of a 19-foot (5.8 m) diameter tunnel in right abutment controlled by two vertical lift gates. A similar tunnel conducts water to two hydroelectric turbines. Closure was made for diversion in July 1950 and regulated storage began in July 1952; conservation pool was first filled Apr. 9, 1953. Capacity, 1,231,000 acre-ft (1,520 hm³) at elevation 667.0 ft (203.30 m), flood-control pool, 791,900 acre-ft (976 hm³) at elevation, 642.0 ft (195.68 m), spillway crest, 628,700 acre-ft at elevation 630.0 ft (192.02 m), maximum power pool, and 283,100 acre-ft (349 hm³) at elevation 594.5 ft (181.20 m), conservation and minimum power pool. Figures given herein represent total contents. Reservoir is used for flood control and for power development.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,218,000 acre-ft (1.50 km³) June 5, 1957, elevation, 666.36 ft (203.107 m); minimum since conservation pool was first filled, 305,700 acre-ft (377 hm³) Oct. 21, 1954, elevation, 597.50 ft (182.118 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 701,300 acre-ft (865 hm³) Apr. 16, elevation, 635.60 ft (193.731 m); minimum, 546,700 acre-ft (674 hm³) Jan. 16, elevation 623.13 ft (189.930 m)

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

621	523,000	630	628,700
624	556,800	633	667,200
627	591,800	636	706,900

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567300	554600	557400	552600	555200	583500	654500	650600	653300	665100	662200	654900
2	566900	554600	558000	552000	555000	589600	655900	650800	658600	664600	663700	654900
3	566500	554200	557700	549200	555500	595500	658000	657400	660400	663400	664300	655000
4	566100	554200	557000	548300	556100	601500	659200	672300	660800	663900	665600	654500
5	565600	554100	557400	548200	556000	607100	659900	687800	660600	663500	666800	653700
6	564900	554400	557400	548300	556800	612000	659900	694800	661600	664400	665800	652400
7	564400	553900	557500	548600	557000	615900	659300	697100	662600	665400	664800	651700
8	564100	553400	557100	548100	557400	619400	658800	697100	663900	666200	664100	651300
9	563300	553300	557100	548000	556600	622300	657600	695800	663700	666200	663000	651000
10	562700	553300	557400	547700	557000	624900	656100	693700	666200	665500	664100	650800
11	562100	553300	557300	547700	557700	627200	657000	690600	665900	665000	664700	650600
12	561500	553300	557000	547300	557700	629300	656900	687600	666200	663500	664800	649100
13	560700	553700	556900	547400	558200	631400	693100	684900	665000	662200	663500	648500
14	560400	553300	556600	547400	558300	632800	699300	681200	663900	662400	662400	647900
15	560000	553700	556600	547000	559100	634200	701100	676800	662600	662600	661800	647600
16	559500	554500	556700	546800	559600	635800	701100	671800	663900	662900	661300	647300
17	558800	554500	556600	547200	561000	637300	699600	666800	665100	662900	660400	647000
18	558400	554600	556200	548000	562700	640400	697700	665000	663500	662900	660500	646900
19	558200	554800	555900	548300	562800	645600	694600	663000	662600	662900	660900	646800
20	557700	554700	555300	549200	564000	651000	691200	665600	661400	662700	661000	647000
21	557300	554500	554700	550100	564900	656500	687100	664200	662100	663300	660400	646800
22	557400	554500	553900	551200	566100	658700	683300	662500	660900	663800	659900	646800
23	557300	554500	554200	552200	567500	657600	679900	660400	663500	663300	660000	646500
24	556800	554100	554100	552400	570500	658600	675600	658300	664400	662900	659300	646400
25	556800	554100	554500	553400	573500	659500	671400	655800	665200	662400	659500	645100
26	556200	555600	553700	553700	574400	659900	666200	655700	665100	661800	659600	643900
27	555900	555900	553100	554500	576500	659500	661300	655700	665000	662100	659100	642200
28	555600	555900	552200	555300	578900	658900	658300	655900	664400	662400	657600	641000
29	555500	556600	551800	555400	---	658000	655500	654900	664300	663400	656200	640800
30	555200	556800	551900	555000	---	655400	652800	652500	664800	662600	655500	640600
31	554800	---	552700	554800	---	653600	---	652500	---	662400	654900	---
MAX	567300	556800	558000	555400	578900	659900	701100	697100	666200	666200	666800	655000
MIN	554800	553300	551800	546800	555000	583500	652800	650600	653300	661800	654900	640600
†	623.83	624.00	623.65	623.83	625.91	631.96	631.90	631.88	632.82	632.63	632.06	630.97
‡	-12,900	+2,000	-4,100	+2,100	+24,100	+74,700	-800	-300	+12,300	-2,400	-7,500	-14,300
CAL YR 1978	MAX	757600	MIN	551800	‡-74400							
WTR YR 1979	MAX	701100	MIN	546800	‡+72900							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE¼SW¼ sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110104, on right bank 4.3 mi (6.9 km) downstream from Tenkiller Ferry Dam, 4.5 mi (7.2 km) northeast of Gore, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--1,626 mi² (4,211 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 473.00 ft (144.170 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to Feb. 19, 1952.

REMARKS.--Records good. Except for 16 mi² (41 km²) intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (station 07197500).

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

AVERAGE DISCHARGE.--41 years (water years 1924-25, 1939-79), 1,535 ft³/s (43.47 m³/s), 1,112,000 acre-ft/yr (1.37 km³/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) May 11, 1950, gage height, 29.6 ft (9.02 m), present site and datum, from floodmark, from rating curve extended above 42,000 ft³/s (1,190 m³/s) by velocity-area studies; minimum, 2.0 ft³/s (0.057 m³/s) Sept. 16, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,400 ft³/s (125 m³/s) June 8, maximum gage height, 7.9 ft (2.41 m) May 16; minimum daily discharge, 70 ft³/s (1.98 m³/s) Mar. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	235	222	157	167	156	2120	2330	674	150	933	153
2	236	82	155	1060	472	165	2100	2250	734	641	867	146
3	311	245	297	994	156	110	2070	2440	509	1070	845	146
4	233	84	545	841	76	98	2060	2560	1220	155	156	583
5	235	156	332	388	459	478	2070	3820	1430	692	144	509
6	357	232	312	173	227	160	2090	3760	1440	522	1230	740
7	235	232	236	155	230	155	2080	3670	2180	142	1040	554
8	230	235	318	425	217	148	2070	3680	2340	140	882	144
9	365	76	156	317	746	84	2110	3630	3800	553	875	137
10	371	79	77	309	83	70	2390	3660	1710	623	893	142
11	372	156	313	319	78	75	2470	3790	2540	727	158	138
12	450	81	333	474	314	77	2510	3760	1810	1160	146	946
13	381	84	311	166	227	79	2530	3770	2190	954	1020	374
14	246	310	308	158	382	83	3720	3780	1890	154	953	140
15	140	299	312	313	438	79	3740	3790	1820	102	586	134
16	289	314	152	396	585	78	3760	3820	180	556	576	136
17	240	216	144	162	300	77	3780	3770	160	570	674	138
18	233	82	463	160	90	82	3830	2580	1580	557	154	132
19	233	78	527	161	810	100	3900	2470	1120	550	144	133
20	307	359	549	85	236	129	3850	200	1030	569	670	489
21	240	439	526	85	365	105	3850	2550	1110	144	754	140
22	81	389	538	76	302	2230	3880	2470	1100	138	696	129
23	313	318	156	441	225	3550	3860	2490	173	545	529	129
24	245	347	161	454	83	2300	3910	2450	153	558	602	132
25	156	314	152	171	148	2180	3910	2490	147	585	148	798
26	233	82	456	443	1290	2140	3930	1290	646	606	106	757
27	308	307	462	165	1290	2070	3990	1230	578	577	593	877
28	167	219	543	80	927	2040	2790	1320	789	156	965	732
29	77	233	548	329	---	2190	2700	1610	562	142	1040	173
30	301	307	158	696	---	3010	2380	2200	157	1520	537	121
31	238	---	226	535	---	2860	---	894	---	1340	661	---
TOTAL	7962	6590	9988	10688	10923	27158	90450	84524	35772	16898	19577	10002
MEAN	257	220	322	345	390	876	3015	2727	1192	545	632	333
MAX	450	439	549	1060	1290	3550	3990	3820	3800	1520	1230	946
MIN	77	76	77	76	76	70	2060	200	147	102	106	121
AC=FT	15790	13070	19810	21200	21670	53870	179400	167700	70950	33520	38830	19840
CAL YR 1978 TOTAL	557727			1528	MAX 11400	MIN 63	AC=FT 1106000					
WTR YR 1979 TOTAL	330532			906	MAX 3990	MIN 70	AC=FT 655600					

ARKANSAS RIVER BASIN

291

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years, 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.

WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963.

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
24...	1600	--	80020	22	225	6.8	16.0	--	5.7	58	--
24...	1601	1028	9740	22	225	6.8	16.0	13	5.7	58	10
NOV											
07...	1520	--	80020	111	200	6.9	17.0	--	6.0	62	--
07...	1521	1028	9740	111	200	6.9	17.0	3.0	6.0	62	6
DEC											
28...	1300	1028	9740	288	220	8.0	9.0	2.0	10.2	89	4
28...	1301	--	80020	288	220	8.0	9.0	--	10.2	89	--
FEB											
21...	1545	1028	9740	51	188	7.6	7.5	1.0	14.2	118	4
21...	1546	--	80020	51	188	7.6	7.5	.50	14.2	118	--
MAR											
13...	1055	--	80020	20	310	8.0	11.0	2.0	12.6	112	--
13...	1056	1028	9740	20	310	8.0	11.0	1.0	12.6	112	8
APR											
24...	0915	--	80020	3910	220	7.8	11.5	1.0	11.2	104	--
24...	0916	1028	9740	3910	220	7.8	11.5	<1.0	11.2	104	26
MAY											
22...	1115	1028	9740	3810	220	7.5	15.0	77	11.9	120	53
22...	1116	--	80020	3810	220	7.5	15.0	310	11.9	120	--
JUN											
20...	1000	1028	9740	32	288	7.5	18.0	6.0	6.5	69	4
20...	1030	--	80020	32	288	7.5	18.0	2.0	6.5	69	--
JUL											
17...	1010	--	80020	24	255	7.6	28.0	--	--	--	--
17...	1011	1028	9740	24	255	7.6	28.0	1.0	--	--	7
AUG											
08...	1030	1028	9740	31	270	7.7	22.0	<1.0	5.0	57	6
08...	1031	--	80020	31	270	7.7	22.0	.80	5.0	57	--
SEP											
18...	1030	1028	9740	15	260	7.5	17.5	1.0	5.8	61	9
18...	1031	--	80020	15	260	7.5	17.5	--	5.8	61	--

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT											
24...	90	8	--	33	--	--	1.8	--	4.9	10	.2
24...	95	--	34	--	85	1.9	--	<10	--	--	--
NOV											
07...	78	9	--	28	--	--	1.9	--	7.0	16	.3
07...	--	--	--	--	--	--	--	--	--	--	--
DEC											
28...	--	--	32	--	80	1.9	--	<10	--	--	--
28...	74	8	--	27	--	--	1.7	--	6.2	15	.3
FEB											
21...	--	--	29	--	73	2.0	--	<10	--	--	--
21...	79	17	--	29	--	--	1.7	--	7.5	17	.4
MAR											
13...	94	25	--	34	--	--	2.2	--	13	22	.6
13...	--	--	--	--	--	--	--	--	--	--	--
APR											
24...	77	15	--	28	--	--	1.8	--	4.6	11	.2
24...	82	--	30	--	75	1.7	--	<10	--	--	--
MAY											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	89	23	--	33	--	--	1.7	--	4.2	9	.2
JUN											
20...	95	--	13	--	32	2.6	--	18	--	--	--
20...	90	22	--	32	--	--	2.5	--	17	28	.8
JUL											
17...	83	9	--	30	--	--	2.0	--	13	25	.6
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	--	--	35	--	88	2.7	--	15	--	--	--
08...	100	30	--	37	--	--	2.9	--	16	27	.7
SEP											
18...	--	--	--	--	--	--	--	--	--	--	--
18...	94	--	--	34	--	--	2.2	--	13	24	.6

DATE	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
24...	--	--	2.3	100	0	82	25	11	8.2	--	124
24...	--	1.7	--	--	--	--	--	19	--	.1	--
NOV											
07...	--	--	2.6	84	0	69	17	--	10	--	111
07...	--	--	--	--	--	--	--	13	--	.1	--
DEC											
28...	--	2.3	--	--	--	--	--	--	10	.1	--
28...	--	--	2.0	--	--	66	--	7.2	12	--	111
FEB											
21...	--	2.3	--	--	--	--	--	12	14	.1	--
21...	--	--	1.8	--	--	62	--	9.2	14	--	94
MAR											
13...	--	--	3.8	--	--	69	--	12	26	--	132
13...	--	--	--	--	--	--	--	8.0	21	.2	--
APR											
24...	--	--	2.2	--	--	62	--	12	8.0	--	108
24...	--	2.0	--	--	--	--	--	--	10	<.1	--
MAY											
22...	--	--	--	--	--	--	--	--	19	.1	--
22...	6.5	--	2.3	--	--	66	--	14	--	--	110
JUN											
20...	--	2.3	--	--	--	--	--	11	32	.1	--
20...	--	--	2.4	--	--	68	--	12	30	--	165
JUL											
17...	15	--	2.4	--	--	74	--	11	25	--	141
17...	--	--	--	--	--	--	--	10	22	.1	--
AUG											
08...	--	3.1	--	--	--	--	--	7.0	38	.1	--
08...	18	--	2.4	--	--	74	--	7.0	--	--	152
SEP											
18...	--	--	--	--	--	--	--	10	58	.2	--
18...	16	--	2.6	--	--	--	--	--	--	--	--

[illegible][illegible]

ARKANSAS RIVER BASIN

07228400 DEER CREEK AT HYDRO, OK

LOCATION.--Lat 35°32'28", long 98°34'40", in NW¼SE¼ sec. 4, T.12 N., R.13 W., Caddo County, Hydrologic Unit 11090201, on downstream side of second pier from right bank of bridge on State Highway 58 at south edge of Hydro, 3.2 mi (5.1 km) downstream from Little Deep Creek, 7 mi (11 km) east of Weatherford, and at mile 7.4 (11.9 km).

DRAINAGE AREA.--274 mi² (710 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to December 1963; December 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,454.01 ft (443.182 m) National Geodetic Vertical Datum of 1929. October 1960 to December 1963 gage at same site and at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,940 ft³/s (253 m³/s) Nov. 2, 1961, gage height, 17.54 ft (5.346 m), present datum; minimum, 5.0 ft³/s (0.14 m³/s) Aug. 23, 24, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1948 reached a stage of about 32 ft (9.8 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft³/s (109 m³/s) at 1045 July 24, gage height, 15.24 ft (4.645 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily discharge, 6.4 ft³/s (0.18 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	17	25	24	25	25	33	31	31	12	42	32
2	7.8	17	25	22	24	108	23	34	33	12	40	26
3	7.0	17	25	23	24	145	25	135	32	10	33	25
4	6.9	18	25	25	25	52	27	118	31	10	33	25
5	6.4	18	26	27	25	29	25	57	32	9.8	27	25
6	8.4	26	26	25	25	26	25	37	32	12	26	132
7	7.6	22	26	24	25	26	23	32	31	58	28	57
8	8.9	22	26	23	26	24	23	30	32	24	28	25
9	10	23	26	25	25	24	22	29	181	17	26	16
10	10	24	26	26	25	22	20	29	180	16	26	15
11	10	22	27	25	26	22	29	29	52	13	263	14
12	9.5	27	25	25	25	22	26	28	31	13	124	14
13	8.2	26	28	25	25	22	26	27	23	11	50	12
14	8.6	72	28	25	26	22	27	27	20	11	30	14
15	8.9	60	28	25	25	22	27	27	18	10	29	13
16	9.6	35	28	25	25	23	26	26	17	17	28	13
17	9.8	26	28	25	25	25	31	25	16	17	26	13
18	11	24	28	25	25	159	39	86	16	20	22	13
19	11	23	28	32	25	198	34	37	16	17	21	12
20	11	25	28	28	25	40	46	31	15	15	20	14
21	12	24	28	26	24	24	35	51	14	14	51	13
22	10	24	28	25	26	720	31	40	90	12	50	12
23	11	24	28	24	25	458	30	34	35	75	26	12
24	12	24	28	24	25	49	31	32	27	1570	27	11
25	13	25	28	25	24	32	31	32	129	239	76	12
26	13	25	28	25	24	27	29	31	109	149	43	12
27	13	25	28	25	25	26	32	31	43	70	39	9.8
28	14	25	28	25	25	25	33	30	22	53	34	11
29	15	25	28	25	---	23	33	29	16	39	29	9.8
30	16	25	28	25	---	22	31	31	11	31	27	9.4
31	15	---	26	25	---	24	---	31	---	86	31	---
TOTAL	322.8	790	838	778	699	2466	873	1247	1335	2662.8	1355	622.0
MEAN	10.4	26.3	27.0	25.1	25.0	79.5	29.1	40.2	44.5	85.9	43.7	20.7
MAX	16	72	28	32	26	720	46	135	181	1570	263	132
MIN	6.4	17	25	22	24	22	20	25	11	9.8	20	9.4
AC-FT	640	1570	1660	1540	1390	4890	1730	2470	2650	5280	2690	1230
CAL YR 1978	TOTAL	12801.2	MEAN	35.1	MAX	2540	MIN	6.1	AC-FT	25390		
WTR YR 1979	TOTAL	13988.6	MEAN	38.3	MAX	1570	MIN	6.4	AC-FT	27750		

07228400 DEER CREEK AT HYDRO, OK--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1977 to current year.

WATER TEMPERATURE: December 1977 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,940 micromhos Aug. 27, 1979; minimum daily, 359 micromhos July 24, 1979.

WATER TEMPERATURE: Maximum daily, 33.0°C July 15, 1979; minimum daily 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,940 micromhos Aug. 27; minimum daily, 359 micromhos July 24.

WATER TEMPERATURE: Maximum daily, 33.0°C July 15; minimum daily, 0.0°C Jan. 31, Feb. 9, 16.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT											
09...	0935	9.3	941	8.4	17.0	--	--	440	260	140	21
15...	0925	9.0	1000	8.3	14.0	--	--	500	320	160	24
20...	0915	11	988	8.0	13.5	10.2	102	470	300	150	23
22...	0915	10	1070	8.5	17.0	--	--	500	320	160	24
NOV											
10...	0810	25	1090	8.4	13.0	--	--	560	360	180	26
16...	0910	33	1090	8.3	7.5	--	--	560	400	180	28
22...	1120	25	1300	8.5	7.0	11.6	100	590	390	190	29
29...	0915	25	1200	7.9	7.5	--	--	620	410	200	29
DEC											
02...	1620	25	1180	8.4	10.0	--	--	590	380	190	29
10...	1230	26	1270	8.2	4.0	--	--	630	420	200	32
23...	1410	28	1220	8.3	8.0	--	--	600	400	190	30
28...	1400	28	1200	8.0	10.0	10.9	83	600	420	190	30
JAN											
19...	1005	32	962	7.0	4.0	--	--	--	--	--	22
22...	0950	25	1390	7.6	4.5	--	--	710	540	220	40
28...	1510	25	1170	8.2	3.0	--	--	580	380	180	31
30...	1300	25	1230	7.4	.0	1.5	153	610	410	190	32
FEB											
04...	1320	25	1180	8.2	3.0	--	--	630	440	200	31
09...	0950	25	1330	8.2	.0	--	--	690	480	220	35
12...	1035	25	1040	7.9	3.0	--	--	--	--	--	26
22...	1400	26	1220	7.9	14.0	13.4	136	660	480	210	34
MAR											
05...	0955	42	862	8.7	7.0	--	--	430	310	130	25
21...	1115	24	950	7.8	12.0	10.0	95	430	310	130	26
22...	0830	720	385	--	13.0	--	--	180	88	61	7.8
31...	1720	24	1300	8.8	18.0	--	--	670	470	210	36
APR											
01...	0915	33	1290	8.2	14.0	--	--	610	420	190	34
18...	1155	42	1150	8.3	19.0	--	--	560	400	170	34
18...	1200	42	1200	--	19.0	8.6	91	--	--	--	--
24...	0810	30	1430	8.5	19.0	--	--	760	570	230	44
MAY											
05...	0905	66	836	7.5	13.0	--	--	410	300	120	27
16...	1250	26	1300	7.8	23.5	9.2	112	--	--	--	--
19...	0920	38	1150	7.9	21.0	--	--	610	460	190	33
24...	1045	33	1430	7.9	19.0	--	--	720	510	220	41
JUN											
10...	2025	168	835	7.4	20.5	--	--	400	270	120	24
18...	1037	17	1120	8.1	24.0	--	--	560	370	180	28
24...	1335	26	1410	7.6	24.0	--	--	740	570	230	39
28...	1315	25	990	8.1	30.5	7.5	104	420	270	130	23
JUL											
10...	1105	17	1100	7.8	31.5	--	--	590	410	180	34
24...	0940	1570	359	7.6	27.5	--	--	170	70	55	8.0
25...	1200	248	875	8.0	24.0	5.8	72	--	--	--	--
30...	1045	31	1830	8.0	26.0	--	--	--	--	300	--
AUG											
12...	1320	124	665	7.9	24.0	--	--	320	220	97	19
15...	0930	29	1400	8.4	23.5	8.4	102	800	610	220	61
21...	1105	26	1340	7.8	28.0	--	--	630	450	180	43
27...	1015	40	1940	8.0	22.5	--	--	1100	930	320	82
SEP											
01...	1110	32	1740	8.0	27.0	--	--	960	740	270	70
07...	0920	53	955	7.8	26.0	--	--	470	360	140	28
16...	1425	12	1340	8.0	22.0	--	--	730	520	220	44
20...	1245	14	1300	7.9	21.5	7.3	86	650	440	200	37

ARKANSAS RIVER BASIN

07228400 DEER CREEK AT HYDRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SURP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT											
09...	38	16	.8	--	4.2	200	8	180	1.4	300	18
15...	34	13	.7	--	4.0	220	0	180	1.8	350	15
20...	35	14	.7	--	4.1	220	0	180	3.3	290	29
22...	36	13	.7	--	4.2	200	8	180	1.1	370	20
NOV											
10...	37	13	.7	--	4.3	--	--	200	--	410	14
16...	31	11	.6	--	4.7	--	--	160	--	420	16
22...	38	12	.7	--	4.0	240	0	200	1.2	450	24
29...	40	12	.7	--	3.7	--	--	210	--	440	16
DEC											
02...	31	10	.6	--	3.2	--	--	210	--	430	20
10...	33	10	.6	--	2.8	--	--	210	--	460	21
23...	32	10	.6	--	2.6	--	--	200	--	440	20
28...	33	11	.6	--	2.5	220	0	180	3.5	470	18
JAN											
19...	--	--	--	--	4.4	--	--	130	--	350	10
22...	35	10	.6	--	3.0	--	--	170	--	600	19
28...	35	12	.6	--	2.8	--	--	200	--	430	19
30...	33	11	.6	--	3.0	--	--	210	16	450	22
FEB											
04...	32	10	.6	--	2.5	--	--	190	--	440	15
09...	37	10	.6	--	1.5	--	--	210	--	510	17
12...	27	--	--	30	3.2	--	--	94	--	390	30
22...	34	10	.6	--	2.8	--	--	180	--	490	16
MAR											
05...	22	10	.5	28	5.7	--	--	120	--	320	11
21...	26	11	.5	--	5.9	--	--	120	--	360	17
22...	9.7	10	.3	13	3.3	--	--	96	--	88	7.3
31...	39	11	.7	--	4.6	--	--	200	--	530	33
APR											
01...	37	11	.7	42	5.0	--	--	190	--	500	24
18...	38	13	.7	42	4.0	--	--	160	--	450	23
18...	--	--	--	--	--	--	--	--	--	--	--
24...	42	14	.7	46	3.9	--	--	190	--	610	21
MAY											
05...	23	14	.5	30	6.7	--	--	--	--	290	16
16...	--	--	--	--	--	--	--	--	--	--	--
19...	31	10	.5	36	4.8	--	--	150	--	460	18
24...	37	10	.6	42	4.5	--	--	210	--	560	20
JUN											
10...	20	10	.4	27	6.5	--	--	130	--	300	13
18...	31	13	.6	36	4.7	--	--	190	--	430	35
24...	37	10	.6	43	6.4	--	--	170	--	610	24
28...	25	11	.5	33	8.0	--	--	150	--	320	20
JUL											
10...	33	14	.6	39	6.2	--	--	180	--	420	23
24...	--	--	--	10	7.0	--	--	100	--	75	2.6
25...	--	--	--	--	--	--	--	--	--	--	--
30...	50	--	--	57	7.4	--	--	240	--	850	38
AUG											
12...	20	15	.5	26	5.6	--	--	96	--	250	12
15...	38	9	.6	46	7.5	--	--	190	--	630	30
21...	46	18	.8	52	5.9	--	--	180	--	550	38
27...	48	11	.6	54	5.8	--	--	210	--	990	33
SEP											
01...	49	14	.7	55	5.5	--	--	220	--	770	38
07...	25	13	.5	33	7.6	--	--	110	--	370	15
16...	41	14	.7	46	4.9	--	--	210	--	540	20
20...	38	11	.6	42	4.4	--	--	210	--	490	23

ARKANSAS RIVER BASIN

297

07228400 DEER CREEK AT HYDRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
OCT											
09...	--	--	695	--	.93	17.2	--	--	--	--	--
15...	--	--	749	--	1.02	18.2	--	--	--	--	--
20...	.3	19	733	659	1.00	21.8	--	--	--	--	--
22...	--	--	798	--	1.09	21.5	--	--	--	--	--
NOV											
10...	--	--	820	--	1.12	55.3	--	--	--	--	--
16...	--	--	822	--	1.12	74.1	--	--	--	--	--
22...	.3	22	913	996	1.24	61.6	40	5	160	14	0
29...	--	--	953	--	1.30	64.6	--	--	--	--	--
DEC											
02...	--	--	913	--	1.24	61.9	--	--	--	--	--
10...	--	--	977	--	1.33	69.9	--	--	--	--	--
23...	--	--	937	--	1.27	72.1	--	--	--	--	--
28...	.3	19	936	980	1.27	72.0	0	4	160	8	0
JAN											
19...	--	--	712	--	--	61.5	--	--	--	--	--
22...	--	--	1130	--	1.54	76.3	--	--	--	--	--
28...	--	--	874	--	1.19	59.0	--	--	--	--	--
30...	.3	17	957	868	1.30	64.6	--	--	--	--	--
FEB											
04...	--	--	901	--	1.23	60.8	--	--	--	--	--
09...	--	--	1040	--	1.41	70.2	--	--	--	--	--
12...	--	--	702	--	--	47.4	--	--	--	--	--
22...	.3	16	949	911	1.29	66.6	--	--	--	--	--
MAR											
05...	--	--	669	--	.91	76.0	--	--	--	--	--
21...	.4	13	675	650	.92	43.7	--	--	--	--	--
22...	--	--	271	--	.37	52.7	--	--	--	--	--
31...	--	--	1080	--	1.47	70.0	--	--	--	--	--
APR											
01...	--	--	1030	--	1.40	91.8	--	--	--	--	--
16...	--	--	882	--	1.20	100	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	1160	--	1.58	94.0	--	--	--	--	--
MAY											
05...	--	--	607	--	.83	108	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	926	--	1.26	95.0	--	--	--	--	--
24...	--	--	1120	--	1.52	99.8	--	--	--	--	--
JUN											
10...	--	--	574	--	.78	260	--	--	--	--	--
18...	--	--	848	--	1.15	39.6	--	--	--	--	--
24...	--	--	1170	--	1.59	83.7	--	--	--	--	--
28...	.3	18	653	634	.89	44.3	--	--	--	--	--
JUL											
10...	--	--	823	--	1.12	37.8	--	--	--	--	--
24...	--	--	231	--	--	97.9	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	1540	--	2.09	129	--	--	--	--	--
AUG											
12...	--	--	476	--	.65	159	--	--	--	--	--
15...	.4	17	1150	1120	1.56	90.0	0	4	200	0	10
21...	--	--	1050	--	1.43	73.7	--	--	--	--	--
27...	--	--	1720	--	2.34	188	--	--	--	--	--
SEP											
01...	--	--	1480	--	2.01	128	--	--	--	--	--
07...	--	--	721	--	.98	103	--	--	--	--	--
16...	--	--	1090	--	1.48	36.8	--	--	--	--	--
20...	.3	20	995	939	1.35	38.7	--	--	--	--	--

07228400 DEER CREEK AT HYDRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

07228400 DEER CREEK AT HYDRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	997	1040	1190	---	1260	1210	1290	1370	1280	1020	1690	1740
2	1000	1050	1180	---	1230	1240	1290	1360	1300	1060	1280	1510
3	992	1060	1200	---	1240	1130	1370	1090	1370	1080	1780	1300
4	983	1050	1200	---	1180	825	1350	1250	1350	1050	1720	1410
5	962	1060	1190	---	1240	862	1370	836	1290	1060	1750	1460
6	959	1070	1200	---	1190	1040	1390	1110	1250	1050	1770	1440
7	992	1030	1190	---	1210	1260	1420	1170	1280	736	1690	955
8	944	1030	1200	---	1210	1270	1410	1290	1280	912	1710	1000
9	941	1080	---	---	1330	1250	1440	1230	941	1060	1740	1150
10	975	1090	1270	---	1220	1270	1330	1270	835	1100	1710	1400
11	992	1080	1260	---	1250	1260	1310	1230	958	1180	1720	1440
12	1010	1130	1230	---	1040	1240	1380	1270	838	1190	665	1420
13	1010	1090	1220	---	1220	1250	1400	1310	943	1190	939	1420
14	1020	1080	1200	---	1120	1240	1420	1260	1040	1200	1430	1390
15	1000	1060	1210	---	1050	1220	1380	1300	1090	1170	1430	1370
16	1010	972	1230	---	1300	1220	1370	1300	1130	1120	1560	1340
17	1010	1080	1240	1210	1190	1240	1360	1310	1160	1130	1520	1310
18	1020	1090	1200	1140	1280	1090	1150	912	1120	1150	1720	1270
19	1020	1160	1210	962	1240	891	1340	1150	1110	1010	1670	1260
20	992	1170	1220	1120	1210	955	1350	1270	1090	1120	1710	1270
21	1000	1150	1200	1340	1220	916	1370	1100	1120	1140	1340	1270
22	1070	1170	1200	1390	1240	385	1370	974	972	1180	1050	1300
23	1020	1160	1220	1230	1240	484	1370	1300	866	1170	1550	1300
24	1020	1170	1210	1230	1270	666	1430	1430	1410	359	1540	1290
25	1010	1260	1210	1230	1290	840	1380	1400	1220	844	590	1260
26	1040	1210	1220	1270	1300	947	1400	1360	840	1390	1620	1290
27	1030	1180	1210	1230	1270	1060	1360	1330	774	1020	1940	1330
28	1020	1190	1200	1160	1230	1120	1330	1340	840	1390	1710	1130
29	1020	1200	1210	1290	---	1180	1370	1330	930	1650	1360	1230
30	1060	1190	1220	1230	---	1260	1380	1300	972	1830	1570	1240
31	1060	---	---	1210	---	1300	---	1310	---	1360	1580	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	13.0	10.0	---	1.0	8.0	14.0	18.0	19.0	31.0	25.5	27.0
2	22.0	16.0	10.0	---	3.0	10.0	11.0	18.0	23.0	32.0	29.0	27.5
3	19.0	16.0	9.0	---	2.5	7.0	7.5	14.0	20.5	28.0	29.0	26.0
4	18.0	16.0	9.0	---	3.0	4.0	8.5	12.0	24.5	32.5	27.5	28.0
5	17.0	16.5	4.0	---	1.0	7.0	---	13.0	24.0	32.0	29.0	28.0
6	15.0	15.0	4.0	---	2.0	7.0	12.0	20.5	24.0	31.5	26.0	25.5
7	15.0	11.0	9.0	---	1.0	11.0	14.0	---	22.0	32.0	28.0	26.0
8	18.0	12.0	4.0	---	1.5	7.5	22.0	21.0	24.0	32.5	28.0	23.0
9	17.0	14.0	---	---	0	11.0	21.0	21.0	21.0	32.0	28.0	24.5
10	16.5	13.0	4.0	---	1.0	8.0	18.0	19.0	20.5	31.5	28.5	22.0
11	18.0	13.0	3.0	---	2.0	9.0	13.0	15.5	19.0	28.5	28.0	23.0
12	19.0	11.0	1.0	---	3.0	13.0	17.0	13.0	26.5	30.5	24.0	23.0
13	17.0	13.0	4.0	---	4.0	14.0	18.0	22.0	21.0	29.0	21.0	21.0
14	14.0	11.5	6.0	3.0	5.0	11.0	17.0	24.0	27.0	29.0	24.5	18.0
15	14.0	7.0	4.5	4.0	4.0	10.0	---	22.0	26.0	33.0	24.0	17.0
16	13.5	7.5	4.0	3.0	0	9.5	---	24.0	22.0	31.0	26.0	22.0
17	14.0	7.0	1.0	2.0	1.0	9.0	21.0	19.5	21.0	24.5	25.0	17.0
18	14.5	7.0	3.0	3.0	2.0	13.0	19.0	20.0	24.0	29.0	29.0	18.0
19	13.0	10.0	11.0	4.0	1.0	12.0	18.5	21.0	25.0	28.0	27.0	18.5
20	16.5	8.0	11.0	3.5	3.0	10.5	21.0	21.0	28.0	26.0	28.0	20.0
21	16.0	6.5	6.0	4.5	4.0	11.0	19.0	20.5	32.0	29.0	28.0	19.0
22	17.0	7.0	6.0	4.5	8.0	13.0	18.0	19.0	28.0	31.0	23.0	19.0
23	14.0	10.0	8.0	4.0	7.0	13.5	22.5	18.5	26.0	28.5	29.0	19.0
24	14.0	9.0	6.0	2.0	5.0	11.0	19.0	19.0	24.0	27.5	28.0	21.0
25	13.0	12.0	5.0	3.5	3.0	9.0	19.5	19.0	23.0	25.5	21.0	21.5
26	13.0	12.5	4.0	4.0	4.5	13.0	16.0	17.0	25.5	24.0	23.0	24.0
27	11.0	8.0	3.0	3.0	6.0	13.0	16.0	21.0	26.0	24.5	22.5	20.0
28	11.0	12.0	6.0	3.0	8.0	14.0	16.5	20.0	26.0	24.0	23.0	20.5
29	13.0	7.5	6.0	1.0	---	20.0	19.0	20.5	29.0	30.5	25.0	21.0
30	14.0	8.0	6.0	1.5	---	19.0	13.0	23.5	29.5	26.0	26.0	21.5
31	14.0	---	---	0	---	18.0	---	21.0	---	25.0	26.0	---

ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°34'00", long 98°22'45", in SE¼SW¼ sec.28, T.13 N., R.11 W., Blaine County, Hydrologic Unit 11090202, on downstream side of left abutment of Chicago, Rock Island and Pacific Railroad Co. bridge, 1.0 mi (1.6 km) north of Bridgeport, 2.8 mi (4.5 km) upstream from Lumpmouth Creek, and at mile 267.3 (429.8 km).

DRAINAGE AREA.--25,229 mi² (65,343 km²), of which 4,801 mi² (12,435 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,384.25 ft (421.919 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1947, at site 0.2 mi (0.3 km) downstream at same datum. Oct. 1, 1947, to Sept. 30, 1948, nonrecording gage at present site and datum.

REMARKS.--Records poor. Occasional slight regulation by Conchas Reservoir in New Mexico, and by Lake Meredith in Texas since 1964.

AVERAGE DISCHARGE.--30 years, 389 ft³/s (11.02 m³/s), 281,800 acre-ft/yr (347 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft³/s (4,250 m³/s) June 23, 1948, gage-height, 14.60 ft (4.450 m), from floodmarks, from rating curve extended above 50,000 ft³/s (1,420 m³/s), no flow at times in 1946, 1951-56, 1964, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft (5.91 m), a higher stage probably occurred during flood in October 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,980 ft³/s (198 m³/s) at 1430 July 24, gage height, 10.20 ft (3.109 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Oct. 5-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	10	15	11	20	170	214	88	161	65	345	29
2	4.6	10	15	9.0	24	250	212	95	437	55	293	22
3	4.5	11	15	11	23	350	219	580	455	50	169	15
4	4.4	11	14	14	21	270	311	692	378	45	134	14
5	4.3	11	14	17	19	250	311	403	322	43	97	13
6	4.3	16	14	16	22	270	295	271	251	940	71	113
7	5.8	18	15	13	25	240	232	189	238	247	55	192
8	6.7	14	12	10	23	232	186	167	212	174	43	40
9	7.4	14	10	14	22	231	154	140	675	104	36	25
10	7.8	14	13	18	30	191	173	129	1240	80	33	20
11	8.1	14	18	22	45	187	273	116	870	62	726	18
12	7.8	16	25	21	90	180	208	769	595	47	234	15
13	6.3	22	18	15	60	169	177	603	414	36	124	14
14	6.3	47	17	10	50	155	154	316	267	62	80	13
15	6.3	178	16	14	40	147	152	197	150	30	50	14
16	6.6	40	17	20	34	143	155	172	120	32	34	13
17	6.6	26	16	35	35	148	181	129	97	56	25	14
18	6.6	19	18	40	34	524	384	205	80	255	19	13
19	7.0	16	18	80	50	919	228	177	66	140	14	13
20	7.3	15	18	50	80	680	177	137	58	236	12	13
21	7.3	14	18	30	150	679	178	376	52	192	20	14
22	7.6	14	18	25	400	1840	132	414	48	138	152	14
23	8.0	14	17	22	340	1690	119	319	100	2560	44	14
24	8.0	14	17	20	285	796	109	261	200	6050	27	13
25	8.2	14	17	24	229	627	96	225	450	2070	113	13
26	8.6	16	17	27	205	496	88	217	300	596	85	13
27	8.7	16	18	24	195	304	85	204	250	435	79	13
28	8.9	16	17	22	180	244	85	185	221	226	51	11
29	9.1	15	17	25	---	213	86	167	143	144	35	12
30	9.5	15	15	22	---	193	91	164	89	104	28	12
31	10	---	13	17	---	178	---	164	---	227	25	---
TOTAL	217.4	670	502	698.0	2731	12966	5465	8271	8939	15501	3253	752
MEAN	7.01	22.3	16.2	22.5	97.5	418	182	267	298	500	105	25.1
MAX	10	178	25	80	400	1840	384	769	1240	6050	726	192
MIN	4.3	10	10	9.0	19	143	85	88	48	30	12	11
AC-FT	431	1330	996	1380	5420	25720	10840	16410	17730	30750	6450	1490

CAL YR 1978 TOTAL 60583.9 MEAN 166 MAX 10800 MIN 3.7 AC-FT 120200
WTR YR 1979 TOTAL 59965.4 MEAN 164 MAX 6050 MIN 4.3 AC-FT 118900

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-61, 1964, 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1948 to September 1960, October 1969 to current year.

WATER TEMPERATURE: October 1948 to September 1960, October 1969 to current year.

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

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, 2,830 micromhos June 11, 1975; minimum daily, 223 micromhos Aug. 16, 1973.

WATER TEMPERATURE: Maximum daily, 40.0°C July 9, 22, 1973; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,580 micromhos May 11, 13; minimum daily, 547 micromhos Sept. 6.

WATER TEMPERATURE: Maximum daily, 29.0°C July 27; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1979

		AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LUA LEVEL) (MG/L)
OCT											
04...	1120	--	80020	4.4	1000	8.2	15.0	--	--	--	--
11...	1040	1028	9740	8.1	1000	8.3	20.0	3.0	8.2	95	12
24...	1015	--	80020	8.1	921	8.9	10.5	--	--	--	--
31...	0945	--	80020	10	971	8.5	14.0	--	--	--	--
NOV											
13...	1015	--	80020	23	1010	8.2	7.5	--	--	--	--
15...	1415	--	80020	118	685	7.3	5.0	--	--	--	--
22...	0930	1028	9740	14	1100	7.9	5.0	12	11.0	90	--
30...	0936	--	80020	15	1120	8.1	7.5	--	--	--	--
DEC											
10...	1015	--	80020	25	1080	8.2	2.0	--	--	--	--
19...	0940	1028	9740	18	1260	8.4	8.0	3.0	--	--	--
19...	1025	--	80020	18	1110	8.4	3.5	--	--	--	--
30...	1030	--	80020	19	1100	8.4	2.0	--	--	--	--
JAN											
02...	1120	--	80020	37	1340	7.9	5.0	--	--	--	--
20...	0955	--	80020	256	706	7.9	.0	--	--	--	--
27...	1030	--	80020	104	974	7.1	.5	--	--	--	--
31...	1015	1028	9740	93	1300	8.2	.0	7.0	14.9	105	5
FEB											
02...	0945	1028	9740	109	1050	8.3	1.0	6.0	14.0	98	9
14...	1045	--	80020	449	2340	8.4	--	--	--	--	--
19...	1145	--	80020	280	1650	8.3	--	--	--	--	--
27...	1000	--	80020	185	2130	7.9	--	--	--	--	--
27...	1150	--	--	195	--	--	6.0	--	--	--	--
MAR											
03...	1035	--	80020	350	1950	8.4	5.0	--	--	--	--
08...	1140	--	--	232	--	--	9.0	--	--	--	--
14...	0915	--	80020	155	2250	8.5	5.0	--	--	--	--
14...	1000	1028	9740	155	2300	8.2	10.0	19	11.5	105	16
23...	0930	--	80020	1750	1290	8.3	6.5	--	--	--	--
APR											
05...	0940	--	80020	316	2340	7.6	10.0	--	--	--	--
13...	1440	--	--	181	--	--	21.0	--	--	--	--
16...	0945	--	80020	152	1780	7.4	10.0	--	--	--	--
22...	0930	--	80020	129	2060	8.0	16.0	--	--	--	--
26...	0930	1028	9740	91	2450	8.3	16.0	24	9.2	98	18
MAY											
03...	1030	1028	9740	366	--	7.9	14.5	47	10.0	102	22
13...	0945	--	80020	550	2580	7.8	14.5	--	--	--	--
16...	1155	--	--	174	--	--	21.0	--	--	--	--
19...	1045	--	80020	185	1080	7.4	16.0	--	--	--	--
24...	0945	--	80020	266	2070	7.8	16.0	--	--	--	--
JUN											
02...	1030	--	80020	462	2200	8.3	19.5	--	--	--	--
06...	0945	1028	9740	251	1900	8.1	22.5	200	8.1	99	41
13...	1045	--	80020	378	1690	7.5	22.5	--	--	--	--

ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY CUL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
JUN										
25...	1040	--	80020	450	1040	7.4	22.5	--	--	--
28...	0945	--	--	221	--	--	--	--	--	--
JUL										
02...	0900	--	80020	55	2070	8.1	23.5	--	--	--
06...	1208	--	--	891	--	--	--	--	--	--
22...	0935	--	80020	140	701	7.8	25.0	--	--	--
24...	1530	--	--	6980	--	--	28.0	--	--	--
25...	1335	--	--	3700	--	--	27.0	--	--	--
25...	1455	--	--	3650	--	--	27.0	--	--	--
25...	1530	--	--	3516	--	--	27.0	--	--	--
26...	1000	1028	9740	596	1450	--	28.0	--	6.4	86
26...	1230	--	--	634	1450	7.7	28.0	--	6.3	85
31...	0945	--	80020	280	1410	7.9	27.0	--	--	--
AUG										
10...	1115	--	80020	33	2110	8.0	26.5	--	--	--
14...	0955	1028	9740	204	1180	8.2	25.0	140	6.5	82
14...	1020	--	--	164	--	--	25.0	--	--	--
23...	0945	--	80020	42	859	7.3	25.0	--	--	--
30...	0910	--	80020	28	1500	8.1	24.0	--	--	--
SEP										
01...	0925	--	80020	29	1520	8.2	23.5	--	--	--
04...	1505	1028	9740	14	1600	8.4	32.0	20	--	--
06...	0915	--	80020	13	547	7.9	22.0	--	--	--
26...	1045	--	80020	12	1250	7.9	21.0	--	--	--

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACU3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SURF- TIUM RATIO
UCT											
04...	440	260	--	140	--	--	23	--	41	17	.8
11...	--	--	186	--	--	32	--	--	--	--	--
24...	420	240	--	130	--	--	22	--	38	16	.8
31...	440	240	--	140	--	--	23	--	35	15	.7
NOV											
13...	480	290	--	150	--	--	25	--	33	13	.7
15...	310	200	--	96	--	--	16	--	22	13	.5
22...	--	--	340	--	850	54	--	--	--	--	--
30...	540	330	--	170	--	--	28	--	36	13	.7
DEC											
10...	510	300	--	160	--	--	27	--	34	13	.7
19...	--	--	--	--	--	--	--	--	--	--	--
19...	540	330	--	170	--	--	28	--	35	12	.7
30...	550	340	--	170	--	--	30	--	36	12	.7
JAN											
02...	670	420	--	210	--	--	36	--	43	12	.7
20...	--	--	--	--	--	--	--	--	--	--	--
27...	430	360	--	130	--	--	26	--	36	15	.8
31...	--	--	210	--	525	40	--	42	--	--	--
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	690	440	--	190	--	--	52	--	260	45	4.3
19...	420	260	--	110	--	--	35	--	190	49	4.0
27...	560	370	--	150	--	--	46	--	250	49	4.6
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	510	350	--	140	--	--	40	--	210	47	4.0
08...	--	--	--	--	--	--	--	--	--	--	--
14...	610	420	--	160	--	--	50	--	250	47	4.4
14...	--	--	160	--	400	50	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
05...	660	470	--	170	--	--	57	--	270	47	4.6
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	40	--	--	--	--
22...	660	480	--	170	--	--	56	--	240	44	4.1
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
03...	--	--	190	--	475	57	--	--	--	--	--
13...	650	480	--	160	--	--	60	--	330	63	5.6
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	24	--	110	--	--
24...	560	370	--	140	--	--	50	--	250	60	4.6
JUN											
02...	500	330	--	130	--	--	43	--	270	64	5.2
06...	--	--	--	--	--	--	--	--	--	--	--
13...	470	330	--	120	--	--	42	--	190	46	3.8
25...	350	250	--	97	--	--	27	--	89	35	2.1
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
02...	610	440	--	160	--	--	50	--	240	46	4.2
06...	--	--	--	--	--	--	--	--	--	--	--
22...	290	220	--	90	--	--	16	--	30	18	.8
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	140	--	350	32	--	46	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	570	440	--	160	--	--	41	--	100	27	1.8
AUG											
10...	890	770	--	240	--	--	71	--	150	27	2.2
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
23...	350	260	--	100	--	--	24	--	43	21	1.0
30...	710	540	--	200	--	--	52	--	85	20	1.4
SEP											
01...	680	500	--	190	--	--	51	--	69	24	1.1
04...	--	--	159	--	398	59	--	--	--	--	--
06...	230	140	--	68	--	--	14	--	21	21	.6
26...	610	430	--	180	--	--	39	--	50	19	.9

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL DIS- SOLV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
UCT											
04...	--	--	4.2	230	0	190	2.3	310	27	--	707
11...	--	--	--	--	--	--	--	--	--	.4	--
24...	--	--	3.8	180	16	--	.4	320	25	--	673
31...	--	--	3.4	230	8	--	1.2	310	20	--	698
NOV											
13...	--	--	4.1	--	--	190	--	330	26	--	740
15...	--	--	4.5	--	--	110	--	230	16	--	467
22...	--	--	--	--	--	--	--	--	--	.3	--
30...	--	--	3.7	--	--	210	--	380	28	--	846
DEC											
10...	--	--	3.4	--	--	210	--	340	21	--	793
19...	--	--	--	--	--	--	--	--	--	.3	--
19...	--	--	2.9	--	--	210	--	370	24	--	832
30...	--	--	2.7	--	--	210	--	370	24	--	829
JAN											
02...	--	--	2.7	--	--	250	--	480	21	--	1040
20...	--	--	--	--	--	110	--	200	19	--	469
27...	--	--	3.6	--	--	71	--	380	24	--	690
31...	--	4.0	--	--	--	--	--	--	--	.3	--
FEB											
02...	--	--	--	--	--	--	--	--	--	.4	--
14...	--	--	9.4	--	--	250	--	440	380	--	1530
19...	--	--	7.1	--	--	160	--	270	270	--	1020
27...	--	--	8.6	--	--	190	--	370	360	--	1370
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	220	--	8.0	--	--	160	--	350	310	--	1230
08...	--	--	--	--	--	--	--	--	--	--	--
14...	260	--	9.0	--	--	190	--	430	370	--	1470
14...	--	--	--	--	--	--	--	--	--	1.1	--
23...	--	--	--	--	--	130	--	290	160	--	833
APR											
05...	280	--	9.0	--	--	190	--	480	370	--	1540
13...	--	--	--	--	--	--	--	--	--	--	--
16...	190	--	9.1	--	--	150	--	360	330	--	1230
22...	250	--	8.9	--	--	180	--	490	330	--	1440
26...	--	--	--	--	--	--	--	--	--	1.2	--
MAY											
03...	--	--	--	--	--	--	--	--	--	1.1	--
13...	340	--	11	--	--	170	--	--	450	--	1700
16...	--	--	--	--	--	--	--	--	--	--	--
19...	120	--	7.3	--	--	160	--	--	140	--	677
24...	260	--	9.7	--	--	190	--	370	320	--	1340
JUN											
02...	280	--	9.4	--	--	170	--	430	--	--	1390
06...	--	--	--	--	--	--	--	--	--	1.2	--
13...	200	--	8.4	--	--	140	--	370	280	--	1170
25...	96	--	7.0	--	--	100	--	--	--	--	702
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
02...	250	--	9.8	--	--	170	--	500	300	--	1390
06...	--	--	--	--	--	--	--	--	--	--	--
22...	36	--	6.4	--	--	71	--	220	33	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	46	--	--	--	--	--	--	--	.1	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	110	--	7.3	--	--	130	--	--	--	--	573
AUG											
10...	160	--	8.7	--	--	120	--	770	200	--	1610
14...	--	--	--	--	--	--	--	--	--	.3	--
14...	--	--	--	--	--	--	--	--	--	--	--
23...	50	--	6.8	--	--	88	--	280	52	--	592
30...	92	--	6.6	--	--	170	--	560	87	--	1140
SEP											
01...	74	--	5.0	--	--	180	--	580	73	--	997
04...	--	--	--	--	--	--	--	--	--	.3	--
06...	27	--	5.6	--	--	92	--	140	22	--	361
26...	55	--	4.9	--	--	180	--	490	30	--	954

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT											
04...	.96	8.40	--	--	--	--	--	--	--	--	--
11...	--	--	13	--	2.4	--	--	.430	--	--	--
24...	.92	14.7	--	--	--	--	--	--	--	--	--
31...	.95	19.6	--	--	--	--	--	--	--	--	--
NOV											
13...	1.01	46.0	--	--	--	--	--	--	--	--	--
15...	.64	149	--	--	--	--	--	--	--	--	--
22...	--	--	24	.60	.46	1.0	4.7	.441	--	--	--
30...	1.15	35.2	--	--	--	--	--	--	--	--	--
DEC											
10...	1.08	53.5	--	--	--	--	--	--	--	--	--
19...	--	--	17	1.4	.79	2.2	9.7	.421	--	--	--
19...	1.13	40.9	--	--	--	--	--	--	--	--	--
30...	1.13	42.5	--	--	--	--	--	--	--	--	--
JAN											
02...	1.41	104	--	--	--	--	--	--	--	--	--
20...	.64	324	--	--	--	--	--	--	--	--	--
27...	.94	194	--	--	--	--	--	--	--	--	--
31...	--	--	15	--	3.3	--	--	3.500	<1	2	12
FEB											
02...	--	--	11	--	1.6	3.2	--	.370	--	--	--
14...	2.08	1860	--	--	--	--	--	--	--	--	--
19...	1.39	771	--	--	--	--	--	--	--	--	--
27...	1.86	684	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	1.67	1160	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
14...	2.00	615	--	--	--	--	--	--	--	--	--
14...	--	--	52	.20	1.2	1.4	6.2	.250	--	--	--
23...	1.13	3940	--	--	--	--	--	--	--	--	--
APR											
05...	2.09	1310	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	505	--	--	--	--	--	--	--	--	--
22...	1.96	502	--	--	--	--	--	--	--	--	--
26...	--	--	68	.10	1.3	1.4	6.2	.220	--	--	--
MAY											
03...	--	--	165	.10	1.6	1.7	7.5	.240	--	--	--
13...	2.31	2520	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
19...	.92	338	--	--	--	--	--	--	--	--	--
24...	1.82	962	--	--	--	--	--	--	--	--	--
JUN											
02...	1.89	1730	--	--	--	--	--	--	--	--	--
06...	--	--	424	.10	2.1	2.2	9.7	.305	--	--	--
13...	1.59	1190	--	--	--	--	--	--	--	--	--
25...	.95	853	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
02...	1.89	206	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	1282	<.50	4.6	4.6	--	.845	15	3	<10
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	2.19	145	--	--	--	--	--	--	--	--	--
14...	--	--	428	<.50	--	2.8	--	.385	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
23...	.81	67.8	--	--	--	--	--	--	--	--	--
30...	1.55	86.8	--	--	--	--	--	--	--	--	--
SEP											
01...	1.36	78.3	--	--	--	--	--	--	--	--	--
04...	--	--	52	<.50	1.8	1.8	--	.100	--	--	--
06...	.49	12.8	--	--	--	--	--	--	--	--	--
26...	1.30	32.5	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	CUPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	690	--	30	--	--	--	--	--	13
24...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
NOV										
13...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	--	800	--	50	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
31...	9	495	18	65	<.5	9	<1	2	12	--
FEB										
02...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
03...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	1560	--	60	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
05...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	3500	--	170	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
26...	11	2100	52	1060	<.5	33	5	3	23	--
26...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--
04...	--	600	--	50	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

307

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
FEB								
27...	1150	195	735	387	--	--	--	--
MAR								
08...	1140	232	482	302	--	--	--	--
14...	1000	155	239	100	--	--	--	--
APR								
13...	1440	181	543	265	--	--	--	--
26...	0930	91	594	146	--	--	--	--
MAY								
03...	1030	366	2340	2310	--	--	--	--
16...	1155	174	589	277	--	--	--	--
JUN								
06...	0945	251	1240	840	22	25	28	6
JUL								
06...	1208	891	10300	24800	14	19	27	44
24...	1530	6980	21600	407000	8	10	12	6
25...	1335	3700	6760	67500	25	29	37	19
25...	1455	3650	8510	83900	21	25	32	19
25...	1530	3516	4315	41000	18	21	27	8
26...	1230	634	1840	3150	--	--	--	--
AUG								
14...	1020	164	614	272	--	--	--	--
16...	1325	--	164	--	--	--	--	--
SEP								
04...	1505	14	431	16	--	--	--	--
18...	1525	--	46	--	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL SIEVE DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM
FEB								
27...	--	--	--	52	--	--	--	--
MAR								
08...	--	--	--	69	--	--	--	--
14...	--	--	--	86	--	--	--	--
APR								
13...	--	--	--	50	--	--	--	--
26...	--	--	--	30	--	--	--	--
MAY								
03...	--	--	--	33	--	--	--	--
16...	--	--	--	83	--	--	--	--
JUN								
06...	46	92	100	--	--	--	--	--
JUL								
06...	68	95	100	--	0	18	88	100
24...	48	91	100	--	1	36	83	100
25...	74	96	100	--	--	--	--	--
25...	78	97	100	--	0	27	92	100
25...	46	98	100	--	1	28	90	100
26...	--	--	--	94	--	--	--	--
AUG								
14...	--	--	--	87	--	--	--	--
16...	--	--	--	92	--	--	--	--
SEP								
04...	--	--	--	97	--	--	--	--
18...	--	--	--	88	--	--	--	--

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	991	981	1120	1310	---	2130	2110	2250	2160	2040	1410	1520
2	988	976	1100	1340	---	2140	1740	1840	2200	2070	1510	1390
3	986	997	1100	1330	---	1950	2180	1880	1950	1880	1400	1380
4	1000	986	1100	1340	2250	2070	2220	1220	1980	1160	1620	1400
5	1000	981	1130	1310	2290	2060	2340	1220	1810	1320	1950	554
6	950	965	1120	1320	2280	2060	2130	2300	1780	1800	1640	547
7	947	948	1190	1220	2290	2150	2170	2300	1820	898	1950	558
8	936	950	1280	1210	2300	2150	2260	2290	1640	905	2060	556
9	937	947	1290	1220	2300	2210	2200	2250	1660	1560	2070	1160
10	935	955	1080	1200	2260	2210	2240	2340	1050	1520	2110	1160
11	975	947	1160	1180	2300	2220	2240	2580	1050	1580	2060	1160
12	972	994	1160	1180	2280	2220	2300	2560	1790	1560	1150	1340
13	961	1010	1150	1190	2290	2220	2250	2580	1690	1560	1150	1340
14	980	813	1150	1290	2340	2250	2280	2360	1810	1070	1170	1340
15	955	685	1100	1270	2340	2140	1800	1520	2000	1040	1580	1330
16	960	812	1120	1260	2160	2150	1780	1530	2000	1410	1580	1280
17	980	1010	1130	1260	2160	2140	1880	1460	2020	1420	1720	1230
18	975	1020	1120	963	1670	2120	1840	1390	2070	1120	1700	1260
19	986	1060	1110	711	1650	2090	1840	1080	2130	1460	1670	1220
20	978	1080	1120	706	1740	2000	1870	1990	2140	884	1690	1210
21	983	1080	1120	1120	1870	2020	1890	1990	2160	---	1510	1200
22	925	1100	1120	1120	1870	2000	2060	1980	1980	701	866	1200
23	927	1110	---	1130	1850	1520	2000	2080	1330	715	859	1190
24	921	1100	1140	1120	1860	1530	2160	2070	1090	795	1470	1190
25	963	1080	1150	1120	2140	1540	2090	2060	1040	801	1480	1210
26	966	1120	1130	1130	2140	1540	2030	2060	1680	803	1590	1250
27	963	1120	1130	974	2130	1810	1770	2050	1620	1500	1590	1230
28	963	1120	1110	---	2140	2100	2000	2070	1160	1490	1560	1210
29	974	1120	1120	---	---	2150	2160	2200	1760	1620	1510	1250
30	974	1120	1340	---	---	2180	2060	2210	1870	1620	1500	1200
31	971	---	1120	---	---	2180	---	2210	---	1410	1500	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

309

07229200 CANADIAN RIVER AT PURCELL, OK

LOCATION.--Lat 35°00'50", long 97°20'50", in NW¼ sec.7, T.6 N., R.1 W., McClain County, Hydrologic Unit 11090202, at bridge on U.S. Highway 77, 0.5 mi (0.8 km) east of Purcell, 1 mi (1.6 km) upstream from Walnut Creek, and at mile 184.9 (297.5 km).

DRAINAGE AREA.--25,939 mi² (67,182 km²) of which 4,801 mi² (12,434 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1952-53, 1957-58, 1960-63, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1974 to September 1975.

WATER TEMPERATURE: May 1974 to September 1975.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)
DEC 20...	1215	1100	8.3	13.0	1.0	--	--	31	--	130	325	32
JAN 30...	1100	800	7.9	.0	10	13.6	95	23	--	--	--	--
FEB 28...	1345	1620	8.4	8.5	33	--	--	17	465	130	302	40
MAR 21...	1000	1300	7.2	13.5	17	9.0	89	--	--	--	--	--
APR 03...	1340	1880	8.4	9.0	78	11.7	104	40	658	170	425	56
MAY 15...	1100	1480	8.2	21.5	--	9.0	105	56	--	--	--	--
JUN 14...	0920	1700	8.2	22.0	280	7.9	95	50	500	220	550	58
JUL 11...	1110	980	8.8	29.0	25	9.6	130	--	--	--	--	--
AUG 02...	1430	1600	8.9	32.0	55	10.2	146	37	188	12	30	38
SEP 05...	1030	490	--	26.5	--	7.7	99	48	--	--	--	--

DATE	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
DEC 20...	93	8.4	243	52	.5	11	1.2	7.0	8.2	37	3.51	--
JAN 30...	--	--	219	47	.4	16	.90	6.1	7.0	31	1.70	--
FEB 28...	186	8.6	288	263	.8	54	2.0	1.4	3.4	15	1.16	--
MAR 21...	--	--	385	139	.8	1135	--	5.6	--	--	1.30	--
APR 03...	202	9.3	394	312	.8	210	.20	3.2	3.4	15	.850	--
MAY 15...	--	--	267	276	.9	878	.40	3.1	3.5	16	.270	--
JUN 14...	188	10	304	266	.8	595	--	2.8	--	--	.700	--
JUL 11...	--	--	193	90	.4	51	<.50	1.9	1.9	--	.350	--
AUG 02...	124	10	343	166	.8	125	.60	2.7	2.7	15	.560	12
SEP 05...	--	--	96	33	.2	531	1.3	3.3	4.6	20	.740	--

07229200 CANADIAN RIVER AT PURCELL, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

311

07229300 WALNUT CREEK AT PURCELL, OK

LOCATION.--Lat 34°59'56", long 97°22'00", in NW¼NW¼ sec.13, T.6 N., R.2 W., McClain County, Hydrologic Unit 11090202, on downstream side of right bank pier of bridge on U.S. Highway 77, at south edge of Purcell, and at mile 1.0 (1.6 km).

DRAINAGE AREA.-- 202 mi² (523 km²).

PERIOD OF RECORD.--Water years 1951-55, 1958-65 (occasional low-flow measurements). October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,017.68 ft (310.189 m) Oklahoma State Highway Department datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 48.0 ft³/s (1.360 m³/s), 34,780 acre-ft/yr (42.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,200 ft³/s (770 m³/s) May 23, 1975, gage height, 16.80 ft (5.121 m), from rating curve extended above 8,200 ft³/s (232 m³/s) on basis of slope-area measurement at peak; no flow at times in 1966-67.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft³/s (314 m³/s) at 1100 June 9, gage height, 14.77 ft (4.502 m), no other peak above base of 3,000 ft³/s (85 m³/s); minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Nov. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.24	3.9	10	15	7.9	10	18	12	40	38	400
2	.33	.22	3.7	8.0	13	8.9	9.5	49	13	35	34	60
3	.32	.22	3.9	7.0	10	14	8.8	427	12	34	24	14
4	.32	.22	3.7	6.0	9.0	13	8.8	391	10	34	23	8.3
5	.32	.23	4.1	8.0	8.0	9.2	9.2	70	353	33	22	5.9
6	.32	.31	3.9	11	9.0	7.9	8.9	52	462	582	21	8.5
7	.32	.23	3.9	10	40	7.2	8.5	42	511	163	20	8.2
8	.37	.21	4.1	9.0	13	6.8	8.3	33	706	62	17	8.1
9	.39	.20	4.1	8.0	10	6.7	8.1	31	4620	45	18	8.3
10	.35	.20	4.1	7.0	9.0	6.7	288	30	521	38	16	8.1
11	.33	.20	3.9	11	10	6.7	603	30	174	34	17	8.9
12	.33	.21	3.9	10	20	6.6	34	29	103	33	17	9.8
13	.30	.27	5.2	12	18	6.5	24	28	72	32	16	10
14	.29	.51	4.5	14	17	6.4	15	27	58	30	15	15
15	.30	.90	4.5	16	16	6.3	12	27	50	30	15	16
16	.29	11	4.5	13	14	7.2	12	28	49	30	20	15
17	.30	3.5	3.9	9.0	13	9.5	12	27	48	567	16	14
18	.28	.88	4.3	12	13	33	71	28	47	159	16	14
19	.28	.85	4.5	44	12	23	32	31	38	66	39	14
20	.27	.91	4.5	21	11	17	212	306	29	53	39	12
21	.26	1.0	4.3	13	14	9.7	82	503	228	39	20	10
22	.26	.90	4.1	12	12	202	24	97	251	37	128	6.0
23	.30	.80	4.1	11	9.8	44	23	34	35	35	31	5.7
24	.27	.70	4.1	10	9.2	19	21	17	222	34	19	5.4
25	.27	3.0	4.5	14	8.3	15	21	11	96	33	11	5.2
26	.25	33	3.9	16	8.3	14	20	12	50	35	9.8	4.7
27	.25	9.4	3.7	18	8.0	14	19	13	47	30	17	5.0
28	.24	5.0	3.7	15	8.1	12	19	52	46	29	17	4.7
29	.24	4.1	4.1	13	---	11	20	93	44	29	14	4.7
30	.23	3.9	4.3	22	---	10	18	25	42	29	11	4.5
31	.23	---	8.0	18	---	9.7	---	20	---	29	18	---
TOTAL	9.15	83.31	131.9	408.0	357.7	570.9	1662.1	2581	8949	2459	738.8	714.0
MEAN	.30	2.78	4.25	13.2	12.8	18.4	55.4	83.3	298	79.3	23.8	23.8
MAX	.39	33	8.0	44	40	202	603	503	4620	582	128	400
MIN	.23	.20	3.7	6.0	8.0	6.3	8.1	11	10	29	9.8	4.5
AC-FT	18	165	262	809	709	1130	3300	5120	17750	4880	1470	1420
CAL YR 1978	TOTAL	8453.85	MEAN 23.2	MAX 3550	MIN .05	AC-FT 16770						
WTR YR 1979	TOTAL	18664.86	MEAN 51.1	MAX 4620	MIN .20	AC-FT 37020						

ARKANSAS RIVER BASIN

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'15", long 97°13'05", in NW¼SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hyrdologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek and 13 mi (20.9 km) east of Norman, and at mile 96.4 (111.1 km).

DRAINAGE AREA.--256 mi² (663 km²).

RESERVOIR CONTENTS RECORDS

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

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft (242 hm³) at elevation 1,049.4 ft (319.86 m), crest of drop inlet; 119,600 acre-ft (147 hm³) at elevation 1,039.0 ft (316.687 m), top of conservation pool; 13,640 acre-ft (16.8 hm³) at elevation 1,010.0 ft (307.848 m), minimum conservation pool. Dead storage, 1,200 acre-ft (1.48 hm³) below elevation 997.0 ft (303.886 m), sill of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies diverted to Del City, Midwest City, and Norman.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 147,100 acre-ft (181 hm³) May 30, 1975, elevation, 1,043.20 ft (317.967 m), minimum since conservation pool first reached 15,370 acre-ft (19.0 hm³) Nov. 30, 1965, elevation, 1,011.0 ft (308.153 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 125,500 acre-ft (155 hm³) July 8, elevation, 1,039.96 ft (316.980 m); minimum, 86,480 acre-ft (107 hm³) Mar. 16, elevation, 1,032.95 ft (314.843 m).

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1,034.07	92,000	--	--
Oct. 31	1,033.35	88,500	-3,500	1,106
Nov. 30	1,033.40	88,750	+ 250	507
Dec. 31	1,033.13	87,400	-1,350	526
CAL YR 78	--	--	-5,350	15,779
Jan 31	1,033.17	87,600	+200	647
Feb. 28	1,033.05	87,000	-600	895
Mar. 31	1,033.36	88,500	+1,500	949
Apr. 30	1,033.94	91,280	+2,780	945
May 31	1,037.75	112,200	+20,920	984
June 30	1,039.29	121,400	+9,200	1,136
July 31	1,039.29	121,400	0	1,137
Aug. 31	1,038.76	118,100	-3,300	1,407
Sept. 30	1,038.30	115,400	-2,700	1,164
WTR YR 79	--	--	+23,400	11,403

ARKANSAS RIVER BASIN

313

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT								
10...	1515	90840	460	8.3	22.0	--	9.7	112
DEC								
21...	1100	87580	461	--	--	--	--	--
JAN								
30...	1415	87630	420	8.0	.5	--	13.9	112
FEB								
28...	1445	86980	440	8.2	5.5	3.7	--	--
MAR								
21...	1445	87480	490	7.5	14.5	13	10.8	110
APR								
04...	1020	88580	450	7.4	11.0	14	10.7	99
MAY								
15...	1245	98540	440	8.5	23.0	24	10.3	123
JUN								
14...	1015	113400	430	8.4	24.5	9.2	8.0	90
JUL								
11...	1330	117600	390	8.8	31.0	2.6	9.9	138
AUG								
01...	1135	121300	389	8.6	27.5	3.3	7.8	102
SEP								
05...	1150	118400	380	--	28.0	3.0	6.2	82

DATE	HARD- NESS (MG/L AS CAC(3))	HARD- NESS, NONCAR- BONATE (MG/L CAC(3))	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT									
10...	180	13	28	26	22	21	.7	--	5.4
DEC									
21...	170	3	28	25	21	20	.7	--	5.0
JAN									
30...	190	16	30	27	22	20	.7	--	5.2
FEB									
28...	--	--	--	26	22	--	--	--	4.6
MAR									
21...	180	0	29	26	22	20	.7	--	5.6
APR									
04...	170	3	28	25	21	20	.7	--	5.2
MAY									
15...	170	14	30	24	21	20	.7	27	5.8
JUN									
14...	170	10	30	23	21	21	.7	26	5.0
JUL									
11...	150	5	29	20	18	20	.6	23	5.0
AUG									
01...	150	5	29	20	20	36	.7	25	4.9
SEP									
05...	170	6	30	22	19	19	.6	24	5.1

ARKANSAS RIVER BASIN

07229900 LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TUNS PER AC-FT)
OCT								
10...	200	0	160	1.6	12	37	246	.33
DEC								
21...	--	--	170	--	13	36	247	.34
JAN								
30...	--	--	170	--	7.0	36	243	.33
FEB								
28...	--	--	170	--	--	34	250	.34
MAR								
21...	--	--	180	--	9.2	37	239	.33
APR								
04...	--	--	170	--	11	30	237	.32
MAY								
15...	--	--	160	--	10	31	210	.29
JUN								
14...	--	--	160	--	14	36	239	.33
JUL								
11...	--	--	150	--	14	26	208	.28
AUG								
01...	--	--	150	--	13	25	215	.29
SEP								
05...	--	--	160	--	13	28	196	.27

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD, NEAR NORMAN, OK

LOCATION.--Lat 35°13'14", long 97°13'00", in NE&SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, at right bank of outlet channel, 170 ft (51.8 m) upstream from State Highway 9, 1,200 ft (365.8 m) downstream from Lake Thunderbird, 1.0 mi (1.6 km) upstream from Prairie Creek, 13.0 mi (20.9 km) east of Norman, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--257 mi² (666 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 965.62 ft (294.321 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 28, 1956, nonrecording gage 800 ft (243.8 m) downstream at same datum. Nov. 28, 1956, to Oct. 14, 1964, water-stage recorder at site 800 ft (243.8 m) downstream at same datum. Oct. 15, 1964, to Sept. 1, 1965, nonrecording gage at site 170 ft (51.8 m) downstream at same datum.

REMARKS.--Records fair. Flow regulated by Lake Thunderbird since March 1965 (station 07229900). In prior years occasional small diversions above station for irrigation.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 12 years (water years 1952-64), 58.9 ft³/s (1.668 m³/s), 42,640 acre-ft/yr (52.6 hm³/yr); (after regulation by Lake Thunderbird) 14 years, (water years 1966-79), 15.7 ft³/s (0.445 m³/s), 11,370 acre-ft/yr (14.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s (980 m³/s) May 25, 1957, gage height, 28.85 ft (8.793 m), from high-water mark, at site then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times in 1954-56, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s (9.06 m³/s) June 9, gage height, 5.25 ft (1.600 m); minimum daily discharge, 0.40 ft³/s (0.011 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.62	.61	.45	.53	.45	.64	.45	.48	.53	.45	.43
2	.59	.53	.59	.48	.53	.54	.55	.59	.53	.53	.42	.43
3	.65	.54	.53	.53	.53	.49	.58	1.3	.53	.53	.41	.40
4	.53	.62	.61	.53	.50	.45	.54	.53	.52	.53	.40	.40
5	.53	.68	.61	.53	.50	.45	.57	.47	.65	.58	.41	.40
6	.53	.79	.50	.52	.56	.45	.61	.46	.67	.78	.41	.41
7	.53	.61	.45	.53	.53	.48	.61	.45	.57	142	.40	.40
8	.60	.61	.45	.53	.50	.46	.59	.46	.75	142	.41	.40
9	.55	.61	.47	.53	.47	.46	.58	.45	54	194	.41	.40
10	.53	.59	.53	.53	.45	.44	1.0	.46	.54	256	.40	.40
11	.60	.57	.53	.50	.47	.45	.94	.45	.53	245	.41	.40
12	.61	.63	.53	.45	.45	.45	.45	.45	.53	245	.40	.45
13	.62	.65	.51	.42	.45	.45	.45	.45	.53	177	.40	.53
14	.69	.66	.53	.44	.46	.45	.45	.45	.53	131	.40	.50
15	.69	.74	.53	.45	.45	.45	.45	.45	.53	131	.40	.52
16	.69	.98	.53	.45	.45	.48	.45	.45	.53	60	.40	.51
17	.69	.68	.53	.45	.45	.51	.45	.45	.53	2.6	.40	.53
18	.69	.61	.53	.58	.45	.77	.63	.49	.53	.61	.40	.53
19	.72	.61	.53	.46	.45	.56	.49	.53	.53	79	.42	.53
20	.79	.61	.53	.52	.48	.49	.60	.76	.54	135	.40	.54
21	.76	.61	.53	.57	.45	.49	.47	1.0	.78	135	.52	.53
22	.73	.61	.53	.61	.45	.91	.45	.63	.75	134	.47	.53
23	.74	.61	.53	.60	.51	.47	.45	.54	.54	135	.40	.52
24	.72	.61	.54	.97	.46	.48	.45	.49	.72	78	.40	.50
25	.88	.67	.54	.66	.45	.52	.47	.45	.62	.45	.40	.50
26	.98	.66	.54	.61	.45	.48	.54	.45	.54	.64	.47	.53
27	.83	.54	.54	.52	.48	.53	.54	.63	.53	.45	.40	.52
28	.78	.61	.54	.52	.49	.53	.50	.53	.53	.45	.40	.64
29	.72	.61	.54	.53	---	.53	.52	.53	.53	.45	.41	.80
30	.69	.61	.54	.51	---	.54	.45	.47	.53	.45	.40	.53
31	.73	---	.54	.52	---	.54	---	.48	---	.45	.64	---
TOTAL	20.94	19.08	16.54	16.50	13.40	15.75	16.47	16.75	70.62	2506.25	13.06	14.71
MEAN	.68	.64	.53	.53	.48	.51	.55	.54	2.35	80.8	.42	.49
MAX	.98	.98	.61	.97	.56	.91	1.0	1.3	.54	256	.64	.80
MIN	.53	.53	.45	.42	.45	.44	.45	.45	.48	.45	.40	.40
AC-FT	42	38	33	33	27	31	33	33	140	4970	26	29
CAL YR 1978	TOTAL	197.57	MEAN	.54	MAX	2.1	MIN	.43	AC-FT	392		
WTR YR 1979	TOTAL	2740.07	MEAN	7.51	MAX	256	MIN	.40	AC-FT	5430		

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-65, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1953 to September 1964.

WATER TEMPERATURE: October 1953 to September 1964.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)
DEC 21...	1045	.73	940	7.3	10.0	3.0	--	--	13	334	70	175
JAN 30...	1515	.54	720	7.1	4.0	16	11.7	91	4	--	--	--
FEB 28...	1515	.45	720	7.8	9.5	8.0	--	--	8	235	53	144
MAR 21...	1535	.45	935	7.4	14.5	6.0	7.9	81	14	--	--	--
APR 04...	0945	.54	780	7.5	8.0	12	10.1	88	8	231	49	123
MAY 15...	1340	.45	810	7.8	24.0	--	7.7	94	8	--	--	--
JUN 14...	1045	.54	710	7.7	24.0	9.0	6.1	75	7	214	49	123
JUL 11...	1230	246	460	8.1	25.5	12	8.3	105	14	--	--	--
AUG 01...	1100	.54	720	7.7	26.5	4.0	6.7	86	11	192	40	100
SEP 05...	1240	.40	680	--	28.0	4.0	5.1	67	8	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
DEC 21...	37	109	3.6	34	106	.4	6	.20	1.0	1.2	5.4	--
JAN 30...	--	--	--	34	74	.3	79	.10	.89	.99	4.4	.100
FEB 28...	24	73	2.5	20	75	.2	20	.10	1.0	1.1	4.9	.190
MAR 21...	--	--	--	40	99	.6	8	--	.78	--	--	.100
APR 04...	26	65	2.6	29	80	.3	30	.10	.90	1.0	4.4	.050
MAY 15...	--	--	--	--	89	.2	12	<.10	1.2	--	--	.015
JUN 14...	26	67	2.5	22	72	.3	13	--	<.10	.10	--	.035
JUL 11...	--	--	--	19	30	.2	14	<.50	1.1	1.1	--	--
AUG 01...	22	47	3.6	20	59	.3	10	<.50	1.1	1.1	--	.040
SEP 05...	--	--	--	22	77	.2	--	<.50	1.3	1.3	--	.010

317

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD, NEAR NORMAN, OK--Continued

[illegible]

07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'25", long 96°55'55", near northwest corner sec.18, T.8 N., R.4 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi (2.4 km) downstream from Dance Creek, 5.0 mi (8.0 km) south of Tecumseh, and at mile 77.2 (124.2 km).

DRAINAGE AREA.--456 mi² (1,181 km²).

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft (273.869 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi (30.9 km) upstream (station 07229900).

AVERAGE DISCHARGE.--(prior to regulation by Lake Thunderbird) 21 years (water years 1944-64), 149 ft³/s (4.22 m³/s), 107,900 acre-ft/yr (133.0 hm³/yr); (since regulation by Lake Thunderbird) 15 years (water years 1965-79), 74.4 ft³/s (2.107 m³/s), 53,900 acre-ft/yr (66.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s) May 25, 1957, gage height, 18.84 ft (5.742 m); maximum gage height, 19.68 ft (5.998 m) May 18, 1949; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft (7.797 m), from flood mark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,020 ft³/s (142 m³/s) June 9, gage height, 16.34 ft (4.980 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.63	.63	2.3	3.5	5.2	59	7.1	23	13	8.1	419
2	.00	.63	.58	2.0	4.0	7.1	14	44	22	9.7	3.3	55
3	.00	.77	.55	2.2	4.5	18	9.2	715	21	8.1	3.3	30
4	.00	.57	.84	2.5	4.8	8.6	8.6	415	20	7.1	1.3	20
5	.00	.77	2.2	3.0	5.0	5.2	7.1	107	19	6.1	.77	15
6	.00	1.6	2.1	2.1	10	4.4	6.6	45	136	352	.57	10
7	.00	3.6	2.1	1.8	20	4.4	5.7	23	345	259	.50	8.0
8	.00	1.6	1.8	1.7	10	3.6	5.7	13	221	133	.50	7.0
9	.00	.93	1.8	2.0	8.0	4.0	4.8	8.6	3820	119	.32	6.0
10	.00	.57	2.5	2.4	7.0	3.6	259	7.1	2790	272	.44	5.0
11	.00	.50	2.9	2.9	10	3.3	1910	5.7	660	287	39	4.5
12	.00	.63	3.3	3.4	23	4.4	213	5.2	297	297	1.1	4.0
13	.00	1.3	2.9	4.0	8.6	2.9	109	4.0	142	272	.50	3.6
14	.00	4.8	2.1	2.1	10	2.9	67	2.9	80	126	.32	2.9
15	.00	3.6	2.5	2.5	9.7	2.9	47	1.8	51	119	1.6	2.5
16	.00	44	2.5	3.0	6.1	4.0	31	1.3	35	105	5.7	2.5
17	.00	21	2.1	3.5	5.7	9.2	23	.93	22	95	.19	2.5
18	.00	3.3	2.5	4.0	6.1	65	52	1.1	15	28	.00	2.5
19	.00	1.8	2.9	30	8.1	99	39	1.1	12	17	18	3.3
20	.00	1.3	2.9	4.4	10	84	502	366	11	121	16	7.1
21	.00	.93	2.1	1.6	8.6	19	180	705	8.1	121	4.4	7.1
22	.00	1.1	1.8	1.8	8.1	238	49	370	370	121	169	4.4
23	.00	1.6	1.8	3.6	6.6	82	25	117	51	121	17	3.3
24	.00	1.1	2.1	2.5	4.8	25	17	51	638	121	4.8	2.9
25	.00	2.1	1.8	3.6	4.4	15	14	31	678	26	2.9	2.5
26	.00	8.1	1.6	6.1	4.8	12	10	28	300	12	2.1	2.2
27	.00	4.4	1.8	7.5	4.8	10	9.7	177	75	12	5.2	2.0
28	.00	1.6	2.9	6.0	5.2	9.7	10	97	37	8.1	4.0	1.7
29	.00	.77	2.9	5.0	---	20	9.2	115	23	5.7	1.8	1.4
30	.02	.68	2.6	4.5	---	23	8.1	43	16	3.6	1.1	1.0
31	.25	---	2.5	4.0	---	11	---	29	---	4.8	224	---
TOTAL	.27	116.28	65.60	128.0	221.4	806.4	3704.7	3537.83	10938.1	3202.2	537.81	638.9
MEAN	.009	3.88	2.12	4.13	7.91	26.0	123	114	365	103	17.3	21.3
MAX	.25	44	3.3	30	23	238	1910	715	3820	352	224	419
MIN	.00	.50	.55	1.6	3.5	2.9	4.8	.93	8.1	3.6	.00	1.0
AC=FT	.5	231	130	254	439	1600	7350	7020	21700	6350	1070	1270
CAL YR 1978	TOTAL	11371.17	MEAN	31.2	MAX	3130	MIN	.00	AC=FT	22550		
WTR YR 1979	TOTAL	23897.49	MEAN	65.5	MAX	3820	MIN	.00	AC=FT	47400		

ARKANSAS RIVER BASIN

319

07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", in NE¼ sec.22, T.6 N., R.7 W., Seminole County, Hydrologic Unit 11090203, near left abutment on downstream side of county road bridge, 2.8 mi (4.5 km) northwest of Sasakwa, 8.7 mi (14.0 km) downstream from Salt Creek, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--865 mi² (2,240 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 749.21 ft (228.359 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum.

REMARKS.--Records poor prior to March and good thereafter. Flow regulated by Lake Thunderbird 72.3 mi (116.3 km) upstream since March 1965 (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 23 years (water years 1943-65), 398 ft³/s (11.27 m³/s), 288,400 acre-ft/yr (356 hm³/yr); (Since regulation by Lake Thunderbird) 14 years (water years 1966-79), 251 ft³/s (7.108 m³/s), 181,800 acre-ft/yr (224 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,600 ft³/s (1,260 m³/s) May 11, 1950, gage height, 33.48 ft (10.205 m); no flow at times most years after 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft³/s (314 m³/s) June 10, gage height, 27.14 ft (8.272 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.40	.70	3.0	3.8	110	52	120	196	24	556
2	.00	.00	.30	.50	3.5	4.2	75	82	95	158	22	413
3	.00	.00	.25	.40	4.0	20	63	522	84	129	22	149
4	.00	.00	.20	.30	4.5	19	29	1030	72	103	22	75
5	.00	.00	.19	.50	5.0	12	19	870	62	79	17	45
6	.00	.00	.18	.40	15	14	14	460	288	77	16	32
7	.00	.00	.18	.35	50	9.3	11	231	701	629	14	24
8	.00	.00	.30	.33	15	5.7	9.2	143	576	918	11	19
9	.00	.00	.25	.32	10	4.2	6.8	101	5260	501	9.4	14
10	.00	.00	.23	.30	8.0	2.9	7.6	79	9240	328	8.8	12
11	.00	.00	.22	.35	15	2.4	1530	67	7980	325	8.1	9.9
12	.00	.00	.22	.40	60	2.2	1850	56	5080	341	26	8.2
13	.00	.00	.22	.35	50	1.8	1500	47	3520	299	41	6.6
14	.00	.00	.23	.30	42	1.5	852	41	1590	302	19	5.0
15	.00	.00	.25	.25	10	1.4	484	35	938	202	11	3.8
16	.00	.35	.32	.40	8.0	1.6	303	30	635	197	14	2.8
17	.00	2.3	.35	1.2	10	4.2	217	26	482	172	27	2.4
18	.00	1.4	.34	3.5	6.0	77	175	22	379	131	13	2.1
19	.00	.80	.32	25	7.0	161	207	20	311	131	13	2.2
20	.00	.60	.30	5.0	8.0	503	202	21	268	77	14	3.2
21	.00	.50	.29	2.5	4.9	213	705	256	234	113	41	10
22	.00	.54	.28	2.6	3.5	467	538	1690	226	156	96	9.8
23	.00	.58	.27	3.0	3.5	567	255	1090	424	155	239	6.9
24	.00	.50	.27	2.9	2.8	215	167	582	471	154	77	6.5
25	.00	.44	.27	3.5	2.7	103	123	283	926	153	37	5.3
26	.00	16	.29	4.5	3.0	67	93	170	1690	114	23	4.2
27	.00	2.1	.31	7.0	3.2	37	80	236	1130	55	16	7.5
28	.00	1.0	.30	6.0	3.5	26	71	324	608	41	12	1.2
29	.00	.80	.35	4.5	---	22	63	545	357	35	9.5	1.4
30	.00	.60	.32	4.0	---	21	58	328	247	32	8.1	1.4
31	.00	---	1.0	3.5	---	42	---	177	---	26	12	---
TOTAL	.00	28.51	9.20	84.85	361.1	2631.2	9817.6	9616	43994	6329	922.9	1432.65
MEAN	.000	.95	.30	2.74	12.9	84.9	327	310	1466	204	29.8	47.8
MAX	.00	16	1.0	25	60	567	1850	1690	9240	918	239	556
MIN	.00	.00	.18	.25	2.7	1.4	6.8	20	62	26	8.1	.75
AC-FT	.00	57	18	168	716	5220	19470	19070	87260	12550	1830	2840
CAL YR 1978	TOTAL	48899.69	MEAN	134	MAX	4180	MIN	.00	AC-FT	96990		
WTR YR 1979	TOTAL	75227.01	MEAN	206	MAX	9240	MIN	.00	AC-FT	149200		

ARKANSAS RIVER BASIN

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1955 to current year.

WATER TEMPERATURE: October 1955 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month. 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, 138,000 micromhos Oct. 31, 1956; minimum daily, 118 micromhos Sept. 11, 1977.

WATER TEMPERATURE: Maximum daily, 38.5°C July 13, 1978; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 5,860 micromhos Dec. 6; minimum daily, 258 micromhos June 10.

WATER TEMPERATURE: Maximum daily, 35.0°C Aug. 4; minimum daily, 0.5°C Feb. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT										
05...	1700	--	80020	.00	2130	7.8	23.0	--	--	--
15...	1730	--	80020	.00	2180	8.1	20.5	--	--	--
25...	1553	--	80020	.00	2240	7.7	21.5	--	--	--
NOV										
05...	1455	--	80020	.00	2230	8.4	19.0	--	--	--
15...	1516	--	80020	.00	1880	8.2	11.5	--	--	--
17...	0800	1028	9740	2.3	1780	7.6	4.0	24	13.2	104
27...	1514	--	80020	2.1	863	7.4	13.0	--	--	--
DEC										
05...	1516	--	80020	.19	5790	7.8	11.0	--	--	--
15...	1515	--	80020	.25	4520	7.8	8.0	--	--	--
16...	1220	1028	9740	.32	4150	8.1	7.5	5.0	11.0	94
25...	1555	--	80020	.27	3700	8.0	9.0	--	--	--
JAN										
03...	1705	--	80020	.40	4690	7.6	1.0	--	--	--
16...	1532	--	80020	.40	3470	7.8	2.0	--	--	--
25...	1510	--	80020	3.5	804	7.6	3.5	--	--	--
FEB										
05...	1557	--	80020	5.0	1670	7.6	1.0	--	--	--
15...	1600	--	80020	10	1390	7.5	7.5	--	--	--
25...	1626	--	80020	2.7	2500	7.5	10.0	--	--	--
28...	1530	1028	9740	3.0	1800	7.6	9.0	39	12.7	113
MAR										
05...	1630	--	80020	10	2570	8.4	14.5	--	--	--
15...	1540	--	80020	1.4	2260	8.5	12.0	--	--	--
21...	1145	1028	9740	199	730	6.9	14.0	>1000	8.6	86
25...	1600	--	80020	94	772	8.1	14.5	--	--	--
APR										
03...	1230	1028	9740	60	1450	7.9	10.0	85	10.4	95
05...	1728	--	80020	18	1420	7.9	19.0	--	--	--
15...	1535	--	80020	445	413	7.9	21.0	--	--	--
25...	1708	--	80020	115	960	7.5	25.5	--	--	--
MAY										
03...	1400	1028	9740	711	920	7.4	16.5	>1000	8.3	86
05...	1821	--	80020	764	407	7.4	17.5	--	--	--
15...	1612	--	80020	34	1560	8.3	28.0	--	--	--
25...	1516	--	80020	253	627	7.3	23.0	--	--	--
JUN										
05...	1115	--	80020	60	1410	7.9	24.0	--	--	--
06...	1130	1028	9740	441	930	7.9	22.5	>1000	6.1	73
15...	1843	--	80020	815	587	8.0	27.0	--	--	--
25...	1355	--	80020	1091	642	7.5	24.0	--	--	--
JUL										
03...	1100	1028	9740	132	1150	7.3	27.5	75	7.2	93
05...	1732	--	80020	75	1270	7.8	33.0	--	--	--
15...	1625	--	80020	--	632	7.7	32.5	--	--	--
25...	1600	--	80020	154	630	8.0	31.0	--	--	--
AUG										
05...	1736	--	80020	17	1960	8.2	34.5	--	--	--

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	
AUG											
15...	1850	--	80020	11	1750	8.3	32.0	--	--	--	
25...	1837	--	80020	31	911	7.6	29.0	--	--	--	
29...	1230	1028	9740	9.8	1700	7.5	31.0	47	6.4	89	
SEP											
05...	1755	--	80020	41	683	7.9	31.0	--	--	--	
12...	1215	1028	9740	8.3	1400	7.0	23.0	39	7.5	89	
15...	1824	--	80020	3.2	1790	8.0	25.0	--	--	--	
25...	1845	--	80020	5.3	2020	7.9	26.0	--	--	--	
OCT											
05...	370	96	--	56	--	--	55	--	290	63	
15...	390	98	--	57	--	--	59	--	300	62	
25...	390	110	--	60	--	--	59	--	310	63	
NOV											
05...	390	86	--	59	--	--	58	--	330	64	
15...	360	65	--	62	--	--	51	--	240	58	
17...	--	--	160	--	400	140	--	--	--	--	
27...	160	63	--	38	--	--	15	--	110	59	
DEC											
05...	--	--	--	--	--	--	120	--	820	--	
15...	780	550	--	160	--	--	93	--	630	63	
16...	1271	--	260	--	650	150	--	350	--	--	
25...	670	430	--	140	--	--	78	--	510	62	
JAN											
03...	710	440	--	140	--	--	88	--	710	68	
16...	--	--	--	110	--	--	--	--	480	--	
25...	--	--	--	--	--	--	16	--	99	--	
FEB											
05...	290	140	--	68	--	--	29	--	200	60	
15...	260	81	--	55	--	--	30	--	180	60	
25...	280	130	--	96	--	--	8.8	--	350	73	
28...	--	--	--	--	--	--	--	--	--	--	
MAR											
05...	440	250	--	97	--	--	47	--	340	63	
15...	380	240	--	74	--	--	47	--	--	--	
21...	--	--	32	--	80	47	--	--	--	--	
25...	170	74	--	39	--	--	18	--	87	52	
APR											
03...	--	--	--	--	--	--	--	--	--	--	
05...	270	130	--	65	--	--	27	--	180	58	
15...	120	36	--	29	--	--	11	--	38	52	
25...	210	91	--	50	--	--	21	--	110	52	
MAY											
03...	--	--	11	--	28	59	--	--	--	--	
05...	120	27	--	28	--	--	12	--	35	38	
15...	350	140	--	80	--	--	36	--	180	66	
25...	170	46	--	40	--	--	16	--	60	43	
JUN											
05...	320	130	--	72	--	--	34	--	160	52	
06...	--	--	--	--	--	--	--	--	--	--	
15...	160	49	--	39	--	--	15	--	55	42	
25...	170	49	--	43	--	--	15	--	63	44	
JUL											
03...	--	--	45	--	112	26	--	113	--	--	
05...	290	100	--	68	--	--	30	--	130	49	
15...	210	45	--	41	--	--	25	--	56	37	
25...	190	34	--	38	--	--	24	--	49	35	
AUG											
05...	380	170	--	75	--	--	47	--	250	74	
15...	310	140	--	62	--	--	37	--	220	60	
25...	170	78	--	39	--	--	18	--	110	58	
29...	--	--	--	--	--	--	--	--	--	--	
SEP											
05...	160	57	--	35	--	--	17	--	70	62	
12...	--	--	74	--	--	30	--	--	--	--	
15...	340	150	--	76	--	--	36	--	220	71	
25...	350	180	--	77	--	--	38	--	260	74	

ARKANSAS RIVER BASIN

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
UCT											
05...	--	--	6.8	330	0	270	8.4	24	510	--	1170
15...	--	--	8.3	350	0	290	4.4	19	520	--	1210
25...	--	--	7.5	340	0	280	11	21	570	--	1250
NOV											
05...	--	--	9.5	--	--	300	--	20	540	--	1200
15...	--	--	7.5	--	--	300	--	25	430	--	1020
17...	--	--	--	--	--	--	--	--	--	.3	--
27...	--	--	5.1	--	--	94	--	4.0	210	--	465
DEC											
05...	--	--	11	--	--	210	--	61	1800	--	3370
15...	--	--	8.2	--	--	230	--	38	1400	--	2590
16...	--	8.9	--	--	--	--	--	36	1243	.2	--
25...	--	--	7.2	--	--	240	--	33	1100	--	2150
JAN											
03...	--	--	8.2	--	--	270	--	9.0	1400	--	2540
16...	--	--	7.2	--	--	230	--	--	970	--	1870
25...	--	--	3.5	--	--	98	--	17	170	--	427
FEB											
05...	200	--	4.4	--	--	150	--	35	390	--	895
15...	180	--	3.0	--	--	180	--	32	310	--	762
25...	360	--	5.2	--	--	150	--	35	600	--	1410
28...	--	--	--	--	--	--	--	--	--	.2	--
MAR											
05...	340	--	4.0	--	--	190	--	49	630	--	1380
15...	340	--	4.9	--	--	140	--	61	600	--	1290
21...	--	--	--	--	--	--	--	--	--	.6	--
25...	90	--	3.3	--	--	98	--	20	170	--	454
APR											
03...	--	--	--	--	--	--	--	--	--	.3	--
05...	180	--	4.0	--	--	140	--	33	330	--	790
15...	41	--	3.0	--	--	82	--	16	60	--	229
25...	110	--	4.5	--	--	120	--	20	220	--	545
MAY											
03...	--	--	--	--	--	--	--	--	--	.2	--
05...	38	--	2.9	--	--	92	--	11	62	--	214
15...	180	--	4.6	--	--	210	--	36	360	--	857
25...	64	--	3.8	--	--	120	--	14	110	--	382
JUN											
05...	160	--	4.1	--	--	190	--	29	320	--	766
06...	--	--	--	--	--	--	--	--	--	.2	--
15...	58	--	3.1	--	--	110	--	20	110	--	335
25...	66	--	2.9	--	--	120	--	20	120	--	362
JUL											
03...	--	4.7	--	--	--	--	--	--	--	.2	--
05...	130	--	4.3	--	--	190	--	26	280	--	724
15...	61	--	4.6	--	--	160	--	8.5	100	--	362
25...	54	--	4.6	--	--	160	--	18	89	--	352
AUG											
05...	260	--	5.9	--	--	210	--	39	480	--	1080
15...	220	--	4.7	--	--	170	--	41	430	--	971
25...	110	--	3.6	--	--	94	--	17	220	--	523
29...	--	--	--	--	--	--	--	--	--	.2	--
SEP											
05...	74	--	4.4	--	--	100	--	10	150	--	379
12...	--	--	--	--	--	--	--	--	--	.5	--
15...	230	--	5.0	--	--	190	--	19	430	--	964
25...	270	--	5.7	--	--	170	--	20	520	--	1110

323

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4220	3560	1490	2040	686	1550	1030	912	1680	743
2		---	5230	4220	1470	1890	2600	792	1130	1050	1780	374
3		---	5340	4690	1520	1900	1460	934	1280	1070	1930	504
4		---	5600	---	1650	2420	1340	464	1560	1100	1840	606
5		---	5790	---	1670	2510	1420	407	1410	1270	1960	683
6		---	5860	---	1490	2540	1290	550	1090	1320	1990	797
7		---	5240	---	1440	3210	1280	737	631	455	2030	917
8		---	5310	---	1640	2600	1280	864	627	407	2080	1070
9		---	5560	---	---	2120	1400	945	288	512	2160	1150
10		---	5680	---	1890	3040	1460	1030	258	592	2080	1260
11		---	5580	---	1910	2270	472	1160	284	578	2110	1320
12		---	5290	1830	1860	5100	313	1400	279	574	2450	1410
13		---	4860	---	3200	4660	297	1400	---	575	1790	1550
14		---	4620	---	2130	3720	364	1490	482	572	2380	1650
15		---	4520	---	1540	2440	413	1560	587	632	1750	1790
16		1640	4220	3470	1820	2270	470	1650	681	675	1710	1790
17		1780	4240	2900	2220	---	516	1650	754	682	2800	1830
18		1360	4000	2550	2020	2360	574	1750	832	828	1780	1840
19		1570	3880	934	1740	2210	1050	1850	902	933	1480	1880
20		1690	3930	936	1750	854	858	1810	958	1030	1530	1840
21		1820	3910	527	1740	665	764	970	1020	918	2420	1970
22		1780	3900	482	1750	706	435	421	1000	702	1560	2070
23		1720	3840	594	2620	504	664	444	750	640	630	2040
24		1610	3840	686	2500	632	820	537	985	637	680	2450
25		1440	3700	804	2500	772	960	627	642	630	911	2020
26		1930	3790	803	2120	927	1010	765	380	736	1180	2000
27		863	3780	912	1900	920	1010	811	422	977	1370	2020
28		2970	3800	1130	1700	994	1100	818	537	1250	1600	2050
29		2790	3720	---	---	1120	1520	447	720	1480	1800	2340
30		2920	3690	1230	---	---	1460	677	856	1560	1960	2340
31		---	3420	1410	---	1650	---	905	---	1590	2090	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	12.0	1.0	1.5	14.5	15.0	19.0	26.0	29.0	32.0	25.5
2		---	18.0	1.5	2.5	11.5	15.0	19.0	22.0	31.0	33.0	27.0
3		---	8.0	1.0	1.5	9.0	12.0	17.0	22.0	31.5	34.0	27.5
4		---	8.0	---	1.5	12.0	16.0	15.0	23.0	33.0	35.0	30.0
5		---	11.0	---	1.0	14.5	19.0	17.5	24.0	33.0	34.5	31.0
6		---	6.5	---	1.0	14.0	21.0	19.5	22.0	28.5	34.0	29.5
7		---	3.0	---	2.0	18.0	22.0	24.0	26.0	28.0	33.0	28.0
8		---	3.0	---	1.5	15.0	21.5	26.0	27.0	29.5	35.0	28.0
9		---	3.0	---	---	15.0	22.5	26.0	22.0	31.0	32.5	30.0
10		---	4.5	---	2.5	17.0	16.5	23.0	22.0	31.5	33.0	30.0
11		---	6.0	---	4.5	17.5	15.0	18.5	23.0	32.0	31.0	28.0
12		---	7.5	3.5	2.5	17.0	16.5	18.0	24.0	31.5	26.0	27.0
13		---	7.5	---	2.0	20.5	18.0	24.0	---	32.0	30.0	26.5
14		---	6.0	---	11.0	16.5	19.5	26.5	25.5	32.0	34.5	25.0
15		---	6.0	---	7.5	12.0	21.0	28.0	27.0	32.5	32.0	25.0
16		10.0	8.0	2.0	1.0	10.0	22.5	27.5	27.0	32.0	33.0	22.5
17		13.0	5.0	3.0	.5	---	23.0	26.0	27.0	30.0	32.0	25.5
18		11.0	10.5	4.0	3.0	16.5	19.0	26.5	27.5	25.5	32.5	23.0
19		12.5	15.0	4.5	6.5	16.5	19.0	28.0	27.5	26.0	31.0	22.0
20		10.0	14.0	4.0	4.5	15.5	19.0	25.0	27.5	29.0	31.5	22.0
21		9.0	10.0	4.5	8.5	16.0	18.5	22.0	29.5	29.5	31.0	25.0
22		10.5	7.0	4.0	14.5	15.0	19.0	20.0	27.0	27.5	28.5	25.0
23		10.0	11.5	2.5	12.0	14.5	21.5	22.0	28.5	30.0	28.0	26.0
24		12.5	5.0	1.5	5.0	13.5	25.0	22.0	24.0	30.0	31.0	27.0
25		14.5	9.0	3.5	10.0	14.5	25.5	23.0	24.0	31.0	29.0	26.0
26		16.5	7.0	2.0	11.0	18.0	19.5	22.0	25.0	29.5	30.0	27.5
27		13.0	4.0	3.0	1.5	18.0	16.5	21.0	27.5	28.0	30.0	27.5
28		11.0	6.0	2.0	10.5	17.5	17.0	24.0	29.0	34.0	33.0	26.5
29		13.0	8.0	---	---	20.5	20.0	22.5	31.0	34.0	33.5	26.5
30		10.5	2.0	2.0	---	---	22.5	24.0	29.5	33.0	34.5	28.0
31		---	1.5	1.5	---	22.0	---	26.5	---	32.0	25.5	---

ARKANSAS RIVER BASIN

07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'32", long 96°14'24", in NE¼SW¼ sec.22 T.6 N., R.10 E., Hughes County, Hydrologic Unit 11090202, near left bank on downstream side of pier of bridge on old U.S. Highway 75, 0.5 mi (0.8 km) northeast of Calvin, 2.4 mi (3.9 km) upstream from Shawnee Creek, 8.5 mi (13.7 km) downstream from Little River, and at mile 93.9 (151.1 km).

DRAINAGE AREA.--27,952 mi² (72,396 km²), of which 4,801 mi² (12,435 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area, WSP 1391: 1941.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft (208.093 m) National Geodetic Vertical Datum of 1929. January 1905 to December 1908, nonrecording gage at site 0.8 mi (1.3 km) upstream at datum 4.00 ft (1.219 m) higher. Oct. 1, 1938, to Aug. 12, 1944, nonrecording gage at present site and datum. Aug. 13, 1944 to July 31, 1977 water-stage recorder at present site and datum 2.00 ft (0.611 m) higher.

REMARKS.--Records poor. Occasional slight regulation by dams in New Mexico and Texas.

AVERAGE DISCHARGE.--40 years (water years 1906, 1939-42, 1945-79), 1,563 ft³/s (44.26 m³/s), 1,132,000 acre-ft/yr (1.40 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174,000 ft³/s (4,930 m³/s) May 11, 1950, gage height, 17.35 ft (5.288 m); maximum gage height, 21.00 ft (6.401 m), Aug. 7, 1906, from floodmark, site and datum then in use; no flow at times in 1939, 1954, 1956, 1966-67.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,200 ft³/s (1,220 m³/s) unknown June 10, gage height, 10.3 ft (3.14 m), no other peaks above base of 25,000 ft³/s (708 m³/s); minimum daily, 0.18 ft³/s (0.005 m³/s) Oct. 7, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	5.1	34	20	315	198	2050	206	473	688	498	281
2	.40	5.1	31	33	228	206	1480	186	333	606	412	1980
3	.20	5.6	29	39	190	321	854	1460	251	515	321	866
4	.20	5.6	29	35	175	371	1980	4550	175	442	303	733
5	.20	5.9	24	39	182	435	1930	6060	136	450	303	364
6	.36	8.2	25	39	194	893	351	2780	1620	744	364	303
7	.18	11	24	35	391	473	351	578	7640	2970	315	237
8	.36	10	18	33	378	327	405	947	8310	3960	219	198
9	.90	14	24	32	228	256	398	667	14100	2700	179	171
10	.54	13	24	34	219	210	473	606	30500	1460	139	139
11	.36	12	20	34	202	175	6710	606	11700	1130	119	109
12	.18	11	36	39	228	145	5900	412	2030	947	111	84
13	.36	11	34	33	232	116	4370	228	5180	779	114	73
14	.36	10	31	26	182	95	2620	206	3190	657	148	116
15	.36	19	25	35	171	73	1480	333	2260	559	142	99
16	.36	33	23	32	139	78	880	678	1650	427	321	76
17	.36	43	27	39	119	104	721	292	1360	841	237	52
18	.36	38	33	63	92	74	688	154	1400	1850	315	46
19	.36	29	32	136	121	2490	791	86	1200	2320	210	43
20	1.3	38	32	194	175	3190	1070	54	961	733	130	48
21	1.8	82	31	384	198	2000	779	2430	854	420	114	43
22	2.1	73	33	506	466	2490	1950	5830	2130	351	194	40
23	13	56	32	309	358	4440	1000	4330	4190	412	384	39
24	5.1	47	36	202	303	4820	710	2430	2700	281	626	50
25	4.6	42	30	164	523	3190	490	1340	5630	287	287	40
26	5.4	92	25	161	626	1950	391	1030	5390	4850	206	33
27	5.1	219	23	194	391	1340	309	578	3130	4480	219	31
28	4.9	130	27	442	298	767	223	2380	2460	2800	164	38
29	5.1	63	30	327	---	568	182	1230	1830	1560	119	35
30	5.1	42	29	237	---	490	164	1850	920	961	92	33
31	5.4	---	18	164	---	450	---	710	---	597	97	---
TOTAL	65.70	1173.5	869	4060	7324	32735	41700	45227	123703	41777	7402	6400
MEAN	2.12	39.1	28.0	131	262	1056	1390	1459	4123	1348	239	213
MAX	13	219	36	506	626	4820	6710	6060	30500	4850	626	1980
MIN	.18	5.1	18	20	92	73	164	54	136	281	92	31
AC-FT	130	2330	1720	8050	14530	64930	82710	89710	245400	82860	14680	12690
CAL YR 1978	TOTAL	250243.64	MEAN	686	MAX	24400	MIN	.18	AC-FT	496400		
WTR YR 1979	TOTAL	312436.20	MEAN	856	MAX	30500	MIN	.18	AC-FT	619700		

ARKANSAS RIVER BASIN

327

07231500 CANADIAN RIVER AT CALVIN, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-53, 1960-61, 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1965 to current year.

WATER TEMPERATURE: July 1965 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

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, 11,400 micromhos Nov. 17, 1966; minimum daily, 205 micromhos Nov. 1, 1972.

WATER TEMPERATURE: Maximum daily, 34.0°C July 7, 1975; minimum, 0.0°C on many days during the winter periods.

EXTREMES FOR CURRENT YEAR.-

SPECIFIC CONDUCTANCE: Maximum daily, 4,720 micromhos Oct. 14; minimum daily, 268 micromhos June 9.

WATER TEMPERATURE: Maximum daily, 29.0°C on July 6; minimum daily, 0.0°C on several days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FURN, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV												
16...	1430	266	1200	7.5	8.0	4.1	11.9	104	K805	K525	240	53
DEC												
16...	0845	252	1510	8.5	6.5	6.4	9.0	74	K118	K2850	330	70
JAN												
10...	0900	187	1750	9.1	.0	5.6	17.7	124	--	--	400	100
FEB												
28...	1030	421	1650	8.1	7.5	180	12.3	106	K16	303	--	--
MAR												
16...	0900	223	1950	8.5	8.5	7.0	10.5	91	K9	K16	450	270
APR												
03...	0845	1100	1100	8.1	9.0	250	13.4	120	6650	9150	290	140
MAY												
03...	1030	712	1200	8.6	17.0	170	8.4	88	3400	5000	290	160
JUN												
06...	0830	541	1480	7.8	22.0	150	7.6	88	158	--	380	210
JUL												
03...	0840	524	1100	7.9	26.0	90	9.7	120	65	K720	290	120
AUG												
29...	0920	100	970	7.7	24.0	100	8.0	96	80	--	350	220
SEP												
12...	0830	252	820	6.7	21.0	78	6.3	72	118	234	240	82

ARKANSAS RIVER BASIN

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SURP- TIUN RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SU4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV											
16...	51	28	160	58	4.5	--	4.5	190	--	230	.2
DEC											
16...	81	31	170	52	4.1	--	8.1	260	78	280	.4
JAN											
10...	96	39	240	56	5.2	--	7.5	300	100	360	.5
FEB											
28...	100	--	170	--	--	--	7.9	220	220	250	.8
MAR											
16...	110	43	220	51	4.5	--	9.1	180	300	310	.9
APR											
03...	78	24	110	44	2.8	--	6.2	150	130	170	.6
MAY											
03...	71	27	140	51	3.6	150	5.0	130	140	220	.4
JUN											
06...	93	35	160	47	3.6	170	7.1	170	190	250	.6
JUL											
03...	73	27	96	41	2.4	100	6.9	170	140	150	.4
AUG											
29...	86	32	74	31	1.7	81	6.9	130	250	95	.4
SEP											
12...	64	20	56	33	1.6	63	7.2	160	--	68	.4

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTIT- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
NOV											
16...	5.4	649	--	.88	466	.34	.01	--	.46	.47	.01
DEC											
16...	11	839	816	1.14	571	1.1	.54	--	.76	1.3	.20
JAN											
10...	6.8	1060	1030	1.44	535	1.3	.26	--	.69	.95	.12
FEB											
28...	9.9	921	--	1.25	1050	.41	.67	--	1.4	2.1	.30
MAR											
16...	9.5	1130	1110	1.54	680	.02	.26	--	.52	.78	.08
APR											
03...	8.2	627	617	.85	1860	.69	.03	--	1.7	1.7	1.2
MAY											
03...	6.5	693	688	.94	1330	.03	.04	.05	.40	.44	.00
JUN											
06...	8.6	888	847	1.21	1300	.05	.04	.05	1.4	1.4	.78
JUL											
03...	8.7	599	604	.81	847	.02	.03	.04	1.4	1.4	1.0
AUG											
29...	8.1	644	631	.88	174	.18	.36	.44	.64	1.0	.71
SEP											
12...	9.1	450	--	.61	306	.02	.03	.04	1.5	1.5	.10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 16...	0	0	0	0	30	20	9	90	65	66
DEC 16...	--	--	--	--	--	--	--	164	112	82
JAN 10...	--	--	--	--	--	--	--	191	96	98
FEB 28...	1	0	0	0	50	30	20	32	36	61
APR 03...	--	--	--	--	--	--	--	474	1410	96
MAY 03...	1	0	0	0	50	30	20	762	1470	93
JUN 06...	--	--	--	--	--	--	--	1590	2320	39
JUL 03...	--	--	--	--	--	--	--	206	291	98
AUG 29...	1	0	0	0	20	10	9	242	65	98
SEP 12...	--	--	--	--	--	--	--	180	122	99

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 16...	1430	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 03...	1030	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	0920	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- EPOXIDE TOTAL (UG/L)	HEPTA- EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	ND	--	ND	--	ND	--	ND	--	ND	--

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 1345	MAR 16,79 0900	MAY 3,79 1030	JUN 6,79 0830				
TOTAL CELLS/ML	9500	19000	84000	64000				
DIVERSITY: DIVISION	1.4	1.4	1.1	1.1				
..CLASS	1.4	1.5	1.1	1.1				
...ORDER	2.1	1.9	1.1	1.1				
...FAMILY	2.4	1.9	1.5	1.6				
...GENUS	2.8	2.0	1.6	2.1				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
....CHLOROCOCCACEAE								
....CHLOROCOCCUM	--	-	--	-	--	-	--	-
....COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	4900	8
....HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	650	1
....MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	1000	1	520	1
....OOCYSTACEAE								
....ANKISTRODESMUS	160	2	110	1	1300	2	1200	2
....CHLORELLA	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	110	1	--	-	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	460	5	--	-	520	1	5500	8
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	92	1	--	-	--	-	1600	2
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	*	0	--	-	--	-	--	-
....SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	1000	2
....SCENEDESMUS	1800#	19	840	5	33000#	39	11000#	18
....TETRASTRUM	160	2	--	-	520	1	--	-
..TETRASPORALES								
..PALMELLACEAE								
...SPHAEROCYSTIS	550	6	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	120	1	9300#	50	*	0	*	0
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	530	6	5600#	30	*	0	*	0
...MELOSIRA	300	3	--	-	--	-	--	-
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	*	0	--	-	--	-	--	-
...FRAGILARIACEAE								
...FRAGILARIA	--	-	110	1	--	-	--	-
...NAVICULACEAE								
...NAVICULA	*	0	--	-	--	-	--	-
...NITZSCHACEAE								
...NITZSCHIA	160	2	420	2	1200	1	650	1
..CHRYSOPHYCEAE								
...CHRYSOMONADALES								
...MALLOMONADACEAE								
...MALLOMONAS	--	-	110	1	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE	--	-	--	-	--	-	--	-
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	69	1	320	2	--	-	--	-

ARKANSAS RIVER BASIN

333

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 1345		MAR 16,79 0900		MAY 3,79 1030		JUN 6,79 0830	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	92	1	--	-	--	-	--	-
....ANACYSTIS	580	6	--	-	--	-	--	-
....COCCOCHLORIS	69	1	--	-	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	3100	4	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	4200#	44	--	-	43000#	51	36000#	57
....SCHIZOTHRIX	--	-	--	-	--	-	--	-
....SPIRULINA	69	1	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	210	1	--	-	--	-
....TRACHELOMONAS	--	-	1500	8	--	-	--	-

ARKANSAS RIVER BASIN

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 3,79 0840	AUG 29,79 0920	SEP 12,79 0830
TOTAL CELLS/ML	25000	88000	18000
DIVERSITY: DIVISION	1.1	1.1	1.3
..CLASS	1.1	1.1	1.3
...ORDER	1.3	0.0	2.0
...FAMILY	2.5	0.0	2.6
....GENUS	3.3	0.0	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHRUEDERIA	*	0	--	-	--	-
...CHLOROCOCCACEAE						
....CHLOROCOCCUM	--	-	730	1	260	1
...COELASTRACEAE						
....COELASTRUM	2900	11	5800	7	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	1000	4	5800	7	--	-
...MICRACTINIACEAE						
....GOLENKINIA	130	1	--	-	260	1
...MICRACTINIUM	390	2	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	*	0	1300	1	130	1
...CHLURELLA	--	-	2900	3	--	-
...CHUDATELLA	--	-	--	-	--	-
...CLOSTERIOPSIS	*	0	--	-	--	-
...DICTYOSPHAERIUM	910	4	1500	2	3500#	19
...KIRCHNERIELLA	260	1	*	0	--	-
...OOCYSTIS	1500	6	910	1	520	3
...SELENASTRUM	--	-	--	-	130	1
...TETRAEDRON	--	-	--	-	130	1
...SCENEDESMACEAE						
....ACTINASTRUM	3100	12	--	-	1000	6
...SCENEDESMUS	7100#	28	4400	5	2300	13
...TETRASTRUM	780	3	--	-	--	-
...TETRASPORALES						
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CARTERIA	--	-	--	-	130	1
...CHLAMYDOMONAS	450	2	--	-	1000	6
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	710	3	2700	3	260	1
...MELOSIRA	1200	5	--	-	260	1
...PENNALES						
...ACHNANTHACEAE						
...ACHNANTHES	--	-	--	-	--	-
...FRAGILARIACEAE						
...FRAGILARIA	--	-	--	-	--	-
...NAVICULACEAE						
...NAVICULA	--	-	--	-	--	-
...NITZSCHACEAE						
...NITZSCHIA	520	2	1100	1	390	2
...CHRYSTOPHYCEAE						
...CHRYSONOMADALES						
...MALLOMONADACEAE						
...MALLOMONAS	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE	--	-	*	0	--	-
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	--	-

ARKANSAS RIVER BASIN

335

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 3,79 0840		AUG 29,79 0920		SEP 12,79 0830	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	--	-
....ANACYSTIS	190	1	16000#	18	2500	14
....CUCCOCHLORIS	--	-	--	-	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
....ANABAENOPSIS	--	-	910	1	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	3900#	15	40000#	45	4900#	27
....SCHIZOTHRIX	--	-	3800	4	--	-
....SPIRULINA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	--	-	260	1
....TRACHELOMONAS	--	-	--	-	--	-

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1380	1360	1600	1200	1780	1300	1520	864	1010	1140	847
2	---	1190	1360	1870	---	1520	1150	1260	1060	1020	1230	---
3	4250	1190	---	---	---	1420	1230	---	1160	1020	1330	---
4	3950	---	1530	---	1130	1360	1520	---	1220	1120	1400	469
5	3980	1130	1610	---	1120	1500	1540	688	1330	---	1420	484
6	4010	1140	1570	---	1170	1680	1560	610	---	1340	1470	544
7	3820	1770	1580	---	---	1480	1600	694	493	963	1510	547
8	4010	1780	1580	---	1370	1390	1640	893	380	556	1490	553
9	4020	1630	1720	---	---	1220	1700	896	268	504	1500	---
10	4000	1340	1780	---	1330	1390	1770	1120	318	630	1510	654
11	3820	1340	1860	---	1100	1740	914	1110	383	752	1510	702
12	1360	1230	1560	1950	1080	1770	552	---	450	---	1810	764
13	1360	1220	1460	1610	1180	1850	743	1520	532	715	1560	824
14	4720	1280	1460	---	1210	1870	534	1590	633	768	1580	975
15	4280	1280	1490	---	1210	1880	---	1980	---	787	1780	1100
16	3600	1160	---	---	1460	---	649	2070	900	852	1240	1170
17	3590	1190	---	1570	1820	1770	768	2020	952	898	1230	1330
18	2210	1190	---	1300	1980	1920	831	1770	971	661	1270	1660
19	2200	---	1550	950	1710	1160	790	1640	942	549	1250	1910
20	2040	---	1440	1020	1590	756	631	---	927	514	1190	1860
21	2040	---	1440	---	1620	887	820	1300	1010	534	1190	1420
22	1280	---	1480	---	1390	1230	862	775	1000	---	1120	1510
23	1280	---	1480	732	1500	1060	674	465	620	737	1120	---
24	1350	---	---	768	1520	1140	780	602	569	828	909	---
25	1350	---	---	731	---	1250	964	694	497	829	662	---
26	1320	1110	1390	731	1510	1190	1090	758	548	1080	665	---
27	1380	1110	1410	799	---	1270	1240	914	445	769	676	---
28	1200	726	1410	817	1520	1320	1300	894	483	830	816	---
29	1550	1020	1400	---	---	1470	1450	764	622	879	1010	2510
30	1550	1200	1420	1030	---	1590	1480	931	836	929	1010	2370
31	1400	---	1470	---	---	1630	---	901	---	1010	843	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

337

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°48'05", long 95°39'16", in NE¼SE¼ sec.19, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on downstream left bank at county road bridge, 0.9 mi (1.4 km) south of junction of State Highway 63 and county road, 1.2 mi (1.9 km) northeast of Arch and 6.3 mi (10.1 km) southwest of Haileyville.

DRAINAGE AREA.--139 mi² (360 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 605.35 ft (184.511 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 20	1200	7,800 221	21.08 6.425	May 21	2030	5,230 148	19.48 5.938
Mar. 27	0330	2,250 63.7	14.34 4.371	June 7	2200	*9,160 259	*21.57 6.575
Apr. 2	0030	5,450 154	19.67 5.995				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	7.8	1.6	20	370	3600	14	54	3.3	1.4	.61
2	.00	.00	4.5	1.6	16	173	1800	58	193	2.6	1.3	.47
3	.00	.00	8.0	1.6	15	1000	300	127	251	1.9	1.0	.35
4	.00	.00	5.7	1.6	14	372	212	62	102	1.6	.80	.29
5	.00	.00	3.6	1.7	14	144	130	55	58	1.4	.60	.21
6	.00	.00	3.4	1.9	14	84	90	38	48	2.4	.48	.15
7	.00	.00	3.3	1.9	18	57	65	26	5870	6.4	.37	.12
8	.00	.00	3.0	1.9	34	40	49	19	2690	5.4	.32	.08
9	.00	.00	2.5	2.1	45	31	39	15	277	3.8	.24	.05
10	.00	.00	2.4	2.3	29	24	33	13	160	20	.18	.03
11	.00	.00	2.4	2.3	75	20	42	892	106	5.7	.17	.02
12	.00	.00	2.4	3.9	281	17	113	389	55	3.0	.17	.01
13	.00	.00	2.2	40	147	15	58	116	37	2.0	.14	.00
14	.00	.00	1.7	56	85	14	37	57	28	1.6	.11	.00
15	.00	.00	1.6	28	63	12	28	35	21	1.6	.08	.00
16	.00	29	1.3	21	43	11	23	24	17	4.4	.05	.00
17	.00	137	.94	50	29	11	19	18	13	2.0	.03	.00
18	.00	43	.94	267	23	12	17	14	10	1.6	.02	.00
19	.00	18	.94	1140	20	1060	16	12	7.7	3.7	.01	.00
20	.00	7.3	.43	1090	20	5580	338	66	5.9	7.0	.01	.00
21	.00	3.7	.17	278	21	582	671	3600	4.9	4.2	.00	.01
22	.00	2.2	.19	122	95	674	157	2920	4.5	2.6	.05	.01
23	.00	1.0	.33	75	264	594	85	584	3.9	1.9	.08	.00
24	.00	.27	.37	51	249	213	56	228	3.4	1.5	.10	.00
25	.00	.09	.42	37	905	109	39	121	9.5	1.1	.14	.05
26	.00	34	.56	65	891	296	27	84	7.0	1.0	.14	.40
27	.00	131	.60	145	706	1110	22	145	4.5	3.7	.45	.47
28	.00	53	.60	77	956	221	19	270	3.6	2.0	.46	.31
29	.00	24	.60	41	---	128	17	381	4.2	1.9	.13	.19
30	.00	14	.67	30	---	510	15	153	4.0	1.7	.10	.14
31	.00	---	1.2	24	---	355	---	86	---	1.5	.11	---
TOTAL	.00	497.56	64.76	3661.4	5092	13839	8117	10622	10053.1	104.5	9.24	3.97
MEAN	.000	16.6	2.09	118	182	446	271	343	335	3.37	.30	.13
MAX	.00	137	8.0	1140	956	5580	3600	3600	5870	20	1.4	.61
MIN	.00	.00	.17	1.6	14	11	15	12	3.4	1.0	.00	.00
AC=FT	.00	987	128	7260	10100	27450	16100	21070	19940	207	18	7.9

WTR YR 1979 TOTAL 52064.53 MEAN 143 MAX 5870 MIN .00 AC=FT 103300

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to September 1979.

INSTRUMENTATION.--Automatic pumping sediment sampler since April 1979.

REMARKS.--Point sediment sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
NOV											
29...	1445	23	124	7.2	10.5	8.4	76	--	--	--	--
DEC											
06...	1100	3.6	132	6.9	7.2	9.2	77	--	--	--	--
13...	1030	1.8	132	7.1	3.5	10.2	76	--	--	--	--
20...	1200	.73	134	7.1	13.0	8.5	83	--	--	--	--
28...	1230	.60	140	7.1	5.0	8.8	70	--	--	--	--
JAN											
16...	1355	17	148	7.1	2.0	12.7	93	51	17	13	4.5
25...	1110	37	61	7.1	2.5	13.5	98	--	--	--	--
FEB											
13...	1515	130	104	7.2	3.0	13.0	98	--	--	--	--
22...	1106	29	140	7.1	7.5	--	--	--	--	--	--
27...	1244	793	51	7.2	4.5	--	--	--	--	--	--
MAR											
07...	1204	57	73	6.9	10.5	--	--	--	--	--	--
12...	1015	17	110	7.1	9.5	--	--	--	--	--	--
19...	1143	13	135	7.2	15.0	--	--	--	--	--	--
29...	1315	123	85	6.9	16.5	9.4	97	--	--	--	--
APR											
12...	1100	143	130	7.0	17.0	8.9	95	52	14	14	4.2
17...	1100	19	--	7.2	20.5	--	--	--	--	--	--
23...	1445	79	105	6.9	18.5	7.7	85	--	--	--	--
26...	1000	28	120	7.2	19.0	7.4	81	--	--	--	--
MAY											
07...	1100	27	157	7.4	18.5	8.0	88	58	10	15	4.9
15...	1100	37	83	7.1	19.5	7.9	87	--	--	--	--
23...	1342	508	72	7.3	21.0	7.8	89	25	3	6.5	2.2
30...	0930	151	75	7.4	21.0	8.0	91	--	--	--	2.1
JUN											
05...	1006	58	100	7.3	23.0	7.0	83	39	9	11	2.9
12...	1107	55	100	7.2	23.0	6.8	79	38	7	10	3.1
18...	1230	10	123	7.2	27.0	7.1	90	--	--	--	--
22...	1020	4.3	135	7.0	27.5	5.3	68	--	--	--	--
27...	1108	4.5	169	7.1	28.0	6.3	78	67	10	18	5.4
JUL											
05...	1430	1.5	178	7.2	31.0	6.6	90	--	--	--	--
11...	1430	4.9	180	7.2	30.5	4.1	55	--	--	--	--
19...	1135	1.3	248	7.2	26.0	3.4	42	93	4	26	6.8
31...	1120	1.1	235	7.4	28.5	5.1	67	--	--	--	--
AUG											
08...	1220	.33	250	7.3	29.0	5.3	70	--	--	--	--
13...	1045	.13	270	6.9	25.0	2.8	34	--	--	--	--
16...	1215	.05	248	7.4	30.0	5.5	72	--	--	--	--
21...	1400	.00	280	7.3	29.0	4.3	56	--	--	--	--
29...	1045	.11	242	7.1	25.0	3.5	43	--	--	--	--
SEP											
13...	1100	.00	260	6.9	25.5	7.6	94	90	0	23	7.8
26...	1130	.60	230	7.4	21.5	6.1	70	84	4	21	7.6

ARKANSAS RIVER BASIN

339

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
29...	--	--	--	--	--	25	0	21	2.5	--	--
DEC											
06...	--	--	--	--	--	30	0	25	6.2	--	--
13...	--	--	--	--	--	29	0	24	3.7	--	--
20...	--	--	--	--	--	38	0	32	4.9	--	--
28...	--	--	--	--	--	42	0	35	5.4	--	--
JAN											
16...	7.8	24	.5	--	2.7	41	0	34	5.3	19	7.6
25...	--	--	--	--	--	18	0	15	2.3	--	--
FEB											
13...	--	--	--	--	--	15	0	12	1.5	--	--
22...	--	--	--	--	--	25	0	21	3.3	--	--
27...	--	--	--	--	--	14	0	12	1.5	--	--
MAR											
07...	--	--	--	--	--	22	0	18	4.4	--	--
12...	--	--	--	--	--	28	0	24	3.7	--	--
19...	--	--	--	--	--	39	0	33	4.0	--	--
29...	--	--	--	--	--	27	0	23	5.0	--	--
APR											
12...	8.0	24	.5	--	1.5	46	0	38	6.6	20	6.3
17...	--	--	--	--	--	42	0	34	4.2	21	6.0
23...	--	--	--	--	--	33	0	28	6.8	--	--
26...	--	--	--	--	--	45	0	37	4.5	--	--
MAY											
07...	7.7	22	.4	--	2.1	58	0	48	3.7	24	6.2
15...	--	--	--	--	--	29	0	24	3.7	--	--
23...	3.9	24	.3	5.7	1.8	26	0	22	2.1	11	2.8
30...	3.9	--	--	5.7	1.8	26	0	21	1.5	11	3.1
JUN											
05...	5.4	22	.4	--	1.8	36	0	30	2.9	11	4.1
12...	5.5	23	.4	7.4	1.9	37	0	31	3.8	18	3.9
18...	--	--	--	--	--	50	0	41	5.0	--	--
22...	--	--	--	--	--	54	0	45	8.7	--	--
27...	9.2	22	.5	12	2.3	70	0	58	8.9	23	4.9
JUL											
05...	--	--	--	--	--	73	0	61	7.5	--	--
11...	--	--	--	--	--	78	0	64	7.9	--	--
19...	8.8	17	.4	12	3.1	108	0	89	11	17	6.4
31...	--	--	--	--	--	95	0	78	6.1	--	--
AUG											
08...	--	--	--	--	--	104	0	85	8.4	--	--
13...	--	--	--	--	--	108	0	88	22	--	--
16...	--	--	--	--	--	108	0	89	6.1	--	--
21...	--	--	--	--	--	138	0	114	11	--	--
29...	--	--	--	--	--	107	0	88	14	--	--
SEP											
13...	13	23	.6	16	2.9	121	0	99	24	17	7.9
26...	12	32	.6	15	2.8	97	0	80	6.2	23	7.9

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
NOV										
29...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	.1	6.7	103	86	.14	4.73	.78	3.5	.01	.03
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	.1	8.9	82	87	.11	31.7	.32	1.4	.01	.03
17...	.1	5.5	79	--	.11	4.05	.29	1.3	.00	.03
23...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	.1	7.1	107	97	.15	7.80	.15	.66	.01	.03
15...	--	--	--	--	--	--	--	--	--	--
23...	.1	7.7	51	50	.07	70.0	.16	.71	.01	.03
30...	.1	6.1	47	--	--	19.2	.09	.40	.01	.03
JUN										
05...	.1	7.0	65	62	.09	10.2	.10	.44	.01	.03
12...	.1	7.2	80	69	.11	11.9	.15	.66	.01	.03
18...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	.1	9.2	108	107	.15	1.31	.04	.18	.00	.00
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	.2	8.4	126	131	.17	.44	.00	.00	.01	.03
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	.2	7.6	132	141	.18	.00	.01	.04	.00	.00
26...	.2	6.4	133	129	.18	.22	.00	.00	.01	.03

ARKANSAS RIVER BASIN

341

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
29...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	50	0	--	5
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	.79	.02	.03	.130	.40	--	20	0	50	<1
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	70	0	--	5
27...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	--	--	--	--	--	--	30	0	--	4
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	.33	.03	.04	.020	.06	.06	0	1	40	<1
17...	.30	.01	.01	.020	.06	.06	--	--	30	--
23...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	10	1	--	1
MAY										
07...	.16	.04	.05	.060	.18	.18	40	0	50	16
15...	--	--	--	--	--	--	--	--	--	--
23...	.17	.01	.01	.070	.21	.21	20	1	40	1
30...	.10	.00	.00	.080	.25	.25	0	1	60	0
JUN										
05...	.11	.00	.00	.020	.06	.06	40	1	60	1
12...	.16	.00	.00	.050	.15	.15	20	1	50	1
18...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	.04	.00	.00	.040	.12	.12	20	2	40	<1
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	.00	.00	.00	.080	--	.25	20	1	50	<1
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	0	1	--	0
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	.01	.09	.12	.070	--	.21	20	2	60	<1
26...	.01	.00	.00	.030	--	.09	20	1	60	<1

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
NOV										
29...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	0	2	--	45	--	.0	0	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	0	4	300	3	130	.0	0	<3	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	0	2	--	41	--	.0	0	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	0	0	--	47	--	.0	0	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	0	2	110	1	<1	.0	<10	<3	--	--
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
28...	0	1	--	0	--	.2	0	--	--	--
MAY										
07...	0	1	170	24	160	.2	<10	60	11	1.4
15...	--	--	--	--	--	--	--	--	--	--
23...	0	1	130	0	70	.0	0	10	11	--
30...	0	0	140	0	20	.0	0	10	27	1.9
JUN										
05...	20	1	130	0	60	.0	0	10	5.4	1.0
12...	10	1	90	2	60	.0	0	0	7.2	1.4
18...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	20	0	30	0	60	.0	<10	<3	4.8	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	0	0	20	1	720	.0	<10	4	12	1.5
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	10	15	--	0	--	.0	0	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	10	1	520	0	1700	.0	<10	4	6.2	1.1
26...	0	2	50	0	270	.0	<10	5	5.3	1.4

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DTS- SOLVED (MG/L)	SED- MENT, SUS- PENDED (MG/L)	SED- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
29...	1445	23	124	7.2	10.5	8.4	76	34	2.1	73
DEC										
06...	1100	3.6	132	6.9	7.2	9.2	77	53	.52	99
13...	1030	1.8	132	7.1	3.5	10.2	76	44	.21	98
20...	1200	.73	134	7.1	13.0	8.5	83	53	.10	97
28...	1230	.60	140	7.1	5.0	8.8	70	39	.06	99
JAN										
16...	1355	17	148	7.1	2.0	12.7	93	75	3.4	91
25...	1110	37	61	7.1	2.5	13.5	98	173	17	76
FEB										
13...	1515	130	104	7.2	3.0	13.0	98	50	18	91
22...	1106	29	140	7.1	7.5	--	--	27	2.1	85
MAR										
07...	1204	57	73	6.9	10.5	--	--	49	7.5	90
12...	1015	17	110	7.1	9.5	--	--	58	2.7	87
19...	1143	13	135	7.2	15.0	--	--	68	2.4	91
29...	1315	123	85	6.9	16.5	9.4	97	98	33	95
APR										
10...	1300	33	--	--	--	--	--	28	2.5	91
11-15	--	--	--	--	--	--	--	32	4.7	94
12...	1100	143	130	7.0	17.0	8.9	95	90	35	92
16...	2100	21	--	--	--	--	--	15	.85	88
17...	1100	19	--	7.2	20.5	--	--	18	.92	85
17...	1125	--	--	--	--	--	--	49	--	74
18-19	--	--	--	--	--	--	--	19	.87	81
20...	0500	17	--	--	--	--	--	16	.73	88
21...	0400	1198	--	--	--	--	--	50	162	92
22...	0400	204	--	--	--	--	--	470	259	91
23...	1346	81	--	--	--	--	--	62	14	96
23-24	--	--	--	--	--	--	--	68	14	89
25...	0800	41	--	--	--	--	--	31	3.4	93
26...	0943	28	--	--	--	--	--	51	3.9	97
26...	1000	28	120	7.2	19.0	7.4	81	17	1.3	92
27-30	--	--	--	--	--	--	--	5	.26	95
MAY										
01...	0400	14	--	--	--	--	--	21	.79	95
02...	0400	15	--	--	--	--	--	102	4.1	92
03...	0400	204	--	--	--	--	--	24	13	96
04-06	--	--	--	--	--	--	--	62	8.9	96
07...	0500	29	--	--	--	--	--	36	2.8	97
07...	1100	27	157	7.4	18.5	8.0	88	88	6.4	96
15...	1100	37	83	7.1	19.5	7.9	87	42	4.2	96
15...	1108	37	--	--	--	--	--	87	8.7	85
15...	2230	29	--	--	--	--	--	46	3.6	87
16-17	--	--	--	--	--	--	--	27	1.4	90
20...	2230	1201	--	--	--	--	--	27	88	87
23...	1308	468	--	--	--	--	--	275	347	83
23...	1319	464	--	--	--	--	--	96	120	95
24...	0130	288	--	--	--	--	--	116	90	88
25...	0130	143	--	--	--	--	--	44	17	91
26-27	--	--	--	--	--	--	--	27	4.2	94
27...	1200	4.5	--	--	--	--	--	28	.34	95
28...	0915	268	--	--	--	--	--	29	21	95
29...	0930	487	--	--	--	--	--	74	97	95
30...	0930	151	75	7.4	21.0	8.0	91	115	47	94
31...	1000	90	--	--	--	--	--	52	13	98
JUN										
01...	1000	57	--	--	--	--	--	43	6.6	97
02...	1000	337	--	--	--	--	--	48	44	96
03...	1000	276	--	--	--	--	--	187	139	95
05...	1006	58	100	7.3	23.0	7.0	83	75	12	96
06...	1030	--	--	--	--	--	--	61	--	88
07...	1100	6255	--	--	--	--	--	1330	22500	92
08...	1100	2304	--	--	--	--	--	1250	7780	43
09...	1115	283	--	--	--	--	--	434	332	20
10...	1130	159	--	--	--	--	--	78	33	78
11...	1130	114	--	--	--	--	--	44	14	92
12...	1105	41	--	--	--	--	--	59	6.5	91
12...	1107	55	100	7.2	23.0	6.8	79	48	7.1	96
18...	1230	10	123	7.2	27.0	7.1	90	36	1.0	93
22...	1008	4.9	--	--	--	--	--	27	.36	87
22...	1020	4.3	135	7.0	27.5	5.3	68	34	.40	89
23...	2030	3.7	--	--	--	--	--	16	.16	87
25...	2100	10	--	--	--	--	--	24	.65	92
26-27	--	--	--	--	--	--	--	94	1.2	98
27...	1108	4.5	169	7.1	26.0	6.3	78	41	.50	98
27-30	--	--	--	--	--	--	--	28	.32	82

ARKANSAS RIVER BASIN

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL										
01...	2230	296	--	--	--	--	--	25	20	83
02-04	--	--	--	--	--	--	--	15	.07	77
05...	1045	1.5	--	--	--	--	--	33	.13	87
05...	1410	1.5	--	--	--	--	--	36	.15	95
05...	1430	1.5	178	7.2	31.0	6.6	90	51	.21	91
06...	2300	8.6	--	--	--	--	--	32	.74	90
07-08	--	--	--	--	--	--	--	26	.34	82
09...	2400	7.3	--	--	--	--	--	37	.73	94
11...	0030	5.3	--	--	--	--	--	44	.63	94
11...	1238	5.5	--	--	--	--	--	45	.67	93
11...	1430	4.9	180	7.2	30.5	4.1	55	101	1.3	84
13-15	--	--	--	--	--	--	--	27	.13	80
16-19	--	--	--	--	--	--	--	19	.14	79
19...	1120	1.3	--	--	--	--	--	31	.11	91
19...	1135	1.3	248	7.2	26.0	3.4	42	71	.25	89
28...	2200	4.3	--	--	--	--	--	39	.45	83
31...	1030	1.1	--	--	--	--	--	44	.13	88
31...	1120	1.1	235	7.4	28.5	5.1	67	44	.13	95
AUG										
08...	1220	.33	250	7.3	29.0	5.3	70	46	.04	96
12...	1025	.19	--	--	--	--	--	20	.01	77
13...	1045	.13	270	6.9	25.0	2.8	34	68	.02	94
16...	1215	.05	248	7.4	30.0	5.5	72	55	.01	94
21...	1400	.00	280	7.3	29.0	4.3	56	69	.00	96
21...	1500	.00	--	--	--	--	--	20	.00	89
22...	0100	.02	--	--	--	--	--	24	.00	75
23-24	--	--	--	--	--	--	--	48	.01	88
25-26	--	--	--	--	--	--	--	19	.01	88
27...	0230	.87	--	--	--	--	--	22	.05	92
28...	0245	.54	--	--	--	--	--	99	.14	86
29...	0300	.13	--	--	--	--	--	58	.02	73
29...	1045	.11	242	7.1	25.0	3.5	43	57	.02	94
30...	0315	.11	--	--	--	--	--	45	.01	61
31...	0330	--	--	--	--	--	--	28	--	87
SEP										
01...	0400	.73	--	--	--	--	--	28	.06	78
02...	0415	.54	--	--	--	--	--	35	.05	80
03-06	--	--	--	--	--	--	--	26	.03	80
06...	1340	.16	--	--	--	--	--	65	.03	86
06...	1515	.13	215	7.3	25.5	4.3	53	72	.03	96
07-10	--	--	--	--	--	--	--	34	.01	68
13...	0955	.01	--	--	--	--	--	54	.00	82
13...	1100	.00	260	6.9	25.5	7.6	94	90	.00	93
14-16	--	--	--	--	--	--	--	27	.00	78
20-25	--	--	--	--	--	--	--	37	.00	50
26...	0800	2.9	--	--	--	--	--	20	.16	89
26...	1050	.54	--	--	--	--	--	55	.08	88
26...	1130	.60	230	7.4	21.5	6.1	70	66	.11	97
27...	1000	.54	--	--	--	--	--	31	.05	82
28...	1000	.27	--	--	--	--	--	30	.02	81
29...	1000	.16	--	--	--	--	--	111	.05	24
30...	1000	--	--	--	--	--	--	37	--	6

ARKANSAS RIVER BASIN

345

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°51'07", long 95°39'15", on east edge of NE¼ sec.6, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, at right downstream end of county road bridge, 3.3 mi (5.3 km) south of Bache, 5 mi (8 km) west of Haileyville, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--134 mi² (347.1 km²)

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.66 ft (183.081 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR CURRENT PERIOD.--July to September 1978 maximum discharge about 4.0 ft³/s (0.11 m³/s) July 1, gage height unknown; no flow at times

Water Year 1979: Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 20	0045	2,990	84.7	15.47	4.715	May 21	2200	3,420	96.9	16.53	5.038
Apr. 1	0930	2,250	63.7	13.01	3.965	June 7	1100	*3,840	109.0	*17.69	5.392

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										3.7	.45	.00
2										2.4	.40	.00
3										1.5	.17	.00
4										.84	.27	.00
5										.50	.70	.00
6										.30	2.7	.00
7										.60	1.2	.00
8										1.3	.96	.00
9										.88	.78	.00
10										.50	.58	.00
11										.30	.54	.00
12										.17	.30	.00
13										.11	.10	.00
14										.07	.05	.00
15										.04	.03	.00
16										.02	.01	.00
17										.00	.00	.00
18										.00	.00	.00
19										.00	.00	.00
20										.00	.00	.00
21										.00	.00	.00
22										.00	.00	.00
23										.01	.00	.00
24										.18	.00	.00
25										2.3	.00	.00
26										.98	.00	.00
27										1.9	.00	.00
28										1.6	.00	.00
29										.90	.00	.00
30										.54	.00	.00
31										.31	.00	.00
TOTAL	---	---	---	---	---	---	---	---	---	21.95	9.24	.00
MEAN	---	---	---	---	---	---	---	---	---	.71	.30	.000
MAX	---	---	---	---	---	---	---	---	---	3.7	2.7	.00
MIN	---	---	---	---	---	---	---	---	---	.00	.00	.00
AC=FT	---	---	---	---	---	---	---	---	---	.44	.18	.00

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.5	1.5	5.4	280	1370	5.7	33	2.3	.89	1.7
2	.00	.00	1.2	1.2	4.7	128	1180	226	36	1.6	.75	1.2
3	.00	.00	.54	.89	4.7	653	218	453	42	1.4	.62	.67
4	.00	.00	.36	.75	4.7	381	153	269	37	1.2	.50	.53
5	.00	.00	.36	1.1	4.4	119	99	110	24	1.1	.64	.48
6	.00	.00	.36	1.5	4.4	68	67	61	44	1.6	.63	.59
7	.00	.00	.37	1.2	7.1	49	59	46	3290	113	.56	.52
8	.00	.00	.42	.89	9.7	31	57	35	3460	73	.48	.41
9	.00	.00	.42	.64	9.2	25	44	23	483	27	.43	.30
10	.00	.00	.48	.75	8.3	21	34	14	169	63	.38	.25
11	.00	.00	.42	1.2	52	14	97	44	84	27	.32	.20
12	.00	.00	.42	2.2	211	13	289	30	54	7.8	.23	.15
13	.00	.00	.42	14	97	13	90	17	41	4.0	.18	.14
14	.00	.00	.42	13	51	19	50	10	35	2.5	.15	.12
15	.00	.00	.37	8.3	36	11	34	7.1	28	2.6	.13	.09
16	.00	163	.42	7.1	22	6.7	24	9.0	21	3.3	.12	.08
17	.00	139	.37	33	13	6.2	20	5.4	16	2.8	.10	.07
18	.00	18	.36	119	10	7.9	17	4.0	13	9.8	.14	.06
19	.00	7.5	.32	344	10	695	26	3.0	8.2	4.1	.23	.07
20	.00	4.0	.32	324	13	2750	33	374	5.4	2.5	.17	.47
21	.00	2.2	.27	105	16	1290	29	3030	6.1	1.5	.12	.53
22	.00	1.5	.42	44	54	545	23	2610	5.1	1.1	.29	.44
23	.00	.89	.54	26	1040	614	18	615	4.4	.86	.27	.44
24	.00	.89	.48	19	559	158	16	167	4.7	.63	.50	.42
25	.00	.89	.48	15	599	76	13	81	44	.59	.87	.38
26	.00	50	.48	27	810	74	14	50	39	.68	.97	.37
27	.00	62	.48	58	532	908	11	74	13	8.5	1.7	.39
28	.00	15	.48	34	536	337	7.2	290	6.3	4.9	1.1	.40
29	.00	7.1	.54	19	---	147	6.6	249	3.8	2.0	.80	.42
30	.00	3.7	.48	12	---	139	6.4	101	3.0	1.3	.42	.42
31	.00	---	1.5	7.5	---	86	---	52	---	.90	.88	---
TOTAL	.00	475.67	17.00	1242.72	4723.6	9664.8	4105.2	9065.2	8053.0	374.76	15.57	12.31
MEAN	.000	15.9	.55	40.1	169	312	137	292	268	12.1	.50	.41
MAX	.00	163	2.5	344	1040	2750	1370	3030	3460	113	1.7	1.7
MIN	.00	.00	.27	.64	4.4	6.2	6.4	3.0	3.0	.59	.10	.06
AC=FT	.00	943	34	2460	9370	19170	8140	17980	15970	743	31	24

WTR YR 1979 TOTAL 37749.83 MEAN 103 MAX 3460 MIN .00 AC=FT 74880

ARKANSAS RIVER BASIN

347

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to September 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analysis on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
NOV											
30...	1115	3.7	225	7.4	10.6	8.2	75	--	--	--	--
DEC											
06...	1300	.32	210	7.1	6.8	8.2	67	--	--	--	--
13...	1230	.42	218	7.2	6.1	8.6	69	--	--	--	--
20...	1545	.32	201	7.1	14.5	8.9	88	--	--	--	--
28...	1330	.48	187	7.4	6.0	11.3	93	--	--	--	--
JAN											
16...	1537	6.2	210	7.1	2.0	11.9	87	54	18	13	5.3
25...	1423	14	142	7.1	2.0	12.9	93	--	--	--	--
FEB											
13...	1145	83	124	7.3	1.5	12.6	91	--	--	--	--
22...	1337	36	170	7.0	8.0	--	--	--	--	--	--
27...	1400	514	75	7.3	5.5	--	--	--	--	--	--
MAR											
06...	1002	74	120	7.3	7.0	--	--	--	--	--	--
12...	1210	10	170	7.1	12.0	--	--	--	--	--	--
19...	1653	347	125	6.8	15.0	--	--	--	--	--	--
20...	1411	2820	54	6.5	13.0	8.7	84	--	--	--	--
29...	1810	141	93	6.9	16.0	9.0	93	--	--	--	--
APR											
12...	1415	219	99	7.0	18.0	7.4	80	--	--	--	--
17...	1400	23	--	7.1	21.0	--	--	--	--	--	--
23...	1715	18	190	7.0	19.0	7.5	82	--	--	--	--
26...	1200	11	182	7.2	20.0	7.8	87	58	14	14	5.6
MAY											
07...	1413	48	128	7.2	20.0	7.2	81	40	7	9.9	3.7
15...	1400	6.7	161	7.2	22.0	7.3	84	--	--	--	--
23...	1651	367	92	7.0	21.5	7.3	84	28	5	7.1	2.5
30...	1245	92	100	7.2	21.5	7.3	84	38	10	10	3.1
JUN											
05...	1405	22	160	7.1	22.0	6.4	75	--	--	--	--
12...	1340	52	115	7.0	23.5	7.3	86	--	--	--	--
18...	1345	13	144	7.2	27.0	7.0	89	48	10	12	4.4
22...	1430	4.6	160	7.1	28.0	6.4	83	--	--	--	--
27...	1355	12	173	7.0	25.0	5.8	70	51	12	12	5.0
JUL											
05...	1545	1.2	205	8.3	30.0	9.2	123	--	--	--	--
11...	1430	4.9	180	7.1	30.5	4.1	55	--	--	--	--
11...	1635	18	86	6.9	28.5	5.0	66	--	--	--	--
19...	1405	4.4	132	7.2	27.0	6.2	78	43	0	11	3.8
31...	1250	.89	180	7.3	29.0	6.1	80	--	--	--	--
AUG											
08...	1328	.48	195	7.4	30.5	7.3	99	--	--	--	--
13...	1245	.16	230	7.4	26.0	7.9	98	--	--	--	--
16...	1355	.12	215	7.6	31.0	7.8	105	--	--	--	--
21...	1600	.13	220	7.8	31.0	8.3	114	--	--	--	--
29...	1155	.75	214	7.4	26.5	5.6	71	--	--	--	--
SEP											
06...	1235	.66	220	7.4	27.0	6.8	86	--	--	--	--
13...	1250	.18	220	7.5	23.0	6.5	76	68	0	17	6.3
20...	1240	.46	224	7.3	20.0	7.3	82	--	--	--	--
26...	1315	.42	215	7.5	21.0	7.1	81	65	0	16	6.1

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
30...	--	--	--	--	--	41	0	34	2.7	--	--
DEC											
06...	--	--	--	--	--	45	0	37	5.8	--	--
13...	--	--	--	--	--	54	0	44	5.5	--	--
20...	--	--	--	--	--	51	0	42	6.6	--	--
28...	--	--	--	--	--	61	0	50	3.9	--	--
JAN											
16...	17	38	1.0	--	4.4	44	0	36	5.6	25	20
25...	--	--	--	--	--	24	0	20	3.1	--	--
FEB											
13...	--	--	--	--	--	22	0	18	1.8	--	--
22...	--	--	--	--	--	24	0	20	4.0	--	--
27...	--	--	--	--	--	24	0	20	1.9	--	--
MAR											
06...	--	--	--	--	--	29	0	24	2.3	--	--
12...	--	--	--	--	--	34	0	28	4.3	--	--
19...	--	--	--	--	--	30	0	25	6.9	--	--
20...	--	--	--	--	--	19	0	16	9.9	--	--
29...	--	--	--	--	--	24	0	20	4.8	--	--
APR											
12...	--	--	--	--	--	29	0	24	4.1	--	--
17...	--	--	--	--	--	48	0	39	6.1	--	--
23...	--	--	--	--	--	54	0	44	8.6	--	--
26...	15	35	.9	--	2.9	54	0	44	5.5	30	8.3
MAY											
07...	9.7	33	.7	--	2.3	40	0	33	4.0	19	7.5
15...	--	--	--	--	--	49	0	40	4.9	--	--
23...	5.3	27	.4	--	2.5	28	0	23	4.5	13	5.5
30...	6.4	25	.5	9.3	2.9	33	0	27	3.4	14	5.9
JUN											
05...	--	--	--	--	--	51	0	42	6.6	--	--
12...	--	--	--	--	--	38	0	32	6.1	--	--
18...	11	30	.7	18	6.5	47	0	38	4.7	19	9.7
22...	11	--	--	14	2.7	54	0	44	6.9	19	10
27...	15	37	.9	19	4.0	47	0	39	7.5	25	11
JUL											
05...	--	--	--	--	--	66	0	54	.5	--	--
11...	--	--	--	--	--	78	0	64	9.9	--	--
11...	--	--	--	--	--	33	0	27	6.6	--	--
19...	6.9	24	.5	10	3.4	52	0	43	5.3	10	6.1
31...	--	--	--	--	--	65	0	54	5.3	--	--
AUG											
08...	--	--	--	--	--	73	0	61	4.7	--	--
13...	--	--	--	--	--	77	0	63	4.9	--	--
16...	--	--	--	--	--	83	0	68	3.3	--	--
21...	--	--	--	--	--	89	0	73	2.3	--	--
29...	--	--	--	--	--	86	0	71	5.5	--	--
SEP											
06...	--	--	--	--	--	88	0	73	5.6	--	--
13...	15	31	.8	19	3.6	88	0	72	4.5	13	15
20...	--	--	--	--	--	93	0	76	6.6	--	--
26...	15	42	.8	19	3.6	84	0	69	4.3	14	14

ARKANSAS RIVER BASIN

349

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	.1	13	138	123	.19	2.32	.62	2.7	.01	.03
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
26...	.1	8.2	129	112	.18	3.94	.14	.62	.01	.03
MAY										
07...	.1	8.6	84	82	.11	10.9	.22	.97	.02	.07
15...	--	--	--	--	--	--	--	--	--	--
23...	.1	7.0	72	58	.10	71.3	.17	.75	.01	.03
30...	.1	6.8	73	67	.10	18.2	.20	.89	.02	.07
JUN										
05...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
18...	.1	8.4	105	95	--	3.69	.11	.49	.01	.03
22...	.1	10	110	--	--	1.37	.03	.13	.00	.00
27...	.2	9.7	116	107	.16	3.76	.29	1.3	.01	.03
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	.2	7.3	79	75	.11	.94	.03	.13	.01	.03
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--
13...	.3	6.8	118	121	.16	.06	.00	.00	.00	.00
20...	--	--	--	--	--	--	--	--	--	--
26...	.2	6.2	121	117	.16	.14	.00	.00	.01	.03

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	10	1	--	14
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	.63	.18	.23	.240	.74	--	20	1	50	5
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	40	1	--	11
27...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	--	--	--	--	--	--	30	1	--	3
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	--	--	--	--	--	--	70	1	--	3
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	30	0	--	1
26...	.15	.03	.04	.030	.09	.09	20	1	50	3
MAY										
07...	.24	.09	.12	.100	.31	.31	30	1	50	7
15...	--	--	--	--	--	--	--	--	--	--
23...	.18	.00	.00	.150	.46	.46	30	1	40	3
30...	.22	.00	.00	.140	.43	.43	20	1	30	0
JUN										
05...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
18...	.12	.03	.04	.060	.18	.18	60	2	40	2
22...	.03	.00	.00	.040	.12	.12	80	2	50	2
27...	.30	.00	.00	.140	.43	.43	100	2	30	<1
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	.04	.01	.01	.100	--	.31	10	1	40	1
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	0	--	--	0
29...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--
13...	.00	.00	.00	.040	--	.12	20	1	70	<1
20...	--	--	--	--	--	--	--	--	--	--
26...	.01	.00	.00	.050	--	.15	10	1	60	<1

ARKANSAS RIVER BASIN

351

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MU)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	0	3	--	140	--	.0	0	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	0	4	220	36	80	.0	0	<3	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	--	--	--	--	--	--	--	--	--	--
22...	0	3	--	24	--	.0	0	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	0	2	--	50	--	.0	0	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
12...	0	4	--	38	--	.1	0	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
23...	0	1	--	4	--	.3	0	--	--	--
26...	10	1	130	15	60	.3	<10	<3	--	--
MAY										
07...	0	1	230	45	80	.1	<10	50	6.0	1.4
15...	--	--	--	--	--	--	--	--	--	--
23...	10	2	270	21	60	.0	0	10	13	--
30...	0	1	270	0	40	.0	0	10	16	2.6
JUN										
05...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
18...	2	5	430	2	60	.0	0	10	8.7	2.0
22...	10	3	200	0	70	.0	<10	4	8.4	--
27...	20	2	210	0	50	.0	<10	<3	8.6	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	0	2	100	0	130	.1	<10	<3	7.7	1.8
31...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
21...	10	1	--	0	--	.0	0	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--
13...	10	1	20	1	130	.0	<10	<3	6.7	.7
20...	--	--	--	--	--	--	--	--	--	--
26...	10	4	10	0	60	.0	<10	4	6.7	1.7

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
17...	1440	--	--	--	--	--	--	194	--	94
DEC										
06...	1300	.32	210	7.1	6.8	8.2	67	53	.05	98
13...	1300	--	--	--	--	--	--	48	--	99
20...	1545	.32	201	7.1	14.5	8.9	88	61	.05	96
28...	1530	--	--	--	--	--	--	36	--	95
JAN										
04...	1055	.64	215	7.6	2.0	11.2	81	44	.08	91
16...	1537	6.2	210	7.1	2.0	11.9	87	75	1.3	93
22...	1423	11	--	--	--	--	--	86	2.6	91
FEB										
13...	1145	83	124	7.3	1.5	12.6	91	185	42	73
22...	1337	36	170	7.0	8.0	--	--	86	8.4	92
27...	1400	514	75	7.3	5.5	--	--	187	260	96
MAR										
06...	1002	74	120	7.3	7.0	--	--	55	11	95
07...	0830	51	--	--	--	--	--	54	7.4	95
08-10	--	--	--	--	--	--	--	86	5.1	92
11...	--	12	--	--	--	--	--	79	2.6	90
12...	--	--	--	--	--	--	--	53	--	95
12...	1210	10	170	7.1	12.0	--	--	66	1.8	92
20...	1411	2820	54	6.5	13.0	8.7	84	689	5250	91
29...	1513	180	--	--	--	--	--	38	18	88
29...	1810	141	93	6.9	16.0	9.0	93	95	36	93
APR										
09...	--	41	--	--	--	--	--	50	5.5	87
12...	1415	219	99	7.0	18.0	7.4	80	174	103	96
13-14	--	--	--	--	--	--	--	83	13	89
17...	1400	23	--	7.1	21.0	--	--	46	2.9	97
18...	--	12	--	--	--	--	--	35	1.1	76
19...	--	17	--	--	--	--	--	33	1.5	78
20-24	--	--	--	--	--	--	--	25	1.3	77
23...	1715	18	190	7.0	19.0	7.5	82	52	2.5	96
25...	--	11	--	--	--	--	--	25	.74	72
26...	1200	11	182	7.2	20.0	7.8	87	54	1.6	96
26-30	--	--	--	--	--	--	--	22	.59	74
MAY										
05...	0400	149	--	--	--	--	--	108	43	93
06-07	--	--	--	--	--	--	--	72	9.9	89
07...	1413	48	128	7.2	20.0	7.2	81	78	10	95
08-10	--	--	--	--	--	--	--	40	2.1	84
15...	1400	6.7	161	7.2	22.0	7.3	84	92	1.7	87
15-16	--	--	--	--	--	--	--	40	--	80
23...	1651	367	92	7.0	21.5	7.3	84	175	173	96
30...	1245	92	100	7.2	21.5	7.3	84	135	34	99
31...	0200	70	--	--	--	--	--	73	14	89

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MH/IS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN										
01...	0700	38	--	--	--	--	--	48	4.9	94
02-04	--	--	--	--	--	--	--	46	4.8	88
05...	0700	40	--	--	--	--	--	49	5.3	91
05...	1405	22	160	7.1	22.0	6.4	75	70	4.2	89
07...	1400	3717	--	--	--	--	--	854	8570	78
08...	0030	3682	--	--	--	--	--	620	6160	62
08...	0800	3840	--	--	--	--	--	1350	14000	83
08...	1300	3696	--	--	--	--	--	800	7980	85
08...	1930	--	--	--	--	--	--	605	--	81
08...	2200	--	--	--	--	--	--	351	--	73
08...	2330	--	--	--	--	--	--	378	--	65
09...	0100	--	--	--	--	--	--	196	--	70
09...	0200	--	--	--	--	--	--	140	--	64
09...	0330	--	--	--	--	--	--	124	--	76
09...	0500	--	--	--	--	--	--	177	--	75
09...	0800	--	--	--	--	--	--	243	--	90
09...	1500	303	--	--	--	--	--	335	274	88
10...	0830	184	--	--	--	--	--	167	83	94
11-12	--	--	--	--	--	--	--	69	15	92
12...	1340	52	115	7.0	23.5	7.3	86	69	9.7	93
12...	1521	58	--	--	--	--	--	57	8.9	86
13...	1000	46	--	--	--	--	--	62	7.7	92
14...	1000	36	--	--	--	--	--	50	4.9	95
15...	1000	28	--	--	--	--	--	62	4.7	91
16-18	--	--	--	--	--	--	--	40	2.1	94
18...	1345	13	144	7.2	27.0	7.0	89	60	2.1	94
19...	1030	10	--	--	--	--	--	50	1.3	94
20...	1030	6.7	--	--	--	--	--	42	.76	94
21-24	--	--	--	--	--	--	--	10	.16	86
22...	1430	4.6	160	7.1	28.0	6.4	83	56	.70	95
25...	1100	7.1	--	--	--	--	--	77	1.5	97
25...	1930	133	--	--	--	--	--	78	28	94
26...	0430	51	--	--	--	--	--	149	21	93
26...	1100	41	--	--	--	--	--	179	20	93
27...	1130	14	--	--	--	--	--	48	1.8	95
27...	1355	12	173	7.0	25.0	5.8	70	134	4.3	97
28-30	--	--	--	--	--	--	--	37	.54	95
JUL										
01-02	--	--	--	--	--	--	--	21	.16	80
03-06	--	--	--	--	--	--	--	14	.08	87
05...	1545	1.2	205	8.3	30.0	9.2	123	75	.24	85
07...	0700	167	--	--	--	--	--	22	9.9	82
07...	1200	118	--	--	--	--	--	79	25	84
09...	1200	28	--	--	--	--	--	34	2.6	85
10...	1200	61	--	--	--	--	--	34	5.6	94
10...	1400	144	--	--	--	--	--	133	52	93
11...	0030	60	--	--	--	--	--	49	7.9	80
11...	1200	26	--	--	--	--	--	58	4.1	92
11...	1635	18	86	6.9	28.5	5.0	66	159	7.7	96
11...	1640	19	--	--	--	--	--	84	4.3	88
12...	1100	9.2	--	--	--	--	--	43	1.1	82
14-17	--	--	--	--	--	--	--	36	.33	68
18...	1100	12	--	--	--	--	--	32	1.0	79
19...	1100	5.1	--	--	--	--	--	36	.50	74
19...	1350	5.1	--	--	--	--	--	77	1.1	78
19...	1405	4.4	132	7.2	27.0	6.2	78	62	.74	89
20-26	--	--	--	--	--	--	--	20	.06	72
27...	1100	13	--	--	--	--	--	27	.95	73
28...	1030	5.8	--	--	--	--	--	30	.47	79
29...	1100	2.2	--	--	--	--	--	33	.20	76
30...	1100	1.7	--	--	--	--	--	31	.14	76
31...	1100	1.3	--	--	--	--	--	31	.11	85
31...	1250	.89	180	7.3	29.0	6.1	80	85	.20	94
AUG										
01-02	--	--	--	--	--	--	--	26	.09	78
03-07	--	--	--	--	--	--	--	16	.03	75
08...	1200	.54	--	--	--	--	--	27	.04	83
08...	1328	.48	195	7.4	30.5	7.3	99	42	.05	98
09-12	--	--	--	--	--	--	--	16	.01	75
13...	1135	.24	--	--	--	--	--	25	.02	82
13...	1245	.16	230	7.4	26.0	7.9	98	42	.02	97
16...	1345	.15	--	--	--	--	--	87	.04	86
16...	1355	.12	215	7.6	31.0	7.8	105	42	.01	93
17...	1130	.15	--	--	--	--	--	20	.01	89
18...	1130	.24	--	--	--	--	--	21	.01	93
19...	1130	.42	--	--	--	--	--	27	.03	86
21...	1130	.21	--	--	--	--	--	18	.01	92
21...	1600	.13	220	7.8	31.0	8.3	114	40	.01	96
22-23	--	--	--	--	--	--	--	19	.02	92

ARKANSAS RIVER BASIN

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
AUG										
24...	1130	1.1	--	--	--	--	--	22	.07	85
25-26	--	--	--	--	--	--	--	16	.09	89
27...	1130	3.4	--	--	--	--	--	24	.22	77
28-31	--	--	--	--	--	--	--	24	.13	87
29...	1155	.75	214	7.4	26.5	5.6	71	42	.09	96
SEP										
01...	1130	3.7	--	--	--	--	--	20	.20	81
02...	1130	4.1	--	--	--	--	--	23	.25	73
03-05	--	--	--	--	--	--	--	14	.08	87
06...	1130	3.4	--	--	--	--	--	20	.18	80
06...	1235	.66	220	7.4	27.0	6.8	86	41	.07	91
07-08	--	--	--	--	--	--	--	16	.11	81
09...	1130	1.5	--	--	--	--	--	22	.09	89
10...	1130	1.3	--	--	--	--	--	21	.07	85
11-12	--	--	--	--	--	--	--	14	.03	84
13...	1130	.75	--	--	--	--	--	23	.05	80
13...	1241	.75	--	--	--	--	--	44	.09	92
13...	1250	.18	220	7.5	23.0	6.5	76	43	.02	92
14...	1030	.42	--	--	--	--	--	22	.02	93
15...	1030	.37	--	--	--	--	--	26	.03	89
16...	1030	.27	--	--	--	--	--	24	.02	88
17...	1000	.18	--	--	--	--	--	20	.01	87
18...	1000	.18	--	--	--	--	--	24	.01	90
19...	1000	.15	--	--	--	--	--	32	.01	94
19...	1900	.21	--	--	--	--	--	41	.02	90
19...	2100	.21	--	--	--	--	--	57	.03	99
20...	1150	2.0	--	--	--	--	--	26	.14	86
20...	1240	.46	224	7.3	20.0	7.3	82	114	.14	99
20...	1845	2.5	--	--	--	--	--	85	.57	98
21...	1845	2.0	--	--	--	--	--	41	.22	94
22...	1845	1.7	--	--	--	--	--	29	.13	94
23...	1845	2.0	--	--	--	--	--	43	.23	92
24...	1845	2.0	--	--	--	--	--	34	.18	80
25...	1845	1.7	--	--	--	--	--	29	.13	78
26...	1303	1.7	--	--	--	--	--	27	.12	88
26...	1315	.42	215	7.5	21.0	7.1	81	305	.35	11
26...	1845	1.7	--	--	--	--	--	58	.27	86
27...	1845	1.7	--	--	--	--	--	25	.11	94
28...	1845	1.7	--	--	--	--	--	30	.14	87
29...	1845	1.5	--	--	--	--	--	28	.11	89
30...	1845	1.5	--	--	--	--	--	26	.11	89

ARKANSAS RIVER BASIN

355

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK

LOCATION.--Lat 35°02'25", long 95°34'15", NE¼NW¼, sec.36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 1109204, approximately 400 ft (122 m) east of State Highway 31 bridge along Blue Creek, 1.5 miles (2.4 km) south of Blocker, and at mile 0.0 (0.0 km).

DRAINAGE AREA.--7.36 mi² (19.06 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)
NOV										
30...	0930	.89	70	9.0	9.0	--	--	11.3	99	--
DEC										
11...	1445	.09	60	8.3	6.0	--	--	12.9	103	--
18...	1540	.14	70	6.6	8.0	2	.60	11.2	97	18
JAN										
30...	1120	.97	48	6.3	1.0	7	7.4	14.0	98	11
FEB										
08...	1215	.64	55	7.2	1.0	--	--	16.1	117	--
27...	1420	25	40	6.6	7.5	28	7.0	10.3	89	10
MAR										
08...	1430	2.1	38	6.8	11.5	--	--	10.8	102	--
23...	1230	12	32	6.9	12.0	--	--	11.4	108	--
APR										
10...	0900	.82	42	6.4	15.5	5	4.4	9.6	98	11
19...	1300	3.3	45	7.5	22.0	--	--	8.5	98	--
MAY										
03...	1400	24	40	7.1	16.0	100	12	9.5	98	7
25...	1130	2.0	38	7.3	20.0	--	--	9.2	103	--
JUN										
04...	1515	1.8	40	7.6	26.5	40	14	8.0	102	13
26...	1545	6.5	38	7.2	26.0	--	--	8.2	101	--
JUL										
11...	1455	.06	76	6.8	29.0	20	3.4	5.0	67	21

DATE	HARD- NESS, NUNCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
11...	--	--	--	--	--	--	--	--	--	--
18...	12	3.6	2.2	5.5	39	.6	--	.7	6	18
JAN										
30...	10	2.1	1.3	3.3	39	.4	--	.6	1	8.4
FEB										
08...	--	--	--	--	--	--	--	--	--	--
27...	8	2.4	.9	2.4	33	.3	--	.6	2	8.6
MAR										
08...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
10...	11	2.2	1.4	3.5	38	.5	4.4	.9	--	--
19...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	0	1.2	1.0	2.9	43	.5	3.9	1.0	7	6.7
25...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	6	3.1	1.2	4.1	39	.5	5.3	1.2	7	6.8
26...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	7	4.2	2.5	5.7	35	.5	7.1	1.4	14	17

ARKANSAS RIVER BASIN

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
11...	--	--	--	--	--	--	--	--	--	--
18...	5.6	.0	6.7	48	46	.07	.02	.04	.08	--
JAN										
30...	4.0	.0	6.7	34	29	.05	.09	.33	.35	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
27...	2.7	.0	6.8	28	26	.04	1.89	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
10...	3.1	.0	8.9	33	--	.04	.07	.02	.01	3.2
19...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	2.2	.0	7.8	39	27	.05	2.53	.02	.00	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	2.8	.1	8.4	37	32	.05	.18	.01	.07	--
26...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	3.3	.0	9.7	48	52	.07	.01	.02	.00	.0

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + SUSP. TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
11...	--	--	--	--	--	--	--	--	--	--
18...	.01	.06	--	--	.08	.42	.14	.43	--	.20
JAN										
30...	.02	.02	--	--	.03	.10	.03	.12	--	.05
FEB										
08...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
10...	.01	.00	9.7	.01	.00	.07	.12	.08	.00	.12
19...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	.02	.03	--	.02	.04	.21	.24	.23	.00	.27
25...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	.03	.03	--	.04	.04	.26	.66	.29	.00	.69
26...	--	--	--	--	--	--	--	--	--	--
JUL										
11	.00	.00	18	.00	.00	.27	.14	.27	.13	.14

ARKANSAS RIVER BASIN

357

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

DATE	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NQ3)	NITRO- GEN, TOT IN BOT- TUM MA- TERIAL (MG/KG AS N)	PHOS- PHURUS, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHURUS, TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
DEC										
11...	--	--	--	--	--	--	--	--	--	--
18...	--	.47	.28	2.1	--	.040	--	--	.030	--
JAN										
30...	--	.45	.40	2.0	--	.020	--	--	.020	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
10...	240	.10	.13	.44	243	.010	.03	.03	.000	780
19...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	.25	.27	1.1	--	.030	.09	.09	.010	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	--	.30	.76	1.3	--	.010	.03	.03	.020	--
26...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	334	.29	.14	1.3	334	.020	--	.06	.020	350

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TUM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TUM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV											
30...	0930	190	--	50	--	0	--	0	--	90	--
DEC											
11...	1445	110	60	50	--	0	0	0	--	40	--
18...	1540	50	--	20	--	0	--	0	--	30	--
JAN											
30...	1120	270	--	80	--	0	--	1	--	40	30
FEB											
08...	1215	290	--	110	--	0	--	0	--	40	20
27...	1420	300	--	60	--	0	--	0	--	70	50
MAR											
08...	1430	120	--	10	--	0	--	0	--	50	30
23...	1230	260	--	80	--	0	--	0	--	60	30
APR											
10...	0900	160	110	70	2100	0	0	0	30	30	0
19...	1300	320	300	20	--	0	0	0	--	30	10
MAY											
03...	1400	440	320	120	--	1	0	0	--	40	20
25...	1130	540	500	40	--	1	0	1	--	0	0
JUN											
04...	1515	--	--	--	--	--	--	--	--	--	--
26...	1545	670	510	160	--	0	0	0	--	70	40
JUL											
11...	1455	170	140	30	5	0	0	0	22	60	20

ARKANSAS RIVER BASIN

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE- RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE- RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 30...	20	25	--	5	--	10	--	0	--	--	0
DEC 11...	--	0	0	3	--	0	0	0	--	--	0
18...	20	0	--	<1	--	20	--	0	--	--	0
JAN 30...	10	0	--	<1	--	10	--	0	--	--	10
FEB 08...	20	0	--	2	--	0	--	0	--	--	10
27...	20	0	--	0	--	0	--	0	--	--	10
MAR 08...	20	0	--	0	--	10	--	0	--	--	0
23...	30	0	--	<1	--	10	--	0	--	--	0
APR 10...	30	0	--	<1	0	0	0	0	22	10	0
19...	20	0	--	<1	--	0	0	0	--	--	0
MAY 03...	20	0	0	0	--	10	0	10	--	--	0
25...	20	0	0	0	--	0	0	0	--	--	0
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
26...	30	0	0	<1	--	10	10	0	--	--	10
JUL 11...	40	0	0	0	0	0	0	0	0	0	0
DATE	COPPER, SUS- PENDE- RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE- RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV 30...	--	<10	--	210	--	50	--	400	--	200	--
DEC 11...	0	<10	--	250	180	70	--	0	0	90	--
18...	--	<10	--	60	--	10	--	0	--	<10	--
JAN 30...	--	<10	--	320	--	130	--	0	--	<10	--
FEB 08...	--	<10	--	300	--	170	--	0	--	<10	--
27...	--	10	--	350	--	40	--	0	--	0	--
MAR 08...	--	0	--	380	--	300	--	0	--	0	--
23...	--	<10	--	280	--	140	--	0	--	<10	--
APR 10...	--	<10	5	240	140	100	13000	0	--	<10	10
19...	--	<10	--	480	440	40	--	0	--	<10	--
MAY 03...	0	0	--	480	350	130	--	0	0	0	--
25...	0	0	--	550	400	150	--	0	0	0	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
26...	0	<10	--	780	110	670	--	0	0	<10	--
JUL 11...	0	0	2	180	120	60	0	0	0	0	0

ARKANSAS RIVER BASIN

359

07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MU)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MU)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MU)
NOV											
30...	0	--	3	--	.2	--	.0	--	0	--	0
DEC											
11...	30	30	4	--	.1	.0	.1	--	0	0	0
18...	10	--	1	--	.0	--	.0	--	0	--	0
JAN											
30...	0	--	3	--	.0	--	.0	--	0	--	0
FEB											
08...	20	--	5	--	.0	--	.0	--	0	--	0
27...	0	--	0	--	.0	--	.0	--	0	--	0
MAR											
08...	10	--	0	--	.2	--	.1	--	1	--	0
23...	20	--	4	--	.1	--	.0	--	0	--	0
APR											
10...	10	4	6	1100	.1	.1	.0	.02	0	0	<10
19...	10	4	6	--	.4	.2	.2	--	0	0	<10
MAY											
03...	20	10	10	--	.4	.4	.0	--	0	0	0
25...	10	0	20	--	.2	.1	.1	--	0	0	0
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
26...	10	0	10	--	8.3	.0	13	--	0	0	<10
JUL											
11...	30	10	20	94	6.9	.0	7.9	.02	0	0	0

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
30...	--	0	--	0	20	--	<3	--	--	--	--
DEC											
11...	--	3	3	0	10	7	<3	--	11	.00	73
18...	--	0	--	0	10	--	<3	--	27	.01	96
JAN											
30...	--	0	--	0	10	--	4	--	11	.03	74
FEB											
08...	--	0	--	0	20	--	4	--	41	.07	93
27...	--	0	--	0	30	--	30	--	13	.88	88
MAR											
08...	--	1	--	0	20	--	10	--	6	.03	80
23...	--	0	--	0	10	--	<3	--	13	.42	67
APR											
10...	0	0	0	0	10	7	<3	28	10	.02	73
19...	--	0	0	0	20	20	<3	--	28	.25	98
MAY											
03...	--	0	0	0	10	10	0	--	18	1.2	96
25...	--	0	0	0	10	0	20	--	36	.19	84
JUN											
04...	--	--	--	--	--	--	--	--	17	.08	88
26...	--	0	0	0	20	10	7	--	16	.28	79
JUL											
11...	0	0	0	0	20	10	10	1	18	.00	95

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK

LOCATION.--Lat 34°02'26", long 95°34'21", in SW¼NW¼ sec.36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204 on right bank at downstream side of bridge on State Highway 31, 1.5 mi (2.4 km) south of Blocker and at mile 3.9 (6.3 km).

DRAINAGE AREA.--12.1 mi² (31.3 km²).

WATER-DISCHARGE RECORDS

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

GAGE.-Water-stage recorder. Datum of gage is 592.47 ft (180.585 m) Oklahoma State Highway Department datum.

REMARKS.-Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum 6,170 ft³/s (175 m³/s) Apr. 19, 1976, gage height, 8.41 ft (2.563 m); no flow each year.

EXTREMES FOR CURRENT YEAR.-Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Feb. 22	2100	1,540	43.6	4.73	1.442	June 21	1745	743	21	4.14	1.262
June 7	0445	*3,190	90.3	*5.79	1.765						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.63	.30	1.0	27	15	.79	2.5	.69	.09	.00
2	.00	.00	.57	.28	1.0	18	9.4	1.0	3.5	.50	.08	.00
3	.00	.00	.46	.28	1.0	61	6.7	53	5.7	.42	.05	.00
4	.00	.00	.40	.30	.99	20	6.8	23	3.4	.28	.03	.00
5	.00	.00	.35	.33	.92	12	5.3	13	1.8	.25	.00	.00
6	.00	.00	.30	.29	1.0	9.4	4.1	8.0	2.0	.42	.00	.00
7	.00	.00	.33	.27	1.3	6.7	3.2	4.7	548	.58	.00	.00
8	.00	.00	.31	.25	1.6	5.6	2.7	2.4	29	.42	.00	.00
9	.00	.00	.27	.26	1.3	4.2	2.1	1.4	13	.31	.00	.00
10	.00	.00	.24	.28	2.4	3.0	2.2	.98	8.6	13	.00	.00
11	.00	.00	.23	.28	27	2.2	7.1	1.6	4.0	.85	.00	.00
12	.00	.00	.22	.36	24	2.0	7.0	1.8	1.9	.58	.00	.00
13	.00	.00	.20	3.2	12	1.6	4.9	1.3	1.2	.34	.00	.00
14	.00	.00	.18	.70	10	1.3	3.9	.85	.85	.25	.00	.00
15	.00	.00	.18	.33	7.2	1.1	2.8	.74	.69	.17	.00	.00
16	.00	5.6	.23	10	3.5	1.0	1.8	.64	.50	.09	.00	.00
17	.00	1.4	.31	7.3	2.1	1.3	1.4	.50	.42	10	.00	.00
18	.00	.42	.39	59	2.0	1.4	4.7	.46	.31	3.6	.00	.00
19	.00	.38	.32	68	2.8	64	8.9	.34	.25	.92	.00	.00
20	.00	.28	.30	37	3.5	57	6.0	2.7	.19	.62	.00	.00
21	.00	.25	.30	14	3.8	20	5.0	78	72	.42	.00	.00
22	.00	.22	.30	7.3	225	56	3.5	24	14	.31	.00	.00
23	.00	.22	.31	5.6	116	24	2.7	14	2.2	.25	.00	.00
24	.00	.28	.30	4.2	101	12	2.1	4.2	1.6	.17	.00	.00
25	.00	.38	.30	3.7	120	7.3	1.6	1.5	29	.14	.00	.00
26	.00	60	.28	6.3	64	16	1.1	1.1	14	.10	.00	.00
27	.00	6.2	.27	8.9	54	32	.91	24	4.0	.31	.00	.00
28	.00	1.6	.30	4.3	70	15	.91	40	1.5	.28	.00	.00
29	.00	1.0	.31	2.3	---	12	.98	25	.98	.25	.00	.00
30	.00	.80	.28	1.6	---	13	.85	10	.79	.17	.00	.00
31	.00	---	.36	1.2	---	8.7	---	4.9	---	.10	.00	---
TOTAL	.00	79.03	9.73	248.41	860.41	515.8	125.65	345.90	767.88	36.79	.25	.00
MEAN	.000	2.63	.31	8.01	30.7	16.6	4.19	11.2	25.6	1.19	.008	.000
MAX	.00	60	.63	68	225	64	15	78	548	13	.09	.00
MIN	.00	.00	.18	.25	.92	1.0	.85	.34	.19	.09	.00	.00
AC-FT	.00	157	19	493	1710	1020	249	686	1520	73	.5	.00
CAL YR 1978	TOTAL	2382.67	MEAN	6.53	MAX	749	MIN	.00	AC-FT	4730		
WTR YR 1979	TOTAL	2989.85	MEAN	8.19	MAX	548	MIN	.00	AC-FT	5930		

ARKANSAS RIVER BASIN

361

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)
OCT										
26...	1600	.00	--	--	--	--	--	--	--	--
NOV										
20...	1400	.28	68	6.9	11.0	30	7.0	10.1	93	15
30...	0900	.79	--	--	--	--	--	--	--	--
DEC										
12...	0820	.19	85	7.9	3.0	--	--	13.5	100	--
18...	1210	.54	130	6.6	7.0	7	1.8	11.5	96	34
JAN										
29...	1745	2.0	70	6.8	1.0	14	15	13.6	97	17
FEB										
08...	1400	1.6	100	7.9	1.0	--	--	15.7	114	--
27...	1230	44	60	6.7	6.0	46	16	11.3	93	--
MAR										
09...	0845	4.7	68	7.0	9.0	--	--	10.6	94	--
23...	1100	23	60	6.9	12.0	--	--	10.9	103	--
APR										
09...	1550	1.6	83	7.0	19.0	20	7.1	9.5	104	22
19...	1400	9.4	90	7.4	24.0	--	--	7.4	88	--
MAY										
03...	1200	56	66	7.3	17.0	160	72	8.7	92	18
24...	1230	5.2	64	6.7	20.0	--	--	8.0	90	--
JUN										
04...	1615	5.2	75	7.6	27.0	45	17	8.1	104	25
27...	0905	6.7	56	7.0	23.0	--	--	7.6	89	--
JUL										
11...	1725	.79	92	7.1	29.0	140	81	6.7	89	27

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
26...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	--	3.2	1.8	4.7	37	.5	--	1.4	11	11
30...	--	--	--	--	--	--	--	--	--	--
DEC										
12...	--	--	--	--	--	--	--	--	--	--
18...	24	6.4	4.4	13	45	1.0	--	.8	10	34
JAN										
29...	13	3.7	2.0	4.7	35	.5	--	1.1	4	13
FEB										
08...	--	--	--	--	--	--	--	--	--	--
27...	--	--	1.7	3.7	--	--	--	1.0	6	10
MAR										
09...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR										
09...	15	4.7	2.5	5.9	35	.5	7.2	1.3	7	16
19...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	2	4.4	1.8	4.8	35	.5	5.4	.6	16	10
24...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	11	6.3	2.2	5.0	29	.4	6.4	1.4	14	13
27...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	2	6.1	2.9	6.3	32	.5	8.2	1.9	25	15

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 26...	--	--	--	--	--	--	--	--	--	--
NOV 20...	5.4	.0	7.7	45	--	.06	.03	.17	.19	.03
30...	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--
18...	18	.0	6.7	89	90	.12	.13	.04	.08	.01
JAN 29...	5.2	.0	7.0	49	45	.07	.26	1.3	1.2	.04
FEB 08...	--	--	--	--	--	--	--	--	--	--
27...	3.7	.1	7.1	48	--	--	5.70	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR 09...	--	.1	7.6	50	--	.07	.22	.08	.11	.01
19...	--	--	--	--	--	--	--	--	--	--
MAY 03...	4.0	.1	6.7	63	43	.09	9.53	.17	.14	.13
24...	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	.1	8.1	51	--	.07	.72	.02	.00	.09
27...	--	--	--	--	--	--	--	--	--	--
JUL 11...	5.0	.1	5.9	68	59	.09	.15	.20	.25	.11

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS, (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 26...	--	--	--	--	--	--	--	--	--	--
NOV 20...	.04	.05	.39	.36	.42	.40	.59	2.6	.030	.020
30...	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--
18...	.06	.08	.23	.35	.24	.41	.28	1.2	.020	.020
JAN 29...	.06	.08	.15	.14	.19	.20	1.5	6.6	.030	.030
FEB 08...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
APR 09...	.00	.00	.17	.17	.18	.17	.26	1.2	.010	.000
19...	--	--	--	--	--	--	--	--	--	--
MAY 03...	.03	.04	.62	.63	.75	.66	.92	4.1	.110	.020
24...	--	--	--	--	--	--	--	--	--	--
JUN 04...	.03	.04	.46	.33	.55	.36	.57	2.5	.050	.030
27...	--	--	--	--	--	--	--	--	--	--
JUL 11...	.01	.01	.61	.65	.72	.66	.92	4.1	.080	.030

363

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TUM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
		OCT 26...	1600	--	--	--	--	--	--	--	1
NOV 20...	1400	80	--	90	--	1	--	0	--	50	--
30...	0900	--	--	--	--	--	--	--	--	--	--
DEC 12...	0820	120	--	60	--	0	--	0	--	60	--
18...	1210	80	--	0	--	0	--	0	--	110	--
JAN 29...	1745	410	--	100	--	0	--	1	--	70	40
FEB 08...	1400	270	--	90	--	1	--	0	--	40	20
27...	1230	490	--	80	--	0	--	0	--	70	50
MAR 09...	0845	320	--	80	--	0	--	0	--	30	10
23...	1100	730	--	80	--	0	--	0	--	120	90
APR 09...	1550	250	190	60	1700	0	0	0	29	30	10
19...	1400	330	280	50	--	0	0	0	--	50	30
MAY 03...	1200	4200	4100	150	--	1	0	1	--	30	0
24...	1230	640	620	20	--	1	1	0	--	20	0
JUN 04...	1615	--	--	--	--	--	--	--	--	--	--
27...	0905	880	830	50	--	0	0	0	--	60	30
JUL 11...	1725	1800	1700	150	15	1	1	0	31	40	0

[illegible]

ARKANSAS RIVER BASIN

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
UCT											
26...	--	--	5	--	--	--	4500	--	--	--	0
NOV											
20...	--	<10	--	560	--	100	--	100	--	190	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	<10	--	70	--	60	--	62	--	160	--
18...	--	<10	--	250	--	60	--	0	--	<10	--
JAN											
29...	--	<10	--	450	--	120	--	0	--	5	--
FEB											
08...	--	<10	--	370	--	130	--	0	--	<10	--
27...	--	10	--	580	--	90	--	0	--	0	--
MAR											
09...	--	0	--	300	--	90	--	0	--	0	--
23...	--	<10	--	710	--	240	--	0	--	<10	--
APR											
09...	--	<10	6	360	250	110	34000	0	--	<10	20
19...	--	<10	--	470	400	70	--	0	--	<10	--
MAY											
03...	--	0	--	3600	3000	630	--	400	--	0	--
24...	0	10	--	930	850	80	--	0	0	0	--
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
27...	0	<10	--	1200	1100	120	--	0	0	<10	--
JUL											
11...	0	0	0	2100	1900	240	0	0	0	0	0

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MD)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MD)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MD)
UCT											
26...	--	--	--	450	--	--	--	.01	--	--	--
NOV											
20...	0	--	4	--	.0	--	.0	--	1	--	0
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	40	--	30	--	.7	--	.2	--	0	--	0
18...	260	--	290	--	.0	--	.0	--	0	--	0
JAN											
29...	30	--	10	--	.0	--	.1	--	0	--	0
FEB											
08...	40	--	30	--	.1	--	.0	--	0	--	0
27...	20	--	10	--	.0	--	.0	--	0	--	0
MAR											
09...	60	--	50	--	.2	--	.2	--	0	--	0
23...	60	--	30	--	.1	--	.0	--	0	--	0
APR											
09...	60	20	40	1400	.1	.1	.0	.01	0	0	<10
19...	60	20	40	--	2.7	.0	3.6	--	1	0	<10
MAY											
03...	190	140	50	--	.2	.2	.0	--	0	0	0
24...	70	20	50	--	.2	.0	.2	--	0	0	0
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
27...	50	20	30	--	8.0	.0	11	--	0	0	<10
JUL											
11...	140	90	50	230	9.2	1.1	8.1	.02	0	0	0

ARKANSAS RIVER BASIN

365

07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

DATE	MOLYB- DENUM, RECOV, FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 26...	--	--	--	--	--	--	--	10	--	--	--
NOV 20...	--	0	--	0	20	--	20	--	9	.01	96
30...	--	--	--	--	--	--	--	--	8	.02	75
DEC 12...	--	0	--	0	10	--	4	--	10	.01	80
18...	--	0	--	0	20	--	8	--	8	.01	99
JAN 29...	--	0	--	0	20	--	30	--	15	.08	87
FEB 08...	--	0	--	0	10	--	20	--	17	.07	86
27...	--	0	--	0	50	--	30	--	13	1.5	93
MAR 09...	--	0	--	0	20	--	10	--	11	.14	88
23...	--	0	--	0	10	--	10	--	25	1.6	83
APR 09...	0	0	0	0	20	20	<3	72	11	.05	94
19...	--	0	0	0	30	10	20	--	32	.81	99
MAY 03...	--	0	0	0	20	20	0	--	138	21	91
24...	--	0	0	0	10	10	0	--	32	.45	57
JUN 04...	--	--	--	--	--	--	--	--	21	.29	95
27...	--	0	0	0	10	7	<3	--	21	.38	84
JUL 11...	0	0	0	0	40	30	10	0	66	.14	95

ARKANSAS RIVER BASIN

07232029 MATHULDY CREEK NEAR CROWDER, OK

LOCATION.--Lat 35°04'17", long 95°36'47", NE¼NE¼ sec.21, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on county road bridge 4.3 miles (6.9 km) southeast of Crowder, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--5.41 mi² (14.01 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)
NOV										
30...	1230	.18	170	8.8	10.0	--	--	9.7	87	--
JAN										
29...	1450	.74	185	6.8	1.0	18	--	13.8	98	61
FEB										
14...	1115	3.6	140	7.0	6.0	--	--	11.4	94	--
23...	1015	20	80	6.4	8.0	180	5.0	10.5	88	25
MAR										
09...	1030	1.3	138	7.4	9.0	--	--	10.9	96	--
22...	1630	32	70	6.8	19.5	--	--	8.4	94	--
APR										
06...	0855	1.1	152	7.1	12.0	15	14	10.5	98	44
20...	1000	1.1	255	7.9	20.0	--	--	8.3	92	--
MAY										
03...	1545	17	74	7.2	16.0	1	50	9.4	97	24
24...	1015	1.3	120	7.8	18.0	--	--	8.1	87	--
JUN										
04...	1345	.65	210	7.8	27.0	45	29	7.6	97	62
21...	1655	.12	126	6.6	25.0	--	--	7.4	91	--
21...	2035	14	87	6.4	25.0	--	--	--	--	--
JUL										
13...	0830	.06	136	7.0	26.0	100	48	5.3	67	38

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV										
30...	--	--	--	--	--	--	--	--	--	--
JAN										
29...	59	16	5.2	11	27	.6	--	1.9	2	42
FEB										
14...	--	--	--	--	--	--	--	--	--	--
23...	16	5.7	2.6	4.6	27	.4	--	1.9	9	15
MAR										
09...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
APR										
06...	35	10	4.6	11	34	.7	13	1.5	9	39
20...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	13	6.1	2.2	4.7	28	.4	6.6	1.9	11	14
24...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	43	14	6.6	13	30	.7	15	2.2	19	54
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	18	8.6	4.0	11	36	.8	14	3.1	20	32

ARKANSAS RIVER BASIN

367

07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TUNS PER AC-FT)	SOLIDS, DIS- SOLVED (TUNS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
NOV 30...	--	--	--	--	--	--	--	--	--	--
JAN 29...	20	.1	8.0	126	118	.17	.25	2.3	2.7	--
FEB 14...	--	--	--	--	--	--	--	--	--	--
23...	4.8	.1	7.1	61	47	.08	3.29	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
APR 06...	9.7	.1	6.6	98	89	.13	.29	.23	.20	5.8
20...	--	--	--	--	--	--	--	--	--	--
MAY 03...	3.5	.1	7.4	--	47	.10	3.44	.14	.14	--
24...	--	--	--	--	--	--	--	--	--	--
JUN 04...	13	.2	6.1	138	121	.19	.24	.05	.10	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUL 13...	6.8	.2	7.3	104	85	.14	.02	.02	.01	3.7

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)
NOV 30...	--	--	--	--	--	--	--	--	--	--
JAN 29...	.06	.11	--	--	.14	.37	.29	.43	--	.40
FEB 14...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
APR 06...	.03	.01	14	.04	.01	.31	.25	.34	.08	.26
20...	--	--	--	--	--	--	--	--	--	--
MAY 03...	.10	.10	--	.12	.13	.72	.63	.82	.09	.73
24...	--	--	--	--	--	--	--	--	--	--
JUN 04...	.07	.01	--	.08	.01	.51	.38	.58	.19	.39
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUL 13...	.09	.10	11	.11	.13	.40	.48	.49	.00	.58

ARKANSAS RIVER BASIN

07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

DATE		NITRO- GEN, NH4 + ORG. TOT IN BUT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOT IN BUT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BUT, MAT, (MG/KG AS P)
NOV 30...		--	--	--	--	--	--	--	--	--	--
JAN 29...		--	2.7	3.1	12	--	.040	--	--	.030	--
FEB 14...		--	--	--	--	--	--	--	--	--	--
23...		--	--	--	--	--	--	--	--	--	--
MAR 09...		--	--	--	--	--	--	--	--	--	--
22...		--	--	--	--	--	--	--	--	--	--
APR 06...		300	.57	.46	2.5	306	.010	.03	.03	.000	810
20...		--	--	--	--	--	--	--	--	--	--
MAY 03...		--	.96	.87	4.3	--	.090	.28	.28	.040	--
24...		--	--	--	--	--	--	--	--	--	--
JUN 04...		--	.63	.49	2.8	--	.040	.12	.12	.010	--
21...		--	--	--	--	--	--	--	--	--	--
21...		--	--	--	--	--	--	--	--	--	--
JUL 13...		1100	.51	.59	2.3	1100	.050	--	.15	.030	770
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV, (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECov, FM BUT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV 30...	1230	480	--	50	--	0	--	0	--	160	--
JAN 29...	1450	630	--	50	--	1	--	0	--	70	50
FEB 14...	1115	1000	--	140	--	0	--	0	--	60	20
23...	1015	2900	--	220	--	1	--	0	--	80	40
MAR 09...	1030	620	--	50	--	0	--	0	--	50	30
22...	1630	1500	--	100	--	1	--	0	--	120	0
APR 06...	0855	470	410	60	2300	0	0	0	28	40	10
20...	1000	310	290	20	--	1	1	0	--	70	10
MAY 03...	1545	3500	3400	140	--	1	1	0	--	50	10
24...	1015	1400	1400	10	--	2	1	1	--	20	0
JUN 04...	1345	--	--	--	--	--	--	--	--	--	--
21...	1655	--	--	--	--	--	--	--	--	--	--
21...	2035	12000	12000	410	--	1	1	1	--	70	40
JUL 13...	0830	1300	1200	120	10	1	1	0	36	20	0

ARKANSAS RIVER BASIN

369

07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	COBALT, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 30...	30	25	--	<1	--	10	--	0	--	--	0
JAN 29...	20	0	--	4	--	0	--	0	--	--	0
FEB 14...	40	0	--	0	--	10	--	0	--	--	30
23...	40	0	--	0	--	20	--	0	--	--	30
MAR 09...	20	0	--	0	--	10	--	0	--	--	10
22...	150	0	--	1	--	10	--	0	--	--	0
APR 06...	30	0	--	<1	0	0	0	0	11	60	10
20...	60	0	--	<1	--	0	0	0	--	--	0
MAY 03...	40	0	--	0	--	10	10	0	--	--	0
24...	50	0	0	0	--	10	0	10	--	--	0
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	30	0	0	<1	--	20	20	0	--	--	30
JUL 13...	30	0	0	0	0	10	10	0	0	0	0

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECov. FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV 30...	--	<10	--	580	--	50	--	400	--	140	--
JAN 29...	--	<10	--	630	--	110	--	2	--	2	--
FEB 14...	--	10	--	1100	--	90	--	0	--	0	--
23...	--	10	--	3300	--	260	--	0	--	0	--
MAR 09...	--	0	--	630	--	80	--	0	--	0	--
22...	--	<10	--	2400	--	450	--	0	--	<10	--
APR 06...	--	<10	8	590	490	100	11000	0	--	<10	30
20...	--	<10	--	640	450	190	--	0	--	<10	--
MAY 03...	--	0	--	2400	2100	260	--	0	--	0	--
24...	0	0	--	1900	1700	180	--	0	0	0	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	20	<10	--	17000	17000	220	--	0	0	<10	--
JUL 13...	0	0	1	1600	1100	500	0	0	0	0	0

ARKANSAS RIVER BASIN

07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SULVED (UG/L AS MO)
NOV 30...	40	--	30	--	.1	--	.0	--	0	--	0
JAN 29...	340	--	310	--	.0	--	.0	--	0	--	0
FEB 14...	300	--	300	--	.1	--	.0	--	1	--	0
23...	210	--	90	--	.1	--	.0	--	0	--	0
MAR 09...	250	--	240	--	.1	--	.1	--	0	--	0
22...	160	--	60	--	.1	--	.1	--	0	--	0
APR 06...	260	20	240	18000	.0	.0	.0	.02	0	0	<10
20...	420	0	430	--	33	8.0	25	--	1	0	<10
MAY 03...	150	0	150	--	.2	.2	.0	--	0	0	0
24...	140	40	100	--	.2	.0	.3	--	0	0	0
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
21...	850	740	110	--	8.4	.0	10	--	0	0	<10
JUL 13...	250	70	180	280	1.5	.0	1.5	.01	0	0	0

	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
NOV 30...	--	0	--	0	20	--	10	--	22	.01	97
JAN 29...	--	0	--	0	40	--	30	--	32	.06	93
FEB 14...	--	0	--	0	130	--	40	--	88	.86	95
23...	--	0	--	0	70	--	60	--	131	7.1	90
MAR 09...	--	1	--	0	40	--	20	--	16	.06	97
22...	--	0	--	0	70	--	20	--	96	8.3	93
APR 06...	0	0	0	0	40	30	10	176	16	.05	100
20...	--	0	0	0	40	0	40	--	60	.18	98
MAY 03...	--	0	0	0	30	20	10	--	72	3.3	98
24...	--	0	0	0	30	10	20	--	51	.18	91
JUN 04...	--	--	--	--	--	--	--	--	44	.08	98
21...	--	--	--	--	--	--	--	--	244	.08	96
21...	--	0	0	0	230	200	30	--	309	12	91
JUL 13...	0	0	0	0	90	80	10	1	55	.01	97

ARKANSAS RIVER BASIN

371

07232500 BEAVER RIVER NEAR GUYMON, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°43'24", long 101°29'30", in NW¼SW¼ sec.18, T.3 N., R.15 E., Texas County, Hydrologic Unit 11100101, near center of span on downstream side of pier of bridge on U.S. Highway 64 at Dry Sand Draw, 1.2 mi (1.9 km) upstream from Goff Creek, 2.5 mi (4.0 km) north of Guymon, and at mile 650.7 (1,047.0 km).

DRAINAGE AREA.--2,139 mi² (5,540 km²), which includes that of Dry Sand Draw and of which 964 mi² (2,497 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1970 published as North Canadian River near Guymon.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,970.69 ft (905.466 m), revised, National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair except for winter periods which are poor.

AVERAGE DISCHARGE.--42 years, 24.6 ft³/s (0.70 m³/s), 17,820 acre-ft/yr (22.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,400 ft³/s (1,570 m³/s) June 15, 1964, gage height, 13.68 ft (4.170 m); maximum gage height, 13.82 ft (4.212 m), Sept. 23, 1941, from floodmark; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 331 ft³/s (9.37 m³/s) June 9, gage height, 6.83 ft (2.082 m), no peak above base of 2,400 ft³/s (68 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	4.0	4.5	4.8	9.3	15	.00	.00	.00
2	.00	.00	.00	.00	2.0	4.7	4.8	9.0	12	.00	.00	.00
3	.00	.00	.00	.00	1.7	4.8	6.9	12	11	.00	.00	.00
4	.00	.00	.00	.00	1.5	5.2	7.1	9.8	8.1	.00	.00	.00
5	.00	.00	.00	.00	2.8	5.4	7.0	7.2	7.7	.00	.00	.00
6	.00	.00	.00	.00	2.3	5.1	6.6	5.9	7.6	.00	.00	.00
7	.00	.00	.00	.00	7.6	5.7	6.1	4.1	7.8	14	.00	.00
8	.00	.00	.00	.00	4.0	5.7	5.1	3.7	15	64	.00	.00
9	.00	.00	.00	.00	10	5.1	5.0	3.4	151	11	.00	.00
10	.00	.00	.00	.00	15	5.4	4.8	3.3	27	4.7	.00	.00
11	.00	.00	.00	.00	6.3	5.1	4.8	3.2	19	1.1	.00	.00
12	.00	.00	.00	.00	6.4	4.8	4.2	3.1	10	.00	.00	.00
13	.00	.00	.00	.00	4.7	4.2	4.0	3.0	7.6	.00	.00	.00
14	.00	.00	.00	.00	3.8	4.5	3.6	2.7	6.1	.00	.00	.00
15	.00	.00	.00	.00	1.7	4.8	3.5	2.5	4.9	.00	.00	.00
16	.00	.00	.00	.00	1.4	5.1	3.1	2.3	4.3	.00	.00	.00
17	.00	.00	.00	4.0	1.2	5.1	3.2	2.1	3.7	10	.00	.00
18	.00	.00	2.4	13	1.7	5.4	3.1	2.6	3.2	50	.00	.00
19	.00	.00	1.2	5.8	2.1	4.2	2.7	2.4	2.3	8.0	.00	.00
20	.00	.00	.16	3.7	5.0	4.8	2.3	4.1	1.9	3.8	.00	.00
21	.00	.00	.49	7.0	5.6	6.4	2.4	23	1.8	1.7	.00	.00
22	.00	.00	2.5	3.8	7.4	6.4	2.5	12	1.3	.00	.00	.00
23	.00	.00	2.2	2.0	4.0	5.1	2.6	8.4	1.1	.00	.00	.00
24	.00	.00	1.6	1.5	3.8	4.8	2.4	7.7	1.1	.00	.00	.00
25	.00	.00	1.3	2.5	4.5	4.8	2.0	6.8	4.1	.00	.00	.00
26	.00	.00	1.2	1.2	4.8	4.8	2.3	6.1	2.6	.00	.00	.00
27	.00	.00	1.9	.70	4.5	5.1	2.2	5.8	1.3	.00	.00	.00
28	.00	.00	4.0	.90	4.3	4.5	2.6	5.4	.04	.00	.00	.00
29	.00	.00	.21	.50	---	4.1	2.8	4.5	.10	.00	.00	.00
30	.00	.00	.00	.45	---	3.9	5.7	72	.00	.00	.00	.00
31	.00	---	.00	.45	---	4.6	---	11	---	.00	.00	---
TOTAL	.00	.00	19.16	47.50	124.1	154.1	120.2	339.4	338.64	168.30	.00	.00
MEAN	.000	.000	.62	1.53	4.43	4.97	4.01	10.9	11.3	5.43	.000	.000
MAX	.00	.00	4.0	13	15	6.4	7.1	90	151	64	.00	.00
MIN	.00	.00	.00	.00	1.2	3.9	2.0	2.1	.00	.00	.00	.00
AC=FT	.00	.00	38	94	246	306	238	673	672	334	.00	.00
CAL YR 1978	TOTAL	4382.22	MEAN	12.0	MAX	1020	MIN	.00	AC=FT	8690		
WTR YR 1979	TOTAL	1311.40	MEAN	3.59	MAX	151	MIN	.00	AC=FT	2600		

ARKANSAS RIVER BASIN

07232500 BEAVER RIVER NEAR GUYMON, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-63, 1968 to July 1979 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1959 to September 1963, October 1975 to July 1979 (discontinued).

WATER TEMPERATURE: November 1959 to September 1963, October 1975 to July 1979 (discontinued).

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	540	528	552	---	543	---		
2			---	---	562	522	554	---	545	---		
3			---	---	561	528	552	---	540	---		
4			---	---	506	548	554	---	516	---		
5			---	---	498	545	553	---	546	---		
6			---	---	---	551	551	548	563	---		
7			---	---	450	547	552	554	562	---		
8			---	---	436	542	538	553	538	443		
9			---	---	431	548	548	552	562	445		
10			---	---	432	547	541	547	504	449		
11			---	---	457	548	542	547	554	---		
12			---	---	460	550	539	550	521	---		
13			---	---	531	541	542	521	547	---		
14			---	---	532	539	540	515	514	---		
15			---	---	534	538	522	526	514	---		
16			---	---	538	541	519	523	554	---		
17			---	---	611	541	521	525	501	354		
18			531	---	603	563	524	526	520	---		
19			---	---	564	564	522	525	522	---		
20			---	---	562	563	524	552	514	---		
21			---	562	550	564	522	551	530	---		
22			---	490	550	562	502	549	524	---		
23			---	521	537	564	506	552	507	---		
24			---	562	540	566	503	552	500	---		
25			---	512	537	543	499	552	481	---		
26			---	---	539	545	501	553	494	---		
27			---	---	543	542	504	575	484	---		
28			---	---	542	544	501	576	485	---		
29			---	---	---	545	---	576	473	---		
30			---	---	---	545	---	573	---	---		
31			---	564	---	544	---	575	---	---		

ARKANSAS RIVER BASIN

373

07232500 BEAVER RIVER NEAR GUYMON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

07232630 BEAVER RIVER NEAR HOOKER, OK

LOCATION.--Lat 36°41'22", long 101°12'19", at the northwest corner of NW¼ sec.35, T.3 N., R.2 E., Texas County, Hydrologic Unit 11100102, at bridge on State Highway 94, 12 miles (19.3 km) south of Hooker, and at mile 628.6 (1,011.4 km).

DRAINAGE AREA.--3,017 mi² (7,814 km²) of which 1,488 mi² (3,854 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1972-73, 1975 to September 1979 (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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHQS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, (PERCENT SATURATION)	OXYGEN, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT
FEB 22...	1530	930	8.9	4.5	10.0	87	24	290	65	30	50	27
MAY 16...	1530	960	8.5	25.0	6.0	81	13	300	79	24	75	35

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS PO4)
FEB 22...	1.3	4.9	230	59	553	.75	.21	.17	.38	.020	--	--
MAY 16...	1.9	8.0	230	100	713	.97	.00	.88	.88	.060	.18	.18

07233200 OPTIMA LAKE NEAR HARDESTY, OK

LOCATION.--Lat 36°39'23", long 101°08'13", in NE¼NE¼ sec.8, T.2 N., T.18 E., Texas County, Hydrologic Unit 11100102, in control tower for dam on Beaver River, 4.5 mi (7.2 km) northeast of Hardesty, and at mile 623.2 (1,002.7 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1978 to September 1979.

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

REMARKS.--Reservoir is formed by earth dam having a concrete gate tower with a 12'0" x 16'5" oblong conduit. Discharges are controlled by two drum-hoist operated tractor-type service gates and a 36-inch low-flow control pipe. Closure for storage was made Oct. 2, 1978. Capacity, 618,500 acre-ft (763 hm³) at elevation 2,814.2 ft (857.77 m), maximum pool; 382,500 acre-ft (472 hm³) at elevation 2,796.0 (852.22 m), uncontrolled spillway crest; 229,500 acre-ft (283 hm³) at elevation 2,779.0 ft (847.04 m), top of flood-control pool; 129,000 acre-ft (159 hm³) at elevation 2,763.5 (842.32 m), top of conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, and water supply. Capacity table based on original survey.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,960 acre-ft (7.35 hm³) July 20 to Aug. 2, elevation 2,721.30 ft (829.452 m); minimum, 60.4 acre-ft (0.07 hm³) Nov. 2-23, elevation 2,707.85 ft (825.353 m).

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

2,707	31.0	2,716	1,890
2,710	219.	2,719	3,870
2,713	760.	2,722	6,660

 CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160.0	62.6	67.0	76.8	136	305	349	526	5100	5050	5960	5480
2	160.0	60.4	69.4	76.8	136	313	349	3110	5100	5050	5860	5430
3	158.0	60.4	69.4	76.8	136	318	349	3940	5100	5050	5860	5380
4	155.0	60.4	69.4	76.8	136	326	349	4060	5100	5010	5770	5380
5	153.0	60.4	69.4	76.8	148	336	357	4180	5100	5010	5770	5380
6	150.0	60.4	69.4	76.8	152	349	365	4200	5100	5010	5770	5380
7	148.0	60.4	71.9	76.8	158	349	365	4200	5100	5010	5670	5290
8	138.0	60.4	71.9	76.8	160	349	357	4270	5190	5010	5670	5290
9	135.0	60.4	71.9	76.8	167	357	357	4420	5190	5150	5620	5290
10	133.0	60.4	71.9	76.8	174	357	365	4370	5290	5150	5620	5290
11	130.0	60.4	69.4	76.8	179	357	365	4440	5290	5150	5620	5190
12	121.0	60.4	69.4	76.8	180	357	365	4480	5290	5100	5570	5190
13	119.0	60.4	69.4	76.8	194	357	365	4460	5290	5100	5570	5190
14	117.0	60.4	71.9	76.8	202	357	365	4460	5290	5100	5570	5190
15	108.0	60.4	71.9	76.8	211	349	365	4460	5290	5100	5570	5190
16	106.0	60.4	71.9	79.6	218	349	365	4460	5290	5150	5570	5190
17	104.0	60.4	71.9	79.6	222	349	390	4510	5290	5570	5570	5150
18	102.0	60.4	71.9	79.6	230	349	415	4550	5290	5770	5570	5150
19	93.9	60.4	71.9	90.8	240	349	415	4640	5290	5910	5530	5100
20	86.2	60.4	71.9	110.0	242	349	415	4730	5190	5960	5530	5100
21	79.0	60.4	71.9	128.0	248	349	415	4730	5190	5960	5530	5100
22	77.4	60.4	71.9	128.0	252	362	415	4730	5190	5960	5430	5010
23	75.8	60.4	71.9	128.0	261	373	415	4730	5100	5960	5430	5010
24	69.4	62.6	74.4	128.0	226	373	433	4730	5100	5960	5430	5010
25	69.4	64.8	74.4	128.0	270	373	433	4780	5100	5960	5480	5010
26	69.4	64.8	74.4	128.0	288	373	433	4820	5100	5960	5480	5010
27	69.4	64.8	74.4	128.0	304	373	433	4910	5100	5960	5480	5010
28	64.8	64.8	74.4	128.0	297	360	433	4960	5100	5960	5530	4960
29	64.8	64.8	74.4	136.0	---	349	433	5010	5100	5960	5630	4960
30	62.6	62.6	76.8	136.0	---	349	460	5100	5100	5960	5530	4910
31	62.6	---	76.8	136.0	---	349	---	5100	---	5960	5480	---
MAX	160	64	76	136	304	373	460	5100	5290	5960	5960	5480
MIN	62	60	67	76	136	305	349	526	5100	5010	5430	4910
†	2707.90	2707.90	2708.20	2709.10	2710.64	2711.00	2711.65	2720.40	2720.40	2721.30	2720.80	2720.20
‡	---	0	+14.2	+59.2	+161	+52	+111	+4,640	0	+860	-480	-570

WTR YR 1979 MAX 5960 MIN 60 ‡+4750

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07233210 BEAVER RIVER NEAR HARDESTY, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°39'23", long 101°08'06", in SE¼NE¼ sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, on left bank of outlet channel, 500 ft (152 m) downstream from Optima Dam, 5 mi (8 km) northeast of Hardesty, and at mile 623.1 (1,002.6 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder. Datum of gage 2,690.00 ft (819.912 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) June 8, 1978, gage height, 10.42 ft (3.176 m); no flow at times in 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 174 ft³/s (4.93 m³/s) July 9, gage height, 9.00 ft (2.743 m); minimum daily discharge, 0.01 ft³/s (0.0003 m³/s) Jan. 31, May 12-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.05	.02	.04	.04	.02	.03	.88	.02	.06	.05	.04
2	.02	.04	.02	.03	.03	.02	.03	3.5	.02	.06	.05	.04
3	.02	.04	.02	.04	.03	.02	.07	.19	.02	.06	.04	.04
4	.02	.04	.04	.04	.02	.02	.04	.06	.02	.06	.04	.03
5	.02	.04	.04	.03	.08	.02	.03	.03	.02	.12	.04	.03
6	.02	.03	.04	.03	.12	.02	.03	.03	.02	.18	.05	.03
7	.02	.03	.03	.03	.10	.02	.03	.02	.02	.23	.04	.03
8	.02	.03	.02	.02	.08	.02	.03	.02	.05	.21	.05	.03
9	.02	.03	.02	.04	.05	.02	.03	.02	.02	12	.05	.03
10	.02	.03	.04	.03	.04	.02	.03	.02	.02	.11	.06	.03
11	.02	.03	.06	.03	.04	.02	.03	.02	.02	.08	.04	.03
12	.02	.03	.05	.03	.04	.02	.07	.01	.02	.08	.04	.02
13	.02	.03	.05	.03	.04	.02	.14	.01	.02	.08	.05	.02
14	.03	.03	.04	.02	.04	.02	.13	.01	.02	.08	.05	.04
15	.02	.03	.06	.04	.04	.02	.06	.01	.02	.08	.05	.04
16	.02	.03	.04	.10	.03	.02	.04	.01	.02	3.4	.06	.04
17	.02	.03	.06	.10	.06	.02	.49	.02	.02	5.6	.05	.04
18	.02	.03	.06	.12	.11	.04	.07	.03	.02	.17	.05	.04
19	.02	.03	.04	.09	.04	.03	.05	.05	.02	.22	.04	.04
20	.02	.03	.04	.06	.03	.02	.03	.06	.02	.20	.04	.03
21	.03	.03	.04	.04	.03	.06	.02	.14	.02	.08	.04	.03
22	.06	.03	.04	.03	.03	.07	.02	.04	.02	.08	.03	.03
23	.04	.02	.04	.04	.02	.05	.02	.04	.02	.07	.04	.03
24	.03	.02	.04	.04	.02	.03	.02	.04	.02	.06	.04	.03
25	.04	.02	.03	.03	.02	.03	.02	.03	.05	.05	.05	.03
26	.06	.02	.03	.02	.02	.03	.04	.03	.04	.05	2.5	.03
27	.04	.02	.03	.04	.02	.03	.10	.03	.04	.04	.12	.03
28	.04	.02	.04	.03	.02	.03	.14	.04	.04	.25	.08	.02
29	.03	.02	.04	.02	---	.03	.10	.04	.06	.08	.06	.02
30	.04	.02	.05	.02	---	.03	.21	.09	.06	.06	.04	.02
31	.04	---	.06	.01	---	.03	---	.25	---	.06	.04	---
TOTAL	.86	.88	1.23	1.27	1.24	.85	2.15	5.77	.80	23.96	3.98	.94
MEAN	.028	.029	.040	.041	.044	.027	.072	.19	.027	.77	.13	.031
MAX	.06	.05	.06	.12	.12	.07	.49	3.5	.06	.12	2.5	.04
MIN	.02	.02	.02	.01	.02	.02	.02	.01	.02	.04	.03	.02
AC-FT	1.7	1.7	2.4	2.5	2.5	1.7	4.3	11	1.6	48	7.9	1.9
CAL YR 1978	TOTAL	8451.34	MEAN	23.2	MAX	668	MIN	.00	AC-FT	16760		
WTR YR 1979	TOTAL	43.93	MEAN	.12	MAX	12	MIN	.01	AC-FT	87		

ARKANSAS RIVER BASIN

377

07234000 BEAVER RIVER AT BEAVER, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'05", in SW¼ sec.7, T.4 N., R.24 E., Beaver County, Hydrologic Unit 11100201, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.5 mi (2.4 km) downstream from Home Creek, 5 mi (8.0 km) upstream from Clear Creek, and at mile 576.0 (926.8 km).

DRAINAGE AREA.--7,955 mi² (20,603 km²), of which 4,270 mi² (11,059 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft (721.815 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Mar. 29, 1904, to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938, to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft (9.1 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--42 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft³/s (1,980 m³/s) Oct. 8, 1946, maximum gage height, 14.55 ft (4.435 m) by slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 ft³/s (1,190 m³/s); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft³/s (35.4 m³/s) July 27, gage height, 7.24 ft (2.207 m), no peak above base of 4,000 ft³/s (113 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.07	.16	.12	.45	.18	8.7	14	70	3.9	28	.00
2	.00	.13	.15	.10	.30	.23	8.8	31	77	1.7	24	.01
3	.00	.14	.11	.04	.16	.23	12	158	62	.59	52	.02
4	.00	.13	.18	.00	.13	.18	15	78	74	.31	38	.00
5	.00	.12	.15	.15	.25	.59	15	55	102	.35	25	.00
6	.00	.13	.15	.18	.30	.77	15	46	57	.41	24	.00
7	.00	.13	.47	.15	.33	.82	12	40	40	.30	22	.00
8	.00	.13	.35	.12	.50	.96	10	36	35	.22	19	.00
9	.00	.16	.30	.24	1.8	1.1	9.6	33	41	.17	17	.00
10	.00	.15	.45	.07	1.2	1.1	12	30	38	283	15	.00
11	.00	.17	.80	.05	.96	.83	13	27	32	54	14	.00
12	.00	.17	1.0	.08	.74	.84	11	25	27	21	12	.00
13	.00	.16	.26	.10	.65	.76	10	24	22	11	12	.00
14	.00	.16	.18	.00	.68	.52	9.1	23	19	2.7	11	.00
15	.00	.20	.13	.08	.53	.64	7.9	22	12	.23	4.8	.00
16	.00	.17	.13	.30	.40	.92	7.4	20	11	132	.23	.00
17	.00	.15	.16	3.0	.25	1.3	6.4	18	8.4	167	.18	.00
18	.00	.14	.10	10	3.0	5.9	6.8	18	5.9	478	.15	.00
19	.00	.15	.09	17	1.4	7.4	9.6	18	1.9	91	.14	.00
20	.00	.14	.08	12	.55	7.6	11	30	.74	51	.14	.00
21	.00	.13	.40	6.4	.36	10	9.2	83	.23	40	.11	.00
22	.00	.15	.12	4.3	.28	15	8.3	118	.15	28	.09	.00
23	.00	.18	.10	2.0	.26	14	7.0	75	.18	25	.08	.00
24	.00	.17	.16	1.5	.21	13	6.5	128	.39	24	.15	.00
25	.00	.18	.13	3.2	.23	12	5.5	107	2.7	22	.12	.00
26	.03	.17	.15	2.3	.21	10	4.6	69	2.3	98	.18	.00
27	.05	.17	.15	1.0	.13	9.5	4.5	49	.72	655	.10	.00
28	.06	.17	.10	.30	.18	9.9	5.1	39	.61	102	.06	.00
29	.06	.18	.16	.20	---	10	6.9	36	14	79	.01	.00
30	.06	.19	.25	.25	---	8.0	6.2	50	6.9	51	.00	.00
31	.06	---	.18	.10	---	7.6	---	83	---	38	.00	---
TOTAL	.32	4.59	7.30	65.33	16.44	151.87	274.1	1583	764.12	2460.88	319.54	.03
MEAN	.010	.15	.24	2.11	.59	4.90	9.14	51.1	25.5	79.4	10.3	.001
MAX	.06	.20	1.0	.17	3.0	.15	.15	158	102	655	52	.02
MIN	.00	.07	.08	.00	.13	.18	4.5	14	.15	.17	.00	.00
AC=FT	.6	9.1	14	130	33	301	544	3140	1520	4880	634	.06
CAL YR 1978	TOTAL	16492.19	MEAN	45.2	MAX	2410	MIN	.00	AC=FT	32710		
WTR YR 1979	TOTAL	5647.52	MEAN	15.5	MAX	655	MIN	.00	AC=FT	11200		

ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958-59, 1962-63, 1968 to current year.

PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: October 1967 to current year.

WATER TEMPERATURE: October 1967 to current year.

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

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, 6,580 micromhos Apr. 29, 1978; minimum daily, 286 micromhos July 31, 1971.

WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 1978; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT												
05...	1800	.00	5350	7.8	17.0	--	--	--	--	--	1700	1600
14...	2100	.00	5560	7.8	12.0	--	--	--	--	--	1800	1600
25...	1900	.00	4840	7.9	12.0	--	--	--	--	--	1100	920
NOV												
05...	1530	.08	4860	7.8	17.0	--	--	--	--	--	1300	1200
15...	2200	.18	4560	7.7	3.0	--	--	--	--	--	1200	1100
25...	2100	.18	4700	7.8	6.0	--	--	--	--	--	1700	1500
30...	0830	.20	5000	8.2	3.5	3.4	12.3	102	790	1400	1400	1100
DEC												
05...	1730	.13	5310	8.0	6.0	--	--	--	--	--	1600	1400
15...	1630	.13	5090	7.8	12.0	--	--	--	--	--	1600	1400
20...	1300	.10	5200	8.3	6.0	1.9	12.9	114	130	86	1300	1100
25...	1600	.10	4960	7.7	6.0	--	--	--	--	--	1300	1100
JAN												
17...	1800	3.0	5130	7.4	.0	--	--	--	--	--	--	--
22...	1600	4.2	4380	7.6	.0	--	--	--	--	--	--	--
23...	1415	1.1	5000	8.2	.0	6.5	12.0	91	47	140	1400	1200
28...	1730	.30	4760	7.6	2.0	--	--	--	--	--	--	--
FEB												
05...	1700	.25	4850	7.8	1.0	--	--	--	--	--	1300	1300
15...	1800	.46	5110	7.7	5.0	--	--	--	--	--	1400	1200
22...	1130	.32	5300	8.3	5.0	5.0	13.0	112	K100	24	1300	1100
25...	2100	.25	5170	7.5	3.0	--	--	--	--	--	1400	1300
MAR												
05...	1730	.74	5340	8.5	7.0	--	--	--	--	--	770	590
15...	1900	.74	5310	8.1	3.0	--	--	--	--	--	860	680
21...	1235	11	5100	8.0	10.0	18	10.0	99	280	430	700	520
25...	1900	12	5360	8.1	16.0	--	--	--	--	--	780	580
APR												
05...	1730	16	5050	7.6	18.0	--	--	--	--	--	720	540
12...	0800	12	5500	8.2	5.0	15	13.8	119	180	280	780	590
15...	1730	8.4	5720	7.6	17.0	--	--	--	--	--	830	650
25...	1800	5.0	6060	8.0	15.0	--	--	--	--	--	900	720
MAY												
07...	1900	39	5330	7.9	17.0	--	--	--	--	--	790	560
15...	1900	22	6330	8.1	17.0	--	--	--	--	--	860	650
16...	1730	20	6300	8.1	24.5	20	6.2	81	120	190	790	600
24...	1900	193	2250	7.5	18.0	--	--	--	--	--	360	210
JUN												
05...	1700	89	4940	7.5	23.0	--	--	--	--	--	720	520
15...	1700	12	5650	7.9	26.0	--	--	--	--	--	900	700
25...	1700	2.7	4690	8.0	21.0	--	--	--	--	--	810	660
28...	1000	.32	5300	8.0	26.0	3.5	6.2	84	420	290	1300	1100
JUL												
05...	1700	.53	5780	7.9	27.0	--	--	--	--	--	1400	1200
15...	1300	.23	3230	7.9	27.0	--	--	--	--	--	600	420
18...	1000	752	598	7.9	24.0	1100	6.2	82	4600	45000	130	31
25...	1800	20	538	7.5	29.0	--	--	--	--	--	140	23
AUG												
05...	2100	25	2100	8.1	27.0	--	--	--	--	--	380	220
07...	1200	22	3700	8.2	27.5	48	5.7	79	27	140	650	440
15...	1930	.23	5410	8.2	26.0	--	--	--	--	--	1300	1100
19...	1730	.13	5400	8.2	26.0	--	--	--	--	--	1300	1100

ARKANSAS RIVER BASIN

379

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
05...	400	180	540	40	5.6	--	9.9	230	0	190	5.8	1100
14...	400	190	560	40	5.8	--	9.4	200	0	160	5.1	1100
25...	180	150	540	52	7.2	--	11	180	0	150	3.6	730
NOV												
05...	290	150	540	46	6.4	--	14	--	--	150	--	890
15...	280	130	500	47	6.2	--	12	--	--	160	--	820
25...	390	180	530	40	5.6	--	11	--	--	170	--	1100
30...	300	150	580	48	6.8	--	9.4	--	--	230	--	860
DEC												
05...	360	180	570	43	6.1	--	9.4	--	--	220	--	1100
15...	340	180	540	42	5.9	--	8.8	--	--	240	--	1000
20...	290	150	570	48	6.8	--	10	--	--	220	--	860
25...	270	150	590	50	7.1	--	10	--	--	160	--	770
JAN												
17...	--	160	650	--	--	--	11	--	--	68	--	960
22...	--	130	510	--	--	--	8.5	--	--	160	--	750
23...	340	140	570	46	6.6	--	8.4	--	--	240	--	910
28...	--	150	590	--	--	--	8.8	--	--	79	--	830
FEB												
05...	300	140	580	62	7.7	590	7.8	--	--	62	--	790
15...	300	150	--	--	--	640	7.7	--	--	120	--	840
22...	300	140	620	50	7.4	--	9.4	--	--	210	--	--
25...	310	150	670	51	7.8	680	8.0	--	--	67	--	850
MAR												
05...	170	85	790	69	12	800	9.2	--	--	180	--	500
15...	180	100	790	66	12	800	9.1	--	--	180	--	530
21...	150	80	800	71	13	--	9.9	--	--	180	--	400
25...	160	92	810	69	13	820	9.5	--	--	200	--	450
APR												
05...	150	84	780	70	13	790	11	--	--	180	--	400
12...	170	86	890	71	14	--	9.3	--	--	190	--	450
15...	170	99	920	70	14	930	12	--	--	180	--	550
25...	180	110	970	70	14	980	12	--	--	180	3.5	550
MAY												
07...	160	96	850	82	13	870	16	--	--	230	--	420
15...	190	93	1100	83	16	1100	8.5	--	--	210	--	520
16...	180	82	1000	82	16	1000	12	--	--	190	--	520
24...	91	32	360	76	8.3	370	11	--	--	150	--	--
JUN												
05...	150	84	750	69	12	760	11	--	--	200	--	400
15...	180	110	900	68	13	910	12	--	--	200	--	640
25...	160	100	--	--	--	960	11	--	--	150	--	620
28...	300	140	650	51	7.8	660	9.9	--	--	210	--	810
JUL												
05...	300	150	770	69	9.1	780	11	--	--	160	--	1000
15...	150	55	450	72	8.0	460	11	--	--	180	--	400
18...	35	10	76	63	2.4	84	7.7	--	--	98	--	49
25...	39	11	52	51	1.9	62	9.5	--	--	120	--	39
AUG												
05...	96	34	290	62	6.5	300	10	--	--	160	--	230
07...	150	67	600	66	10	610	13	--	--	210	--	430
15...	300	130	700	54	8.5	710	10	--	--	180	--	880
19...	300	130	750	56	9.1	760	11	--	--	180	--	880

ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	1100	--	--	3850	--	5.24	.00	--	--	--	--	--
14...	1200	--	--	3970	--	5.40	.00	--	--	--	--	--
25...	970	--	--	3290	--	4.47	.00	--	--	--	--	--
NOV												
05...	1100	--	--	3290	--	4.47	.71	--	--	--	--	--
15...	1000	--	--	2970	--	4.04	1.44	--	--	--	--	--
25...	1000	--	--	3670	--	4.99	1.78	--	--	--	--	--
30...	1100	.7	24	3270	3160	4.45	1.77	.04	.02	--	.47	.49
DEC												
05...	1100	--	--	3770	--	5.13	1.32	--	--	--	--	--
15...	1100	--	--	3590	--	4.88	1.26	--	--	--	--	--
20...	1000	.7	22	3300	3040	4.49	.89	.05	.01	--	.47	.48
25...	1100	--	--	3330	--	4.53	.90	--	--	--	--	--
JAN												
17...	1100	--	--	3390	--	--	27.5	--	--	--	--	--
22...	870	--	--	2840	--	--	32.2	--	--	--	--	--
23...	1000	.7	20	3290	3130	4.47	9.77	.05	.05	--	.37	.42
28...	1000	--	--	3090	--	--	2.50	--	--	--	--	--
FEB												
05...	1100	--	--	3190	--	4.34	2.15	--	--	--	--	--
15...	1100	--	--	3360	--	--	4.17	--	--	--	--	--
22...	--	.7	--	--	--	--	--	.05	.05	--	.42	.47
25...	1100	--	--	3400	--	4.62	2.29	--	--	--	--	--
MAR												
05...	1300	--	--	3170	--	4.31	6.33	--	--	--	--	--
15...	1300	--	--	3140	--	4.27	6.27	--	--	--	--	--
21...	1300	1.4	15	2870	2860	3.90	85.2	.01	.01	--	.61	.62
25...	1400	--	--	2830	--	3.85	91.7	--	--	--	--	--
APR												
05...	1200	--	--	2870	--	3.90	124	--	--	--	--	--
12...	1500	1.5	19	3310	3240	4.50	107	.02	.05	.06	.35	.40
15...	1500	--	--	3180	--	4.32	72.1	--	--	--	--	--
25...	1500	--	--	3770	--	5.13	50.9	--	--	--	--	--
MAY												
07...	1400	--	--	3080	--	4.19	324	--	--	--	--	--
15...	1700	--	--	3730	--	5.07	222	--	--	--	--	--
16...	1600	1.7	25	3800	3540	5.17	205	.01	.24	.29	.45	.69
24...	500	--	--	1320	--	1.80	688	--	--	--	--	--
JUN												
05...	1300	--	--	2910	--	3.96	699	--	--	--	--	--
15...	1500	--	--	3420	--	4.65	111	--	--	--	--	--
25...	1200	--	--	2980	--	--	21.7	--	--	--	--	--
28...	1300	.9	29	3650	3370	4.96	3.15	.03	.19	.23	.22	.41
JUL												
05...	1400	--	--	3830	--	5.21	5.48	--	--	--	--	--
15...	750	--	--	1950	--	2.65	1.21	--	--	--	--	--
18...	100	.4	8.6	330	346	.45	670	.66	.02	.02	3.8	3.8
25...	70	--	--	320	--	.44	17.3	--	--	--	--	--
AUG												
05...	460	--	--	1240	--	1.69	83.7	--	--	--	--	--
07...	920	1.7	27	2320	2340	3.16	138	.02	.18	.22	.46	.64
15...	1300	--	--	3630	--	4.94	2.25	--	--	--	--	--
19...	1300	--	--	3640	--	4.95	1.28	--	--	--	--	--

381

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
NOV 30...	10	2	100	100	0	12	4	8	10	10	0
DEC 20...	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	4	3	100	100	0	2	1	1	20	0	20
MAR 21...	--	--	--	--	--	--	--	--	--	--	--
APR 12...	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	8	3	200	0	300	0	0	0	30	10	20
JUN 28...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	10	8	400	0	400	1	0	5	20	0	40

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CU)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 30...	1	0	1	16	12	4	880	860	20	41
DEC 20...	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--
FEB 22...	0	0	0	4	4	0	750	710	40	8
MAR 21...	--	--	--	--	--	--	--	--	--	--
APR 12...	--	--	--	--	--	--	--	--	--	--
MAY 16...	0	0	1	8	6	2	750	740	10	10
JUN 28...	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--
AUG 07...	1	1	0	7	0	10	1800	1800	10	4

ARKANSAS RIVER BASIN

383

07234000 BEAVER RIVER AT BEAVER, OK--Continued

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
NOV 30...	0	75	310	20	290	.0	.0	.0	1	0
DEC 20...	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--
FEB 22...	7	1	350	230	120	.0	.0	.0	0	0
MAR 21...	--	--	--	--	--	--	--	--	--	--
APR 12...	--	--	--	--	--	--	--	--	--	--
MAY 16...	10	0	60	30	30	.1	.0	.1	1	0
JUN 28...	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--
AUG 07...	2	2	90	70	20	.2	.1	.1	1	0

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 30...	1	0	0	0	40	0	40	166	.09	59
DEC 20...	--	--	--	--	--	--	--	359	.10	97
JAN 23...	--	--	--	--	--	--	--	138	.41	96
FEB 22...	1	0	0	0	30	10	20	440	.38	92
MAR 21...	--	--	--	--	--	--	--	96	2.9	91
APR 12...	--	--	--	--	--	--	--	422	14	100
MAY 16...	1	0	0	0	30	10	20	605	33	99
JUN 28...	--	--	--	--	--	--	--	604	.52	99
JUL 18...	--	--	--	--	--	--	--	1820	3700	96
AUG 07...	1	0	0	0	20	0	20	590	35	97

07234000 BEAVER RIVER AT BEAVER, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 30,78 0830	MAR 21,79 1235	MAY 16,79 1730	JUN 28,79 1000	JUL 18,79 1000	AUG 7,79 1200				
TOTAL CELLS/ML	2800	2700	1100	5500	1200	34000				
DIVERSITY: DIVISION	0.3	0.7	1.0	1.2	1.0	0.9				
..CLASS	0.3	0.7	1.0	1.2	1.0	0.9				
...ORDER	0.3	1.3	1.5	2.1	1.8	2.0				
...FAMILY	2.1	1.8	1.5	2.6	1.8	2.8				
....GENUS	2.2	2.7	1.6	3.0	1.8	3.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
...SCHROEDERIA	--	-	--	-	--	-	--	-	970	3
...MICRACTINIACEAE										
...GOLENKINIA	--	-	--	-	--	-	--	-	480	1
...MICRACTINIUM	--	-	--	-	--	-	--	-	650	2
...OOCYSTACEAE										
...ANKISTRODESMUS	--	-	--	-	--	-	--	-	*	0
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	4400	13
...OOCYSTIS	--	-	--	-	--	-	--	-	320	1
...TREUBARIA	--	-	--	-	--	-	--	-	5300#	16
...SCENEDESMACEAE										
...ACTINASTRUM	--	-	--	-	--	-	--	-	1300	4
...SCENEDESMUS	--	-	260	10	40	4	1300#	24	520#	44
...TETRASTRUM	--	-	--	-	--	-	--	-	650	2
...TETRASPORALES										
...PALMELLACEAE										
...GLOEOCYSTIS	--	-	--	-	--	-	--	-	7400#	22
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CARTERIA	--	-	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	190	7	380#	34	1300#	24	130	11
...CHLOROGONIUM	--	-	--	-	--	-	210	4	810	2
									1600	5
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...CHAETOCERACEAE										
...CHAETOCEROS	--	-	--	-	--	-	500	9	--	-
...COSCINODISCAEAE										
...CYCLOTELLA	--	-	300	11	--	-	83	2	130	11
...MELOSIRA	--	-	29	1	30	3	--	-	--	-
...STEPHANODISCUS	--	-	--	-	40	4	--	-	1300	4
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	240	9	--	-	--	-	--	-	--	-
...COCCONEIS	--	-	14	1	--	-	--	-	--	-
...CYMBELLACEAE										
...AMPHORA	24	1	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
...ASTERIONELLA	49	2	--	-	--	-	--	-	--	-
...SYNEURA	190	7	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE										
...GOMPHONEMA	120	4	--	-	--	-	--	-	--	-
...NAVICULACEAE										
...CALONEIS	--	-	120	4	--	-	--	-	--	-
...DIPLONEIS	--	-	58	2	--	-	--	-	--	-
...ENTOMONEIS	--	-	980#	37	--	-	--	-	--	-
...NAVICULA	750#	27	420#	16	10	1	250	5	390#	33
...NITZSCHIAEAE										
...NITZSCHIA	1300#	45	290	11	620#	55	870#	16	--	-
									1800	5
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	--	-	--	-	--	-	--	-	*	0
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	--	-	41	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...ANACYSTIS	150	5	--	-	--	-	83	2	--	-
									1300	4
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...PHACUS	--	-	--	-	10	1	--	-	--	-
...TRACHELOMONAS	--	-	--	-	--	-	83	2	--	-

07234000 BEAVER RIVER AT BEAVER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	5330	4720	---	---	5110	5440	---	4450	3510	1260	
2	---	4830	4980	---	---	4570	4820	---	4240	5170	1260	
3	---	5140	5040	---	4380	4590	4800	---	4040	5660	1500	
4	---	4790	5150	---	4610	4860	4960	---	4550	5740	2660	
5	---	4860	5310	---	4850	5340	5050	---	4210	5780	2100	
6	---	5300	---	---	4850	5040	5690	---	1290	5760	4680	
7	---	5340	---	---	4260	5060	5740	5330	1770	5770	4680	
8	---	5010	---	---	3980	5240	5740	5660	2720	5740	4680	
9	---	5360	5120	---	3980	5250	5490	5980	3680	5600	3700	
10	---	4810	---	---	3560	5270	5480	5930	3470	5860	3690	
11	---	4780	5200	---	4400	5270	5740	5930	3540	5780	4670	
12	---	4740	5360	---	4270	5370	5740	5960	4160	3210	4670	
13	---	5180	5260	---	4290	5450	5670	5940	5160	3220	5400	
14	---	5020	5330	---	4590	5420	5360	6350	5150	3190	5410	
15	---	4560	5090	---	5110	5310	5720	6330	5650	3230	5410	
16	---	5150	3830	---	5130	5300	5920	6080	5690	8310	5400	
17	---	5400	5180	5130	---	4280	5940	6090	5960	1400	5380	
18	---	4830	4100	3830	4170	4270	5910	4210	5770	7120	5410	
19	---	4830	4880	4580	4910	4880	5370	4190	6170	1130	5400	
20	---	5070	4060	4660	4940	4660	5370	4190	5640	3490	---	
21	---	4750	4060	4220	5040	4640	5330	2680	5640	3490	---	
22	---	4750	4670	4380	5040	5250	5560	2700	4960	4180	---	
23	---	4840	4070	---	5160	5230	5670	2710	5100	5380	---	
24	---	4800	4690	4440	5160	5330	6000	2250	5130	5370	---	
25	---	4700	4960	4710	5170	5360	6060	2250	4690	5380	---	
26	4770	5280	3720	---	5030	5470	5570	1070	4600	8150	---	
27	4760	4370	3680	---	5250	5460	5480	1070	1400	8180	---	
28	4810	4360	3800	4760	5190	5450	5630	---	1420	8180	---	
29	4820	4650	3840	---	---	5800	5580	3430	3400	1270	---	
30	5410	4830	3760	---	---	5460	---	3440	3490	1750	---	
31	5490	---	---	---	---	5460	---	4550	---	2220	---	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14.0	12.0	---	---	11.0	7.0	---	16.0	25.0	30.0	
2	---	15.0	.0	---	---	7.0	7.0	---	17.0	27.0	26.0	
3	---	15.0	.0	---	3.0	3.0	2.0	---	19.0	27.0	29.0	
4	---	19.0	8.0	---	1.0	5.0	10.0	---	20.0	26.0	29.0	
5	---	17.0	6.0	---	1.0	7.0	18.0	---	23.0	27.0	27.0	
6	---	12.0	---	---	2.0	5.0	15.0	---	22.0	25.0	28.0	
7	---	12.0	---	---	4.0	9.0	16.0	---	25.0	28.0	29.0	
8	---	13.0	---	---	3.0	7.0	14.0	15.0	23.0	25.0	29.0	
9	---	15.0	9.0	---	5.0	5.0	9.0	15.0	22.0	26.0	27.0	
10	---	8.0	---	---	2.5	6.0	13.0	16.0	17.0	25.0	26.0	
11	---	5.0	8.0	---	4.0	9.0	15.0	17.0	23.0	24.0	28.0	
12	---	8.0	10.0	---	3.0	10.0	14.0	14.0	24.0	27.0	26.0	
13	---	7.0	7.0	---	4.0	10.0	16.0	17.0	26.0	29.0	26.0	
14	---	8.0	9.0	---	10.0	5.0	15.0	16.0	25.0	28.0	27.0	
15	---	3.0	12.0	---	5.0	3.0	17.0	17.0	26.0	27.0	26.0	
16	---	10.0	6.0	---	3.0	4.0	15.0	14.0	22.0	27.0	25.0	
17	---	7.0	7.0	.0	---	6.0	17.0	20.0	20.0	29.0	27.0	
18	---	7.0	13.0	.0	1.0	8.0	15.0	19.0	24.0	28.0	26.0	
19	---	5.0	12.0	.0	6.0	14.0	16.0	19.0	26.0	26.0	26.0	
20	---	7.0	9.0	1.0	7.0	14.0	15.0	13.0	26.0	27.0	---	
21	---	5.0	9.0	2.0	7.0	12.0	18.0	14.0	23.0	28.0	---	
22	---	8.0	2.0	.0	7.0	9.0	18.0	16.0	26.0	25.0	---	
23	---	12.0	4.0	---	7.0	11.0	18.0	18.0	24.0	28.0	---	
24	---	15.0	6.0	3.0	5.0	14.0	16.0	18.0	20.0	28.0	---	
25	---	6.0	6.0	.0	3.0	16.0	15.0	19.0	21.0	29.0	---	
26	11.0	4.0	4.0	---	15.0	11.0	11.0	15.0	23.0	27.0	---	
27	10.0	8.0	6.0	---	12.0	9.0	12.0	17.0	25.0	29.0	---	
28	18.0	6.0	6.0	2.0	10.0	17.0	13.0	---	24.0	29.0	---	
29	21.0	12.0	12.0	---	---	15.0	15.0	14.0	23.0	28.0	---	
30	13.0	12.0	2.0	---	---	15.0	---	13.0	27.0	27.0	---	
31	15.0	---	---	---	---	10.0	---	14.0	---	28.0	---	

ARKANSAS RIVER BASIN

07234100 CLEAR CREEK NEAR ELMWOOD, OK

LOCATION.--Lat 36°38'42", long 100°30'07", in SW¼SW¼ sec.8, T.2 N., R.24 E., Beaver County, Hydrologic Unit 11100201, on downstream side of right pile bent of county road bridge, 1,000 ft (304.8 m) downstream from small irrigation dam, 2.8 mi (4.5 km) northeast of Elmwood, and at mile 16.9 (27.2 km).

DRAINAGE AREA.--170 mi² (440 km²).

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

REVISED RECORDS.--WSP 2121: 1966.

GAGE.--Water-stage recorder. Datum of gage is 2,541.26 ft (774.576 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--14 years, 7.49 ft³/s (0.212 m³/s), 5,430 acre-ft/yr (6.70 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Oct. 16, 1969, gage height, 13.97 ft (4.258 m), from floodmark, from rating curve extended above 12,500 ft³/s (343 m³/s) on basis of slope-area measurement at gage height 13.15 ft (4.008 m); no flow part of July 14, 18, 19, 1970, and Oct. 5, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 627 ft³/s (17.8 m³/s) at 0745 June 8, gage height, 5.62 ft (1.713 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily discharge, 0.57 ft³/s (0.016 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.8	1.8	1.7	2.4	2.4	2.2	6.2	4.4	1.7	.93	1.1
2	1.5	1.8	1.7	1.8	3.0	2.4	2.2	65	3.5	1.8	.96	1.1
3	1.6	1.7	1.6	1.7	3.1	3.0	2.5	28	3.6	1.7	.87	1.0
4	1.6	1.7	1.7	1.9	2.9	2.6	2.6	5.0	3.2	1.6	.95	1.1
5	1.7	1.7	1.8	2.1	2.8	3.0	2.6	2.9	2.9	1.7	1.0	.89
6	1.8	1.7	1.8	2.2	2.9	3.1	2.7	2.5	2.9	1.6	1.1	.73
7	1.9	2.0	1.7	2.1	2.8	3.0	2.5	2.3	2.8	1.7	1.3	.60
8	1.9	2.1	1.7	1.8	2.7	2.6	2.3	2.2	172	1.7	1.2	.70
9	2.0	2.0	1.7	2.0	2.7	2.5	2.5	2.1	16	1.8	1.1	.65
10	1.8	2.1	1.7	2.2	2.7	2.4	2.6	2.1	5.4	1.7	1.3	.62
11	1.8	2.2	1.6	2.1	2.7	2.4	2.6	2.0	3.9	1.4	1.1	.60
12	1.7	2.3	1.8	2.0	2.7	2.4	2.3	2.0	3.3	1.4	.93	.57
13	1.8	2.2	1.7	2.1	2.6	2.4	2.4	2.0	3.0	1.3	.79	.59
14	1.9	2.1	1.8	1.8	2.3	2.3	2.3	1.9	2.7	1.4	.85	.85
15	1.8	2.1	1.9	2.2	2.2	2.4	2.4	1.9	2.6	1.3	1.0	.85
16	1.7	2.0	1.9	2.8	1.8	2.4	2.4	1.8	2.5	1.8	1.1	.79
17	1.8	2.0	2.0	3.3	1.9	2.5	2.3	2.4	2.5	72	.86	.80
18	1.7	2.0	2.1	4.0	2.0	3.0	2.2	2.8	2.4	20	.77	.83
19	1.9	1.9	2.1	2.9	2.0	2.2	2.2	2.2	2.3	1.7	.76	.88
20	1.8	2.0	2.1	2.4	2.0	2.0	2.1	2.7	2.2	1.4	.76	.95
21	2.0	2.0	2.1	2.4	2.1	2.5	2.1	3.5	2.2	1.3	.87	.98
22	1.8	2.3	2.2	2.8	2.0	2.8	2.1	2.7	2.1	1.3	.94	.90
23	1.8	1.9	2.4	2.4	2.0	2.2	2.1	2.2	2.1	1.5	1.0	.74
24	1.9	2.0	2.4	3.0	2.0	2.0	2.2	2.1	3.1	1.6	1.1	.71
25	1.8	1.8	2.4	2.4	2.2	2.2	2.1	2.4	2.3	1.7	1.2	.73
26	1.8	1.7	2.5	2.3	2.2	2.2	2.1	2.3	2.0	1.5	1.4	.84
27	1.7	1.6	2.8	2.2	2.2	2.2	2.1	2.3	2.0	1.5	1.4	.97
28	1.7	1.8	2.8	2.0	2.3	2.2	2.2	2.4	1.9	1.4	1.2	1.1
29	1.8	2.0	2.5	2.2	---	2.2	2.1	2.4	1.8	1.4	1.0	1.0
30	1.7	2.1	2.3	2.0	---	2.1	2.3	3.7	1.6	1.3	.99	.98
31	1.7	---	2.1	1.8	---	2.2	---	3.1	---	1.0	1.1	---
TOTAL	54.9	58.6	62.7	70.6	67.2	75.8	69.3	169.1	265.2	136.2	31.83	25.15
MEAN	1.77	1.95	2.02	2.28	2.40	2.45	2.31	5.45	8.84	4.39	1.03	.84
MAX	2.0	2.3	2.8	4.0	3.1	3.1	2.7	65	172	72	1.4	1.1
MIN	1.5	1.6	1.6	1.7	1.8	2.0	2.1	1.8	1.6	1.0	.76	.57
AC-FT	109	116	124	140	133	150	137	335	526	270	63	50

CAL YR 1978 TOTAL 2087.18 MEAN 5.72 MAX 556 MIN .17 AC-FT 4140
WTR YR 1979 TOTAL 1086.58 MEAN 2.98 MAX 172 MIN .57 AC-FT 2160

07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°33'14", long 99°34'16", in NE¼SE¼ sec.17, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, in control tower at left end of Fort Supply Dam on Wolf Creek, 2.0 mi (3.2 km) southeast of Fort Supply and at mile 5.5 (8.8 km).

DRAINAGE AREA.--1,735 mi² (4,494 km²), of which 241 mi² (624 km²) is probably noncontributing.

PERIOD OF RECORD.--June 1942 to current year. Prior to October 1970, published as Fort Supply Reservoir near Fort Supply.

REVISED RECORDS.--WSP 1117: Drainage area.

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

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of a 540-foot (164.6 m) uncontrolled gravity type concrete weir, one 36-inch (914 mm) diameter gated by-pass, and one 18-foot (5.49 m) oval shaped conduit controlled by three vertical lift sluiceways. Regulated storage began May 4, 1942; conservation pool first filled in June 1942. Capacity, 100,700 acre-ft (124 hm³) at elevation 2,028.0 ft (618.134 m), crest of spillway and 13,890 acre-ft (17.1 hm³) at elevation 2,004.0 ft (610.819 m), conservation pool, designated in 1965. No storage below elevation 1,987.0 ft (605.688 m). Figures given herein represent total contents. Reservoir is used for flood control and conservation. Revised capacity table, based on survey in 1969, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,500 acre-ft (123 hm³) June 25, 1957, elevation, 2,026.97 ft (617.820 m); no contents at times November 1942 to January 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,340 acre-ft (55.9 hm³) May 12, elevation, 2,015.77 ft (614.407 m); minimum, 11,840 acre-ft (14.6 hm³) Oct. 22, elevation, 2,002.86 ft (610.472 m).

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

2,002	10,430	2,009	25,020
2,004	13,890	2,012	33,280
2,006	17,890	2,016	46,170

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12520	11950	12500	13330	14710	14630	13970	14330	15180	14210	14170	14020
2	12400	11960	12450	13330	14650	14560	13930	14420	14730	14350	14170	13980
3	12410	11950	12520	13330	14610	14500	13950	14560	14230	14290	14230	13970
4	12360	11960	12610	13350	14560	14460	13980	14710	14170	14330	14270	13950
5	12290	11910	12500	13390	14460	14270	14020	14920	14190	14360	14270	13890
6	12290	11960	12540	13440	14420	14170	14140	15040	14150	14400	14230	13870
7	12270	11980	12560	13460	14360	14270	14230	15080	14080	14460	14170	13830
8	12330	12000	12590	13480	14330	14170	14210	15200	14120	14540	14170	13800
9	12260	12050	12590	13520	14250	14360	14330	16090	14400	14560	14170	13760
10	12260	11890	12610	13530	14210	14420	14500	26310	14610	14610	14080	13720
11	12240	11960	12640	13570	14190	14500	14500	43420	14610	14650	14100	13650
12	12150	12050	12660	13610	14170	14590	14560	45090	14480	14590	14100	13550
13	12170	12000	12700	13610	14170	14560	14610	42910	14270	14560	14080	13570
14	12150	11960	12730	13650	14170	14610	14520	39960	14170	14480	14060	13570
15	12140	12000	12790	13650	14140	14730	14590	37080	13980	14330	14080	13570
16	12150	12070	12810	13680	14080	14850	14500	34090	13980	14360	14080	13570
17	12150	12100	12880	13700	14000	14890	14460	31190	13910	14360	14080	13530
18	12050	12100	12930	13810	13950	15100	14460	28700	14140	14400	14080	13520
19	12070	12150	12970	13890	13950	15040	14440	26780	14120	14460	14040	13520
20	12070	12170	12970	13980	13910	14890	14270	25200	14210	14460	13980	13520
21	12070	12220	13020	14000	13980	14830	14210	23520	14540	14420	13980	13480
22	11890	12270	13060	14080	14250	14610	14170	22240	14650	14360	13970	13480
23	11980	12260	13020	14170	14120	14750	14120	21150	14520	14630	13950	13480
24	12080	12310	13090	14210	14170	14650	14150	20030	14790	14710	14080	13440
25	11950	12340	13110	14330	14230	14560	13970	19280	14710	14710	14060	13420
26	11960	12340	13150	14400	14330	14360	13980	19060	14400	14590	14080	13440
27	11930	12400	13280	14460	14360	14330	14000	18790	14120	14380	14140	13350
28	11960	12410	13280	14500	14420	14210	14080	18530	13980	14170	14170	13330
29	12000	12430	13200	14540	---	14060	14150	17970	14080	13980	14150	13330
30	11930	12490	13240	14610	---	13980	14210	17010	14170	13870	14080	13290
31	11910	---	13330	14650	---	14000	---	15930	---	14080	14150	---
MAX	12520	12490	13330	14650	14710	15100	14610	45090	15180	14710	14270	14020
MIN	11890	11890	12450	13330	13910	13980	13930	14330	13910	13870	13950	13290
†	2002.90	2003.23	2003.70	2004.40	2004.28	2004.06	2004.17	2005.05	2004.15	2004.10	2004.14	2003.68
‡	-540	+580	+840	+1,320	-230	-420	+210	+1,720	-1,760	-90	-70	-860
CAL YR 1978	MAX	15490	MIN	11790	†-790							
WTR YR 1979	MAX	45090	MIN	11890	‡+840							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

ARKANSAS RIVER BASIN

07237000 WOLF CREEK NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°34'00", long 99°33'05", in SE¼SE¼ sec.9, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, near left bank on downstream side of pier of bridge on U.S. Highway 270, 1.0 mi (1.6 km) southeast of Fort Supply, 1.6 mi (2.6 km) downstream from Fort Supply Dam, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--1,739 mi² (4,504 km²), of which 241 mi² (624 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1, 1941, published as "near Supply".

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,958.38 ft (596.914 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

REMARKS.--Records fair. Flow completely regulated since May 1942 by Fort Supply Lake (station 07236500).

AVERAGE DISCHARGE.--(Prior to regulation by Fort Supply Dam) 5 years (water years 1938-42), 104 ft³/s (2.95 m³/s), 73,350 acre-ft/yr (92.9 hm³/yr); (Since regulation by Fort Supply Dam) 37 years (water years 1943-79), 58.4 ft³/s (1.654 m³/s), 42,310 acre-ft/yr (52.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 24, 1939, gage height, 15.60 ft (4.775 m), present datum, from rating curve extended above 8,000 ft²/s (227 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.6 ft (5.97 m), present datum, was reached prior to October 1937, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) May 13, gage height 10.33 ft (3.149 m) minimum daily discharge, 0.87 ft³/s (0.025 m³/s) Oct 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	1.1	1.2	1.1	1.2	1.4	68	1.8	629	15	8.7	7.4
2	.88	1.1	1.2	1.1	21	17	67	2.3	420	15	7.1	7.2
3	.89	1.1	1.3	1.1	49	45	49	1.9	414	14	6.3	7.2
4	.87	1.2	1.2	1.1	50	45	25	1.9	253	13	5.7	7.2
5	.89	1.1	1.2	1.2	50	146	24	1.7	144	13	10	6.7
6	.93	1.1	1.2	1.2	50	115	12	1.6	172	12	28	6.9
7	1.1	1.2	1.2	1.2	50	3.2	1.7	1.6	168	11	27	6.9
8	1.0	1.1	1.2	1.2	50	2.4	1.4	1.6	148	11	19	6.9
9	.96	1.1	1.2	1.2	49	2.1	1.2	273	88	11	11	6.7
10	.95	1.2	1.2	1.1	49	1.9	1.2	40	83	11	11	6.7
11	.91	1.2	1.2	1.2	49	1.8	1.1	24	162	10	10	4.0
12	.91	1.2	1.2	1.2	49	1.7	.99	707	238	36	9.7	1.0
13	.90	1.2	1.2	1.2	50	1.6	18	1690	236	65	9.2	.96
14	.91	1.2	1.2	1.2	50	1.6	54	1940	233	66	9.1	.96
15	.90	1.2	1.2	1.2	50	1.6	54	1890	194	67	9.1	.96
16	.92	1.3	1.2	1.2	49	1.6	53	1840	77	66	8.8	.96
17	.93	1.2	1.2	1.2	49	1.6	52	1790	54	65	8.6	.96
18	.93	1.2	1.2	1.3	48	1.9	52	1630	16	64	8.4	.96
19	.92	1.2	1.2	1.3	48	70	51	1360	14	65	8.4	.96
20	.91	1.2	1.2	1.2	47	134	51	1360	14	65	8.4	.96
21	.92	1.2	1.2	1.2	23	136	51	1350	13	64	8.2	.96
22	.93	1.2	1.2	1.2	2.0	137	51	1030	20	64	8.2	.91
23	.96	1.2	1.2	1.2	1.6	134	51	844	61	52	8.0	.91
24	.94	1.2	1.2	1.3	1.5	132	51	836	39	24	8.2	.91
25	1.0	1.2	1.1	1.3	1.5	131	51	688	124	62	8.2	.91
26	1.1	1.2	1.1	1.3	1.4	130	37	370	233	88	8.0	.91
27	1.1	1.3	1.1	1.2	1.4	130	4.2	358	233	147	8.0	.91
28	1.2	1.2	1.1	1.1	1.4	130	2.9	355	134	150	7.8	.91
29	1.2	1.2	1.1	1.3	---	98	2.3	488	24	150	7.6	.91
30	1.1	1.2	1.1	1.3	---	70	2.1	745	19	84	7.4	.91
31	1.1	---	1.1	1.1	---	69	---	735	---	14	7.4	---
TOTAL	30.04	35.5	36.6	37.2	942.0	1893.4	941.09	22377.4	4657	1594	310.5	91.63
MEAN	.97	1.18	1.18	1.20	33.6	61.1	31.4	722	155	51.4	10.0	3.05
MAX	1.2	1.3	1.3	1.3	50	146	68	1940	629	150	28	7.4
MIN	.87	1.1	1.1	1.1	1.2	1.4	.99	1.6	13	10	5.7	.91
AC=FT	60	70	73	74	1870	3760	1870	44390	9240	3160	616	182
CAL YR 1978	TOTAL	10384.00	MEAN	28.4	MAX	788	MIN	.67	AC=FT	20600		
WTR YR 1979	TOTAL	32946.36	MEAN	90.3	MAX	1940	MIN	.87	AC=FT	65350		

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'18", long 99°16'40", in SE¼SE¼ sec.25, T.23 N., R.20 W., Woodward County, Hydrologic Unit 11100301, near right bank on downstream side of pier of bridge on State Highway 15, 200 ft (61.0 m) downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6.0 mi (9.7 km) east of Woodward, 7.2 mi (11.6 km) upstream from Indian Creek, 27.5 mi (44.2 km) downstream from Wolf Creek, and at mile 460.2 (740.5 km).

DRAINAGE AREA.--11,589 mi² (30,016 km²), of which 4,812 mi² (12,463 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to September 1905 (gage heights only), October 1905 to June 1906, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-6. Gage-height records collected in this vicinity since 1919 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,830.43 ft (557.915 m) National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording gage at railway bridge 200 ft (61.0 m) upstream at different datum. Oct. 1, 1938, to Oct. 26, 1943, nonrecording gage and Oct. 27, 1943, to July 12, 1951, water-stage recorder, at site 7.8 mi (12.6 km) upstream at datum 37.01 ft (11.281 m) higher than present datum.

REMARKS.--Records fair. Some regulation since May 1942 by Fort Supply Lake on Wolf Creek 33 mi (53 km) upstream (station 07236500).

AVERAGE DISCHARGE.--41 years (water years 1939-79), 193 ft³/s (5.466 m³/s), 139,800 acre-ft/yr (172 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) Oct. 10, 1946, gage height, 9.80 ft (2.987 m), site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1923, reached a stage of 11.0 ft (3.35 m), site and datum then in use; from reports of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft³/s (53.2 m³/s) May 18, maximum gage height, 9.27 ft (2.825 m) May 11, no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 6.8 ft³/s (0.193 m³/s) Sept.28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.1	10	8.5	7.5	13	112	42	846	103	166	22
2	14	9.1	9.0	7.1	8.4	14	105	65	758	93	122	21
3	14	9.1	8.0	7.8	19	18	100	59	567	82	97	20
4	14	8.5	8.5	8.2	30	40	90	86	552	75	84	19
5	13	8.5	9.1	8.0	26	56	82	107	382	70	72	17
6	13	8.5	9.9	8.4	30	87	80	107	305	67	63	17
7	13	8.5	9.4	8.6	45	93	78	105	300	64	66	17
8	13	8.5	8.5	8.4	40	54	65	93	291	61	63	16
9	12	8.5	7.8	8.0	52	47	65	83	373	56	58	16
10	12	8.5	9.0	8.0	66	43	62	746	318	53	49	14
11	12	8.5	12	8.4	72	40	60	1660	291	52	45	13
12	12	8.0	15	9.0	70	38	59	888	328	48	41	13
13	12	8.5	9.6	8.0	75	36	56	795	360	50	39	12
14	11	8.5	9.8	7.1	74	35	53	1480	341	73	37	13
15	11	8.5	10	8.2	68	33	84	1770	320	87	40	13
16	11	8.5	9.7	12	46	34	82	1840	274	91	36	13
17	10	8.8	9.5	24	42	34	81	1830	196	145	34	12
18	10	9.1	11	28	38	104	83	1860	164	132	31	11
19	10	9.1	10	35	98	57	83	1810	128	139	28	10
20	10	8.5	9.8	50	82	74	81	1610	114	119	25	11
21	10	8.6	9.0	54	75	131	78	1690	134	123	24	11
22	10	9.1	9.9	45	68	232	78	1680	154	153	22	10
23	9.8	9.7	10	42	41	190	77	1390	112	218	26	9.2
24	9.7	9.7	8.6	35	29	156	77	1160	146	169	30	8.4
25	9.7	9.7	8.2	34	21	154	76	1110	143	156	42	8.3
26	9.3	9.7	7.9	25	15	150	75	891	173	133	30	7.5
27	9.7	9.7	9.1	16	14	148	72	549	249	132	28	7.6
28	9.7	9.5	11	9.2	13	151	54	502	265	163	24	6.8
29	9.7	9.7	11	8.4	---	154	49	464	193	160	23	7.8
30	9.7	9.7	10	7.7	---	116	45	574	123	158	22	7.0
31	9.3	---	9.3	7.2	---	103	---	841	---	194	23	---
TOTAL	348.6	267.9	299.6	554.2	1266.9	2635	2242	27887	8900	3419	1490	383.6
MEAN	11.2	8.93	9.66	17.9	45.2	85.0	74.7	900	297	110	48.1	12.8
MAX	15	9.7	15	54	98	232	112	1860	846	218	166	22
MIN	9.3	8.0	7.8	7.1	7.5	13	45	42	112	48	22	6.8
AC-FT	691	531	594	1100	2510	5230	4450	55310	17650	6780	2960	761
CAL YR 1978 TOTAL	34184.3			93.7	MAX 1720	MIN 2.8	AC-FT 67800					
WTR YR 1979 TOTAL	49693.8			MEAN 136	MAX 1860	MIN 6.8	AC-FT 98570					

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1958-59, 1961-63, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURE: October 1974 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,760 micromhos Nov. 27, 1975; minimum daily, 348 micromhos Aug. 22, 1977.

WATER TEMPERATURE: Maximum daily, 35.5°C Aug. 12, 1976; minimum daily, 0.0°C Nov. 19, 20, 1975, Feb. 6, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 12...	1320	12	2820	8.0	23.5	2.5	9.4	121	1000	1800	--
DEC 01...	0730	6.1	2800	8.1	4.5	5.0	9.5	79	10000	1300	710
21...	1100	8.5	2700	8.2	1.5	4.1	13.6	103	47	83	700
JAN 23...	0945	42	2420	8.5	.0	6.3	6.9	51	280	300	680
FEB 21...	1700	73	1500	8.7	5.0	29	14.1	119	>600	210	380
MAR 20...	1500	82	2100	8.3	11.5	26	9.2	89	8850	500	520
APR 10...	1400	62	2250	8.0	14.0	4.4	9.6	102	5000	110	590
MAY 10...	1400	946	865	8.0	18.0	350	8.5	96	8100	14000	210
JUN 28...	1600	273	1200	8.3	28.0	74	6.2	85	590	520	290
JUL 18...	1400	146	1250	8.1	27.0	600	6.2	83	1100	5800	320
AUG 08...	0730	66	1800	7.9	24.5	64	6.1	78	80	960	460
SEP 12...	1400	14	2500	7.9	28.0	3.5	5.7	79	160	230	620

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 12...	--	--	42	320	--	--	--	9.0	110	620	--
DEC 01...	510	200	52	300	47	4.9	--	7.9	200	550	450
21...	500	190	55	280	46	4.6	--	8.6	200	540	400
JAN 23...	460	200	43	280	47	4.7	--	8.9	220	480	390
FEB 21...	170	100	31	180	50	4.0	--	8.3	210	--	--
MAR 20...	330	140	42	200	45	3.8	--	6.4	190	400	260
APR 10...	390	160	47	280	50	5.0	--	6.1	200	470	360
MAY 10...	97	58	15	77	44	2.3	84	7.1	110	--	--
JUN 28...	100	80	23	130	48	3.3	140	6.3	190	130	180
JUL 18...	180	86	26	110	52	2.7	120	7.1	140	190	140
AUG 08...	270	120	39	220	61	4.5	230	9.0	190	290	330
SEP 12...	450	170	47	300	60	5.3	310	8.4	170	600	360

ARKANSAS RIVER BASIN

391

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 12...	.9	44	1810	--	2.46	58.6	.55	--	13	--	1.0
DEC 01...	.7	23	1730	1700	2.35	28.5	.63	--	3.5	--	1.1
21...	.7	25	1690	1620	2.30	38.8	.62	--	3.2	--	5.6
JAN 23...	.6	23	1580	1560	2.15	179	.63	--	4.3	--	.10
FEB 21...	.8	--	--	--	--	--	.43	--	.84	--	.86
MAR 20...	.7	18	1190	1180	1.62	263	1.2	--	.17	--	.57
APR 10...	.8	23	1540	1470	2.09	258	.90	--	.77	.93	.33
MAY 10...	--	--	--	--	--	--	1.1	--	.01	.01	2.2
JUN 28...	.7	18	660	682	.90	486	.02	--	.06	.07	.70
JUL 18...	.6	16	701	660	.95	276	.87	--	.01	.01	3.0
AUG 08...	1.0	23	1140	1150	1.55	203	.53	--	.01	.01	.81
SEP 12...	.7	29	1710	1620	2.33	64.6	1.4	1.4	.43	.52	1.9

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 12...	14	.00	14	15	--	64	2.10	--	--	1.90	--
DEC 01...	4.6	.60	4.0	5.2	--	23	2.50	--	--	2.30	6
21...	8.8	4.9	3.9	9.4	--	42	2.10	--	--	2.00	--
JAN 23...	4.4	--	--	5.0	--	22	2.00	--	--	1.70	--
FEB 21...	1.7	--	--	2.1	--	9.4	.440	--	--	--	5
MAR 20...	.74	.00	1.1	1.9	--	8.6	.330	--	--	.280	--
APR 10...	1.1	.00	1.2	2.0	--	8.9	.350	1.1	1.1	.230	--
MAY 10...	2.2	--	--	3.3	--	15	.140	.43	.43	--	5
JUN 28...	.76	--	--	.78	--	3.5	.180	.55	.55	.030	--
JUL 18...	3.0	2.4	.59	3.9	--	17	.620	--	1.9	.090	--
AUG 08...	.82	.51	.31	1.4	--	6.0	.010	--	.03	.020	9
SEP 12...	2.3	.50	1.8	3.7	3.2	16	.570	--	1.7	.430	--

[illegible][illegible]

ARKANSAS RIVER BASIN

393

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	240	20	220	.1	.1	.0	0	0	1	1	1
21...	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	70	70	0	.0	.0	.0	0	0	1	0	0
MAR 20...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	500	490	10	.3	.2	.1	2	2	0	0	0
JUN 28...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	130	110	20	.0	.0	.1	0	0	0	0	0
SEP 12...	--	--	--	--	--	--	--	--	--	--	--

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SFD. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 12...	--	--	--	--	12	--	--	--	90	86
DEC 01...	0	30	10	20	--	8.6	1.0	14000	201	97
21...	--	--	--	--	9.0	--	--	--	176	98
JAN 23...	--	--	--	--	6.4	--	--	--	224	98
FEB 21...	0	20	0	20	--	5.8	.8	--	132	94
MAR 20...	--	--	--	--	7.7	--	--	2500	281	92
APR 10...	--	--	--	--	6.4	--	--	--	137	99
MAY 10...	0	90	50	40	--	9.6	4.6	17000	735	94
JUN 28...	--	--	--	--	8.1	--	--	100000	281	89
JUL 18...	--	--	--	--	30	--	--	9100	1070	94
AUG 08...	0	20	0	20	--	12	4.1	45000	345	97
SEP 12...	--	--	--	--	11	--	--	300000	176	97

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	DEC 1,78 0730	MAR 20,79 1500	MAY 10,79 1400	JUN 28,79 1600
TOTAL CELLS/ML	14000	2500	17000	100000
DIVERSITY: DIVISION	1.4	1.5	1.3	1.4
..CLASS	1.4	1.5	1.3	1.4
..ORDER	1.6	2.2	1.3	2.2
...FAMILY	2.1	3.0	2.3	3.0
....GENUS	2.2	3.2	2.7	3.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACTACEAE								
....SCHROEDERIA	130	1	--	-	--	-	*	0
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	4400	4
...MICRACTINIACEAE								
....GOLENKINIA	*	0	--	-	--	-	--	-
...MICRACTINIUM	--	-	--	-	3000#	17	1600	2
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	130	1	1900	2
....CLOSTERIOPSIS	--	-	--	-	130	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	8300	8
....GLOEOACTINIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	--	-	--	-	3200	3
...OOCYSTIS	--	-	--	-	130	1	4900	5
...SELENASTRUM	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	4900	5
....CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	1000	7	160	6	4400#	25	7900	8
...TETRASTRUM	--	-	--	-	2100	12	930	1
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	170	1	210	8	--	-	2600	3
...PHACOTACEAE								
...PHACOTUS	--	-	--	-	--	-	1900	2
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	210	8	650	4	3500	3
....MELOSIRA	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	260	1	--	-
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	83	1	13	1	--	-	--	-
....COCCONEIS	--	-	13	1	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	*	0	--	-	--	-	--	-
....CYMBELLA	*	0	13	1	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	78	3	130	1	--	-
....SYNEDRA	*	0	91	4	--	-	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	210	2	52	2	--	-	--	-
...NAVICULACEAE								
....CALONEIS	--	-	26	1	--	-	--	-
....DIPLONEIS	--	-	13	1	--	-	--	-
....ENTOMONEIS	--	-	65	3	--	-	--	-
...NAVICULA	1600	12	160	6	--	-	*	0
...NITZSCHIACEAE								
...NITZSCHIA	2300#	16	570#	23	130	1	7700	8
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	--	-	--	-	--	-

ARKANSAS RIVER BASIN

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	DEC 1,78 0730	MAR 20,79 1500	MAY 10,79 1400	JUN 28,79 1600				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	460	3	140	6	--	-	17000#	17
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	3100#	18	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	--	-	25000#	25
...OSCILLATORIA								
....LYNGBYA	--	-	--	-	--	-	4600	5
....OSCILLATORIA	7500#	55	650#	26	3200#	19	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	--	-	--	-	*	0
....TRACHELOMONAS	*	0	13	1	--	-	*	0

DATE TIME	JUL 18,79 1400	AUG 8,79 0730	SEP 12,79 1400
TOTAL CELLS/ML	9100	45000	300000
DIVERSITY: DIVISION	1.0	1.3	0.5
..CLASS	1.0	1.3	0.5
...ORDER	1.5	1.4	0.9
....FAMILY	2.4	1.9	1.0
.....GENUS	2.8	2.2	1.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	*	0	--	-
...COELASTRACEAE						
....COELASTRUM	--	-	870	2	--	-
...MICRACTINIACEAE						
....GULENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	130	1	1000	2	*	0
....CLUSTERIOPSIS	130	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	2600	6	--	-
....GLOEOACTINIUM	--	-	580	1	--	-
....KIRCHNERTELLA	--	-	--	-	--	-
....OOCYSTIS	1300	14	650	1	--	-
....SELENASTRUM	--	-	*	0	*	0
....TREUBARIA	--	-	*	0	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
....CRUCIGENIA	--	-	1200	3	--	-
...SCENEDESMUS	2900#	31	1700	4	--	-
....TETRASTRUM	520	6	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	520	6	*	0	2600	1
...PHACOTACEAE						
....PHACOTUS	--	-	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCAEAE						
....CYCLOTTELLA	780	9	1400	3	*	0
....MELOSIRA	--	-	3200	7	--	-
...STEPHANODISCUS	--	-	--	-	--	-
...PENNALES						
....ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....CUCCONEIS	--	-	--	-	--	-
....CYMBELLACEAE						
....AMPHORA	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-

ARKANSAS RIVER BASIN

397

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 18, 79 1400		AUG 8, 79 0730		SEP 12, 79 1400	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
...FRAGILARIACEAE						
...FRAGILARIA	1600#	17	--	-	--	-
...SYNEDRA	--	-	--	-	--	-
...GOMPHONEMACEAE						
...GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
...CALONEIS	--	-	--	-	--	-
...DIPLONEIS	--	-	--	-	--	-
...ENTUMONEIS	--	-	--	-	--	-
...NAVICULA	130	1	--	-	5800	2
...NITZSCHIACEAE						
...NITZSCHIA	1200	13	1800	4	15000	5
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	* 0		--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	18000	6
....ANACYSTIS	--	-	--	-	*	0
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
....ANABAENOPSIS	--	-	1600	4	--	-
....APHANIZOMENON	--	-	--	-	--	-
...USCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	28000#	62	250000#	84
EUGLENOPHYTA (EUGLENIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	2000	1
....TRACHELOMONAS	--	-	--	-	--	-

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2880	---	---	2710	2110	1560	2280	---	---	858	---
2	---	2900	---	---	2810	---	1620	---	954	1850	1160	---
3	2840	2890	2600	---	---	---	---	1960	---	1970	---	2290
4	2430	---	2680	---	2700	1550	1640	---	---	---	1600	2440
5	2730	2890	---	---	2860	1390	1800	710	---	2040	1860	---
6	3030	2760	2780	---	---	1340	1830	791	1600	2100	---	2420
7	3160	2620	---	---	---	1260	1810	1540	1660	2100	1960	2420
8	2780	2800	---	---	1490	1520	2090	1330	1660	---	1950	---
9	2790	2810	---	---	---	---	2160	1480	---	2150	---	2460
10	2730	---	2790	---	1590	1910	---	765	---	2160	---	2420
11	2990	2640	2740	---	1410	2060	---	370	1450	2170	2260	2380
12	2800	2780	---	---	1440	2150	2330	548	1190	2100	2210	2490
13	2710	2720	2650	---	1490	2250	---	1200	1300	2140	2220	2350
14	---	---	2610	---	1480	2220	2310	726	1370	---	2160	2600
15	---	---	---	---	---	---	1760	688	1320	---	2030	---
16	2340	2540	---	---	---	---	1670	615	1400	1110	2250	2590
17	2270	2520	---	---	---	---	---	603	1830	---	---	2630
18	2370	2720	2610	---	1740	1240	1650	583	1840	1300	2300	2720
19	2690	---	2680	---	1400	1790	1720	594	2170	847	---	2720
20	2830	---	2630	---	1360	---	---	608	2270	919	2280	2690
21	---	---	2500	---	---	1210	1680	---	---	---	2300	---
22	---	2750	2810	2370	1560	1220	1730	552	2240	1000	2280	2850
23	2520	---	---	---	1760	---	1650	680	---	---	2340	---
24	2720	2580	---	2540	---	1280	1640	720	1440	---	---	2710
25	2840	---	---	---	---	---	1680	---	1660	---	1620	---
26	2740	2710	2560	---	1910	---	1660	890	1330	---	---	2820
27	2790	2690	2610	---	2050	1340	---	1250	1070	1510	2240	2960
28	---	2650	2370	---	2060	1320	---	1530	1090	1320	2180	---
29	---	2890	---	---	---	1320	2300	978	---	1330	2350	2770
30	2850	2630	---	---	---	1410	2330	888	---	1250	2300	2740
31	---	---	---	---	---	1570	---	866	---	938	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	20.0	---	---	3.0	15.0	12.5	20.0	---	---	31.0	---
2	---	21.0	---	---	3.0	---	13.0	---	21.0	31.0	31.5	---
3	26.0	19.0	10.0	---	---	---	---	12.5	---	32.0	---	34.0
4	25.0	---	7.0	---	2.0	10.0	15.0	---	---	---	28.0	33.0
5	24.0	20.0	---	---	3.0	13.0	20.0	21.5	---	32.5	33.0	---
6	21.0	15.0	5.0	---	---	14.5	14.0	24.0	27.0	26.0	---	33.0
7	24.0	16.5	---	---	---	16.5	17.0	25.0	29.5	24.0	32.0	25.0
8	25.0	18.0	---	---	4.0	17.0	22.5	27.0	26.0	---	33.0	---
9	26.0	18.5	4.0	---	---	---	20.0	28.0	---	25.0	---	33.0
10	26.5	---	3.5	---	3.0	10.0	---	19.0	---	33.0	---	31.0
11	27.0	9.0	---	---	8.0	18.0	---	16.0	26.0	38.0	23.0	31.0
12	25.0	10.5	7.5	---	5.0	19.0	20.0	17.0	27.0	33.0	31.0	32.0
13	16.0	16.5	7.5	---	7.0	18.5	---	18.0	28.0	29.0	32.5	28.0
14	---	---	---	---	11.0	16.0	14.0	21.0	29.0	---	31.0	21.0
15	---	---	---	---	---	---	25.0	21.0	24.0	---	27.0	---
16	20.0	8.0	---	---	---	---	25.0	21.0	23.0	31.0	33.0	29.0
17	21.0	10.0	11.0	---	---	---	---	21.0	23.0	---	---	28.0
18	22.0	8.0	14.5	---	3.0	17.0	22.0	21.0	24.0	25.0	29.0	28.0
19	22.0	---	9.0	---	3.0	16.0	23.0	23.0	27.0	25.5	---	29.0
20	19.0	---	9.0	---	3.0	---	---	23.0	29.0	27.0	33.0	30.0
21	---	---	7.0	---	---	13.0	24.0	---	---	---	34.0	---
22	---	10.0	---	8.0	14.0	17.0	24.5	19.0	23.0	27.0	34.0	25.0
23	16.0	---	---	---	9.0	---	26.0	22.0	---	---	29.0	---
24	16.0	10.0	---	3.0	---	9.0	27.0	19.5	26.0	---	---	31.0
25	18.0	---	8.0	---	---	---	20.0	---	29.0	---	24.0	---
26	19.0	11.0	7.0	---	10.0	---	23.5	20.0	29.0	---	---	29.0
27	9.0	10.0	10.5	---	14.0	15.0	---	22.0	30.5	31.0	30.0	29.0
28	---	11.0	---	---	13.0	17.0	---	23.0	30.0	30.0	33.5	---
29	---	12.0	---	---	---	21.0	22.0	27.0	---	31.0	34.0	19.0
30	21.0	13.0	---	---	---	15.0	23.0	25.0	---	28.0	34.0	30.0
31	---	---	---	---	---	12.0	---	23.0	---	30.0	---	---

ARKANSAS RIVER BASIN

399

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK

LOCATION.--Lat 36°11'06", long 98°55'15", in NW¼ sec.28, T.20 N., R.16 W., Major County, Hydrologic Unit 11100301, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2.0 mi (3.2 km) upstream from Seiling Creek, 2.2 mi (3.5 km) north of Seiling, 2.8 mi (4.5 km) downstream from Deep Creek, and at mile 422.6 (680.0 km).

DRAINAGE AREA.--12,261 mi² (31,756 km²), of which 4,847 mi² (12,554 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft (510.702 m) National Geodetic Vertical Datum of 1929. July 1, 1946, to Aug. 17, 1964, at site 60 ft (18.3 m) downstream and prior to Oct. 1, 1954, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair. Some regulation by Fort Supply Lake on Wolf Creek 70.6 mi (113.6 km) upstream. (Station 07236500).

AVERAGE DISCHARGE.--33 years, 214 ft³/s (6.060 m³/s), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) May 19, 1951, gage height, 15.61 ft (4.758 m), present datum; maximum gage height, 16.00 ft (4.877 m) Oct. 11, 1946, present datum; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,550 ft³/s (72.2 m³/s) July 23, gage height, 10.82 ft (3.298 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum daily discharge, 7.9 ft³/s (0.22 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	11	25	20	30	42	169	88	1020	161	609	45
2	17	11	25	18	27	44	166	306	1040	141	331	42
3	16	12	23	20	23	55	162	188	897	129	225	41
4	15	12	20	21	22	54	156	150	719	117	174	40
5	13	13	25	20	20	63	147	154	672	118	146	38
6	13	16	26	21	22	70	134	182	485	625	130	34
7	13	16	24	22	23	81	124	183	397	150	121	32
8	12	16	21	19	21	91	120	161	378	123	113	30
9	12	16	19	20	45	60	114	142	879	115	107	28
10	12	16	24	19	104	52	109	210	935	109	99	27
11	12	16	24	21	126	47	107	883	586	103	94	26
12	11	17	27	22	170	44	103	1380	442	96	90	25
13	9.8	19	30	18	185	42	99	1090	423	90	86	24
14	9.4	20	24	17	193	39	94	931	424	84	80	23
15	9.6	21	24	20	172	37	92	1360	389	82	76	24
16	9.2	22	26	26	150	36	92	1560	357	93	75	24
17	9.4	22	24	50	130	37	99	1740	317	104	74	23
18	9.3	22	25	53	120	426	112	1860	255	150	73	22
19	9.3	22	27	58	149	292	117	1930	210	241	67	20
20	9.6	22	27	60	196	201	119	2020	178	177	61	19
21	8.9	22	25	78	113	150	120	2050	160	143	57	19
22	8.0	24	25	78	88	909	119	1960	168	135	60	18
23	7.9	25	25	71	81	665	116	1960	194	981	59	17
24	8.5	25	24	62	64	371	113	1750	156	1030	72	14
25	8.8	26	25	60	55	284	112	1280	181	992	80	12
26	9.6	27	25	54	49	236	108	1160	181	451	60	10
27	9.6	27	24	42	46	214	105	990	195	289	54	10
28	9.6	26	24	39	45	206	106	759	264	212	58	9.3
29	10	27	26	31	---	203	98	682	280	184	54	9.3
30	10	25	24	21	---	197	92	643	221	159	50	8.5
31	11	---	22	18	---	184	---	757	---	1260	47	---
TOTAL	342.5	596	759	1099	2469	5432	3524	30509	13003	8844	3482	714.1
MEAN	11.0	19.9	24.5	35.5	88.2	175	117	984	433	285	112	23.8
MAX	19	27	30	78	196	909	169	2050	1040	1260	609	45
MIN	7.9	11	19	17	20	36	92	88	156	82	47	8.5
AC=FT	679	1180	1510	2180	4900	10770	6990	60510	25790	17540	6910	1420
CAL YR 1978	TOTAL	48798.2	MEAN 134	MAX 2240	MIN 2.8	AC=FT 96790						
WTR YR 1979	TOTAL	70773.6	MEAN 194	MAX 2050	MIN 7.9	AC=FT 140400						

ARKANSAS RIVER BASIN

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1953-59, 1968-71, 1974 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT										
02...	1412	17	--	--	--	--	--	--	--	--
12...	1500	11	2200	8.1	25.0	--	9.6	125	--	--
30...	1120	10	--	--	--	--	--	--	--	--
DEC										
01...	1030	25	2200	8.4	5.5	3.0	11.8	101	16	--
21...	1230	25	2100	8.4	4.5	4.0	13.7	114	18	840
JAN										
23...	1030	72	800	8.4	.0	4.0	13.6	98	24	--
FEB										
23...	1030	82	1600	8.5	6.0	19	13.2	113	21	488
MAR										
22...	1100	1420	630	7.6	12.0	>1000	11.1	111	272	--
APR										
12...	1215	104	2300	--	13.5	8.0	10.7	110	19	796
MAY										
17...	1130	1730	750	7.9	21.5	63	7.6	90	22	--
JUN										
29...	1100	284	690	8.4	28.0	64	--	--	--	325
JUL										
19...	1130	314	1100	8.0	25.0	>1000	6.6	84	--	--
AUG										
08...	1400	115	2000	8.3	28.5	6.0	5.7	77	38	566
SEP										
13...	1000	24	2300	8.3	19.5	3.0	7.3	85	14	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	488	--	.6	3	11
21...	260	650	--	195	6.4	476	210	.6	9	--
JAN										
23...	--	--	--	--	--	354	178	.5	8	1.6
FEB										
23...	130	325	36	138	6.1	276	178	.6	7	.60
MAR										
22...	--	--	--	--	--	145	45	.4	3210	.50
APR										
12...	230	575	--	200	6.1	522	276	.7	35	.20
MAY										
17...	--	--	--	--	--	60	--	.4	126	<.10
JUN										
29...	80	200	28	121	7.6	148	165	.5	199	<.50
JUL										
19...	--	--	--	--	--	248	72	.4	1616	.80
AUG										
08...	128	320	59	197	9.7	404	283	.6	78	<.50
SEP										
13...	--	--	--	--	--	500	309	.7	5	<.50

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT									
02...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
01...	1.5	12	55	.460	--	--	--	--	--
21...	1.7	--	--	.360	--	--	--	--	480
JAN									
23...	2.9	4.5	20	.450	--	--	--	--	--
FEB									
23...	1.7	2.3	10	.300	--	2	18	5	1860
MAR									
22...	11	11	51	--	--	--	--	--	--
APR									
12...	1.3	1.5	6.6	.280	--	--	--	--	840
MAY									
17...	1.5	1.5	--	.095	--	--	--	--	--
JUN									
29...	2.5	2.5	--	.290	--	--	--	--	5200
JUL									
19...	5.5	6.3	28	.980	--	--	--	--	--
AUG									
08...	2.9	2.9	--	.165	10	<2	15	7	1600
SEP									
13...	1.2	1.2	--	.080	--	--	--	--	--

[illegible]

07238500 CANTON LAKE NEAR CANTON, OK

LOCATION.--Lat 36°05'03", long 98°36'05", in SE&NE& sec.32, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, near right end of Canton Dam on North Canadian River, 2.0 mi (3.2 km) northwest of Canton, and at mile 394.3 (634.4 km).

DRAINAGE AREA.--12,483 mi² (32,331 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

RESERVOIR CONTENTS RECORDS

PERIOD OF RECORD.--April 1948 to current year. Prior to October 1970 published as Canton Reservoir near Canton.

REVISED RECORDS.--WSP 1341: Drainage area.

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

REMARKS.--Reservoir is formed by an earth dam. The outlet works consists of a concrete gravity, chute-type weir spillway controlled by sixteen taintor gates with net length of 640-feet (195.1 m), three sluice gates and two 24-inch (610 mm) valved pipes. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 383,800 acre-ft (473 hm³) at elevation 1,638.0 ft (499.26 m) (flood-control pool), 116,000 acre-ft (143 hm³) at elevation 1,615.2 ft (492.31 m) (Normal water-supply pool, designated in 1965), 99,400 acre-ft (123 hm³) at elevation 1,613.0 ft (492 m) (crest of spillway), and 18,460 acre-ft (22.8 hm³) at elevation 1,596.5 ft (486.61 m) (conservation pool). Dead storage, 4 acre-ft (4,930 m³) at elevation 1,582.0 ft (482.19 m) (invert of bypass gates) Figures given herein represent total contents. Reservoir was designed for flood control, irrigation, and conservation, but owing to a lack of facilities, it is not being used for irrigation at this time. Revised capacity table, based on survey in 1966, used since Oct. 1, 1967.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft (319 hm³) May 25, 1951, elevation, 1,628.05 ft (496.230 m); minimum since conservation pool was first filled, 867 acre-ft (1.07 hm³) May 5, 1955, elevation, 1,585.66 ft (483.309 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 126,800 acre-ft (156 hm³) July 9, elevation, 1,616.52 ft (492.715 m); minimum, 68,550 acre-ft (84.5 hm³) Nov. 28, elevation, 1,608.23 ft (490.188 m).

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

1,608	67,210	1,613	99,400
1,609	73,040	1,615	114,500
1,611	85,580	1,617	130,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73650	70360	70010	69600	70470	73220	71170	75490	120700	125500	121100	115100
2	73650	70240	70300	69600	70530	74140	70300	76960	120900	125100	121100	115100
3	73650	70240	69830	69600	70530	74510	70710	77870	121200	125100	120600	115000
4	73590	70120	69660	69600	70590	74390	70710	78060	121400	124800	119800	114800
5	73220	70180	70010	69600	70650	74510	71050	77940	121200	125500	119000	114700
6	73040	70300	69830	69660	70650	74690	71000	77870	121000	126000	117900	114700
7	72920	70180	70010	69600	70710	74810	71230	78240	120400	126200	117400	114500
8	72800	69950	69600	69600	70760	75060	71810	78240	120700	126200	117300	114200
9	72860	69770	69420	69540	70760	75120	71870	78910	122100	126200	117300	114000
10	72690	70180	69420	69480	70760	75240	72280	79740	123300	125500	117500	113700
11	72690	69890	69370	69540	70820	75240	72450	80120	124200	124400	117100	113600
12	72980	69710	69480	69540	70880	75000	72570	81660	123700	123100	117100	113700
13	72450	69890	69370	69540	71050	75550	72510	82950	123300	121900	116900	113200
14	72340	70120	69370	69600	71230	75490	72800	84360	122600	120800	117100	112900
15	72160	70180	69420	69540	71460	75430	72800	85850	122400	121400	116800	112700
16	71990	70120	69420	69540	71520	75490	72980	87400	122300	119000	116700	112400
17	71520	70010	69070	69540	71580	75730	73220	89020	122600	118900	116700	112300
18	71870	70120	69310	69890	71580	77020	73590	91980	122400	119100	116400	112200
19	71640	70010	69310	69950	71750	77870	73650	94650	122800	119000	116000	112000
20	71460	70120	69420	69770	71930	78240	74200	97480	122800	119000	116100	112000
21	71400	69950	69370	69890	72220	78300	74320	100900	123200	118700	116000	111700
22	71290	69770	69420	69890	72450	80380	74450	104100	123500	118700	115900	111500
23	71110	70010	69540	70010	72740	79610	74630	107300	124200	118700	115800	111300
24	70710	70010	69370	70060	73040	78910	74510	110100	124400	120000	115900	111200
25	71000	70180	69540	70120	72920	78000	74940	113000	124700	121900	116000	111000
26	70760	70360	69480	70240	72980	77260	74880	115500	124700	122200	116000	110700
27	70760	70120	69310	70240	73220	75610	75060	117600	124700	121900	115900	110500
28	70650	69710	69190	70240	73220	74630	75240	119100	124700	121200	115600	110400
29	70530	70010	69710	70470	---	73960	75370	120300	124700	120300	115500	110300
30	70530	70010	69830	70470	---	73160	75490	120500	125300	119700	115700	110100
31	70410	---	69890	70470	---	72160	---	120300	---	120500	115200	---
MAX	73650	70360	70300	70470	73220	80380	75490	120500	125300	126200	121100	115100
MIN	70410	69710	69070	69480	70470	72160	70300	75490	120400	118700	115200	110100
†	1608.55	1608.48	1608.46	1608.56	1609.03	1608.85	1609.40	1615.73	1616.34	1615.75	1615.09	1614.43
‡	-2,150	-400	-120	+580	+2,750	-1,060	+3,330	+44,810	+5,000	-4,800	-5,300	-5,100
CAL YR 1978	MAX	121800	MIN	66640	‡	+3140						
WTR YR 1979	MAX	126200	MIN	69070	‡	+37540						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-ft.

ARKANSAS RIVER BASIN

403

07238500 CANTON LAKE NEAR CANTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1960-64, 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	RESER- VOIR STORAGE (AC-FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT								
10...	1400	72690	1590	8.1	21.0	18	7.7	91
NOV								
21...	1245	69950	1540	8.1	5.0	14	12.0	98
DEC								
18...	1700	69310	1560	8.5	--	--	--	--
JAN								
25...	1110	70120	1430	8.3	.0	11	9.9	73
FEB								
01...	1530	70470	1600	8.2	1.5	2.0	13.1	93
MAR								
13...	1400	75550	1650	8.6	10.5	.65	10.9	105
APR								
25...	1400	74940	1520	8.2	18.5	69	8.6	97
MAY								
03...	1530	77870	1520	8.0	28.0	66	8.0	111
JUN								
05...	1315	121200	1310	8.0	23.0	7.8	7.1	91
JUL								
25...	1500	121900	1310	8.5	26.5	6.2	7.4	98
AUG								
13...	1550	116900	1300	8.6	26.0	56	6.1	81
SEP								
05...	1215	114700	1300	8.4	25.5	4.0	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT									
10...	400	250	92	42	150	44	3.3	--	11
NOV									
21...	400	240	91	42	180	49	3.9	--	11
DEC									
18...	420	260	99	41	170	46	3.6	--	12
JAN									
25...	370	230	82	41	160	47	3.6	--	13
FEB									
01...	400	240	91	42	170	47	3.7	--	10
MAR									
13...	450	290	110	43	170	44	3.5	--	9.4
APR									
25...	440	280	110	41	160	43	3.3	--	8.5
MAY									
03...	590	440	150	52	210	43	3.8	--	7.6
JUN									
05...	350	190	90	31	130	55	3.2	140	8.5
JUL									
25...	320	160	80	28	130	47	3.2	140	8.1
AUG									
13...	370	210	94	33	130	54	2.9	140	8.8
SEP									
05...	350	190	88	32	130	44	3.0	140	8.6

ARKANSAS RIVER BASIN

07238500 CANTON LAKE NEAR CANTON, OK--Continued

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT								
10...	190	0	160	2.4	260	230	974	1.32
NOV								
21...	190	0	160	2.4	310	230	994	1.35
DEC								
18...	--	--	160	--	320	230	1010	1.37
JAN								
25...	--	--	140	--	270	210	897	1.22
FEB								
01...	--	--	160	--	300	240	1010	1.37
MAR								
13...	--	--	160	--	300	230	987	1.34
APR								
25...	--	--	160	--	310	220	966	1.31
MAY								
03...	--	--	150	--	470	300	1360	1.85
JUN								
05...	--	--	160	--	230	180	803	1.09
JUL								
25...	--	--	160	--	--	--	798	1.09
AUG								
13...	--	--	160	--	230	180	770	1.05
SEP								
05...	--	--	160	--	240	180	800	1.09

07239000 NORTH CANADIAN RIVER AT CANTON, OK

LOCATION.--Lat 36°04'45", long 98°35'25", in NE&SW¼ sec.33, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, on right bank 2,700 ft (823.0 m) downstream from Canton Dam, 1.5 mi (2.4 km) northwest of Canton, 4.8 mi (7.7 km) upstream from Minnehaha Creek, and at mile 393.8 (633.6 km).

DRAINAGE AREA.--12,484 mi² (32,334 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1914 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft (476.250 m) Corps of Engineers datum. Oct. 1, 1937, to Jan. 5, 1955, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 1.91 ft (0.582 m) lower prior to Oct. 1, 1950, and at datum 6.91 ft (2.106 m) lower thereafter.

REMARKS.--Records good. Flow partly regulated by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and completely regulated thereafter by Canton Lake (station 07238500).

AVERAGE DISCHARGE.--(Prior to regulation by Canton Dam) 11 years (water years 1938-48), 256 ft³/s (7,250 m³/s), 185,500 acre-ft/yr (229 hm³/yr); (since regulation by Canton Dam) 31 years (water years (1949-79), 166 ft³/s (4,701 m³/s), 120,300 acre-ft/yr (148 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s (702 m³/s) Oct. 12, 1946, gage height, 12.83 ft (3.911 m), site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 13, 1923, reached a stage of 16.8 ft (5.121 m), at site 300 ft (91.4 m) upstream from former site at datum 1.91 ft (0.582 m) lower than present datum, from reports of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 746 ft³/s (21.1 m³/s) Mar. 23, gage height 7.65 ft (2.332 m); minimum daily discharge, 3.1 ft³/s (0.088 m³/s) Jan. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	9.9	3.5	4.6	4.3	728	6.4	582	56	525	30
2	19	14	9.5	3.3	4.9	5.1	596	8.7	583	55	526	30
3	20	14	9.0	3.3	5.0	5.0	138	6.4	580	53	524	28
4	20	13	9.0	3.3	5.0	4.6	19	6.3	581	53	521	29
5	20	13	9.0	3.1	5.0	4.6	18	5.9	581	54	521	30
6	19	13	8.8	3.1	5.2	4.6	17	5.9	580	56	519	30
7	17	14	8.5	3.1	5.1	4.6	16	5.8	580	53	527	30
8	16	14	8.3	3.2	5.2	4.6	14	5.8	577	53	527	30
9	16	14	8.3	3.2	5.5	4.4	13	5.9	340	70	42	30
10	16	14	8.1	3.2	5.5	4.3	14	5.6	50	310	40	30
11	15	13	7.8	3.2	5.1	5.8	13	5.3	248	572	37	30
12	15	13	7.6	3.5	4.9	6.5	13	5.5	549	574	36	28
13	15	13	7.3	3.2	5.3	7.0	12	5.7	549	572	37	28
14	15	13	6.3	3.5	5.6	7.7	11	5.8	550	569	36	28
15	16	13	6.0	3.5	5.8	8.3	11	5.9	368	570	35	29
16	16	12	5.5	3.6	5.5	8.4	11	5.9	177	568	33	29
17	15	11	5.2	3.6	5.9	7.8	10	5.9	174	349	34	28
18	15	11	5.4	4.2	5.9	10	10	6.3	163	125	35	28
19	14	11	5.4	4.4	5.6	8.6	10	6.3	135	120	35	28
20	14	11	5.5	3.8	5.2	8.7	9.8	6.2	126	118	35	29
21	14	11	5.4	3.7	5.0	9.3	9.6	6.7	98	117	34	30
22	13	11	5.6	3.8	5.4	263	9.9	6.5	61	117	30	30
23	13	11	5.6	3.7	5.3	649	9.9	6.4	59	88	31	29
24	14	11	5.5	3.6	4.9	744	9.9	6.6	61	67	32	29
25	14	11	5.0	4.1	4.6	742	8.9	6.6	60	260	33	29
26	14	11	5.0	4.2	4.5	741	8.5	6.7	58	529	30	29
27	14	11	5.1	4.1	4.4	740	8.3	6.9	57	531	30	28
28	15	10	4.5	4.1	4.3	741	8.2	7.1	57	529	31	28
29	15	10	4.0	4.3	---	742	7.6	8.9	57	530	31	27
30	15	10	3.7	4.1	---	736	7.5	464	57	529	31	28
31	15	---	4.1	4.1	---	731	---	586	---	530	31	---
TOTAL	487	365	203.9	112.6	144.2	6963.2	1772.1	1314.0	8698	8777	4289	869
MEAN	15.7	12.2	6.58	3.63	5.15	225	59.1	42.4	290	283	138	29.0
MAX	20	14	9.9	4.4	5.9	744	728	586	583	574	526	30
MIN	13	10	3.7	3.1	4.3	4.3	7.5	5.3	50	53	30	27
AC-FT	966	724	404	223	286	13810	3510	2610	17250	17410	8510	1720
CAL YR 1978	TOTAL	28513.4	MEAN	78.1	MAX	1010	MIN	3.3	AC-FT	56560		
WTR YR 1979	TOTAL	33995.0	MEAN	93.1	MAX	744	MIN	3.1	AC-FT	67430		

ARKANSAS RIVER BASIN

07239000 NORTH CANADIAN RIVER AT CANTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-59, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1951 to September 1954.

WATER TEMPERATURE: October 1951 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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT										
10...	1300	16	2000	8.1	22.0	21	8.0	98	21	--
NOV										
21...	1200	11	1700	8.0	6.0	11	9.2	77	20	--
DEC										
18...	1600	5.4	1950	8.4	8.5	5.0	--	--	21	570
JAN										
25...	1140	4.1	1800	8.4	3.0	3.0	8.3	66	24	--
FEB										
01...	1630	4.9	1800	8.0	7.0	3.0	13.0	114	17	350
MAR										
13...	1300	6.9	1700	8.2	15.0	6.0	10.0	105	21	--
APR										
25...	1315	8.8	1800	8.2	20.0	17	8.3	96	24	412
MAY										
02...	1400	8.6	1500	--	28.0	67	6.9	96	36	--
JUN										
05...	1255	580	1300	8.2	23.0	24	7.2	89	23	361
JUL										
25...	1330	222	1300	8.3	26.5	5.0	7.1	93	15	--
AUG										
13...	1515	37	1450	8.4	27.5	12	6.7	89	22	372
SEP										
05...	1300	30	1500	8.4	26.0	19	--	--	16	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT									
10...	--	--	--	--	--	293	225	.7	24
NOV									
21...	--	--	--	--	--	285	220	.7	1
DEC									
18...	140	350	53	177	9.3	260	223	.7	11
JAN									
25...	--	--	--	--	--	233	242	.8	26
FEB									
01...	100	250	40	168	6.8	247	247	.9	9
MAR									
13...	--	--	--	--	--	273	226	.8	6
APR									
25...	95	238	42	157	8.0	270	242	.8	51
MAY									
02...	--	--	--	--	--	135	120	--	398
JUN									
05...	87	218	33	130	8.6	230	174	.5	--
JUL									
25...	--	--	--	--	--	226	142	.4	34
AUG									
13...	84	210	39	140	8.3	227	179	.5	41
SEP									
05...	--	--	--	--	--	218	193	.6	--

407

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 10...	--	--	--	--	.177	--	--	--	--
NOV 21...	.10	1.1	1.2	5.5	.147	--	--	--	--
DEC 18...	.30	1.0	1.3	5.9	.023	--	--	--	--
JAN 25...	.40	2.4	2.8	13	.450	--	--	--	--
FEB 01...	.30	2.2	2.5	11	.250	9	2	13	5
MAR 13...	.20	1.8	2.0	8.9	.250	--	--	--	--
APR 25...	.20	1.8	2.0	8.9	.170	--	--	--	--
MAY 02...	.40	2.6	3.0	14	.580	--	--	--	--
JUN 05...	.10	1.8	1.9	8.5	.265	--	--	--	--
JUL 25...	<.50	--	1.5	--	.145	--	--	--	--
AUG 13...	<.50	1.6	1.6	--	.215	<5	2	<10	14
SEP 05...	<.50	1.7	1.7	--	.095	--	--	--	--

[illegible]

ARKANSAS RIVER BASIN

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'44", long 97°57'32", on east line of sec.32, T.13 N., R.7 W., Canadian County, Hydrologic Unit 11100301, near left bank on downstream side of pier of bridge on old U.S. Highway 81, 2.0 mi (3.2 km) north of courthouse in El Reno, 2.2 mi (3.5 km) downstream from Target Creek, and at mile 307.4 (494.6 km).

DRAINAGE AREA.--13,042 mi² (33,779 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1.0 mi (1.6 km) upstream March 1914 to March 1934 and at present site thereafter are contained in reports of U.S. Weather Service. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,299.02 ft (395.941 m) National Geodetic Vertical Datum of 1929. October 1902 to April 1908, nonrecording gage at site about 50 ft (15.2 m) downstream at different datum.

REMARKS.--Records good Some regulation by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and by Canton Lake (station 07238500) thereafter.

AVERAGE DISCHARGE.--(Prior to regulation by Canton Lake) 16 years (water years 1903-7, 1938-48), 264 ft³/s (7.476 m³/s), 191,300 acre-ft/yr (236 hm³/yr); (Since regulation by Canton Lake) 31 years (water years 1949-79), 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) Oct. 28, 1941, gage height, 15.98 ft (4.871 m); maximum gage height, 18.20 ft (5.547 m) Sept. 21, 1965; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft (404.256 m) above mean sea level at railroad bridge 1.0 mi (1.6 km) above station, from reports of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,790 ft³/s (50.7 m³/s) Apr. 10, gage height, 8.58 ft (2.615 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Dec. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	17	21	12	19	19	735	48	84	81	759	52
2	74	17	21	10	22	59	753	46	381	77	624	41
3	65	17	20	12	21	290	746	69	460	75	555	41
4	59	17	21	14	20	116	623	271	487	74	561	36
5	54	16	19	16	18	69	272	211	507	76	594	34
6	50	21	19	15	20	48	140	110	521	106	531	38
7	47	21	18	13	22	38	111	72	547	188	528	38
8	46	21	17	11	21	30	95	55	547	128	520	108
9	51	20	14	13	20	28	86	46	781	94	420	57
10	43	18	17	15	23	25	256	45	703	84	171	40
11	41	17	23	16	30	24	916	45	581	79	116	33
12	38	17	29	15	40	22	186	37	199	97	379	30
13	33	18	20	13	33	21	117	34	164	331	252	28
14	31	19	20	11	27	20	93	32	440	488	135	27
15	29	201	20	12	25	19	82	29	503	484	110	26
16	27	88	20	15	22	18	75	28	510	492	99	24
17	26	49	17	17	23	20	70	26	419	554	99	25
18	25	35	16	20	22	37	69	28	210	605	84	24
19	24	31	3.9	280	29	82	68	31	172	592	76	24
20	25	29	3.2	115	40	156	87	28	161	277	69	25
21	23	26	8.9	74	90	80	75	978	142	190	66	24
22	22	25	25	49	80	681	65	267	129	155	70	23
23	21	25	27	38	60	582	60	81	126	141	81	22
24	20	24	16	30	40	277	57	52	495	146	63	21
25	20	25	15	28	30	437	54	42	331	172	57	20
26	19	26	15	25	26	634	51	37	183	336	55	20
27	18	24	15	24	24	669	50	35	130	298	56	19
28	19	22	14	22	21	684	49	31	103	434	49	18
29	18	22	14	21	---	700	49	29	92	482	42	18
30	18	22	14	20	---	712	48	29	86	484	39	18
31	17	---	13	17	---	722	---	27	---	507	43	---
TOTAL	1088	930	536.0	993	868	7319	6138	2899	10194	8327	7303	954
MEAN	35.1	31.0	17.3	32.0	31.0	236	205	93.5	340	269	236	31.8
MAX	83	201	29	280	90	722	916	978	781	605	759	108
MIN	17	16	3.2	10	18	18	48	26	84	74	39	18
AC=FT	2160	1840	1060	1970	1720	14520	12170	5750	20220	16520	14490	1890
CAL YR 1978	TOTAL	41231.50	MEAN 113	MAX 3870	MIN .00	AC=FT 81780						
WTR YR 1979	TOTAL	47549.00	MEAN 130	MAX 978	MIN 3.2	AC=FT 94310						

ARKANSAS RIVER BASIN

409

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1953, 1955-57, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1954 to September 1957, May 1974 to September 1975.

WATER TEMPERATURE: October 1954 to September 1957, May 1974 to September 1975.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)
OCT										
11...	1230	95	2200	8.2	23.0	13	8.4	104	24	--
NOV										
22...	1045	25	1500	7.8	6.0	3.0	8.9	75	17	--
DEC										
18...	1215	16	2100	8.2	5.5	8.0	--	--	20	628
JAN										
26...	0910	25	1250	8.2	.0	19	13.0	94	35	--
FEB										
02...	1030	22	1400	8.0	1.0	2.0	14.0	103	17	467
MAR										
14...	1145	20	1800	8.3	13.5	7.0	10.7	106	22	--
APR										
26...	1115	50	1750	8.2	19.5	4.0	8.4	95	24	487
MAY										
03...	1230	59	--	7.8	14.5	20	11.7	122	23	--
JUN										
06...	1200	521	1230	7.3	23.5	87	7.2	89	37	361
JUL										
26...	1345	446	930	8.1	29.0	>1000	6.8	93	85	--
AUG										
13...	1015	243	410	8.1	23.0	>1000	6.8	84	117	195
SEP										
04...	1140	37	1500	8.4	28.0	10	--	--	20	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT									
11...	--	--	--	--	--	458	239	.7	15
NOV									
22...	--	--	--	--	--	288	201	.6	7
DEC									
18...	150	375	61	186	8.9	357	217	.7	14
JAN									
26...	--	--	--	--	--	142	111	.4	31
FEB									
02...	110	275	46	165	6.9	--	206	.7	5
MAR									
14...	--	--	--	--	--	340	223	.8	6
APR									
26...	108	270	52	160	8.5	305	226	.7	17
MAY									
03...	--	--	--	--	--	--	291	.6	74
JUN									
06...	105	263	34	132	8.8	225	174	.6	332
JUL									
26...	--	--	--	--	--	136	106	.2	830
AUG									
13...	44	110	19	22	7.6	31	31	.2	1680
SEP									
04...	--	--	--	--	--	248	191	.6	--

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 11...	--	2.4	--	--	.203	--	--	--	--
NOV 22...	<.10	.46	--	--	.260	--	--	--	--
DEC 18...	<.10	.68	.68	--	.154	--	--	--	--
JAN 26...	.30	2.2	2.5	11	.500	--	--	--	--
FEB 02...	.10	1.1	1.2	5.4	.300	--	2	12	8
MAR 14...	.10	1.4	1.5	6.6	.330	--	--	--	--
APR 26...	.10	1.3	1.4	6.3	.120	--	--	--	--
MAY 03...	<.10	1.4	1.4	--	.190	--	--	--	--
JUN 06...	--	1.8	1.9	--	.250	--	--	--	--
JUL 26...	.50	--	4.7	--	.650	--	--	--	--
AUG 13...	.50	5.8	6.3	28	1.20	5	<2	<10	22
SEP 04...	<.50	1.6	1.6	--	.105	--	--	--	--

[illegible]

ARKANSAS RIVER BASIN

411

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 98°57'11", in SW¼SW¼ sec.34, T.13 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft (792.5 m) upstream from Lake Hefner, 3.0 mi (4.8 km) northeast of Bethany, and 7.6 mi (12.2 km) northwest of the State Capitol in Oklahoma City.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,200.96 ft (336.053 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi (4.3 km) upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi (4.8 km) upstream at different datum. May 1, 1950, to May 19, 1954, water-stage recorder and concrete control at present site and datum. May 20, 1954, to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft (762.0 m) downstream at datum 2.80 ft (0.853 m) lower than present datum., Used as supplementary gage after Apr. 25, 1975.

REMARKS.--Records fair. Use of canal began in March 1944. Canal diverts water from North Canadian River just upstream from Lake Overholser (station 07240500) and delivers water to Lake Hefner, capacity, 80,600 acre-ft (99.4 hm³), for municipal water supply of Oklahoma City. Subsequent to April 1950, small ground-water seepage, when head gates are closed, included in records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,500 ft³/s (42.5 m³/s) May 28, 1955; no flow at times in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1180	5.8	188	2.5	17	141
2	.00	.00	.00	.00	.00	.00	1160	15	187	2.5	17	227
3	.00	.00	.00	.00	.00	.00	1190	185	180	2.5	17	56
4	.00	.00	.00	.00	.00	.00	1270	11	180	2.5	17	30
5	.00	.00	.00	.00	.00	.00	896	4.0	185	2.6	18	9.4
6	.00	.00	.00	.00	.00	.00	131	17	184	3.8	18	9.4
7	.00	.00	.00	.00	.00	.00	115	264	212	2.5	17	8.9
8	.00	.00	.00	.00	.00	.00	95	262	39	2.5	17	8.7
9	.00	.00	.00	.00	.00	.00	86	264	27	2.6	17	8.6
10	.00	.00	.00	.00	.00	.00	100	259	3.3	2.5	17	7.5
11	.00	.00	.00	.00	.00	.00	534	252	11	2.5	17	7.3
12	.00	.00	.00	.00	.00	.00	445	251	11	2.4	17	7.0
13	.00	.00	.00	.00	.00	.00	150	248	11	2.4	136	7.0
14	.00	.00	.00	.00	.00	.00	20	245	11	2.4	185	6.9
15	.00	.00	.00	.00	.00	.00	12	245	7.4	2.5	38	6.6
16	.00	.00	.00	.00	.00	.00	12	245	6.6	2.5	31	6.7
17	.00	.00	.00	.00	.00	.00	155	244	6.1	2.4	13	6.5
18	.00	.00	.00	.50	.00	.00	26	215	5.5	140	13	5.7
19	.00	.00	.00	.55	.00	.00	18	198	5.1	470	14	5.5
20	.00	.00	.00	.06	.00	.00	52	195	5.2	255	14	4.8
21	.00	.00	.00	.00	.00	.00	24	175	7.0	16	14	2.0
22	.00	.00	.00	.00	.00	401	17	35	4.9	16	14	1.8
23	.00	.00	.00	.00	.00	1040	16	68	2.6	15	14	1.7
24	.00	.00	.00	.00	.00	800	15	211	2.7	16	14	1.7
25	.00	.00	.00	.00	.00	150	13	209	3.3	16	13	1.8
26	.00	.00	.00	.00	.00	20	11	205	2.5	16	13	1.8
27	.00	.00	.00	.00	.00	339	9.5	205	2.5	16	13	1.8
28	.00	.00	.00	.00	.00	409	8.4	201	2.4	17	13	1.8
29	.00	.00	.00	.00	---	392	7.5	193	2.5	16	13	1.8
30	.00	.00	.00	.00	---	1090	6.6	194	2.5	17	13	1.7
31	.00	---	.00	.00	---	1190	---	191	---	17	13	---
TOTAL	.00	.00	.00	1.11	.00	5831.00	7775.0	5511.8	1498.1	1086.6	797	588.4
MEAN	.000	.000	.000	.036	.000	188	259	178	49.9	35.1	25.7	19.6
MAX	.00	.00	.00	.55	.00	1190	1270	264	212	470	185	227
MIN	.00	.00	.00	.00	.00	.00	6.6	4.0	2.4	2.4	13	1.7
AC-FT	.00	.00	.00	2.2	.00	11570	15420	10930	2970	2160	1580	1170
CAL YR 1978	TOTAL	11280.94	MEAN	30.9	MAX	1290	MIN	.00	AC-FT	22380		
WTR YR 1979	TOTAL	23089.01	MEAN	63.3	MAX	1270	MIN	.00	AC-FT	45800		

ARKANSAS RIVER BASIN

07240500 LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°29'11", long 97°39'58", on north line of SW¼ sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, at control tower at left end of dam on North Canadian River, 2.9 mi (4.7 km) upstream from Mustang Creek, 9.0 mi (14.5 km) west of State Capitol in Oklahoma City, and at mile 281.5 (452.9 km).

DRAINAGE AREA.--13,221 mi² (34,242 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

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

GAGE.--Nonrecording gage. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Oklahoma City Water Department). Prior to Oct. 1, 1955, at same site at datum 1,065.77 ft (324.847 m) elevation. Oct. 1, 1955, to Sept. 30, 1962, water-stage recorder at same site and present datum.

REMARKS.--Reservoir is formed by Ambursen-type dam flanked by long earth-fill sections. Outlet facilities are twenty-three taintor gates and one uncontrolled spillway. Storage began in 1917. Dam was partly washed out in 1923 and rebuilt in 1924. Capacity, 17,100 acre-ft (21.1 hm³) below elevation 1,242.27 ft (378.644 m), top of spillway gates. Dead storage, 1,400 acre-ft (1.73 hm³) below elevation 1,229.77 ft (374.834 m), sill of outlet work. Figures given herein represent total contents. Water diverted for municipal water supply by Oklahoma City. Revised capacity table used since Oct. 1, 1950.

COOPERATION.--Elevations and capacity table furnished by Oklahoma City Water Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,900 acre-ft (25.8 hm³) June 14, 1944, elevation, 1,242.67 ft (378,766 m), from capacity table then in use; minimum observed, 1,870 acre-ft (2.31 hm³) May 14, 1955, elevation, 1,230.62 ft (375.093 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,550 acre-ft (20.4 hm³) July 18, elevation, 1,241.90 ft (378.531 m); minimum, 12,120 acre-ft (14.9 hm³) Jan. 1, elevation, 1,239.00 ft (377.647 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet) †	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,240.15	13,870	--
Oct. 31	1,239.15	12,350	-1,520
Nov. 30	1,239.50	12,880	+530
Dec. 31	1,239.00	12,120	-760
CAL YR 78	--	--	-2,360
Jan. 31	1,239.45	12,800	+680
Feb. 28	1,239.45	12,800	0
Mar. 31	1,241.00	15,170	+2,370
Apr. 30	1,241.40	15,780	+610
May 31	1,241.10	15,320	-460
June 30	1,241.45	15,860	+540
July 31	1,241.55	16,010	+150
Aug. 31	1,241.05	15,240	-770
Sept. 30	1,240.20	13,950	-1,290
WTR YR 79	--	--	+80

† Elevation at 0800 the following day.

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER, NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'46", long 97°39'47", in southeast corner of SW¼ sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, on left bank 200 ft (61.0 m) upstream from bridge on State Highway 4, 0.5 mi (0.8 km) downstream from Lake Overholser, 2.4 mi (3.9 km) upstream from Mustang Creek, 9.1 mi (14.6 km) southwest of State Capitol in Oklahoma City, and at mile 281.0 (452.1 km).

DRAINAGE AREA.--13,222 mi² (34,245 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft (364.132 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, at datum 10.00 ft (3.048 m) higher and through Mar. 24, 1971 at site 200 ft (61.0 m) downstream.

REMARKS.--Records poor. Some regulation by Canton Lake (station 07238500) and Lake Overholser (station 07238500) and Lake Overholser (station 07240500). Diversions above station into Lake Overholser and Lake Hefner Canal (station 07240000).

AVERAGE DISCHARGE.--25 years, 98.3 ft³/s (2.784 m³/s), 71,220 acre-ft/yr (87.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Nov. 3, 1974, gage height, 29.18 ft (8.894 m); no flow at times in 1952-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.9 ft (12.47 m), present datum, was reached in October 1923, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft³/s (81.8 m³/s) June 9, gage height, 21.99 ft (6.703 m); minimum daily discharge, 1.6 ft³/s (0.045 m³/s) Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.4	2.0	3.5	4.5	41	7.3	55	3.5	110	350	191
2	30	8.0	2.9	5.0	5.0	40	5.8	58	120	110	400	18
3	60	6.9	5.9	3.9	5.3	73	2.8	403	400	110	390	14
4	60	6.4	2.0	2.9	5.0	22	5.0	1620	350	110	300	14
5	60	5.0	2.3	2.5	5.0	5.3	2.7	716	400	80	310	14
6	40	10	17	2.2	5.0	4.7	2.7	316	450	500	382	15
7	20	40	66	2.2	5.0	4.5	45	196	400	450	328	26
8	150	40	31	19	4.5	22	254	53	558	100	327	55
9	126	9.0	5.0	43	4.5	56	156	74	1370	100	327	85
10	27	7.0	3.1	40	4.0	54	123	77	1720	80	213	75
11	3.5	6.0	3.7	19	3.8	52	267	40	702	70	99	62
12	3.3	5.0	2.7	2.2	3.6	52	40	36	427	60	31	46
13	3.2	4.7	2.9	2.0	3.5	53	17	36	92	80	75	42
14	21	4.5	2.2	1.8	4.1	50	69	16	121	100	15	37
15	52	4.5	2.1	1.8	6.6	21	165	3.7	309	350	14	20
16	62	4.5	23	1.7	6.0	4.7	112	2.9	372	400	38	15
17	56	21	44	1.6	5.1	4.2	110	2.5	367	500	63	80
18	30	70	32	66	4.4	4.0	110	2.7	361	700	40	72
19	10	70	2.5	99	3.5	88	110	2.5	259	20	38	11
20	10	32	2.3	7.6	23	206	122	30	209	300	57	10
21	12	2.0	1.9	5.3	86	164	148	363	300	300	46	10
22	12	30	1.8	4.7	108	77	131	561	250	130	44	10
23	10	72	1.9	4.7	53	6.5	36	106	240	150	44	10
24	32	40	2.9	5.9	6.7	3.5	18	37	800	170	45	10
25	60	43	1.8	4.2	4.8	3.2	72	43	1500	170	44	10
26	7.0	71	8.6	4.7	27	43	52	1.9	500	110	43	10
27	6.0	89	26	4.5	40	4.1	57	3.1	300	170	43	10
28	6.3	38	25	4.5	43	2.6	55	24	100	50	38	10
29	5.1	2.7	11	4.7	---	2.4	55	31	80	400	18	10
30	7.0	2.1	2.5	4.5	---	3.5	55	3.1	70	350	13	10
31	7.9	---	4.0	4.5	---	2.7	---	5.0	---	350	51	---
TOTAL	999.3	753.7	342.0	379.1	479.9	1169.9	2405.3	4918.4	13130.5	6680	4226	1002
MEAN	32.2	25.1	11.0	12.2	17.1	37.7	80.2	159	438	215	136	33.4
MAX	150	89	66	99	108	206	267	1620	1720	700	400	191
MIN	3.2	2.0	1.8	1.6	3.5	2.4	2.7	1.9	3.5	20	13	10
AC-FT	1980	1490	678	752	952	2320	4770	9760	26040	13250	8380	1990
CAL YR 1978	TOTAL	27870.66	MEAN	76.4	MAX	2140	MIN	.46	AC-FT	55280		
WTR YR 1979	TOTAL	36486.10	MEAN	100	MAX	1720	MIN	1.6	AC-FT	72370		

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW¼NW¼ sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, near left bank on downstream side of pier of county road bridge, 2.2 mi (3.5 km) north-west of Harrah, 3.8 mi (6.1 km) downstream from Choctaw Creek, and at mile 230.0 (370.1 km).

DRAINAGE AREA.--13,501 mi² (34,968 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,055.69 ft (321.774 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some regulation by Canton Lake (station 07238500) and by Lake Overholser (station 07240500), where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--11 years, 277 ft³/s (7.845 m³/s), 200,700 acre-ft/yr (247 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s (196 m³/s) Nov. 5, 1974, gage height, 17.93 ft (5.465 m); minimum, 23 ft³/s (0.65 m³/s) Aug. 8, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,190 ft³/s (119 m³/s) July 7, gage height, 14.48 ft (4.414 m); minimum daily discharge, 42 ft³/s (1.19 m³/s) Oct. 31, Nov. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	48	94	90	64	71	78	96	112	329	822	1160
2	98	47	85	70	72	83	151	114	110	293	378	732
3	77	47	74	80	82	170	91	624	120	303	390	398
4	84	42	66	90	78	238	100	3290	412	282	492	196
5	102	50	73	84	70	164	96	2040	319	258	482	150
6	99	59	76	80	68	114	75	982	510	1760	463	142
7	103	218	74	86	74	87	68	537	659	3700	530	130
8	109	102	74	68	84	85	66	435	585	1350	482	128
9	807	92	70	76	68	83	166	236	2520	640	463	126
10	347	79	65	94	60	102	213	249	3460	427	463	146
11	173	62	83	105	52	129	708	236	2340	415	425	192
12	108	56	74	110	150	121	671	200	1210	378	310	168
13	83	54	71	100	167	119	280	162	800	305	200	149
14	73	61	72	78	110	118	135	142	440	293	185	134
15	69	123	68	100	115	118	126	122	258	293	156	131
16	79	285	76	154	107	120	197	109	395	305	138	119
17	94	385	76	220	53	97	187	105	493	1110	126	103
18	92	147	87	300	80	104	186	126	477	925	156	101
19	90	120	120	743	71	266	312	138	475	941	164	193
20	75	152	103	331	61	153	201	130	425	692	198	125
21	56	158	71	144	63	258	711	2020	346	236	207	107
22	53	105	69	110	83	570	301	1410	2220	472	276	101
23	53	80	66	66	161	976	234	970	1660	202	271	96
24	69	101	66	71	157	299	178	486	789	365	168	91
25	65	120	63	80	88	166	110	256	3220	293	161	99
26	87	222	61	78	53	121	90	240	2770	270	142	92
27	97	479	53	63	58	110	138	175	592	258	144	91
28	47	198	69	53	63	122	134	152	770	293	140	89
29	47	162	96	70	---	95	131	130	613	440	142	89
30	45	114	96	80	---	87	114	207	383	305	130	87
31	42	---	90	62	---	75	---	138	---	305	132	---
TOTAL	3594	3968	2381	3936	2412	5421	6248	16257	29483	18438	8936	5665
MEAN	116	132	76.8	127	86.1	175	208	524	983	595	288	189
MAX	807	479	120	743	167	976	711	3290	3460	3700	822	1160
MIN	42	42	53	53	52	71	66	96	110	202	126	87
AC-FT	7130	7870	4720	7810	4780	10750	12390	32250	58480	36570	17720	11240
CAL YR 1978	TOTAL	79787	MEAN 219	MAX 3330	MIN 42	AC-FT 158300						
WTR YR 1979	TOTAL	106739	MEAN 292	MAX 3700	MIN 42	AC-FT 211700						

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1968 to current year.

WATER TEMPERATURE: October 1968 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum and mean specific conductance for the month. An additional sample was collected 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, 3,840 micromhos Apr. 2, 1978; minimum daily, 262 micromhos June 9, 1974.

WATER TEMPERATURE: Maximum daily, 35.0°C July 11, Aug. 9, 1969; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,130 micromhos Jan. 4; minimum daily, 346 micromhos July 7.

WATER TEMPERATURE: Maximum daily, 31.0°C July 11, Aug. 4; minimum daily, 0.0°C on several days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
OCT											
10...	0800	--	80020	378	735	7.8	18.0	--	--	--	--
17...	0800	--	80020	88	1790	7.1	14.0	--	--	--	--
26...	0900	--	80020	60	1520	7.8	13.0	--	--	--	--
26...	1215	--	80010	69	1690	7.1	16.0	--	9.9	103	--
26...	1216	1028	9740	69	1690	7.1	16.0	3.0	9.9	103	50
NOV											
09...	0830	--	80020	87	1240	7.5	11.0	--	--	--	--
15...	1240	--	80010	140	1500	7.4	7.0	--	9.1	78	--
15...	1241	1028	9740	140	1500	7.4	7.0	8.0	9.1	78	--
18...	0900	--	80020	148	530	7.9	7.0	--	--	--	--
24...	0930	--	80020	101	1950	7.8	11.5	--	--	--	--
DEC											
07...	0930	--	80020	85	1900	7.6	20.0	--	9.0	67	--
20...	1300	--	80010	97	2000	7.6	11.0	--	--	--	--
20...	1301	1028	9740	97	2000	7.6	11.0	2.0	--	--	69
JAN											
04...	1600	--	80020	90	3130	7.0	.0	--	--	--	--
19...	1230	--	80010	1020	710	7.9	5.5	--	5.2	43	--
19...	1231	1028	9740	1020	710	7.9	5.5	>1000	5.2	43	328
20...	1020	--	80020	331	491	7.2	4.0	--	--	--	--
26...	1630	--	80020	78	1800	7.4	3.0	--	--	--	--
29...	1130	--	80020	70	1480	7.5	.0	--	8.3	59	--
FEB											
01...	1300	--	80020	64	2420	7.7	2.0	--	--	--	--
13...	1230	--	80020	164	929	7.9	4.0	--	--	--	--
24...	1000	--	80020	177	1660	7.4	7.0	--	--	--	--
MAR											
04...	1100	--	80020	236	1890	8.3	7.0	--	--	--	--
13...	0830	--	80020	116	1240	8.6	12.0	--	--	--	--
23...	1000	--	80020	1100	520	8.5	14.0	--	--	--	--
30...	0945	--	80010	81	1450	7.8	17.0	--	5.6	61	--
30...	0946	1028	9740	81	1450	7.8	17.0	10	5.6	61	51
APR											
03...	1100	--	80020	80	2470	8.4	12.0	--	--	--	--
12...	0830	--	80020	710	594	8.2	14.0	--	--	--	--
17...	1045	--	80010	183	990	8.0	22.0	--	7.6	88	--
17...	1046	1028	9740	183	990	8.0	22.0	65	7.6	88	56
28...	0930	--	80020	120	1530	8.3	15.0	--	--	--	--
MAY											
04...	1100	--	80020	3510	450	7.7	13.0	--	--	--	--
09...	1215	--	80010	348	1100	8.1	23.0	--	7.3	88	--
09...	1216	1028	9740	348	1100	8.1	23.0	61	7.3	88	44
12...	0830	--	80020	200	1370	8.0	14.0	--	--	--	--
18...	0830	--	80020	126	2330	7.7	20.0	--	--	--	--
JUN											
12...	1145	--	80010	1150	710	8.9	25.0	--	5.4	67	--
12...	1146	1028	9740	1150	710	8.9	25.0	130	5.4	67	34

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
JUN											
24...	0830	--	80020	789	830	7.2	25.0	--	--	--	--
26...	0800	--	80020	2770	374	7.6	23.0	--	--	--	--
30...	0800	--	80020	383	1160	7.4	27.0	--	--	--	--
JUL											
03...	1250	--	80010	303	1470	8.2	31.0	--	--	--	--
03...	1251	1028	9740	303	1470	8.2	31.0	28	--	--	64
07...	0800	--	80020	4100	346	7.5	25.0	--	--	--	--
17...	1200	--	80020	1530	1300	7.7	28.5	--	3.1	41	--
24...	1000	--	80020	365	2000	7.3	26.0	--	--	--	--
30...	0830	--	80020	305	1120	7.7	28.5	--	--	--	--
AUG											
07...	0910	1028	9740	530	1500	8.2	27.5	65	6.0	79	48
07...	0911	--	80010	530	1500	8.2	27.5	--	6.0	79	--
18...	0900	--	80020	172	2350	7.2	26.0	--	--	--	--
21...	1320	--	80020	207	1210	8.2	27.0	--	7.4	96	--
23...	0830	--	80020	293	904	7.0	25.0	--	--	--	--
29...	0800	--	80020	148	1630	7.1	26.0	--	--	--	--
SEP											
03...	0830	--	80020	422	506	8.1	26.0	--	--	--	--
11...	0830	--	80020	192	1190	8.1	22.5	--	--	--	--
11...	0930	--	80010	192	1300	7.7	23.0	--	--	--	--
11...	0931	1028	9740	192	1300	7.7	23.0	42	6.6	80	45
25...	0930	--	80020	88	1830	7.9	21.0	--	--	--	--
25...	1010	--	80010	90	1800	7.8	21.5	--	7.9	94	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
OCT											
10...	--	--	--	--	--	190	93	--	52	--	--
17...	--	--	--	--	--	370	170	--	93	--	--
26...	--	--	--	--	--	280	130	--	69	--	--
26...	--	11	--	26000	K770	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	--	--	--	--	--	210	110	--	53	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	180	--	450	59
18...	--	--	--	--	--	120	48	--	34	--	--
24...	--	--	--	--	--	330	160	--	84	--	--
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	83	--	--	2850000	>10000000	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
04...	--	--	--	--	--	220	56	--	42	--	--
19...	300	61	>8000	>6000	>10000	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	150	--	123	40
20...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
29...	100	29	5500000	70000	8100	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	410	270	--	110	--	--
13...	--	--	--	--	--	150	82	--	43	--	--
24...	--	--	--	--	--	320	160	--	80	--	--
MAR											
04...	--	--	--	--	--	310	190	--	89	--	--
13...	--	--	--	--	--	240	94	--	58	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
30...	58	--	40000	8000	150	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	78	--	198	30
APR											
03...	--	--	--	--	--	400	270	--	110	--	--
12...	--	--	--	--	--	170	59	--	51	--	--
17...	50	15	73000	K9600	K450	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	350	160	--	87	--	--
MAY											
04...	--	--	--	--	--	130	35	--	41	--	--
09...	66	38	340000	24000	1700	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	72	--	7	25
12...	--	--	--	--	--	310	140	--	83	--	--
18...	--	--	--	--	--	440	210	--	120	--	--
JUN											
12...	50	35	130000	37500	2850	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	220	--	--	60	--	--
26...	--	--	--	--	--	120	27	--	37	--	--
30...	--	--	--	--	--	280	85	--	74	--	--
JUL											
03...	54	29	K70000	K16000	K550	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	84	--	210	31
07...	--	--	--	--	--	120	23	--	36	--	--
17...	66	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	450	230	--	120	--	--
30...	--	--	--	--	--	250	92	--	63	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	42	--	2000000	520000	8500	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
21...	34	--	20000	5100	--	--	--	--	--	--	--
23...	--	--	--	--	--	190	79	--	51	--	--
29...	--	--	--	--	--	340	140	--	88	--	--
SEP											
03...	--	--	--	--	--	130	33	--	37	--	--
11...	--	--	--	--	--	280	110	--	71	--	--
11...	42	15	K790000	--	K1800	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	79	--	198	25
25...	--	--	--	--	--	390	160	--	100	--	--
25...	--	--	3900000	50000	K2000	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM+ AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT											
10...	15	--	72	--	2.3	--	--	--	120	0	98
17...	34	--	230	--	5.2	--	--	--	250	0	210
26...	27	--	210	--	5.4	--	--	--	190	0	160
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	19	--	160	--	4.8	--	--	--	--	--	100
15...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
18...	7.8	--	57	--	2.3	--	--	--	--	--	69
24...	28	--	270	--	6.5	--	--	--	--	--	170
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
04...	27	--	450	80	13	--	--	18	--	--	160
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	78	--	--	--	--	8.6	--	--	--	--
20...	7.7	--	48	--	--	--	--	5.4	--	--	99
26...	28	--	230	--	--	--	--	13	--	--	150
29...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	32	--	320	62	6.9	340	--	16	--	--	140
13...	11	--	110	59	3.9	120	--	8.2	--	--	71
24...	29	--	200	57	4.9	210	--	12	--	--	160
MAR											
04...	21	--	260	64	6.4	270	--	10	--	--	120
13...	24	--	140	54	3.9	150	--	10	--	--	150
23...	--	--	--	--	--	--	--	--	--	--	120
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
APR											
03...	30	--	360	65	7.9	370	--	14	--	--	130
12...	10	--	56	48	1.9	61	--	5.4	--	--	110
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
28...	31	--	180	52	4.2	190	--	12	--	--	190
MAY											
04...	6.4	--	37	43	1.4	41	--	4.2	--	--	94
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
12...	25	--	160	61	4.0	170	--	11	--	--	170
18...	34	--	290	58	6.0	300	--	13	--	--	230
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
24...	16	--	81	44	2.4	88	--	7.2	--	--	--
26...	7.1	--	26	31	1.0	31	--	4.8	--	--	95
30...	22	--	--	--	--	130	--	9.4	--	--	190
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	168	--	--	--	--	11	--	--	--	--
07...	6.1	--	22	28	.9	27	--	4.9	--	--	92
17...	--	--	--	--	--	--	--	--	--	--	--
24...	36	--	260	55	5.3	270	--	12	--	--	220
30...	23	--	120	61	3.3	130	--	9.3	--	--	160
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
18...	37	--	310	--	--	320	--	14	--	--	230
21...	--	--	--	--	--	--	--	--	--	--	--
23...	15	--	100	61	3.2	110	--	7.2	--	--	110
29...	30	--	200	55	4.7	210	--	11	--	--	200
SEP											
03...	9.8	--	48	51	1.8	53	--	5.4	--	--	100
11...	24	--	120	58	3.1	130	--	10	--	--	170
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
25...	33	--	230	65	5.1	240	--	13	--	--	230
25...	--	--	--	--	--	--	--	--	--	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	SOLIDS, VOL- TILE, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT											
10...	3.0	110	100	--	444	.60	453	--	--	--	--
17...	32	180	320	--	1080	1.47	257	--	--	--	--
26...	4.8	160	270	--	912	1.24	148	--	--	--	--
26...	--	--	--	--	944	1.28	176	--	5	93	.95
26...	--	--	--	1.1	--	--	--	1	--	--	--
NOV											
09...	--	110	240	--	716	.97	168	--	--	--	--
15...	--	--	--	--	880	1.20	333	--	47	132	.51
15...	--	--	--	1.0	--	--	--	23	--	--	--
18...	--	41	90	--	307	.42	123	--	--	--	--
24...	--	140	410	--	1160	1.58	316	--	--	--	--
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	1140	1.55	299	--	12	165	.27
20...	--	--	--	.9	--	--	--	9	--	--	--
JAN											
04...	--	17	750	--	1750	2.38	425	--	--	--	--
19...	--	--	--	--	373	.51	1030	--	1820	64	--
19...	--	--	--	.4	--	--	--	2398	--	--	--
20...	--	43	65	--	298	--	266	--	--	--	--
26...	--	140	340	--	1020	--	215	--	--	--	--
29...	--	--	--	--	785	1.07	148	--	35	125	.31
FEB											
01...	--	140	580	--	1260	1.71	218	--	--	--	--
13...	--	63	180	--	534	.73	236	--	--	--	--
24...	--	160	290	--	938	1.28	448	--	--	--	--
MAR											
04...	--	68	480	--	1100	1.50	701	--	--	--	--
13...	--	140	190	--	744	1.01	233	--	--	--	--
23...	--	45	63	--	319	--	947	--	--	--	--
30...	--	--	--	--	865	1.18	189	--	60	133	.33
30...	--	--	--	.8	--	--	--	64	--	--	--
APR											
03...	--	--	640	--	1480	2.01	320	--	--	--	--
12...	1.4	56	71	--	341	.46	654	--	--	--	--
17...	--	--	--	--	--	--	--	--	160	117	.90
17...	--	--	--	.6	--	--	--	248	--	--	--
28...	--	200	250	--	902	1.23	292	--	--	--	--
MAY											
04...	--	27	55	--	266	.36	2520	--	--	--	--
09...	--	--	--	--	653	.89	614	--	144	--	.83
09...	--	--	--	.6	--	--	--	156	--	--	--
12...	--	150	240	--	810	1.10	437	--	--	--	--
18...	--	150	500	--	1370	1.86	466	--	--	--	--
JUN											
12...	--	--	--	--	429	.58	1330	--	274	63	.47
12...	--	--	--	.4	--	--	--	359	--	--	--
24...	--	150	120	--	--	--	--	--	--	--	--
26...	--	35	37	--	221	.30	1650	--	--	--	--
30...	--	140	190	--	685	--	708	--	--	--	--
JUL											
03...	--	--	--	--	851	1.16	696	--	131	136	3.1
03...	--	--	--	.5	--	--	--	90	--	--	--
07...	--	21	30	--	201	.27	2230	--	--	--	--
17...	--	--	--	--	685	.93	2830	--	606	105	.64
24...	--	150	430	--	1210	1.65	1190	--	--	--	--
30...	--	130	180	--	663	.90	546	--	--	--	--
AUG											
07...	--	--	--	.6	--	--	--	254	--	--	--
07...	--	--	--	--	860	1.17	1230	--	144	116	1.0
18...	--	150	500	--	1420	--	659	--	--	--	--
21...	--	--	--	--	648	.88	362	--	--	118	1.2
23...	--	67	170	--	516	.70	408	--	--	--	--
29...	--	170	300	--	954	1.30	381	--	--	--	--
SEP											
03...	--	44	64	--	305	.41	348	--	--	--	--
11...	--	130	180	--	--	--	--	--	--	--	--
11...	--	--	--	--	693	.94	359	--	46	70	2.1
11...	--	--	--	.7	--	--	--	14	--	--	--
25...	--	120	360	--	1070	1.46	254	--	--	--	--
25...	--	--	--	--	1090	1.48	265	--	63	160	1.6

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)
OCT											
10...	--	--	--	--	--	--	--	--	--	.680	--
17...	--	--	--	--	--	--	--	--	--	4.50	--
26...	--	--	--	--	--	--	--	--	--	6.50	--
26...	4.2	.45	1.5	--	1.4	--	--	--	--	7.00	--
26...	--	--	--	102	--	--	11	--	500	--	--
NOV											
09...	--	--	--	--	--	--	--	--	--	3.60	--
15...	2.3	.12	.39	--	.63	11	--	--	--	5.90	--
15...	--	--	--	>10	--	--	12	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	1.20	--
24...	--	--	--	--	--	--	--	--	--	5.60	--
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	1.2	.06	.20	--	.33	9.8	--	--	--	6.00	--
20...	--	--	--	--	--	--	13	--	--	--	--
JAN											
04...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	.74	1.3	--	--	--	2.70	--
19...	--	--	--	.40	--	--	15	15	68	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
29...	1.4	.05	.16	--	.36	12	--	--	--	4.80	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
30...	1.5	.21	.69	--	.54	13	--	14	60	5.30	--
30...	--	--	--	.50	--	--	13	--	--	--	--
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
17...	4.0	.30	.99	--	1.2	4.6	--	--	--	1.70	5.2
17...	--	--	--	1.0	--	--	6.0	7.0	31	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
09...	3.7	.27	.89	--	1.1	3.8	--	--	--	1.60	4.9
09...	--	--	--	1.2	--	--	4.8	6.0	27	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
12...	2.1	.12	.39	--	.59	.72	--	--	--	.830	1.0
12...	--	--	--	1.2	--	--	2.2	3.4	15	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	14	.01	.03	--	3.1	1.1	--	--	--	.800	4.3
03...	--	--	--	2.3	--	--	4.6	6.9	31	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
17...	2.8	.33	1.1	--	.97	--	--	--	--	1.40	2.7
24...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	1.6	--	--	1.8	3.4	15	--	--
07...	4.4	.40	1.3	--	1.4	.73	--	--	--	1.00	2.5
18...	--	--	--	--	--	--	--	--	--	--	--
21...	5.3	.40	1.3	--	1.6	1.8	--	--	--	2.60	6.4
23...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
03...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	9.3	.80	2.6	--	2.9	1.3	--	--	--	2.40	6.1
11...	--	--	--	3.2	--	--	4.2	7.4	33	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	6.9	.85	2.8	--	2.4	7.3	--	--	--	5.50	14

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT											
10...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	6.0	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	--	--	--	--	--	--	--	--	--	--	--
15...	--	6.3	--	--	--	2	--	0	--	3	--
15...	--	--	--	--	--	--	--	--	--	--	740
18...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
20...	--	.48	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
04...	--	--	--	--	--	--	--	--	--	--	--
19...	--	.63	--	--	--	--	--	--	--	--	--
19...	--	--	<1	--	10	--	205	--	120	--	43000
20...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
29...	--	3.9	--	--	--	--	--	--	--	--	--
FEB											
01...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
30...	--	4.3	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	1660
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
17...	5.2	1.0	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
09...	4.9	--	5	--	--	1	--	0	--	2	--
09...	--	--	--	--	--	--	--	--	--	--	4900
12...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
12...	2.5	.33	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	2.5	1.4	--	--	--	--	--	--	--	--	--
03...	--	--	13	--	7	--	<10	--	6	--	1500
07...	--	--	--	--	--	--	--	--	--	--	--
17...	4.3	.87	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	3.1	.80	--	5	--	1	--	10	--	0	--
18...	--	--	--	--	--	--	--	--	--	--	--
21...	8.0	2.1	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
03...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	7.4	2.0	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	430
25...	--	--	--	--	--	--	--	--	--	--	--
25...	17	4.4	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	PHENOLS (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT										
10...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	5200	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
NOV										
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	10	7	5500	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
DEC										
07...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	16000	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
JAN										
04...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	4200	--	--	--	--	--
19...	5	485	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
04...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	14000	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	16000	35.1	39.5	63.6	69.2	34.8
17...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	--	--	--	--	--	--
09...	--	--	20	--	12000	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
JUN										
12...	--	--	--	--	6800	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUL										
03...	--	--	--	--	11000	--	--	--	--	--
03...	2	20	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	4	--	12000	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	140000	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	.350	.390	22.6	1.77	.000

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 26,78 1215	NOV 14,78 1240	DEC 20,78 1330	JAN 19,79 1230	MAR 30,79 0945	APR 17,79 1045				
TOTAL CELLS/ML	5200	5500	16000	4200	14000	16000				
DIVERSITY: DIVISION	1.5	1.1	1.1	0.5	1.1	1.4				
..CLASS	1.5	1.1	1.1	0.5	1.1	1.4				
...ORDER	2.4	1.4	1.9	0.7	1.6	1.8				
...FAMILY	2.7	1.6	2.0	2.0	1.9	2.5				
....GENUS	3.1	1.6	2.1	0.0	2.0	2.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
...COELASTRACEAE										
...COELASTRUM	--	-	--	-	--	-	810	6	6200#	38
...HYDRODICTYACEAF										
...PEDIASTRUM	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE										
...GOLENKINIA	--	-	--	-	--	-	--	-	--	-
...MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...DUCYSTACEAE										
...ANKISTRODESMSUS	140	3	43	1	470	3	--	-	100	1
...CHUDATELLA	--	-	--	-	--	-	--	-	100	1
...DICTYOSPHAERIUM	140	3	--	-	--	-	--	-	--	-
...GLOEOACTINIUM	--	-	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	69	1	--	-	--	-	--	-	--	-
...UOCYSTIS	--	-	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	210	4	--	-	--	-	--	-
...WESTELLA	--	-	--	-	--	-	--	-	520	3
...SCENEDESMACEAE										
...ACTINASTRUM	550	11	--	-	--	-	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-	1200	9	1000	6
...SCENEDESMUS	140	3	430	8	2200	14	--	-	610	4
...TETRASTRUM	140	3	--	-	--	-	--	-	--	-
..TETRASPORALES										
...TETRASPORACEAE										
...TETRASPORA	140	3	--	-	540	3	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE	--	-	--	-	--	-	430	10	--	-
....CHLAMYDOMONAS	520	10	340	6	--	-	--	-	1000	7
CHRYSTOPHYTA										
..BACILLARIOPHYCEAF										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTETELLA	450	9	130	2	470	3	140	3	8500#	63
...MELOSIRA	210	4	--	-	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
...PENNALES										
...ACHNANTHACEAE										
...COCCONEIS	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
...FRAGILARIA	--	-	--	-	--	-	290	7	--	-
...SYNEDRA	--	-	--	-	--	-	--	-	100	1
...GOMPHONEMATACEAE										
...GOMPHONEMA	--	-	--	-	--	-	140	3	--	-
...NAVICULACEAE										
...DIPLONEIS	--	-	--	-	--	-	290	7	--	-
...NAVICULA	100	2	43	1	*	0	1300#	31	200	1
...PINNULARIA	--	-	--	-	--	-	140	3	--	-
...NITZSCHACEAE										
...NITZSCHIA	2100#	40	4000#	72	340	2	1400#	34	300	2
...SURIPELLACEAE										
....SURIPELLA	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	100	2	--	-	*	0	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...ANACYSTIS	140	3	130	2	8700#	55	--	-	610	4
...COCCOCHLORIS	--	-	--	-	*	0	--	-	--	-
...HORMOGONALES										
...OSCILLATORACEAE										
....OSCILLATORIA	35	1	--	-	2700#	17	--	-	--	-

425

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

EUGLENOPHYCEAE

••EUGLENALES

...EUGLENACEAE

...EUGLENA

210 4

210 4

200 1

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... TRACHEL

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...TRACHELOMONAS

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	MAY 9,79 1215	JUN 12,79 1145	JUL 3,79 1250	AUG 7,79 0911	SEP 11,79 0930	
TOTAL CELLS/ML	12000	6800	11000	12000	140000	
DIVERSITY: DIVISION	0.9	1.6	1.2	1.0	1.2	
..CLASS	0.9	1.6	1.2	1.0	1.2	
...ORDER	1.7	1.9	1.7	1.4	1.5	
...FAMILY	1.7	2.1	2.1	2.4	2.5	
....GENUS	1.8	2.7	2.5	3.3	2.7	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	1800	1
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	620	5
...HYDRODICTYACEAE					730	6
....PEDIASTRUM	--	-	--	-	1400	11
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	91	1
...MICRACTINIUM	--	-	--	-	360	3
...ODOCYSTACEAE					28000#	20
....ANKISTRODESMUS	--	-	210	3	910	8
....CHODATELLA	--	-	--	-	--	-
...DICTYUSPHERIUM	--	-	--	-	360	3
...GLONODACTINIUM	--	-	--	-	1500	12
...KIRCHNERIELLA	--	-	--	-	--	-
...ODOCYSTIS	--	-	--	-	77	1
...SELENASTRUM	--	-	--	-	910	8
...WESTELLA	--	-	--	-	180	2
...SCENEDESMACEAE					3700	3
....ACTINASTRUM	--	-	--	-	310	3
...CRUCIGENTIA	--	-	--	-	--	-
...SCENEDESMUS	1600	14	2100#	31	--	-
...TETRASTRUM	--	-	420	6	550	5
..TETRASPORALES					9800	7
...TETRASPORACEAE					2400	2
....TETRASPORA	--	-	--	-	--	-
...VOLVOCALES					--	-
...CHLAMYDOMONADACEAE	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	100	2	270	2
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	91	1	930	14	3600#	30
...MELOSIRA	--	-	1100#	17	56000#	40
...STEPHANODISCUS	360	3	--	-	1200	1
..PENNALES					--	-
...ACHNANTHACEAE						
...COCCONEIS	--	-	--	-	--	-
...FRAGILARIACEAE					--	-
....FRAGILARIA	--	-	--	-	--	-
...SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE					--	-
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE					--	-
....DIPLONEIS	--	-	--	-	--	-
...NAVICULA	--	-	100	2	--	-
...PINNULARIA	--	-	--	-	--	-
...NITZSCHIA	360	3	210	3	640	5
...NITZSCHIA					8000	6
...SURIARELLACEAE	--	-	--	-	--	-
....SURIARELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	230	2
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	6300#	53	1500#	22	390	3
...COCCOCHLORIS	--	-	--	-	--	-
...HORMOGONALES					--	-
...OSCILLATORIACEAE					--	-
....OSCILLATORIA	3200#	27	--	-	--	-

ARKANSAS RIVER BASIN

427

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

EUGLENOPHYTA (EUGLENOIDS)

.EUGLENOPHYCEAE

..EUGENALES

...EUGENACEAE

....EUGLENA

....PHACUS

....TRACHELUMONAS

--	-	--	-	--	-	--	-	--	-
--	-	--	-	--	-	--	-	--	-
--	-	100	2	--	-	91	1	--	-

ARKANSAS RIVER BASIN

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1560	1400	2240	2420	1510	1620	1810	---	1340	1400	738
2	---	1610	1720	2260	1930	1470	1740	1650	1670	1490	1330	565
3	---	1710	1920	3120	2210	1360	2470	1990	1800	1470	1400	506
4	1590	1750	1960	3130	1790	1890	1630	450	1890	1520	1200	758
5	1600	1810	1960	---	1730	1040	1430	562	1360	1600	1290	1130
6	1560	1520	2110	---	1550	1150	1380	600	1330	1500	1390	1400
7	1560	1320	2080	---	1510	1350	1580	818	1190	346	1430	1560
8	1470	675	2610	2250	1530	1670	1700	983	1060	556	1350	1680
9	818	1240	1920	---	1700	1600	1940	1050	850	805	1440	1460
10	735	1500	1780	---	2050	1730	1240	1690	492	1290	1440	1460
11	1180	1640	2010	---	1850	1390	1550	1410	549	1320	1420	1190
12	1280	1580	2080	---	1840	1300	594	1370	674	1290	1520	1310
13	1460	1620	2080	---	929	1240	1090	1640	977	1390	1510	1320
14	1540	1570	2550	---	1050	1280	1160	1880	1020	1600	1770	1430
15	1620	1620	2300	---	1320	1410	1350	1800	1200	1600	1550	1440
16	1580	720	2240	---	1360	1420	1400	2010	1440	1650	1950	1420
17	1790	---	2480	---	1230	1320	1020	1990	1240	1430	2210	1480
18	1470	530	2360	566	1350	1320	1180	2330	1350	864	2350	1650
19	1540	917	2230	552	1560	1630	1220	2330	1310	1280	1750	1680
20	1550	1550	1880	491	1570	872	1210	1180	1290	919	1990	1190
21	1540	1410	2080	945	1650	989	988	656	1300	1110	1380	1390
22	1620	1410	2350	1310	1630	1280	758	530	803	1230	1640	1660
23	1620	1390	2570	1560	1680	520	1140	781	531	1180	904	1700
24	1580	1950	2600	1780	1660	557	1300	670	830	2000	1280	1710
25	1610	1490	2550	1590	1750	927	1470	829	404	1390	1820	1830
26	1520	1300	2540	1800	1430	1100	1610	1430	374	1580	1780	1540
27	1570	607	2700	2020	1590	1250	1680	1110	507	1520	1960	1760
28	1600	898	2680	1340	1920	1600	1530	1320	676	1470	1620	1740
29	1540	1360	2860	1480	---	1310	1540	1540	904	1380	1630	1780
30	1570	1420	2230	1550	---	1550	1810	1770	1160	1120	1680	1760
31	1570	---	2210	1680	---	1660	---	---	---	1220	1660	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

429

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'53", long 96°12'25", in center of SW¼ sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, near left bank on downstream side of pier of bridge on U.S. Highway 75, 2.3 mi (3.7 km) upstream from Wewoka Creek, 2.5 mi (4.0 km) northeast of Wetumka, and at mile 84.4 (135.8 km).

DRAINAGE AREA.--14,290 mi² (37,011 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 977: 1942. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.28 ft (208.264 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Records fair except January through March which is poor. Some regulation by Lake Overholser (station 07240500) and other dams upstream.

AVERAGE DISCHARGE.--42 years, 662 ft³/s (18.75 m³/s), 479,600 acre-ft/yr (591 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,000 ft³/s (1,870 m³/s) Apr. 15, 1945, gage height, 26.40 ft (8.047 m); no flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1923 reached a stage of 26.9 ft (8.20 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) June 9, gage height, 12.00 ft (3.658 m); minimum daily discharge, 69 ft³/s (1.95 m³/s) Nov. 4, 5, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	93	299	76	85	140	269	231	305	1130	427	3610
2	212	82	225	74	95	128	431	235	286	896	417	1060
3	174	73	191	72	104	182	316	842	301	721	480	900
4	211	69	161	70	104	176	206	3950	276	613	531	1090
5	175	69	141	70	89	176	170	2830	258	538	579	812
6	137	76	130	76	91	173	173	2440	263	2130	536	616
7	114	79	127	74	91	184	159	2340	533	2920	546	443
8	104	72	121	70	83	212	153	1530	845	2520	524	350
9	101	69	106	71	156	176	148	1060	7640	2820	487	301
10	106	76	106	72	130	148	153	771	11100	2520	480	273
11	122	90	105	72	118	128	5140	650	9540	1490	549	254
12	144	134	105	71	153	128	3590	491	5840	1040	523	245
13	413	121	101	73	143	116	1170	418	4010	795	509	236
14	291	116	109	72	145	116	878	388	2600	655	506	231
15	212	126	117	72	173	123	704	359	1610	603	468	237
16	168	138	108	80	176	128	500	320	1210	530	397	238
17	139	143	100	91	164	148	328	294	925	475	324	232
18	121	139	97	149	118	182	301	272	731	745	294	222
19	110	160	95	418	120	446	328	258	661	513	274	211
20	102	263	95	549	140	899	328	305	655	839	470	210
21	96	283	92	376	164	603	312	618	635	915	530	206
22	97	207	89	556	143	472	515	1350	627	824	461	199
23	104	177	91	392	140	977	685	1970	618	709	612	217
24	105	173	105	240	132	894	606	1980	2210	517	513	214
25	96	183	108	191	123	648	520	1290	2540	509	384	190
26	89	219	97	187	118	754	379	972	2700	502	337	185
27	84	197	85	166	153	418	330	726	3030	409	339	179
28	80	143	81	125	162	305	294	538	2980	442	354	173
29	78	149	79	104	---	251	250	458	2730	398	314	170
30	80	248	79	100	---	228	233	405	1560	384	257	170
31	83	---	78	90	---	234	---	355	---	384	1660	---
TOTAL	4420	4167	3623	4899	3613	9893	19569	30646	69219	30486	15082	13674
MEAN	143	139	117	158	129	319	652	989	2307	983	487	456
MAX	413	283	299	556	176	977	5140	3950	11100	2920	1660	3610
MIN	78	69	78	70	83	116	148	231	258	384	257	170
AC-FT	8770	8270	7190	9720	7170	19620	38820	60790	137300	60470	29920	27120
CAL YR 1978 TOTAL	125293			MEAN 343	MAX 5820	MIN 26	AC-FT 248500					
WTR YR 1979 TOTAL	209291			MEAN 573	MAX 11100	MIN 69	AC-FT 415100					

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1953 to current year.

WATER TEMPERATURE: October 1953 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected 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, 37,100 micromhos Dec. 31, 1954; minimum daily, 98 micromhos Apr. 30, 1977.

WATER TEMPERATURE: Maximum daily, 39.0°C July 5, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,850 micromhos Jan. 8; minimum daily, 237 Sept. 1.

WATER TEMPERATURE: Maximum daily, 31.0°C Sept 9; minimum daily, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM=MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)
UCT											
04...	1330	215	1620	8.7	22.5	30	12.7	151	190	460	350
05...	0730	184	1840	7.8	17.0	--	--	--	--	--	390
15...	0730	221	628	7.9	16.0	--	--	--	--	--	150
25...	0730	100	1530	7.2	17.0	--	--	--	--	--	300
NOV											
05...	0730	69	1550	7.5	15.5	--	--	--	--	--	320
15...	0730	120	1350	8.1	9.0	--	--	--	--	--	250
16...	0830	132	850	8.0	8.0	7.9	12.1	105	K740	K740	190
25...	0730	179	776	7.8	10.0	--	--	--	--	--	180
DEC											
05...	0730	145	1190	8.1	5.5	--	--	--	--	--	260
15...	0730	118	2010	8.1	2.0	--	--	--	--	--	380
15...	1415	118	2000	8.0	6.0	12	12.6	105	73	K6	380
25...	0730	109	2300	8.1	3.5	--	--	--	--	--	370
JAN											
05...	0730	64	2450	7.2	.0	--	--	--	--	--	460
09...	1545	71	2750	8.1	1.0	5.1	12.9	93	--	--	540
15...	0730	72	2640	7.4	.0	--	--	--	--	--	--
25...	0730	193	678	6.7	.5	--	--	--	--	--	--
FEB											
07...	0730	91	1640	7.6	.5	--	--	--	--	--	320
15...	0730	173	1410	7.3	10.0	--	--	--	--	--	300
25...	0730	123	1390	7.8	3.0	--	--	--	--	--	310
27...	1715	153	1900	8.4	10.0	17	11.0	101	50	84	380
MAR											
05...	0730	176	1460	8.6	6.0	--	--	--	--	--	290
15...	0730	123	1400	8.7	10.5	--	--	--	--	--	300
15...	1615	123	1450	9.2	12.5	7.2	15.2	145	K21	43	330
25...	0730	648	681	7.9	10.0	--	--	--	--	--	160
APR											
02...	1600	431	650	7.4	15.0	900	10.0	101	4600	5700	140
05...	0730	170	980	8.2	10.5	--	--	--	--	--	230
15...	0730	704	1350	8.1	16.0	--	--	--	--	--	290
25...	0730	563	1110	8.1	21.0	--	--	--	--	--	270
MAY											
02...	1630	241	1350	9.4	19.0	21	13.0	144	--	K22000	260
05...	0730	2950	321	7.4	14.0	--	--	--	--	--	110
15...	0730	380	1190	7.8	21.0	--	--	--	--	--	290
25...	0730	1350	504	7.4	19.0	--	--	--	--	--	150
JUN											
05...	0730	258	1350	7.5	25.0	--	--	--	--	--	330
05...	1435	258	1300	8.8	24.5	18	12.1	148	260	--	280
15...	0730	1690	571	7.6	24.5	--	--	--	--	--	170
25...	0730	2210	972	7.3	25.5	--	--	--	--	--	230
JUL											
02...	1430	842	780	7.7	29.0	300	8.2	109	>1200	220	220
05...	0730	538	1100	7.6	28.0	--	--	--	--	--	290
15...	0730	613	1040	7.7	30.0	--	--	--	--	--	270

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPF- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCT FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACU3)	
JUL 25...	0730	472	1060	7.7	28.5	--	--	--	--	--	270	
AUG 05...	0730	588	1340	7.6	28.5	--	--	--	--	--	340	
15...	0730	486	1480	7.6	28.0	--	--	--	--	--	380	
25...	0730	388	1240	7.5	26.5	--	--	--	--	--	250	
28...	1610	339	1170	7.5	31.0	150	7.1	97	230	260	250	
SEP 05...	0730	866	839	7.4	28.0	--	--	--	--	--	190	
11...	1445	251	1000	7.7	26.0	21	9.1	115	K27	K12	260	
15...	0730	238	1240	7.2	19.5	--	--	--	--	--	230	
25...	0730	190	1370	7.2	20.5	--	--	--	--	--	250	
DATE		HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 04...	340	84	34	170	50	4.0	--	13	--	--	--	--
05...	210	94	37	230	55	5.1	--	17	--	210	0	170
15...	42	38	13	64	47	2.3	--	8.2	--	130	0	110
25...	120	74	29	210	59	5.2	--	14	--	230	0	190
NOV 05...	120	77	30	190	55	4.7	--	15	--	--	--	200
15...	110	62	22	170	59	4.7	--	13	--	--	--	140
16...	72	49	17	97	51	3.0	--	6.0	--	--	--	120
25...	79	52	12	87	50	2.8	--	7.7	--	--	--	100
DEC 05...	110	69	22	140	52	3.8	--	11	--	--	--	150
15...	180	97	33	260	59	5.8	--	13	--	--	--	200
15...	230	98	33	250	58	5.6	--	16	--	--	--	--
25...	180	89	35	320	64	7.3	--	15	--	--	--	190
JAN 05...	210	120	40	320	59	6.5	--	15	--	--	--	250
09...	310	150	41	350	58	6.5	--	11	--	--	--	230
15...	--	--	39	350	--	--	--	15	--	--	--	200
25...	--	--	10	72	--	--	--	7.1	--	--	--	92
FEB 07...	170	82	27	220	59	5.4	230	11	--	--	--	150
15...	140	77	26	180	56	4.5	190	10	--	--	--	160
25...	130	80	26	170	54	4.2	180	11	--	--	--	180
27...	210	100	31	230	56	5.2	240	12	--	--	--	170
MAR 05...	110	73	26	180	57	4.6	190	9.5	--	--	--	180
15...	86	74	27	170	55	4.3	180	9.8	--	--	--	210
15...	130	86	28	170	52	4.1	180	12	--	--	--	200
25...	61	44	12	74	58	2.6	79	5.2	--	--	--	98
APR 02...	41	38	11	63	48	2.3	68	5.3	--	--	--	99
05...	91	63	18	110	50	3.1	120	7.2	--	--	--	140
15...	150	85	20	150	52	3.8	160	9.2	--	--	--	140
25...	120	73	21	120	48	3.2	130	8.2	--	--	--	150
MAY 02...	120	63	26	160	56	4.3	170	7.8	--	--	--	140
05...	19	32	6.4	25	33	1.1	29	3.5	--	--	--	87
15...	120	79	22	140	59	3.6	150	8.9	--	--	--	170
25...	39	45	8.9	45	45	1.6	50	5.0	--	--	--	110
JUN 05...	110	89	25	150	58	3.4	160	7.8	--	--	--	220
05...	120	69	26	160	55	4.2	170	8.9	--	--	--	160
15...	58	49	11	48	37	1.6	54	5.6	--	--	--	110
25...	97	63	17	100	48	2.9	110	6.3	--	--	--	130
JUL 02...	67	62	15	65	38	1.9	74	9.1	--	--	--	150
05...	71	82	21	100	50	2.6	110	9.6	--	--	--	--
15...	73	78	19	97	43	2.6	110	8.8	--	--	--	200
25...	99	73	21	110	46	2.9	120	8.4	--	--	--	170
AUG 05...	170	91	28	150	48	3.5	160	9.2	--	--	--	170
15...	200	96	33	180	50	4.0	190	9.7	--	--	--	180
25...	79	65	21	140	54	3.9	150	7.7	--	--	--	170
28...	100	67	20	130	52	3.6	140	7.1	--	--	--	150
SEP 05...	58	52	14	93	59	3.0	100	6.7	--	--	--	130
11...	71	73	19	100	45	2.7	110	8.2	--	--	--	190
15...	83	57	22	150	68	4.3	160	9.0	--	--	--	150
25...	110	51	30	180	74	4.9	190	10	--	--	--	140

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
04...	--	280	270	1.1	1.8	995	--	1.35	578	.00
05...	5.3	250	320	--	--	1110	--	1.51	551	--
15...	2.6	62	86	--	--	369	--	.50	220	--
25...	23	160	280	--	--	890	--	1.21	240	--
NOV										
05...	--	140	280	--	--	890	--	1.21	166	--
15...	--	100	270	--	--	759	--	1.03	246	--
16...	--	77	150	.5	5.1	495	474	.67	176	3.4
25...	--	56	140	--	--	440	--	.60	213	--
DEC										
05...	--	110	210	--	--	699	--	.95	274	--
15...	--	130	420	--	--	1220	--	1.66	389	--
15...	--	160	410	1.0	14	1180	1070	1.60	376	3.8
25...	--	150	500	--	--	1380	--	1.88	406	--
JAN										
05...	--	180	530	--	--	1430	--	1.94	247	--
09...	--	190	640	.9	13	1650	1530	2.24	316	5.2
15...	--	180	570	--	--	1520	--	--	295	--
25...	--	50	100	--	--	391	--	--	204	--
FEB										
07...	--	130	340	--	--	934	--	1.27	229	--
15...	--	--	270	--	--	801	--	1.09	374	--
25...	--	120	250	--	--	805	--	1.09	267	--
27...	--	160	360	.8	11	1070	1010	1.46	442	3.1
MAR										
05...	--	140	270	--	--	853	--	1.16	405	--
15...	--	120	240	--	--	815	--	1.11	271	--
15...	--	120	300	.7	12	809	849	1.10	269	2.0
25...	--	47	110	--	--	406	--	.55	710	--
APR										
02...	--	53	98	.4	4.8	334	333	.45	389	1.7
05...	--	87	160	--	--	556	--	.76	255	--
15...	--	130	270	--	--	821	--	1.12	1560	--
25...	--	140	170	--	--	656	--	.89	997	--
MAY										
02...	--	110	240	.6	.3	715	692	.97	465	.08
05...	--	21	35	--	--	184	--	.25	1470	--
15...	--	95	220	--	--	700	--	.95	718	--
25...	--	29	70	--	--	297	--	.40	1080	--
JUN										
05...	--	97	250	--	--	853	--	1.16	594	--
05...	--	96	260	.6	7.3	743	724	1.01	518	.15
15...	--	62	73	--	--	382	--	.52	1740	--
25...	--	95	170	--	--	627	--	.85	3740	--
JUL										
02...	--	64	100	.4	9.6	430	415	.58	978	1.0
05...	--	84	180	--	--	653	--	.89	949	--
15...	--	71	160	--	--	603	--	.82	998	--
25...	--	130	160	--	--	616	--	.84	785	--
AUG										
05...	--	200	210	--	--	799	--	1.09	1270	--
15...	--	220	240	--	--	891	--	1.21	1170	--
25...	--	88	230	--	--	735	--	1.00	770	--
28...	--	82	210	.5	.4	650	607	.88	595	.03
SEP										
05...	--	51	150	--	--	483	--	.66	1130	--
11...	--	72	160	.5	4.6	564	552	.77	382	.03
15...	--	86	250	--	--	690	--	.94	443	--
25...	--	110	270	--	--	772	--	1.05	396	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PU4)
OCT										
04...	.06	--	3.2	3.3	2.4	.89	3.3	15	1.40	--
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	.01	--	.89	.90	.22	.68	4.3	19	3.50	--
25...	--	--	--	--	--	--	--	--	--	--
DEC										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	4.0	--	2.1	6.1	.20	5.9	9.9	44	4.10	--
25...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
09...	5.5	--	1.5	7.0	1.5	5.5	12	54	5.40	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	6.3	--	1.6	7.9	.80	7.1	11	49	3.10	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	1.2	--	2.0	3.2	1.7	1.5	5.2	23	.970	--
25...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.10	--	4.8	4.9	4.3	.64	6.6	29	1.50	--
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	.07	.08	3.4	3.5	2.7	.81	3.6	16	.710	2.2
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	--	--	--	--	--	--	--	--	--	--
05...	.02	.02	2.7	2.7	1.6	1.1	2.9	13	.820	2.5
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	.06	.07	1.3	1.4	1.0	.40	2.4	11	.440	1.4
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
AUG										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
28...	.23	.28	2.1	2.3	1.8	.47	10	10	.960	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
11...	.02	.02	1.8	1.8	1.0	.79	1.8	8.1	.860	--

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

435

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

[illegible]

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	--	--	--	--	--	--	--	103	60	81
NOV 16...	0	0	0	0	20	10	10	67	24	90
DEC 15...	--	--	--	--	--	--	--	110	35	92
JAN 09...	--	--	--	--	--	--	--	33	6.3	61
FEB 27...	1	0	0	0	40	20	20	173	71	88
APR 02...	--	--	--	--	--	--	--	1360	1580	98
MAY 02...	0	0	0	0	30	10	20	372	242	63
JUN 05...	--	--	--	--	--	--	--	84	59	95
JUL 02...	--	--	--	--	--	--	--	428	973	99
AUG 28...	0	0	0	0	30	10	20	429	393	92
SEP 11...	--	--	--	--	--	--	--	81	55	85

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16, 78 0830	MAR 15, 79 1615	MAY 2, 79 1630	JUN 5, 79 1435
TOTAL CELLS/ML	18000	97000	440000	2400000
DIVERSITY: DIVISION	1.5	1.7	0.8	0.5
..CLASS	1.5	1.7	0.8	0.5
..ORDER	2.1	2.1	1.2	0.8
...FAMILY	2.8	2.6	2.3	2.3
....GENUS	3.3	2.9	2.6	3.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHRUEDERIA	*	0	--	-	--	-	--	-
...CHLOROCOCCACEAE								
....CHLOROCOCCUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	47000	11	67000	3
...HYDRODICTYACEAE								
....PEDIASTRUM	1100	6	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	*	0	1200	1	*	0	*	0
....MICRACTINIUM	280	2	14000	15	210000#	47	470000#	20
...ODCYSTACEAE								
....ANKISTRODESMUS	670	4	--	-	8500	2	30000	1
...CHLORELLA	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	*	0	*	0	--	-
...CLOSTERIOPSIS	*	0	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	670000#	28
...FRANCEIA	--	-	820	1	--	-	--	-
...KIRCHNERIELLA	--	-	*	0	--	-	--	-
...ODCYSTIS	220	1	1600	2	8500	2	12000	1
...SELENASTRUM	--	-	--	-	--	-	73000	3
...TETRAEDRON	--	-	--	-	--	-	*	0
...WESTELLA	--	-	--	-	--	-	24000	1
...SCENEDESMACEAE								
....ACTINASTRUM	220	1	--	-	9700	2	390000#	16
....CRUCIGENIA	1100	6	--	-	--	-	--	-
...SCENEDESMUS	3800#	21	6500	7	34000	8	350000	15
...TETRASTRUM	900	5	3300	3	9700	2	--	-
...TETRASPORALES								
...PALMELLACEAE								
...SPHAEROCYSTIS	--	-	--	-	--	-	49000	2
...TETRASPORACEAE								
....TETRASPORA	220	1	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	340	2	15000#	16	6000	1	33000	1
...CHLOROGONIUM	--	-	820	1	--	-	--	-
...PHACOTACEAE								
....PTEROMONAS	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCEAE								
....CYCLOTELLA	2200	13	--	-	30000	7	46000	2
...STEPHANODISCUS	--	-	--	-	9700	2	--	-
...PENNALES								
...FRAGILARIACEAE								
....SYNEDRA	--	-	820	1	--	-	--	-
...NAVICULACEAE								
....NAVICULA	*	0	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	670	4	820	1	67000#	15	33000	1
...SURIPELLACEAE								
....SURIPELLA	--	-	--	-	--	-	--	-
CHRYSTOPHYCEAE								
...CHRYSDOMONADALES								
...OCHROMONADACEAE								
....UCHROMONAS	--	-	*	0	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
...CHROMONAS	110	1	*	0	--	-	*	0
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	*	0

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 0830		MAR 15,79 1615		MAY 2,79 1630		JUN 5,79 1435	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	4300#	24	27000#	28	2400	1	97000	4
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	1400	8	--	-	--	-	--	-
...OSCILLATORIA								
....OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	1200	1	--	-	--	-
....TRACHELOMONAS	--	-	20000#	21	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	*	0	--	-	--	-

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 2,79 1430	AUG 28,79 1610	SEP 11,79 1445
TOTAL CELLS/ML	7900	170000	260000
DIVERSITY: DIVISION	0.7	1.1	1.5
...CLASS	0.7	1.1	1.5
...ORDER	0.7	1.4	1.9
...FAMILY	1.0	2.7	2.7
...GENUS	1.0	3.2	3.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	--	-	--	-
...CHLOROCOCCACEAE						
...CHLOROCOCCUM	--	-	5100	3	--	-
...COELASTRACEAE						
...COELASTRUM	--	-	27000#	16	7500	3
...HYDRODICTYACEAE						
...PEDIASTRUM	--	-	--	-	--	-
...MICRACTINIACEAE						
...GOLENKINTIA	--	-	--	-	--	-
...MICRACTINIUM	--	-	*	0	15000	6
...OOCYSTACEAE						
...ANKISTRODESMUS	--	-	*	0	11000	4
...CHLORELLA	--	-	*	0	--	-
...CHODATELLA	--	-	--	-	--	-
...CLOSTERIOPSIS	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	41000#	16
...FRANCEIA	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	4200	2	5600	2
...OOCYSTIS	830	11	36000#	21	8400	3
...SELENASTRUM	--	-	--	-	*	0
...TETRAEDRON	--	-	--	-	--	-
...WESTELLA	--	-	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	--	-	15000	9	7500	3
...CRUCIGENIA	--	-	3400	2	2800	1
...SCENEDESMUS	830	11	12000	7	13000	5
...TETRASTRUM	--	-	3400	2	3700	1
...TETRASPORALES						
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	--	-	--	-
...TETRASPORACEAE						
...TETRASPORA	--	-	--	-	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	--	-	--	-	1900	1
...CHLOROGONIUM	--	-	--	-	*	0
...PHACOTACEAE						
...PTEROMONAS	--	-	--	-	*	0
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	--	-	32000#	19	36000	14
...STEPHANODISCUS	--	-	--	-	--	-
...PENNALES						
...FRAGILARIACEAE						
...SYNEDRA	--	-	--	-	--	-
...NAVICULACEAE						
...NAVICULA	--	-	1700	1	--	-
...NITZSCHACEAE						
...NITZSCHIA	--	-	21000	12	51000#	20
...SURIPELLACEAE						
...SURIPELLA	--	-	*	0	--	-
..CHRYSOPHYCEAE						
...CHRYSDOMONADALES						
...OCHROMONADACEAE						
...OCHROMONAS	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	--	-

ARKANSAS RIVER BASIN

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 2,79 1430	AUG 28,79 1610	SEP 11,79 1445			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	6800	4	51000#	20
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...OSCILLATORIACEAE						
...OSCILLATORIA	6200#	79	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	--	-	--	-	--	-

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	1560	1590	2150	---	1930	1080	1280	1200	549	1500	237
2	1540	1600	1120	2230	1450	1550	1050	1310	1020	720	1470	372
3	1620	1600	764	---	---	1400	723	1200	1150	836	1430	588
4	1640	1570	803	2430	---	1210	756	468	1270	988	1160	469
5	1840	1550	1190	2450	---	1460	980	321	1350	1100	1340	839
6	1750	1520	1270	2550	---	1800	1170	419	1210	1090	1600	457
7	1650	1450	1360	2730	1640	2230	1510	515	884	248	1390	582
8	1620	1450	1380	2850	1520	1610	1610	579	1060	459	1450	787
9	1610	1500	1490	2450	---	1730	1590	456	425	583	1290	676
10	1620	1540	1450	2430	1530	1630	1600	611	264	414	1320	891
11	1590	1510	1540	2360	1880	1390	605	697	265	485	1350	941
12	1570	1630	1750	2520	1830	1330	329	971	395	518	1430	1080
13	1520	1700	1860	2450	1760	1270	451	974	476	696	1390	1190
14	780	1510	1880	---	1440	1300	452	1020	513	860	1500	1280
15	628	1350	2010	2640	1410	1400	1350	1190	571	1040	1480	1240
16	786	920	2100	2540	1690	1510	863	1240	736	1180	1460	1150
17	1110	881	2010	2220	1330	1540	715	1250	902	1260	1540	1160
18	1260	1180	1880	1990	1430	1230	827	1270	959	1320	1430	1150
19	1320	1200	1840	1290	1400	544	941	1400	986	948	1440	1180
20	1380	1220	1830	876	1530	789	946	1450	1150	1380	1500	1190
21	1360	1320	1940	644	1250	684	1200	919	1280	1360	464	1170
22	1370	775	2040	1040	1260	677	991	1010	1250	972	1260	1230
23	1430	653	2230	1230	1570	574	871	594	1230	1150	1190	1250
24	1500	627	2250	771	1480	649	712	641	770	1080	890	1270
25	1530	776	2300	678	1390	681	1110	504	972	1060	1240	1370
26	1580	1230	2310	635	1420	954	762	536	492	1200	1230	1180
27	1450	944	2340	962	1680	807	833	680	624	1270	1270	1180
28	1510	1270	2100	1130	1940	696	988	662	421	1240	1170	1290
29	1460	1240	1960	1230	---	776	1160	678	419	1560	892	1320
30	1470	1260	1880	1210	---	989	1230	812	465	1370	1260	1350
31	1500	---	2050	1290	---	1050	---	1020	---	1460	1570	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK

LOCATION.--Lat 35°38'58", long 97°21'12", on east line of NE¼ sec.36, T.14 N., R.2 W., Oklahoma County, Hydrologic Unit 11100303, on left bank at upstream side of county road bridge, 1.9 mi (3.1 km) southwest of Arcadia, 2.0 mi (3.2 km) upstream from Coffee Creek, and at mile 213.1 (342.9 km).

DRAINAGE AREA.--105 mi² (272 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR OK-77-1; 1975 (gage height only).

GAGE.--Water-stage recorder. Datum of gage is 941.65 ft (287.015 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974 at site 0.3 mi (0.5 km) downstream at same datum. May 2, 1978 to May 14, 1979 the gage was temporarily moved 1.3 mi (2.1 km) downstream to county road bridge, at a 5.00 ft (1.524 m) lower datum.

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

AVERAGE DISCHARGE.--10 years, 64.3 ft³/s (1.821 m³/s), 46,590 acre-ft/yr (57.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) Nov. 2, 1974, gage height, 26.9 ft (8.20 m) from floodmark; minimum daily, 9.8 ft³/s (0.28 m³/s) Aug. 9, 1978.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 19	0100	2,040 57.8	10.51 3.203	June 22	0800	2,430 68.8	11.71 3.569
May 3	2000	*5,560 157	*18.83 5.739	June 24	1600	2,930 83.0	12.85 3.917
May 20	2400	2,110 59.8	10.94 3.335	June 25	1600	3,070 86.9	13.16 4.011
June 9	0700	4,500 127	15.94 4.859	July 6	0400	3,250 92.0	13.54 4.127

Minimum daily discharge, 21 ft³/s (0.59 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	22	29	23	26	29	42	40	34	108	47	216
2	23	21	28	24	29	32	40	79	35	90	40	126
3	24	21	27	25	32	118	40	2450	35	70	42	54
4	23	22	28	25	35	47	50	720	34	65	39	47
5	23	25	27	26	33	40	38	111	34	94	35	39
6	23	113	26	29	35	35	31	78	100	1110	28	35
7	23	69	25	30	37	34	32	64	293	151	27	36
8	56	47	24	28	40	33	32	61	285	96	26	33
9	326	27	23	27	38	35	31	65	1280	76	26	31
10	30	46	25	26	41	37	41	58	296	66	29	31
11	28	35	28	30	56	37	372	59	97	66	56	29
12	24	29	25	28	41	35	67	55	96	68	35	30
13	22	29	23	27	38	37	49	56	89	69	34	29
14	25	86	24	26	38	35	39	56	63	64	30	28
15	24	65	23	30	59	37	44	58	55	56	27	28
16	21	157	25	67	48	37	37	58	53	60	28	28
17	21	49	26	105	42	36	35	76	56	334	26	28
18	23	29	26	75	40	43	44	112	53	140	26	28
19	29	28	31	306	39	39	81	67	57	73	24	28
20	39	39	28	49	39	44	55	177	57	49	55	28
21	25	29	26	56	78	40	132	551	191	47	139	29
22	32	26	25	34	43	300	50	122	749	44	102	28
23	29	29	26	28	40	70	45	77	170	51	33	26
24	70	29	25	30	35	45	45	53	922	62	32	28
25	32	47	24	32	30	40	44	43	947	46	34	27
26	25	124	25	31	27	38	41	41	191	43	34	26
27	22	44	28	30	26	37	41	41	110	39	34	27
28	23	32	27	28	35	39	49	38	105	41	36	29
29	22	29	26	29	---	37	45	49	84	37	36	30
30	21	28	25	30	---	36	41	38	87	39	35	30
31	21	---	24	28	---	50	---	35	---	41	57	---
TOTAL	1153	1376	802	1362	1100	1552	1733	5588	6658	3395	1252	1212
MEAN	37.2	45.9	25.9	43.9	39.3	50.1	57.8	180	222	110	40.4	40.4
MAX	326	157	31	306	78	300	372	2450	1280	1110	139	216
MIN	21	21	23	23	26	29	31	35	34	37	24	26
AC=FT	2290	2730	1590	2700	2180	3080	3440	11080	13210	6730	2480	2400
CAL YR 1978	TOTAL	23022.8	MEAN 63.1	MAX 2970	MIN 9.8	AC=FT	45670					
WTR YR 1979	TOTAL	27183.0	MEAN 74.5	MAX 2450	MIN 21	AC=FT	53920					

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURE: 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, 2,370 micromhos Oct. 15, 1977; minimum daily, 198 micromhos June 8, 1974.

WATER TEMPERATURE: Maximum daily, 32.0°C July 21, 1977, July 14, 1978; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,680 micromhos Sept. 26; minimum daily, 239 micromhos July 17.

WATER TEMPERATURE: Maximum daily, 28.0 July 15, Aug. 13; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT												
03...	0900	--	80020	24	1520	6.4	20.0	--	--	--	--	--
09...	1000	--	80020	326	377	7.5	16.0	--	--	--	--	--
30...	0830	--	80020	21	1180	6.6	12.0	--	--	--	--	--
31...	1340	--	80020	21	2000	7.7	20.0	--	8.5	94	--	81
31...	1341	1028	9740	21	2000	7.7	20.0	7.0	8.5	94	49	--
NOV												
12...	0800	--	80020	29	1640	6.6	10.0	--	--	--	--	--
15...	1030	--	80020	65	1500	7.4	9.0	--	10.0	88	--	--
15...	1031	1028	9740	65	1500	7.4	9.0	32	10.0	88	--	--
17...	0800	--	80020	49	481	7.2	8.0	--	--	--	--	--
22...	0830	--	80020	26	1280	6.8	10.0	--	--	--	--	--
DEC												
03...	0900	--	80020	27	1350	7.3	8.0	--	--	--	--	--
08...	0800	--	80020	31	1540	7.3	6.0	--	--	--	--	--
19...	0800	--	80020	24	1070	6.7	1.0	--	--	--	--	--
20...	0930	--	80020	28	1050	8.3	9.0	--	--	--	--	52
20...	0931	1028	9740	28	1050	8.3	9.0	--	--	--	50	--
JAN												
07...	0800	--	80020	30	944	6.9	.0	--	--	--	--	--
14...	0800	--	80020	26	1480	6.6	.0	--	--	--	--	--
19...	0900	--	80020	306	420	7.7	5.0	--	10.4	84	--	100
19...	0901	1028	9740	306	420	7.7	5.0	24	10.4	84	107	--
19...	0930	--	80020	306	423	6.9	5.0	--	--	--	--	--
FEB												
08...	0930	--	--	40	--	--	--	--	--	--	--	--
12...	0800	--	80020	41	800	6.9	3.0	--	--	--	--	--
15...	0800	--	80020	59	1090	6.8	6.0	--	--	--	--	--
22...	1255	--	80020	43	800	6.3	14.0	--	9.8	96	--	58
22...	1256	1028	9740	43	800	6.3	14.0	7.0	9.8	96	41	--
25...	0800	--	80020	30	967	7.9	3.0	--	--	--	--	--
MAR												
03...	0800	--	80020	50	547	7.9	12.0	--	--	--	--	--
22...	0700	--	80020	300	900	8.5	15.0	--	--	--	--	--
27...	0915	--	80020	37	1140	7.9	10.5	--	13.6	121	--	43
27...	0916	1028	9740	37	1140	7.9	10.5	12	13.6	121	37	--
31...	0700	--	80020	118	1420	7.9	7.0	--	--	--	--	--
APR												
02...	1200	--	80020	40	935	8.2	14.0	--	--	--	--	--
07...	0700	--	80020	32	1350	6.9	14.0	--	--	--	--	--
18...	0845	--	80020	44	1100	7.7	17.5	--	8.6	92	--	51
18...	0846	1028	9740	44	1100	7.7	17.5	13	8.6	92	42	--
27...	0700	--	80020	41	515	7.8	13.0	--	--	--	--	--
MAY												
04...	0800	--	80020	720	372	7.9	12.0	--	--	--	--	--
09...	0945	--	80020	65	1240	7.7	21.0	--	8.2	95	--	52
09...	0946	1028	9740	65	1240	7.7	21.0	12	8.2	95	36	--

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
MAY												
16...	0700	--	80020	58	1320	6.6	20.0	--	--	--	--	--
24...	0830	--	80020	53	807	6.9	18.0	--	--	--	--	--
JUN												
11...	0800	--	80020	97	816	7.9	20.0	--	--	--	--	--
12...	0905	--	80020	96	1100	8.5	21.0	--	8.0	91	--	34
12...	0906	1028	9740	96	1100	8.5	21.0	100	8.0	91	37	--
17...	0800	--	80020	56	1350	7.2	23.0	--	--	--	--	--
22...	0700	--	80020	749	348	7.4	21.0	--	--	--	--	--
JUL												
01...	0800	--	80020	108	1350	7.3	25.0	--	--	--	--	--
03...	0945	--	80020	70	1400	8.0	27.5	--	8.0	101	--	32
03...	0946	1028	9740	70	1400	8.0	27.5	13	8.0	101	30	--
17...	0700	--	80020	334	239	6.9	24.0	--	--	--	--	--
26...	0700	--	80020	43	1180	7.0	27.0	--	--	--	--	--
AUG												
07...	1230	--	80020	27	1500	8.3	30.5	--	8.2	112	--	43
07...	1231	1028	9740	27	1500	8.3	30.5	10	8.2	112	36	--
12...	0800	--	80020	35	1000	7.7	23.0	--	--	--	--	--
18...	0700	--	80020	26	1540	6.9	25.0	--	--	--	--	--
22...	0700	--	80020	102	279	7.1	20.0	--	--	--	--	--
SEP												
01...	0800	--	80020	216	342	7.7	24.0	--	--	--	--	--
10...	0700	--	80020	31	1230	7.3	21.0	--	--	--	--	--
11...	1315	--	80020	29	1300	8.0	25.0	--	9.8	121	--	66
11...	1316	1028	9740	29	1300	8.0	25.0	6.0	9.8	121	44	--
26...	0830	--	80020	26	1680	7.1	20.0	--	--	--	--	--

ARKANSAS RIVER BASIN

445

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)
OCT												
03...	240	150	--	55	--	--	26	--	200	63	5.6	--
09...	110	42	--	30	--	--	9.6	--	28	34	1.1	--
30...	210	110	--	46	--	--	23	--	140	57	4.2	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
12...	270	180	--	57	--	--	31	--	210	61	5.6	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	100	--	250	51	--	--	--	--	--	--
17...	130	48	--	33	--	--	12	--	45	41	1.7	--
22...	240	130	--	50	--	--	28	--	140	54	3.9	--
DEC												
03...	260	160	--	54	--	--	31	--	160	55	4.3	--
08...	290	170	--	61	--	--	33	--	200	59	5.1	--
19...	220	98	--	46	--	--	25	--	120	53	3.5	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
07...	--	--	--	--	--	--	22	--	110	--	--	--
14...	--	--	--	--	--	--	25	--	200	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	170	--	68	--	--	29	--	10	--	--	--	--
19...	75	0	--	12	--	--	11	--	34	48	1.7	--
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
12...	170	73	--	46	--	--	14	--	92	62	3.0	98
15...	250	140	--	63	--	--	22	--	120	50	3.3	130
22...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	200	83	--	45	--	--	22	--	100	50	3.1	110
MAR												
03...	--	--	--	--	--	--	14	--	49	--	--	54
22...	220	80	--	52	--	--	22	--	97	48	2.8	110
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	158	--	57	--	--	36	--	--	--	--	--	--
31...	--	--	--	--	--	--	31	--	160	7	--	170
APR												
02...	240	98	--	54	--	--	25	--	98	46	2.8	110
07...	280	120	--	64	--	--	30	--	160	54	4.1	170
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
27...	160	48	--	40	--	--	14	--	44	47	1.5	50
MAY												
04...	140	42	--	37	--	--	12	--	22	25	.8	26
09...	--	--	--	--	7	--	--	--	--	--	--	--
09...	7	--	79	--	--	40	--	--	--	--	--	--
16...	270	93	--	60	--	--	30	--	150	67	3.9	160
24...	220	63	--	53	--	--	22	--	55	34	1.6	65
JUN												
11...	270	83	--	63	--	--	28	--	76	37	2.0	82
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
17...	350	140	--	76	--	--	38	--	150	48	3.5	160
22...	120	17	--	33	--	--	8.4	--	12	18	.5	15
JUL												
01...	--	--	--	--	--	--	--	--	160	--	--	170
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	168	--	67	--	--	38	--	144	--	--	--	--
17...	90	18	--	23	--	--	8.0	--	17	37	.8	21
26...	320	130	--	69	--	--	35	--	--	--	--	96
AUG												
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
12...	230	89	--	52	--	--	24	--	110	50	3.2	120
18...	240	100	--	54	--	--	26	--	180	72	5.0	190
22...	100	7	--	28	--	--	7.6	--	19	28	.8	24
SEP												
01...	110	20	--	28	--	--	9.5	--	26	43	1.1	30
10...	250	87	--	56	--	--	26	--	150	56	4.2	160
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	120	--	52	--	--	26	--	--	--	--	--	--
26...	250	120	--	57	--	--	27	--	210	74	5.7	220

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT												
03...	--	11	120	0	98	76	150	290	--	863	1.17	55.9
09...	--	4.6	88	0	72	4.5	44	47	--	222	.30	195
30...	--	14	120	0	98	48	160	170	--	676	.92	38.3
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	1.3	--	--	--
NOV												
12...	--	18	--	--	--	--	200	290	--	952	1.29	74.5
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	.9	--	--	--
17...	--	6.1	--	--	84	--	58	58	--	271	.37	35.9
22...	--	15	--	--	110	--	180	190	--	757	1.03	53.1
DEC												
03...	--	17	--	--	99	--	180	--	--	818	1.11	59.6
08...	--	16	--	--	120	--	190	280	--	948	1.29	79.3
19...	--	12	--	--	120	--	150	150	--	645	.88	41.8
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	.9	--	--	--
JAN												
07...	--	11	--	--	110	--	140	120	--	561	--	45.4
14...	--	12	--	--	96	--	140	280	--	817	--	57.4
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	7.0	--	--	--	--	--	--	--	.4	--	--	--
19...	--	4.7	--	--	100	--	50	36	--	258	.35	213
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	6.1	--	--	100	--	--	140	--	455	.62	50.4
15...	--	9.5	--	--	110	--	98	--	--	614	.84	97.8
22...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	.7	--	--	--
25...	--	11	--	--	120	--	100	150	--	556	.76	45.0
MAR												
03...	--	4.8	--	--	170	--	50	54	--	356	.48	48.1
22...	--	10	--	--	140	--	95	130	--	538	.73	436
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	.7	--	--	--
31...	--	13	--	--	150	--	150	200	--	802	1.09	256
APR												
02...	--	8.0	--	--	140	--	150	130	--	550	.75	59.4
07...	--	12	--	--	160	--	180	230	--	785	1.07	67.8
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	.8	--	--	--
27...	--	5.5	--	--	110	--	--	--	--	299	--	--
MAY												
04...	--	4.1	--	--	100	--	33	--	--	237	.32	461
09...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	.6	--	--	--
16...	--	11	--	--	180	--	160	180	--	792	1.08	124
24...	--	10	--	--	160	--	97	70	--	458	.62	65.5
JUN												
11...	--	5.5	--	--	190	--	120	87	--	518	.70	136
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	.9	--	--	--
17...	--	8.2	--	--	210	--	170	200	--	812	1.10	123
22...	--	3.0	--	--	100	--	20	14	--	173	.24	350
JUL												
01...	--	7.3	--	--	250	--	180	190	--	834	1.13	243
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	8.6	--	--	--	--	--	--	--	.5	--	--	--
17...	--	4.2	--	--	72	--	22	17	--	152	.21	137
26...	--	9.2	--	--	190	--	170	170	--	707	--	82.1
AUG												
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	.6	--	--	--
12...	--	8.8	--	--	140	--	120	160	--	583	.79	55.1
18...	--	12	--	--	140	--	140	280	--	860	1.17	60.4
22...	--	5.0	--	--	94	--	25	27	--	195	.27	53.7
SEP												
01...	--	3.9	--	--	89	--	34	29	--	214	.29	125
10...	--	11	--	--	160	--	110	210	--	676	.92	56.6
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	.7	--	--	--
26...	--	14	--	--	130	--	120	320	--	952	1.29	66.8

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT												
03...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	1.2	5.4	.77	2.5	--	2.0	9.1	12	2.9	--	12
31...	12	--	--	--	--	--	--	--	--	--	14	--
NOV												
12...	--	--	--	--	--	--	--	--	--	--	--	--
15...	63	.75	3.3	.20	.66	--	.95	5.4	7.0	.90	--	6.3
15...	63	--	--	--	--	.50	--	--	--	--	9.4	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	1.6	6.9	.05	.16	--	1.6	11	14	.00	--	10
20...	22	--	--	--	--	--	--	--	--	--	14	--
JAN												
07...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	1.1	4.9	.10	.33	--	1.2	2.5	3.2	1.5	--	4.0
19...	1301	--	--	--	--	1.3	--	--	--	--	7.0	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	.53	2.3	.20	.66	--	.73	9.5	12	1.5	--	11
22...	24	--	--	--	--	.70	--	--	--	--	12	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	.73	3.2	.22	.72	--	.95	7.4	9.5	2.0	--	9.4
27...	35	--	--	--	--	1.1	--	--	--	--	10	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
02...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	.72	3.2	.58	1.9	--	1.3	6.4	8.2	2.0	--	8.4
18...	38	--	--	--	--	1.6	--	--	--	--	8.6	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
04...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	.46	2.0	.37	1.2	--	.83	6.8	8.8	1.2	--	8.0
09...	29	--	--	--	--	1.0	--	--	--	--	8.6	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	.64	2.8	.46	1.5	--	1.1	.10	.13	.00	--	.02
12...	285	--	--	--	--	3.1	--	--	--	--	6.4	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
01...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	.50	2.2	1.5	4.9	--	2.0	3.8	4.9	1.2	--	5.0
03...	33	--	--	--	--	2.1	--	--	--	--	6.1	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
07...	--	.50	2.2	1.1	3.6	--	1.6	--	--	--	--	9.6
07...	27	--	--	--	--	1.9	--	--	--	--	2.8	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
01...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	.94	4.2	.86	2.8	--	1.8	9.8	13	4.2	--	14
11...	9	--	--	--	--	1.1	--	--	--	--	15	--
26...	--	--	--	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	CHROMIUM, SUSPENDED RECOVER (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVER- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOVER- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVER- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVER- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVER- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOVER- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	0	0	4	0	4	410	380	30	0	0	0
31...	--	--	--	--	--	--	--	--	--	--	--
NOV											
12...	--	--	--	--	--	--	--	--	--	--	--
15...	20	0	4	0	4	710	670	40	25	22	3
15...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	10	10	9	6	3	490	420	70	29	24	5
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
19...	20	10	34	25	9	15000	15000	140	120	100	19
19...	--	--	40	--	--	--	--	--	133	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	0	40	8	0	32	570	500	70	21	14	7
22...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
27...	10	0	1	1	0	800	790	10	10	10	0
27...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
02...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
18...	10	0	5	4	1	640	610	30	15	15	0
18...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
09...	10	0	20	16	4	710	690	20	10	10	0
09...	--	--	--	--	--	1100	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
12...	0	10	6	5	1	1800	1800	20	12	0	15
12...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
03...	0	10	9	7	2	590	590	<0	8	8	0
03...	--	--	5	--	--	--	--	--	30	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	0	0	2	0	2	440	430	10	35	35	0
07...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	0	10	1	0	1	530	--	30	17	3	14
11...	--	--	--	--	--	670	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

07242350 DEEP FORK NEAR, ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECUV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	PHENOLS (UG/L)
OCT											
03...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	440	60	380	--	--	--	--	20	0	20	2
31...	--	--	--	--	--	--	--	--	--	--	--
NOV											
12...	--	--	--	--	--	--	--	--	--	--	--
15...	260	50	210	--	--	--	--	30	10	20	3
15...	270	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
DEC											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	380	0	390	--	--	--	--	40	30	10	15
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
07...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
19...	760	600	160	--	--	--	--	130	100	30	5
19...	--	--	--	.5	50	1	3	145	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
22...	310	30	280	--	--	--	--	40	0	60	14
22...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
27...	240	40	200	--	--	--	--	30	20	8	4
27...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
02...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
18...	200	50	150	--	--	--	--	30	30	<3	14
18...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
09...	120	60	60	--	--	--	--	40	10	30	5
09...	150	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
12...	260	130	130	--	--	--	--	30	20	8	7
12...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
03...	70	40	30	--	--	--	--	30	20	6	6
03...	--	--	--	.8	26	7	2	14	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	230	50	180	--	--	--	--	10	0	10	4
07...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	480	110	370	--	--	--	--	0	0	4	1
11...	440	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDG- SULFAN, TOTAL (UG/L)
NOV											
15...	1030	.0	.00	.00	.0	.00	.00	.00	.28	.00	.00
FEB											
08...	0930	--	--	--	--	--	--	--	--	--	--
22...	1255	.0	--	.00	.0	.00	.00	.00	.60	.01	.00
MAR											
27...	0915	.0	--	.00	.0	.00	.00	.00	.54	.01	.00
APR											
18...	0845	.0	--	.00	.0	.00	.00	.00	.44	.01	.00
MAY											
09...	0945	.0	--	.00	.1	.00	.00	.00	.26	.01	.00
JUN											
12...	0905	.0	--	.03	.1	.00	.00	.00	--	.02	.00
JUL											
03...	0945	.0	--	.00	.1	.00	.00	.00	.39	.02	.00
AUG											
07...	1230	.0	--	.00	.0	.00	.00	.00	.26	.01	.00
SEP											
11...	1315	.0	--	.00	.2	.00	.00	.00	.50	.02	.00

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
NOV										
15...	.00	.00	.00	.00	.01	.06	--	.00	.00	.00
FEB										
08...	--	--	--	--	--	--	--	--	--	--
22...	.00	.00	.00	.00	.02	.03	--	.00	.00	.00
MAR										
27...	.00	.00	.00	.00	.01	.02	--	.00	.00	.00
APR										
18...	.00	.00	.00	.00	.01	.03	--	.00	.00	.00
MAY										
09...	.00	.00	.00	.00	.02	.01	--	.00	.00	.00
JUN										
12...	.00	--	.00	.01	.01	--	--	--	--	.00
JUL										
03...	.00	.00	.00	.01	.02	.10	--	.00	.00	.00
AUG										
07...	.00	.00	.00	.00	.01	.00	--	.00	.00	.00
SEP										
11...	.00	.00	.00	.00	.04	.03	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
15...	.00	.00	0	.00	.00	.00	.00	--	--	--
FEB										
08...	--	--	--	--	--	--	--	207	22	69
22...	.00	.00	0	.00	.05	.01	.02	--	--	--
MAR										
27...	.00	.00	0	.00	.51	.01	.20	--	--	--
APR										
18...	.01	.00	0	.00	.42	.01	.04	--	--	--
MAY										
09...	.00	.00	0	.00	.18	.02	.04	--	--	--
JUN										
12...	--	.00	0	--	--	--	--	--	--	--
JUL										
03...	.00	.00	0	.00	.28	.02	.04	--	--	--
AUG										
07...	.00	.00	0	.00	.00	.00	.00	--	--	--
SEP										
11...	.00	.00	0	.00	.00	.00	.00	--	--	--

ARKANSAS RIVER BASIN

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1320	1270	1120	875	994	1310	1150	1060	1350	782	342
2	1160	1240	1420	1110	924	997	935	1200	1080	1270	1240	689
3	1520	1250	1350	1100	915	547	1010	398	1070	1310	1330	563
4	1280	1330	1340	1140	994	761	1140	372	1040	1290	1310	900
5	1340	1420	1580	1110	883	893	1060	672	1060	1150	1310	1000
6	1370	575	1580	992	908	947	1180	1080	1010	310	1200	1100
7	1380	604	1470	944	909	1200	1350	1150	345	497	1460	1170
8	1260	1090	1640	997	907	1190	1350	1290	709	830	1340	1170
9	377	1280	1550	1070	1090	893	1300	1210	277	1050	1390	1410
10	648	1230	1570	973	1040	1220	1360	1240	379	1200	1360	1230
11	992	1480	1350	1170	1000	1140	352	1210	816	1200	1370	1170
12	1190	1640	1300	1090	800	1160	730	1230	816	1300	1000	1260
13	1400	1480	1500	1170	845	1260	1110	1230	1280	1310	1040	1430
14	1350	1410	1470	1480	954	1230	1170	1220	832	1270	1120	1460
15	1330	1030	1610	1200	1090	1210	1210	1260	1280	1290	1070	1540
16	1240	530	1410	1110	888	1230	1240	1320	1240	1210	1160	1400
17	1220	481	1390	936	855	1280	1270	1270	1350	239	1360	1380
18	1290	814	1150	650	910	1360	1240	831	1280	718	1540	1340
19	1350	1280	1080	423	919	872	852	644	1250	653	1470	1520
20	1380	1180	1140	696	936	1140	1090	956	1340	1060	707	1440
21	1270	1280	1170	906	912	874	515	328	363	1120	532	1450
22	1370	1280	1280	895	925	900	986	433	255	1250	279	1300
23	1300	1480	1250	934	916	600	1100	720	666	1190	1240	1340
24	1110	1350	1200	946	965	955	1240	807	814	1270	1380	1410
25	1290	1470	1140	862	967	1120	1260	1090	481	1140	1300	1440
26	1340	1420	1120	922	849	1160	1250	1120	561	1180	1390	1680
27	1290	745	1090	966	1040	1220	1270	1080	1030	1140	1350	1540
28	1350	1310	1190	934	962	1290	1200	1110	1140	1220	1340	1380
29	1220	1090	1200	878	---	1250	1100	1080	1280	1340	1440	1280
30	1180	1320	1160	854	---	1300	1120	1050	1300	1340	1420	1130
31	1330	---	1280	976	---	1420	---	1060	---	1220	1370	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	14.0	9.0	.0	.0	7.0	14.0	17.0	21.0	25.0	24.0	24.0
2	20.0	14.0	12.0	1.0	3.0	10.0	14.0	18.5	21.0	25.0	25.0	24.0
3	20.0	16.0	8.0	.0	.5	7.0	10.0	16.0	20.0	26.0	22.0	25.0
4	23.0	17.0	7.0	.0	3.0	4.0	8.0	12.0	23.0	27.0	27.0	25.0
5	22.0	17.0	7.0	.0	1.0	9.0	10.0	12.0	---	27.0	26.0	26.5
6	14.0	15.0	5.0	.0	3.0	7.0	12.0	16.0	24.0	24.0	26.0	25.0
7	13.0	10.0	3.0	.0	.0	11.0	14.0	18.0	21.0	25.0	27.0	23.0
8	16.0	11.0	1.0	3.0	4.0	9.0	14.0	22.0	20.0	25.0	27.0	23.0
9	16.0	15.0	.0	4.0	.0	4.0	14.0	21.0	21.0	27.0	26.0	22.0
10	17.0	17.0	1.0	4.0	1.0	9.0	15.0	22.0	20.0	26.0	26.0	21.0
11	19.0	15.0	3.0	3.0	3.0	1.0	14.0	14.0	20.0	27.0	24.0	22.0
12	21.0	10.0	4.0	2.0	3.0	9.0	13.0	12.0	21.0	27.0	23.0	23.0
13	17.0	17.0	.5	3.0	3.0	10.0	14.0	16.0	22.0	27.0	26.0	21.0
14	13.0	12.0	3.0	.0	6.0	8.0	15.0	17.0	22.0	27.0	26.0	19.0
15	12.0	9.0	4.0	1.0	6.0	10.0	13.0	28.0	23.0	28.0	26.0	18.0
16	14.0	8.0	5.0	1.0	.0	10.0	19.0	20.0	23.0	27.0	26.0	23.0
17	12.0	8.0	3.0	4.0	.0	10.0	21.0	21.0	23.0	24.0	25.0	18.0
18	14.0	8.0	12.0	3.0	1.0	5.0	18.0	20.0	23.0	24.0	25.0	18.0
19	17.0	10.0	6.0	5.0	3.0	14.0	18.0	20.0	24.0	23.0	25.0	20.0
20	15.0	9.0	11.0	5.0	1.0	11.0	14.0	24.0	24.0	23.0	22.0	21.0
21	16.0	9.0	5.0	3.0	4.0	9.0	13.0	21.0	21.0	25.0	23.0	20.0
22	18.0	10.0	5.0	3.0	10.0	15.0	12.0	19.0	21.0	25.0	20.0	18.0
23	15.0	10.0	6.0	3.0	9.0	11.0	18.0	18.0	24.0	25.0	24.0	18.0
24	13.0	10.0	3.0	.0	8.0	8.0	14.0	18.0	23.0	24.0	27.0	22.0
25	15.0	14.0	4.0	4.0	3.0	9.0	19.0	18.0	22.0	27.0	26.0	21.0
26	12.0	16.0	5.0	3.0	4.0	9.0	14.0	20.0	22.0	27.0	23.0	20.0
27	11.0	8.0	3.0	1.0	9.0	13.0	17.0	21.0	24.0	26.0	23.0	20.0
28	12.0	8.0	5.0	.0	10.0	15.0	13.0	23.0	25.0	26.0	24.0	22.0
29	12.0	7.0	8.0	1.0	---	18.0	13.0	23.0	25.0	27.0	25.0	20.0
30	12.0	10.0	3.0	3.0	---	17.0	15.0	22.0	26.0	27.0	26.0	20.0
31	11.0	---	.0	1.0	---	12.0	---	23.0	---	26.0	26.0	---

ARKANSAS RIVER BASIN

453

07243000 DRY CREEK NEAR KENDRICK, OK

LOCATION.--Lat 35°46'55", long 96°51'20", in NW¼NW¼ sec.14, T.15 N., R.4 W., Lincoln County, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi (1.6 km) downstream from Beaver Creek and 4.5 mi (7.2 km) west of Kendrick.

DRAINAGE AREA.--69.0 mi² (178.7 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (251.5 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--24 years, 20.8 ft³/s (0.589 m³/s), 15,070 acre-ft/yr (18.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Nov. 2, 1974, gage height, 19.20 ft (5.852 m); no flow at times in most years.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 3	1845	*4,300 122	*14.21 4.331	June 21	0145	2,030 57.5	10.08 3.072
June 9	0530	2,250 63.7	10.61 3.234				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.83	42	2.8	3.0	3.2	1.4	.55
2	.00	.00	.00	.00	.00	1.0	2.3	2.7	3.1	2.9	.84	17
3	.00	.00	.00	.00	.00	2.1	1.9	1740	3.2	2.7	.75	.84
4	.00	.00	.00	.00	.00	.90	1.9	396	3.1	2.6	.71	.55
5	.00	.00	.00	.00	.00	.71	1.6	60	3.0	2.5	.60	.48
6	.00	.00	.00	.00	.00	.73	1.4	20	6.4	106	.60	.50
7	.00	.00	.00	.00	.00	.75	1.4	15	21	5.9	.75	.65
8	.00	.00	.00	.00	.00	.75	1.4	12	5.9	3.8	.71	.42
9	.00	.00	.00	.00	.00	.74	1.3	10	644	3.2	.71	.33
10	.00	.00	.00	.00	.05	.67	2.5	9.0	47	2.9	.65	.28
11	.00	.00	.00	.00	.50	.74	27	8.0	7.7	2.7	.78	.27
12	.00	.00	.00	.00	1.1	.73	2.6	7.0	3.7	2.5	.67	.27
13	.00	.00	.00	.00	1.2	.61	1.9	6.0	2.9	2.4	.65	.29
14	.00	.00	.00	.00	6.8	.42	1.7	5.0	2.3	2.3	.62	.22
15	.00	.00	.00	.00	2.7	.39	1.6	4.4	2.0	2.2	.60	.14
16	.00	.00	.00	.00	1.1	.46	1.5	4.2	1.9	2.2	.60	.14
17	.00	.00	.00	.00	1.1	.69	1.5	4.0	1.8	4.5	.56	.17
18	.00	.00	.00	280	1.2	4.4	3.0	4.0	1.8	2.7	.51	.20
19	.00	.00	.00	34	1.2	1.5	2.5	3.9	1.7	2.3	.46	.22
20	.00	.00	.00	1.7	1.2	.96	2.0	3.8	286	2.0	.48	.27
21	.00	.00	.00	.89	1.1	.82	2.5	9.4	422	1.9	.60	.32
22	.00	.00	.00	.65	1.1	.68	2.2	19	78	1.9	1.6	.29
23	.00	.00	.00	.51	.84	4.3	2.1	5.5	106	1.9	.58	.22
24	.00	.00	.00	.35	.61	1.9	2.0	4.1	48	2.0	.46	.18
25	.00	.00	.00	.10	.54	1.5	1.9	3.7	20	1.8	.46	.11
26	.00	.00	.00	.00	.58	1.4	1.8	3.7	7.2	75	.43	.04
27	.00	.00	.00	.00	.68	1.3	1.7	4.4	4.6	2.4	.43	.00
28	.00	.00	.00	.00	.74	1.3	1.6	3.8	3.9	1.3	.47	.00
29	.00	.00	.00	.00	---	2.0	3.0	3.9	3.6	.93	.40	.00
30	.00	.00	.00	.00	---	1.5	2.9	3.4	3.3	.79	.30	.00
31	.00	---	.00	.00	---	1.1	---	3.2	---	1.1	.53	---
TOTAL	.00	.00	.00	318.20	24.34	105.20	124.7	2381.9	1748.1	252.52	19.91	24.95
MEAN	.000	.000	.000	10.3	.87	3.39	4.16	76.8	58.3	8.15	.64	.83
MAX	.00	.00	.00	280	6.8	.68	42	1740	644	106	1.6	.17
MIN	.00	.00	.00	.00	.00	.39	1.3	2.7	1.7	.79	.30	.00
AC=FT	.00	.00	.00	631	48	209	247	4720	3470	501	39	49
CAL YR 1978	TOTAL	2469.61	MEAN	6.77	MAX	441	MIN	.00	AC=FT	4900		
WTR YR 1979	TOTAL	4999.82	MEAN	13.7	MAX	1740	MIN	.00	AC=FT	9920		

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'15", long 96°04'08", on line between secs. 19 and 20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, near left bank on downstream side of pier of county road bridge, 3.0 mi (4.8 km) upstream from Adams Creek, 4.0 mi (6.4 km) south of Beggs, 8.0 mi (12.9 km) downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0 (136.8 km).

DRAINAGE AREA.--2,018 mi² (5,277 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WSP 957: 1941. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 632.55 ft (192.801 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1939, nonrecording gage at site 450 ft (137.2 m) downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum.

REMARKS.--Records good except for Janaury and February.

AVERAGE DISCHARGE.--41 years, 804 ft³/s (22.77 m³/s), 582,500 acre-ft/yr (718 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft³/s (1,890 m³/s) May 11, 1943, gage height, 34.55 ft (10.531 m); no flow at times in 1939, 1954, 1956.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
May 6	0215	5,840 165	19.85 6.050	June 23	1830	3,200 90.6	14.74 4.493
June 13	1530	8,570 243	21.85 6.660	July 9	0845	3,390 96.0	15.27 4.654

Minimum, 8.9 ft³/s (0.25 m³/s) Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	64	25	45	59	439	116	387	1870	124	618
2	24	15	65	22	40	57	704	465	319	1270	154	665
3	26	15	71	24	50	68	400	3120	267	782	139	463
4	23	14	69	22	60	76	257	4740	249	566	124	370
5	20	13	59	18	55	86	208	5370	216	444	102	334
6	17	13	53	14	50	78	177	5650	195	990	104	285
7	15	14	53	14	45	72	154	4950	193	2680	93	271
8	13	13	46	13	55	70	129	4500	534	3200	79	251
9	13	13	42	12	50	73	110	4290	2380	3350	72	216
10	11	13	41	11	50	68	96	4260	3980	2690	65	184
11	9.2	15	37	13	55	58	1540	4350	5740	1510	63	154
12	9.3	18	30	17	60	57	2840	4300	7370	1040	56	130
13	12	25	24	22	64	56	2540	3920	8440	792	51	112
14	66	35	19	21	75	55	1510	2130	8420	618	50	93
15	73	39	28	21	107	55	750	889	8140	498	46	80
16	55	42	36	25	80	50	532	617	7380	403	43	71
17	41	38	35	40	50	51	420	466	6210	326	43	61
18	30	54	34	131	150	62	360	373	4930	267	42	53
19	25	57	33	526	130	431	337	314	3970	434	42	48
20	23	57	33	704	120	1060	316	284	1930	653	52	44
21	21	60	33	407	122	843	270	1100	870	565	219	44
22	18	68	30	229	119	458	252	1580	634	458	89	43
23	16	70	30	182	101	883	245	1550	2070	398	90	43
24	16	64	31	246	97	860	217	1460	2640	356	79	40
25	15	57	31	260	75	520	217	1170	2320	310	78	39
26	15	58	29	135	65	368	202	925	2000	265	74	35
27	14	52	27	72	64	322	181	861	1950	216	72	35
28	13	83	27	65	67	284	161	842	2020	184	81	32
29	14	75	28	60	---	255	140	761	2240	200	124	29
30	13	77	27	55	---	252	127	612	2150	188	87	27
31	13	---	28	50	---	266	---	475	---	150	89	---
TOTAL	694.5	1182	1193	3456	2101	7953	15831	66440	90144	27673	2626	4870
MEAN	22.4	39.4	38.5	111	75.0	257	528	2143	3005	893	84.7	162
MAX	73	83	71	704	150	1060	2840	5650	8440	3350	219	665
MIN	9.2	13	19	11	40	50	96	116	193	150	42	27
AC-FT	1380	2340	2370	6850	4170	15770	31400	131800	178800	54890	5210	9660
CAL YR 1978	TOTAL	95622.2	MEAN 262	MAX 3020	MIN 4.4	AC-FT 189700						
WTR YR 1979	TOTAL	224163.5	MEAN 614	MAX 8440	MIN 9.2	AC-FT 444600						

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1951 to current year.

WATER TEMPERATURE: November 1951 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near 5th, 15th, and 25th of 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, 10,500 micromhos Jan. 12, 1955; minimum daily, 83 micromhos June 10, 1974.

WATER TEMPERATURE: Maximum daily, 38.5°C Aug. 8, 1970; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,540 micromhos Oct. 2; minimum daily, 127 micromhos July 7.

WATER TEMPERATURE: Maximum daily, 34.0°C Aug. 6; minimum daily, 3.0°C Dec. 31-Jan. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT											
04...	1030	23	1350	8.2	19.5	40	8.1	90	120	380	240
05...	1800	19	1160	8.4	23.0	--	--	--	--	--	220
15...	1730	72	1030	7.3	19.0	--	--	--	--	--	200
24...	1730	16	723	7.3	18.0	--	--	--	--	--	160
NOV											
05...	1630	13	753	8.3	19.0	--	--	--	--	--	180
15...	1230	39	1250	8.8	10.0	60	11.8	106	160	160	270
15...	1630	42	1290	7.5	11.0	--	--	--	--	--	260
24...	1630	62	1030	8.0	12.0	--	--	--	--	--	220
DEC											
05...	1600	55	1080	8.1	12.0	--	--	--	--	--	230
15...	1315	29	750	7.7	2.0	29	13.0	96	K12	26	190
15...	1600	31	648	8.2	7.0	--	--	--	--	--	200
25...	1600	32	1340	7.2	9.0	--	--	--	--	--	310
JAN											
05...	1600	17	1420	8.1	7.0	--	--	--	--	--	280
09...	1245	12	1470	8.4	5.0	6.5	15.0	105	--	--	320
15...	1600	21	1380	8.3	6.0	--	--	--	--	--	--
25...	1600	260	405	7.3	4.0	--	--	--	--	--	47
FEB											
05...	1600	55	858	7.1	4.0	--	--	--	--	--	240
15...	1600	107	933	7.6	6.0	--	--	--	--	--	210
25...	1600	70	946	7.4	7.0	--	--	--	--	--	230
27...	1245	68	740	7.5	6.0	75	11.2	92	K70	K21	180
MAR											
05...	1630	83	917	--	9.0	--	--	--	--	--	200
15...	1130	56	905	9.0	13.0	9.8	13.6	130	110	K36	230
15...	1700	55	923	--	14.0	--	--	--	--	--	220
25...	1700	458	505	--	14.0	--	--	--	--	--	130
APR											
02...	1315	746	400	7.5	14.0	500	8.0	73	4500	K9800	97
05...	1730	199	590	7.6	16.0	--	--	--	--	--	150
15...	1730	671	380	7.9	20.0	--	--	--	--	--	100
25...	1730	216	825	8.1	24.0	--	--	--	--	--	210
MAY											
02...	1245	470	500	7.6	16.5	360	8.6	91	K20000	K19000	140
05...	1800	5700	162	7.0	17.0	--	--	--	--	--	41
15...	1830	783	453	7.9	24.0	--	--	--	--	--	140
25...	1830	1070	456	7.5	22.0	--	--	--	--	--	130
JUN											
05...	1030	216	782	7.6	24.0	180	6.6	80	200	>200	220
05...	1830	196	724	7.7	24.0	--	--	--	--	--	210
15...	1830	8030	212	7.0	26.0	--	--	--	--	--	67
25...	1830	2220	313	6.9	24.0	--	--	--	--	--	92
JUL											
02...	1100	1290	450	6.9	27.0	280	6.6	83	440	230	140
05...	1830	418	582	8.0	33.0	--	--	--	--	--	180
15...	1830	469	525	7.8	32.0	--	--	--	--	--	150

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	
JUL												
25...	1830	310	738	7.5	31.0	--	--	--	--	--	190	
AUG												
05...	1830	100	1000	7.9	33.0	--	--	--	--	--	270	
15...	1830	45	1090	7.6	30.0	--	--	--	--	--	290	
25...	1830	83	822	7.5	29.0	--	--	--	--	--	190	
28...	1020	77	1100	7.3	25.5	88	6.7	83	190	220	280	
SEP												
05...	1830	317	402	8.3	28.0	--	--	--	--	--	100	
11...	1130	155	600	6.7	27.0	84	5.1	64	270	140	150	
15...	1830	77	672	8.1	23.0	--	--	--	--	--	190	
25...	1830	38	1000	7.6	23.0	--	--	--	--	--	250	
DATE		HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACU3)
OCT												
04...	83	51	28	190	62	5.3	--	11	--	--	--	160
05...	33	47	25	160	60	4.7	--	11	--	210	9	190
15...	38	43	23	140	59	4.3	--	11	--	200	0	160
24...	38	35	18	85	52	2.9	--	9.2	--	150	0	120
NOV												
05...	42	40	20	81	48	2.6	--	9.9	--	--	--	140
15...	100	60	30	150	53	3.9	--	10	--	--	--	170
15...	100	56	30	160	55	4.3	--	13	--	--	--	160
24...	76	47	24	130	55	3.8	--	12	--	--	--	140
DEC												
05...	82	50	26	120	52	3.4	--	9.5	--	--	--	150
15...	46	40	21	82	48	2.6	--	7.8	--	--	--	140
15...	62	43	23	82	46	2.5	--	7.8	--	--	--	140
25...	120	63	36	160	52	4.0	--	12	--	--	--	190
JAN												
05...	81	73	24	170	56	4.4	--	12	--	--	--	200
09...	110	65	38	180	54	4.4	--	13	--	--	--	210
15...	--	--	37	170	--	--	--	12	--	--	--	220
25...	0	5.1	8.3	47	66	3.0	--	4.0	--	--	--	62
FEB												
05...	89	56	24	93	45	2.6	100	7.7	--	--	--	150
15...	72	47	23	110	52	3.3	120	7.2	--	--	--	140
25...	70	51	25	100	48	2.9	110	6.5	--	--	--	160
27...	72	40	20	82	49	2.6	--	5.5	--	--	--	110
MAR												
05...	40	42	23	94	50	2.9	--	6.3	--	--	--	160
15...	73	52	25	100	47	2.9	--	7.7	--	--	--	160
15...	49	48	24	95	48	2.8	100	7.1	--	--	--	170
25...	47	27	14	52	46	2.0	57	4.5	--	--	--	78
APR												
02...	30	23	9.5	36	43	1.6	--	4.5	--	--	--	67
05...	64	36	15	62	59	2.2	67	4.6	--	--	--	86
15...	0	25	10	37	54	1.6	41	4.4	--	--	--	120
25...	57	45	23	79	44	2.4	85	6.2	--	--	--	150
MAY												
02...	50	34	14	45	40	1.6	49	4.4	--	--	--	93
05...	23	10	3.8	15	42	1.0	19	3.5	--	--	--	18
15...	28	32	14	39	50	1.4	44	4.6	--	--	--	110
25...	29	29	13	40	40	1.6	45	4.6	--	--	--	97
JUN												
05...	55	50	22	73	42	2.2	79	6.0	--	--	--	160
05...	48	47	22	71	42	2.1	77	5.6	--	--	--	160
15...	12	16	6.6	15	31	.8	20	4.7	--	--	--	55
25...	26	22	9.0	29	39	1.3	34	4.5	--	--	--	66
JUL												
02...	28	32	14	30	43	1.1	35	5.0	--	--	--	110
05...	39	42	18	46	35	1.5	51	5.2	--	--	--	140
15...	32	36	15	42	37	1.5	47	5.0	--	--	--	120
25...	42	44	20	68	43	2.1	74	5.6	--	--	--	150
AUG												
05...	69	60	29	97	43	2.6	100	5.9	--	--	--	200
15...	--	62	32	110	45	2.8	120	6.2	--	--	--	--
25...	57	42	20	86	49	2.7	91	5.4	--	--	--	130
28...	69	64	29	130	50	3.4	140	6.7	--	--	--	210
SEP												
05...	26	23	11	36	55	1.5	40	4.4	--	--	--	77
11...	21	34	16	51	41	1.8	56	5.4	--	--	--	130
15...	40	43	20	64	55	2.0	69	5.4	--	--	--	150
25...	51	56	27	110	62	3.0	120	6.6	--	--	--	200

ARKANSAS RIVER BASIN

457

072435Q0 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
04...	--	130	250	.9	2.9	785	760	1.07	48.7	.00
05...	1.5	100	190	--	--	656	--	.89	33.7	--
15...	16	110	160	--	--	582	--	.79	113	--
24...	12	70	100	--	--	409	--	.56	17.7	--
NOV										
05...	--	70	110	--	--	419	--	.57	14.7	--
15...	--	150	220	.6	2.1	738	725	1.00	77.7	1.7
15...	--	150	230	--	--	744	--	1.01	84.4	--
24...	--	100	180	--	--	583	--	.79	97.6	--
DEC										
05...	--	100	190	--	--	617	--	.84	91.6	--
15...	--	74	120	.4	4.6	475	434	.65	37.2	2.1
15...	--	78	130	--	--	472	--	.64	39.5	--
25...	--	140	210	--	--	789	--	1.07	68.2	--
JAN										
05...	--	160	220	--	--	817	--	1.11	37.5	--
09...	--	170	250	.7	6.0	865	849	1.18	28.0	5.6
15...	--	130	210	--	--	806	--	--	45.7	--
25...	--	35	53	--	--	234	--	.32	164	--
FEB										
05...	--	100	130	--	--	490	--	.67	72.8	--
15...	--	74	160	--	--	525	--	.71	152	--
25...	--	59	160	--	--	529	--	.72	100	--
27...	--	63	130	.4	5.5	416	413	.57	76.4	1.3
MAR										
05...	--	70	140	--	--	511	--	.70	115	--
15...	--	100	140	.6	4.8	533	526	.72	80.6	1.3
15...	--	77	140	--	--	520	--	.71	77.2	--
25...	--	31	83	--	--	286	--	.39	354	--
APR										
02...	--	23	56	.3	5.2	204	198	.28	411	.67
05...	--	35	--	--	--	332	--	.45	178	--
15...	--	2.4	51	--	--	214	--	.29	388	--
25...	2.3	57	130	--	--	466	--	.63	272	--
MAY										
02...	--	37	72	.3	4.6	288	267	.39	365	.81
05...	--	13	26	--	--	112	--	.15	1720	--
15...	--	26	63	--	--	259	--	.35	548	--
25...	--	21	64	--	--	266	--	.36	768	--
JUN										
05...	--	39	120	.4	7.9	441	415	.60	257	.70
05...	--	45	120	--	--	448	--	.61	237	--
15...	--	8.8	22	--	--	137	--	.19	2970	--
25...	--	17	47	--	--	195	--	.27	1170	--
JUL										
02...	--	20	55	.3	8.4	256	231	.35	892	.53
05...	--	19	77	--	--	330	--	.45	372	--
15...	--	19	75	--	--	296	--	.40	375	--
25...	--	36	120	--	--	426	--	.58	357	--
AUG										
05...	--	49	170	--	--	574	--	.76	155	--
15...	--	59	180	--	--	--	--	--	--	--
25...	--	43	150	--	--	460	--	.63	103	--
28...	--	67	200	.5	5.1	645	629	.88	134	.41
SEP										
05...	--	21	66	--	--	225	--	.31	193	--
11...	--	36	74	.4	7.9	322	306	.44	135	.84
15...	--	41	93	--	--	383	--	.52	79.6	--
25...	--	59	170	--	--	564	--	.77	57.9	--

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPH USPHATE TOTAL (MG/L AS PO4)
OCT										
04...	.01	--	.99	1.0	.35	.65	1.0	4.4	.300	--
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
15...	.01	--	.98	.99	.00	1.6	2.7	12	.530	--
15...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
DEC										
05...	--	--	--	--	--	--	--	--	--	--
15...	.08	--	1.0	1.1	.10	1.0	3.2	14	.770	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	--	--	--	--	--	--	--	--	--	--
09...	1.8	--	1.6	3.4	.30	3.1	9.0	40	2.90	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
27...	2.3	--	1.0	3.3	.40	2.9	4.6	20	1.00	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
15...	.15	--	1.1	1.2	.21	.99	2.5	11	1.20	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.15	--	2.6	2.7	2.0	.70	3.4	15	.610	--
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	.10	.12	.71	.81	.21	.60	1.6	7.2	.450	1.4
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	.06	.07	1.3	1.4	.77	.63	2.1	9.3	.480	1.5
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	.10	.12	1.1	1.2	.68	.52	1.7	7.7	.110	.34
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
AUG										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
28...	.10	.12	.85	.95	.59	.36	1.4	6.0	.260	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
11...	.03	.04	1.2	1.2	.36	.84	2.0	9.0	.380	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

461

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 15...	88	32	130	110	20	.0	.0	.0	1	0
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 09...	--	--	--	--	--	--	--	--	--	--
FEB 27...	46	0	110	70	40	.6	.6	.0	1	0
MAR 15...	--	--	--	--	--	--	--	--	--	--
MAY 02...	21	0	440	300	140	.4	.4	.0	1	1
JUN 05...	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--
AUG 28...	7	0	270	260	10	.1	.0	.3	1	1
SEP 11...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	--	--	--	--	--	--	--	81	5.0	100
NOV 15...	1	0	0	0	40	10	30	160	17	96
DEC 15...	--	--	--	--	--	--	--	266	21	75
JAN 09...	--	--	--	--	--	--	--	318	10	89
FEB 27...	1	0	0	0	80	50	30	190	35	91
MAR 15...	--	--	--	--	--	--	--	570	86	98
MAY 02...	0	0	0	0	70	50	20	1470	1870	93
JUN 05...	--	--	--	--	--	--	--	322	188	99
JUL 02...	--	--	--	--	--	--	--	459	1600	94
AUG 28...	0	0	0	0	20	10	10	252	52	98
SEP 11...	--	--	--	--	--	--	--	264	110	98

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 15,78 1230	MAR 15,79 1200	MAY 2,79 1230	JUN 5,79 1030
TOTAL CELLS/ML	9800	31000	15000	7800
DIVERSITY: DIVISION	1.4	0.8	0.8	0.5
..CLASS	1.4	0.8	0.8	0.5
..ORDER	2.0	0.8	0.9	0.5
...FAMILY	2.3	0.9	1.2	1.9
....GENUS	3.2	0.9	1.3	2.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	1000	13
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	550	4	--	-
...MICRACTINIUM	--	-	--	-	1600	11	1900#	25
...OOCYSTACEAE								
....ANKISTRODESMUS	65	1	540	2	--	-	--	-
...CLOSTERIOPSIS	--	-	--	-	270	2	--	-
...KIRCHNERIELLA	230	2	--	-	--	-	130	2
...OOCYSTIS	--	-	--	-	--	-	--	-
...TREUBARIA	130	1	--	-	--	-	--	-
...WESTELLA	260	3	--	-	1100	7	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	1900#	20	--	-	--	-	--	-
...SCENEDESMUS	710	7	1100	3	--	-	3400#	43
...TETRASTRUM	390	4	--	-	--	-	520	7
..TETRASPORALES								
...TETRASPORACEAE								
...TETRASPORA	97	1	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	230	2	--	-	270	2	--	-
...ZYGNEMATALES								
...DESMIDIACEAE	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
...CYCLOTELLA	420	4	1900	6	--	-	650	8
...PENNALES								
...ACHNANTHACEAE								
...COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
...SYNEDRA	*	0	--	-	--	-	--	-
...NAVICULACEAE								
...NAVICULA	*	0	--	-	--	-	--	-
...PLEUROSIGMA	--	-	--	-	--	-	--	-
...NITZSCHIA								
...NITZSCHIA	*	0	--	-	--	-	--	-
..CHRYSTOPHYCEAE								
...CHRYSONOMADALES								
...OCHROMONADACEAE								
...OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	65	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	2100#	21	--	-	--	-	--	-
...ANACYSTIS	1800#	19	1100	3	--	-	130	2
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	11000#	74	--	-
...OSCILLATORIACEAE								
...OSCILLATORIA	970	10	--	-	--	-	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-

ARKANSAS RIVER BASIN

463

07243500 DEEP FORK NEAR BEGGS, OK--Continued

EUGLENOPHYTA (EUGLENOIDS)

.EUGLENOPHYCEAE

..EUGLENALES

...EUGLENACEAE

....EUGLENA

130 1 27000# 85 -- - -- -

....EUTREPTIA

-- - -- - -- - -- -

....PHACUS

-- - -- - -- - -- -

....TRACHELOMONAS

97 1 -- - -- - -- -

PYRRHOPHYTA (FIRE ALGAE)

.DINOPHYCEAE

..PERIDINIALES

...GLENODINIACEAE

....GLENODINIUM

-- - -- - -- - -- -

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

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

ARKANSAS RIVER BASIN

07243500 DEEP FORK NEAR BEGGS, OK--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 2,79 1100	AUG 28,79 1020	SEP 11,79 1130
TOTAL CELLS/ML	9800	3700	2300
DIVERSITY: DIVISION	0.6	1.8	1.2
..CLASS	0.7	1.8	1.2
...ORDER	0.7	2.5	1.6
...FAMILY	0.7	2.9	2.1
....GENUS	0.7	0.0	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	120	3	--	-
....MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	30	1	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	390#	17
....OOCYSTIS	--	-	45	1	--	-
....TREUBARIA	--	-	--	-	--	-
....WESTELLA	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	1500	15	300	8	1000#	44
....TETRASTRUM	--	-	240	6	--	-
..TETRASPORALES						
...TETRASPORACEAE						
....TETRASPORA	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	130	6
..ZYGNEMATALES						
...DESMIDIACEAE	--	-	30	1	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	180	2	250	7	130	6
...PENNALES						
....ACHNANTHACEAE						
....COCCONEIS	--	-	150	4	130	6
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	89	2	--	-
....PLEURUSIGMA	--	-	30	1	--	-
...NITZSCHACEAE						
....NITZSCHIA	--	-	270	7	--	-
..CHRYSOPHYCEAE						
...CHRYDOMONADALES						
...OCHROMONADACEAE						
....OCHROMONAS	8200#	83	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROMONAS	--	-	--	-	--	-

ARKANSAS RIVER BASIN

465

07243500 DEEP FORK NEAR BEGGS, OK--Continued

CYANOPHYTA (BLUE-GREEN ALGAE)

.CYANOPHYCEAE					
..CHROOCOCCALES					
...CHROOCOCCACEAE					
....AGMENELLUM	--	-	480	13	-- -
....ANACYSTIS	--	-	--	-	520# 22
..HORMOGONALES					
...NOSTOCACEAE					
....ANABAENA	--	-	--	-	-- -
...OSCILLATORIACEAE					
....OSCILLATORIA	--	-	360	10	-- -
....SCHIZOTHRIX	--	-	950#	26	-- -

EUGLENOPHYTA (EUGLENIDS)

.EUGLENOPHYCEAE					
..EUGLENALES					
...EUGLENACEAE					
....EUGLENA	--	-	30	1	-- -
....EUTREPTIA	--	-	45	1	-- -
....PHACUS	--	-	*	0	-- -
....TRACHELOMONAS	--	-	210	6	-- -

PYRRHOPHYTA (FIRE ALGAE)

.DINOPHYCEAE					
..PERIDINIALES					
...GLENODINIACEAE					
....GLENODINIUM	--	-	59	2	-- -

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

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

ARKANSAS RIVER BASIN

07244800 EUFAULA LAKE NEAR BROOKEN, OK

LOCATION.--Lat 35°18'25", long 95°21'45", in SW¼ sec.25, T.10 N., R.18 E., McIntosh County, Hydrologic Unit 11090204, in intake structure near left end of dam on Canadian River, 4.0 mi (6.4 km) northeast of Brooken and at mile 27.0 (43.4 km).

DRAINAGE AREA.--47,522 mi² (123,082 km²), of which 9,700 mi² (25,123 km²) is probably noncontributing.

PERIOD OF RECORD.--February 1964 to current year. Prior to October 1970 published as Eufaula Reservoir near Brooken.

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

REMARKS.--Reservoir is formed by an earth dam having a gated, concrete, ogee-type spillway weir controlled by 11, 40-foot (12.2 m) taintor gates. Closure for diversion was made Feb. 1, 1963 and regulated storage began Feb. 10, 1964; minimum power pool was first filled June 17, 1964. Capacity, 3,798,000 acre-ft (4.68 km³) at elevation 597.0 ft (181.966 m), top of flood control pool, 2,329,000 acre-ft (2.87 km³) at elevation 585.0 ft (178.308 m), top of power pool, and 864,800 acre-ft (1.07 km³) at elevation 565.0 ft (172.212 m), bottom of power pool. Dead storage is negligible. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, power development, and other water uses. Revised capacity table, based on survey 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,791,000 acre-ft (4.67 km³) Apr. 25, 1973, elevation, 596.95 ft (181.950 m); minimum since power pool first filled, 1,182,000 acre-ft (1.46 km³) Nov. 4, 1964, elevation, 570.23 ft (173.806 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,804,000 acre-ft (3.46 km³) June 11, elevation 589.36 ft (179.637 m); minimum, 1,791,000 acre-ft (2.21 km³) Jan. 16, elevation, 579.22 ft (176.546 m).

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

580	1,858,000	586	2,434,000
582	2,036,000	588	2,649,000
584	2,228,000	590	2,880,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1875000	1830000	1849000	1819000	1848000	1955000	2268000	2322000	2389000	2591000	2360000	2304000
2	1874000	1828000	1856000	1811000	1848000	1973000	2282000	2333000	2394000	2580000	2359000	2313000
3	1872000	1828000	1851000	1808000	1848000	1984000	2305000	2358000	2400000	2572000	2357000	2317000
4	1866000	1827000	1849000	1807000	1851000	1987000	2306000	2368000	2393000	2567000	2356000	2322000
5	1866000	1827000	1846000	1803000	1848000	1992000	2309000	2386000	2387000	2552000	2356000	2327000
6	1863000	1831000	1846000	1806000	1854000	1997000	2307000	2397000	2377000	2579000	2352000	2329000
7	1861000	1830000	1843000	1806000	1853000	1998000	2313000	2404000	2450000	2601000	2345000	2328000
8	1858000	1828000	1841000	1803000	1854000	1999000	2314000	2407000	2529000	2612000	2336000	2328000
9	1856000	1826000	1841000	1800000	1850000	1998000	2316000	2406000	2680000	2610000	2327000	2327000
10	1856000	1825000	1840000	1800000	1851000	2002000	2299000	2408000	2776000	2630000	2327000	2324000
11	1856000	1823000	1836000	1797000	1854000	2002000	2352000	2423000	2803000	2626000	2316000	2322000
12	1854000	1824000	1834000	1795000	1856000	2004000	2388000	2428000	2779000	2616000	2316000	2322000
13	1852000	1824000	1830000	1801000	1860000	2005000	2407000	2425000	2740000	2602000	2314000	2318000
14	1849000	1824000	1830000	1796000	1866000	2004000	2415000	2418000	2694000	2586000	2312000	2313000
15	1849000	1836000	1827000	1794000	1862000	2004000	2415000	2407000	2657000	2567000	2315000	2312000
16	1847000	1854000	1828000	1794000	1864000	2007000	2411000	2393000	2629000	2550000	2314000	2311000
17	1845000	1845000	1828000	1795000	1866000	2009000	2405000	2379000	2611000	2533000	2314000	2307000
18	1842000	1845000	1829000	1804000	1866000	2020000	2406000	2365000	2607000	2514000	2313000	2310000
19	1842000	1845000	1827000	1816000	1866000	2041000	2403000	2367000	2607000	2499000	2317000	2308000
20	1840000	1846000	1821000	1827000	1884000	2075000	2407000	2381000	2607000	2485000	2306000	2311000
21	1838000	1843000	1820000	1834000	1868000	2117000	2406000	2421000	2616000	2471000	2314000	2307000
22	1837000	1846000	1817000	1839000	1880000	2155000	2404000	2472000	2600000	2457000	2296000	2303000
23	1840000	1844000	1817000	1846000	1895000	2170000	2405000	2492000	2600000	2443000	2295000	2301000
24	1839000	1841000	1815000	1844000	1912000	2181000	2397000	2483000	2603000	2429000	2294000	2299000
25	1837000	1844000	1815000	1849000	1917000	2190000	2390000	2468000	2607000	2418000	2295000	2295000
26	1835000	1856000	1812000	1854000	1930000	2203000	2377000	2450000	2607000	2403000	2299000	2286000
27	1834000	1851000	1811000	1854000	1946000	2212000	2366000	2443000	2608000	2404000	2297000	2280000
28	1833000	1852000	1809000	1853000	1948000	2228000	2354000	2432000	2606000	2394000	2296000	2271000
29	1831000	1851000	1811000	1852000	---	2234000	2346000	2421000	2603000	2387000	2291000	2266000
30	1831000	1850000	1812000	1855000	---	2236000	2332000	2415000	2594000	2375000	2289000	2262000
31	1830000	---	1819000	1850000	---	2242000	---	2402000	---	2368000	2294000	---
MAX	1875000	1856000	1856000	1855000	1948000	2242000	2415000	2492000	2803000	2630000	2360000	2329000
MIN	1830000	1823000	1809000	1794000	1848000	1955000	2268000	2322000	2377000	2368000	2289000	2262000
†	579.68	579.91	579.55	579.91	581.02	584.14	585.02	585.70	587.51	585.37	584.65	584.33
‡	-47,000	+20,000	-31,000	+31,000	+98,000	+294,000	+90,000	+70,000	+192,000	-226,000	-74,000	-32,000

CAL YR 1978 MAX 2604000 MIN 1809000 ‡-204000
WTR YR 1979 MAX 2803000 MIN 1794000 ‡+385000

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'45", long 95°14'19", in SE¼SE¼ sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, near right bank on downstream side of pier of bridge on State Highway 2, 0.8 mi (1.3 km) north of Whitefield, 5.5 mi (8.8 km) upstream from Taleka (Snake) Creek, 8.2 mi (13.2 km) downstream from Eufaula Dam, and at mile 18.8 (30.2 km).

DRAINAGE AREA.--47,576 mi² (123,222 km²), of which 9,700 mi² (25,123 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 473.16 ft (144.219 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 11, 1939, nonrecording gage and Jan. 11, 1939, to Dec. 10, 1941, June 12, 1947, to Sept. 30, 1948, water-stage recorder, all at site 2.1 mi (3.4 km) downstream at datum 2.20 ft (0.671 m) higher. Dec. 11, 1941, to June 11, 1947 and Oct. 1, 1948 to Sept. 30, 1978, water-stage recorder at present site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi² (140 km²) of intervening area, completely regulated thereafter by Eufaula Lake (station 07244800).

COOPERATION.--Gage-height record and 22 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Eufaula Dam) 25 years (water years 1939-63), 6,005 ft³/s (170.1 m³/s), 4,347,000 acre-ft/yr (5.36 km³/yr); (since regulation by Eufaula Dam) 12 years (water years 1968-79), 5,315 ft³/s (150.5 m³/s), 3,851,000 acre-ft/yr (4.75 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 281,000 ft³/s (7,960 m³/s) May 10, 1943, gage height, 25.5 ft (7.77 m) datum then in use; minimum daily, 0.4 ft³/s (0.11 m³/s) Oct. 8, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1898, that of May 10, 1943, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,900 ft³/s (1,045 m³/s) June 12, gage height, 16.86 ft (5.139 m); minimum daily, 46 ft³/s (1.30 m³/s) Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	212	224	56	747	805	96	7480	9650	8600	4670	699
2	219	235	383	1070	781	163	83	7860	5320	8430	1890	303
3	483	398	69	1170	419	224	78	7340	4130	8450	1290	285
4	304	62	615	981	78	126	90	6980	8840	5830	516	279
5	326	52	693	1040	718	98	69	7520	6090	5160	52	58
6	335	63	669	155	322	88	67	8010	6370	6720	1260	538
7	60	207	191	95	596	82	74	7820	6560	6160	3150	387
8	53	377	1510	596	505	75	70	7640	8120	6300	5490	220
9	50	216	1020	369	932	292	65	10100	15400	6230	4630	59
10	344	381	88	776	476	108	1180	10300	17000	7380	4530	883
11	284	63	821	1080	76	79	3910	9680	28800	9700	1200	1340
12	635	53	582	333	501	74	6150	9490	36100	9080	117	490
13	295	51	915	397	530	69	5100	10300	34900	9200	377	151
14	55	342	1060	67	482	68	5440	9970	34500	10000	973	637
15	49	580	1100	971	492	67	5440	10300	31500	11700	521	317
16	46	426	682	1020	385	68	5930	9910	25400	11700	80	70
17	593	597	84	117	100	72	5870	9560	21700	11900	302	558
18	208	321	807	339	80	72	4940	9500	11800	11900	304	252
19	542	70	1200	403	69	303	7130	3130	12400	11700	62	664
20	197	243	1180	121	63	226	6640	329	9810	10600	2810	658
21	55	1300	1010	79	65	111	5860	4680	9230	9750	3670	1590
22	48	824	595	68	83	550	5690	8290	9180	9200	5110	703
23	55	126	404	312	152	562	5570	15100	9350	9500	1550	621
24	635	737	78	323	102	124	6360	15000	9360	7980	513	458
25	190	127	67	298	142	81	6650	15000	9270	8030	174	2130
26	427	78	225	575	868	76	7890	15300	14600	6470	76	4060
27	184	489	600	282	2110	263	8570	15900	9720	7560	601	2600
28	59	119	666	60	1550	208	7450	16200	9960	8120	1060	4240
29	52	529	441	755	---	77	7300	15600	8750	5570	1250	3100
30	49	106	401	1110	---	259	7310	10400	8530	6590	1680	1830
31	595	---	87	1040	---	501	---	9070	---	6660	899	---
TOTAL	7484	9384	18467	16058	13424	5971	127072	303759	432340	262170	50807	30180
MEAN	241	313	596	518	479	193	4236	9799	14410	8457	1639	1006
MAX	635	1300	1510	1170	2110	805	8570	16200	36100	11900	5490	4240
MIN	46	51	67	56	63	67	65	329	4130	5160	52	58
AC-FT	14840	18610	36630	31850	26630	11840	252000	602500	857500	520000	100800	59860
CAL YR 1978	TOTAL	894729	MEAN	2451	MAX	18000	MIN	43	AC-FT	1775000		
WTR YR 1979	TOTAL	1277116	MEAN	3499	MAX	36100	MIN	46	AC-FT	2533000		

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-64, 1967 to current year.

PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.

WATER TEMPERATURE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.

INSTRUMENTATION.--Water quality monitor since July 1969.

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

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, 22,900 micromhos Nov. 11, 1956; minimum daily, 40 micromhos Mar. 24, 1978.

WATER TEMPERATURE: Maximum daily, 31.0°C Sept. 4, 1944, Aug. 11, 19, 1973; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 656 micromhos Oct. 5; minimum daily, 144 micromhos Feb. 22.

WATER TEMPERATURE: Maximum daily, 29.0°C July 5; minimum daily, 0.0°C Feb. 2, 9, 16.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT												
05...	1100	107	551	8.3	23.0	--	--	--	--	--	160	44
16...	1100	49	550	8.3	19.0	--	--	--	--	--	160	44
26...	0845	84	555	7.7	14.0	--	--	--	--	--	150	45
31...	0845	50	635	8.2	14.0	.50	10.4	100	73	71	170	46
NOV												
05...	0930	53	564	8.1	18.0	--	--	--	--	--	170	46
15...	--	580	496	8.2	14.0	--	--	--	--	--	130	46
16...	1230	101	570	8.9	11.0	2.1	11.6	106	53	83	140	42
25...	0800	127	541	8.2	18.0	--	--	--	--	--	140	49
DEC												
02...	1100	187	542	8.4	17.0	--	--	--	--	--	140	46
14...	1230	207	543	7.5	7.5	5.7	11.1	92	K23	K460	130	45
15...	0800	392	561	8.4	9.0	--	--	--	--	--	160	36
25...	0830	68	574	8.1	5.0	--	--	--	--	--	170	46
JAN												
04...	1130	985	548	8.1	5.0	--	--	--	--	--	75	0
10...	1345	2950	547	7.8	4.5	6.5	--	--	--	--	110	16
15...	0800	121	559	8.0	3.0	--	--	--	--	--	75	0
25...	1000	298	522	7.9	2.0	--	--	--	--	--	85	0
FEB												
05...	0825	71	541	8.2	3.0	--	--	--	--	--	150	52
15...	0825	101	431	8.1	12.0	--	--	--	--	--	87	30
25...	0835	117	308	8.0	2.0	--	--	--	--	--	110	44
27...	1250	2846	690	7.8	5.5	5.0	13.5	105	--	--	140	54
MAR												
05...	0840	100	366	8.4	5.0	--	--	--	--	--	100	29
15...	0835	67	536	8.6	11.0	--	--	--	--	--	150	37
25...	0840	81	427	8.6	7.0	--	--	--	--	--	120	32
28...	0900	140	530	7.6	12.5	7.0	10.1	95	--	K29	130	47
APR												
05...	0840	71	448	8.3	10.0	--	--	--	--	--	120	27
15...	0835	692	498	7.9	13.0	--	--	--	--	--	120	35
25...	0830	862	497	8.1	16.0	--	--	--	--	--	120	35
26...	0945	647	450	9.1	10.0	6.0	10.5	94	--	46	140	60
MAY												
05...	0800	1015	455	7.5	13.0	--	--	--	--	--	110	41
10...	0930	3489	505	6.9	17.5	10	10.3	112	--	--	130	53
15...	0830	1750	507	7.9	17.0	--	--	--	--	--	130	46
25...	0835	15100	510	7.7	17.0	--	--	--	--	--	130	46
JUN												
05...	0835	807	455	8.0	20.0	--	--	--	--	--	120	45

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JUN												
13...	0900	34940	460	7.8	24.5	17	7.1	86	K6	43	110	37
15...	0845	34510	465	7.6	23.0	--	--	--	--	--	110	42
25...	0835	1228	485	7.5	22.0	--	--	--	--	--	120	44
JUL												
03...	1000	669	480	7.5	26.0	22	6.2	76	82	91	120	43
05...	0835	510	495	7.4	23.0	--	--	--	--	--	120	45
15...	0840	11700	462	7.7	25.0	--	--	--	--	--	130	56
25...	0830	834	449	7.5	25.0	--	--	--	--	--	120	38
AUG												
02...	1000	400	490	7.8	25.5	15	6.0	73	25	340	120	40
05...	0835	54	480	7.7	26.0	--	--	--	--	--	140	38
15...	0835	326	445	7.6	24.0	--	--	--	--	--	120	36
25...	0835	171	452	7.7	24.0	--	--	--	--	--	120	32
SEP												
05...	0835	60	470	8.1	26.0	--	--	--	--	--	140	30
05...	0930	59	469	7.8	26.0	5.0	7.7	97	42	620	130	31
15...	0845	239	437	8.1	20.0	--	--	--	--	--	120	34
25...	0835	261	446	7.5	20.0	--	--	--	--	--	110	28

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CU3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
05...	42	13	50	40	1.7	--	4.4	140	0	110	1.1	43
16...	42	13	51	40	1.8	--	4.1	140	0	110	1.1	42
26...	41	12	49	40	1.7	--	4.6	130	0	110	4.2	45
31...	45	13	49	38	1.7	--	4.0	--	--	120	--	44
NOV												
05...	45	13	48	38	1.6	--	4.8	--	--	120	--	46
15...	33	11	49	44	1.9	--	4.8	--	--	82	--	45
16...	37	11	47	42	1.7	--	4.1	--	--	96	--	47
25...	36	12	47	41	1.7	--	5.2	--	--	90	--	47
DEC												
02...	36	12	48	42	1.8	--	4.2	--	--	93	--	41
14...	34	12	50	44	1.9	--	4.4	--	--	89	--	54
15...	41	13	45	38	1.6	--	4.1	--	--	120	--	40
25...	45	13	46	37	1.6	--	4.2	--	--	120	--	42
JAN												
04...	12	11	50	57	2.5	--	4.3	--	--	93	--	49
10...	37	3.2	51	50	2.2	--	4.3	--	--	90	--	45
15...	12	11	55	60	2.8	--	4.2	--	--	76	--	47
25...	16	11	47	53	2.2	--	4.1	--	--	90	--	45
FEB												
05...	41	12	46	39	1.6	50	3.9	--	--	100	--	45
15...	23	7.1	26	39	1.2	29	2.8	--	--	57	--	30
25...	30	9.7	40	42	1.6	44	3.7	--	--	71	--	41
27...	36	13	50	42	1.8	54	3.9	--	--	90	--	49
MAR												
05...	27	8.4	30	38	1.3	33	2.9	--	--	73	--	35
15...	39	12	45	39	1.6	49	3.7	--	--	110	--	48
25...	32	10	36	38	1.4	39	3.3	--	--	89	--	39
28...	32	11	47	44	1.8	52	4.6	--	--	78	--	46
APR												
05...	32	9.7	34	37	1.4	37	3.3	--	--	93	.9	39
15...	30	10	41	42	1.7	45	4.2	--	--	81	2.0	46
25...	29	11	46	45	1.8	50	3.9	--	--	83	--	44
26...	37	12	48	42	1.8	52	4.1	--	--	82	--	50
MAY												
05...	30	9.7	45	55	1.8	49	3.9	--	--	74	--	51
10...	35	11	48	43	1.8	52	4.2	--	--	80	--	46
15...	34	11	51	55	1.9	55	4.1	--	--	84	--	51
25...	34	11	51	55	1.9	55	4.1	--	--	84	--	52
JUN												
05...	31	9.4	45	55	1.7	48	3.4	--	--	71	--	49

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM+ AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CU2)	SULFATE DIS- SOLVED (MG/L AS SO4)
JUN												
13...	28	10	47	47	1.9	51	4.2	--	--	74	--	51
15...	29	9.9	43	44	1.8	46	3.4	--	--	71	--	51
25...	31	10	48	46	1.9	52	3.5	--	--	75	--	52
JUL												
03...	31	11	48	45	1.9	52	4.0	--	--	80	--	44
05...	31	11	46	55	1.8	50	3.9	--	--	78	--	48
15...	34	11	44	52	1.7	48	3.8	--	--	74	--	46
25...	33	10	44	52	1.7	48	3.9	--	--	86	--	41
AUG												
02...	31	9.8	43	43	1.7	47	4.0	--	--	78	--	41
05...	37	11	38	37	1.4	42	4.2	--	--	100	--	41
15...	31	9.9	39	41	1.6	43	4.2	--	--	82	--	40
25...	32	9.5	38	40	1.5	42	3.9	--	--	87	--	39
SEP												
05...	38	11	42	48	1.5	46	4.0	--	--	110	--	37
05...	36	10	39	38	1.5	43	4.2	--	--	100	--	37
15...	32	9.9	42	52	1.7	46	4.0	--	--	87	--	35
25...	30	9.7	39	51	1.6	43	4.2	--	--	87	--	34
DATE	CHLD- RIDE, DIS- SOLVED (MG/L AS CL)	FLUD- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
05...	74	--	--	311	--	.42	89.4	--	--	--	--	--
16...	74	--	--	307	--	.42	40.6	--	--	--	--	--
26...	76	--	--	312	--	.42	70.8	--	--	--	--	--
31...	72	.3	4.5	315	304	.43	42.5	.01	.07	--	.41	.48
NOV												
05...	78	--	--	312	--	.42	44.8	--	--	--	--	--
15...	85	--	--	277	--	.38	434	--	--	--	--	--
16...	64	.2	4.0	278	272	.38	76.0	.12	.07	--	.40	.47
25...	82	--	--	323	--	.44	110	--	--	--	--	--
DEC												
02...	79	--	--	323	--	.44	163	--	--	--	--	--
14...	81	.3	2.8	317	292	.43	177	.24	.02	--	.40	.42
15...	75	--	--	306	--	.42	324	--	--	--	--	--
25...	75	--	--	310	--	.42	56.9	--	--	--	--	--
JAN												
04...	77	--	--	294	--	.40	782	--	--	--	--	--
10...	75	.3	.2	305	270	.41	2430	.20	.01	--	.46	.47
15...	75	--	--	303	--	.41	98.9	--	--	--	--	--
25...	69	--	--	283	--	.38	228	--	--	--	--	--
FEB												
05...	72	--	--	300	--	.41	57.5	--	--	--	--	--
15...	41	--	--	--	--	--	--	--	--	--	--	--
25...	59	--	--	248	--	.34	78.5	--	--	--	--	--
27...	75	.3	2.4	303	284	.41	2330	.20	.04	--	.39	.43
MAR												
05...	39	--	--	211	--	.29	57.0	--	--	--	--	--
15...	65	--	--	295	--	.40	53.4	--	--	--	--	--
25...	50	--	--	232	--	.32	50.7	--	--	--	--	--
28...	76	.3	2.1	271	266	.37	103	.19	.03	--	.37	.40
APR												
05...	51	--	--	239	--	.33	45.8	--	--	--	--	--
15...	68	--	--	278	--	.38	519	--	--	--	--	--
25...	72	--	--	272	--	.37	633	--	--	--	--	--
26...	68	.3	1.9	275	271	.37	480	.18	.05	.06	.39	.44
MAY												
05...	62	--	--	249	--	.34	682	--	--	--	--	--
10...	72	.3	1.6	276	266	.38	2600	.22	.07	.08	.38	.45
15...	71	--	--	280	--	.38	1320	--	--	--	--	--
25...	72	--	--	282	--	.38	11500	--	--	--	--	--
JUN												
05...	67	--	--	264	--	.36	575	--	--	--	--	--

471

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
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[illegible]

473

[illegible][illegible]

ARKANSAS RIVER BASIN

474

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 31...	--	--	--	--	--	--	--	13	1.8	91
NOV 16...	0	0	0	0	2	0	20	51	14	85
DEC 14...	--	--	--	--	--	--	--	36	20	100
JAN 10...	--	--	--	--	--	--	--	44	350	91
FEB 27...	0	0	0	0	20	10	10	76	584	57
MAR 28...	--	--	--	--	--	--	--	34	13	88
APR 26...	--	--	--	--	--	--	--	2090	3650	99
MAY 10...	0	0	0	0	20	0	20	77	725	92
JUN 13...	--	--	--	--	--	--	--	175	16500	30
JUL 03...	--	--	--	--	--	--	--	108	195	98
AUG 02...	0	--	--	0	--	--	10	60	65	96
SEP 05...	--	--	--	--	--	--	--	50	8.0	93

ARKANSAS RIVER BASIN

475

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued
PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 16,78 1230	MAR 28,79 0900	MAY 10,79 0930	JUN 13,79 0900	JUL 3,79 1100	AUG 2,79 1000
TOTAL CELLS/ML	15	120	260	2700	3700	7100
DIVERSITY: DIVISION	1.0	0.8	1.0	1.7	1.5	0.6
..CLASS	1.0	0.8	1.0	1.7	1.5	0.6
...ORDER	1.0	1.4	1.2	2.4	1.8	1.1
...FAMILY	1.0	1.7	1.2	2.7	2.1	1.2
....GENUS	1.0	1.7	1.7	3.0	2.4	1.7
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHLOROCYTHACEAE						
...CHLORODENDROIDEAE						
...COELASTRACEAE						
...COELASTRUM						
...HYDRODICTYACEAE						
...PEDIASTRUM						
...MICRACETINACEAE						
...GOLENKINIA						
...MICRACETINIUM						
...OOCYSTACEAE						
...ANKISTRODESUS						
...CHODATELLA						
...DICTYOSPHAERIUM						
...OOCYSTIS						
...SELENASTRUM						
...TETRAEDRON						
...SCENEDESMACEAE						
...SCENEDESMUS						
...TETRASTRUM						
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS						
...CHLOROGONIUM						
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA						
...MELOSIRA						
...STEPHANODISCUS						
..PENNIALES						
...FRAGILARIACEAE						
...SYNEDRA						
...NAVICULACEAE						
...NAVICULA						
...NITZSCHACEAE						
...NITZSCHIA						
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS						
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM						
...ANACYSTIS						
...HORMOGONIALES						
...NOSTOCACEAE						
...ANABAENA						
...OSCILLATORIACEAE						
...LYNGBYA						
...OSCILLATORIA						

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

EUGLENOPHYTA (EUGLENOIDS)

.EUGLENOPHYCEAE

..EUGLENALES

...EUGLENACEAE

....EUGLENA

.....TRACHELOMONAS

	8# 50	--	-	--	-	--	-	--	-	--	-	
	--	-	--	-	--	-	--	-	*	0	--	-

PYRRHOPHYTA (FIRE ALGAE)

.DINOPHYCEAE

..PERIDINIALES

...GLENODINIACEAE

....GLENODINIUM

	--	-	--	-	--	-	--	-	* <th>0</th> <th>--</th> <th>-</th>	0	--	-
	--	-	--	-	--	-	--	-	*	0	--	-

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538	---	562	---	531	442	518	509	476	588	443	438
2	560	---	542	535	535	446	382	503	188	489	448	442
3	552	---	547	540	527	247	443	460	353	476	452	472
4	537	555	550	548	536	240	406	436	435	482	452	442
5	551	564	532	540	541	366	448	455	444	495	480	470
6	540	548	536	546	534	422	448	479	455	479	506	483
7	554	547	531	563	527	437	452	481	227	478	448	442
8	560	538	531	560	523	450	494	490	475	510	442	443
9	557	567	535	545	559	461	468	504	463	470	443	471
10	563	552	543	553	496	514	486	508	499	309	442	483
11	541	569	559	549	535	501	483	491	484	445	443	438
12	562	566	536	559	379	512	438	471	455	455	482	434
13	560	571	536	557	482	518	487	510	454	458	510	466
14	560	553	538	545	464	529	492	501	474	468	454	446
15	542	496	561	559	431	536	498	507	465	462	445	437
16	550	494	571	542	470	540	498	510	476	468	477	467
17	567	548	561	356	517	534	505	515	465	464	496	483
18	546	536	563	538	496	514	516	510	462	462	450	441
19	553	550	541	354	517	492	492	509	481	460	478	466
20	539	555	540	420	523	245	504	530	486	454	494	435
21	550	538	541	442	518	279	475	460	494	428	445	431
22	534	540	570	473	144	280	480	467	473	448	433	432
23	548	541	565	515	491	327	479	514	475	456	439	440
24	553	539	563	545	321	346	490	516	449	452	462	466
25	535	541	574	522	308	427	497	510	485	449	452	446
26	555	536	575	541	227	422	494	514	466	452	481	433
27	539	538	546	535	424	354	505	500	479	437	501	432
28	---	513	543	535	420	494	497	501	484	440	443	434
29	---	540	543	531	---	478	490	482	446	446	439	433
30	---	534	547	525	---	451	504	466	483	448	438	434
31	---	---	526	540	---	491	---	458	---	445	471	---

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	546	418	---	---	---	443	523	517	497	580	---	444
2	532	435	---	---	---	443	375	515	309	484	---	453
3	549	464	---	---	---	219	449	455	404	469	---	475
4	545	629	---	549	---	245	410	450	460	---	---	452
5	656	---	---	529	---	326	396	494	457	---	---	---
6	537	---	---	584	---	395	400	511	463	---	---	---
7	546	---	---	588	---	433	---	500	325	---	---	---
8	571	---	---	---	---	436	516	498	488	---	---	---
9	558	---	---	517	---	463	543	509	468	---	---	---
10	564	---	---	537	---	563	470	517	496	---	---	---
11	518	---	---	569	---	491	456	521	476	---	---	---
12	543	---	528	---	---	500	443	508	453	---	---	---
13	609	---	578	---	---	514	483	547	459	---	---	---
14	627	---	530	588	---	530	498	533	478	---	---	---
15	452	---	570	576	---	535	494	512	465	---	---	---
16	550	---	568	---	---	540	502	515	477	---	486	---
17	551	---	538	366	---	528	496	516	469	---	491	---
18	566	---	556	486	---	513	500	512	452	---	459	---
19	550	---	537	---	---	486	489	485	477	---	482	---
20	535	---	541	---	---	244	472	---	481	---	472	---
21	562	---	535	413	---	275	477	631	483	---	444	---
22	531	---	---	---	146	297	471	495	469	---	439	---
23	435	---	---	---	471	330	473	515	478	---	447	---
24	612	---	---	---	329	335	487	515	451	---	459	---
25	542	---	---	---	289	405	489	510	480	---	460	---
26	565	---	---	---	201	421	517	514	463	---	485	---
27	508	---	---	---	432	359	517	502	474	---	486	---
28	482	---	537	---	425	606	530	508	478	---	445	---
29	452	---	535	---	---	473	518	482	440	---	445	---
30	444	---	552	---	---	448	532	493	481	---	448	---
31	455	---	531	---	---	480	---	483	---	---	455	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	---	14.0	---	.5	7.0	16.0	14.0	17.0	22.0	25.0	24.0
2	25.0	---	17.0	6.0	.0	8.0	14.0	14.0	20.0	23.0	25.0	24.0
3	25.0	---	10.0	6.0	4.0	12.0	11.0	15.0	18.0	24.0	25.0	25.0
4	23.0	17.0	15.0	5.0	3.0	2.0	10.0	14.0	18.0	24.0	25.0	25.0
5	23.0	18.0	10.0	6.0	3.0	5.0	10.0	13.0	20.0	29.0	26.0	26.0
6	22.0	18.0	10.0	6.0	3.0	7.0	13.0	15.0	21.0	24.0	27.0	26.0
7	20.0	10.0	9.0	3.0	3.0	11.0	14.0	15.0	22.0	23.0	25.0	26.0
8	21.0	16.0	6.0	3.0	4.0	8.0	17.0	17.0	21.0	24.0	25.0	22.0
9	21.0	15.0	10.0	6.0	.0	11.0	13.0	17.0	20.0	24.0	25.0	22.0
10	21.0	18.0	7.0	6.0	5.0	10.0	14.0	17.0	20.0	24.0	25.0	22.0
11	24.0	15.0	5.0	6.0	---	8.0	12.0	15.0	22.0	24.0	24.0	23.0
12	25.0	18.0	8.0	3.0	5.0	11.0	13.0	15.0	22.0	24.0	22.0	22.0
13	20.0	15.0	10.0	3.0	5.0	13.0	13.0	15.0	22.0	24.0	23.0	22.0
14	20.0	16.0	7.0	6.0	5.0	9.0	12.0	16.0	23.0	25.0	25.0	20.0
15	20.0	14.0	9.0	3.0	12.0	11.0	13.0	17.0	23.0	25.0	24.0	20.0
16	19.0	14.0	8.0	6.0	.0	11.0	14.0	18.0	23.0	25.0	24.0	18.0
17	19.0	17.0	7.0	6.0	6.0	10.0	14.0	17.0	23.0	25.0	26.0	18.0
18	20.0	15.0	8.0	7.0	2.0	15.0	14.0	17.0	21.0	24.0	25.0	22.0
19	20.0	17.0	6.0	5.0	4.0	17.0	14.0	17.0	22.0	24.0	25.0	22.0
20	23.0	15.0	10.0	5.0	6.0	12.0	15.0	22.0	23.0	24.0	25.0	24.0
21	20.0	10.0	8.0	3.0	8.0	15.0	15.0	20.0	23.0	24.0	25.0	22.0
22	18.0	18.0	10.0	4.0	12.0	15.0	14.0	17.0	23.0	24.0	24.0	21.0
23	19.0	20.0	12.0	2.0	12.0	11.0	14.0	18.0	23.0	24.0	24.0	21.0
24	17.0	20.0	8.0	2.0	9.0	8.0	15.0	18.0	22.0	25.0	24.0	20.0
25	18.0	18.0	5.0	2.0	2.0	7.0	16.0	17.0	22.0	25.0	24.0	20.0
26	14.0	15.0	8.0	3.0	4.0	10.0	13.0	17.0	22.0	25.0	25.0	22.0
27	15.0	13.0	7.0	2.0	4.0	12.0	14.0	18.0	24.0	24.0	25.0	22.0
28	---	13.0	8.0	6.0	7.0	12.0	13.0	20.0	23.0	25.0	25.0	21.0
29	---	14.0	11.0	2.0	---	17.0	14.0	18.0	24.0	25.0	25.0	22.0
30	---	14.0	7.0	4.0	---	16.0	12.0	18.0	23.0	25.0	25.0	21.0
31	---	---	4.0	1.0	---	11.0	---	18.0	---	26.0	26.0	---
MEAN	20.5	15.5	9.0	4.5	5.0	10.5	13.5	16.5	21.5	24.5	25.0	22.0
WTR YR 1979	MEAN	16.0	MAX	29.0	MIN	.0						

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.93	24.00	---	---	---	91.30	11.70	909.0	1150.0	1070.0	---	79.3
2	26.60	26.60	---	---	---	18.50	8.96	934.0	546.0	1000.0	---	35.2
3	58.70	46.20	---	---	---	21.80	8.85	852.0	457.0	981.0	---	33.1
4	36.90	8.04	---	119.00	---	12.20	9.96	792.0	1030.0	---	---	32.4
5	43.10	---	---	126.00	---	10.30	7.64	893.0	707.0	---	---	---
6	40.70	---	---	19.70	---	9.74	7.42	952.0	740.0	---	---	---
7	7.29	---	---	12.10	---	9.30	---	929.0	691.0	---	---	---
8	6.58	---	---	---	---	8.50	8.32	908.0	965.0	---	---	---
9	6.21	---	---	44.80	---	33.90	7.90	1200.0	1790.0	---	---	---
10	42.70	---	---	94.30	---	13.40	137.00	1250.0	2020.0	---	---	---
11	34.50	---	---	134.00	---	9.39	454.00	1180.0	3340.0	---	---	---
12	77.20	---	70.7	---	---	8.79	697.00	1130.0	4190.0	---	---	---
13	37.40	---	114.0	---	---	8.20	592.00	1250.0	4050.0	---	---	---
14	7.13	---	129.0	8.50	---	8.26	646.00	1210.0	4010.0	---	---	---
15	5.69	---	137.0	121.00	---	8.14	646.00	1220.0	3660.0	---	---	---
16	5.71	---	84.7	---	---	8.26	704.00	1180.0	2950.0	---	9.50	---
17	73.70	---	10.2	12.60	---	8.75	697.00	1140.0	2520.0	---	35.90	---
18	25.80	---	100.0	40.30	---	8.55	587.00	1130.0	1370.0	---	35.30	---
19	67.30	---	146.0	---	---	36.00	847.00	372.0	1440.0	---	7.20	---
20	23.90	---	143.0	---	---	22.00	771.00	---	1140.0	---	326.00	---
21	6.83	---	123.0	8.75	---	11.10	680.00	607.0	1070.0	---	416.00	---
22	5.83	---	---	---	7.40	56.40	661.00	985.0	1070.0	---	579.00	---
23	6.24	---	---	---	17.60	59.20	647.00	1790.0	1090.0	---	176.00	---
24	80.60	---	---	---	10.70	13.10	756.00	1780.0	1090.0	---	59.60	---
25	23.10	---	---	---	14.60	8.97	790.00	1780.0	1080.0	---	20.20	---
26	53.00	---	---	---	82.00	8.62	959.00	1820.0	1700.0	---	9.03	---
27	21.90	---	---	---	239.00	28.40	1040.00	1890.0	1130.0	---	71.40	---
28	6.85	---	80.9	---	176.00	26.40	905.00	1920.0	1160.0	---	120.00	---
29	6.04	---	53.6	---	---	8.94	887.00	1810.0	992.0	---	142.00	---
30	5.56	---	49.8	---	---	29.40	888.00	1240.0	990.0	---	191.00	---
31	69.10	---	10.6	---	---	58.20	---	1050.0	---	---	104.00	---

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	58	---	---	---	61	69	69	67	75	---	61
2	70	60	---	---	---	61	54	69	47	65	---	62
3	72	63	---	---	---	37	62	62	57	64	---	64
4	72	81	---	72	---	40	58	62	63	---	---	62
5	83	---	---	70	---	49	56	66	62	---	---	---
6	71	---	---	76	---	56	57	68	63	---	---	---
7	72	---	---	76	---	60	---	67	49	---	---	---
8	74	---	---	---	---	60	69	67	66	---	---	---
9	73	---	---	69	---	63	72	68	64	---	---	---
10	74	---	---	71	---	74	64	69	67	---	---	---
11	69	---	---	74	---	66	62	69	64	---	---	---
12	72	---	70	---	---	67	61	68	62	---	---	---
13	78	---	75	---	---	68	65	72	63	---	---	---
14	80	---	70	76	---	70	67	70	65	---	---	---
15	62	---	74	75	---	71	66	68	63	---	---	---
16	72	---	74	---	---	71	67	69	65	---	66	---
17	72	---	71	53	---	70	67	69	64	---	66	---
18	74	---	73	66	---	68	67	68	62	---	63	---
19	72	---	71	---	---	66	66	65	65	---	65	---
20	71	---	71	---	---	40	64	---	65	---	64	---
21	74	---	71	58	---	43	65	81	65	---	61	---
22	70	---	---	---	30	46	64	66	64	---	61	---
23	60	---	---	---	64	49	64	69	65	---	61	---
24	79	---	---	---	49	50	66	69	62	---	63	---
25	71	---	---	---	45	57	66	68	65	---	63	---
26	74	---	---	---	36	59	69	68	63	---	65	---
27	68	---	---	---	60	52	69	67	64	---	66	---
28	65	---	71	---	59	78	70	68	65	---	61	---
29	62	---	71	---	---	64	69	65	61	---	61	---
30	61	---	72	---	---	62	70	66	65	---	62	---
31	62	---	70	---	---	65	---	65	---	---	62	---

ARKANSAS RIVER BASIN

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.10	33.2	---	---	---	133.0	17.9	1390.0	1750.0	1740.0	---	115.0
2	41.40	38.1	---	---	---	26.8	12.1	1460.0	675.0	1480.0	---	50.7
3	93.90	67.7	---	---	---	22.4	13.1	1230.0	636.0	1460.0	---	49.2
4	59.10	13.6	---	191.0	---	13.6	14.1	1170.0	1500.0	---	---	46.7
5	73.10	---	---	197.0	---	13.0	10.4	1340.0	1020.0	---	---	---
6	64.20	---	---	31.8	---	13.3	10.3	1470.0	1080.0	---	---	---
7	11.70	---	---	19.5	---	13.3	---	1410.0	868.0	---	---	---
8	10.60	---	---	---	---	12.2	13.0	1380.0	1450.0	---	---	---
9	9.85	---	---	68.7	---	49.7	12.6	1850.0	2660.0	---	---	---
10	68.70	---	---	149.0	---	21.6	204.0	1920.0	3080.0	---	---	---
11	52.90	---	---	216.0	---	14.1	655.0	1800.0	4980.0	---	---	---
12	123.00	---	110.0	---	---	13.4	1010.0	1740.0	6040.0	---	---	---
13	62.10	---	185.0	---	---	12.7	895.0	2000.0	5940.0	---	---	---
14	11.90	---	200.0	13.7	---	12.9	984.0	1880.0	6050.0	---	---	---
15	8.20	---	220.0	197.0	---	12.8	969.0	1890.0	5360.0	---	---	---
16	8.94	---	136.0	---	---	13.0	1070.0	1850.0	4460.0	---	14.3	---
17	115.00	---	16.1	16.7	---	13.6	1060.0	1780.0	3750.0	---	53.8	---
18	41.60	---	159.0	60.4	---	13.2	894.0	1740.0	1980.0	---	51.7	---
19	105.00	---	230.0	---	---	54.0	1270.0	549.0	2180.0	---	10.9	---
20	37.80	---	220.0	---	---	24.4	1150.0	---	1720.0	---	486.0	---
21	11.00	---	194.0	12.4	---	12.9	1030.0	1020.0	1620.0	---	604.0	---
22	9.07	---	---	---	6.72	68.3	983.0	1480.0	1590.0	---	842.0	---
23	8.91	---	---	---	26.30	74.4	962.0	2810.0	1640.0	---	255.0	---
24	135.00	---	---	---	13.50	16.7	1130.0	2790.0	1570.0	---	87.3	---
25	36.40	---	---	---	17.30	12.5	1190.0	2750.0	1630.0	---	29.6	---
26	85.30	---	---	---	84.40	12.1	1470.0	2810.0	2480.0	---	13.3	---
27	33.80	---	---	---	342.00	36.9	1600.0	2880.0	1680.0	---	107.0	---
28	10.40	---	128.0	---	247.00	43.8	1410.0	2970.0	1750.0	---	175.0	---
29	8.70	---	84.5	---	---	13.3	1360.0	2740.0	1440.0	---	206.0	---
30	8.07	---	78.0	---	---	43.4	1380.0	1850.0	1500.0	---	281.0	---
31	99.60	---	16.4	---	---	87.9	---	1590.0	---	---	150.0	---

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	263	---	---	---	270	291	290	284	306	---	270
2	293	268	---	---	---	270	252	289	234	281	---	273
3	298	275	---	---	---	160	271	273	260	277	---	278
4	297	319	---	298	---	183	261	272	274	---	---	272
5	326	---	---	293	---	239	257	283	274	---	---	---
6	295	---	---	307	---	257	259	288	275	---	---	---
7	297	---	---	308	---	267	---	285	239	---	---	---
8	304	---	---	---	---	268	289	284	282	---	---	---
9	300	---	---	290	---	275	296	287	277	---	---	---
10	302	---	---	295	---	302	277	290	284	---	---	---
11	290	---	---	303	---	283	273	291	279	---	---	---
12	296	---	292	---	---	285	270	287	273	---	---	---
13	314	---	306	---	---	289	280	297	274	---	---	---
14	319	---	293	308	---	293	284	294	279	---	---	---
15	272	---	304	305	---	294	283	288	276	---	---	---
16	298	---	303	---	---	296	286	289	279	---	281	---
17	299	---	295	249	---	292	284	289	277	---	283	---
18	302	---	300	281	---	288	285	288	272	---	274	---
19	298	---	295	---	---	281	282	281	279	---	280	---
20	294	---	296	---	---	182	278	---	280	---	278	---
21	301	---	294	262	---	210	279	320	280	---	270	---
22	293	---	---	---	96	229	277	284	277	---	269	---
23	268	---	---	---	277	240	278	289	279	---	271	---
24	315	---	---	---	240	241	282	289	272	---	274	---
25	296	---	---	---	222	260	282	288	280	---	274	---
26	302	---	---	---	144	264	290	289	275	---	281	---
27	287	---	---	---	267	248	290	286	278	---	281	---
28	280	---	295	---	265	313	293	287	279	---	270	---
29	272	---	294	---	---	278	290	280	269	---	270	---
30	270	---	299	---	---	271	293	283	280	---	271	---
31	273	---	293	---	---	280	---	280	---	---	273	---
MEAN	295	281	297	292	216	262	280	287	274	288	275	273
WTR YR 1979	MEAN	279	MAX	326	MIN	96						

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.7	151.0	---	---	---	587.0	75.4	5860.0	7400.0	7110.0	---	510.0
2	173.0	170.0	---	---	---	119.0	56.5	6130.0	3360.0	6400.0	---	223.0
3	389.0	296.0	---	---	---	96.8	57.1	5410.0	2900.0	6320.0	---	214.0
4	244.0	53.4	---	789.0	---	62.3	63.4	5130.0	6540.0	---	---	205.0
5	287.0	---	---	823.0	---	63.2	47.9	5750.0	4510.0	---	---	---
6	267.0	---	---	128.0	---	61.1	46.9	6230.0	4730.0	---	---	---
7	48.1	---	---	79.0	---	59.1	---	6020.0	4230.0	---	---	---
8	43.5	---	---	---	---	54.3	54.6	5860.0	6180.0	---	---	---
9	40.5	---	---	289.0	---	217.0	51.9	7830.0	11500.0	---	---	---
10	280.0	---	---	618.0	---	88.1	883.0	8060.0	13000.0	---	---	---
11	222.0	---	---	884.0	---	60.4	2880.0	7610.0	21700.0	---	---	---
12	507.0	---	459.0	---	---	56.9	4480.0	7350.0	26600.0	---	---	---
13	250.0	---	756.0	---	---	53.8	3860.0	8260.0	25800.0	---	---	---
14	47.4	---	839.0	55.7	---	53.8	4170.0	7910.0	26000.0	---	---	---
15	36.0	---	903.0	800.0	---	53.2	4160.0	8010.0	23500.0	---	---	---
16	37.0	---	558.0	---	---	54.3	4580.0	7730.0	19100.0	---	60.7	---
17	479.0	---	66.9	78.7	---	56.8	4500.0	7460.0	16200.0	---	231.0	---
18	170.0	---	654.0	257.0	---	56.0	3800.0	7390.0	8670.0	---	225.0	---
19	436.0	---	956.0	---	---	230.0	5430.0	2370.0	9340.0	---	46.9	---
20	156.0	---	943.0	---	---	111.0	4980.0	---	7420.0	---	2110.0	---
21	44.7	---	802.0	55.9	---	62.9	4410.0	4040.0	6980.0	---	2680.0	---
22	38.0	---	---	---	21.5	340.0	4260.0	6360.0	6870.0	---	3710.0	---
23	39.8	---	---	---	114.0	364.0	4180.0	11800.0	7040.0	---	1130.0	---
24	540.0	---	---	---	66.1	80.7	4840.0	11700.0	6870.0	---	380.0	---
25	152.0	---	---	---	85.1	56.9	5060.0	11700.0	7010.0	---	129.0	---
26	348.0	---	---	---	337.0	54.2	6180.0	11900.0	10800.0	---	57.7	---
27	143.0	---	---	---	1520.0	176.0	6710.0	12300.0	7300.0	---	456.0	---
28	44.6	---	530.0	---	1110.0	176.0	5890.0	12600.0	7500.0	---	773.0	---
29	38.2	---	350.0	---	---	57.8	5720.0	11800.0	6360.0	---	911.0	---
30	35.7	---	324.0	---	---	190.0	5780.0	7950.0	6450.0	---	1230.0	---
31	439.0	---	68.8	---	---	379.0	---	6860.0	---	---	663.0	---
MEAN	194.0	168.0	586.0	405.0	465.0	133.0	3350.0	7850.0	10700.0	6610.0	925.0	288.0
WTR YR 1979	MEAN	3400.0	MAX	26600.0	MIN	21.5						

ARKANSAS RIVER BASIN

07245020 TALOKA CREEK AT STIGLER, OK

LOCATION.--Lat 35°16'09", long 95°05'49", SW¼NW¼, sec.9, T.9 N., T.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 0.6 mi (1.0 km) north of State Highway 9, 1.6 mi (2.6 km) northeast of Stigler, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--3.98 mi² (10.31 km²).

PERIOD OF RECORD.--December 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)
DEC										
05...	0845	.38	115	7.0	5.0	22	7.1	13.5	109	29
20...	1530	.31	110	7.6	11.5	90	56	11.6	109	29
FEB										
01...	0950	1.3	110	7.1	.0	8	8.4	14.3	97	28
15...	0830	3.9	108	7.4	11.0	--	--	10.7	99	--
MAR										
01...	1545	7.2	98	7.0	10.0	29	7.5	9.9	88	27
12...	1815	2.6	96	7.2	13.0	--	--	9.5	91	--
24...	1000	6.0	86	6.6	7.0	--	--	11.9	101	--
APR										
11...	1110	586	36	6.4	16.5	100	250	8.7	92	11
24...	1330	5.8	90	8.2	22.0	--	--	8.4	97	--
MAY										
04...	0820	8.5	86	7.2	13.5	50	15	10.0	98	24
29...	1430	.72	79	7.3	22.0	--	--	7.7	89	--
JUN										
06...	1200	6.8	86	7.5	23.0	35	9.2	7.0	84	24
22...	1135	.12	166	7.2	25.0	--	--	5.4	66	--
JUL										
12...	0930	.14	108	7.2	25.0	70	32	4.1	51	34

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
DEC										
05...	15	6.6	3.0	8.1	36	.7	--	2.4	14	16
20...	17	6.5	3.2	8.9	38	.7	--	2.1	12	13
FEB										
01...	24	5.8	3.2	8.3	38	.7	--	1.6	4	9.2
15...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	20	6.6	2.6	7.2	35	.6	--	1.4	7	--
12...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
APR										
11...	11	2.6	1.1	2.2	26	.3	4.3	2.1	0	8.0
24...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	9	5.5	2.4	6.7	36	.6	--	1.6	15	7.6
29...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	8	5.5	2.4	8.4	42	.8	10	1.6	16	9.2
22...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	4	8.5	3.0	8.2	31	.6	13	5.2	30	13

ARKANSAS RIVER BASIN

483

07245020 TALOKA CREEK AT STIGLER, OK--Continued

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT. MAT (MG/KG AS N)
DEC										
05...	13	.1	8.5	74	75	.10	.08	--	1.9	--
20...	16	.1	9.6	77	76	.10	.06	1.6	2.1	--
FEB										
01...	18	.0	8.0	72	69	.10	.25	2.9	2.9	--
15...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	13	.1	7.5	63	--	.09	1.22	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
APR										
11...	3.1	.1	2.8	--	23	.05	53.8	.28	.23	--
24...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	9.2	.1	8.2	67	52	.09	1.54	.41	.37	16
29...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	8.1	.1	9.0	59	55	.08	1.08	.18	.17	--
22...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	7.1	.1	5.5	70	69	.10	.03	.14	.12	5.9

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)
DEC										
05...	--	--	--	--	--	--	--	--	--	--
20...	.03	.20	--	--	.26	.50	.67	.53	--	.87
FEB										
01...	.04	.02	--	--	.03	.30	.18	.34	--	.20
15...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
APR										
11...	.37	.09	--	.45	.12	2.3	.50	2.7	2.1	.59
24...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	.13	.10	23	.16	.13	.38	.34	.51	.07	.44
29...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	.03	.01	--	.04	.01	.81	.69	.84	.14	.70
22...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	.09	.01	18	.11	.01	.67	.64	.76	.11	.65

ARKANSAS RIVER BASIN

07245020 TALOKA CREEK AT STIGLER, OK--Continued

DATE	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TUM MA- TERIAL (MG/KG AS N)	PHOS- PHURUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPH OSPHATE TOTAL (MG/L AS P04)	PHOS- PHURUS, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHURUS, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHURUS, TOTAL IN BOT. MAT. (MG/KG AS P)
DEC										
05...	--	--	--	--	--	--	--	--	.020	--
20...	--	2.1	3.0	9.4	--	.070	--	--	.030	--
FEB										
01...	--	3.2	3.1	14	--	.030	--	--	.020	--
15...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
APR										
11...	--	3.0	.82	13	--	.430	1.3	1.3	.050	--
24...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	198	.92	.81	4.1	214	.040	.12	.12	.010	2
29...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	1.0	.87	4.5	--	.040	.12	.12	.020	--
22...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	50	.90	.77	4.0	56	.100	--	.31	.040	190

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECov. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
DEC											
05...	0845	450	--	70	--	0	--	0	--	70	--
20...	1530	1100	--	80	--	1	--	0	--	80	--
FEB											
01...	0950	230	--	40	--	0	--	0	--	30	20
15...	0830	550	--	80	--	0	--	0	--	60	20
MAR											
01...	1545	290	--	60	--	0	--	0	--	90	50
12...	1815	220	--	40	--	0	--	0	--	40	30
24...	1000	310	--	60	--	0	--	0	--	50	30
APR											
11...	1110	9400	9300	110	--	3	2	1	--	70	30
24...	1330	200	190	10	--	1	1	0	--	40	20
MAY											
04...	0820	440	400	40	5800	0	0	0	19	30	10
29...	1430	620	580	40	--	0	0	0	--	8	0
JUN											
06...	1200	--	--	--	--	--	--	--	--	--	--
22...	1135	230	200	30	--	1	1	1	--	70	40
JUL											
12...	0930	20	0	40	0	1	1	1	19	70	40

[illegible]

ARKANSAS RIVER BASIN

07245020 TALOKA CREEK AT STIGLER, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECov, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECov, FM BOT- TOM MA- TERIAL (UG/G AS PB)
DEC											
05...	--	<10	--	560	--	70	--	100	--	96	--
20...	--	<10	--	2100	--	110	--	100	--	<10	--
FEB											
01...	--	15	--	310	--	40	--	0	--	<10	--
15...	--	10	--	550	--	110	--	0	--	0	--
MAR											
01...	--	10	--	400	--	70	--	0	--	0	--
12...	--	0	--	260	--	90	--	0	--	0	--
24...	--	<10	--	400	--	120	--	0	--	<10	--
APR											
11...	--	<10	--	15000	15000	180	--	0	--	<10	--
24...	--	<10	--	830	470	360	--	0	--	<10	--
MAY											
04...	0	0	10	1000	640	360	48000	0	0	0	40
29...	0	0	--	1000	860	140	--	0	0	0	--
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
22...	40	<10	--	610	430	180	--	100	90	<10	--
JUL											
12...	20	0	0	1500	1300	250	0	0	0	0	0

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV, (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECov, FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MU)	MOLYB- DENUM, SUS- PENDE RECOV, (UG/L AS MU)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MU)
DEC											
05...	50	--	30	--	.0	--	.1	--	0	--	0
20...	100	--	50	--	.0	--	.0	--	0	--	0
FEB											
01...	40	--	20	--	.0	--	.0	--	0	--	0
15...	40	--	20	--	.0	--	.0	--	0	--	1
MAR											
01...	30	--	20	--	.0	--	.0	--	0	--	1
12...	50	--	50	--	.1	--	.1	--	0	--	0
24...	80	--	60	--	.1	--	.1	--	0	--	0
APR											
11...	1100	990	110	--	.3	.3	.0	--	0	0	<10
24...	60	10	50	--	80	51	29	--	0	0	<10
MAY											
04...	70	10	60	3000	.3	.3	.0	.01	0	0	0
29...	100	20	80	--	4.8	1.2	3.6	--	0	0	0
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
22...	260	50	210	--	9.2	.3	8.9	--	0	0	<10
JUL											
12...	380	60	320	260	2.2	1.2	1.0	.01	0	0	0

ARKANSAS RIVER BASIN

487

07245020 TALOKA CREEK AT STIGLER, OK--Continued

DATE	MOLYB- DENUM, RECOV, FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM, % FINER THAN .062 MM
DEC											
05...	--	0	--	0	10	--	<3	--	--	--	--
20...	--	0	--	0	20	--	<3	--	54	.05	91
FEB											
01...	--	0	--	0	20	--	10	--	21	.07	88
15...	--	0	--	0	20	--	30	--	40	.42	88
MAR											
01...	--	0	--	0	20	--	10	--	37	.72	84
12...	--	0	--	0	10	--	10	--	9	.06	92
24...	--	0	--	0	10	--	<3	--	24	.39	75
APR											
11...	--	1	1	0	70	70	<3	--	2500	3960	52
24...	--	0	0	0	30	30	<3	--	--	--	--
MAY											
04...	4	0	0	0	20	10	10	268	35	.80	95
29...	--	0	0	0	10	0	20	--	50	.10	89
JUN											
06...	--	--	--	--	--	--	--	--	27	.50	83
22...	--	0	0	0	70	70	4	--	30	.01	96
JUL											
12...	0	0	0	0	40	30	10	0	68	.03	85

LOCATION.--Lat 35°17'13", long 95°07'00", on west line NW¼, sec.5, T.9 N., R.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 1.8 mi (2.9 km) north of Stigler.

DRAINAGE AREA.--20.4 mi² (52.8 km²).

PERIOD OF RECORD.--November 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)
NOV										
22...	1130	--	3100	8.8	11.0	--	--	--	--	--
DEC										
05...	1245	2.4	3250	7.7	11.0	10	64	12.0	112	400
21...	1000	--	3000	7.8	9.5	--	--	13.0	115	--
FEB										
01...	1345	.86	2850	8.3	3.0	17	20	13.7	103	510
MAR										
01...	1400	2.1	2550	8.1	14.5	--	--	10.3	103	--
13...	0845	1.9	3200	8.1	13.5	--	--	10.0	99	--
24...	1130	1.9	2140	8.1	12.0	--	--	10.7	103	--
APR										
10...	1715	3.5	2400	8.0	15.0	--	--	9.5	97	--
24...	1535	2.4	3200	8.4	26.0	--	--	9.1	114	--
MAY										
04...	1000	2.6	2100	8.0	15.0	--	--	9.9	101	--
29...	1530	--	2500	8.0	26.0	--	--	7.9	101	--
JUN										
06...	1400	--	3100	7.8	24.0	--	--	7.8	98	--
26...	1055	2.9	3550	7.9	21.5	--	--	9.3	107	--
JUL										
12...	1110	2.5	3100	8.2	24.0	--	--	9.0	111	--
AUG										
16...	1620	3.4	3020	7.7	26.0	--	--	7.5	94	--
SEP										
17...	1300	1.8	2740	8.1	21.5	--	--	9.8	111	--
26...	1145	1.7	2400	8.2	21.0	--	--	8.4	94	--

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

ARKANSAS RIVER BASIN

07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 05...	1245	1900	40	11	10	670	--	660	25	25	0
FEB 01...	1345	290	10	6	5	610	80	530	10	0	0

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
DEC 05...	0	20	10	1700	80	300	200	310	220	.3
FEB 01...	10	10	20	320	10	0	0	440	380	.0

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 05...	.1	9	11	9	9	30	30	--	--	--
FEB 01...	.0	4	4	3	3	30	20	304	.71	99

ARKANSAS RIVER BASIN

491

07245030 TALOKA CREEK NEAR STIGLER, OK

LOCATION.--Lat 35°17'46", long 95°07'56", in NE¼SE¼ sec.36, T.10 N., R.20 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 2.4 mi (3.8 km) north, on county road at west edge of Stigler, and at mile 9.6 (15.4 km).

DRAINAGE AREA.--20.1 mi² (52.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder. Altitude of gage is 490 ft (149 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Apr. 11	1500	1,210	34.3	16.00	4.877	May 28	1200	637	18.0	13.00	3.962
May 27	0800	959	27.2	14.80	4.511	June 2	0900	*1,440	*40.8	*16.96	5.169

No flow Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	.31	.68	2.4	5.3	29	35	12	46	4.7	2.3	.15
2	.68	.31	.68	1.7	4.8	20	26	23	717	4.0	.11	.22
3	.55	.31	1.0	1.5	5.3	24	19	117	79	3.0	.03	.35
4	.49	.31	2.0	1.6	5.9	27	16	40	36	2.7	.02	.39
5	.44	.31	1.6	1.6	6.5	20	14	25	27	3.2	.01	.49
6	.44	.31	1.7	1.7	6.5	19	12	18	37	4.0	.01	.55
7	.35	.55	3.2	1.6	6.6	16	11	13	192	4.4	.01	.84
8	.31	.35	2.1	1.6	8.0	13	10	11	27	2.3	.01	.84
9	.39	.35	1.1	1.5	6.5	12	9.9	12	19	6.8	.01	.84
10	.39	.31	1.5	1.5	6.5	11	9.5	11	33	54	.03	1.0
11	.35	.39	2.3	1.6	11	12	380	27	14	4.4	.04	.84
12	.35	10	1.6	1.7	20	11	71	11	13	2.7	34	.93
13	.31	2.6	1.6	2.1	22	8.8	29	10	10	2.0	3.2	1.0
14	.28	1.6	1.6	1.8	25	9.0	22	8.6	9.5	1.4	.10	1.4
15	.25	1.7	1.7	1.6	16	7.4	18	7.6	8.8	1.7	.01	1.5
16	.22	7.0	1.3	1.7	7.2	8.8	15	8.0	8.0	1.5	7.2	1.5
17	.19	5.5	1.4	5.9	7.2	10	14	8.8	8.0	1.4	4.2	1.1
18	.19	1.5	1.3	5.0	7.0	11	13	5.7	7.8	5.3	3.7	1.1
19	.19	.75	1.7	.49	7.2	17	18	3.3	6.5	3.8	3.0	1.0
20	.17	.49	1.1	.75	7.4	135	20	5.7	7.2	2.7	.75	1.2
21	.17	.68	.44	8.8	8.4	42	26	86	6.8	2.0	.09	1.4
22	.17	.68	1.3	9.0	94	93	20	187	6.5	1.6	.00	1.0
23	.25	.68	1.1	8.2	87	45	19	38	6.5	1.4	.00	.95
24	.55	.55	1.1	6.5	24	20	25	32	6.8	.19	.13	1.0
25	.39	1.0	1.1	7.2	79	17	40	9.9	6.6	.05	.25	1.1
26	.31	4.4	.93	8.2	63	39	23	8.8	6.1	.02	.35	1.1
27	.55	1.7	1.3	10	48	27	13	502	6.6	.07	3.0	1.1
28	.55	.44	1.1	9.0	64	19	13	419	5.3	.49	.35	1.1
29	.44	.49	1.1	6.5	---	18	16	81	4.7	.17	.17	1.1
30	.44	.55	2.1	6.1	---	23	13	30	5.0	.09	.13	1.0
31	.39	---	2.4	6.6	---	18	---	21	---	.25	.15	---
TOTAL	11.68	46.12	45.13	125.44	659.3	782.0	970.4	1792.4	1366.7	122.33	63.36	28.09
MEAN	.38	1.54	1.46	4.05	23.5	25.2	32.3	57.8	45.6	3.95	2.04	.94
MAX	.93	10	3.2	10	94	135	380	502	717	54	34	1.5
MIN	.17	.31	.44	.49	4.8	7.4	9.5	3.3	4.7	.02	.00	.15
AC-FT	23	91	90	249	1310	1550	1920	3560	2710	243	126	56

WTR YR 1979 TOTAL 6012.95 MEAN 16.5 MAX 717 MIN .00 AC-FT 11930

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACU3)
OCT										
19...	1530	.19	3140	8.2	15.0	6	2.6	11.0	111	440
NOV										
10...	0930	.32	2700	8.0	11.5	--	--	8.3	79	--
22...	1300	.72	2500	8.6	9.0	120	100	8.7	77	150
DEC										
05...	1530	1.6	2400	8.2	7.0	90	52	10.9	93	350
21...	0905	.44	2500	8.1	8.0	15	39	9.6	83	360
FEB										
02...	1030	4.7	850	8.1	.0	15	16	13.1	90	130
14...	0745	25	250	8.2	2.0	--	--	15.4	115	--
MAR										
01...	1045	27	360	7.5	8.0	25	51	10.3	88	62
13...	1030	8.8	1150	8.2	13.0	--	--	9.4	92	--
24...	1330	20	580	7.8	10.0	--	--	10.1	92	--
APR										
10...	1315	8.8	1260	8.2	16.0	20	23	10.1	105	150
11...	1537	1150	--	--	17.5	--	--	--	--	--
11...	1600	1100	58	6.8	17.5	150	350	7.8	85	20
25...	0830	40	900	8.1	19.0	--	--	8.7	94	--
MAY										
04...	1100	38	600	7.6	14.5	80	51	9.1	91	94
29...	1300	57	320	7.1	21.5	--	--	7.6	88	--
JUN										
06...	0930	20	850	7.5	21.0	60	90	7.9	91	110
26...	1220	5.7	3000	8.3	22.0	--	--	8.2	95	--
JUL										
12...	1425	2.7	2710	8.4	26.5	20	69	7.5	96	260
AUG										
17...	1210	4.2	3440	8.2	26.0	8	44	6.6	82	310
28...	1430	1.0	2300	6.8	29.0	--	--	7.9	104	--
SEP										
17...	1530	1.1	2920	8.4	20.0	25	18	9.1	101	270
26...	0845	--	2350	8.3	20.5	--	--	7.4	82	--
26...	0930	1.7	2350	8.3	20.5	--	--	7.4	82	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECUM, (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECUM, FM BUT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECUM- ERABLE (UG/L AS B)
OCT											
19...	1530	290	--	0	--	2	--	1	--	--	--
NOV											
10...	0930	210	--	10	--	1	--	1	--	--	--
22...	1300	2800	--	70	--	3	--	2	--	450	--
DEC											
05...	1530	2600	--	40	--	4	--	3	--	500	--
21...	0905	1000	--	50	--	3	--	2	--	650	--
FEB											
02...	1030	--	--	--	--	--	--	--	--	--	--
14...	0745	3100	--	210	--	1	--	0	--	90	0
MAR											
01...	1045	1300	--	80	--	1	--	1	--	100	30
13...	1030	950	--	20	--	2	--	1	--	220	30
24...	1330	790	--	60	--	1	--	0	--	120	20
APR											
10...	1315	530	500	30	1900	1	0	1	29	250	10
11...	1537	--	--	--	--	--	--	--	--	--	--
11...	1600	7900	7800	150	--	3	2	1	--	50	10
25...	0830	510	480	30	--	1	0	1	--	180	20
MAY											
04...	1100	1200	1200	50	--	1	0	1	--	100	10
29...	1300	8700	8600	80	--	--	--	1	--	50	0
JUN											
06...	0930	--	--	--	--	--	--	--	--	--	--
26...	1220	750	720	30	--	2	2	1	--	680	60
JUL											
12...	1425	1700	1700	30	0	2	2	2	17	550	0
AUG											
17...	1210	2200	2200	20	--	2	0	2	--	850	80
28...	1430	1800	1800	0	--	2	1	1	--	660	40
SEP											
17...	1530	500	470	30	--	7	1	6	--	670	20
26...	0930	550	530	20	--	7	1	6	--	670	30

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECUM, (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECUM, FM BUT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECUM, (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECUM, FM BOT- TOM MA- TERIAL (UG/G AS CD)	COBALT, RECUM, FM BOT- TOM MA- TERIAL (UG/G AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT											
19...	--	10	--	10	--	0	--	0	--	--	10
NOV											
10...	--	10	--	0	--	0	--	0	--	--	0
22...	410	0	--	0	--	10	--	0	--	--	33
DEC											
05...	470	13	--	10	--	0	--	0	--	--	10
21...	510	13	--	1	--	10	--	0	--	--	0
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	90	0	--	0	--	0	--	0	--	--	30
MAR											
01...	70	0	--	0	--	0	--	10	--	--	30
13...	190	0	--	0	--	10	--	10	--	--	10
24...	100	0	--	<1	--	10	--	0	--	--	0
APR											
10...	240	0	--	<1	0	0	0	0	9	30	0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	40	0	--	1	--	10	10	0	--	--	30
25...	160	0	--	<1	--	0	0	10	--	--	10
MAY											
04...	90	0	--	0	--	10	10	0	--	--	0
29...	70	--	--	0	--	--	--	10	--	--	--
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
26...	620	0	0	0	--	10	0	10	--	--	20
JUL											
12...	580	0	0	0	0	0	0	0	0	0	0
AUG											
17...	770	0	0	0	--	20	20	0	--	--	0
28...	620	0	0	0	--	10	0	20	--	--	10
SEP											
17...	650	0	0	0	--	10	0	20	--	--	0
26...	640	0	0	<1	--	10	0	10	--	--	0

ARKANSAS RIVER BASIN

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, SUS- PENDE RECov- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECov, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECov- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECov, FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT											
19...	--	0	--	430	--	90	--	0	--	0	--
NOV											
10...	--	0	--	400	--	40	--	0	--	0	--
22...	--	10	--	3600	--	50	--	100	--	200	--
DEC											
05...	--	10	--	2400	--	50	--	200	--	300	--
21...	--	0	--	1600	--	20	--	100	--	100	--
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	--	0	--	3900	--	240	--	0	--	0	--
MAR											
01...	--	0	--	1800	--	140	--	0	--	0	--
13...	--	0	--	2000	--	50	--	0	--	0	--
24...	--	<10	--	1100	--	200	--	0	--	<10	--
APR											
10...	--	<10	8	1100	1100	40	11000	0	--	<10	40
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	<10	--	10000	9700	270	--	0	--	<10	--
25...	--	<10	--	1300	1100	250	--	0	--	<10	--
MAY											
04...	--	0	--	2100	1700	370	--	0	--	0	--
29...	--	0	--	8800	8700	100	--	--	--	0	--
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
26...	20	0	--	920	880	40	--	0	0	0	--
JUL											
12...	0	0	0	2400	2400	30	0	0	0	0	0
AUG											
17...	0	0	--	2200	2200	30	--	0	0	0	--
28...	10	0	--	3000	3000	10	--	0	0	0	--
SEP											
17...	0	0	--	760	--	20	--	0	0	0	--
26...	0	<10	--	870	--	40	--	0	0	<10	--
DATE	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov, (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECov, FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECov- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECov, (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
UCT											
19...	80	--	10	--	.0	--	.0	--	4	--	2
NOV											
10...	50	--	30	--	.0	--	.0	--	8	--	7
22...	140	--	60	--	.3	--	.1	--	9	--	9
DEC											
05...	210	--	100	--	.7	--	.2	--	3	--	5
21...	140	--	40	--	.2	--	.0	--	6	--	5
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
14...	160	--	80	--	.1	--	.0	--	0	--	0
MAR											
01...	170	--	120	--	.1	--	.0	--	0	--	0
13...	310	--	240	--	.1	--	.1	--	1	--	0
24...	270	--	230	--	.1	--	.1	--	0	--	0
APR											
10...	240	40	200	2100	.1	.1	.0	.02	2	0	<10
11...	--	--	--	--	--	--	--	--	--	--	--
11...	520	360	160	--	.3	.3	.0	--	0	0	<10
25...	230	20	210	--	36	.0	53	--	2	0	<10
MAY											
04...	220	50	170	--	.3	.2	.1	--	0	0	0
29...	380	200	180	--	--	--	.4	--	0	0	0
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
26...	350	50	300	--	6.7	.5	6.2	--	0	0	0
JUL											
12...	360	100	260	46	1.5	.7	.8	.00	3	1	2
AUG											
17...	400	150	250	--	.2	.1	.1	--	5	2	3
28...	220	160	60	--	2.2	.0	3.6	--	5	2	3
SEP											
17...	70	50	20	--	1.4	.8	.6	--	4	0	5
26...	120	100	20	--	1.6	1.4	.2	--	5	0	<10

ARKANSAS RIVER BASIN

497

07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
19...	--	3	--	3	40	--	20	--	114	.06	100
NOV											
10...	--	8	--	6	10	--	10	--	178	.15	97
22...	--	43	--	35	20	--	20	--	--	--	--
DEC											
05...	--	6	--	0	20	--	20	--	262	1.1	95
21...	--	4	--	3	20	--	0	--	226	.27	96
FEB											
02...	--	--	--	--	--	--	--	--	59	.75	94
14...	--	0	--	0	40	--	20	--	112	7.6	97
MAR											
01...	--	1	--	1	30	--	30	--	63	4.6	82
13...	--	2	--	1	40	--	20	--	126	3.0	97
24...	--	0	--	0	20	--	<3	--	62	3.3	90
APR											
10...	0	2	0	2	20	20	<3	18	101	2.4	96
11...	--	--	--	--	--	--	--	--	535	1660	92
11...	--	0	0	0	0	0	<3	--	--	--	--
25...	--	0	0	0	20	20	<3	--	143	15	97
MAY											
04...	--	1	0	1	20	10	10	--	104	11	94
29...	--	--	--	1	--	--	10	--	328	50	98
JUN											
06...	--	--	--	--	--	--	--	--	134	7.2	98
26...	--	1	0	1	30	10	20	--	445	6.9	97
JUL											
12...	0	5	0	5	30	10	20	0	485	3.5	97
AUG											
17...	--	6	1	5	20	10	10	--	514	5.8	100
28...	--	3	0	3	20	0	20	--	--	--	--
SEP											
17...	--	1	0	2	0	0	10	--	252	.75	100
26...	--	2	0	3	20	10	10	--	365	1.7	98

ARKANSAS RIVER BASIN

07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK

LOCATION.--Lat 35°20'57", long 94°46'43", in SW¼SW¼ sec.9, T.10 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, from lock wall at dam, 0.5 mi (0.8 km) upstream from gage on bridge on U.S. Highway 59, 3.5 mi (5.6 km) downstream from Sans Bois Creek, 7.5 mi (12.1 km) south of Sallisaw, and at mile 395.4 (636.2 km).

DRAINAGE AREA.--147,756 mi² (382,688 km²) of which 22,241 mi² (57,604 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1970 to current year.

REVISED RECORDS.--OK-77-1: Drainage area.

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT											
25...	1000	1028	9740	780	8.1	17.0	13	7.7	81	13	--
25...	1100	--	80020	830	8.1	17.0	--	8.8	93	--	--
NOV											
08...	0745	--	80020	900	7.8	14.0	--	10.0	96	--	--
08...	0845	1028	9740	900	7.8	14.0	9.0	10.0	96	13	--
DEC											
27...	1445	1028	9740	890	8.7	7.0	11	11.9	98	16	--
27...	1545	--	80020	823	8.5	5.5	--	11.7	94	--	--
FEB											
22...	1400	1028	9740	865	8.7	4.0	3.0	--	--	22	--
22...	1500	--	80020	865	8.7	4.0	--	--	--	--	34
MAR											
13...	1340	--	80020	639	8.2	11.0	--	--	--	--	29
13...	1440	1028	9740	639	8.2	11.0	11	--	--	20	--
APR											
23...	1800	1028	9740	710	7.6	18.0	33	9.1	97	16	--
23...	1900	--	80020	710	7.6	18.0	--	9.1	97	--	21
MAY											
22...	1345	1028	9740	620	7.6	21.0	37	8.1	93	13	--
22...	1445	--	80020	620	7.6	21.0	--	8.1	93	--	31
JUN											
20...	1430	1028	9740	842	8.2	26.0	35	5.0	61	26	--
20...	1530	--	80020	842	8.2	26.0	--	5.0	61	--	15
JUL											
17...	1230	--	80020	654	8.2	31.0	--	--	--	--	--
17...	1330	1028	9740	654	8.2	31.0	4.0	--	--	15	--
AUG											
08...	1400	1028	9740	850	8.2	30.5	10	6.3	84	14	--
08...	1500	--	80020	850	8.2	30.5	--	6.3	84	--	20
SEP											
18...	1230	--	80020	1140	7.8	24.0	--	--	--	--	20
18...	1330	1028	9740	1140	7.8	24.0	14	--	--	11	--

07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK--Continued

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CACU3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT											
25...	174	--	50	--	126	12	--	115	--	--	--
25...	190	84	--	58	--	--	11	--	94	51	3.0
NOV											
08...	170	64	--	50	--	--	11	--	110	58	3.7
08...	--	--	--	--	--	--	--	--	--	--	--
DEC											
27...	207	--	60	--	150	13	--	106	--	--	--
27...	150	38	--	44	--	--	9.2	--	100	59	3.6
FEB											
22...	169	--	51	--	128	13	--	105	--	--	--
22...	--	--	--	69	--	--	--	--	110	5	--
MAR											
13...	140	45	--	44	--	--	8.0	--	69	50	2.5
13...	--	--	--	--	--	--	--	--	--	--	--
APR											
23...	136	--	41	--	102	8.0	--	80	--	--	--
23...	130	50	--	38	--	--	8.1	--	76	55	2.9
MAY											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	149	--	34	--	85	9.1	--	96	--	--	--
20...	130	39	--	37	--	--	8.4	--	100	62	3.9
JUL											
17...	120	36	--	33	--	--	8.3	--	74	57	3.0
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	151	--	44	--	123	9.6	--	95	--	--	--
08...	170	78	--	53	--	--	9.7	--	97	61	3.2
SEP											
18...	160	71	--	49	--	--	9.9	--	150	72	5.1
18...	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT										
25...	--	5.0	--	--	--	--	--	63	170	.2
25...	--	--	4.6	130	0	110	1.7	56	170	--
NOV										
08...	--	--	4.3	130	0	110	3.3	57	170	--
08...	--	--	--	--	--	--	--	53	181	.3
DEC										
27...	--	5.5	--	--	--	--	--	64	412	.3
27...	--	--	4.7	--	--	110	--	54	150	--
FEB										
22...	--	4.7	--	--	--	--	--	60	154	.3
22...	--	--	4.2	--	--	100	--	63	160	--
MAR										
13...	--	--	3.8	--	--	98	--	57	97	--
13...	--	--	--	--	--	--	--	41	100	.3
APR										
23...	--	4.2	--	--	--	--	--	40	130	.2
23...	--	--	3.8	--	--	78	--	56	110	--
MAY										
22...	--	--	--	--	--	--	--	--	110	.2
22...	--	--	--	--	--	77	--	45	120	--
JUN										
20...	--	4.3	--	--	--	--	--	54	148	.2
20...	100	--	4.1	--	--	88	--	56	160	--
JUL										
17...	78	--	3.6	--	--	81	--	48	110	--
17...	--	--	--	--	--	--	--	51	107	.2
AUG										
08...	--	4.1	--	--	--	--	--	48	162	.2
08...	100	--	4.1	--	--	94	--	58	150	--
SEP										
18...	150	--	4.7	--	--	92	--	72	240	--
18...	--	--	--	--	--	--	--	59	263	.2

ARKANSAS RIVER BASIN

07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
OCT										
25...	--	--	21	--	1.8	--	--	<.100	--	--
25...	473	.64	--	--	--	--	--	--	--	--
NOV										
08...	471	.64	--	--	--	--	--	--	--	--
08...	--	--	1	3.5	1.1	4.6	20	<.100	--	--
DEC										
27...	--	--	45	<.10	1.6	1.6	--	<.001	--	--
27...	441	.60	--	--	--	--	--	--	--	--
FEB										
22...	--	--	6	.20	1.7	1.9	8.4	.100	<2	<1
22...	455	.62	--	--	--	--	--	--	--	--
MAR										
13...	347	.47	--	--	--	--	--	--	--	--
13...	--	--	20	.50	1.6	2.1	9.3	.100	--	--
APR										
23...	--	--	40	1.0	1.3	2.3	10	.105	--	--
23...	427	.58	--	--	--	--	--	--	--	--
MAY										
22...	--	--	51	.80	<.11	.80	--	.205	--	--
22...	365	.50	--	--	--	--	--	--	--	--
JUN										
20...	--	--	39	.70	1.1	1.8	8.1	.090	--	--
20...	455	.62	--	--	--	--	--	--	--	--
JUL										
17...	358	.49	--	--	--	--	--	--	--	--
17...	--	--	45	.60	1.6	2.2	9.7	.050	--	--
AUG										
08...	--	--	23	.50	1.6	2.1	9.4	.110	<10	<2
08...	427	.58	--	--	--	--	--	--	--	--
SEP										
18...	631	.86	--	--	--	--	--	--	--	--
18...	--	--	23	<.50	1.4	1.4	--	.120	--	--

[illegible]

ARKANSAS RIVER BASIN

501

07246615 COAL CREEK NEAR SPIRO, OK

LOCATION.--Lat 35°15'11", long 94°45'17", on south edge of NW¼ sec.15, T.9 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, on right downstream side of bridge on U.S. Highways 59 and 9, 0.4 mi (0.6 km) southeast of junction of U.S. Highways 59 and 9 and 7.1 mi west of Spiro and at mile 2.0 (3.2 km).

DRAINAGE AREA.--18.1 mi² (46.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 446.80 ft (136.185 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 19	1945	2,030 57.5	9.60 2.926	May 28	1730	1,370 38.8	8.52 2.597
May 21	1815	1,670 47.3	9.09 2.771	June 2	1145	*3,960 112.0	*11.95 3.642

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.53	1.3	12	3.2	52	55	4.1	16	3.0	2.8	2.5
2	.00	.49	1.2	4.5	3.2	36	27	6.3	1640	2.8	2.5	2.3
3	.00	.49	5.0	3.3	3.4	231	18	34	87	2.3	7.1	1.8
4	.00	.49	1.8	3.2	3.4	46	16	50	43	2.1	3.7	1.6
5	.00	.49	.96	3.2	4.1	28	14	23	28	2.1	2.3	1.6
6	.00	1.0	.83	3.1	4.5	22	11	14	23	3.1	2.0	1.5
7	.02	1.5	3.8	2.9	6.8	18	9.7	9.7	204	2.7	1.9	1.6
8	.05	.90	2.4	2.4	7.2	15	9.2	6.9	38	2.5	1.8	1.3
9	.10	.30	1.1	2.3	4.5	13	9.1	5.8	22	2.4	1.9	1.2
10	.10	.30	.77	2.6	3.8	12	9.4	5.6	19	23	1.9	1.1
11	.10	.20	.64	2.8	10	10	122	119	13	3.3	9.5	1.1
12	.10	.20	.51	3.1	26	10	32	33	11	2.3	2.5	1.2
13	.05	.20	.60	4.5	31	9.1	15	16	8.6	2.0	1.9	1.2
14	.05	.40	.46	3.0	59	8.6	12	9.5	7.1	1.9	1.7	1.1
15	.07	3.4	.45	2.2	31	8.1	9.3	7.0	6.1	1.7	3.3	1.1
16	.24	6.6	.42	2.7	11	8.0	7.9	5.7	5.5	1.7	2.2	1.1
17	.20	5.0	.46	5.1	7.3	8.1	6.4	4.8	5.1	70	2.3	1.0
18	.36	1.3	.68	44	6.1	8.6	6.2	4.0	4.7	18	1.9	1.0
19	.57	1.2	.85	70	5.2	538	7.8	3.7	4.5	5.7	1.7	1.0
20	.57	.90	.90	79	5.2	382	6.0	23	4.5	3.5	2.8	1.2
21	.57	.90	.87	31	5.7	49	5.8	705	4.1	2.9	2.1	1.6
22	.57	1.5	.80	15	88	53	5.3	400	4.0	2.6	2.1	1.6
23	.57	1.4	.76	12	79	39	9.6	52	3.9	2.5	2.4	1.4
24	.53	1.1	.89	7.6	185	23	11	24	3.7	2.4	1.7	1.0
25	.57	1.2	.90	6.6	202	18	7.3	17	3.5	2.4	1.5	1.0
26	.66	11	.90	9.3	105	21	5.8	13	3.5	2.2	1.5	1.0
27	.61	4.1	.86	15	78	84	5.0	188	3.2	36	3.1	.96
28	.61	2.0	.87	6.7	129	30	5.0	579	3.0	14	3.2	.94
29	.61	1.6	1.1	4.6	---	26	5.2	117	3.0	4.7	2.0	.96
30	.57	1.5	1.4	4.3	---	50	4.6	33	2.7	3.2	1.6	.90
31	.53	---	40	3.8	---	28	---	21	---	2.8	1.6	---
TOTAL	8.98	52.19	74.48	371.8	1107.6	1884.5	467.6	2534.1	2224.7	231.8	80.5	38.86
MEAN	.29	1.74	2.40	12.0	39.6	60.8	15.6	81.7	74.2	7.48	2.60	1.30
MAX	.66	11	.40	79	202	538	122	705	1640	70	9.5	2.5
MIN	.00	.20	.42	2.2	3.2	8.0	4.6	3.7	2.7	1.7	1.5	.90
CFSM	.02	.11	.16	.78	2.57	3.95	1.01	5.31	4.82	.49	.17	.08
IN.	.02	.13	.18	.90	2.68	4.55	1.13	6.12	5.37	.56	.19	.09
AC-FT	18	104	148	737	2200	3740	927	5030	4410	460	160	77

WTR YR 1979 TOTAL 9077.11 MEAN 24.9 MAX 1640 MIN .00 CFSM 1.62 IN 21.93 AC-FT 18000

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1978 to September 1979.

pH: November 1978 to September 1979.

WATER TEMPERATURE: November 1978 to September 1979.

DISSOLVED OXYGEN: November 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler, complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV											
15...	1035	3.9	692	7.6	17.0	9.0	87	--	--	--	--
DEC											
04...	0945	1.8	425	7.8	5.5	11.2	90	--	--	--	--
11...	1200	.61	660	8.2	2.4	12.0	91	--	--	--	--
18...	0845	.57	750	7.6	6.0	12.4	100	--	--	--	--
26...	0910	.89	860	7.9	5.0	10.8	85	--	--	--	--
JAN											
02...	0900	4.6	403	7.5	.5	13.5	94	150	100	27	19
17...	0910	4.9	480	7.8	1.5	13.4	97	--	--	--	--
19...	1409	36	--	--	--	--	--	--	--	--	--
22...	1545	13	242	7.5	2.8	--	--	--	--	--	--
29...	1005	4.3	352	7.6	.5	13.8	94	--	--	--	--
FEB											
01...	1335	3.2	390	7.8	1.0	13.9	98	--	--	--	--
08...	1442	7.6	330	7.4	1.0	--	--	--	--	--	--
26...	1605	76	155	7.1	7.0	--	--	--	--	--	--
MAR											
05...	1415	27	214	7.3	7.5	--	--	--	--	--	--
09...	1300	60	--	--	--	--	--	--	--	--	--
09...	1320	13	290	7.3	10.0	--	--	--	--	--	--
15...	1400	7.8	408	7.6	10.5	--	--	--	--	--	--
23...	0925	37	--	--	--	--	--	--	--	--	--
23...	1002	39	210	7.1	11.5	9.8	92	--	--	--	--
23...	1400	36	--	--	--	--	--	--	--	--	--
27...	1140	56	175	7.0	10.0	11.2	98	--	--	--	--
27...	1400	57	--	--	--	--	--	--	--	--	--
28...	1200	29	--	--	--	--	--	--	--	--	--
APR											
04...	0935	16	--	7.6	10.0	10.0	89	93	57	16	13
09...	0845	7.4	340	7.4	14.0	9.2	89	--	--	--	--
11...	1620	372	--	--	--	--	--	--	--	--	--
16...	1425	7.9	343	8.0	21.0	9.6	108	120	60	21	17
20...	1310	5.3	369	7.4	21.5	8.5	97	--	--	--	--
25...	1645	7.3	395	--	23.0	9.2	108	--	--	--	--
MAY											
02...	1615	6.7	420	7.7	17.5	8.0	85	--	--	--	--
04...	0835	46	--	--	--	--	--	--	--	--	--
05...	0900	25	244	7.5	14.0	9.5	92	83	46	15	11
11...	1005	243	--	--	--	--	--	--	--	--	--
17...	1420	4.6	439	7.7	24.5	8.0	96	--	--	--	--
29...	1621	61	237	7.4	22.5	7.5	87	84	48	14	12
JUN											
09...	1415	22	301	7.6	26.5	7.6	95	110	63	18	15
15...	1420	6.1	401	7.6	27.0	7.7	97	160	100	25	23
20...	1052	4.6	475	7.6	27.0	6.5	82	180	110	32	25
26...	1050	3.5	559	7.6	24.0	7.5	89	220	130	34	32
30...	0950	2.7	545	7.6	26.0	7.4	92	--	--	--	--
JUL											
02...	1325	2.7	525	7.7	28.0	7.0	91	--	--	--	--
10...	1432	8.6	290	7.4	26.0	6.8	85	100	58	16	15
16...	1400	1.7	510	7.6	29.5	6.7	87	--	--	--	--
26...	1150	2.2	560	7.7	27.5	7.2	92	--	--	--	--
AUG											
01...	1400	2.7	480	7.7	28.0	7.3	94	--	--	--	--
07...	0850	2.0	520	7.6	27.5	6.1	77	--	--	--	--
15...	0855	4.4	520	7.7	26.0	6.8	84	--	--	--	--
20...	0830	1.5	620	7.7	26.0	6.8	84	--	--	--	--
28...	0840	3.2	500	7.7	25.0	6.7	82	--	--	--	--
SEP											
04...	0930	1.6	610	7.6	26.5	6.3	78	--	--	--	--
17...	0910	1.0	760	7.9	18.5	8.4	90	--	--	--	--
24...	0815	1.0	700	7.8	19.5	7.9	87	270	140	--	39
28...	0820	.89	780	7.8	20.0	7.8	86	310	180	50	45

ARKANSAS RIVER BASIN

503

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM+ AD- SURP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
15...	--	--	--	--	--	163	0	134	6.6	--	--
DEC											
04...	--	--	--	--	--	94	0	77	2.4	--	--
11...	--	--	--	--	--	109	0	89	1.1	--	--
18...	--	--	--	--	--	129	0	106	4.5	--	--
26...	--	--	--	--	--	160	0	131	3.2	--	--
JAN											
02...	24	26	.9	--	2.9	--	--	42	--	130	7.1
17...	--	--	--	--	--	89	0	73	2.3	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	42	0	34	1.9	--	--
29...	--	--	--	--	--	54	0	44	1.8	--	--
FEB											
01...	--	--	--	--	--	77	0	63	2.0	--	--
08...	--	--	--	--	--	48	0	39	3.1	--	--
26...	--	--	--	--	--	21	0	17	2.7	--	--
MAR											
05...	--	--	--	--	--	31	0	25	2.5	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	47	0	39	3.4	--	--
15...	--	--	--	--	--	69	0	57	2.5	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	33	0	27	4.2	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	24	0	20	3.8	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	16	27	.7	--	1.5	44	0	36	1.8	78	6.3
09...	--	--	--	--	--	59	0	48	3.3	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
16...	22	28	.9	--	1.7	73	0	60	1.2	110	5.6
20...	--	--	--	--	--	69	0	57	4.4	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
02...	--	--	--	--	--	94	0	77	3.0	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
05...	14	26	.7	--	1.7	45	0	37	2.3	65	5.8
11...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	89	0	73	2.8	--	--
29...	12	23	.6	14	1.8	44	0	36	2.8	67	3.6
JUN											
09...	17	25	.7	--	1.7	57	0	47	2.3	95	3.8
15...	21	22	.7	23	1.9	68	0	56	2.7	140	4.0
20...	26	23	.8	28	2.0	90	0	74	3.6	160	3.9
26...	34	46	1.0	36	1.9	100	0	82	4.0	200	3.9
30...	--	--	--	--	--	101	0	83	3.6	--	--
JUL											
02...	--	--	--	--	--	100	0	82	3.2	--	--
10...	--	--	--	16	2.8	53	0	43	3.4	94	4.6
16...	--	--	--	--	--	102	0	84	3.7	--	--
26...	--	--	--	--	--	109	0	89	3.5	--	--
AUG											
01...	--	--	--	--	--	94	0	77	3.0	--	--
07...	--	--	--	--	--	111	0	91	4.5	--	--
15...	--	--	--	--	--	116	0	95	3.7	--	--
20...	--	--	--	--	--	120	0	98	3.8	--	--
28...	--	--	--	--	--	115	0	94	3.7	--	--
SEP											
04...	--	--	--	--	--	132	0	108	5.3	--	--
17...	--	--	--	--	--	158	0	130	3.2	--	--
24...	42	45	1.1	44	2.2	149	0	122	3.8	240	3.0
28...	52	46	1.3	52	2.2	160	0	130	4.1	290	2.4

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	.1	6.2	260	257	.35	3.23	3.4	15	.01	.03
17...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
04...	.1	7.8	160	162	.22	6.91	.26	1.2	.01	.03
09...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
16...	.2	5.2	209	219	.28	4.48	.10	.44	.01	.03
20...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
05...	.1	7.3	141	143	.19	9.52	.21	.93	.01	.03
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
29...	.1	6.7	144	140	.20	23.7	.16	.71	.01	.03
JUN										
09...	.2	6.5	188	186	.26	11.2	.12	.53	.01	.03
15...	.2	5.1	257	254	.35	4.23	.00	.00	.00	.00
20...	.2	4.7	311	298	.42	3.86	.01	.04	.00	.00
26...	.3	5.5	357	362	.49	3.37	.11	.49	.00	.00
30...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	--	--	--	--	--	--	--	--	--	--
10...	.2	4.7	179	--	.24	4.16	.23	1.0	.01	.03
16...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
SEP										
04...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
24...	.3	3.9	460	454	.63	1.24	.03	.13	.00	.03
28...	.3	4.4	519	525	.71	1.25	.01	.04	.00	.01

ARKANSAS RIVER BASIN

505

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC										
04...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	0	0	--	5
18...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	3.4	.16	.21	.130	.40	--	20	0	80	2
17...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	30	0	--	1
26...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	--	--	--	--	--	--	20	0	--	5
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
04...	.27	.01	.01	.020	.06	--	0	0	50	1
09...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
16...	.11	.06	.08	.020	.06	.06	20	0	70	4
20...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	10	0	--	2
MAY										
02...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
05...	.22	.10	.13	.040	.12	.12	30	0	20	1
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
29...	.17	.00	.00	.050	.15	.15	10	1	60	8
JUN										
09...	.13	.21	.27	.040	.12	.12	40	2	80	1
15...	.00	.00	.00	.020	.06	.06	0	1	70	1
20...	.01	.01	.01	.020	.06	.06	0	1	170	1
26...	.11	.00	.00	.040	.12	.12	20	2	140	<1
30...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	--	--	--	--	--	--	--	--	--	--
10...	.24	.00	.00	.090	.28	.28	10	1	240	<1
16...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	0	0	--	1
28...	--	--	--	--	--	--	--	--	--	--
SEP										
04...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
24...	.04	.00	.00	.020	--	.06	20	1	180	<1
28...	.02	.00	.00	.020	--	.06	0	1	190	<1

ARKANSAS RIVER BASIN

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC										
04...	--	--	--	--	--	--	--	--	--	--
11...	0	2	--	81	--	.0	1	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	0	2	50	28	160	.0	0	0	28	1.6
17...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
08...	10	0	--	1	--	.0	0	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	0	0	--	53	--	.0	0	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
04...	0	1	150	12	70	.0	<10	<3	--	--
09...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
16...	0	0	50	27	50	.3	<10	<3	--	--
20...	--	--	--	--	--	--	--	--	--	--
25...	0	0	--	15	--	.1	0	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
05...	0	1	80	0	60	.4	0	10	10	1.2
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
29...	--	3	100	18	40	.4	0	10	4.3	1.6
JUN										
09...	20	29	90	0	40	.0	0	10	17	.8
15...	10	0	40	0	50	.0	0	20	2.8	.5
20...	20	0	10	1	60	.0	0	10	6.8	.6
26...	10	0	10	0	60	.1	<10	<3	4.0	--
30...	--	--	--	--	--	--	--	--	--	--
JUL										
02...	--	--	--	--	--	--	--	--	--	--
10...	0	0	10	0	30	.0	<10	<3	5.9	.1
16...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	10	1	--	0	--	.0	0	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
SEP										
04...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
24...	10	2	10	0	50	.0	<10	<3	2.4	.3
28...	10	1	<10	0	70	.0	<10	<3	7.9	.3

07246615 COAL CREEK NEAR SPIRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01-08	--	--	30	--	86
09-15	--	--	21	--	89
16-17	--	--	39	--	99
18...	0945	--	56	--	99
18-20	--	--	39	--	93
22...	1630	--	80	--	97
23-25	--	--	29	--	96
26-29	--	--	12	--	94
30-31	--	--	5	--	87
NOV					
01-05	--	--	5	--	87
06...	1005	--	58	--	100
07...	0950	--	92	--	99
08-09	--	--	89	--	100
10...	0850	--	112	--	56
11...	0815	--	60	--	99
12-13	--	--	382	--	10
14...	1115	--	64	--	98
15...	1150	--	138	--	100
15...	1245	--	84	--	100
DEC					
04...	0945	1.8	132	.64	98
11...	1200	.61	69	.11	98
18...	0845	.57	78	.12	95
26...	0910	.89	101	.24	97
JAN					
02...	0900	4.6	96	1.2	95
17...	0910	4.9	108	1.5	92
19...	1409	36	116	11	94
22...	1545	13	61	2.1	86
FEB					
01...	1335	3.2	78	.67	93
08...	1442	7.6	84	1.7	93
26...	1605	76	70	14	96
MAR					
05...	1415	27	35	2.6	97
09...	1300	60	90	15	82
09...	1320	13	40	1.4	98
15...	1400	7.8	67	1.4	95
23...	0925	37	1150	115	75
23...	1200	--	56	--	97
23...	1400	36	111	11	69
27...	1140	56	123	19	95
27...	1400	57	173	27	89
28...	1200	29	54	4.2	93
APR					
04...	0935	16	24	1.0	100
09...	0845	7.4	47	.94	100
11...	1620	372	698	701	80
16...	1425	7.9	42	.90	95
20...	1310	5.3	51	.73	98
25...	1645	7.3	172	3.4	98
MAY					
02...	1615	6.7	70	1.3	99
04...	0835	46	119	15	91
05...	0900	25	48	3.2	93
11...	1005	243	464	304	82
17...	1420	4.6	78	.98	95
29...	1621	61	65	11	96
JUN					
09...	1415	22	46	2.7	98
15...	1420	6.1	74	1.2	99
26...	1050	3.5	140	1.3	95
30...	0950	2.7	120	.87	98
JUL					
02...	1325	2.7	134	.98	92
10...	1432	8.6	143	3.3	90
16...	1400	1.7	95	.44	98
26...	1150	2.2	115	.68	98
AUG					
01...	1400	2.7	77	.56	98
07...	0850	2.0	86	.47	98
15...	0855	4.4	101	1.2	99
20...	0830	1.5	94	.38	98
28...	0840	3.2	90	.78	98
SEP					
04...	0930	1.6	104	.47	99
17...	0910	1.0	108	.29	99
24...	0815	1.0	95	.26	98
28...	0820	.89	93	.22	99

07246615 COAL CREEK NEAR SPIRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	656	---		---	198	381		---	---	613
2		---	689	---		---	202	460		---	---	587
3		---	510	---		---	231	---		---	---	616
4		---	459	455		---	259	---		---	---	625
5		---	---	443		---	283	221		---	---	632
6		---	---	440		---	307	288		---	---	658
7		---	---	466		---	340	353		---	---	663
8		---	---	491		---	362	448		---	537	671
9		---	---	534		---	360	564		---	541	694
10		991	---	536		---	371	642		---	561	715
11		948	675	513		---	236	---		---	394	730
12		910	678	507		---	202	---		---	462	744
13		868	693	461		---	256	---		---	542	747
14		789	669	488		---	277	---		---	585	756
15		689	692	534		---	318	---		---	411	769
16		655	707	566		---	336	---		---	414	755
17		350	712	475		---	365	---		---	550	786
18		390	731	336		---	380	---		448	579	790
19		555	776	195		---	356	---		515	594	792
20		668	838	177		---	374	---		543	577	783
21		734	853	187		---	426	---		560	554	739
22		761	862	213		---	466	---		586	579	709
23		764	860	254		---	372	---		---	547	661
24		766	863	298		---	294	---		---	605	707
25		791	873	---		---	374	---		---	---	696
26		531	864	---		---	431	---		---	---	760
27		422	855	---		184	399	---		---	---	778
28		537	843	---		213	395	---		---	525	744
29		603	851	---		231	441	---		---	588	714
30		651	843	---		204	457	---		---	620	747
31		---	765	---		217	---	---		---	631	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	7.9	---		---	7.1	7.6		---	---	7.8
2		---	7.9	---		---	7.2	7.8		---	---	7.7
3		---	7.9	---		---	7.3	8.3		---	---	7.7
4		---	7.8	7.6		---	7.6	7.5		---	---	7.7
5		---	---	7.6		---	7.7	7.5		---	---	7.7
6		---	---	7.7		---	7.9	7.5		---	---	7.8
7		---	---	7.7		---	8.0	7.5		---	---	7.8
8		---	---	7.8		---	8.1	7.4		---	7.4	7.8
9		---	---	7.9		---	8.1	7.4		---	7.5	7.8
10		7.9	---	7.9		---	---	7.6		---	---	7.9
11		7.7	8.3	7.9		---	---	7.2		---	7.5	7.8
12		7.6	8.2	7.9		---	---	6.9		---	7.8	7.8
13		7.5	8.1	7.8		---	---	7.4		---	7.7	7.9
14		7.5	8.0	7.7		---	---	7.6		---	7.7	7.9
15		7.6	7.9	7.8		---	---	7.7		---	8.0	7.9
16		7.7	7.9	7.9		---	7.9	7.7		---	8.0	7.9
17		7.5	7.8	7.6		---	7.9	7.7		---	7.9	7.9
18		7.5	7.7	7.3		---	7.9	---		7.3	7.9	7.9
19		7.6	7.7	6.8		---	7.6	---		7.3	7.8	7.8
20		7.7	7.7	6.8		---	7.4	---		7.4	7.8	7.8
21		7.7	7.7	6.9		---	7.2	---		7.4	7.7	7.8
22		7.8	7.8	7.2		---	---	---		7.4	7.8	7.8
23		7.8	7.9	7.5		---	---	---		---	7.8	7.8
24		7.8	7.9	7.5		---	---	---		---	7.8	7.9
25		7.8	8.0	---		---	---	---		---	---	7.9
26		7.7	8.0	---		---	---	---		---	---	7.8
27		7.6	8.0	---		7.0	---	---		---	---	7.8
28		7.7	7.9	---		7.1	---	---		---	7.7	7.9
29		7.8	7.6	---		7.1	---	---		---	7.7	7.8
30		7.9	7.7	---		7.1	---	---		---	7.7	7.8
31		---	7.6	---		7.1	---	---		---	7.7	---

07246615 COAL CREEK NEAR SPIRO, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	12.9			---	---	---		---	---	6.7
2		---	12.3			---	---	8.3		---	---	6.7
3		---	11.0			---	---	7.8		---	---	6.7
4		---	11.4			---	10.2	---		---	---	6.4
5		---	---			---	10.0	8.7		---	---	6.4
6		---	---			---	9.2	7.9		---	---	6.4
7		---	---			---	8.9	---		---	---	6.7
8		---	---			---	8.4	---		---	6.9	7.1
9		---	---			---	9.4	---		---	6.5	7.4
10		9.4	---			---	9.4	---		---	6.9	7.5
11		9.0	---			---	9.2	---		---	6.8	7.4
12		8.7	---			---	9.2	---		---	6.8	7.3
13		7.7	---			---	9.1	---		---	6.4	7.4
14		7.1	---			---	8.9	---		---	5.9	7.7
15		8.5	---			---	8.3	---		---	---	7.9
16		9.7	---			---	7.9	---		---	7.1	8.0
17		10.3	---			---	8.3	---		---	7.1	8.2
18		10.5	---			---	8.0	---		6.1	7.2	7.8
19		10.6	---			---	8.5	---		6.4	7.1	7.5
20		10.4	---			---	7.9	---		6.8	7.1	7.2
21		10.7	---			---	8.4	---		7.0	6.9	7.6
22		10.8	---			---	8.5	---		7.0	6.8	7.8
23		10.7	---			---	8.6	---		---	6.7	8.0
24		10.6	---			---	8.7	---		---	6.6	7.9
25		10.9	---			---	8.4	---		---	---	7.9
26		10.5	---			---	8.5	---		---	---	7.9
27		8.8	---			10.5	8.5	---		---	---	7.9
28		9.3	---			9.9	9.2	---		---	6.6	8.0
29		9.1	---			9.2	9.1	---		---	6.3	7.8
30		10.5	---			---	8.8	---		---	6.3	7.9
31		---	---			---	---	---		---	6.2	---

ARKANSAS RIVER BASIN

07247350 POTEAU RIVER NEAR HEAVENER, OK

LOCATION.--Lat 34°51'29", long 94°37'42", in NE¼SE¼ sec.35, T.5 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, at bridge on U.S. Highway 59 and 270, 0.6 mi (1.0 km) downstream from Black Fork, and 2.5 mi (4.0 km) southwest of intersection of Highways 59 and 128 in Heavener, and at mile 78.5 (126.3 km).

DRAINAGE AREA.--555 mi² (1,437 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO ₃)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)
OCT 21...	1630	--	7.1	22.0	6.0	8.0	92	24	41	5.8	14	5.0
DEC 07...	0730	62	9.2	7.5	--	10.5	90	17	32	5.0	13	3.1
JAN 22...	1510	52	6.9	4.0	28	11.5	85	14	--	--	--	--
FEB 14...	1700	72	7.0	8.5	27	13.4	116	6	25	4.0	10	2.4
MAR 06...	1700	44	7.5	8.0	15	9.7	83	5	--	--	--	--
APR 04...	0745	40	7.8	11.5	35	12.2	113	16	12	2.0	5	1.8
MAY 09...	1507	56	6.8	23.0	--	10.0	119	7	--	--	--	--
JUN 20...	0900	60	7.2	28.0	59	6.4	82	59	17	3.0	7	1.8
JUL 25...	0900	77	7.9	27.0	19	6.1	77	15	--	--	--	--
AUG 29...	1230	66	6.9	29.0	16	5.9	78	13	25	4.0	10	3.2
SEP 26...	0900	60	7.7	20.5	10	4.0	54	1	--	--	--	--

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO ₄)	CHLORIDE, DISSOLVED (MG/L AS Cl)	FLUORIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO ₃)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS As)
OCT 21...	<10	3.1	17	--	.1	10	--	2.4	--	--	--	--
DEC 07...	<10	1.6	11	1.0	<.0	74	.50	--	--	--	.075	--
JAN 22...	--	--	9.0	<1.0	<.1	18	.60	1.3	1.9	8.4	.100	--
FEB 14...	<10	1.6	10	6.0	<.0	21	.70	1.3	2.0	9.2	.100	<2
MAR 06...	--	--	1.0	4.0	.1	16	.40	1.0	1.4	6.2	.110	--
APR 04...	<10	1.2	14	1.0	<.1	43	.30	1.0	1.3	5.8	.100	--
MAY 09...	--	--	11	2.0	.0	16	.20	.66	.86	3.8	.040	--
JUN 20...	<10	.9	5.0	3.0	<.0	522	.10	2.6	2.6	12	.295	--
JUL 25...	--	--	10	3.0	.0	22	<.50	1.3	1.3	--	.090	--
AUG 29...	<10	2.0	11	<1.0	.0	23	<.50	1.4	1.4	--	.090	<10
SEP 26...	--	--	12	--	.1	10	--	3.5	3.5	--	.085	--

511

07247350 POTEAU RIVER NEAR HEAVENER, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK

LOCATION.--Lat 34°55'25", long 95°15'10", on east line of NW¼ sec.12, T.5 N., R.19 E., Latimer County, Hydrologic Unit 11110105, on right downstream end of bridge on U.S. Highway 270 and 2.5 mi (4 km) east of water tower in Wilburton, and at mile 53.1 (85.4 km).

DRAINAGE AREA.--56.2 mi² (145.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.73 ft (173.349 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--July to September 1978: Maximum discharge during period, about 4 ft³/s (.11 m³/s) July 1, gage height, unknown; no flow at times.

Water year 1979: Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 19	2315	1,760	49.8	18.27	5.569	June 2	1500	*1,810	51.3	*18.50	5.639
May 28	1800	1,560	44.2	17.34	5.285	June 7	1030	1,800	51.0	18.46	5.627

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										3.3	.04	.00
2										2.7	.04	.00
3										2.1	.03	.00
4										1.8	.03	.00
5										1.5	.03	.00
6										1.3	.02	.00
7										1.0	.02	.00
8										1.1	.02	.00
9										1.0	.01	.00
10										.90	.01	.00
11										.80	.01	.00
12										.76	.01	.00
13										.70	.01	.00
14										.64	.01	.00
15										.56	.00	.00
16										.50	.00	.00
17										.40	.00	.00
18										.30	.00	.00
19										.22	.00	.00
20										.15	.00	.00
21										.13	.00	.00
22										.12	.00	.00
23										.16	.00	.00
24										.17	.00	.00
25										.14	.00	.00
26										.12	.00	.00
27										.11	.00	.00
28										.10	.00	.00
29										.08	.00	.00
30										.06	.00	.00
31										.05	.00	.00
TOTAL	---	---	---	---	---	---	---	---	---	22.97	.29	.00
MEAN	---	---	---	---	---	---	---	---	---	.74	.009	.000
MAX	---	---	---	---	---	---	---	---	---	3.3	.04	.00
MIN	---	---	---	---	---	---	---	---	---	.05	.00	.00
CFSM	---	---	---	---	---	---	---	---	---	.01	.000	.000
IN,	---	---	---	---	---	---	---	---	---	.02	.00	.00
AC-FT	---	---	---	---	---	---	---	---	---	.46	.6	.00

ARKANSAS RIVER BASIN

513

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	.00	3.9	2.8	17	366	447	15	243	5.8	6.1	4.4		
2	.00	.00	3.5	2.3	15	237	333	16	1200	4.6	6.9	3.8		
3	.00	.00	5.0	2.8	14	333	170	196	713	3.7	5.7	3.4		
4	.00	.00	3.9	3.0	14	213	100	200	500	3.1	4.0	2.8		
5	.00	.00	3.9	3.3	13	117	81	128	402	2.7	3.0	2.6		
6	.00	.00	4.0	3.1	13	79	65	76	308	3.1	2.5	2.1		
7	.00	.00	4.2	3.1	16	61	53	53	1310	3.0	2.3	2.0		
8	.00	.00	3.9	2.8	17	50	46	39	583	2.6	2.2	1.8		
9	.00	.00	5.0	2.8	15	43	40	31	476	2.2	2.1	2.0		
10	.00	.00	5.0	2.8	14	36	38	25	336	1.6	3.6	2.0		
11	.00	.00	4.0	2.8	19	30	712	237	246	1.6	5.5	1.8		
12	.00	.00	3.9	3.0	37	27	439	156	201	1.4	9.1	1.8		
13	.00	.00	3.5	3.1	56	24	289	72	83	1.3	4.5	1.5		
14	.00	.00	2.8	3.1	46	20	248	44	40	1.4	2.8	1.3		
15	.00	.00	2.6	3.3	41	17	221	33	34	1.4	2.6	1.3		
16	.00	.97	2.3	4.4	33	14	128	25	28	3.9	2.2	1.2		
17	.00	1.3	2.0	5.0	27	13	48	19	24	17	2.0	1.1		
18	.00	.80	2.2	8.3	24	12	41	15	20	5.4	1.9	1.1		
19	.00	5.4	2.0	136	21	400	51	13	16	4.8	1.7	1.0		
20	.00	3.5	2.2	248	20	1010	74	26	13	8.1	1.4	1.0		
21	.00	2.8	2.0	113	22	479	72	774	23	2.3	1.3	.98		
22	.00	3.0	1.9	66	46	420	44	847	48	1.6	1.6	.94		
23	.00	3.0	2.3	49	84	398	37	491	23	1.3	1.3	.90		
24	.00	3.5	2.2	39	115	301	35	348	16	1.2	1.2	.88		
25	.00	6.1	2.0	32	222	251	32	241	16	1.1	1.1	.84		
26	.00	9.2	1.9	32	237	181	26	202	17	.97	1.1	.80		
27	.00	11	1.8	32	296	81	20	431	14	47	83	.78		
28	.00	11	1.6	28	522	68	19	882	10	40	79	.76		
29	.00	9.0	1.8	23	---	59	18	693	8.2	17	20	.74		
30	.00	6.5	2.0	23	---	97	16	466	6.6	9.5	8.9	.70		
31	.00	---	3.1	19	---	93	---	312	---	6.3	5.4	---		
TOTAL	.00	77.07	92.4	901.8	2016	5530	3943	7106	6957.8	206.97	357.9	48.32		
MEAN	.000	2.57	2.98	29.1	72.0	178	131	229	232	6.68	11.5	1.61		
MAX	.00	11	5.0	248	522	1010	712	882	1310	47	83	4.4		
MIN	.00	.00	1.6	2.3	13	12	16	13	6.6	.97	1.1	.70		
CFSM	.000	.05	.05	.52	1.28	3.17	2.33	4.08	4.13	.12	.21	.03		
IN.	.00	.05	.06	.60	1.33	3.66	2.61	4.70	4.61	.14	.24	.03		
AC=FT	.00	153	183	1790	4000	10970	7820	14090	13800	411	710	96		
WTR YR 1979	TOTAL	27237.26	MEAN	74.6	MAX	1310	MIN	.00	CFSM	1.33	IN	18.03	AC=FT	54030

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1978 to September 1979.

pH: November 1978 to September 1979.

WATER TEMPERATURE: November 1978 to September 1979.

DISSOLVED OXYGEN: November 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	pH (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)
NOV											
28...	1015	11	122	6.9	9.0	8.2	72	--	--	--	--
DEC											
01...	0800	3.8	138	6.8	8.5	8.6	74	--	--	--	--
10...	1200	5.0	158	7.3	--	10.9	79	--	--	--	--
15...	1045	2.6	159	7.3	3.5	11.8	89	--	--	--	--
15...	1230	--	159	7.4	3.5	11.8	89	--	--	--	--
22...	1015	7.8	148	6.9	5.5	8.3	67	--	--	--	--
JAN											
09...	1013	2.8	152	6.9	2.0	11.2	81	33	0	6.2	4.3
18...	1005	7.1	140	7.1	4.0	13.0	101	--	--	--	--
31...	1025	18	56	7.0	--	13.2	91	--	--	--	--
FEB											
03...	1258	14	62	7.0	.8	13.2	94	--	--	--	--
09...	0952	14	52	7.4	.0	--	--	--	--	--	--
16...	0900	33	85	7.2	2.0	12.8	92	--	--	--	--
24...	1108	66	65	7.0	7.5	--	--	--	--	--	--
MAR											
02...	1255	232	39	6.7	8.0	--	--	--	--	--	--
10...	1325	35	59	6.9	10.5	--	--	--	--	--	--
16...	1320	34	63	6.5	11.5	--	--	--	--	--	--
22...	1330	505	54	6.6	14.5	9.4	94	--	--	--	--
26...	1320	201	44	6.6	13.0	10.8	104	--	--	--	--
APR											
02...	1411	306	63	6.6	15.0	9.6	96	15	5	2.7	1.9
07...	0935	57	60	6.8	14.0	10.0	98	--	--	--	--
14...	1024	236	54	6.5	15.0	9.4	94	12	4	2.3	1.6
21...	1435	61	74	6.7	19.0	7.5	82	--	--	--	--
28...	1245	19	76	7.4	17.0	8.2	85	--	--	--	--
MAY											
04...	1340	172	56	6.8	16.0	8.4	87	--	--	--	--
10...	1255	25	75	6.9	22.0	7.1	82	20	3	3.8	2.5
18...	1330	15	79	6.9	22.0	6.9	80	--	--	--	--
25...	1217	239	40	6.8	16.5	8.9	96	12	2	2.3	1.4
JUN											
01...	1240	243	41	6.7	20.0	9.1	101	--	--	--	--
07...	1445	1700	46	6.8	26.0	8.6	109	16	5	3.9	1.4
11...	1330	243	36	6.7	21.5	8.2	93	11	1	2.4	1.1
16...	1115	29	70	7.0	24.0	6.7	80	18	1	3.8	2.0
25...	1118	16	73	6.8	24.5	5.9	71	20	0	4.1	2.4
JUL											
05...	1030	2.6	100	6.7	27.0	3.9	49	--	--	--	--
11...	1030	1.9	97	6.8	26.5	3.6	45	26	0	4.8	3.3
19...	0930	3.6	97	6.8	24.0	5.3	64	--	--	--	--
30...	1709	8.5	100	6.9	28.5	5.6	74	--	--	--	--
AUG											
09...	1020	2.0	146	6.9	26.5	4.1	51	--	--	--	--
14...	0835	2.8	110	6.9	24.0	4.4	52	--	--	--	--
17...	1030	2.0	111	7.0	26.0	5.2	64	--	--	--	--
22...	1600	1.7	130	6.9	26.0	4.1	51	--	--	--	--
30...	0850	9.2	88	6.8	25.0	5.3	65	--	--	--	--
SEP											
01...	1140	2.0	102	6.8	25.0	4.2	51	--	--	--	--
07...	1140	2.0	--	--	--	--	--	--	--	--	--
14...	1010	1.2	123	7.0	20.0	5.1	57	27	0	5.3	3.4
21...	1130	.96	138	6.7	20.0	4.7	52	--	--	--	--
27...	1355	.60	144	7.0	19.0	3.8	42	30	0	5.9	3.8

ARKANSAS RIVER BASIN

515

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM+ AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
28...	--	--	--	--	--	42	0	34	8.5	--	--
DEC											
01...	--	--	--	--	--	39	0	32	9.9	--	--
10...	--	--	--	--	--	46	0	38	3.7	--	--
15...	--	--	--	--	--	52	0	43	3.7	--	--
15...	--	--	--	--	--	--	--	42	--	--	--
22...	--	--	--	--	--	42	0	34	8.5	--	--
JAN											
09...	17	50	1.3	--	2.5	--	--	37	--	19	13
18...	--	--	--	--	--	37	0	30	4.7	--	--
31...	--	--	--	--	--	21	0	17	3.4	--	--
FEB											
03...	--	--	--	--	--	19	0	16	3.0	--	--
09...	--	--	--	--	--	21	0	17	1.3	--	--
16...	--	--	--	--	--	17	0	14	1.7	--	--
24...	--	--	--	--	--	20	0	16	3.2	--	--
MAR											
02...	--	--	--	--	--	12	0	10	3.4	--	--
10...	--	--	--	--	--	17	0	14	3.4	--	--
16...	--	--	--	--	--	19	0	16	6.6	--	--
22...	--	--	--	--	--	17	0	14	6.8	--	--
26...	--	--	--	--	--	10	0	8	3.8	--	--
APR											
02...	4.7	39	.5	--	1.0	12	0	10	4.8	--	3.8
07...	--	--	--	--	--	19	0	16	4.1	--	--
14...	5.0	44	.6	--	1.0	10	0	8	5.1	9.1	5.1
21...	--	--	--	--	--	23	0	19	7.3	--	--
28...	--	--	--	--	--	26	0	21	1.6	--	--
MAY											
04...	--	--	--	--	--	20	0	16	5.1	--	--
10...	7.1	42	.7	8.5	1.4	21	0	17	4.2	12	4.9
18...	--	--	--	--	--	21	0	17	4.2	--	--
25...	3.7	38	.5	--	1.2	12	0	10	3.0	8.7	2.7
JUN											
01...	--	--	--	--	--	12	0	10	3.4	--	--
07...	3.0	27	.3	4.5	1.5	13	0	11	3.3	8.6	2.3
11...	2.8	34	.4	3.9	1.1	12	0	10	3.8	7.7	2.3
18...	6.6	43	.7	7.8	1.2	21	0	17	3.4	9.1	3.8
25...	--	--	--	7.8	1.8	26	0	22	6.6	11	6.0
JUL											
05...	--	--	--	--	--	33	0	27	11	--	--
11...	--	--	--	9.3	1.5	38	0	31	9.6	--	5.0
19...	--	--	--	--	--	37	0	30	9.4	--	--
30...	--	--	--	--	--	36	0	30	7.3	--	--
AUG											
09...	--	--	--	--	--	49	0	40	9.9	--	--
14...	--	--	--	--	--	45	0	37	9.1	--	--
17...	--	--	--	--	--	39	0	32	6.2	--	--
22...	--	--	--	--	--	42	0	34	8.5	--	--
30...	--	--	--	--	--	32	0	26	8.1	--	--
SEP											
01...	--	--	--	--	--	36	0	30	9.1	--	--
07...	--	--	--	--	--	38	0	30	--	--	--
14...	14	50	1.2	17	2.5	48	0	39	7.7	11	7.6
21...	--	--	--	--	--	44	0	36	14	--	--
27...	15	65	1.2	18	2.5	53	0	43	8.5	12	8.8

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	.0	6.4	96	92	.13	.73	.07	.31	.00	.00
18...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.0	8.3	46	--	.06	38.0	.10	.44	.01	.03
07...	--	--	--	--	--	--	--	--	--	--
14...	.1	7.0	41	37	.06	26.1	.06	.27	.00	.00
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	--	--	--	--	--	--
10...	.1	7.3	--	50	.06	3.12	.07	.31	.01	.03
18...	--	--	--	--	--	--	--	--	--	--
25...	.1	7.3	45	34	.06	29.0	.00	.00	.01	.03
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	.1	5.1	38	33	.05	174	.07	.31	.02	.07
11...	.1	.1	44	24	.06	28.9	.02	.09	.01	.03
16...	.1	6.9	31	45	.07	4.10	.08	.35	.01	.03
25...	.1	7.6	54	--	.07	2.35	.05	.22	.00	.00
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	.1	7.9	59	--	.08	.30	.01	.04	.00	.00
19...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
14...	.2	7.2	56	76	.08	.20	.05	.22	.01	.03
21...	--	--	--	--	--	--	--	--	--	--
27...	.1	6.2	78	81	.11	.13	.03	.13	.01	.03

ARKANSAS RIVER BASIN

517

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	40	1	--	12
22...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	.07	.02	.03	.040	.12	--	30	1	40	4
18...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	--	--	--	--	--	--	40	0	--	4
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	40	0	--	3
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.11	.03	.04	.030	.09	--	30	0	50	5
07...	--	--	--	--	--	--	10	1	--	4
14...	.06	.03	.04	.020	.06	.06	80	1	50	2
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	--	--	60	0	--	2
10...	.08	.02	.03	.040	.12	.12	--	--	30	--
18...	--	--	--	--	--	--	--	--	--	--
25...	.01	.00	.00	.040	.12	.12	70	0	30	3
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	.09	.00	.00	.080	.25	.25	60	1	0	1
11...	.03	.00	.00	.050	.15	.15	110	1	40	1
16...	.09	.06	.08	.030	.09	.09	40	1	20	1
25...	.05	.00	.00	.040	.12	.12	20	2	80	2
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	.01	.00	.00	.050	.15	.15	20	2	130	<1
19...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	0	1	--	0
17...	--	--	--	--	--	--	0	1	--	1
22...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
14...	.06	.01	.01	.050	--	.15	30	1	60	<1
21...	--	--	--	--	--	--	--	--	--	--
27...	.04	.00	.00	.060	--	.18	0	1	60	<1

ARKANSAS RIVER BASIN

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
NOV										
28...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
15...	0	1	--	130	--	.0	0	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	10	2	440	9	60	.0	0	<3	7.1	.3
18...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	0	2	--	32	--	.0	0	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	0	0	--	28	--	.0	0	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	0	2	120	10	40	1.0	<10	8	--	--
07...	0	1	--	20	--	.0	0	--	--	--
14...	0	3	70	27	40	.3	<10	3	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	0	1	--	64	--	.6	0	--	--	--
10...	--	--	310	--	80	--	--	10	5.0	.9
18...	--	--	--	--	--	--	--	--	--	--
25...	0	0	210	22	50	.4	0	10	9.3	--
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	10	3	290	2	90	.0	3	10	11	1.6
11...	10	2	160	1	60	.0	0	10	7.9	1.3
16...	10	48	140	0	80	.0	0	10	7.8	1.0
25...	10	1	430	0	80	.0	<10	5	6.8	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
11...	0	1	600	0	220	.0	<10	8	8.2	.8
19...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
14...	10	--	--	0	--	.0	0	--	--	--
17...	10	1	--	0	--	.1	0	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
14...	0	0	270	0	270	.0	<10	<3	8.7	.5
21...	--	--	--	--	--	--	--	--	--	--
27...	10	2	210	0	310	.0	<10	<3	5.3	1.2

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CTIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
28...	1015	11	122	6.9	9.0	8.2	72	142	4.4	98
DEC										
01...	1305	--	--	--	--	--	--	24	--	91
10...	1110	--	--	--	--	--	--	17	--	99
15...	1045	2.6	159	7.3	3.5	11.8	89	19	.14	97
28...	1053	--	--	--	--	--	--	19	--	94
JAN										
09...	1013	2.6	152	6.9	2.0	11.2	81	23	.17	93
18...	1005	7.1	140	7.1	4.0	13.0	101	39	.75	83
31...	1025	18	56	7.0	--	13.2	91	204	10	95
FEB										
03...	1258	14	62	7.0	.8	13.2	94	30	1.2	80
09...	0952	14	52	7.4	.0	--	--	31	1.2	79
MAR										
02...	1255	232	39	6.7	8.0	--	--	40	25	83
08...	0130	52	--	--	--	--	--	44	6.2	80
09...	0100	45	--	--	--	--	--	49	6.0	83
10...	0100	37	--	--	--	--	--	50	5.0	88
10...	1325	35	59	6.9	10.5	--	--	33	3.1	84
10...	1515	34	--	--	--	--	--	50	4.6	88
11...	0300	31	--	--	--	--	--	44	3.7	87
12...	--	27	--	--	--	--	--	74	5.4	92
12...	2330	24	--	--	--	--	--	54	3.5	89
13...	2315	21	--	--	--	--	--	62	3.5	70
14...	2300	18	--	--	--	--	--	57	2.8	81
16...	1300	13	--	--	--	--	--	59	2.1	83
16...	1320	34	63	6.5	11.5	--	--	33	3.0	84
22...	1615	521	--	--	--	--	--	97	136	78
26...	1320	201	44	6.6	13.0	10.8	104	51	28	81
APR										
02...	1411	306	63	6.6	15.0	9.6	96	68	56	81
14...	1024	236	54	6.5	15.0	9.4	94	70	45	56
21...	1435	61	74	6.7	19.0	7.5	82	38	6.3	92
28...	1245	19	76	7.4	17.0	8.2	85	29	1.5	98
MAY										
04...	1340	172	56	6.8	16.0	8.4	87	47	22	88
10...	1255	25	75	6.9	22.0	7.1	82	42	2.9	94
18...	1330	15	79	6.9	22.0	6.9	80	41	1.7	88
25...	1217	239	40	6.8	18.5	8.9	96	44	28	84
JUN										
01...	1240	243	41	6.7	20.0	9.1	101	47	31	93
07...	1445	1700	46	6.8	26.0	8.6	109	154	707	88
11...	1330	243	36	6.7	21.5	8.2	93	40	26	86
16...	1115	29	70	7.0	24.0	6.7	80	23	1.9	98
25...	1118	16	73	6.8	24.5	5.9	71	31	1.3	94
JUL										
05...	1030	2.6	100	6.7	27.0	3.9	49	64	.46	85
11...	1030	1.9	97	6.8	26.5	3.6	45	48	.25	95
19...	0930	3.6	97	6.8	24.0	5.3	64	62	.61	96
31...	1709	8.5	--	--	--	--	--	43	.99	92
AUG										
09...	1020	2.0	146	6.9	26.5	4.1	51	41	.23	97
14...	0835	2.8	110	6.9	24.0	4.4	52	44	.33	98
17...	1030	2.0	111	7.0	26.0	5.2	64	40	.22	93
22...	1600	1.7	130	6.9	26.0	4.1	51	40	.18	90
22...	1755	1.7	--	--	--	--	--	42	.19	87
23-25	--	--	--	--	--	--	--	30	.11	70
26...	0430	.98	--	--	--	--	--	31	.08	93
27...	0500	100	--	--	--	--	--	327	88	88
28...	0500	144	--	--	--	--	--	114	44	82
29...	0515	25	--	--	--	--	--	68	4.6	77
30...	0515	10	--	--	--	--	--	81	2.2	89
30...	0850	9.2	88	6.8	25.0	5.3	65	66	1.6	98
SEP										
07...	1140	2.0	--	--	--	--	--	40	.22	90
14...	1010	1.2	123	7.0	20.0	5.1	57	39	.14	95
21...	1130	.96	138	6.7	20.0	4.7	52	37	.10	95
27...	1355	.60	144	7.0	19.0	3.8	42	32	.05	96

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	138	169	62	45	62				---	87
2		---	146	147	60	43	---				---	91
3		---	151	146	59	47	---				---	89
4		---	155	147	59	51	---				---	94
5		---	157	148	54	49	---				---	94
6		---	159	148	48	52	---				---	96
7		---	168	149	52	57	---				---	101
8		---	---	150	48	60	---				---	107
9		---	---	152	54	59	---				---	106
10		---	---	155	65	61	---				---	107
11		---	---	151	65	63	---				---	109
12		---	---	155	60	63	---				---	122
13		---	---	164	64	62	---				---	125
14		---	---	153	57	61	---				111	127
15		---	157	147	---	56	---				113	130
16		163	168	140	---	62	---				117	126
17		198	166	140	---	68	---				---	125
18		205	169	148	---	70	---				---	128
19		118	169	148	---	65	---				---	134
20		123	166	---	---	50	---				---	137
21		123	160	---	---	55	---				---	144
22		119	142	---	---	61	---				129	146
23		118	140	90	64	57	---				125	146
24		119	140	86	58	58	---				128	145
25		126	139	82	46	56	---				129	145
26		150	138	82	49	47	---				135	144
27		128	140	74	53	49	---				87	144
28		122	140	---	48	48	---				100	149
29		122	140	---	---	51	---				100	156
30		125	142	---	---	62	---				88	160
31		---	163	64	---	68	---				89	---
MEAN		137	152	133	56	57	62				112	124
WTR YR 1979	MEAN		108	MAX	205	MIN		43				

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	6.9	7.0	6.5	6.7				---	6.8
2			---	6.9	7.0	6.6	6.6				---	6.8
3			---	6.9	7.0	6.7	---				---	6.8
4			---	6.9	7.0	6.6	---				---	6.8
5			---	6.9	7.1	6.5	---				---	6.8
6			---	6.9	7.3	6.6	---				---	6.8
7			---	6.9	7.4	6.8	---				---	6.9
8			---	6.9	7.4	7.0	---				---	7.1
9			---	7.0	7.4	7.0	---				---	7.1
10			---	7.0	7.3	7.0	---				---	7.0
11			---	7.0	7.3	7.0	---				---	6.9
12			---	7.0	7.3	7.0	---				---	7.0
13			---	7.0	7.2	7.0	---				---	7.0
14			---	7.0	7.3	7.0	---				6.8	7.0
15			---	6.9	7.2	6.9	---				6.8	7.0
16			---	7.0	7.2	7.0	---				6.7	7.0
17			---	6.9	7.2	7.0	---				---	7.0
18			---	7.0	7.2	6.9	---				---	6.9
19			---	6.9	7.1	6.8	---				---	6.8
20			---	---	7.1	6.6	---				---	6.8
21			---	---	6.9	6.6	---				---	6.8
22			6.9	---	6.9	6.7	---				6.8	6.8
23			6.9	6.9	6.9	6.7	---				6.8	6.8
24			6.9	6.9	6.9	6.6	---				6.8	6.9
25			6.9	6.9	6.8	6.5	---				6.8	7.0
26			6.9	6.9	6.7	6.6	---				6.8	6.9
27			6.9	7.0	6.6	6.7	---				6.6	7.1
28			6.9	7.0	6.6	6.5	---				6.8	7.1
29			6.9	7.0	---	6.7	---				6.8	7.0
30			6.9	7.0	---	6.9	---				6.8	6.9
31			6.9	7.0	---	6.7	---				6.8	---
MEAN			6.9	7.0	7.1	6.8	6.7				6.8	6.9
WTR YR 1979	MEAN		6.9	MAX	7.4	MIN		6.5				

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	8.5	2.0	1.0	14.0	18.0				---	25.0
2		---	11.5	2.0	1.5	11.5	14.5				---	25.5
3		---	9.5	2.0	1.5	12.0	---				---	25.5
4		---	6.5	2.0	2.0	11.5	---				---	26.0
5		---	7.0	2.0	2.0	12.0	---				---	26.5
6		---	7.0	2.0	1.5	15.0	---				---	26.0
7		---	5.5	2.0	2.0	14.0	---				---	25.5
8		---	---	2.0	1.5	9.5	---				---	24.0
9		---	---	2.0	2.0	10.0	---				---	23.0
10		---	---	2.0	1.5	10.0	---				---	22.5
11		---	---	2.5	2.5	10.5	---				---	22.5
12		---	---	2.5	3.0	11.0	---				---	22.0
13		---	---	2.5	3.0	13.0	---				---	22.0
14		---	---	2.0	4.5	13.0	---				25.0	21.0
15		---	5.0	1.5	---	13.0	---				25.5	20.0
16		10.5	6.0	2.0	---	11.5	---				26.5	19.0
17		10.0	5.0	3.5	---	13.0	---				---	18.5
18		9.5	6.0	4.0	---	14.0	---				---	19.5
19		10.5	8.5	5.0	---	14.5	---				---	20.5
20		10.0	10.5	---	---	14.5	---				---	20.5
21		9.5	8.0	---	---	14.5	---				---	20.5
22		9.5	6.5	---	8.0	13.5	---				25.5	20.5
23		11.0	6.5	4.0	8.0	11.5	---				25.0	20.0
24		12.0	6.5	3.0	7.0	10.0	---				24.5	19.5
25		11.5	5.5	3.0	7.0	13.0	---				24.0	19.0
26		12.5	5.0	3.5	9.5	13.5	---				24.5	19.0
27		10.0	4.5	3.0	11.5	16.0	---				23.0	19.5
28		8.5	5.0	3.5	11.5	18.0	---				24.5	20.0
29		8.5	6.0	4.0	---	17.5	---				25.0	21.0
30		8.0	5.5	4.5	---	17.5	---				25.5	21.0
31		---	3.5	1.5	---	17.5	---				25.5	---
MEAN		10.0	6.5	2.5	4.5	13.0	16.5				25.0	22.0
WTR YR 1979	MEAN		11.5		MAX	26.5		MIN	1.0			

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	8.5	11.1	13.1	---					---	5.0
2		---	8.2	10.8	13.1	---					---	4.3
3		---	8.2	11.1	13.2	---					---	3.7
4		---	9.3	11.0	13.0	---					---	3.4
5		---	10.0	10.9	12.7	---					---	3.6
6		---	10.3	10.9	12.5	---					---	3.8
7		---	11.0	10.9	12.3	---					---	4.2
8		---	---	11.1	11.9	---					---	4.4
9		---	---	11.5	12.3	---					---	4.8
10		---	---	11.6	12.5	---					---	4.9
11		---	---	11.5	12.1	10.5					---	5.0
12		---	---	11.7	11.6	10.0					---	5.3
13		---	---	11.9	11.6	9.5					---	5.2
14		---	---	12.3	10.9	9.7					4.7	5.3
15		---	11.4	12.7	---	9.5					5.8	5.4
16		7.2	11.0	12.7	---	9.4					6.3	5.7
17		7.8	10.7	12.6	---	9.3					5.1	6.0
18		5.6	10.6	11.5	---	8.6					4.3	5.7
19		7.6	9.6	---	---	8.2					4.0	5.1
20		7.5	8.5	---	---	---					4.6	4.8
21		7.4	7.9	---	---	---					---	4.8
22		7.7	8.9	---	---	---					3.8	4.5
23		7.3	9.8	12.1	---	---					3.9	4.5
24		7.0	9.8	12.6	---	---					4.1	4.5
25		6.9	9.9	12.5	---	---					4.2	4.0
26		7.0	9.9	12.4	---	---					4.1	3.7
27		7.3	10.0	12.5	---	---					5.4	3.7
28		8.2	10.2	12.5	---	---					5.3	3.6
29		9.0	9.8	12.1	---	---					5.2	3.2
30		8.9	9.5	11.1	---	---					5.6	3.1
31		---	10.5	13.0	---	---					5.2	---
MEAN		7.5	9.7	11.8	12.3	9.4					4.8	4.5
WTR YR 1979	MEAN		8.4		MAX	13.2		MIN	3.1			

ARKANSAS RIVER BASIN

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'44", long 95°09'20", in NW¼NW¼ sec.13, T.5 N., R.20 E., Latimer County, Hydrologic Unit 11110105, on downstream side of left abutment of county road bridge, 0.1 mi (0.2 km) downstream from Little Fourche Maline, 5.0 mi (8.0 km) southwest of Red Oak, and at mile 41.2 (66.3 km).

DRAINAGE AREA.--122 mi² (316 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1631: 1940.

GAGE.--Water-stage recorder. Datum of gage is 540.80 ft (164.836 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for period of no gage height record Aug. 25 to Sept. 30 which is poor. Some regulation by several flood retarding structures.

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--41 years, 128 ft³/s (3.625 m³/s), 14.25 in/yr (362 mm/yr), 92,740 acre-ft/yr (114 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,175 m³/s) May 19, 1960, gage height, 24.79 ft (7.556 m), from floodmarks, from rating curve extended above 25,000 ft³/s (709 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft (7.742 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,270 ft³/s (92.6 m³/s) at 1100 May 22, gage height, 16.04 ft (4.889 m), no other peak above base of 3,000 ft³/s (85 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.00	14	33	37	844	705	37	463	17	15	12
2	.26	.00	11	15	34	577	838	39	1530	15	13	10
3	.21	.00	27	9.8	34	678	472	276	2170	14	13	9.0
4	.12	.00	19	11	32	536	303	467	1050	11	11	8.0
5	.07	.00	15	13	30	299	213	314	782	8.6	8.6	7.0
6	.01	.00	13	13	29	197	150	201	605	12	7.1	6.0
7	.00	.00	16	11	39	147	116	128	2170	10	6.1	5.7
8	.00	.00	16	8.8	44	119	95	90	1890	7.9	5.6	5.3
9	.00	.00	13	7.5	38	98	82	68	966	7.4	4.8	5.0
10	.00	.00	14	8.1	30	82	72	57	781	7.2	6.2	4.8
11	.00	.00	14	8.7	56	70	1180	471	586	6.5	162	4.6
12	.00	.00	12	10	82	61	1580	583	434	5.5	86	4.3
13	.00	.00	10	14	123	54	776	291	238	4.8	37	4.2
14	.00	5.1	9.1	12	107	47	626	162	99	5.5	19	4.0
15	.00	11	8.4	9.6	90	40	500	97	72	4.1	13	3.9
16	.00	97	7.6	11	71	36	358	68	58	5.2	11	3.7
17	.00	120	6.6	14	56	34	140	52	49	59	8.0	3.6
18	.00	33	6.2	71	50	35	95	42	42	19	6.9	3.5
19	.00	17	5.7	489	47	340	91	34	40	11	6.2	3.3
20	.00	17	5.5	739	44	2420	136	107	34	11	5.8	3.2
21	.00	13	5.4	409	46	1290	364	2010	30	12	5.4	3.1
22	.00	12	4.5	214	186	970	228	2720	71	6.2	5.6	3.0
23	.00	11	4.6	136	238	910	164	1400	49	4.4	5.7	2.9
24	.00	10	5.3	95	317	689	128	881	35	3.6	5.3	2.9
25	.00	15	4.6	74	639	556	97	701	30	3.1	5.0	2.8
26	.00	85	4.1	82	637	371	73	598	33	3.0	4.7	2.8
27	.00	54	3.6	87	722	224	57	841	30	70	200	2.7
28	.00	36	3.4	68	1140	155	51	1540	31	40	70	2.7
29	.00	27	3.3	55	---	127	47	1880	23	23	40	2.6
30	.00	19	3.5	48	---	296	43	936	19	19	25	2.6
31	.00	---	53	40	---	289	---	655	---	17	17	---
TOTAL	1.03	582.10	338.4	2816.5	4998	12591	9780	17746	14410	443.0	829.0	139.2
MEAN	.033	19.4	10.9	90.9	179	406	326	572	480	14.3	26.7	4.64
MAX	.36	120	53	739	1140	2420	1580	2720	2170	70	200	12
MIN	.00	.00	3.3	7.5	29	34	43	34	19	3.0	4.7	2.6
AC-FT	2.0	1150	671	5590	9910	24970	19400	35200	28580	879	1640	276
CAL YR 1978	TOTAL	21990.13	MEAN	60.2	MAX	2370	MIN	.00	AC-FT	43620		
WTR YR 1979	TOTAL	64674.23	MEAN	177	MAX	2720	MIN	.00	AC-FT	128300		

ARKANSAS RIVER BASIN

523

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954, 1956-60, 1963, 1978 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
DEC 07...	1040	15	110	--	8.0	30	9.5	81	14	55	--	28
JAN 22...	1140	211	88	7.2	4.0	40	11.4	84	28	--	--	--
FEB 15...	1200	91	116	7.6	8.0	32	11.5	97	10	33	7.0	18
MAR 07...	1020	149	76	7.6	8.5	32	12.8	--	16	--	--	--
APR 04...	1030	309	74	7.6	11.5	39	12.4	115	23	20	4.0	10
MAY 10...	1030	54	96	7.0	22.0	--	9.9	115	13	--	--	--
JUN 20...	1130	35	130	6.8	25.0	32	5.0	61	20	26	7.0	17
JUL 25...	1100	3.2	--	6.8	26.5	24	6.0	75	20	--	--	--
AUG 29...	1430	5.0	90	6.6	26.0	48	6.3	80	21	33	5.0	12
SEP 26...	1230	2.8	175	7.1	21.0	20	6.7	92	23	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
DEC 07...	5.8	10	2.4	20	1.0	.0	16	.40	.70	1.1	4.9	.137
JAN 22...	--	--	--	15	1.0	.1	40	.50	1.8	2.3	10	.250
FEB 15...	3.6	<10	1.6	22	8.0	<.0	34	.50	1.2	1.7	7.8	.100
MAR 07...	--	--	--	--	6.0	.1	37	.30	1.3	1.6	7.1	.150
APR 04...	2.5	<10	1.4	14	2.0	<.1	63	.20	1.4	1.6	7.1	.150
MAY 10...	--	--	--	15	5.0	.0	47	.20	.83	1.0	4.6	.100
JUN 20...	3.7	10	1.4	11	4.0	.0	42	.20	.94	1.1	5.0	.055
JUL 25...	--	--	--	20	9.0	.0	45	<.50	1.5	1.5	--	.075
AUG 29...	3.5	<10	4.7	10	1.0	<.0	76	<.50	3.2	3.2	--	.105
SEP 26...	--	--	--	--	--	.1	34	<.50	3.1	3.1	--	.050

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

525

07247550 RED OAK CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°56'23", long 95°01'58", on east line in NE¼ sec.1, T.5 N., R.22 E., Latimer County, Hydrologic Unit 11110105, on right downstream side of bridge on county road, 0.9 mi (1.4 km) south of intersection with U.S. Highway 270, and 2.5 mi (4.0 km) southeast of Red Oak.

DRAINAGE AREA.--12.8 mi² (33.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 527.69 ft (160.840 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of no gage height record, Oct. 1 to Dec. 19, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.4 m³/s) May 22, 1979, gage height, 11.44 ft (3.487 m); no flow at times.

EXTREMES FOR CURRENT PERIOD.--July to September 1978: no flow during period.

Water year 1979.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 19	2130	1,130	32.0	9.75	2.972	June 2	1300	929	26.3	9.26	2.822
Apr. 11	1415	1,220	34.6	9.95	3.033	June 7	0700	1,130	32	9.74	2.969
May 22	0815	*2,170	61.5	*11.44	3.487						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.00	.00	.00
2										.00	.00	.00
3										.00	.00	.00
4										.00	.00	.00
5										.00	.00	.00
6										.00	.00	.00
7										.00	.00	.00
8										.00	.00	.00
9										.00	.00	.00
10										.00	.00	.00
11										.00	.00	.00
12										.00	.00	.00
13										.00	.00	.00
14										.00	.00	.00
15										.00	.00	.00
16										.00	.00	.00
17										.00	.00	.00
18										.00	.00	.00
19										.00	.00	.00
20										.00	.00	.00
21										.00	.00	.00
22										.00	.00	.00
23										.00	.00	.00
24										.00	.00	.00
25										.00	.00	.00
26										.00	.00	.00
27										.00	.00	.00
28										.00	.00	.00
29										.00	.00	.00
30										.00	.00	.00
31										.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	.00	.00	.00
MEAN	---	---	---	---	---	---	---	---	---	.000	.000	.000
MAX	---	---	---	---	---	---	---	---	---	.00	.00	.00
MIN	---	---	---	---	---	---	---	---	---	.00	.00	.00
CFSM	---	---	---	---	---	---	---	---	---	.000	.000	.000
IN.	---	---	---	---	---	---	---	---	---	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	---	.00	.00	.00

ARKANSAS RIVER BASIN

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.90	38	.93	52	130	2.3	6.1	.01	.03	18
2	.00	.00	.70	15	1.5	32	35	11	437	.01	.01	2.9
3	.00	.00	1.7	8.1	3.2	120	21	107	63	.00	.00	.62
4	.00	.00	1.1	5.3	2.4	29	19	47	30	.00	.00	.12
5	.00	.00	.90	3.3	2.2	16	12	21	18	.00	.00	.04
6	.00	.00	.80	1.9	2.1	11	8.7	12	45	3.0	.00	.02
7	.00	.00	16	1.2	7.0	7.8	5.7	6.2	371	9.5	.00	.01
8	.00	.00	4.5	.98	7.1	4.9	5.0	2.6	39	1.1	.00	.00
9	.00	.00	1.0	.79	3.8	3.7	3.9	1.2	21	.22	.00	.00
10	.00	.00	.46	1.5	12	2.1	6.9	32	15	.13	.00	.00
11	.00	.00	.67	1.8	29	1.1	332	213	10	.04	.00	.00
12	.00	.00	.38	4.5	23	.97	46	45	6.1	.01	.00	.00
13	.00	.00	.32	10	12	.73	22	20	3.5	.00	.00	.00
14	.00	.00	.38	3.8	9.2	.60	16	11	1.8	.00	.00	.00
15	.00	.00	.38	.81	6.5	.56	12	5.9	.91	.00	.00	.00
16	.00	.20	.46	1.5	2.5	.55	9.3	3.2	.50	.00	.00	.00
17	.00	.40	.46	6.1	1.6	.91	7.3	1.8	.27	.00	.00	.00
18	.00	.16	.42	81	1.7	2.9	7.9	1.3	.14	.00	.00	.00
19	.00	1.1	.38	165	2.7	277	12	.83	.08	.00	.00	.00
20	.00	1.0	.56	109	3.5	206	34	37	.05	.00	.00	.00
21	.00	.80	.82	32	3.3	32	33	620	.05	.00	.00	.00
22	.00	.70	.82	19	85	45	15	710	.43	.00	.00	.00
23	.00	.70	.32	14	31	28	30	54	.18	.00	.00	.00
24	.00	.70	.46	9.8	138	15	21	22	.95	.00	.00	.00
25	.00	1.0	.56	5.2	104	8.9	13	11	1.3	.00	.00	.00
26	.00	5.7	.38	12	95	6.6	15	5.4	.46	.00	.00	.00
27	.00	3.2	.38	7.0	148	12	6.3	78	.21	26	.00	.00
28	.00	2.4	.46	4.7	185	7.5	6.2	229	.06	14	.00	.00
29	.00	1.8	.32	3.0	---	8.3	5.5	56	.03	2.5	.00	.00
30	.00	1.2	.32	2.2	---	99	3.2	24	.02	.39	.00	.00
31	.00	---	204	1.4	---	27	---	12	---	.08	31	---
TOTAL	.00	21.06	241.31	569.88	923.23	1059.12	893.9	2402.73	1072.14	56.99	31.04	21.71
MEAN	.000	.70	7.78	18.4	33.0	34.2	29.8	77.5	35.7	1.84	1.00	.72
MAX	.00	5.7	204	165	185	277	332	710	437	26	31	18
MIN	.00	.00	.32	.79	.93	.55	3.2	.83	.02	.00	.00	.00
CFSM	.000	.06	.61	1.44	2.58	2.67	2.33	6.06	2.79	.14	.08	.06
IN.	.00	.06	.70	1.66	2.68	3.08	2.60	6.98	3.12	.17	.09	.06
AC-FT	.00	42	479	1130	1830	2100	1770	4770	2130	113	62	43
WTR YR 1979	TOTAL	7293.11	MEAN	20.0	MAX	710	MIN	.00	CFSM	1.56	IN	21.19
									AC-FT	14470		

ARKANSAS RIVER BASIN

527

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1978 to September 1979.

INSTRUMENTATION.--Automatic pumping sediment sampler since March 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
DEC											
10...	1430	1.0	123	6.0	1.6	13.0	94	--	--	--	--
15...	1515	.33	142	7.1	4.0	12.1	94	--	--	--	--
22...	1400	.40	153	7.3	7.0	12.2	102	--	--	--	--
28...	0945	.46	170	8.1	4.5	12.7	99	--	--	--	--
JAN											
09...	1450	.80	150	7.1	1.0	13.6	96	33	7	7.1	3.8
18...	1340	95	76	7.2	3.0	13.5	102	--	--	--	--
FEB											
03...	1020	3.8	130	7.2	.0	13.2	92	--	--	--	--
09...	1248	5.9	135	7.3	.0	--	--	--	--	--	--
16...	1500	1.9	122	7.6	6.0	12.2	98	--	--	--	--
24...	0920	15	66	7.0	7.0	14.4	120	--	--	--	--
MAR											
02...	0845	29	52	7.1	7.5	--	--	--	--	--	--
10...	1255	1.9	88	--	11.0	--	--	--	--	--	--
16...	1145	.55	137	6.8	11.5	--	--	--	--	--	--
22...	1000	20	75	6.8	14.5	8.9	89	--	--	--	--
26...	1055	6.8	75	7.0	12.5	11.6	110	--	--	--	--
APR											
02...	1045	35	63	6.9	13.5	10.0	95	--	--	--	--
07...	1415	5.8	104	7.5	19.0	10.7	116	--	--	--	--
14...	1452	15	85	7.0	20.0	9.2	102	22	2	4.8	2.5
21...	1100	27	76	6.9	19.0	8.2	89	--	--	--	--
28...	0910	6.7	83	7.1	13.5	9.2	88	--	--	--	--
MAY											
04...	1020	42	83	7.2	15.0	9.4	94	26	1	6.2	2.6
10...	1045	.67	118	7.0	23.0	6.3	74	--	--	--	--
18...	1046	1.1	102	7.0	22.0	6.6	76	--	--	--	--
25...	0947	10	78	7.3	18.0	8.6	91	25	2	5.4	2.7
JUN											
01...	1007	5.2	93	7.3	22.0	8.4	98	--	--	--	--
07...	1029	676	47	7.0	21.0	8.0	92	19	3	5.1	1.5
11...	1105	9.6	99	6.9	21.5	7.1	81	29	4	6.5	3.2
16...	0905	.55	120	7.3	24.0	7.0	83	33	3	7.3	3.7
25...	0925	1.2	137	7.1	24.0	5.4	64	39	1	8.4	4.4
JUL											
12...	1250	.01	220	7.0	29.0	4.2	55	--	--	--	--
30...	1555	.25	130	7.2	29.5	5.8	76	--	--	--	--
SEP											
06...	0900	.01	106	6.9	23.5	4.3	51	30	0	6.6	3.4

ARKANSAS RIVER BASIN

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
DEC											
10...	--	--	--	--	--	21	0	17	34	--	--
15...	--	--	--	--	--	28	0	23	3.6	--	--
22...	--	--	--	--	--	35	0	29	2.8	--	--
28...	--	--	--	--	--	41	0	34	.5	--	--
JAN											
09...	13	44	1.0	--	2.4	--	--	26	--	23	9.5
18...	--	--	--	--	--	24	0	20	2.2	--	--
FEB											
03...	--	--	--	--	--	28	0	23	2.6	--	--
09...	--	--	--	--	--	28	0	23	2.0	--	--
16...	--	--	--	--	--	29	0	24	1.2	--	--
24...	--	--	--	--	--	15	0	12	2.1	--	--
MAR											
02...	--	--	--	--	--	17	0	14	2.2	--	--
10...	--	--	--	--	--	25	0	21	--	--	--
16...	--	--	--	--	--	33	0	27	7.5	--	--
22...	--	--	--	--	--	23	0	19	5.2	--	--
26...	--	--	--	--	--	23	0	19	3.3	--	--
APR											
02...	--	--	--	--	--	25	0	21	4.5	--	--
07...	--	--	--	--	--	27	0	22	1.4	--	--
14...	8.3	43	.8	--	1.4	24	0	20	3.8	15	4.6
21...	--	--	--	--	--	25	0	21	5.0	--	--
28...	--	--	--	--	--	35	0	29	4.3	--	--
MAY											
04...	5.8	31	.5	--	1.9	31	0	25	2.8	11	3.1
10...	--	--	--	--	--	40	0	33	6.4	--	--
18...	--	--	--	--	--	41	0	34	6.6	--	--
25...	7.3	37	.6	--	1.7	28	0	23	2.2	14	3.9
JUN											
01...	--	--	--	--	--	31	0	25	2.5	--	--
07...	2.6	21	.3	4.4	1.8	20	0	16	3.2	7.4	3.0
11...	8.2	36	.7	9.8	1.6	31	0	25	6.2	14	4.2
16...	10	38	.8	12	1.9	37	0	30	3.0	17	4.8
25...	11	36	.8	13	2.4	46	0	38	5.8	20	6.2
JUL											
12...	--	--	--	--	--	65	0	53	10	--	--
30...	--	--	--	--	--	41	0	34	4.1	--	--
SEP											
06...	7.1	43	.6	11	3.4	43	0	36	8.7	14	3.6

ARKANSAS RIVER BASIN

259

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
DEC										
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	.0	9.5	88	86	.12	--	.38	1.7	.01	.03
18...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
14...	.1	10	57	59	.08	--	.09	.40	.01	.03
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	.1	8.5	55	55	.07	6.24	.12	.53	.01	.03
10...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	.2	9.0	63	59	.09	1.75	.08	.35	.01	.03
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	.1	5.0	40	37	.05	86.1	.07	.31	.02	.07
11...	.1	9.0	72	66	.10	1.87	.70	3.1	.01	.03
16...	.1	7.8	73	71	.10	.11	.00	.00	.01	.03
25...	.1	7.6	90	83	.12	--	.00	.00	.00	.00
JUL										
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	.1	5.5	70	81	.10	.00	3.5	15	.01	.03

ARKANSAS RIVER BASIN

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
DEC										
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	20	1	--	4
22...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	.39	.22	.28	.230	.71	--	50	1	30	5
18...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	--	--	--	--	--	--	50	0	--	3
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	30	0	--	4
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	50	1	--	7
14...	.10	.03	.04	.060	.18	.18	10	1	50	4
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	.13	.06	.08	.080	.25	.25	40	0	30	0
10...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	.09	.00	.00	.080	.25	.25	30	1	30	1
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	.09	.00	.00	.130	.40	.40	60	1	9	0
11...	.71	.00	.00	.080	.25	.25	30	1	50	2
16...	.00	.00	.00	.030	.09	.09	10	1	30	1
25...	.00	.00	.00	.030	.09	.09	20	1	70	1
JUL										
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	3.5	.01	.01	.120	--	.37	0	1	50	<1

ARKANSAS RIVER BASIN

531

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MU)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
DEC										
10...	--	--	--	--	--	--	--	--	--	--
15...	0	1	--	31	--	.0	0	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JAN										
09...	0	2	180	22	30	.0	0	<3	6.4	.7
18...	--	--	--	--	--	--	--	--	--	--
FEB										
03...	0	4	--	26	--	.1	0	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	0	2	--	17	--	.0	0	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
02...	--	--	--	--	--	--	--	--	--	--
07...	0	5	--	57	--	.0	0	--	--	--
14...	0	2	100	22	30	.4	<10	6	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	0	1	210	3	20	.3	0	10	9.3	1.2
10...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
25...	10	0	160	0	30	.0	0	10	5.1	--
JUN										
01...	--	--	--	--	--	--	--	--	--	--
07...	10	2	190	0	40	.0	0	10	11	2.1
11...	10	4	180	0	40	.0	0	20	4.0	.7
16...	20	3	220	0	20	.0	0	10	5.5	.9
25...	10	0	40	0	10	.0	<10	<3	5.6	--
JUL										
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	20	4	40	0	170	.0	<10	10	15	1.3

ARKANSAS RIVER BASIN

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC										
10...	1430	1.0	123	6.0	1.6	13.0	94	45	.12	90
15...	1515	.33	142	7.1	4.0	12.1	94	30	.03	87
JAN										
09...	1450	.80	150	7.1	1.0	13.6	96	30	.06	87
18...	1340	95	76	7.2	3.0	13.5	102	138	35	86
FEB										
03...	1020	3.8	130	7.2	.0	13.2	92	47	.48	90
09...	1248	5.9	135	7.3	.0	--	--	45	.72	89
16...	1500	1.9	122	7.6	6.0	12.2	98	47	.24	92
24...	0920	15	66	7.0	7.0	14.4	120	66	2.7	83
MAR										
02...	0845	29	52	7.1	7.5	--	--	26	2.1	99
10...	1255	1.9	88	--	11.0	--	--	28	.14	99
16...	1145	.55	137	6.8	11.5	--	--	26	.04	99
22...	1000	20	75	6.8	14.5	8.9	89	30	1.7	90
26...	1055	6.8	75	7.0	12.5	11.6	110	33	.61	81
29...	1800	7.3	--	--	--	--	--	32	.63	90
30...	--	34	--	--	--	--	--	349	32	92
APR										
02...	--	35	--	--	--	--	--	57	5.4	93
02...	1045	35	63	6.9	13.5	10.0	95	40	3.8	89
03...	--	23	--	--	--	--	--	64	4.0	94
05-07	--	--	--	--	--	--	--	87	1.2	84
07...	1415	5.8	104	7.5	19.0	10.7	116	27	.42	100
13...	0808	24	--	--	--	--	--	29	1.9	95
14...	1452	15	85	7.0	20.0	9.2	102	26	1.1	95
18...	--	6.6	--	--	--	--	--	23	.41	92
19...	--	14	--	--	--	--	--	43	1.6	71
20...	--	10	--	--	--	--	--	21	.57	85
20...	1720	35	--	--	--	--	--	283	27	85
20...	1735	96	--	--	--	--	--	356	92	92
20...	1800	85	--	--	--	--	--	273	63	92
21...	1035	28	--	--	--	--	--	74	5.6	74
21...	1100	27	76	6.9	19.0	8.2	89	61	4.4	94
21-22	--	--	--	--	--	--	--	46	2.1	91
23-24	--	--	--	--	--	--	--	39	2.7	88
25-27	--	--	--	--	--	--	--	91	2.4	92
28...	0910	6.7	83	7.1	13.5	9.2	88	30	.55	87
28...	1047	6.6	--	--	--	--	--	34	.61	98
29-30	--	--	--	--	--	--	--	24	.29	80
MAY										
01-02	--	--	--	--	--	--	--	24	.29	80
03...	--	16	--	--	--	--	--	277	12	82
04...	--	45	--	--	--	--	--	51	6.2	86
04...	1020	42	83	7.2	15.0	9.4	94	45	5.1	95
04...	1045	44	--	--	--	--	--	41	4.9	89
05...	0630	24	--	--	--	--	--	31	2.0	93
06...	0630	13	--	--	--	--	--	27	.95	94
07-09	--	--	--	--	--	--	--	22	.20	90
10...	0600	.67	--	--	--	--	--	26	.05	95
10...	1045	.67	118	7.0	23.0	6.3	74	34	.06	96
10...	2000	84	--	--	--	--	--	644	146	92
18...	--	1.3	--	--	--	--	--	37	.13	96
18...	1046	1.1	102	7.0	22.0	6.6	76	36	.11	93
19...	2200	1.3	--	--	--	--	--	37	.13	100
22...	0836	2159	--	--	--	--	--	354	2060	88
22...	0935	1878	--	--	--	--	--	293	1490	88
22...	1200	1077	--	--	--	--	--	100	291	86
25...	--	8.1	--	--	--	--	--	24	.52	97
25...	0947	10	78	7.3	18.0	8.6	91	35	.97	94
26...	2230	5.9	--	--	--	--	--	28	.45	100
27...	0900	82	--	--	--	--	--	364	81	94

ARKANSAS RIVER BASIN

533

07247550 RED OAK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN										
01...	1007	5.2	93	7.3	22.0	8.4	98	38	.53	99
02...	0130	80	--	--	--	--	--	344	74	95
07...	0905	561	--	--	--	--	--	296	448	83
07...	1045	832	--	--	--	--	--	337	757	62
07...	1100	708	--	--	--	--	--	183	350	88
11...	1105	9.6	99	6.9	21.5	7.1	81	39	1.0	85
12...	1100	.00	--	--	--	--	--	26	.00	94
13-15	--	--	--	--	--	--	--	16	.10	93
16...	0905	.55	120	7.3	24.0	7.0	83	18	.03	98
16-19	--	--	--	--	--	--	--	15	.01	79
23-24	--	--	--	--	--	--	--	14	.01	68
25...	0430	2.8	--	--	--	--	--	19	.14	89
25...	0925	1.2	137	7.1	24.0	5.4	64	25	.08	87
26-28	--	--	--	--	--	--	--	13	.01	55
JUL										
07-08	--	--	--	--	--	--	--	22	.17	88
09-10	--	--	--	--	--	--	--	23	.01	90
12...	1250	.01	220	7.0	29.0	4.2	55	46	.00	90
27...	0515	.67	--	--	--	--	--	58	.10	93
28...	0515	19	--	--	--	--	--	153	7.8	91
29...	0515	2.8	--	--	--	--	--	86	.65	94
30...	0530	.38	--	--	--	--	--	68	.07	89
30...	1548	.25	--	--	--	--	--	70	.05	95
30...	1555	.25	130	7.2	29.5	5.8	76	75	.05	95
31...	0530	.10	--	--	--	--	--	77	.02	84
SEP										
01...	0845	20	--	--	--	--	--	284	15	89
02...	0845	4.5	--	--	--	--	--	125	1.5	88
03...	0900	1.0	--	--	--	--	--	72	.19	93
04...	0900	.32	--	--	--	--	--	65	.06	89
06...	0900	.01	106	6.9	23.5	4.3	51	54	.00	92

ARKANSAS RIVER BASIN

07248000 WISTER LAKE NEAR WISTER, OK

LOCATION.--Lat 34°56'10", long 94°43'10", in SE¼NE¼ sec.1, T.5 N., R.24 E., LeFlore County, Hydrologic Unit 11110105, in control tower near right end of Wister Dam on Poteau River, 2.0 mi (3.2 km) south of Wister, 2.7 mi (4.3 km) upstream from Caston Creek, and at mile 60.9 (98.0 km).

DRAINAGE AREA.--993 mi² (2,572 km²).

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1970 published as Wister Reservoir near Wister.

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

REMARKS.--Reservoir is formed by an earth dam with outlets of a uncontrolled concrete chute-type spillway and six 7.0 ft (2.13 m) x 12.0 ft (3.66 m) vertical liftgates. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 429,600 acre-ft (530 hm³) at elevation 502.5 ft (153.16 m) crest of spillway and 29,950 acre-ft (36.9 hm³) at elevation 471.6 ft (143.74 m) conservation pool. Figures given herein represent total contents. Reservoir is used for flood control and recreation. Revised capacity table used since Oct. 1, 1953.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 507,400 acre-ft (626 hm³) May 27, 1957, elevation, 505.73 ft (154.147 m); minimum since conservation pool was first filled, 4,020 acre-ft (5.0 hm³) Oct. 16, 1961, elevation, 456.97 ft (139.284 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 425,400 acre-ft (525 hm³) June 9, elevation, 502.39 (153.128 m); minimum, 25,180 acre-ft (31.0 hm³) Jan. 8, elevation, 471.12 ft (143.597 m).

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

471	24,720	483	106,500	495	274,700
475	43,240	487	152,400	499	351,500
479	69,990	491	208,400	503	439,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35730	32980	50170	50850	29280	179500	179800	97950	327100	140800	80880	66860
2	35690	32890	47940	53710	28690	190200	218000	86400	342300	127600	78890	67100
3	35540	32850	45550	49990	28400	205400	232000	85490	369300	116400	76770	67170
4	35440	32800	42910	44640	28030	213400	235600	91680	378900	106300	75430	66940
5	35300	32710	40580	38950	27750	213200	231500	93010	376300	98930	73450	66400
6	35200	32800	38850	33170	27670	205400	224300	89620	368800	92910	71260	66330
7	35060	32710	40690	27300	27380	195700	215800	82190	411200	86030	69200	65720
8	34960	32620	40210	25640	27470	184200	206900	73200	424700	79750	67020	65040
9	34770	32620	37070	26190	27630	173500	197600	63990	423700	75430	64810	64210
10	34720	32480	33210	26740	27830	162500	189800	58080	416900	71750	63840	63320
11	34620	32430	29110	27220	28530	151100	206600	82190	407400	68180	63540	62510
12	34620	32390	27590	27790	30610	138700	229100	102700	396300	64590	63760	61700
13	34480	32390	27750	28360	32340	125800	237600	106100	383800	63090	63760	60830
14	34290	32430	27750	28780	32530	113300	236300	103100	371000	63020	63760	60190
15	34200	34010	27750	28610	31710	100400	231400	96280	357700	62950	63470	60050
16	34100	35440	27670	28280	31050	87490	224000	88600	344600	63240	63760	59900
17	33960	40210	27670	27950	30610	74600	213500	82990	330900	63390	63990	59760
18	33870	42360	27340	28490	29920	62950	204300	80180	317600	64740	63760	59760
19	33820	43300	27510	32160	29110	56840	193700	77110	304300	65640	63470	59760
20	33770	43910	27590	39110	28160	82280	185300	74520	290700	65720	63240	60620
21	33630	44130	27670	44250	27300	96770	179500	122000	277500	65340	63090	60690
22	33590	44590	27710	44130	41170	104100	173300	221100	264600	64890	62800	60760
23	33540	44760	27870	41870	67170	106800	169300	254000	251500	64360	62650	60760
24	33540	44870	27830	38690	86210	103400	169000	267600	238600	63840	62510	60690
25	33540	45210	27870	35540	108200	98150	164100	271600	225100	63170	62210	60690
26	33400	46940	27870	34620	125400	90640	155900	267600	211000	63020	63170	60620
27	33310	48720	27790	34620	136100	82450	145200	277000	196100	66560	63540	60620
28	33260	49930	27830	34390	159800	75180	133200	305800	181300	78890	64290	60550
29	33170	50790	27910	33450	---	67950	121300	329300	167700	82990	64290	60550
30	33120	51290	27990	32300	---	90930	109600	337300	154100	83430	64510	60470
31	33030	---	32570	30830	---	117000	---	334500	---	82720	66180	---
MAX	35730	51290	50170	53710	159800	213400	237600	337300	424700	140800	80880	67170
MIN	33030	32390	27340	25640	27300	56840	109600	58080	154100	62950	62210	59760
†	472.99	476.37	472.89	472.50	487.57	484.00	483.30	498.16	487.13	480.52	478.51	477.74
‡	-2,900	+18,260	-18,720	-1,740	+128,970	-42,800	-7,400	+224,900	-180,400	-71,380	-16,540	-5,710

CAL YR 1978 MAX 105800 MIN 25220 †+ 5470
WTR YR 1979 MAX 424700 MIN 25640 †+24540

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

07248500 POTEAU RIVER NEAR WISTER, OK

LOCATION.--Lat 34°56'15", long 94°42'54", in NW¼NW¼ sec.6, T.5 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left bank of outflow channel 700 ft (213.4 m) downstream from Wister Dam, 2.2 mi (3.5 km) southeast of Wister, 2.6 mi (4.2 km) upstream from Caston Creek, and at mile 60.8 (97.8 km).

DRAINAGE AREA.--993 mi² (2,572 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to May 21, 1951, records below about 500 ft³/s (14.2 m³/s) include flow from Caston Creek, drainage area, 70 mi² (181 km²).

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939, 1943(M), 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 445.43 ft (135.767 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to June 28, 1953.

REMARKS.--Records fair. Flow completely regulated by Wister Lake since October 1949 (station 07248000).

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

AVERAGE DISCHARGE.--(prior to regulation by Wister Dam) 11 years (water years 1939-49), 1,325 ft³/s (37.52 m³/s), 960,000 acre-ft/yr (1.18 km³/yr), (since regulation by Wister Dam) 30 years (water years 1950-79), 1,063 ft³/s (30.10 m³/s), 770,100 acre-ft/yr (950 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,600 ft³/s (2,230 m³/s) May 16, 1945, gage height, 37.16 ft (11.326 m), site and datum then in use; no flow at times in 1938-39, 1943, 1947, 1953-54, 1961, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 43.0 ft (13.11 m) at site and datum used in 1938, estimated as 38.5 ft (11.73 m) at site and datum used during 1939-47, on basis of fall determined for flood in 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,150 ft³/s (202 m³/s) June 11, gage height, 8.45 ft (2.576 m); minimum daily discharge, 9.8 ft³/s (0.28 m³/s) Nov. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	728	68	1320	48	25	6180	6570	6270	1220	15
2	12	10	1400	1210	905	1330	23	5980	3670	6100	1260	15
3	12	10	1400	3240	627	786	750	3780	19	5330	1260	15
4	12	10	1390	3820	625	1500	3020	3450	1410	4700	1260	190
5	12	10	1370	3720	621	3290	5260	4250	5070	3940	1260	402
6	17	9.8	1360	3600	619	5750	5790	4230	6450	3030	1200	405
7	24	9.8	1350	3470	616	6580	5730	4880	1320	2980	1150	402
8	24	9.8	2090	1640	478	6510	5680	5260	3980	2940	1140	402
9	24	9.8	2650	183	353	6390	5620	5140	5780	2260	1140	400
10	24	9.8	2600	131	353	6280	5120	4520	6410	1720	580	397
11	24	9.8	2550	130	351	6170	766	1160	7030	1710	220	397
12	23	9.8	1390	130	354	6660	28	3080	7010	1710	219	395
13	23	10	261	129	1190	6960	1200	3110	6950	787	220	393
14	24	10	262	129	1780	6720	3860	3820	6880	78	217	228
15	24	11	260	345	1770	6530	4590	4690	6800	78	216	16
16	19	11	259	537	1540	6450	5110	4650	6740	78	217	14
17	11	10	259	540	1120	6410	6020	3360	6670	79	227	12
18	11	10	258	536	1110	6130	5670	1910	6590	80	230	11
19	11	11	151	894	1110	4510	5510	1890	6510	80	230	11
20	11	11	74	1330	1100	53	5700	1880	6460	174	234	11
21	11	11	72	1380	1090	895	4130	1070	6390	293	226	12
22	11	11	72	2180	1650	2180	4100	22	6320	293	224	11
23	11	11	70	2760	986	3500	4690	22	6250	293	132	11
24	10	11	70	2730	55	4780	5200	22	6180	293	76	11
25	10	11	70	2690	55	4740	5190	1960	6500	291	76	11
26	10	12	67	1880	594	5150	5590	4800	6990	222	76	11
27	10	11	66	1370	2710	5460	6410	1860	6880	87	71	11
28	10	11	64	1370	1440	5350	6730	26	6740	86	14	12
29	10	11	64	1360	---	5240	6540	24	6580	86	14	12
30	10	11	64	1350	---	1850	6360	2250	6420	710	14	11
31	10	---	66	1340	---	23	---	5320	---	1180	16	---
TOTAL	467	313.6	22807	46192	26522	134225	130412	94596	173569	47958	14639	4244
MEAN	15.1	10.5	736	1490	947	4330	4347	3051	5786	1547	472	141
MAX	24	12	2650	3820	2710	6960	6730	6180	7030	6270	1260	405
MIN	10	9.8	64	68	55	23	23	22	19	78	14	11
AC-FT	926	622	45240	91620	52610	266200	258700	187600	344300	95120	29040	8420
CAL YR 1978	TOTAL	178967.6	MEAN	490	MAX	5220	MIN	9.8	AC-FT	355000		
WTR YR 1979	TOTAL	695944.6	MEAN	1907	MAX	7030	MIN	9.8	AC-FT	1380000		

ARKANSAS RIVER BASIN

07248500 POTEAU RIVER NEAR WISTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952, 1955-59, 1976 to current year.

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)
OCT												
21...	1530	11	--	7.5	19.0	28	8.6	93	16	32	6.0	15
DEC												
07...	0900	1350	78	9.4	8.0	16	12.1	103	9	33	6.0	15
JAN												
22...	1400	2770	58	6.4	2.0	31	14.6	103	12	--	--	--
FEB												
15...	1030	1770	72	7.4	7.5	21	13.1	111	4	18	3.0	8
MAR												
07...	0845	6580	42	8.0	8.0	36	10.2	87	17	--	--	--
APR												
04...	0845	2070	48	7.8	13.0	21	13.0	123	22	16	3.0	8
MAY												
10...	0840	5020	60	6.9	20.5	--	11.8	131	15	--	--	--
JUN												
20...	1005	6450	60	8.7	26.0	14	8.4	104	17	14	3.0	7
JUL												
25...	1000	293	110	6.6	24.0	15	6.2	74	23	--	--	--
AUG												
29...	1330	14	64	6.5	27.5	17	5.3	68	16	34	5.0	12
SEP												
26...	1115	11	70	7.9	22.5	15	7.9	111	10	--	--	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
21...	3.5	12	1.8	15	8.0	.1	24	--	--	--	--	--
DEC												
07...	--	<10	2.0	8.0	1.0	.0	9	.10	.47	.57	2.5	.093
JAN												
22...	--	--	--	9.0	1.0	.1	24	.30	1.6	1.9	8.6	.100
FEB												
15...	2.3	--	1.3	10	5.0	.0	15	.60	1.1	1.7	7.7	.100
MAR												
07...	--	--	--	1.0	4.0	.1	21	.40	1.1	1.5	6.6	.150
APR												
04...	1.8	<10	1.5	14	1.0	<.1	17	.20	1.7	1.9	8.4	.060
MAY												
10...	--	--	--	11	--	.0	19	.10	.99	1.0	4.8	.070
JUN												
20...	1.5	<10	1.3	5.0	1.0	<.0	23	<.10	.89	.89	--	.040
JUL												
25...	--	--	--	12	3.0	.0	30	<.50	1.8	1.8	--	.110
AUG												
29...	3.0	<10	1.8	7.0	<1.0	<.0	21	<.50	1.9	1.9	--	.060
SEP												
26...	--	--	--	12	--	.1	12	--	1.2	1.2	--	.100

537

07248500 POTEAU RIVER NEAR WISTER, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK

LOCATION.--Lat 34°57'27", long 94°44'18", on SW¼SE¼ sec.26, T.6 N., T.24 E., LeFlore County, Hydrologic Unit 11110105, at pier on left downstream side of county road bridge 0.15 mi (0.24 km) downstream from Mountain Creek, and 0.8 mi (1.3 km) along county road southwest of intersection with U.S. Highway 270 at Wister and at mile 2.4 (3.9 km).

DRAINAGE AREA.--72.9 mi² (188.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 447.35 ft (136.352 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period Oct. 1 to Mar. 8, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 11	1430	2,660 75.3	10.64 3.243	May 28	1545	1,780 50.4	9.58 2.920
May 21	2030	*6,660 189.0	*14.11 4.301	June 7	0830	1,730 49.0	9.52 2.902

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	6.0	102	43	868	781	35	279	2.2	15	71
2	.00	.00	5.2	46	38	534	398	44	494	2.1	7.6	16
3	.00	.00	13	30	40	967	238	192	508	1.6	5.1	9.0
4	.00	.00	8.9	34	40	444	196	356	373	1.5	3.9	5.7
5	.00	.00	7.1	40	34	269	155	218	263	3.9	3.2	4.2
6	.00	.00	6.1	40	34	187	126	143	137	83	2.7	3.3
7	.00	.00	21	34	41	147	99	103	749	13	2.5	3.0
8	.00	.00	18	27	37	119	96	72	373	6.9	2.2	2.4
9	.00	.00	14	23	36	85	103	52	197	4.8	2.0	1.9
10	.00	.00	17	25	35	72	92	49	126	10	1.8	1.7
11	.00	.00	18	26	93	63	761	637	83	6.2	1.9	1.6
12	.00	.00	17	32	153	56	590	478	56	4.6	1.7	1.6
13	.00	.00	14	35	151	51	325	238	40	3.6	1.7	1.2
14	.00	.00	12	30	140	43	188	137	29	3.0	1.8	1.2
15	.00	2.5	9.9	24	117	38	143	86	22	2.6	2.3	1.1
16	.00	71	8.4	28	77	35	111	60	17	2.4	2.1	1.0
17	.00	88	6.6	35	56	36	84	42	13	3.7	1.9	1.1
18	.00	24	5.6	415	43	36	75	32	11	3.1	1.8	1.4
19	.00	14	4.6	456	33	67	79	25	7.8	3.5	1.5	1.7
20	.00	12	4.8	494	32	595	96	20	6.0	2.6	1.1	2.8
21	.00	9.6	7.6	281	52	290	166	2030	4.9	2.0	.80	4.2
22	.00	8.0	6.9	158	800	258	106	1690	4.7	1.8	1.2	2.7
23	.00	7.0	9.2	123	551	250	201	830	4.4	1.7	1.2	2.7
24	.00	7.3	16	103	644	167	204	695	4.0	1.4	.96	2.5
25	.00	11	14	72	841	117	129	637	4.0	1.3	.96	2.3
26	.00	51	13	77	533	92	90	583	3.7	1.4	.96	1.9
27	.00	27	11	92	628	105	65	790	3.2	91	40	1.5
28	.00	17	10	86	1310	93	56	923	2.9	74	8.3	1.3
29	.00	13	10	69	---	133	48	694	2.6	27	4.2	1.5
30	.00	9.0	11	62	---	786	41	532	2.1	13	2.7	1.5
31	.00	---	164	53	---	507	---	429	---	11	69	---
TOTAL	.00	371.40	489.9	3152	6632	7510	5842	12852	3820.3	389.9	194.08	155.0
MEAN	.000	12.4	15.8	102	237	242	195	415	127	12.6	6.26	5.17
MAX	.00	88	164	494	1310	967	781	2030	749	91	69	71
MIN	.00	.00	4.6	23	32	35	41	20	2.1	1.3	.80	1.0
CFSM	.0000	.17	.22	1.40	3.25	3.32	2.68	5.69	1.74	.17	.09	.07
IN.	.00	.19	.25	1.61	3.38	3.83	2.98	6.56	1.95	.20	.10	.08
AC-FT	.00	737	972	6250	13150	14900	11590	25490	7580	773	385	307

WTR YR 1979 TOTAL 41408.58 MEAN 113 MAX 2030 MIN .00 CFSM 1.55 IN 21.13 AC-FT 82130

ARKANSAS RIVER BASIN

539

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
NOV											
21...	1300	10	138	6.6	13.0	9.4	89	--	--	--	--
DEC											
05...	1300	7.1	113	7.1	8.6	10.4	91	--	--	--	--
12...	1255	--	128	7.0	4.5	12.8	100	--	--	--	--
12...	1330	15	128	7.0	4.5	12.8	100	--	--	--	--
19...	1530	5.0	112	7.0	11.0	9.0	83	--	--	--	--
27...	1545	10	122	7.1	5.0	12.6	99	--	--	--	--
JAN											
03...	1300	62	97	6.2	2.5	13.7	100	27	16	5.1	3.4
FEB											
02...	1400	38	57	6.7	1.0	14.1	101	--	--	--	--
10...	1450	35	75	7.0	1.7	--	--	--	--	--	--
15...	1040	117	67	8.3	9.0	11.5	101	--	--	--	--
21...	1450	42	86	6.9	8.0	--	--	--	--	--	--
MAR											
01...	1515	868	51	6.7	6.5	--	--	--	--	--	--
08...	1017	119	62	6.6	8.0	--	--	--	--	--	--
14...	1428	41	78	6.8	14.5	--	--	--	--	--	--
17...	1255	29	83	6.9	13.0	--	--	--	--	--	--
26...	1520	86	77	8.6	16.5	9.9	103	--	--	--	--
APR											
03...	1445	224	44	7.1	13.0	11.0	106	--	--	--	--
06...	1550	103	74	6.9	17.0	10.8	112	--	--	--	--
11...	1735	1200	55	6.7	18.0	9.1	99	--	--	--	--
19...	1622	76	80	7.1	22.0	--	--	22	7	4.0	2.9
MAY											
01...	1420	32	77	7.2	18.0	9.0	96	23	7	4.1	3.1
09...	1135	51	77	7.1	23.0	7.8	92	--	--	--	--
14...	1005	142	60	7.6	18.5	8.9	96	17	3	3.1	2.2
19...	1140	25	89	5.1	23.0	5.7	67	--	--	--	--
26...	1658	589	38	7.0	16.5	9.2	96	10	0	2.4	1.0
JUN											
04...	1430	372	55	7.1	22.5	8.3	96	15	3	2.9	1.8
08...	1800	28	62	7.0	26.0	7.4	92	--	--	--	--
14...	1320	29	78	7.2	26.0	7.6	94	23	2	4.2	3.0
21...	1205	4.7	105	7.1	29.0	6.7	87	--	--	--	--
29...	1455	2.6	115	7.4	32.0	7.3	101	35	1	6.3	4.6
JUL											
03...	1235	1.5	110	7.4	29.5	7.2	95	48	22	11	5.0
17...	1115	2.1	123	7.0	29.5	6.2	80	--	--	--	--
23...	1618	1.7	122	7.3	31.0	7.6	104	--	--	--	--
AUG											
02...	1408	9.6	95	6.9	29.5	6.0	79	--	--	--	--
07...	1440	4.0	115	7.4	31.0	7.3	99	--	--	--	--
15...	1620	2.4	126	7.3	29.5	6.2	82	--	--	--	--
20...	1225	1.2	125	7.3	28.5	6.7	86	--	--	--	--
28...	1330	8.3	89	6.9	28.0	6.4	83	--	--	--	--
SEP											
05...	1350	4.3	101	7.2	30.0	7.0	93	--	--	--	--
12...	1155	1.5	118	7.1	24.5	6.5	78	37	0	7.1	4.6
18...	1355	1.5	119	7.4	22.5	8.6	100	--	--	--	--
25...	1300	2.3	119	7.3	22.0	8.1	93	34	0	6.4	4.3

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
21...	--	--	--	--	--	22	0	18	8.8	--	--
DEC											
05...	--	--	--	--	--	20	0	16	2.5	--	--
12...	--	--	--	--	--	--	--	15	--	--	--
12...	--	--	--	--	--	18	0	15	2.9	--	--
19...	--	--	--	--	--	18	0	15	2.8	--	--
27...	--	--	--	--	--	22	0	18	2.8	--	--
JAN											
03...	7.2	35	.6	--	1.6	--	--	11	--	18	6.2
FEB											
02...	--	--	--	--	--	12	0	10	3.8	--	--
10...	--	--	--	--	--	13	0	11	2.0	--	--
15...	--	--	--	--	--	26	0	21	.2	--	--
21...	--	--	--	--	--	18	0	15	3.6	--	--
MAR											
01...	--	--	--	--	--	10	0	8	3.2	--	--
08...	--	--	--	--	--	11	0	9	4.4	--	--
14...	--	--	--	--	--	15	0	12	3.4	--	--
17...	--	--	--	--	--	18	0	15	3.5	--	--
28...	--	--	--	--	--	20	0	16	.1	--	--
APR											
03...	--	--	--	--	--	17	0	14	1.9	--	--
06...	--	--	--	--	--	18	0	15	3.6	--	--
11...	--	--	--	--	--	15	0	12	4.8	--	--
19...	5.7	34	.5	--	1.4	18	0	15	2.0	14	4.6
MAY											
01...	6.1	35	.6	--	1.4	20	0	16	1.8	14	4.6
09...	--	--	--	--	--	21	0	17	2.7	--	--
14...	4.7	36	.5	--	1.4	17	0	14	.7	11	3.2
19...	--	--	--	--	--	21	0	17	238	--	--
26...	2.7	33	.4	--	1.6	13	0	11	2.1	10	1.9
JUN											
04...	3.4	32	.4	4.5	1.1	15	0	12	1.9	9.1	2.4
08...	--	--	--	--	--	17	0	14	2.7	--	--
14...	5.4	32	.5	6.8	1.4	25	0	21	2.5	12	4.2
21...	--	--	--	--	--	36	0	30	4.6	--	--
29...	9.5	54	.7	11	1.5	41	0	34	2.6	15	5.7
JUL											
03...	8.4	27	.5	10	1.8	49	0	26	3.1	13	5.8
17...	--	--	--	--	--	47	0	39	7.5	--	--
23...	--	--	--	--	--	46	0	38	3.3	--	--
AUG											
02...	--	--	--	--	--	34	0	28	6.8	--	--
07...	--	--	--	--	--	38	0	31	2.4	--	--
15...	--	--	--	--	--	50	0	41	4.0	--	--
20...	--	--	--	--	--	45	0	37	3.6	--	--
28...	--	--	--	--	--	33	0	27	6.6	--	--
SEP											
05...	--	--	--	--	--	34	0	28	3.4	--	--
12...	8.1	31	.6	10	2.2	45	0	37	5.7	15	5.0
18...	--	--	--	--	--	44	0	36	2.8	--	--
25...	6.2	49	.6	10	2.1	41	0	34	3.3	12	6.3

ARKANSAS RIVER BASIN

541

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)
NOV										
21...	--	--	--	--	--	--	--	--	--	--
DEC										
05...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	.0	7.6	64	63	.09	10.7	1.6	7.1	.00	.00
FEB										
02...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	.1	7.8	50	52	.07	10.4	.62	2.7	.01	.03
MAY										
01...	.1	6.1	57	51	.08	4.97	.34	1.5	.01	.03
09...	--	--	--	--	--	--	--	--	--	--
14...	.1	7.6	43	43	.06	16.5	.29	1.3	.00	.00
19...	--	--	--	--	--	--	--	--	--	--
26...	.1	7.2	41	35	.06	65.2	.28	1.2	.01	.03
JUN										
04...	.1	7.7	52	37	.07	52.2	.20	.89	.01	.03
08...	--	--	--	--	--	--	--	--	--	--
14...	.1	8.3	61	53	.08	4.79	.37	1.6	.01	.03
21...	--	--	--	--	--	--	--	--	--	--
29...	.1	9.2	76	73	.10	.53	.09	.40	.01	.03
JUL										
03...	.1	7.8	73	69	.10	.31	.08	.35	.01	.03
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
12...	.1	7.2	72	72	.10	.31	.11	.49	.01	.03
18...	--	--	--	--	--	--	--	--	--	--
25...	.1	5.4	73	66	.10	.46	.12	.53	.01	.03

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
21...	--	--	--	--	--	--	--	--	--	--
DEC										
05...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	10	0	--	5
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	1.6	.04	.05	.090	.28	--	70	0	30	2
FEB										
02...	--	--	--	--	--	--	30	0	--	3
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	20	0	--	1
14...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	50	1	--	3
11...	--	--	--	--	--	--	--	--	--	--
19...	.63	.04	.05	.030	.09	.09	10	0	20	11
MAY										
01...	.35	.01	.01	.030	.09	.09	30	0	30	1
09...	--	--	--	--	--	--	--	--	--	--
14...	.29	.03	.04	.020	.06	.06	40	0	20	14
19...	--	--	--	--	--	--	--	--	--	--
26...	.29	.00	.00	.040	--	.12	50	0	80	3
JUN										
04...	.21	.00	.00	.050	.15	.15	30	0	20	4
08...	--	--	--	--	--	--	--	--	--	--
14...	.38	.00	.00	.040	.12	.12	60	1	7	2
21...	--	--	--	--	--	--	--	--	--	--
29...	.10	.01	.01	.060	--	.18	20	1	20	<1
JUL										
03...	.09	.00	.00	.020	.06	.06	10	1	20	1
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	0	1	--	0
28...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
12...	.12	.01	.01	.020	--	.06	30	1	30	1
18...	--	--	--	--	--	--	--	--	--	--
25...	.13	.00	.00	.010	--	.03	0	1	20	<1

ARKANSAS RIVER BASIN

543

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MU)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)
NOV										
21...	--	--	--	--	--	--	--	--	--	--
DEC										
05...	--	--	--	--	--	--	--	--	--	--
12...	0	1	--	100	--	.0	1	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	0	1	100	18	20	.0	0	0	6.3	.9
FEB										
02...	0	3	--	15	--	.0	0	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	0	1	--	4	--	.0	0	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
06...	0	2	--	14	--	.0	0	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
19...	0	0	60	73	40	.1	<10	<3	--	--
MAY										
01...	0	1	80	9	50	.2	0	0	--	--
09...	--	--	--	--	--	--	--	--	--	--
14...	10	0	130	120	30	.0	0	10	3.7	.7
19...	--	--	--	--	--	--	--	--	--	--
26...	0	1	130	--	20	.2	0	0	6.2	--
JUN										
04...	0	0	90	22	30	.3	0	0	5.0	1.0
08...	--	--	--	--	--	--	--	--	--	--
14...	10	1	40	0	50	.0	0	10	3.1	.9
21...	--	--	--	--	--	--	--	--	--	--
29...	10	0	120	0	40	.0	<10	5	3.3	1.1
JUL										
03...	10	0	130	2	40	.0	0	0	5.1	.7
17...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
20...	0	1	--	0	--	.0	0	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
12...	10	3	70	0	80	.0	0	10	12	.3
18...	--	--	--	--	--	--	--	--	--	--
25...	10	1	60	0	50	.0	<10	<3	3.9	1.0

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
21...	1500	--	--	--	--	--	--	17	--	90
DEC										
05...	1350	--	--	--	--	--	--	26	--	98
12...	1255	--	128	7.0	4.5	12.8	100	23	--	98
19...	1530	5.0	112	7.0	11.0	9.0	83	27	.36	83
27...	1545	10	122	7.1	5.0	12.6	99	24	.65	90
JAN										
03...	1300	62	97	6.2	2.5	13.7	100	26	4.4	90
10...	1435	25	117	7.6	1.5	14.3	103	30	2.0	91
FEB										
02...	1400	38	57	6.7	1.0	14.1	101	28	2.9	78
03...	1530	40	--	--	--	--	--	40	4.3	69
04...	1730	41	--	--	--	--	--	42	4.6	86
05...	1607	30	--	--	--	--	--	29	2.3	75
06...	1420	35	--	--	--	--	--	27	2.6	77
07...	1530	42	--	--	--	--	--	31	3.5	67
08-09	--	--	--	--	--	--	--	24	2.5	70
10...	1450	35	75	7.0	1.7	--	--	6	.57	43
10...	1520	35	--	--	--	--	--	25	2.4	86
11-13	--	--	--	--	--	--	--	30	1.4	90
14...	1600	15	--	--	--	--	--	33	1.3	89
15...	1040	117	67	8.3	9.0	11.5	101	36	11	85
15-16	--	--	--	--	--	--	--	70	14	59
17...	1500	57	--	--	--	--	--	25	3.8	87
18...	1500	39	--	--	--	--	--	26	2.7	90
19...	1500	32	--	--	--	--	--	30	2.6	83
21...	1450	42	86	6.9	8.0	--	--	45	5.2	55
23...	1500	561	--	--	--	--	--	26	39	90
24-25	--	--	--	--	--	--	--	72	155	79
26-28	--	--	--	--	--	--	--	101	309	78
MAR										
01...	1550	873	--	--	--	--	--	53	125	79
02...	1600	857	--	--	--	--	--	42	97	79
03...	1530	852	--	--	--	--	--	38	87	83
04...	1500	785	--	--	--	--	--	40	85	86
05...	1630	78	--	--	--	--	--	68	14	36
06...	1600	551	--	--	--	--	--	43	64	85
07...	1500	149	--	--	--	--	--	37	15	89
08...	1017	119	62	6.6	8.0	--	--	20	6.4	98
08...	1402	--	--	--	--	--	--	16	--	87
08...	1530	145	--	--	--	--	--	35	14	87
09...	1700	134	--	--	--	--	--	32	12	80
10...	1600	87	--	--	--	--	--	33	7.8	77
11...	1700	48	--	--	--	--	--	28	3.6	80
12...	1600	46	--	--	--	--	--	31	3.9	76
13...	1700	44	--	--	--	--	--	28	3.3	86
14...	1528	41	--	--	--	--	--	28	3.1	91
14...	1630	40	--	--	--	--	--	33	3.6	85
15...	1600	36	--	--	--	--	--	34	3.3	87
16...	1530	33	--	--	--	--	--	31	2.8	89
17...	1255	29	83	6.9	13.0	--	--	25	2.0	91
17...	1700	31	--	--	--	--	--	60	5.0	84
18...	1500	36	--	--	--	--	--	44	4.3	86
28...	1520	86	77	8.6	16.5	9.9	103	22	5.2	94
28...	1537	86	--	--	--	--	--	42	9.8	95
29...	1600	297	--	--	--	--	--	89	71	94
30-31	--	--	--	--	--	--	--	5	9.1	92
APR										
01...	1700	805	--	--	--	--	--	68	148	91
02...	1700	324	--	--	--	--	--	42	37	97
03...	1520	223	--	--	--	--	--	28	17	87
03-04	--	--	--	--	--	--	--	28	15	96
05-06	--	--	--	--	--	--	--	44	15	98
06...	1550	103	74	6.9	17.0	10.8	112	22	6.1	82
09...	1530	48	--	--	--	--	--	34	4.4	98
10...	1600	90	--	--	--	--	--	32	7.8	96
11...	1639	1477	--	--	--	--	--	258	1030	89
11...	1755	1134	--	--	--	--	--	148	453	88
12...	1630	542	--	--	--	--	--	91	133	92
15...	1730	130	--	--	--	--	--	38	13	100
16...	1800	109	--	--	--	--	--	32	9.4	95
17...	1600	3.8	--	--	--	--	--	49	.50	56
18...	1730	75	--	--	--	--	--	39	7.9	77
19...	1422	90	--	--	--	--	--	23	5.6	90
20...	1600	214	--	--	--	--	--	38	22	95
21...	1700	160	--	--	--	--	--	42	18	92
24...	1900	172	--	--	--	--	--	32	15	98
25...	1600	115	--	--	--	--	--	26	8.1	99
26-28	--	--	--	--	--	--	--	23	4.0	90

ARKANSAS RIVER BASIN

545

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY										
01...	1420	32	77	7.2	18.0	9.0	96	26	2.3	89
01-02	--	--	--	--	--	--	--	28	3.0	94
04...	1600	485	--	--	--	--	--	47	62	94
07-09	--	--	--	--	--	--	--	31	5.4	95
09...	1135	51	77	7.1	23.0	7.8	92	32	4.5	87
11...	1800	696	--	--	--	--	--	75	141	85
12...	1800	594	--	--	--	--	--	49	79	92
13-15	--	--	--	--	--	--	--	37	14	93
14...	1005	142	60	7.6	18.5	8.9	96	30	12	91
16...	1805	2.5	--	--	--	--	--	30	.20	88
17...	1920	42	--	--	--	--	--	13	1.5	90
18...	1730	32	--	--	--	--	--	27	2.3	97
19...	1140	25	89	5.1	23.0	5.7	67	29	2.0	87
19...	1830	20	--	--	--	--	--	23	1.2	91
23...	1700	815	--	--	--	--	--	76	167	89
24...	1900	634	--	--	--	--	--	56	96	96
25...	1700	565	--	--	--	--	--	45	69	95
26...	1658	589	38	7.0	16.5	9.2	96	48	76	89
26...	1800	639	--	--	--	--	--	42	72	94
28...	1500	1815	--	--	--	--	--	38	186	86
28...	1700	1551	--	--	--	--	--	37	155	82
31...	1700	395	--	--	--	--	--	37	39	95
JUN										
04...	1430	372	55	7.1	22.5	8.3	96	39	39	92
04...	2000	372	--	--	--	--	--	33	33	96
05...	1900	187	--	--	--	--	--	26	13	97
06...	1800	136	--	--	--	--	--	2	.73	42
08...	1800	28	62	7.0	26.0	7.4	92	40	3.1	93
09...	1630	172	--	--	--	--	--	27	13	99
14...	1320	29	78	7.2	26.0	7.6	94	47	3.7	96
14-19	--	--	--	--	--	--	--	22	2.1	96
22...	2000	160	--	--	--	--	--	28	12	96
23...	1600	.00	--	--	--	--	--	23	.00	96
25...	2000	.00	--	--	--	--	--	25	.00	95
28-29	--	--	--	--	--	--	--	19	.04	79
29...	1455	2.6	115	7.4	32.0	7.3	101	41	.29	93
30...	1530	2.2	--	--	--	--	--	20	.12	90
JUL										
01...	1900	1.7	--	--	--	--	--	19	.09	83
02...	1600	2.0	--	--	--	--	--	27	.15	81
03...	1235	1.5	110	7.4	29.5	7.2	95	46	.20	91
05...	1930	10	--	--	--	--	--	37	1.0	88
06...	1900	32	--	--	--	--	--	45	3.9	93
08...	2200	4.6	--	--	--	--	--	36	.45	88
09...	1000	--	--	--	--	--	--	34	--	90
14...	1700	2.7	--	--	--	--	--	24	.17	90
15...	2000	2.0	--	--	--	--	--	28	.15	88
16...	1800	2.5	--	--	--	--	--	29	.20	90
17...	1115	2.1	123	7.0	29.5	6.2	80	34	.19	85
17...	1900	2.5	--	--	--	--	--	35	.24	91
18...	1800	2.4	--	--	--	--	--	32	.21	89
21...	1900	2.0	--	--	--	--	--	30	.16	90
22...	1900	2.6	--	--	--	--	--	31	.22	87
23...	1618	1.7	122	7.3	31.0	7.6	104	35	.16	92
23...	2000	1.4	--	--	--	--	--	32	.12	87
24...	2100	1.2	--	--	--	--	--	22	.07	37
25...	2000	.57	--	--	--	--	--	34	.05	90
26...	1800	.88	--	--	--	--	--	34	.08	85
27...	1800	198	--	--	--	--	--	63	34	92
30...	0700	11	--	--	--	--	--	31	.92	89
31...	1600	8.3	--	--	--	--	--	34	.76	87

ARKANSAS RIVER BASIN

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CTFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
AUG										
01...	1900	10	--	--	--	--	--	32	.86	90
02...	1408	9.6	95	6.9	29.5	6.0	79	30	.78	88
05...	2100	1.9	--	--	--	--	--	28	.14	85
07...	1440	4.0	115	7.4	31.0	7.3	99	28	.30	87
08-09	--	--	--	--	--	--	--	23	.14	96
10-13	--	--	--	--	--	--	--	27	.08	68
14...	1930	2.7	--	--	--	--	--	31	.23	94
15...	1620	2.4	126	7.3	29.5	6.2	82	36	.23	92
15-16	--	--	--	--	--	--	--	16	.06	86
17-18	--	--	--	--	--	--	--	15	.04	93
19...	1900	2.7	--	--	--	--	--	28	.20	92
20...	1225	1.2	125	7.3	28.5	6.7	86	29	.09	84
20...	2000	2.0	--	--	--	--	--	28	.15	95
21-25	--	--	--	--	--	--	--	12	.06	92
26...	1900	5.9	--	--	--	--	--	70	1.1	96
27...	1800	--	--	--	--	--	--	69	--	89
28...	1330	8.3	89	6.9	28.0	6.4	83	48	1.1	90
28...	1700	8.3	--	--	--	--	--	3	.07	92
29...	1900	2.4	--	--	--	--	--	3	.02	70
30...	1800	3.8	--	--	--	--	--	2	.02	78
31...	1700	163	--	--	--	--	--	100	44	93
SEP										
05...	1350	4.3	101	7.2	30.0	7.0	93	24	.28	93
06...	--	1.1	--	--	--	--	--	18	.05	86
08...	1800	.00	--	--	--	--	--	23	.00	94
09...	1900	.00	--	--	--	--	--	22	.00	88
10...	1900	.00	--	--	--	--	--	22	.00	91
11-15	--	--	--	--	--	--	--	12	.00	83
12...	1155	1.5	118	7.1	24.5	6.5	78	24	.10	94
12...	1900	.00	--	--	--	--	--	24	.00	92
16...	1800	.18	--	--	--	--	--	20	.01	85
17...	1700	.29	--	--	--	--	--	15	.01	96
18...	1355	1.5	119	7.4	22.5	8.6	100	19	.08	89
18-19	--	--	--	--	--	--	--	14	.03	90
20...	1830	1.1	--	--	--	--	--	16	.05	91
21-22	--	--	--	--	--	--	--	13	.05	82
23-24	--	--	--	--	--	--	--	13	.04	78
25...	1300	2.3	119	7.3	22.0	8.1	93	25	.16	86

07249060 BRAZIL CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'03", long 95°07'06", on north line SW¼ sec.17, T.6 N., T.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 3.3 mi (5.3 km) northwest of Red Oak, and at mile 49.2 (79.2 km).

DRAINAGE AREA.--2.74 mi² (7.10 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO ₃)
NOV										
21...	0930	.23	88	8.4	11.0	80	52	9.0	83	18
DEC										
12...	1415	.30	90	8.9	8.0	--	--	11.6	99	--
19...	0830	.36	100	7.6	10.5	10	5.6	10.7	98	24
JAN										
31...	0930	.50	65	6.3	1.0	26	27	14.0	99	16
FEB										
08...	0930	.50	80	8.0	2.5	--	--	14.9	112	--
28...	0930	.37	35	6.4	6.0	54	36	11.6	96	--
MAR										
08...	0825	2.9	44	7.2	6.0	--	--	12.7	105	--
21...	0930	.13	42	6.5	11.5	--	--	10.7	101	--
APR										
05...	0925	3.9	46	6.4	10.0	50	26	11.9	106	11
19...	1030	1.6	65	7.7	21.5	--	--	8.0	91	--
MAY										
02...	0845	.90	63	7.0	15.5	40	24	9.0	92	15
21...	1630	270	23	6.6	19.0	200	140	11.0	122	7
JUN										
05...	1230	.10	48	7.8	21.0	50	30	8.5	98	13
21...	0800	.34	73	6.3	24.0	--	--	5.6	67	--
JUL										
11...	0925	.43	92	6.4	25.0	40	45	5.9	73	24
AUG										
09...	1320	.14	90	6.4	30.5	10	10	6.2	84	--
SEP										
13...	1220	.10	98	6.7	26.0	20	7.5	5.8	73	25

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO ₃)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO ₃)	SULFATE DIS- SOLVED (MG/L AS SO ₄)
NOV										
21...	5	3.5	2.3	7.7	45	.8	--	1.6	13	9.9
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	13	4.5	3.2	9.0	43	.8	--	1.3	11	13
JAN										
31...	5	3.0	2.1	6.3	44	.7	--	.9	11	7.3
FEB										
08...	--	--	--	--	--	--	--	--	--	--
28...	--	--	1.1	2.6	--	--	--	.6	3	6.3
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	11	1.8	1.6	--	--	--	5.5	.9	--	5.2
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	0	2.6	2.1	5.4	42	.6	--	1.0	17	6.0
21...	4	1.4	.8	1.7	31	.3	2.8	1.1	3	6.3
JUN										
05...	2	2.2	1.8	3.7	36	.4	5.0	1.3	11	5.7
21...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	8	4.5	3.2	7.0	36	.6	8.8	1.8	16	11
AUG										
09...	--	--	3.3	7.7	--	--	9.5	1.8	16	--
SEP										
13...	7	4.6	3.3	7.3	54	.6	8.9	1.6	18	6.5

ARKANSAS RIVER BASIN

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
NOV										
21...	12	.0	9.0	60	--	.08	.04	.43	.41	--
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	--	.0	7.9	69	--	.09	.07	.12	.05	--
JAN										
31...	9.9	.0	7.3	--	45	.07	.08	.25	.30	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
28...	2.7	.0	6.7	31	--	--	3.13	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	4.7	.1	9.5	34	--	.05	.36	.08	.11	8.5
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	7.0	.1	8.0	39	42	.05	.09	.02	.00	--
21...	1.4	.1	5.4	--	20	.04	21.1	.05	.00	--
JUN										
05...	4.8	.1	8.7	--	35	.07	1.46	.04	.09	--
21...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	13	.0	9.8	55	60	.07	.06	.05	.04	6.0
AUG										
09...	12	.1	11	57	--	.08	.02	.04	.05	--
SEP										
13...	13	.1	10	59	58	.08	.02	.08	.08	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)
NOV										
21...	.03	.10	--	--	.13	.36	.78	.39	--	.88
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	.01	.02	--	--	.03	.16	.17	.17	--	.19
JAN										
31...	.03	.05	--	--	.06	.49	.46	.52	--	.51
FEB										
08...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	.01	.03	18	.01	.04	.13	.11	.14	.00	.14
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	.02	.01	--	.02	.01	.09	.03	.11	.07	.04
21...	.07	.00	--	.08	.00	.65	.45	.72	.27	.45
JUN										
05...	.05	.04	--	.06	.05	.38	.38	.43	.01	.42
21...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	.03	.00	22	.04	.00	.17	.10	.20	.10	.10
AUG										
09...	.01	.00	--	.01	.00	2.4	.11	2.4	2.3	.11
SEP										
13...	.07	.00	--	.08	.00	.36	.35	.43	.08	.35

ARKANSAS RIVER BASIN

549

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

DATE	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV										
21...	--	.82	--	3.6	--	.050	--	--	.030	--
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	--	.29	.24	1.3	--	.040	--	--	.030	--
JAN										
31...	--	.77	.81	3.4	--	.030	--	--	.030	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	490	.22	.25	.97	499	.010	.03	.03	.000	460
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	.13	.04	.58	--	.030	.09	.09	.010	--
21...	--	.77	.45	3.4	--	.070	.21	.21	.020	--
JUN										
05...	--	.47	.51	2.1	--	.020	.06	.06	.020	--
21...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	86	.25	.14	1.1	92	.030	--	.09	.010	500
AUG										
09...	--	2.4	.16	11	--	.020	--	.06	.040	--
SEP										
13...	--	.51	.43	2.3	--	.030	--	.09	.010	--

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECUM. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECUM. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECUM. ERABLE (UG/L AS B)
NOV											
21...	0930	1000	--	180	--	1	--	0	--	60	--
DEC											
12...	1415	360	--	110	--	0	--	0	--	40	--
19...	0830	230	--	30	--	0	--	0	--	90	--
JAN											
31...	0930	770	--	130	--	0	--	0	--	70	30
FEB											
08...	0930	550	--	110	--	0	--	0	--	50	10
28...	0930	1100	--	110	--	1	--	0	--	50	20
MAR											
08...	0825	740	--	120	--	0	--	0	--	50	30
21...	0930	900	--	170	--	0	--	0	--	60	20
APR											
05...	0925	850	780	70	7500	0	0	0	20	40	20
19...	1030	810	700	110	--	1	1	0	--	50	40
MAY											
02...	0845	720	700	20	--	1	1	0	--	40	20
21...	1630	--	--	--	--	--	--	--	--	--	--
JUN											
05...	1230	--	--	--	--	--	--	--	--	--	--
21...	0800	790	730	60	--	1	1	0	--	60	40
JUL											
11...	0925	1000	970	30	0	1	1	0	64	70	50
AUG											
09...	1320	400	370	30	--	0	0	0	--	40	10
SEP											
13...	1220	310	250	60	--	0	0	0	--	40	10

ARKANSAS RIVER BASIN

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV											
21...	30	19	--	27	--	10	--	0	--	--	33
DEC											
12...	--	0	--	<1	--	10	--	0	--	--	0
19...	20	0	--	<1	--	20	--	0	--	--	0
JAN											
31...	40	0	--	<1	--	0	--	0	--	--	10
FEB											
08...	40	0	--	3	--	0	--	0	--	--	10
28...	30	0	--	0	--	0	--	0	--	--	20
MAR											
08...	20	0	--	0	--	10	--	0	--	--	10
21...	40	0	--	<1	--	10	--	0	--	--	0
APR											
05...	20	0	--	<1	0	0	0	0	27	20	20
19...	10	0	--	<1	--	0	0	0	--	--	0
MAY											
02...	20	0	--	0	--	10	10	0	--	--	0
21...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
21...	20	0	0	<1	--	0	0	0	--	--	20
JUL											
11...	20	0	0	0	0	10	10	0	0	0	0
AUG											
09...	30	0	0	0	--	10	10	0	--	--	0
SEP											
13...	30	0	0	<1	--	10	0	20	--	--	0

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV											
21...	--	<10	--	1600	--	310	--	200	--	260	--
DEC											
12...	--	<10	--	420	--	100	--	0	--	<10	--
19...	--	<10	--	340	--	50	--	0	--	<10	--
JAN											
31...	--	<10	--	880	--	290	--	0	--	<10	--
FEB											
08...	--	<10	--	730	--	320	--	0	--	<10	--
28...	--	10	--	1400	--	90	--	0	--	0	--
MAR											
08...	--	0	--	760	--	290	--	0	--	0	--
21...	--	<10	--	930	--	100	--	0	--	<10	--
APR											
05...	--	<10	12	1400	1300	70	32000	0	--	<10	20
19...	--	<10	--	1500	1400	120	--	0	--	<10	--
MAY											
02...	--	0	--	1400	740	660	--	0	--	0	--
21...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
21...	10	<10	--	1200	1200	50	--	0	0	<10	--
JUL											
11...	0	0	0	1700	1600	110	0	0	0	0	0
AUG											
09...	0	0	--	450	380	70	--	0	0	0	--
SEP											
13...	0	<10	--	310	--	20	--	0	0	<10	--

ARKANSAS RIVER BASIN

551

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
21...	20	--	20	--	.1	--	.0	--	4	--	0
DEC											
12...	20	--	10	--	.1	--	.0	--	0	--	0
19...	10	--	10	--	.0	--	.0	--	0	--	0
JAN											
31...	20	--	5	--	.0	--	.0	--	0	--	0
FEB											
08...	10	--	7	--	.0	--	.0	--	0	--	0
28...	20	--	10	--	.0	--	.0	--	0	--	0
MAR											
08...	10	--	0	--	.2	--	.2	--	0	--	0
21...	20	--	6	--	.1	--	.0	--	0	--	0
APR											
05...	10	5	5	920	.1	.1	.0	.02	0	0	<10
19...	10	2	8	--	.4	.4	.0	--	0	0	<10
MAY											
02...	20	0	20	--	.4	.4	.0	--	0	0	0
21...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
21...	40	30	10	--	7.3	.0	8.9	--	0	0	<10
JUL											
11...	90	20	70	42	6.1	.0	9.9	.02	0	0	0
AUG											
09...	20	10	10	--	.2	.0	.2	--	0	0	0
SEP											
13...	20	10	6	--	.3	.2	.1	--	0	0	<10

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
21...	--	0	--	0	10	--	20	--	25	.02	99
DEC											
12...	--	0	--	0	10	--	<3	--	16	.01	88
19...	--	0	--	0	10	--	<3	--	10	.01	99
JAN											
31...	--	0	--	0	20	--	8	--	18	.03	84
FEB											
08...	--	0	--	0	10	--	8	--	27	.04	80
28...	--	0	--	0	40	--	20	--	28	2.8	96
MAR											
08...	--	1	--	0	10	--	0	--	13	.10	77
21...	--	0	--	0	20	--	6	--	15	.53	83
APR											
05...	0	0	0	0	10	7	<3	52	8	.08	99
19...	--	1	1	0	20	10	6	--	29	.13	98
MAY											
02...	--	0	0	0	20	20	0	--	25	.06	94
21...	--	--	--	--	--	--	--	--	612	446	65
JUN											
05...	--	--	--	--	--	--	--	--	21	.57	92
21...	--	0	0	0	30	30	<3	--	34	.03	95
JUL											
11...	0	0	0	0	40	30	10	0	55	.06	97
AUG											
09...	--	0	0	0	0	0	10	--	21	.01	86
SEP											
13...	--	0	0	0	0	0	<3	--	21	.01	86

ARKANSAS RIVER BASIN

07249070 ROCK CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'30", long 95°04'56", NE¼SW¼ sec.15, T.6 N., R.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 2.8 mi (4.5 km) north of Red Rock, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--12.0 mi² (31.08 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)
NOV										
21...	1130	1.4	87	7.7	10.0	160	64	9.5	84	20
DEC										
12...	1200	1.5	75	8.2	4.5	--	--	12.6	98	--
19...	0950	.98	88	7.5	9.5	25	8.8	9.8	88	31
JAN										
31...	1300	5.1	60	6.5	2.0	18	16	13.6	98	15
FEB										
07...	1515	2.6	85	7.5	2.0	--	--	14.8	109	--
28...	1330	155	35	6.3	6.0	68	31	10.2	84	10
MAR										
08...	1045	14	42	6.8	7.0	--	--	11.4	96	--
21...	1700	45	50	6.7	14.0	--	--	10.1	100	--
APR										
05...	1145	16	55	6.6	11.0	40	22	11.7	107	11
19...	0930	9.4	55	6.7	22.0	--	--	8.2	94	--
MAY										
02...	1030	18	60	7.1	16.0	40	18	9.1	95	--
21...	1800	1040	30	6.8	19.0	200	140	10.6	118	11
22...	1235	354	29	7.3	19.0	130	48	--	--	22
JUN										
05...	1330	26	44	7.6	22.0	60	20	8.5	8	11
20...	1520	.94	60	7.4	28.0	--	--	7.7	100	--
JUL										
11...	1115	.38	72	7.2	30.0	10	3.8	7.6	101	--
AUG										
09...	1110	.25	75	7.4	29.0	80	44	8.2	106	22
29...	1100	.01	105	6.6	28.0	--	--	6.5	85	--
SEP										
13...	0930	.16	68	7.2	22.0	30	8.4	7.4	86	19

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV										
21...	10	3.4	2.7	6.7	40	.7	--	1.7	10	9.8
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	23	7.0	3.2	7.4	33	.6	--	1.2	8	13
JAN										
31...	9	2.5	2.1	5.6	43	.6	--	.9	6	7.9
FEB										
07...	--	--	--	--	--	--	--	--	--	--
28...	7	2.1	1.2	2.6	34	.4	--	.6	3	6.7
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	4	1.9	1.5	4.0	42	.5	5.0	1.0	7	6.5
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	4.7	--	--	6.9	2.2	7	7.9
21...	11	2.7	1.0	1.6	22	.2	2.7	1.1	0	6.8
22...	21	7.0	1.1	2.2	20	.2	3.8	1.6	1	6.3
JUN										
05...	0	2.1	1.5	3.5	52	.5	5.0	1.5	11	6.7
20...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	3.5	--	5.9	--	--	7.6	1.7	20	11
AUG										
09...	6	4.1	2.8	6.3	36	.6	8.0	1.7	16	4.9
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	0	3.5	2.5	4.4	30	.4	7.3	2.9	19	7.4

ARKANSAS RIVER BASIN

553

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
NOV										
21...	11	.0	8.4	72	--	.10	.27	.27	.26	--
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	17	.0	7.9	64	62	.09	.17	.15	.15	--
JAN										
31...	7.0	.0	7.5	40	39	.05	.55	.40	.44	--
FEB										
07...	--	--	--	--	--	--	--	--	--	--
28...	2.4	.0	6.8	34	24	.05	14.2	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	3.8	.0	9.4	35	33	.05	1.51	.06	.09	2.7
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	4.8	.0	8.4	41	--	.06	1.99	.05	.00	--
21...	--	.1	5.8	--	--	.05	98.3	.04	.01	--
22...	1.9	.1	6.1	34	28	.05	32.5	.01	.19	--
JUN										
05...	2.7	.1	8.8	41	34	.06	2.88	.01	.00	--
20...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	5.2	.1	8.6	46	--	.06	.05	.03	.01	1.1
AUG										
09...	7.4	.1	9.6	60	47	.08	.04	.02	.04	--
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	5.1	.1	4.6	45	42	.06	.02	.19	.05	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + URG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)
NOV										
21...	.03	.02	--	--	.03	.49	.29	.52	--	.31
DEC										
12...	--	--	--	--	--	--	--	--	--	--
19...	.01	.00	--	--	.00	.20	.26	.21	--	.26
JAN										
31...	.04	.02	--	--	.03	.11	.07	.15	--	.09
FEB										
07...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
05...	.01	.00	9.5	.01	.00	.16	.16	.17	.01	.16
19...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	.02	.00	--	.02	.00	.14	.16	.16	.00	.16
21...	.05	.28	--	.06	.36	.65	.82	.70	.00	1.1
22...	.06	.39	--	.07	.50	.64	.91	.70	.00	1.3
JUN										
05...	.01	.03	--	.01	.04	.52	.55	.53	.00	.58
20...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	.03	.00	27	.04	.00	.05	.25	.08	.00	.25
AUG										
09...	.07	.00	--	.08	.00	.58	.21	.65	.44	.21
29...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	.16	.00	--	.19	.00	.59	.52	.75	.23	.52

ARKANSAS RIVER BASIN

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

DATE	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV 21...	--	.79	--	3.5	--	.060	--	--	.010	--
DEC 12...	--	--	--	--	--	--	--	--	--	--
19...	--	.36	.41	1.6	--	.050	--	--	.030	--
JAN 31...	--	.55	.53	2.4	--	.030	--	--	.020	--
FEB 07...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR 05...	240	.23	.25	1.0	243	.010	.03	.03	.000	1100
19...	--	--	--	--	--	--	--	--	--	--
MAY 02...	--	.21	.16	.93	--	.020	.06	.06	.010	--
21...	--	.74	1.1	3.3	--	.050	.15	.15	.050	--
22...	--	.71	1.5	3.1	--	.060	.18	.18	.030	--
JUN 05...	--	.54	.58	2.4	--	.070	.21	.21	.050	--
20...	--	--	--	--	--	--	--	--	--	--
JUL 11...	145	.11	.26	.49	146	.020	--	.06	.020	610
AUG 09...	--	.67	.25	3.0	--	.040	--	.12	.000	--
29...	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	.94	.57	4.2	--	.030	--	.09	.010	--

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECQV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV 21...	1130	1300	--	110	--	1	--	0	--	70	--
DEC 12...	1200	360	--	130	--	0	--	0	--	30	--
19...	0950	300	--	50	--	0	--	0	--	80	--
JAN 31...	1300	440	--	60	--	0	--	0	--	40	20
FEB 07...	1515	430	--	110	--	0	--	0	--	50	30
28...	1330	850	--	90	--	1	--	0	--	60	40
MAR 08...	1045	620	--	70	--	0	--	0	--	30	20
21...	1700	750	--	90	--	0	--	0	--	60	40
APR 05...	1145	750	690	60	1500	0	0	0	23	30	10
19...	0930	580	530	50	--	1	1	0	--	50	40
MAY 02...	1030	600	580	20	--	1	0	1	--	40	30
21...	1800	--	--	--	--	--	--	--	--	--	--
22...	1235	--	--	--	--	--	--	--	--	--	--
JUN 05...	1330	--	--	--	--	--	--	--	--	--	--
20...	1520	380	270	110	--	1	1	0	--	50	30
JUL 11...	1115	150	120	30	5	1	1	0	15	30	10
AUG 09...	1110	1100	870	230	--	1	1	0	--	40	0
29...	1100	1000	1000	0	--	1	0	1	--	50	10
SEP 13...	0930	230	180	50	--	1	0	1	--	40	0

ARKANSAS RIVER BASIN

555

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECUM- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TUM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECUM- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV- FM BOT- TUM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV										
21...	40	9	--	11	--	20	--	0	--	33
DEC										
12...	--	13	--	7	--	0	--	0	--	0
19...	20	13	--	<1	--	20	--	10	--	0
JAN										
31...	20	0	--	<1	--	0	--	0	--	0
FEB										
07...	20	0	--	2	--	0	--	0	--	10
28...	20	0	--	0	--	0	--	0	--	20
MAR										
08...	10	0	--	0	--	10	--	0	--	0
21...	20	0	--	<1	--	10	--	0	--	0
APR										
05...	20	0	--	2	0	0	0	0	10	0
19...	10	0	--	<1	--	0	0	0	--	10
MAY										
02...	10	0	--	0	--	10	0	10	--	0
21...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	--	--	--	--	--	--	--	--	--	--
20...	20	0	0	3	--	10	10	0	--	0
JUL										
11...	20	0	0	0	0	0	0	0	1	0
AUG										
09...	40	0	0	0	--	0	0	10	--	0
29...	40	0	0	0	--	10	0	60	--	0
SEP										
13...	40	0	0	<1	--	10	10	0	--	0

DATE	COPPER, SUS- PENDE RECUM- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV- FM BOT- TUM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECUM- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV- FM BOT- TUM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECUM- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV- FM BOT- TUM MA- TERIAL (UG/G AS PB)
NOV											
21...	--	<10	--	2400	--	90	--	80	--	82	--
DEC											
12...	--	<10	--	480	--	150	--	100	--	78	--
19...	--	<10	--	550	--	110	--	0	--	<10	--
JAN											
31...	--	0	--	640	--	40	--	0	--	<10	--
FEB											
07...	--	<10	--	580	--	250	--	0	--	<10	--
28...	--	10	--	1200	--	70	--	0	--	0	--
MAR											
08...	--	0	--	740	--	130	--	0	--	0	--
21...	--	<10	--	870	--	360	--	0	--	<10	--
APR											
05...	--	<10	3	1000	870	130	7200	0	--	<10	0
19...	--	<10	--	910	870	40	--	0	--	<10	--
MAY											
02...	--	0	--	1200	1200	50	--	0	--	0	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
20...	0	<10	--	750	720	30	--	0	0	<10	--
JUL											
11...	0	0	0	310	140	170	0	0	0	0	0
AUG											
09...	0	0	--	1900	1500	410	--	0	0	0	--
29...	0	0	--	2000	2000	50	--	0	0	0	--
SEP											
13...	0	<10	--	700	--	80	--	0	0	<10	--

ARKANSAS RIVER BASIN

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDED RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
21...	20	--	8	--	.1	--	.0	--	1	--	0
DEC											
12...	20	--	9	--	.5	--	.0	--	0	--	0
19...	20	--	10	--	.0	--	.0	--	0	--	0
JAN											
31...	20	--	10	--	.0	--	.0	--	0	--	0
FEB											
07...	20	--	20	--	.0	--	.0	--	0	--	0
28...	20	--	10	--	.1	--	.0	--	0	--	0
MAR											
08...	20	--	20	--	.2	--	.1	--	0	--	0
21...	20	--	10	--	.1	--	.0	--	0	--	0
APR											
05...	20	10	10	210	.0	.0	.0	.01	0	0	<10
19...	20	10	10	--	.4	.4	.0	--	1	0	<10
MAY											
02...	20	0	20	--	.4	.3	.1	--	0	0	0
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
20...	20	10	10	--	7.5	.0	8.9	--	0	0	<10
JUL											
11...	30	10	20	39	8.4	.0	13	.01	0	0	0
AUG											
09...	70	40	30	--	1.1	1.0	.1	--	0	0	0
29...	100	80	20	--	2.5	1.2	1.3	--	0	0	0
SEP											
13...	80	<10	40	--	.3	.1	.2	--	0	0	<10

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
21...	--	0	--	0	10	--	6	--	34	.13	99
DEC											
12...	--	1	--	0	10	--	3	--	24	.10	93
19...	--	0	--	0	10	--	<3	--	8	.02	94
JAN											
31...	--	0	--	0	20	--	20	--	15	.21	76
FEB											
07...	--	0	--	0	20	--	4	--	16	.11	81
28...	--	0	--	0	40	--	20	--	25	10	90
MAR											
08...	--	0	--	0	20	--	0	--	9	.34	87
21...	--	0	--	0	20	--	4	--	12	1.5	84
APR											
05...	0	0	0	0	20	20	<3	19	8	.35	91
19...	--	0	0	1	20	20	<3	--	14	.36	74
MAY											
02...	--	0	0	0	30	30	0	--	16	.78	78
21...	--	--	--	--	--	--	--	--	320	899	74
22...	--	--	--	--	--	--	--	--	100	96	75
JUN											
05...	--	--	--	--	--	--	--	--	23	1.6	96
20...	--	0	0	0	30	20	10	--	17	.04	87
JUL											
11...	0	0	0	0	40	40	0	0	13	.01	84
AUG											
09...	--	0	0	0	0	0	10	--	26	.02	91
29...	--	0	0	0	10	0	20	--	68	.00	96
SEP											
13...	--	0	0	0	10	7	<3	--	18	.01	96

ARKANSAS RIVER BASIN

557

07249080 BRAZIL CREEK NEAR WALLS, OK

LOCATION.--Lat 35°01'21", long 94°56'39", in SW¼NW¼ sec.1, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at county road bridge, 2.2 mi (3.5 km) southwest of Walls, and at mile 32.2 (51.8 km).

DRAINAGE AREA.--69.1 mi² (179 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorders. Altitude of gage is 642 ft (196 m) from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 20	1300	1,740	49.3	16.15	4.923	May 29	2000	3,200	90.6	17.03	5.191
May 21	1300	2,120	60.0	14.92	4.548	June 2	1900	2,800	79.3	16.30	4.968
May 22	1800	3,020	85.5	16.71	5.093	June 7	1100	2,740	77.6	16.19	4.935
May 27	2000	*3,610	102.0	*17.70	5.395						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	11	80	40	530	266	10	116	6.6	8.7	93
2	.00	.00	8.9	44	38	658	118	40	1940	6.3	6.0	18
3	.00	.00	36	22	36	681	93	262	1590	6.0	5.1	8.3
4	.00	.00	9.6	25	50	526	82	182	322	5.5	5.1	5.1
5	.00	.00	37	24	48	255	77	86	114	5.3	4.4	3.3
6	.00	.00	41	23	46	123	76	69	95	7.7	4.2	2.2
7	.00	.00	68	20	43	84	75	54	1160	129	4.4	1.7
8	.00	.00	49	18	70	73	73	45	286	88	4.9	1.5
9	.00	.00	28	18	52	70	95	46	151	56	3.3	1.2
10	.00	.00	19	18	67	60	94	360	124	18	2.8	1.1
11	.00	.00	13	16	73	46	776	69	96	13	8.7	1.3
12	.00	.00	12	17	73	36	521	24	84	11	1.2	1.4
13	.00	.00	10	36	73	32	241	20	62	10	1.0	1.4
14	.00	122	6.5	31	80	31	170	21	46	19	1.4	1.7
15	.00	220	4.8	29	87	29	129	26	38	16	1.9	1.7
16	.00	253	4.2	29	67	26	97	36	36	12	1.9	3.5
17	.00	207	3.2	29	60	22	71	39	31	11	1.7	4.2
18	.00	26	3.2	412	61	20	57	53	21	11	1.7	3.5
19	.00	17	3.4	542	56	31	143	71	14	42	1.7	12
20	.00	12	3.4	364	54	1080	135	111	12	23	1.6	6.6
21	.00	8.0	3.2	120	67	448	107	1440	12	12	1.5	4.4
22	.00	2.6	3.2	87	400	235	82	2340	12	6.3	24	2.5
23	.00	3.4	2.9	77	351	162	78	788	11	3.2	8.7	2.5
24	.00	4.8	3.1	67	224	146	81	161	9.7	2.5	2.6	2.2
25	.00	3.4	3.2	60	238	130	117	91	8.7	2.5	1.7	2.3
26	.00	256	3.1	57	358	108	81	73	9.0	54	6.0	5.5
27	.00	96	3.1	54	569	89	60	1620	9.4	91	5.5	27
28	.00	12	2.8	53	1040	73	46	2300	8.7	102	1.8	1.9
29	.00	18	2.5	50	---	69	26	2030	7.7	33	1.4	2.8
30	.00	14	4.6	47	---	160	16	800	6.8	16	3.9	1.5
31	.00	---	249	43	---	361	---	108	---	13	38	---
TOTAL	.00	1275.20	651.9	2512	4421	6394	4083	13375	6433.0	831.9	166.8	225.3
MEAN	.000	42.5	21.0	81.0	158	206	136	431	214	26.8	5.38	7.51
MAX	.00	256	249	542	1040	1080	776	2340	1940	129	38	93
MIN	.00	.00	2.5	16	36	20	16	10	6.8	2.5	1.0	1.1
AC=FT	.00	2530	1290	4980	8770	12680	8100	26530	12760	1650	331	447

WTR YR 1979 TOTAL 40369.10 MEAN 111 MAX 2340 MIN .00 AC=FT 80070

ARKANSAS RIVER BASIN
07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)
NOV										
29...	1600	23	240	8.5	10.0	--	--	11.6	104	--
DEC										
07...	1345	81	92	7.1	5.0	--	--	12.2	97	--
19...	1215	5.3	157	6.9	9.0	100	88	10.2	90	38
JAN										
31...	1615	43	90	7.0	2.0	68	39	13.6	98	23
FEB										
07...	1245	39	120	7.4	.0	--	--	13.4	94	--
22...	1630	530	70	6.8	9.0	200	6.0	10.6	91	21
MAR										
07...	1530	81	64	6.9	10.0	--	--	10.2	92	--
21...	1400	331	66	6.7	13.5	--	--	10.2	99	--
APR										
05...	1545	76	81	6.9	13.0	60	44	9.5	91	21
18...	1315	57	91	6.8	19.0	--	--	7.5	81	--
MAY										
02...	1350	39	134	7.4	16.5	50	29	9.0	95	--
23...	1146	450	58	6.8	19.0	150	90	8.4	92	17
JUN										
05...	1000	117	64	7.9	21.5	130	66	8.4	97	19
20...	1255	12	290	7.4	26.0	--	--	5.3	66	--
JUL										
10...	1605	11	168	7.0	25.0	360	140	3.1	38	44
AUG										
08...	1545	6.0	94	6.9	27.0	80	48	3.6	45	38
23...	1415	57	330	7.3	28.0	--	--	4.9	64	--
SEP										
12...	1510	.72	105	7.1	22.0	65	48	4.1	48	53
27...	0945	15	388	7.4	19.5	--	--	6.3	70	--

559

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

[illegible][illegible]

ARKANSAS RIVER BASIN

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

[illegible][illegible]

ARKANSAS RIVER BASIN

561

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV											
29...	1600	1700	--	200	--	1	--	1	--	120	--
DEC											
07...	1345	5100	--	180	--	2	--	1	--	90	--
19...	1215	1300	--	80	--	1	--	0	--	90	--
JAN											
31...	1615	880	--	90	--	1	--	0	--	50	30
FEB											
07...	1245	790	--	160	--	1	--	0	--	80	40
22...	1630	6100	--	160	--	2	--	0	--	80	60
MAR											
07...	1530	960	--	60	--	1	--	0	--	40	10
21...	1400	1800	--	120	--	1	--	1	--	80	30
APR											
05...	1545	1300	1200	60	5200	1	1	0	23	50	20
18...	1315	1100	1100	0	--	1	0	1	--	40	20
MAY											
02...	1350	970	940	30	--	1	1	0	--	50	10
23...	1146	--	--	--	--	--	--	--	--	--	--
JUN											
05...	1000	--	--	--	--	--	--	--	--	--	--
20...	1255	720	650	70	--	2	1	1	--	120	0
JUL											
10...	1605	3500	3300	180	0	2	1	1	25	80	30
AUG											
08...	1545	1400	1300	100	--	1	0	1	--	60	10
23...	1415	860	840	20	--	1	0	1	--	120	0
SEP											
12...	1510	1200	1100	70	--	2	1	1	--	90	20
27...	0945	510	490	20	--	1	0	1	--	140	10

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV											
29...	70	13	--	<1	--	10	--	10	--	--	0
DEC											
07...	50	13	--	5	--	10	--	0	--	--	10
19...	60	0	--	<1	--	20	--	0	--	--	0
JAN											
31...	20	0	--	1	--	0	--	0	--	--	0
FEB											
07...	40	0	--	<1	--	0	--	0	--	--	20
22...	20	0	--	0	--	20	--	0	--	--	30
MAR											
07...	30	0	--	0	--	10	--	0	--	--	0
21...	50	0	--	<1	--	0	--	0	--	--	0
APR											
05...	30	0	--	1	0	0	0	0	6	30	0
18...	20	0	--	<1	--	0	0	0	--	--	0
MAY											
02...	40	0	--	0	--	10	0	10	--	--	0
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
20...	120	0	0	<1	--	0	0	0	--	--	60
JUL											
10...	50	0	0	0	0	20	20	0	0	0	0
AUG											
08...	50	0	0	0	--	0	0	0	--	--	0
23...	120	0	0	0	--	10	0	10	--	--	0
SEP											
12...	70	0	0	<1	--	10	0	10	--	--	0
27...	130	0	0	<1	--	10	0	10	--	--	0

ARKANSAS RIVER BASIN

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV											
29...	--	<10	--	3500	--	180	--	200	--	95	--
DEC											
07...	--	<10	--	8000	--	240	--	140	--	54	--
19...	--	<10	--	3400	--	140	--	0	--	<10	--
JAN											
31...	--	14	--	1700	--	190	--	0	--	<10	--
FEB											
07...	--	<10	--	1500	--	410	--	0	--	<10	--
22...	--	0	--	11000	--	240	--	0	--	0	--
MAR											
07...	--	0	--	1800	--	120	--	0	--	0	--
21...	--	<10	--	3800	--	160	--	0	--	<10	--
APR											
05...	--	<10	12	2000	1900	100	18000	0	--	<10	30
18...	--	<10	--	2400	2300	60	--	100	--	<10	--
MAY											
02...	--	0	--	2400	2200	220	--	0	--	0	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
20...	50	<10	--	19000	19000	70	--	0	0	<10	--
JUL											
10...	0	0	0	990	230	760	0	0	0	100	0
AUG											
08...	0	0	--	3600	3100	540	--	0	0	0	--
23...	0	0	--	2500	2500	50	--	0	0	0	--
SEP											
12...	0	<10	--	2900	--	100	--	0	0	<10	--
27...	0	<10	--	1400	--	20	--	0	0	<10	--

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
29...	120	--	80	--	.1	--	.0	--	0	--	0
DEC											
07...	190	--	70	--	.0	--	.0	--	0	--	0
19...	120	--	100	--	.0	--	.0	--	0	--	0
JAN											
31...	60	--	40	--	.0	--	.0	--	0	--	0
FEB											
07...	50	--	50	--	.0	--	.0	--	0	--	0
22...	360	--	60	--	.2	--	.0	--	0	--	0
MAR											
07...	80	--	60	--	.2	--	.1	--	0	--	0
21...	160	--	80	--	.1	--	.0	--	0	--	0
APR											
05...	90	30	60	1400	.1	.1	.0	.02	0	0	<10
18...	140	40	100	--	.4	.2	.2	--	0	0	<10
MAY											
02...	120	30	90	--	.5	.5	.0	--	0	0	0
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	--	--	--	--	--	--	--	--	--	--	--
20...	180	40	140	--	8.6	2.8	5.8	--	0	0	<10
JUL											
10...	520	260	260	150	9.8	.0	11	.02	0	0	0
AUG											
08...	400	70	330	--	.6	.4	.2	--	0	0	0
23...	340	50	290	--	--	--	2.4	--	0	0	0
SEP											
12...	600	190	410	--	.2	.0	.2	--	0	0	<10
27...	450	20	430	--	.9	.8	.1	--	0	0	<10

ARKANSAS RIVER BASIN

563

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 29...	--	1	--	2	20	--	3	--	75	4.7	98
DEC 07...	--	1	--	0	40	--	<3	--	--	--	--
19...	--	0	--	0	20	--	<3	--	58	.83	99
JAN 31...	--	0	--	0	30	--	30	--	34	4.0	94
FEB 07...	--	0	--	0	20	--	20	--	26	2.7	88
22...	--	0	--	0	40	--	0	--	413	591	95
MAR 07...	--	2	--	0	20	--	20	--	17	3.7	96
21...	--	0	--	0	40	--	<3	--	120	107	94
APR 05...	0	0	0	0	10	7	<3	51	34	7.0	100
18...	--	0	0	0	30	30	<3	--	86	13	76
MAY 02...	--	0	0	1	20	20	0	--	56	5.9	100
23...	--	--	--	--	--	--	--	--	139	169	95
JUN 05...	--	--	--	--	--	--	--	--	54	17	100
20...	--	1	0	1	50	50	<3	--	68	2.2	96
JUL 10...	0	0	0	0	40	30	10	0	316	9.4	97
AUG 08...	--	0	0	0	10	0	10	--	63	1.0	97
23...	--	1	1	0	10	0	10	--	118	18	96
SEP 12...	--	0	0	0	0	0	<3	--	129	.25	73
27...	--	0	0	0	10	7	3	--	77	3.1	96

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, AR

LOCATION.--Lat 35°09'45", long 94°24'25", in NW¼NW¼ sec.34, T.6 N., R.32 W., Sebastian County, Hydrologic Unit 11110105, near left bank on downstream side of bridge on State Highway 45, 1.7 mi (2.7 km) south of Hackett, 2.0 mi (3.2 km) downstream from Elder Branch, 2.0 mi (3.2 km) upstream from small tributary, and 3.6 mi (5.8 km) upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 mi² (381 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year.

REVISED RECORDS.--WRD Ark. 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 459.71 ft (140.120 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--21 years, 132 ft³/s (3.74 m³/s), 12.19 in/yr (310 mm/yr) 95,630 acre-ft/yr (118 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 14, 1968, gage height, 23.00 ft (7.010 m), from rating curve extended above 20,000 ft³/s (566 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Feb. 23	0900	3,010 85.2	16.22 4.944	Apr. 11	2300	3,950 112	18.13 5.526
Mar. 20	1400	4,420 125	18.71 5.703	May 22	0900	*7,650 217	*20.84 6.352
Mar. 30	1900	4,080 116	18.30 5.578	May 29	0100	3,130 88.6	16.48 5.023
Apr. 1	2100	5,940 168	20.15 6.142	June 3	0100	3,160 89.5	16.55 5.044

No flow Oct. 15-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	17	21	367	100	1030	3460	113	254	28	118	175
2	.07	21	15	165	74	612	2870	119	1100	26	86	45
3	.05	20	7.9	111	61	893	687	201	1760	25	68	25
4	.10	16	19	73	60	518	576	767	543	24	62	21
5	.16	9.9	23	68	67	342	410	497	358	23	54	18
6	.17	11	19	65	66	271	310	280	266	24	48	17
7	.11	14	152	64	65	222	251	204	1530	27	30	16
8	.10	13	109	58	73	190	218	156	764	17	25	14
9	.09	12	60	49	76	168	282	131	326	14	23	12
10	.15	11	40	42	69	147	238	114	227	29	33	11
11	.15	10	28	44	79	132	1720	1620	166	32	217	9.2
12	.15	11	24	44	271	121	1650	1140	125	25	80	5.8
13	.10	11	22	52	394	111	524	452	105	25	48	3.8
14	.02	13	20	56	369	99	369	292	91	25	40	3.2
15	.00	24	19	51	304	88	270	202	77	22	40	2.4
16	.00	39	18	33	165	86	208	141	68	21	39	2.0
17	.00	38	16	32	121	84	172	111	62	331	35	1.7
18	.00	23	15	62	105	77	152	95	56	380	33	1.5
19	.00	15	14	358	92	109	163	86	51	74	31	1.4
20	.00	9.7	15	546	91	2890	136	116	49	52	30	1.7
21	.00	8.2	17	406	88	869	149	3690	44	43	32	3.3
22	.00	8.0	19	192	1210	622	124	5630	40	38	30	1.9
23	.00	7.8	19	161	2190	706	557	1160	37	33	30	1.4
24	.00	3.5	16	123	977	381	871	531	35	30	29	.72
25	.00	.48	7.4	107	2070	266	376	341	55	27	26	.42
26	.00	83	7.6	112	1340	214	247	254	41	25	25	.42
27	2.6	104	11	164	1060	449	190	1290	31	1070	32	.56
28	13	33	11	117	2160	296	168	1580	29	818	43	.64
29	4.6	23	11	112	---	255	146	1620	31	223	32	.81
30	2.0	23	13	110	---	2290	127	518	28	139	24	.72
31	1.1	---	393	107	---	1270	---	350	---	99	205	---
TOTAL	24.86	632.58	1181.9	4051	13797	15808	17623	23801	8349	3769	1648	397.59
MEAN	.80	21.1	38.1	131	493	510	587	768	278	122	53.2	13.3
MAX	13	104	393	546	2190	2890	3460	5630	1760	1070	217	175
MIN	.00	.48	7.4	32	60	77	124	86	28	14	23	.42
AC-FT	49	1250	2340	8040	27370	31360	34960	47210	16560	7480	3270	789

CAL YR 1978	TOTAL	24344.89	MEAN	66.7	MAX	2890	MIN	.00	AC-FT	48290
WTR YR 1979	TOTAL	91082.93	MEAN	250	MAX	5630	MIN	.00	AC-FT	180700

ARKANSAS RIVER BASIN

565

07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1961, 1969 to current year.

REMARKS.--Some records furnished by Arkansas Department of Pollution Control and Ecology, Little Rock, AR. Discharge records are available from the USGS, Little Rock, AR. Monthly samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT											
16...	1520	9827	9827	--	671	7.8	18.0	10	--	4.5	47
18...	1200	--	80020	.10	640	7.5	11.0	10	.70	9.8	88
25...	1100	1028	9740	--	--	--	--	--	--	--	--
NOV											
13...	1330	9827	9827	--	983	7.5	20.0	10	--	4.8	52
DEC											
18...	1220	9827	9827	--	409	7.4	10.0	30	--	11.0	97
20...	0900	--	80020	15	360	7.3	9.0	30	19	11.1	98
JAN											
22...	1630	--	80020	163	137	7.1	3.0	75	34	12.0	91
FEB											
12...	1315	9827	9827	--	319	6.7	7.0	15	--	12.4	102
21...	1100	--	80020	89	190	7.2	5.5	44	17	11.5	90
27...	1315	9827	9827	--	134	6.9	9.0	80	--	10.8	93
MAR											
27...	1320	9827	9827	--	182	6.7	14.0	50	--	9.7	93
APR											
02...	1920	--	80020	1230	130	6.7	13.0	80	52	8.8	85
17...	1320	9827	9827	--	212	6.7	22.0	40	--	9.0	102
30...	1500	--	80020	125	260	7.4	17.0	20	6.6	10.0	104
MAY											
22...	1320	9827	9827	--	83	6.8	22.0	100	--	7.4	84
JUN											
07...	0845	--	80020	1360	183	7.7	21.0	70	66	8.4	96
19...	1320	9827	9827	--	353	7.1	27.0	10	--	7.7	95
JUL											
10...	1235	--	80020	30	540	7.8	25.5	5	3.8	6.5	81
23...	1210	9827	9827	--	432	7.4	28.0	20	--	6.8	86
AUG											
08...	1110	--	80020	25	380	7.6	25.5	10	6.3	6.5	80
20...	1120	9827	9827	--	446	7.3	28.0	10	--	7.2	91
SEP											
12...	1130	--	80020	5.6	335	7.5	23.0	20	14	6.5	77
24...	0700	9827	9827	--	408	7.7	21.0	15	--	6.3	70

07249400 JAMES FORK NEAR HACKETT, OK--Continued

[illegible][illegible]

07249400 JAMES' FORK NEAR HACKETT, OK--Continued

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT										
16...	.13	--	--	--	--	--	--	--	--	--
18...	.03	.01	--	--	.01	1.9	.81	1.9	--	.82
25...	--	--	--	--	--	--	--	2.1	--	--
NOV										
13...	.01	--	--	--	--	--	--	--	--	--
DEC										
18...	.07	--	--	--	--	--	--	--	--	--
20...	.02	.02	--	--	.03	.48	.37	.50	--	.39
JAN										
22...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	.19	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
27...	.64	--	--	--	--	--	--	--	--	--
MAR										
27...	--	--	--	--	--	--	--	--	--	--
APR										
02...	.03	.01	--	.04	.01	.45	.31	.48	.16	.32
17...	.31	--	--	--	--	--	--	--	--	--
30...	.03	.00	--	.04	.00	.16	.17	.19	.02	.17
MAY										
22...	.07	--	--	--	--	--	--	--	--	--
JUN										
07...	.05	.03	--	.06	.04	.73	.49	.78	.26	.52
19...	.02	--	--	--	--	--	--	--	--	--
JUL										
10...	.04	.00	39	.05	.00	.08	.12	.12	.00	.12
23...	.06	--	--	--	--	--	--	--	--	--
AUG										
08...	.00	.00	--	.00	.00	.70	.28	.70	.42	.28
20...	.07	--	--	--	--	--	--	--	--	--
SEP										
12...	.08	.00	--	.10	.00	.48	.60	.56	.00	.60
24...	.06	--	--	--	--	--	--	--	--	--

DATE	NITRO- GEN, NH4 + ORG. TUT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NH3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHURUS, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPH OSPHATE TOTAL (MG/L AS PU4)	PHOS- PHURUS, TOTAL (MG/L AS PU4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, TOTAL IN BOT. MAT. (MG/KG AS P)
OCT										
16...	--	--	--	--	--	.070	--	--	--	--
18...	--	1.9	--	8.5	--	.030	--	--	.010	--
25...	--	--	--	--	--	--	--	--	--	--
NOV										
13...	--	--	--	--	--	.120	--	--	--	--
DEC										
18...	--	--	--	--	--	.070	--	--	--	--
20...	--	1.5	1.4	6.4	--	.070	--	--	.030	--
JAN										
22...	--	--	--	--	--	--	--	--	--	--
FEB										
12...	--	--	--	--	--	.030	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	.080	--	--	--	--
MAR										
27...	--	--	--	--	--	.070	--	--	--	--
APR										
02...	--	1.1	.91	4.7	--	.040	.12	.12	.010	--
17...	--	--	--	--	--	.060	--	--	--	--
30...	--	.77	.74	3.4	--	.020	.06	.06	.010	--
MAY										
22...	--	--	--	--	--	.150	--	--	--	--
JUN										
07...	--	1.3	.96	5.7	--	.100	.31	.31	.020	--
19...	--	--	--	--	--	.030	--	--	--	--
JUL										
10...	830	.44	.43	1.9	830	.010	--	.03	.020	540
23...	--	--	--	--	--	.090	--	--	--	--
AUG										
08...	--	.90	50	4.0	--	.100	--	.31	.000	--
20...	--	--	--	--	--	.020	--	--	--	--
SEP										
12...	--	.64	.74	2.8	--	.030	--	.09	.010	--
24...	--	--	--	--	--	.010	--	--	--	--

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV, (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV, FM BUT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
OCT											
16...	1520	--	--	--	--	<5	--	--	--	--	--
18...	1200	120	--	0	--	1	--	1	--	--	--
25...	1100	--	--	--	--	--	--	--	--	--	--
NOV											
08...	1100	120	--	20	--	0	--	0	--	--	--
13...	1330	--	--	--	--	--	--	--	--	--	--
DEC											
06...	0930	480	--	110	--	1	--	0	--	70	--
18...	1220	--	--	--	--	--	--	--	--	--	--
20...	0900	380	--	10	--	1	--	0	--	220	--
JAN											
22...	1630	630	--	60	--	1	--	0	--	50	--
FEB											
06...	0815	380	--	20	--	0	--	0	--	80	30
12...	1315	--	--	--	--	<5	--	--	--	--	--
21...	1100	490	--	50	--	0	--	0	--	80	60
27...	1315	--	--	--	--	--	--	--	--	--	--
MAR											
06...	0945	550	--	90	--	0	--	0	--	50	20
19...	1530	400	--	20	--	0	--	0	--	70	50
27...	1320	--	--	--	--	--	--	--	--	--	--
APR											
02...	1920	1200	1100	90	--	1	1	0	--	30	0
17...	1320	--	--	--	--	<5	--	--	--	--	--
17...	1530	400	360	40	--	0	0	0	--	90	70
30...	1500	380	360	20	--	1	1	1	--	50	30
MAY											
21...	2026	--	--	--	--	--	--	--	--	--	--
22...	1320	--	--	--	--	--	--	--	--	--	--
30...	0830	540	520	20	--	1	1	0	--	20	0
JUN											
07...	0845	--	--	--	--	--	--	--	--	--	--
19...	1100	160	120	40	--	1	1	0	--	70	30
19...	1320	--	--	--	--	--	--	--	--	--	--
JUL											
10...	1235	180	170	10	0	0	0	0	15	70	30
23...	1210	--	--	--	--	<6	--	--	--	--	--
AUG											
08...	1110	290	290	0	--	1	1	0	--	50	0
20...	1120	--	--	--	--	--	--	--	--	--	--
21...	1500	160	150	10	--	1	0	1	--	70	20
SEP											
12...	1130	370	330	40	--	1	0	1	--	60	0
24...	0700	--	--	--	--	--	--	--	--	--	--
24...	1430	280	250	30	--	1	0	1	--	70	10

ARKANSAS RIVER BASIN

569

07249400 JAMES FORK NEAR HACKETT, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT											
16...	--	<10	--	--	--	<5	--	--	--	--	60
18...	--	0	--	2	--	20	--	0	--	--	0
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	--	10	--	<1	--	30	--	0	--	--	0
13...	--	10	--	--	--	--	--	--	--	--	120
DEC											
06...	60	13	--	2	--	10	--	0	--	--	0
18...	--	<10	--	--	--	--	--	--	--	--	<20
20...	60	0	--	<1	--	20	--	10	--	--	0
JAN											
22...	30	0	--	1	--	0	--	10	--	--	20
FEB											
06...	50	0	--	<1	--	0	--	0	--	--	10
12...	--	<10	--	--	--	<5	--	--	--	--	<20
21...	20	0	--	0	--	20	--	10	--	--	30
27...	--	<10	--	--	--	--	--	--	--	--	100
MAR											
06...	30	0	--	0	--	10	--	0	--	--	10
19...	20	0	--	<1	--	0	--	0	--	--	0
27...	--	<10	--	--	--	--	--	--	--	--	110
APR											
02...	30	0	--	0	--	10	0	10	--	--	20
17...	--	<10	--	--	--	<5	--	--	--	--	<20
17...	20	0	--	<1	--	0	0	0	--	--	0
30...	20	0	0	0	--	0	0	0	--	--	0
MAY											
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	<10	--	--	--	--	--	--	--	--	<20
30...	20	0	0	0	--	10	10	0	--	--	0
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	40	0	0	<1	--	30	20	10	--	--	0
19...	--	<10	--	--	--	--	--	--	--	--	<20
JUL											
10...	40	0	0	0	0	0	0	0	0	0	10
23...	--	<10	--	--	--	<5	--	--	--	--	<20
AUG											
08...	50	0	0	0	--	10	10	0	--	--	0
20...	--	<10	--	--	--	--	--	--	--	--	20
21...	50	0	0	0	--	10	0	10	--	--	0
SEP											
12...	60	0	0	<1	--	10	0	10	--	--	0
24...	--	<10	--	--	--	--	--	--	--	--	50
24...	60	0	0	0	--	10	10	0	--	--	0

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, OK--Continued

DATE	COPPER, SUS- PENDE RECUM- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BUT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECUM- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BUT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECUM- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BUT- TOM MA- TERIAL (UG/G AS PB)
OCT											
16...	--	--	--	1100	--	--	--	10	--	--	--
18...	--	<10	--	350	--	0	--	0	--	0	--
25...	--	--	--	2500	--	--	--	--	--	--	--
NOV											
08...	--	<10	--	350	--	50	--	0	--	<10	--
13...	--	--	--	180	--	--	--	--	--	--	--
DEC											
06...	--	<10	--	950	--	180	--	300	--	230	--
18...	--	--	--	870	--	--	--	--	--	--	--
20...	--	<10	--	1100	--	30	--	0	--	<10	--
JAN											
22...	--	<10	--	1200	--	160	--	50	--	50	--
FEB											
06...	--	<10	--	800	--	70	--	0	--	<10	--
12...	--	--	--	1800	--	--	--	<20	--	--	--
21...	--	10	--	1100	--	140	--	0	--	0	--
27...	--	--	--	2000	--	--	--	--	--	--	--
MAR											
06...	--	0	--	900	--	110	--	0	--	0	--
19...	--	<10	--	760	--	10	--	0	--	<10	--
27...	--	--	--	3100	--	--	--	--	--	--	--
APR											
02...	--	0	--	2600	2400	190	--	0	--	0	--
17...	--	--	--	2700	--	--	--	<10	--	--	--
17...	--	<10	--	910	860	50	--	0	--	<10	--
30...	0	0	--	890	800	90	--	0	0	0	--
MAY											
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	4600	--	--	--	--	--	--	--
30...	0	0	--	1300	1200	80	--	0	0	0	--
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	0	<10	--	690	640	50	--	0	0	<10	--
19...	--	--	--	480	--	--	--	--	--	--	--
JUL											
10...	10	0	1	310	290	20	0	0	0	0	0
23...	--	--	--	2600	--	--	--	20	--	--	--
AUG											
08...	0	0	--	680	640	40	--	0	0	0	--
20...	--	--	--	4700	--	--	--	--	--	--	--
21...	0	0	--	500	470	30	--	0	0	0	--
SEP											
12...	0	<10	--	790	--	50	--	0	0	<10	--
24...	--	--	--	270	--	--	--	--	--	--	--
24...	0	0	--	600	--	30	--	0	0	0	--

ARKANSAS RIVER BASIN

571

07249400 JAMES FORK NEAR HACKETT, OK--Continued

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, REC'D FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY REC'D FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE D RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
UCT											
16...	920	--	--	--	--	--	--	--	--	--	--
18...	480	--	280	--	.0	--	.0	--	3	--	0
25...	900	--	--	--	--	--	--	--	--	--	--
NOV											
08...	280	--	310	--	.0	--	.0	--	0	--	0
13...	570	--	--	--	--	--	--	--	--	--	--
DEC											
06...	160	--	130	--	.1	--	.1	--	0	--	0
18...	32	--	--	--	--	--	--	--	--	--	--
20...	140	--	100	--	.0	--	.0	--	0	--	0
JAN											
22...	160	--	110	--	.1	--	.0	--	0	--	0
FEB											
06...	200	--	190	--	.0	--	.0	--	0	--	0
12...	360	--	--	--	--	--	--	--	--	--	--
21...	180	--	150	--	.1	--	.0	--	0	--	0
27...	110	--	--	--	--	--	--	--	--	--	--
MAR											
06...	310	--	290	--	.2	--	.1	--	0	--	0
19...	490	--	470	--	.2	--	.2	--	0	--	0
27...	460	--	--	--	--	--	--	--	--	--	--
APR											
02...	300	60	240	--	.2	.2	.0	--	0	0	0
17...	220	--	--	--	--	--	--	--	--	--	--
17...	260	0	270	--	.4	.2	.2	--	1	0	<10
30...	290	0	290	--	.9	.7	.2	--	0	0	0
MAY											
21...	--	--	--	--	--	--	--	--	--	--	--
22...	240	--	--	--	--	--	--	--	--	--	--
30...	180	20	160	--	8.7	.6	8.1	--	0	0	0
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	260	70	190	--	.7	.3	.4	--	0	0	<10
19...	210	--	--	--	--	--	--	--	--	--	--
JUL											
10...	160	60	100	400	7.9	.0	11	.07	0	0	0
23...	<10	--	--	--	--	--	--	--	--	--	--
AUG											
08...	260	40	220	--	.3	.0	.3	--	0	0	0
20...	140	--	--	--	--	--	--	--	--	--	--
21...	190	20	170	--	4.0	1.8	2.2	--	0	0	0
SEP											
12...	290	70	220	--	.2	.0	1.5	--	0	0	<10
24...	350	--	--	--	--	--	--	--	--	--	--
24...	360	50	310	--	.3	.0	.3	--	0	0	0

ARKANSAS RIVER BASIN

07249400 JAMES FORK NEAR HACKETT, OK--Continued

DATE	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
16...	--	--	--	--	--	--	--	--	--	--	--
18...	--	0	--	0	20	--	<3	--	17	.00	99
25...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	--	0	--	0	10	--	<3	--	52	1.8	97
13...	--	--	--	--	40	--	--	--	--	--	--
DEC											
06...	--	0	--	0	10	--	<3	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	0	--	0	20	--	7	--	41	1.7	92
JAN											
22...	--	0	--	0	20	--	6	--	41	21	81
FEB											
06...	--	0	--	0	40	--	30	--	36	6.4	90
12...	--	--	--	--	90	--	--	--	--	--	--
21...	--	0	--	0	20	--	10	--	27	6.4	91
27...	--	--	--	--	130	--	--	--	--	--	--
MAR											
06...	--	1	--	0	40	--	30	--	24	18	62
19...	--	1	--	1	30	--	8	--	39	11	95
27...	--	--	--	--	140	--	--	--	--	--	--
APR											
02...	--	0	0	0	40	20	20	--	72	558	97
17...	--	--	--	--	60	--	--	--	--	--	--
17...	--	1	1	0	30	30	<3	--	54	25	94
30...	--	0	0	0	30	20	10	--	30	10	98
MAY											
21...	--	--	--	--	--	--	--	--	176	2720	79
22...	--	--	--	--	40	--	--	--	--	--	--
30...	--	0	0	0	30	20	10	--	57	80	93
JUN											
07...	--	--	--	--	--	--	--	--	178	735	88
19...	--	0	0	0	30	20	7	--	57	13	95
19...	--	--	--	--	70	--	--	--	--	--	--
JUL											
10...	0	0	0	0	30	20	10	2	104	8.1	98
23...	--	--	--	--	10	--	--	--	--	--	--
AUG											
08...	--	0	0	0	10	0	10	--	47	3.2	99
20...	--	--	--	--	<10	--	--	--	--	--	--
21...	--	0	0	0	20	10	10	--	--	--	--
SEP											
12...	--	0	0	0	10	7	<3	--	42	.66	100
24...	--	--	--	--	<10	--	--	--	--	--	--
24...	--	0	0	0	10	0	10	--	59	.11	97

LOCATION.--Lat 35°09'30", long 96°36'01", NE¼NW¼ sec.21, T.8 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, near county road 1.1 miles (1.8 km) southwest of Williams.

PERIOD OF RECORD.--Water years 1976 to current year.

[illegible]

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

[illegible][illegible]

575

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

[illegible]

ARKANSAS RIVER BASIN

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV											
09...	1045	140	--	0	--	1	--	0	--	--	--
DEC											
06...	1130	520	--	30	--	1	--	0	--	80	--
20...	1010	430	--	30	--	1	--	1	--	50	--
JAN											
23...	1045	650	--	60	--	1	--	0	--	60	--
FEB											
07...	0845	470	--	70	--	1	--	0	--	80	30
20...	1530	420	--	80	--	0	--	0	--	60	40
MAR											
14...	1015	490	--	30	--	0	--	0	--	60	30
20...	0940	4300	--	130	--	4	--	0	--	80	30
APR											
03...	1615	1400	1300	70	--	1	1	0	--	60	30
17...	1330	440	400	40	--	1	1	0	--	50	30
MAY											
01...	0930	270	250	20	--	1	1	0	--	--	--
30...	1045	1000	950	50	--	1	1	0	--	0	0
JUN											
07...	1115	--	--	--	--	--	--	--	--	--	--
19...	1320	220	210	10	--	0	0	0	--	30	0
JUL											
10...	0950	1900	1900	40	0	1	0	1	20	50	10
AUG											
08...	0830	270	240	30	--	1	1	0	--	50	0
22...	1245	500	480	20	--	1	0	1	--	60	0
SEP											
12...	0845	400	350	50	--	1	0	1	--	70	20
25...	0830	280	270	10	--	1	0	1	--	70	20

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV											
09...	--	0	--	<1	--	0	--	0	--	--	0
DEC											
06...	--	13	--	9	--	0	--	0	--	--	0
20...	40	0	--	<1	--	30	--	10	--	--	10
JAN											
23...	40	0	--	10	--	0	--	0	--	--	20
FEB											
07...	50	0	--	4	--	0	--	0	--	--	10
20...	20	0	--	0	--	20	--	20	--	--	50
MAR											
14...	30	0	--	0	--	10	--	0	--	--	20
20...	50	0	--	0	--	10	--	0	--	--	20
APR											
03...	30	0	--	3	--	0	0	0	--	--	10
17...	20	0	--	3	--	0	0	0	--	--	0
MAY											
01...	20	0	--	0	--	10	10	0	--	--	0
30...	0	0	0	0	--	10	10	0	--	--	0
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	30	0	0	2	--	10	0	10	--	--	20
JUL											
10...	40	0	0	0	0	10	10	0	0	0	0
AUG											
08...	50	0	0	0	--	0	0	0	--	--	0
22...	60	0	0	0	--	0	0	10	--	--	0
SEP											
12...	50	0	0	<1	--	10	0	10	--	--	0
25...	50	0	0	<1	--	20	20	0	--	--	0

ARKANSAS RIVER BASIN

577

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECov, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECov, FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV											
09...	--	<10	--	380	--	30	--	0	--	<10	--
DEC											
06...	--	<10	--	1200	--	80	--	200	--	130	--
20...	--	<10	--	1100	--	50	--	100	--	<10	--
JAN											
23...	--	<10	--	1200	--	120	--	100	--	89	--
FEB											
07...	--	<10	--	880	--	130	--	0	--	<10	--
20...	--	0	--	880	--	190	--	0	--	0	--
MAR											
14...	--	0	--	980	--	100	--	100	--	0	--
20...	--	10	--	9800	--	270	--	0	--	0	--
APR											
03...	--	<10	--	2800	2700	140	--	0	--	<10	--
17...	--	<10	--	1000	810	190	--	0	--	<10	--
MAY											
01...	--	0	--	1200	1100	150	--	0	--	0	--
30...	0	0	--	2100	1900	230	--	0	0	0	--
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	10	<10	--	530	440	90	--	0	0	<10	--
JUL											
10...	0	0	0	3400	3200	170	0	0	0	0	0
AUG											
08...	0	0	--	610	540	70	--	0	0	0	--
22...	0	0	--	1100	1100	30	--	0	0	0	--
SEP											
12...	0	<10	--	840	--	80	--	0	0	<10	--
25...	0	<10	--	570	--	30	--	0	0	<10	--

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov, FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECov, FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
09...	140	--	130	--	.0	--	.0	--	0	--	0
DEC											
06...	180	--	150	--	.1	--	.1	--	0	--	0
20...	100	--	60	--	.1	--	.0	--	0	--	0
JAN											
23...	140	--	90	--	.0	--	.0	--	0	--	0
FEB											
07...	120	--	110	--	.0	--	.0	--	0	--	0
20...	120	--	80	--	.0	--	.0	--	0	--	1
MAR											
14...	290	--	270	--	.1	--	.1	--	0	--	0
20...	870	--	160	--	.0	--	.0	--	0	--	0
APR											
03...	300	80	220	--	.1	.1	.0	--	0	0	<10
17...	180	10	170	--	.4	.3	.1	--	1	0	<10
MAY											
01...	180	30	150	--	26	3.0	23	--	0	0	0
30...	180	60	120	--	11	8.0	3.0	--	0	0	0
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	110	30	80	--	1.3	.8	.5	--	0	0	<10
JUL											
10...	260	10	250	110	9.2	.0	9.5	.04	0	0	0
AUG											
08...	120	40	80	--	.6	.3	.3	--	0	0	0
22...	150	90	60	--	2.2	1.5	.7	--	0	0	0
SEP											
12...	140	100	40	--	1.8	.1	1.7	--	0	0	<10
25...	130	100	30	--	.6	.4	.2	--	1	1	0

ARKANSAS RIVER BASIN

07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

DATE	MOLYB- DENUM, RECOV. FM BOT- TUM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TUM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
NOV 09...	--	0	--	1	10	--	<3	--	41	.06	99
DEC 06...	--	0	--	0	70	--	<3	--	--	--	--
20...	--	0	--	0	20	--	<3	--	36	1.3	98
JAN 23...	--	0	--	0	20	--	4	--	38	24	90
FEB 07...	--	0	--	0	20	--	10	--	36	6.5	89
20...	--	0	--	0	20	--	10	--	32	9.5	83
MAR 14...	--	1	--	1	50	--	10	--	24	8.4	95
20...	--	1	--	0	50	--	10	--	--	--	--
APR 03...	--	0	0	0	40	40	<3	--	78	217	98
17...	--	1	0	1	20	10	10	--	54	35	98
MAY 01...	--	0	0	0	30	20	10	--	34	16	98
30...	--	0	0	0	20	10	10	--	67	164	94
JUN 07...	--	--	--	--	--	--	--	--	318	1370	81
19...	--	0	0	0	20	10	10	--	36	7.4	96
JUL 10...	0	0	0	0	50	40	10	0	144	22	97
AUG 08...	--	0	0	0	10	0	10	--	48	5.2	83
22...	--	0	0	0	0	0	5	--	133	15	97
SEP 12...	--	0	0	0	0	0	4	--	42	3.1	98
25...	--	0	0	0	10	7	<3	--	68	.95	95

579

LOCATION.--Lat 35°11'30", long 94°43'19", SW¼SE¼ sec.1, T.8 N., R.24 E., LeFlore County, Hydrologic Unit 11110105, on county road bridge 3.5 mi (5.6 km) northwest of Panama, and at mile 7.1 (11.4 km).

PERIOD OF RECORD.--Water years 1976 to current year.

[illegible][illegible]

ARKANSAS RIVER BASIN

ARKANSAS RIVER BASINARKANSAS RIVER BASIN

581

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

583

[illegible][illegible]

ARKANSAS RIVER BASIN

07249415 COAL CREEK TRIBUTARY NEAR BOKOSHE, OK--Continued

DATE	MOLOYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB										
06...	--	0	--	0	20	--	5	--	37	.00
21...	--	0	--	0	10	--	10	--	21	.04
MAR										
07...	--	0	--	0	20	--	10	--	15	.04
20...	--	0	--	0	20	--	10	--	53	2.1
APR										
04...	0	0	0	0	30	30	<3	42	24	.24
11...	--	--	--	--	--	--	--	--	1050	116
11...	--	--	--	--	--	--	--	--	623	57
11...	--	--	--	--	--	--	--	--	1990	908
11...	--	--	--	--	--	--	--	--	611	158
18...	--	0	0	0	20	20	<3	--	112	.82
MAY										
01...	--	0	0	0	10	0	20	--	57	.00
03...	--	--	--	--	--	--	--	--	342	27
11...	--	--	--	--	--	--	--	--	288	26
30...	--	0	0	0	10	0	10	--	43	.50
JUN										
07...	--	--	--	--	--	--	--	--	69	1.3
AUG										
14...	--	0	0	0	150	150	0	--	2640	713
14...	--	--	--	--	--	--	--	--	1350	372

ARKANSAS RIVER BASIN

585

07249419 COAL CREEK NEAR PANAMA, OK

LOCATION.--Lat 35°11'08", long 94°40'23", NW¼NE¼ sec.9, T.8 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on U.S. Highway 59, 1.0 mi (1.6 km) north of Panama, and at mile 2.9 (4.6 km).

DRAINAGE AREA.--6.67 mi² (17.37 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACU3)
NOV										
22...	0730	.41	85	8.6	11.0	80	76	7.8	70	21
DEC										
07...	0900	14	104	6.7	6.0	--	--	11.8	96	--
19...	1630	.33	120	6.4	13.0	55	24	10.7	103	32
JAN										
23...	1715	8.7	107	7.1	2.0	81	34	12.3	91	25
FEB										
06...	1130	1.9	170	7.2	.5	--	--	16.7	119	--
22...	0915	156	80	6.5	9.0	200	5.0	10.2	87	20
MAR										
05...	1845	4.0	90	6.9	8.5	--	--	9.5	82	--
20...	1330	62	72	6.7	14.0	--	--	9.8	96	--
APR										
04...	1110	6.6	92	6.8	10.0	50	20	10.5	94	28
11...	0405	93	--	--	--	--	--	--	--	--
11...	0655	107	--	--	--	--	--	--	--	--
11...	1205	541	--	--	--	--	--	--	--	--
11...	1435	505	--	--	--	--	--	--	--	--
11...	1606	275	--	--	--	--	--	--	--	--
11...	1735	143	--	--	--	--	--	--	--	--
17...	0900	.59	113	6.9	19.0	--	--	7.4	80	--
21...	0746	37	--	--	--	--	--	--	--	--
23...	0845	59	--	--	--	--	--	--	--	--
MAY										
01...	1400	.33	111	7.1	18.0	55	10	9.1	97	29
03...	0635	58	--	--	--	--	--	--	--	--
11...	1625	196	--	--	--	--	--	--	--	--
11...	2033	161	--	--	--	--	--	--	--	--
12...	0645	36	--	--	--	--	--	--	--	--
30...	1245	3.6	82	7.6	24.0	--	--	7.3	89	--
JUN										
08...	0815	7.4	92	7.4	25.0	75	43	8.7	107	24
19...	1640	.01	124	7.6	28.0	--	--	6.9	90	--
JUL										
09...	1515	.02	105	8.2	31.0	50	15	9.4	127	29
AUG										
22...	1015	.02	103	7.2	25.0	--	--	6.9	85	--
SEP										
11...	1425	.01	115	6.9	27.0	240	150	4.9	62	33

ARKANSAS RIVER BASIN

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SURP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV										
22...	11	4.4	2.4	4.1	26	.4	--	3.9	10	6.0
DEC										
07...	--	--	--	--	--	--	--	--	--	--
19...	19	6.7	3.6	8.2	33	.6	--	3.1	13	13
JAN										
23...	18	5.2	2.8	6.8	35	.6	--	2.6	--	11
FEB										
06...	--	--	--	--	--	--	--	--	--	--
22...	11	4.6	2.1	6.3	37	.6	--	2.6	9	11
MAR										
05...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
APR										
04...	11	6.3	2.9	7.9	36	.7	10	2.2	17	20
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	3	6.4	3.2	8.5	38	.7	9.3	.8	26	11
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	2	4.9	2.8	4.9	28	.4	7.3	2.4	22	11
19...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	2	7.1	2.8	5.8	26	.5	12	5.9	27	13
AUG										
22...	--	--	--	--	--	--	--	--	--	--
SEP										
11...	2	7.4	3.5	6.7	27	.5	12	5.1	31	11

ARKANSAS RIVER BASIN

587

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
NOV										
22...	3.7	.1	6.2	58	--	.08	.06	2.5	2.5	--
DEC										
07...	--	--	--	--	--	--	--	--	--	--
19...	8.7	.0	8.4	93	77	.13	.08	4.1	4.0	--
JAN										
23...	7.5	.1	7.7	73	48	.10	1.71	--	--	--
FEB										
06...	--	--	--	--	--	--	--	--	--	--
22...	6.9	.1	4.9	65	44	.09	27.4	--	--	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
APR										
04...	5.3	.1	7.3	68	67	.09	1.21	.97	1.0	6.0
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	4.9	.1	7.0	88	59	.12	.08	.48	.44	--
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	3.7	.3	5.9	70	50	.10	1.40	.12	.21	--
19...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	6.2	.2	5.6	92	63	.13	.00	.06	.00	2.4
AUG										
22...	--	--	--	--	--	--	--	--	--	--
SEP										
11...	6.3	.2	6.2	77	65	.10	.00	.19	.05	--

ARKANSAS RIVER BASIN

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
NOV										
22...	.12	.04	--	--	.05	1.4	.83	1.5	--	.87
DEC										
07...	--	--	--	--	--	--	--	--	--	--
19...	.02	.02	--	--	.03	.84	.62	.86	--	.64
JAN										
23...	--	--	--	--	--	--	--	--	--	--
FEB										
06...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
APR										
04...	.07	.01	28	.08	.01	.76	.69	.83	.13	.70
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	.12	.14	--	.15	.18	.63	.76	.75	.00	.90
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	.10	.12	--	.12	.15	1.1	.74	1.2	.34	.86
19...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	.22	.00	28	.27	.00	1.1	.59	1.3	.71	.59
AUG										
22...	--	--	--	--	--	--	--	--	--	--
SEP										
11...	.30	.00	--	.36	.00	1.6	.12	1.9	1.8	.12

ARKANSAS RIVER BASIN

589

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)
NOV										
22...	--	4.0	--	18	--	.160	--	--	.050	--
DEC										
07...	--	--	--	--	--	--	--	--	--	--
19...	--	5.0	4.6	22	--	.080	--	--	.040	--
JAN										
23...	--	--	--	--	--	--	--	--	--	--
FEB										
06...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
APR										
04...	320	1.8	1.7	8.0	326	.040	.12	.12	.020	650
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	1.2	1.3	5.4	--	.060	.18	.18	.040	--
03...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	--	1.3	1.1	5.8	--	.080	--	.25	.040	--
19...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	150	1.4	.59	6.0	152	.170	--	.52	.060	360
AUG										
22...	--	--	--	--	--	--	--	--	--	--
SEP										
11...	--	2.1	.17	9.3	--	.180	--	.55	.020	--

ARKANSAS RIVER BASIN

07249419 COAL CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ALUM- INUM, RECUM, FM BUT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BUT- TOM MA- TERIAL (UG/G AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDE RECOV- ERABLE (UG/L AS B)
NOV											
22...	0730	2200	--	10	--	1	--	1	--	80	--
DEC											
07...	0900	2400	--	150	--	1	--	1	--	80	--
19...	1630	470	--	60	--	1	--	1	--	70	--
JAN											
23...	1715	630	--	130	--	1	--	0	--	780	--
FEB											
06...	1130	590	--	130	--	1	--	1	--	70	30
22...	0915	9000	--	160	--	3	--	0	--	60	40
MAR											
05...	1845	440	--	50	--	1	--	0	--	50	30
20...	1330	1000	--	120	--	1	--	1	--	80	30
APR											
04...	1110	530	460	70	1500	1	0	1	46	40	0
11...	0405	--	--	--	--	--	--	--	--	--	--
11...	0655	--	--	--	--	--	--	--	--	--	--
11...	1205	--	--	--	--	--	--	--	--	--	--
11...	1435	--	--	--	--	--	--	--	--	--	--
11...	1606	--	--	--	--	--	--	--	--	--	--
11...	1735	--	--	--	--	--	--	--	--	--	--
17...	0900	630	610	20	--	1	0	1	--	40	20
21...	0746	--	--	--	--	--	--	--	--	--	--
23...	0845	--	--	--	--	--	--	--	--	--	--
MAY											
01...	1400	430	410	20	--	1	1	0	--	30	10
03...	0635	--	--	--	--	--	--	--	--	--	--
11...	1625	--	--	--	--	--	--	--	--	--	--
11...	2033	--	--	--	--	--	--	--	--	--	--
12...	0645	--	--	--	--	--	--	--	--	--	--
30...	1245	950	910	40	--	1	1	1	--	40	30
JUN											
08...	0815	--	--	--	--	--	--	--	--	--	--
19...	1640	300	240	60	--	1	1	0	--	30	0
JUL											
09...	1515	420	370	50	0	1	1	1	8	100	70
AUG											
22...	1015	990	990	0	--	2	0	2	--	40	0
SEP											
11...	1425	3600	3500	130	--	2	1	1	--	70	30

ARKANSAS RIVER BASIN

591

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, REC- OV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, REC- OV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV											
22...	40	1	--	0	--	10	--	0	--	--	33
DEC											
07...	--	0	--	5	--	0	--	0	--	--	0
19...	30	0	--	<1	--	20	--	10	--	--	10
JAN											
23...	50	0	--	2	--	10	--	0	--	--	10
FEB											
06...	40	0	--	4	--	0	--	0	--	--	0
22...	20	0	--	0	--	30	--	0	--	--	40
MAR											
05...	20	0	--	0	--	10	--	0	--	--	0
20...	50	0	--	<1	--	0	--	10	--	--	0
APR											
04...	40	0	--	<1	0	10	10	0	4	0	0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
17...	20	0	0	3	--	0	0	0	--	--	6
21...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	20	0	--	0	--	0	0	10	--	--	0
03...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
30...	8	0	0	0	--	0	0	0	--	--	0
JUN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	70	0	0	<1	--	0	0	10	--	--	20
JUL											
09...	30	0	0	0	0	10	10	0	0	0	0
AUG											
22...	50	0	0	0	--	10	0	10	--	--	0
SEP											
11...	40	0	0	1	--	30	20	10	--	--	0

ARKANSAS RIVER BASIN

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
NOV											
22...	--	<10	--	5700	--	250	--	18	--	17	--
DEC											
07...	--	<10	--	3000	--	180	--	0	--	140	--
19...	--	<10	--	920	--	180	--	100	--	<10	--
JAN											
23...	--	<10	--	850	--	120	--	0	--	<10	--
FEB											
06...	--	<10	--	880	--	160	--	0	--	27	--
22...	--	10	--	15000	--	420	--	0	--	0	--
MAR											
05...	--	0	--	740	--	270	--	0	--	0	--
20...	--	<10	--	1700	--	530	--	0	--	<10	--
APR											
04...	--	<10	9	940	460	480	5000	0	--	<10	0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
17...	2	4	--	1500	930	570	--	0	0	<10	--
21...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	0	--	1600	800	800	--	0	--	0	--
03...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
30...	0	0	--	1400	1200	220	--	0	0	0	--
JUN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	10	<10	--	450	370	80	--	0	0	<10	--
JUL											
09...	0	0	1	650	450	200	0	0	0	0	0
AUG											
22...	0	0	--	2300	2300	30	--	0	0	0	--
SEP											
11...	0	11	--	6400	--	130	--	0	0	<10	--

ARKANSAS RIVER BASIN

593

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
NOV											
22...	370	--	60	--	.1	--	.0	--	1	--	0
DEC											
07...	160	--	90	--	.1	--	.1	--	0	--	1
19...	190	--	170	--	.0	--	.0	--	0	--	0
JAN											
23...	70	--	60	--	.0	--	.0	--	0	--	0
FEB											
06...	120	--	100	--	.0	--	.0	--	0	--	0
22...	660	--	80	--	.1	--	.0	--	0	--	0
MAR											
05...	100	--	80	--	.2	--	.2	--	0	--	0
20...	150	--	80	--	.1	--	.1	--	0	--	0
APR											
04...	130	10	120	290	.1	.1	.0	.01	0	0	<10
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
17...	190	40	150	--	.4	.1	.3	--	0	0	<10
21...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	230	50	180	--	44	3.0	41	--	0	0	0
03...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
30...	100	30	70	--	11	2.8	8.2	--	0	0	0
JUN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	80	80	5	--	1.0	.3	.7	--	0	0	<10
JUL											
09...	130	80	50	340	8.0	.0	9.4	.01	0	0	0
AUG											
22...	490	130	360	--	3.7	1.6	2.1	--	0	0	0
SEP											
11...	1400	1300	70	--	2.6	1.4	1.2	--	0	0	<10

ARKANSAS RIVER BASIN

07249419 COAL CREEK NEAR PANAMA, OK--Continued

DATE	MOLYB- DENUM, RECOV, FM BOT- TOM MA- TERIAL (UG/G)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP, SIEVE DIAM, % FINER THAN .062 MM
NOV											
22...	--	0	--	0	30	--	10	--	37	.04	88
DEC											
07...	--	0	--	0	20	--	<3	--	--	--	--
19...	--	0	--	0	30	--	10	--	20	.02	95
JAN											
23...	--	0	--	0	10	--	20	--	34	.80	88
FEB											
06...	--	0	--	0	20	--	7	--	44	.23	79
22...	--	0	--	0	50	--	0	--	898	378	95
MAR											
05...	--	0	--	0	40	--	30	--	28	.30	90
20...	--	0	--	0	20	--	9	--	76	13	88
APR											
04...	0	0	0	0	30	30	5	21	22	.39	99
11...	--	--	--	--	--	--	--	--	831	209	82
11...	--	--	--	--	--	--	--	--	582	168	83
11...	--	--	--	--	--	--	--	--	1700	2480	73
11...	--	--	--	--	--	--	--	--	1280	1750	62
11...	--	--	--	--	--	--	--	--	849	630	57
11...	--	--	--	--	--	--	--	--	298	115	89
17...	--	1	1	0	20	0	30	--	48	.08	100
21...	--	--	--	--	--	--	--	--	167	17	71
23...	--	--	--	--	--	--	--	--	380	61	57
MAY											
01...	--	0	0	1	20	10	10	--	34	.03	93
03...	--	--	--	--	--	--	--	--	210	33	85
11...	--	--	--	--	--	--	--	--	580	307	88
11...	--	--	--	--	--	--	--	--	208	90	77
12...	--	--	--	--	--	--	--	--	134	13	64
30...	--	0	0	0	20	20	0	--	48	.47	89
JUN											
08...	--	--	--	--	--	--	--	--	46	.92	81
19...	--	0	0	0	30	30	3	--	32	.00	87
JUL											
09...	0	0	0	0	50	40	10	0	37	.00	86
AUG											
22...	--	0	0	0	20	0	20	--	--	--	--
SEP											
11...	--	0	0	0	40	30	6	--	128	.00	85

ARKANSAS RIVER BASIN

595

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK

LOCATION.--Lat 35°12'46", long 94°40'21", on east edge of NE¼ sec.32, T.9 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left downstream end of culvert on U.S. Highways 59 and 271, and 3.2 mi (5.1 km) north from center of Panama, and at mile 6.2 (10.0 km).

DRAINAGE AREA.--4.39 mi² (11.37 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 566.44 ft (172.651 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period November 15 to January 10 which are poor.

EXTREMES FOR CURRENT PERIOD.--July to September 1978: No flow for entire period.

Water Year 1979: Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 20	0145	479	13.6	9.58	2.920	May 28	1630	428	12.1	9.15	2.789
Apr. 11	1530	353	10.0	8.47	2.582	June 2	1245	*540	15.3	*10.09	3.075
May 21	2015	497	14.1	9.73	2.966						

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.00	.00	.00
2										.00	.00	.00
3										.00	.00	.00
4										.00	.00	.00
5										.00	.00	.00
6										.00	.00	.00
7										.00	.00	.00
8										.00	.00	.00
9										.00	.00	.00
10										.00	.00	.00
11										.00	.00	.00
12										.00	.00	.00
13										.00	.00	.00
14										.00	.00	.00
15										.00	.00	.00
16										.00	.00	.00
17										.00	.00	.00
18										.00	.00	.00
19										.00	.00	.00
20										.00	.00	.00
21										.00	.00	.00
22										.00	.00	.00
23										.00	.00	.00
24										.00	.00	.00
25										.00	.00	.00
26										.00	.00	.00
27										.00	.00	.00
28										.00	.00	.00
29										.00	.00	.00
30										.00	.00	.00
31										.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	.00	.00	.00
MEAN	---	---	---	---	---	---	---	---	---	.000	.000	.000
MAX	---	---	---	---	---	---	---	---	---	.00	.00	.00
MIN	---	---	---	---	---	---	---	---	---	.00	.00	.00
CFSM	---	---	---	---	---	---	---	---	---	.000	.000	.000
IN.	---	---	---	---	---	---	---	---	---	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	---	.00	.00	.00

ARKANSAS RIVER BASIN

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.00	.00	.70	.18	1.1	14	47	.39	2.2	.00	.01	.21		
2	.00	.00	.60	.20	1.0	10	9.3	1.6	216	.00	.00	.09		
3	.00	.00	3.3	2.7	1.5	70	5.2	14	19	.00	.00	.02		
4	.00	.00	1.0	2.3	1.5	13	5.6	15	7.6	.00	.00	.01		
5	.00	.00	.75	2.0	2.6	8.7	4.0	7.5	4.0	1.0	.00	.00		
6	.00	.00	.45	1.6	3.0	6.6	2.7	3.1	2.7	1.6	.00	.00		
7	.00	.00	1.4	1.4	4.3	4.9	1.6	1.2	42	.08	.00	.00		
8	.00	.00	.90	1.2	4.9	3.6	1.2	.49	5.9	.04	.00	.00		
9	.00	.00	.72	.98	5.1	2.5	1.4	.25	2.0	.00	.00	.00		
10	.00	.00	.60	1.2	2.2	1.7	7.3	1.6	1.7	.00	.00	.00		
11	.00	.00	.40	1.3	5.6	1.4	117	55	.69	.00	9.6	.00		
12	.00	.00	.31	2.0	14	1.2	15	15	.29	.00	.20	.00		
13	.00	.00	.26	5.2	15	1.2	6.0	4.8	.23	.00	.02	.00		
14	.00	.00	.24	2.9	19	.94	3.3	2.1	.15	.00	6.0	.00		
15	.00	.50	.26	.39	12	.72	1.6	1.1	.09	.00	3.6	.00		
16	.00	1.0	.24	.79	4.4	.72	1.0	.54	.08	.00	.20	.00		
17	.00	1.1	.33	3.3	3.0	.72	.66	.42	.05	24	.05	.00		
18	.00	.90	.38	35	2.3	.91	.51	.28	.05	2.6	.00	.00		
19	.00	.50	.45	50	1.6	41	1.1	.26	.00	.18	.00	.00		
20	.00	.30	.40	54	2.0	144	41	.29	.00	.04	.00	.00		
21	.00	.74	.35	15	2.9	17	14	172	.00	.01	.00	.00		
22	.00	.66	.30	8.1	35	18	3.6	94	.00	.07	.00	.00		
23	.00	.54	.21	8.1	17	15	12	16	.00	.00	.00	.00		
24	.00	.47	.18	5.8	63	7.7	7.9	6.2	.00	.00	.00	.00		
25	.00	.48	.20	4.2	86	4.6	3.5	2.8	.00	.00	.00	.00		
26	.00	2.1	.22	5.8	33	5.9	1.4	1.8	.00	.00	.00	.00		
27	.00	1.6	.26	9.5	21	21	.88	25	.00	1.6	.00	.00		
28	.00	1.2	.28	7.0	47	5.9	.96	144	.00	1.1	.00	.00		
29	.00	1.0	.21	2.8	---	4.9	.98	19	.00	.12	.00	.00		
30	.00	.85	.19	1.5	---	23	.50	7.7	.00	.05	.00	.00		
31	.00	---	.18	2.1	---	7.3	---	3.8	---	.01	.14	---		
TOTAL	.00	13.94	16.27	238.54	411.0	458.11	318.19	617.22	304.73	32.50	19.82	.33		
MEAN	.000	.46	.52	7.69	14.7	14.8	10.6	19.9	10.2	1.05	.64	.011		
MAX	.00	2.1	3.3	54	86	144	117	172	216	24	9.6	.21		
MIN	.00	.00	.18	.18	1.0	.72	.50	.25	.00	.00	.00	.00		
CFSM	.000	.11	.12	1.75	3.35	3.37	2.42	4.53	2.32	.24	.15	.003		
IN.	.00	.12	.14	2.02	3.48	3.88	2.70	5.23	2.58	.28	.17	.00		
AC-FT	.00	28	32	473	815	909	631	1220	604	64	39	.7		
WTR YR 1979	TOTAL	2430.65	MEAN	6.66	MAX	216	MIN	.00	CFSM	1.52	IN	20.59	AC-FT	4820

ARKANSAS RIVER BASIN

597

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to September 1979.

INSTRUMENTATION.--Automatic point sediment sampler since April 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPF- CIFIC CON- DUCT- ANCE (MICRO- MHMS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV											
27...	1200	1.6	98	6.5	10.0	9.4	8	--	--	--	--
DEC											
04...	1300	1.0	85	6.6	6.0	11.8	96	--	--	--	--
11...	1400	.52	114	6.6	3.5	13.0	98	--	--	--	--
18...	1200	.08	114	6.9	6.5	11.4	93	--	--	--	--
26...	1215	.05	128	7.4	5.0	11.6	91	--	--	--	--
JAN											
17...	1325	4.0	68	6.9	5.0	12.5	87	--	--	--	--
22...	1345	6.5	90	7.3	2.0	--	--	27	10	7.4	2.1
FEB											
01...	1135	1.1	80	7.2	.0	14.4	99	--	--	--	--
08...	1235	5.1	68	6.8	5.0	--	--	--	--	--	--
MAR											
05...	1145	7.2	63	6.8	6.5	--	--	--	--	--	--
09...	1146	2.5	75	6.8	9.0	--	--	--	--	--	--
15...	1215	.72	115	7.1	11.5	--	--	--	--	--	--
23...	1345	13	74	6.9	11.0	11.0	108	--	--	--	--
27...	1625	10	74	6.7	12.0	10.4	97	--	--	--	--
APR											
04...	1130	6.8	--	7.1	10.0	11.6	103	--	--	--	--
09...	1000	2.9	87	6.9	14.0	10.5	102	--	--	--	--
16...	1142	4.8	100	7.2	20.0	9.2	100	28	6	6.7	2.7
20...	1440	4.0	102	7.1	22.0	8.2	93	--	--	--	--
25...	1505	3.5	112	7.1	22.0	8.5	99	31	10	7.7	2.9
MAY											
02...	1403	3.4	110	7.3	17.0	8.8	93	34	4	8.4	3.2
05...	1205	7.0	96	7.2	17.0	9.4	98	30	3	8.0	2.5
17...	1130	.39	114	7.3	21.0	8.7	98	--	--	--	--
29...	1512	14	79	7.0	21.0	8.2	93	--	--	--	--
JUN											
09...	1115	2.4	97	7.2	25.0	7.8	95	32	4	8.5	2.6
15...	1230	.09	100	7.2	26.0	8.5	105	32	2	7.8	3.0
JUL											
10...	1300	.00	110	7.0	2.6	4.6	58	--	--	--	--
AUG											
01...	1225	.70	142	7.1	26.0	5.2	65	--	--	--	--
15...	1230	1.3	71	6.9	25.5	7.2	88	--	--	--	--
SEP											
04...	1115	.01	124	6.8	25.0	4.3	52	--	--	--	--

ARKANSAS RIVER BASIN

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SURP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO ₃)	CAR- BONATE (MG/L AS CO ₃)	ALKA- LINITY (MG/L AS CaCO ₃)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂)	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV											
27...	--	--	--	--	--	12	0	10	6.1	--	--
DEC											
04...	--	--	--	--	--	15	0	12	6.0	--	--
11...	--	--	--	--	--	13	0	11	5.2	--	--
18...	--	--	--	--	--	16	0	13	3.2	--	--
26...	--	--	--	--	--	31	0	25	2.0	--	--
JAN											
17...	--	--	--	--	--	13	0	11	2.6	--	--
22...	5.4	28	.5	--	2.7	21	0	17	1.7	14	6.5
FEB											
01...	--	--	--	--	--	17	0	14	1.6	--	--
08...	--	--	--	--	--	24	0	20	5.4	--	--
MAR											
05...	--	--	--	--	--	10	0	8	2.5	--	--
09...	--	--	--	--	--	16	0	13	4.1	--	--
15...	--	--	--	--	--	20	0	16	2.5	--	--
23...	--	--	--	--	--	23	0	19	4.1	--	--
27...	--	--	--	--	--	20	0	16	6.4	--	--
APR											
04...	--	--	--	--	--	24	0	20	3.1	--	--
09...	--	--	--	--	--	26	0	21	5.2	--	--
16...	10	42	.8	--	1.5	27	0	22	2.7	18	6.1
20...	--	--	--	--	--	30	0	25	3.8	--	--
25...	8.3	35	.6	10	2.1	--	--	21	--	14	7.3
MAY											
02...	9.2	36	.7	11	1.6	37	0	30	2.8	16	6.5
05...	7.0	32	.6	--	2.0	33	0	27	3.1	12	5.1
17...	--	--	--	--	--	36	0	30	2.9	--	--
29...	--	--	--	--	--	27	0	22	4.3	--	--
JUN											
09...	6.6	30	.5	--	1.5	34	0	28	3.4	14	4.1
15...	9.0	37	.7	11	1.7	37	0	30	3.3	14	--
JUL											
10...	--	--	--	--	--	48	0	39	7.7	--	--
AUG											
01...	--	--	--	--	--	57	0	47	7.2	--	--
15...	--	--	--	--	--	18	0	15	3.6	--	--
SEP											
04...	--	--	--	--	--	56	0	46	14	--	--

599

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

[illegible]

[illegible]

601

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

[illegible]

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CTIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
27...	1200	1.6	98	6.5	10.0	9.4	8	60	.27	91
DEC										
04...	1300	1.0	85	6.6	6.0	11.8	96	63	.18	90
11...	1400	.52	114	6.6	3.5	13.0	98	26	.04	98
26...	1215	.05	128	7.4	5.0	11.6	91	22	.00	92
JAN										
02...	1235	1.6	113	6.7	1.0	13.9	98	22	.10	96
17...	1325	4.0	68	6.9	5.0	12.5	87	46	.50	87
22...	1345	6.5	90	7.3	2.0	--	--	41	.72	87
FEB										
01...	1135	1.1	80	7.2	.0	14.4	99	26	.08	86
08...	1235	5.1	68	6.8	5.0	--	--	39	.55	87
MAR										
05...	1145	7.2	63	6.8	6.5	--	--	34	.66	82
09...	1146	2.5	75	6.8	9.0	--	--	26	.18	84
15...	1215	.72	115	7.1	11.5	--	--	28	.05	81
23...	1345	13	74	6.9	11.0	11.0	108	22	.81	76
27...	1625	10	74	6.7	12.0	10.4	97	62	1.8	70
28...	1330	7.3	--	--	--	--	--	37	.73	80
29...	1515	--	--	--	--	--	--	35	--	82
30...	1001	35	--	--	--	--	--	148	14	71
30...	1401	34	--	--	--	--	--	116	11	68
30...	1420	--	--	--	--	--	--	50	--	94
31...	1120	--	--	--	--	--	--	43	--	83
APR										
01...	1600	--	--	--	--	--	--	90	--	92
02...	1600	--	--	--	--	--	--	33	--	81
03...	1510	--	--	--	--	--	--	23	--	86
04...	1203	20	--	--	--	--	--	28	1.5	78
04...	1300	--	--	--	--	--	--	25	--	84
05...	1510	--	--	--	--	--	--	27	--	83
08...	1500	--	--	--	--	--	--	31	--	82
09...	1030	8.1	--	--	--	--	--	29	.63	77
09...	1630	--	--	--	--	--	--	31	--	85
11...	1730	204	--	--	--	--	--	297	164	95
12...	0730	20	--	--	--	--	--	42	2.3	88
12...	1605	--	--	--	--	--	--	31	--	84
12-14	--	--	--	--	--	--	--	56	--	74
13...	1830	--	--	--	--	--	--	29	--	76
14...	1720	--	--	--	--	--	--	25	--	86
15...	1640	--	--	--	--	--	--	22	--	88
16...	--	4.8	--	--	--	--	--	29	.38	78
16...	1130	4.8	--	--	--	--	--	30	.39	67
16...	1315	--	--	--	--	--	--	23	--	88

ARKANSAS RIVER BASIN

603

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR										
17...	1200	3.6	--	--	--	--	--	65	.63	77
17...	1630	--	--	--	--	--	--	20	--	90
17...	1810	--	--	--	--	--	--	23	--	84
18...	1030	3.6	--	--	--	--	--	30	.29	84
18...	1630	--	--	--	--	--	--	24	--	78
19...	1430	4.8	--	--	--	--	--	13	.17	84
20...	1420	4.0	--	--	--	--	--	26	.28	82
20...	1530	.72	--	--	--	--	--	10	.02	81
21...	1000	14	--	--	--	--	--	23	.87	85
21...	1430	8.9	--	--	--	--	--	28	.67	98
22...	1000	7.7	--	--	--	--	--	23	.48	62
22...	1730	3.3	--	--	--	--	--	15	.13	93
23...	1430	22	--	--	--	--	--	34	2.0	98
24...	1200	.15	--	--	--	--	--	16	.01	95
25...	1505	3.5	112	7.1	22.0	8.5	99	24	.23	97
25...	1645	2.0	--	--	--	--	--	11	.06	95
26...	1720	.15	--	--	--	--	--	13	.01	77
27...	1018	3.6	--	--	--	--	--	24	.23	92
27...	1200	47	--	--	--	--	--	14	1.8	92
27...	1715	.15	--	--	--	--	--	11	.00	96
28...	1530	.15	--	--	--	--	--	5	.00	66
28-30	--	--	--	--	--	--	--	10	--	90
MAY										
01-01	--	--	--	--	--	--	--	10	--	90
APR										
29...	1730	.15	--	--	--	--	--	6	.00	92
30...	1145	.09	--	--	--	--	--	10	.00	98
MAY										
02...	1040	258	--	--	--	--	--	26	18	90
02...	1350	5.2	--	--	--	--	--	13	.18	91
02...	1403	3.4	110	7.3	17.0	8.8	93	37	.34	99
02...	1605	.98	--	--	--	--	--	12	.03	95
02...	2200	4.0	--	--	--	--	--	16	.17	86
03...	0430	297	--	--	--	--	--	24	19	92
03...	0915	307	--	--	--	--	--	28	23	91
03...	1515	1.0	--	--	--	--	--	55	.15	98
03...	2200	21	--	--	--	--	--	12	.68	83
04...	2200	17	--	--	--	--	--	24	1.1	91
05...	0600	286	--	--	--	--	--	32	25	87
05...	1117	12	--	--	--	--	--	20	.65	87
05...	1205	7.0	96	7.2	17.0	9.4	98	31	.59	100
05...	1715	6.0	--	--	--	--	--	12	.19	93

ARKANSAS RIVER BASIN

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY										
06...	1735	1.7	--	--	--	--	--	7	.03	93
06-09	--	--	--	--	--	--	--	16	--	86
10...	0130	1.2	--	--	--	--	--	22	.07	94
11...	0130	15	--	--	--	--	--	19	.77	82
11...	0530	357	--	--	--	--	--	36	35	83
11...	0837	68	--	--	--	--	--	36	6.6	93
11...	1228	438	--	--	--	--	--	74	88	85
11...	1330	378	--	--	--	--	--	63	64	87
12...	0130	31	--	--	--	--	--	16	1.3	80
13-14	--	--	--	--	--	--	--	34	--	80
14...	1910	261	--	--	--	--	--	67	47	90
15-16	--	--	--	--	--	--	--	26	--	84
17...	0130	2.7	--	--	--	--	--	18	.13	74
17...	1130	.39	114	7.3	21.0	8.7	98	42	.04	90
20...	0130	1.2	--	--	--	--	--	7	.02	27
21...	0810	69	--	--	--	--	--	28	5.2	94
21...	0815	69	--	--	--	--	--	189	35	91
21...	2035	497	--	--	--	--	--	369	495	94
22...	2230	31	--	--	--	--	--	26	2.2	74
24...	2200	8.5	--	--	--	--	--	19	.44	55
29...	1506	19	--	--	--	--	--	33	1.7	65
29...	1512	14	79	7.0	21.0	8.2	93	27	1.1	99
30...	0245	13	--	--	--	--	--	58	2.0	58
31...	0230	8.9	--	--	--	--	--	92	2.2	43
JUN										
01-02	--	--	--	--	--	--	--	66	--	36
02...	0831	7.9	--	--	--	--	--	38	.82	62
02...	0920	--	--	--	--	--	--	426	--	86
09...	0300	3.8	--	--	--	--	--	54	.56	40
09...	1115	2.4	97	7.2	25.0	7.8	95	25	.16	92
14...	0300	3.6	--	--	--	--	--	23	.23	60
15...	1230	.09	100	7.2	26.0	8.5	105	22	.01	94
15-17	--	--	--	--	--	--	--	55	.18	31
21...	1330	.53	--	--	--	--	--	24	.03	60
JUL										
18...	1200	1.7	--	--	--	--	--	75	.34	66
19...	0900	.21	--	--	--	--	--	111	.06	82
AUG										
01...	--	.98	--	--	--	--	--	60	.16	88
15...	1230	1.3	71	6.9	25.5	7.2	88	75	.28	90
SEP										
04...	1105	.01	--	--	--	--	--	29	.00	95

ARKANSAS RIVER BASIN

605

07249440 POTEAU RIVER NEAR FORT SMITH, AR

LOCATION.--Lat 35°20'43", long 94°27'09", in SE¼SW¼ sec.9, T.10 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, at bridge on State Highway 9, 1.2 mi (1.9 km) west of State line, and 2.0 mi (3.2 km) southwest of Fort Smith.

DRAINAGE AREA.--254 mi² (658 km²) at State line.

PERIOD OF RECORD.--Water years 1976 to September 1979 (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. Additional chemical analyses are published by Arkansas District.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, (PERCENT SATURATION) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DISSOLVED (MG/L AS CaCO3)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS Mg)
OCT 25...	0730	370	7.2	18.0	--	4.0	43	--	--	--	--
NOV 08...	1100	350	7.0	16.0	21	6.8	69	13	--	--	--
DEC 27...	1120	110	8.1	7.5	19	11.6	97	17	37	--	4.0
FEB 22...	1015	90	7.7	8.0	53	--	--	31	30	11	8.2
MAR 13...	1740	50	6.8	12.0	--	11.1	101	--	--	--	--
APR 23...	1400	105	6.6	18.0	43	8.9	95	19	25	5.0	12
MAY 23...	0830	--	7.0	17.0	83	6.3	66	--	--	--	--
JUN 21...	0930	--	7.4	25.0	28	6.9	83	16	18	2.0	5
JUL 18...	0830	450	7.1	26.0	--	--	--	21	--	--	--
AUG 08...	1715	110	8.7	31.5	8.0	9.1	125	60	--	5.0	13
SEP 18...	1700	90	7.3	25.5	24	7.6	93	0	--	--	--

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	--	--	34	33	.1	8	--	1.8	--	--	--	--
DEC 27...	<10	2.3	14	10	.0	17	.30	1.4	1.7	7.7	<.001	--
FEB 22...	<10	2.2	21	13	.1	792	1.4	2.7	4.1	18	.500	--
MAR 13...	--	--	--	--	--	--	--	--	--	--	--	--
APR 23...	<10	1.7	8.0	3.0	<.0	84	.30	1.3	1.6	7.2	.095	--
MAY 23...	--	--	--	8.0	.0	253	.20	<.11	.20	--	.255	--
JUN 21...	<10	1.3	7.0	1.0	<.0	54	.10	1.1	1.2	5.4	.075	--
JUL 18...	--	--	8.0	8.0	.0	21	<.50	1.7	1.7	--	.100	--
AUG 08...	<10	2.2	8.0	7.0	.0	30	<.50	1.8	1.8	--	.060	<5
SEP 18...	--	--	8.0	--	.1	86	<.50	--	1.3	--	.105	--

[illegible]

ARKANSAS RIVER BASIN

607

07249900 LITTLE LEE CREEK NEAR SHORT, OK

LOCATION.--Lat 35°34'32", long 94°33'20", in SW¼NW¼ sec.28, T.13 N., R.26 E., Sequoyah County, Hydrologic Unit 11110104, at bridge on State Highway 101, 2 mi (3.2 km) northwest of Short, and at mile 2.9 (4.7 km).

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

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 the U.S. Geological Survey and were analyzed by Oklahoma State Department of Health.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)
DEC 27...	1300	1028	9740	135	8.3	3.0	1.0	12.4	92	2
FEB 22...	1230	1028	9740	100	7.3	12.5	63	--	--	4
MAR 14...	0950	1028	9740	27	7.1	8.0	2.0	12.2	100	1
APR 23...	1600	1028	9740	80	7.2	18.5	17	8.8	95	5
MAY 22...	1700	1028	9740	--	6.5	22.0	--	8.9	103	2
JUN 20...	2015	1028	9740	--	7.7	27.0	5.0	6.6	84	3
JUL 17...	1415	1028	9740	--	7.3	29.0	--	--	--	3
AUG 09...	0900	1028	9740	110	6.7	26.0	4.0	6.4	79	1
SEP 18...	1430	1028	9740	125	5.8	23.0	3.0	4.7	55	4

DATE	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS CaCO3)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, TOTAL (MG/L AS F)
DEC 27...	44	14	35	2.1	<10	.9	<1.0	8.0	.7
FEB 22...	38	14	35	1.5	<10	.8	6.0	4.0	.0
MAR 14...	--	--	--	--	--	--	6.0	2.0	.1
APR 23...	25	8.0	20	1.3	<10	.8	4.0	3.0	<.0
MAY 22...	--	--	--	--	--	--	15	8.0	<.0
JUN 20...	52	18	45	1.4	<10	1.0	7.0	4.0	.0
JUL 17...	--	--	--	--	--	--	6.0	8.0	.0
AUG 09...	27	7.0	17	2.3	<10	1.7	10	7.0	<.0
SEP 18...	--	--	--	--	--	--	8.0	--	.1

ARKANSAS RIVER BASIN

07249900 LITTLE LEE CREEK NEAR SHORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 27...	--	.10	.89	.99	4.4	<.001	--	--	--
FEB 22...	65	.50	1.1	1.6	7.1	.100	--	<1	27
MAR 14...	1	.10	.90	1.0	4.4	<.100	--	--	--
APR 23...	9	.10	.85	.95	4.2	.040	--	--	--
MAY 22...	6	.10	<.11	.10	--	.050	--	--	--
JUN 20...	6	.30	.78	1.0	4.8	.015	--	--	--
JUL 17...	4	<.50	1.3	1.3	--	.300	--	--	--
AUG 09...	3	<.50	1.0	1.0	--	.030	<5	<2	<10
SEP 18...	1	<.50	--	4.2	--	.030	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drainage area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Arkansas River Basin							
07150870	Salt Fork Arkansas River tributary near Eddy, Okla.	Lat 36°41'42", long 97°25'30", in SW¼ SE¼ sec.28, T.26 N., R.2 W., Kay County, at culvert on U.S. Highway 60, 3.0 mi (4.8 km) southeast of Eddy.	2.35	1964-79	06-09-79	14.02	479
07154650	Tesequite Creek near Kenton, Okla.	Lat 36°53'52", long 102°54'04", in NE¼ SE¼ sec.13, T.5 N., R.1 E., Cimarron County, at county road bridge, 3.9 mi (6.3 km) east of Kenton.	25.4	1964-79	07-16-79	15.74	1820
07155100	Cold Springs Creek near Wheelless, Okla.	Lat 36°46'20", long 102°48'16", in SE¼ NE¼ sec.35, T.4 N., R.2 E., Cimarron County, at county road multi-barrel culvert, 6.0 mi (9.7 km) northeast of Wheelless.	11.0	1964-79		<10.32	<7
07157550	West Fork Creek near Knowles, Okla.	Lat 36°52'30", long 100°07'20", in SE¼ SE¼ sec.22, T.5 N., R.27 E., Beaver County, at county road culvert, 4.2 mi (6.8 km) east of Knowles.	4.22	1964-79	05-22-79	12.40	66
07158500	Preacher Creek near Dover, Okla.	Lat 36°02'37", long 98°00'48", in NW¼ NW¼ sec.13, T.18 N., R.8 W., Kingfisher County, at county road bridge, 7.1 mi (11.4 km) northwest of Dover.	14.5	1952-57+ 1964-79	04-12-79	1.81	10
07158550	Turkey Creek tributary near Goltry, Okla.	Lat 36°28'40", long 98°08'05", in SE¼ SW¼ sec.11, T.2 N., R.9 W., Alfalfa County, at multi-barrel culvert on State Highway 45, 4.1 mi (6.6 km) south of Goltry.	5.08	1964-79	09-01-79	10.84	1240
07159200	Kingfisher Creek near Kingfisher Okla.	Lat 35°50'03", long 98°03'57", in NW¼ SW¼ sec.28, T.16 N., R.8 W., Kingfisher County, at county road bridge, 7.6 mi (12.2 km) west of Kingfisher.	157	1967-70+ 1971-79	03-09-79	16.20	1110
07160550	West Beaver Creek near Orlando, Okla.	Lat 36°08'45", long 97°28'05", in NW¼ NE¼ sec.12, T.19 N., R.3 W., Logan County, at county road bridge, 5.0 mi (8.0 km) west of Orlando.	13.9	1964-79	05-08-79	7.08	1520
07174720	Hogshooter Creek tributary near Bartlesville, Okla.	Lat 36°43'40", long 95°50'52", in SE¼ SE¼ sec.18, T.26 N., R.14 E., Washington County, at multi-barrel culvert on U.S. Highway 60, 4.9 mi (7.9 km) east of junction with U.S. Highway 75 southeast of Bartlesville.	.94	1965-79	03-19-79	7.90	286
07188140	Flint Branch near Peoria, Okla.	Lat 36°52'25", long 94°41'35", in SW¼ SW¼ sec.26, T.28 N., R.24 E., Ottawa County, at upstream side of dam, 3.2 mi (5.1 km) southwest of Peoria.	4.90	1964-79	07-31-79		1430
07189700	Horse Creek at Afton, Okla.	Lat 36°41'50", long 94°57'20", in NE¼ NW¼ sec.33, T.26 N., R.22 E., Ottawa County, on downstream side of bridge on U.S. Highway 60 at east edge of Afton.	21.9	1966-79	07-31-79	11.15	1600
07190600	Big Cabin Creek near Pyramid Corners, Okla.	Lat 36°48'10", long 96°44'50", in SE¼ SE¼ sec.21, T.27N., R.20 E., Craig County, on left bank 60 ft (18 m) upstream from county highway bridge on graveled road 1.2 mi (1.9 km) west of Pyramid Corners, about 7 mi (11 km) upstream from West Fork, and at mile 34.4 (55.4 km).	71.1	1964-72+ 1973-75 1978-79	04-11-79	13.37	3040
07194515	Mill Creek near Park Hill, Okla.	Lat 35°48'08", long 98°47'15", in NW¼ NW¼ sec.3, T.15 N., R.21 E., Cherokee County, at multi-barrel culvert on U.S. Highway 62, 6.3 mi (10.1 km) southwest of junction with State Highway 82 near Park Hill.	2.57	1965-79	06-07-79	5.75	224
07228290	Rough Creek near Thomas, Okla.	Lat 35°48'08", long 98°47'15", in NW¼ SW¼ sec.3, T.15 N., R.15 W., Custer County, at county road bridge, 4.7 mi (7.6 km) northwest of Thomas.	10.4	1964-79	07-06-79	10.20	1280
07228930	Worley Creek near Tuttle, Okla.	Lat 35°17'28", long 97°45'10", in SE¼ SW¼ sec.32, T.10 N., R.5 W., Grady County, at multi-barrel culvert on State Highway 37, 3.3 mi (5.3 km) east of Tuttle.	11.2	1965-72 1978-79	09-01-79	13.31	1880

DISCHARGE AT CREST-STAGE PARTIAL RECORD STATIONS

Crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations

Station Number	Station Name	Location	Drain- age area (mi ²)	Period of Record	Annual Maximum		
					Date	Gage height (feet)	Dis- charge (ft ³ /s)
Arkansas River Basin--Continued							
07229420	Julian Creek trib- utary near Asher, Okla.	Lat 34°59'09", long 96°58'48", in SW¼ SW¼ sec.15, T.6 N., R.3 E., Potta- watomie County, at multi-barrel cul- vert on State Highway 39, 3.4 mi (5.5 km) west of Asher.	2.28	1964-79	06-09-79	15.23	930
07231320	Leader Creek trib- utary near Atwood, Okla.	Lat 34°57'10", long 96°20'21", in NW¼ NW¼ sec.34, T.6 N., R.9 E., Hughes County, at multi-barrel culvert on State Highway 12, 0.7 mi (1.1 km) southwest of Atwood.	.72	1964-79	06-09-79	10.33	309
07231950	Pine Creek near Higgins, Okla.	Lat 34°47'40", long 95°20'50", in NW¼ NE¼ sec.30, T.4 N., R.19 E., Latimer County, at bridge on State Highway 63, 5.4 mi (8.7 km) east of Higgins.	9.99	1964-79	07-27-79	13.63	5450
07232550	South Fork trib- utary near Guymon, Okla.	Lat 36°40'06", long 101°29'54", in SW¼ NE¼ sec.1, T.2 N., R.14 E., Texas County, at multiple culvert on Chicago, Rock Island, and Pacific Railroad, 1.8 mi (2.9 km) southwest of junction of U.S. Highways 54 and 64 at Guymon.	.26	1964-79	05-21-79	6.62	19
07234050	North Fork Clear Creek tributary near Balko, Okla.	Lat 36°37'01", long 100°39'50", in SW¼ SW¼ sec. 23, T.2 N., R.22 E., Beaver County, at multi-barrel culvert on State Highway 3, 1.5 mi (2.4 km) southeast of Balko.	4.22	1964-79	08-26-79	10.73	20
07234290	Clear Creek trib- utary near Catesby, Okla.	Lat 36°29'30", long 99°57'20", in SE¼ SW¼ sec.2, T.23 N., R.26 W., Ellis County, on downstream side of county road bridge, 0.1 mi (0.2 km) east of Catesby.	8.51	1966-79	03-18-79	5.32	361
07237750	Cottonwood Creek near Vici, Okla.	Lat 36°08'45", long 99°12'00", in SE¼ SW¼ sec. 2, T.19 N., R.19 W., Dewey County, at bridge on U.S. Highway 60, 5.4 mi (8.7 km) east of Vici.	11.8	1964-79	07-24-79	7.45	520
07237800	Bent Creek near Seiling, Okla.	Lat 36°11'26", long 99°00'36", in NW¼ SE¼ sec.21, T.20 N., R.17 W., Wood- ward County, at bridge on U.S. Highway 183 and 270, 6 mi (10 km) northwest of Seiling.	139	1964-70† 1971-79	-- -- 78 07-24-79	<12.9 17.65	<1300 3930
07241880	Sand Creek near Cromwell, Okla.	Lat 35°20'56", long 96°29'40", in SE¼ SE¼ sec.7, T.10 N., R.8 E, Seminole County, at bridge on State Highway 99A, 2.2 mi (3.5 km) west of Cromwell.	9.48	1964-79	07-06-79	12.30	1370
07242160	Alabama Creek near Weleetka, Okla.	Lat 35°21'40", long 96°08'55", in NW¼ NE¼ sec.9, T.10 N., R.11 E., Okfuskee County, at county road multi-barrel culvert, 2.0 mi north of Weleetka.	16.5	1965-74 1976-79	05-27-78 08-23-79	11.08 14.80	*1890 4160
07242200	Deep Fork at Portland Ave., Oklahoma City, Okla.	Lat 35°30'06", long 97°34'58", in NW¼ sec.24, T.12 N., R.4 W., Oklahoma County at NW 31st Street and Port- land Avenue in Oklahoma City.	2.98	1973-79	05-20-77 06-21-79	16.9 16.5	*3960 3610
07242220	Deep Fork at Eastern Ave., Oklahoma City, Okla.	Lat 35°32'05", long 97°28'35", on west line NW¼ sec.12, T.12 W., R.3 W., Oklahoma County, at bridge on Eastern Ave., 0.2 mi (.3 km) south of NE 63rd St. in Oklahoma City.	28.2	1975-79	06-21-79	25.65	8220
07243550	Adams Creek near Beggs, Okla.	Lat 35°44'55", long 96°02'15", in NE¼ SE¼ sec.28, T.15 N., T.12 E., Ok- mulgee County, at county road bridge, 2.0 mi (3.2 km) northeast of Beggs.	5.90	1965-79	05-03-79	10.54	1440
07246630	Big Black Fox Creek near Long, Okla.	Lat 35°31'15", long 94°37'10", in NE¼ NE¼ sec.14, T.12 N., R.25 E., Sequoyah County, at county road bridge, 2.3 mi (3.7 km) northwest of Long.	5.32	1964-79	04-17-79	8.46	770

† operated as a continuous-record station
* revised

GROUND-WATER LEVELS

ALFALFA COUNTY

365342098175301, LOCAL NUMBER(CORRECTED), 28N-11W-27 DAD 1.
 LOCATION.--LAT 36 53'42", LONG 098 17'53", HYDROLOGIC UNIT 11060004, OWNER: BENNY WAGONER.
 AQUIFER.--TERRACE DEPOSITS.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 36 FT (11.0M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1185 FT (361M). MEASURING POINT: TOP OF CASING 4.00
 FT (1.22M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1967 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 4.80 FT (1.463M) BELOW LAND-SURFACE
 DATUM, MARCH 20, 1975; LOWEST, 16.95 FT (5.166M) BELOW LAND-SURFACE DATUM, JUNE 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	7.95	DEC 05, 1978	8.11	APR 15, 1979	6.40	JUL 15, 1979	6.85
10	7.93	10	8.20	20	6.47	20	6.76
15	8.03	15	8.15	25	6.53	AUG 20	6.78
20	8.05	20	8.16	30	6.61	25	6.82
25	8.07	25	8.16	MAY 05	6.56	31	6.95
30	8.10	FEB 25, 1979	7.99	10	6.57	SEP 05	6.83
NOV 05	8.10	28	7.86	15	6.37	10	6.85
10	8.15	MAR 05	7.70	JUN 20	6.46	15	6.86
15	8.17	10	7.62	25	6.69	30	7.10
20	8.19	15	7.59	30	6.65		
25	8.15	20	6.90	JUL 05	6.79		
30	8.13	25	6.68	10	6.75		
WTR YEAR 1979	MAX	6.37	MAY 15, 1979	MIN	8.20	DEC 10, 1978	

BEAVER COUNTY

363853100311001, LOCAL NUMBER, 02N-24E-07 CCD 1.
 LOCATION.--LAT 36 38'53", LONG 100 31'10", HYDROLOGIC UNIT 11100201, OWNER: JAMES W. PARKER.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 94 FT (28.7M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2625 FT (800M). MEASURING POINT: HIGHEST POINT ON
 NORTH SIDE OF CASING 0.50 FT (0.15M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1946, 1967 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.37 (21.754M) BELOW LAND-SURFACE
 DATUM, JAN. 24, 1979; LOWEST, 81.35 FT (24.795M) BELOW LAND-SURFACE DATUM, MARCH 1, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1978	76.72	JAN 24, 1979	71.37	APR 24, 1979	76.45	JUL 26, 1979	77.98
WTR YEAR 1979	MAX	71.37	JAN 24, 1979	MIN	77.98	JULY 26, 1979	

CIMARRON COUNTY

364450102190001, LOCAL NUMBER, 03N-07E-09 BBB 1.
 LOCATION.--LAT 36 44'50", LONG 102 19'00", HYDROLOGIC UNIT 11100101, OWNER: ELMER J. BEHRENDT.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 61 FT (18.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3960 FT (1207M). MEASURING POINT: TOP OF CASING ON
 SOUTH SIDE 3.50 FT (1.07M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1938 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.50 FT (8.687M) BELOW LAND-SURFACE
 DATUM, JAN. 12, 1977; LOWEST, 32.41 FT (9.879M) BELOW LAND-SURFACE DATUM, FEB. 13 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 1978	30.57	JAN 18, 1979	29.72	APR 24, 1979	31.00	JUL 25, 1979	31.05
WTR YEAR 1979	MAX	29.72	JAN 18, 1979	MIN	31.05	JULY 25, 1979	

GROUND-WATER LEVELS

CLEVELAND COUNTY

350136097203001. LOCAL NUMBER, 06N-01W-06 DAD 1.
 LOCATION.--LAT 35 01'36", LONG 097 20'30", HYDROLOGIC UNIT 11090202, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED WELL DIAMETER 1-1/4 IN (0.03M), DEPTH 23 FT (7.01M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1034 FT (315M). MEASURING POINT: TOP OF CASING 1.40 FT (0.43M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1947 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.77 FT (0.539M) BELOW LAND-SURFACE DATUM, JAN. 25 1960; LOWEST, 17.25 FT (5.258M) BELOW LAND-SURFACE DATUM, SEPT. 5, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 05, 1978	16.97	APR 03, 1979	17.02	JUN 04, 1979	16.31	SEP 05, 1979	16.25
FEB 01, 1979	17.25						
WTR YEAR 1979 MAX 16.25 SEP 05, 1979 MIN 17.25 FEB 01, 1979							

350816097233101. LOCAL NUMBER, 08N-02W-27 ACD 1.
 LOCATION.--LAT 35 08'16", LONG 097 23'31", HYDROLOGIC UNIT 11090202, OWNER: TOWN OF NOBLE.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 12 IN (0.30M) REDUCED TO 8 IN (0.20M), DEPTH 461 FT (141M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF 1-IN (0.03M) PIPE CEMENTED OVER CASING 1.40 FT (0.43M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--PERFORATIONS 235-245 FT (71.6M-74.7M) AND 415-455 FT (126M-139M).
 PERIOD OF RECORD.--1943 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 165.43 FT (50.423M) BELOW LAND-SURFACE DATUM, JULY 7, 1943; LOWEST, 221.74 FT (67.586M) BELOW LAND-SURFACE DATUM, DEC. 23, 1948.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 05, 1978	200.01	APR 03, 1979	203.78	JUN 04, 1979	202.07	SEP 05, 1979	203.35
FEB 01, 1979	201.89						
WTR YEAR 1979 MAX 200.01 DEC 05, 1978 MIN 203.78 APR 03, 1979							

35122097245901. LOCAL NUMBER, 08N-02W-09 BBA 1.
 LOCATION.--LAT 35 12'35", LONG 097 24'59", HYDROLOGIC UNIT, OWNER: U.S. NAVY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M) REDUCED TO 11 IN (0.28M), DEPTH 545 FT (166M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1131 FT (345M). MEASURING POINT: TOP OF CASING 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1951-52, 1955 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 166.04 FT (50.609M) BELOW LAND-SURFACE DATUM, MARCH 25, 1952; LOWEST, 205.90 FT (62.758M) BELOW LAND-SURFACE DATUM FEB. 1, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 05, 1978	197.02	FEB 05, 1979	183.15	JUN 04, 1979	189.69	SEP 05, 1979	182.77
FEB 01, 1979	205.90	APR 03	185.15				
WTR YEAR 1979 MAX 182.77 SEP 05, 1979 MIN 205.90 FEB 01, 1979							

GROUND-WATER LEVELS

CLEVELAND COUNTY

351357097241901. LOCAL NUMBER, 09N-02W-27 BBB 1.
 LOCATION.--LAT 35 13'57", LONG 097 24'19", HYDROLOGIC UNIT 11090203, OWNER: CITY OF NORMAN.
 AQUIFER.--GARBER WELLINGTON FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED PUBLIC SUPPLY WELL, DIAMETER 6 IN (0.15M), DEPTH 602 FT (183.49M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1185 FT (361M). MEASURING POINT: TOP OF HOLE IN PLYWOOD SHELF, 3.00 FT (0.91M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1977 TO JULY 1979 (DISCONTINUED).
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 229.66 FT (70.00M) BELOW LAND-SURFACE DATUM, JUNE 5, 1977; LOWEST 250.40 FT (76.322M) BELOW LAND-SURFACE DATUM, FEB. 15, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	245.97	MAY 10, 1979	242.47	JUN 05, 1979	239.58	JUN 30, 1979	235.68
10	244.90	15	243.80	10	238.50	JUL 05	235.09
15	244.04	20	245.90	15	237.82		
20	243.17	25	243.36	20	237.25		
FEB 15, 1979	250.40	31	240.93	25	236.58		

OCT 1978 TO JULY 1979 MAX 235.09 JULY 05, 1979 MIN 250.40 FEB 15, 1979

CREEK COUNTY

355510096293501. LOCAL NUMBER, 17N-08E-30 CBB 1.
 LOCATION.--LAT 35 55'10", LONG 096 29'35", HYDROLOGIC UNIT 11100303, OWNER: EVERETT MATHERLY.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 58 FT (17.7M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 960 FT (293M). MEASURING POINT: BASE OF RECORDER SHELTER 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDER SITE.
 PERIOD OF RECORD.--1969 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 34.30 FT (10.455M) BELOW LAND-SURFACE DATUM, JUNE 5, 1975; LOWEST, 42.77 FT (13.036M) BELOW LAND-SURFACE DATUM, MAY 12, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	39.12	JAN 05, 1979	39.97	APR 05, 1979	39.99	JUL 05, 1979	38.90
10	38.95	10	39.92	10	39.54	10	38.61
15	39.21	15	40.02	20	39.80	15	38.79
20	39.12	20	39.42	25	39.55	20	38.74
25	38.97	25	39.70	30	39.71	25	38.54
31	39.45	31	40.12	MAY 05	39.74	31	38.71
NOV 10	39.43	FEB 05	40.02	10	39.44	AUG 05	38.83
15	39.43	15	40.25	15	39.47	15	38.92
20	39.69	20	39.69	20	39.21	20	38.76
25	39.35	25	40.16	25	39.39	25	38.65
30	39.41	28	39.85	31	39.36	31	38.89
DEC 05	39.28	MAR 05	40.09	JUN 05	38.97	SEP 05	38.87
10	39.75	10	40.20	10	39.45	10	38.98
15	39.38	15	40.29	15	38.91	15	39.26
20	39.53	20	39.99	20	38.93	20	38.89
25	39.64	25	39.83	25	38.99	25	39.26
31	39.80	31	40.00	30	38.80	30	39.15

WTR YEAR 1979 MAX 38.54 JULY 25, 1979 MIN 40.29 MAR 15, 1979

GROUND-WATER LEVELS

CUSTER COUNTY

354112098430601. LOCAL NUMBER, 14N-14W-17 CBD 1.
 LOCATION.--LAT 35 41'12", LONG 098 43'06", HYDROLOGIC UNIT 11090201, OWNER: MELT HERRONG.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER 16 IN (0.41M), DEPTH 320 FT (97.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1710 FT (521M). MEASURING POINT: TOP OF WOOD
 RECORDER BASE 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1971 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 24.59 FT (7.495M) BELOW LAND-SURFACE
 DATUM, JULY 5, 1975; LOWEST, 30.08 FT (9.168M) BELOW LAND-SURFACE DATUM SEPT. 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	28.61	DEC 31, 1978	28.44	APR 15, 1979	28.06	JUL 15, 1979	27.76
10	28.57	JAN 05, 1979	28.44	20	28.06	20	27.76
15	28.56	20	28.40	25	28.03	25	27.79
20	28.52	25	28.40	30	28.01	31	28.43
25	28.52	31	28.43	MAY 05	27.98	AUG 15	28.42
31	28.55	FEB 05	28.42	10	27.92	20	28.17
NOV 05	28.54	10	28.43	15	27.89	25	27.95
10	28.53	15	28.46	20	27.85	31	27.79
15	28.50	25	28.48	25	27.90	SEP 05	27.90
20	28.50	28	28.44	31	27.95	10	27.91
25	28.43	MAR 05	28.44	JUN 05	28.01	15	27.96
30	28.44	10	28.51	15	27.96	20	27.92
DEC 05	28.44	15	28.51	20	27.95	25	27.97
10	28.46	20	28.47	25	27.91	30	27.94
15	28.42	25	28.35	30	27.85		
20	28.43	31	28.25	JUL 05	27.77		
25	28.43	APR 05	28.19	10	27.72		

WTR YEAR 1979 MAX 27.72 JULY 10, 1979 MIN 28.61 OCT 05, 1978

ELLIS COUNTY

361536099464601. LOCAL NUMBER, 21N-24W-33 BBD 1.
 LOCATION.--LAT 36 15'36", LONG 099 46'46", HYDROLOGIC UNIT 11100203. OWNER:
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 5 IN (0.13M), DEPTH 205 FT (62.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2280 FT (695M). MEASURING POINT: TOP OF WOODEN
 RECORDER BASE 3.10 FT (0.94M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--APR. 1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 81.29 FT (24.777M) BELOW LAND-SURFACE
 DATUM, JUNE 15, 1979; LOWEST, 84.40 FT (25.725M) BELOW LAND-SURFACE DATUM, APR. 15, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	82.52	FEB 15, 1979	82.10	MAY 10, 1979	81.76	JUL 25, 1979	81.57
10	82.29	20	81.99	20	81.42	31	81.59
15	82.49	25	82.12	25	81.56	AUG 05	81.81
20	82.41	28	81.84	31	81.45	10	82.19
25	82.21	MAR 05	82.00	JUN 05	81.31	15	82.06
31	82.45	10	82.01	10	81.50	20	81.82
NOV 05	82.22	15	82.04	15	81.29	25	82.00
10	82.15	20	81.84	20	81.35	31	81.78
15	82.27	25	81.76	25	81.44	SEP 05	82.01
20	82.35	31	81.78	30	81.35	10	81.97
25	82.12	APR 05	81.80	JUL 05	81.50	15	82.14
30	82.11	10	81.59	10	81.76	20	81.99
DEC 05	82.07	15	81.79	15	81.69	25	82.07
FEB 10, 1979	82.07	25	81.80	20	81.70	30	82.05

WTR YEAR 1979 MAX 81.29 JUNE 15, 1979 MIN 82.52 OCT 05, 1978

GROUND-WATER LEVELS

615

ELLIS COUNTY

363235099592801. LOCAL NUMBER, 24N-26W-21 CAA 1.
 LOCATION.--LAT 36 32'35", LONG 099 59'28", HYDROLOGIC UNIT 11100201, OWNER: HINER.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 5 IN (0.13M), DEPTH 120 FT (36.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2345 FT (715M). MEASURING POINT: TOP EDGE OF
 PLYWOOD SHELTER BASE 1.50 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 30.11 FT (9.178M) BELOW LAND-SURFACE
 DATUM, MAY 10, 1974; LOWEST, 33.25 FT (10.135M) BELOW LAND-SURFACE DATUM, OCT. 25, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	32.13	DEC 31, 1978	32.17	MAR 25, 1979	32.06	JUN 30, 1979	31.83
10	32.16	JAN 05, 1979	32.17	31	32.07	JUL 05	31.86
15	32.20	10	32.15	APR 05	32.06	10	31.88
20	32.21	15	32.12	15	32.08	15	31.91
25	32.25	20	32.12	20	32.09	20	31.90
31	32.27	25	32.12	25	32.08	25	31.83
NOV 05	32.28	31	32.13	30	32.07	31	31.82
10	32.28	FEB 05	32.12	MAY 05	32.08	AUG 05	31.85
15	32.26	10	32.07	10	32.08	10	31.92
20	32.25	15	32.10	20	31.97	25	32.09
25	32.22	20	32.06	25	31.90	31	32.09
30	32.21	25	32.08	31	31.84	SEP 05	32.11
DEC 05	32.20	28	32.06	JUN 05	31.80	10	32.16
10	32.22	MAR 05	32.08	10	31.83	15	32.22
15	32.17	10	32.09	15	31.79	20	32.24
20	32.17	15	32.09	20	31.86	25	32.29
25	32.17	20	32.08	25	31.90	30	32.33

WTR YEAR 1979 MAX 31.79 JUNE 15, 1979 MIN 32.33 SEP 30, 1979

KAY COUNTY

364210097025401. LOCAL NUMBER, 26N-02E-26 BDD 1.
 LOCATION.--LAT 36 42'10", LONG 097 02'54", HYDROLOGIC UNIT 11060001, OWNER: CITY OF PONCA CITY.
 AQUIFER.--ALLUVIAM.
 WELL CHARACTERISTICS.--DUG PUBLIC SUPPLY WELL, NUMBER 5, DIAMETER 30 IN (0.76M), DEPTH 38 FT
 (11.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 925 FT (282M). MEASURING POINT: BOTTOM OF NUMBER
 AT PUMP BASE OPENING 6.70 FT (2.04M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1948 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, +3.30 FT (+1.006M) ABOVE LAND-SURFACE
 DATUM, AUG. 11, 1976; LOWEST, 29.13 FT (8.879M) BELOW LAND-SURFACE DATUM, FEB. 24, 1955.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1978	12.75	JAN 24, 1979	12.90	APR 28, 1979	19.10	JUL 18, 1979	19.75
11	12.80	FEB 07	12.70	MAY 02	18.80	25	19.70
18	12.80	14	12.80	09	18.80	AUG 01	19.10
25	12.85	21	12.80	16	18.65	08	19.10
NOV 01	12.75	28	12.85	23	18.60	15	18.80
08	12.80	MAR 07	17.90	30	18.60	22	18.70
15	12.80	14	18.70	JUN 06	19.80	29	18.45
22	12.75	21	18.80	13	19.80	SEP 05	11.58
29	12.75	28	19.40	20	19.55	12	11.60
JAN 03, 1979	13.20	APR 07	19.10	27	19.55	19	10.40
10	12.50	14	19.05	JUL 05	19.90	26	10.40
17	12.50	21	19.05	11	19.75		

WTR YEAR 1979 MAX 10.40 SEP 19, 1979 MIN 19.90 JULY 05, 1979

GROUND-WATER LEVELS

LE FLORE COUNTY

350934094332101, LOCAL NUMBER (REVISED), 08N-26E-22 BBB 3.
 LOCATION.--LAT 35 09'34", LONG 094 33'21", HYDROLOGIC UNIT 11110104, OWNER: FLOYD SPICER.
 AQUIFER.--ATOKA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 6 IN (0.15M), DEPTH 74 FT (22.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 460 FT (140M). MEASURING POINT: TOP OF CASING
 1.10 FT (0.34M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1977 TO JUNE 1979 (DISCONTINUED).
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 3.38 FT (1.030M) BELOW LAND-SURFACE
 DATUM, JUNE 5, 1979; LOWEST, 17.02 FT (5.188M) BELOW LAND-SURFACE DATUM, DEC. 31, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	16.51	OCT 31, 1978	16.87	DEC 25, 1978	16.96	FEB 20, 1979	12.97
10	16.55	NOV 05	16.87	31	17.02	MAR 20	8.74
15	16.67	10	16.86	JAN 05, 1979	16.83	MAY 31	3.55
20	16.78	15	16.95	10	16.77	JUN 05	3.38
25	16.78	DEC 20	16.88	15	16.84		
OCT 1978 TO JUNE 1979 MAX 3.38 JUNE 05, 1979 MIN 17.02 DEC 31, 1978							

351119094432101, LOCAL NUMBER, 08N-24E-12 ABA 1.
 LOCATION.--LAT 35 11'19", LONG 094 43'21", HYDROLOGIC UNIT 11110105, OWNER: CLIFF TACKETT.
 AQUIFER.--ATOKA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 6 IN (0.15M), DEPTH 331 FT (100.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 490 FT (149M). MEASURING POINT: TOP OF CASING
 0.80 FT (0.24M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 5.58 FT (1.701M) BELOW LAND-SURFACE
 DATUM, JUNE 5, 1979; LOWEST, 14.05 FT (4.282M) BELOW LAND-SURFACE DATUM OCT. 10, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	13.89	MAR 10, 1979	10.46	JUN 10, 1979	5.96	JUL 31, 1979	9.46
10	14.05	15	9.99	15	7.26	AUG 05	9.75
20	13.94	20	9.09	20	7.67	10	9.99
JAN 25, 1979	10.33	25	8.48	25	8.08	15	9.91
FEB 10	10.03	31	8.41	30	8.35	20	9.90
15	9.80	APR 05	8.41	JUL 05	8.90	SEP 25	10.04
20	9.80	10	8.41	10	8.87	30	12.33
25	9.17	15	8.41	15	9.14		
28	9.51	MAY 31	6.15	20	9.16		
MAR 05	9.94	JUN 05	5.58	25	9.33		
WTR YEAR 1979 MAX 5.58 JUNE 05, 1979 MIN 14.05 OCT 10, 1978							

GROUND-WATER LEVELS

617

LINCOLN COUNTY

354442096400801. LOCAL NUMBER, 15N-06E-29 AAA 1.
 LOCATION.--LAT 35 44'42", LONG 096 40'08", HYDROLOGIC UNIT 11100303, OWNER: CITY OF STROUD.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED PUBLIC SUPPLY WELL, DIAMETER 6 IN (0.15M), DEPTH 339 FT (103.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 890 FT (271M). MEASURING POINT: TOP OF CASING
 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 168.07 FT (51.228M) BELOW LAND-SURFACE
 DATUM, SEPT. 5, 1979; LOWEST, 184.01 FT (56.086M) BELOW LAND-SURFACE DATUM,
 NOV. 10, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	171.35	JAN 05, 1979	171.08	APR 10, 1979	169.31	JUL 15, 1979	168.77
10	171.37	10	170.68	20	169.76	20	168.46
15	171.34	15	173.60	25	169.70	25	168.17
20	171.07	20	171.16	30	169.40	31	169.05
25	170.98	25	171.04	MAY 05	169.46	AUG 05	168.81
31	171.34	31	171.27	10	169.76	15	168.80
NOV 05	170.85	FEB 05	170.82	15	169.07	20	168.50
10	170.46	15	174.44	20	169.18	25	168.35
15	170.30	20	172.15	25	168.95	31	168.71
20	170.70	25	171.85	30	168.84	SEP 05	168.07
25	170.28	28	170.98	JUN 05	168.71	10	168.75
30	169.97	MAR 05	171.68	10	169.18	15	168.37
DEC 05	170.52	10	171.26	15	169.21	20	168.50
10	173.40	15	171.05	20	168.69	25	168.37
15	170.40	20	170.49	25	168.40	30	168.84
20	170.87	25	170.79	30	168.22		
25	170.34	31	169.79	JUL 05	168.65		
31	170.32	APR 05	169.76	10	168.41		

WTR YEAR 1979 MAX 168.07 SEP 05, 1979 MIN 174.44 FEB 15, 1979

MAJOR COUNTY

361442098092801. LOCAL NUMBER, 20N-09W-04 AAA 1.
 LOCATION.--LAT 36 14'42", LONG 098 09'28", HYDROLOGIC UNIT 11050002, OWNER: ROSS M. STURGEON.
 AQUIFER.--TERRACE DEPOSITS.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 6 IN (0.15M), DEPTH 60 FT (18.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1225 FT (373M). MEASURING POINT: 2.00 FT (0.61M)
 ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.54 FT (1.993M) BELOW LAND-SURFACE
 DATUM, JUNE 20, 1975; LOWEST, 25.97 FT (7.916M) BELOW LAND-SURFACE DATUM, SEPT. 15, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	17.26	NOV 10, 1978	17.47	APR 10, 1979	16.30	AUG 20, 1979	17.02
10	17.25	DEC 05	17.00	15	16.36	25	16.96
15	16.98	10	17.04	20	16.35	31	16.94
20	17.19	MAR 31, 1979	16.56	25	16.29	SEP 05	16.95
NOV 05	17.86	APR 05	16.47	30	16.23	30	17.70

WTR YEAR 1979 MAX 16.23 APR 30, 1979 MIN 17.86 NOV 05, 1978

MUSKOGEE COUNTY

354613095161001. LOCAL NUMBER, 15N-19E-15 DDD 1.
 LOCATION.--LAT 35 46'13", LONG 095 16'10", HYDROLOGIC UNIT 11110102, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 1 1/4 IN (0.03M), DEPTH 29 FT (8.84M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 509 FT (155M). MEASURING POINT: TOP OF PIPE
 2.55 FT (0.78M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1958, 1974 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.24 FT (1.902M) BELOW LAND-SURFACE
 DATUM, MAY 26, 1975; LOWEST, 15.31 FT (4.666M) BELOW LAND-SURFACE DATUM, JULY 23, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 28, 1978	14.74	FEB 16, 1979	14.81	MAY 11, 1979	13.43	JUL 23, 1979	15.31

WTR YEAR 1979 MAX 13.43 MAY 11, 1979 MIN 15.31 JULY 23, 1979

GROUND-WATER LEVELS

OKLAHOMA COUNTY

352448097263201. LOCAL NUMBER, 11N-02W-19 DDA 1.
 LOCATION.--LAT 35 24'48", LONG 097 26'32", HYDROLOGIC UNIT 11100302, OWNER: CITY OF OKLAHOMA CITY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 304 FT (92.7M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1265 FT (386M). MEASURING POINT: 1900 FT (0.35M)
 ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO JUNE 1979 (DISCONTINUED).
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 138.00 FT (42.062M) BELOW LAND-SURFACE
 DATUM, FEB. 29, 1976; LOWEST, 143.26 FT (43.666M) BELOW LAND-SURFACE DATUM, AUG. 31, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	141.95	NOV 15, 1978	141.14	DEC 31, 1978	141.75	FEB 20, 1979	141.69
10	141.52	20	141.25	JAN 10, 1979	141.85	APR 05	141.00
15	141.49	25	141.10	15	141.82	10	140.72
20	141.39	30	141.14	20	141.57	15	140.78
25	141.18	DEC 10	141.56	25	141.60	20	140.89
31	141.22	15	141.52	31	141.88	25	140.68
NOV 05	141.10	20	141.54	FEB 10	141.86	30	140.79
10	141.20	25	141.58	15	141.87		

OCT 1978 TO JUNE 1979 MAX 140.68 APR 25, 1979 MIN 141.95 OCT 05, 1978

352449097293201. LOCAL NUMBER, 11N-03W-23 BCD 1.
 LOCATION.--LAT 35 24'49", LONG 097 29'32", HYDROLOGIC UNIT 11100302, OWNER: CITY OF OKLAHOMA CITY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 26 FT (7.92M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1250 FT (381M). MEASURING POINT: TOP OF CASING
 0.5 FT (0.15M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 111.00 FT (33.833M) BELOW LAND-SURFACE
 DATUM, APR. 10, 1979; LOWEST, 114.20 FT (34.808M) BELOW LAND-SURFACE DATUM, DEC. 5, 10, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	111.90	JAN 20, 1979	111.10	MAR 31, 1979	111.52	JUN 10, 1979	111.70
10	111.63	25	111.13	APR 05	111.48	15	111.31
15	111.88	31	111.23	10	111.00	20	111.34
20	111.75	FEB 05	111.66	15	111.40	25	111.49
25	111.62	10	111.57	20	111.52	30	111.30
31	111.95	15	111.76	25	111.30	SEP 05	111.05
DEC 10	111.75	20	111.37	30	111.48	10	111.16
15	111.42	25	111.82	MAY 05	111.51	15	111.46
20	111.45	28	111.39	10	111.42	20	111.05
25	111.44	MAR 05	111.59	15	111.60	25	111.37
31	111.53	10	111.74	20	111.32	30	111.20
JAN 05, 1979	111.90	15	111.83	25	111.61		
10	111.76	20	111.53	31	111.59		
15	111.65	25	111.28	JUN 05	111.17		

WTR YEAR 1979 MAX 111.00 APR 10, 1979 MIN 111.95 OCT 31, 1978

GROUND-WATER LEVELS

OKLAHOMA COUNTY

352705097281201. LOCAL NUMBER, 11N-03W-01 CDD 1.
 LOCATION.--LAT 35 27'05", LONG 097 28'12", HYDROLOGIC UNIT 11100302, OWNER: OKLAHOMA CITY.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 354 FT (108M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1290 FT (393M). MEASURING POINT: TOP OF CASING
 1.3 FT (0.40M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.82 FT (63.648M) BELOW LAND-SURFACE
 DATUM, JUNE 15, 1976; LOWEST, 217.24 FT (66.215M) BELOW LAND-SURFACE DATUM, AUG. 15, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10, 1978	215.45	FEB 10, 1979	216.55	APR 05, 1979	214.20	MAY 31, 1979	212.31
15	215.32	15	216.57	10	213.60	JUN 05	211.98
20	215.50	20	216.08	15	213.65	10	213.15
25	215.64	25	216.14	20	213.51	15	213.93
31	215.95	28	215.66	25	213.09	20	214.32
JAN 10, 1979	216.24	MAR 05	215.60	30	213.00	25	214.47
15	216.18	10	215.48	MAY 05	212.81	30	214.10
20	215.78	15	215.34	10	212.51	AUG 05	215.75
25	215.95	20	214.88	15	212.53	10	216.20
31	216.81	25	214.46	20	212.23	15	217.24
FEB 05	216.78	31	214.42	25	212.40		

WTR YEAR 1979 MAX 211.98 JUNE 05, 1979 MIN 217.24 AUG 15, 1979

352725097224701. LOCAL NUMBER, 11N-02W-02 BDD 1.
 LOCATION.--LAT 35 27'25", LONG 097 22'47", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO.
 49.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 274 FT (83.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE
 SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE; AIRLINE IS SET AT 562 FT (171M) BELOW LAND-SURFACE DATUM.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 104.00 FT (31.699M) BELOW LAND-SURFACE
 DATUM, FEB 1, 1979; LOWEST, 257.00 FT (78.333M) BELOW LAND-SURFACE DATUM, JULY 16, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04, 1979	257.00	MAR 01, 1979	239.00	MAY 01, 1979	227.00	JUN 04, 1979	204.00
FEB 01	104.00	APR 03	239.00				

WTR YEAR 1979 MAX 104.00 FEB 01, 1979 MIN 257.00 JAN 04, 1979

352750097223001. LOCAL NUMBER, 11N-02W-02 ABA 1.
 LOCATION.--LAT 35 27'50", LONG 097 22'30", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO.
 50.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 751 FT (229M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1202 FT (366M). MEASURING POINT: TOP OF CONCRETE
 SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE; AIRLINE IS SET AT 580 FT (177M) BELOW LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.00 FT (63.398M) BELOW LAND-SURFACE
 DATUM, JUNE 4, 1979; LOWEST, 395.00 FT (120.396M) BELOW LAND-SURFACE DATUM, NOV. 2, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	347.00	JAN 09, 1979	257.00	APR 03, 1979	234.00	JUL 05, 1979	220.00
NOV 02	395.00	FEB 01	210.00	MAY 01	215.00	AUG 02	245.00
DEC 05	245.00	MAR 01	238.00	JUN 04	208.00	SEP 04	347.00

WTR YEAR 1979 MAX 208.00 JUNE 04, 1979 MIN 395.00 NOV 02, 1978

GROUND-WATER LEVELS

OKLAHOMA COUNTY

352910097232001. LOCAL NUMBER, 12N-02W-26 CBB 1.
 LOCATION.--LAT 35 29'10", LONG 097 23'20", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO. 51.
 AQUIFER.--GARBER SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 748 FT (228M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--MEASURE WITH AIRLINE GAGE, AIRLINE IS SET AT 578 FT (176M) BELOW LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 189.00 FT (57.607M) BELOW LAND-SURFACE DATUM, JULY 5, 1979; LOWEST, 356.00 FT (108.508M) BELOW LAND-SURFACE DATUM, OCT. 5, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	356.00	JAN 09, 1979	379.00	APR 03, 1979	226.00	JUL 05, 1979	189.00
NOV 03	325.00	FEB 01	328.00	MAY 01	279.00	AUG 02	198.00
DEC 05	367.00	MAR 01	222.00	JUN 04	252.00	SEP 04	286.00

WTR YEAR 1979 MAX 189.00 JULY 05, 1979 MIN 356.00 OCT 05, 1978

353100097400001. LOCAL NUMBER, 12N-04W-07 CDC 1.
 LOCATION.--LAT 35 31'00", LONG 097 40'00", HYDROLOGIC UNIT 11100301, OWNER: CITY OF BETHANY.
 AQUIFER.--TERRACE DEPOSITS.
 WELL CHARACTERISTICS.--DRILLED MUNICIPAL WELL, DIAMETER 12 IN (0.30M), DEPTH 66 FT (20.1M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1250 FT (381M). MEASURING POINT: 1.90 FT (0.58M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
 PERIOD OF RECORD.--1973 TO MARCH 1979 (DISCONTINUED).
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 26.41 FT (8.050M) BELOW LAND-SURFACE DATUM, JAN. 15, 1976; LOWEST, 36.91 FT (11.250M) BELOW LAND-SURFACE DATUM, JULY 5, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	31.88	NOV 10, 1978	33.10	DEC 20, 1978	32.37	FEB 28, 1979	31.69
10	32.16	15	33.03	JAN 05, 1979	32.20	MAR 05	31.65
15	32.52	20	32.94	10	32.15	10	31.61
20	32.70	25	32.85	FEB 15	31.76	15	31.59
31	33.23	30	32.76	20	31.74		
NOV 05	33.16	DEC 15	32.44	25	31.71		

OCT 1978 TO MAR 1979 MAX 31.59 MAR 15, 1979 MIN 33.23 OCT 31, 1978

353530097172001. LOCAL NUMBER, 13N-01E-22 ADD 1.
 LOCATION.--LAT 35 35'30", LONG 097 17'20", HYDROLOGIC UNIT 11100303, OWNER: T.E. BOOHER.
 AQUIFER.--GARBER-WELLINGTON FORMATION.
 WELL CHARACTERISTICS.--UNUSED ARTESIAN WELL, DIAMETER 6 IN (0.15M), DEPTH 153 FT (46.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1090 FT (332M). MEASURING POINT: CHISELED ARROW AT NORTHEAST SIDE OF CASING 0.10 FT (0.03M) ABOVE LAND-SURFACE DATUM.
 REMARKS.--RECORDER INSTALLED 12-18-74.
 PERIOD OF RECORD.--1976 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 109.35 FT (33.330M) BELOW LAND-SURFACE DATUM, MAR. 10, 1977; LOWEST, 113.74 FT (34.668M) BELOW LAND-SURFACE DATUM, JUNE 10, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	113.25	JAN 05, 1979	113.71	MAR 31, 1979	113.35	JUN 25, 1979	113.58
10	113.02	10	113.63	APR 05	113.47	30	113.36
15	113.28	15	113.58	10	112.93	AUG 05	113.40
20	113.26	20	112.92	15	113.36	10	113.27
25	113.02	25	113.07	20	113.53	15	113.41
31	113.33	31	113.67	25	113.28	20	113.18
NOV 05	112.95	FEB 05	113.58	30	113.46	25	113.20
10	113.11	10	113.47	MAY 05	113.47	30	113.26
15	113.20	15	113.64	10	113.35	SEP 05	113.30
20	113.50	20	113.28	15	113.52	10	113.28
25	113.08	25	113.61	20	113.25	15	113.56
30	113.06	28	113.16	25	113.56	20	113.23
DEC 10	113.44	MAR 05	113.40	31	113.48	25	113.46
15	113.12	10	113.55	JUN 05	113.20	30	113.28
20	113.10	15	113.69	10	113.74		
25	113.17	20	113.35	15	113.36		
31	113.41	25	113.11	20	113.40		

WTR YEAR 1979 MAX 112.92 JAN 20, 1979 MIN 113.74 JUNE 10, 1979

GROUND-WATER LEVELS

OSAGE COUNTY

362935096291501, LOCAL NUMBER (REVISED), 23N-09E-10 AAD 1.
 LOCATION.--LAT 36 29'35", LONG 096 29'15", HYDROLOGIC UNIT 11070107, OWNER: LESLIE DRUMMOND.
 AQUIFER.--VAMOOSA FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M), DEPTH 55 FT (16.8M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 835 FT (255M). MEASURING POINT: TOP OF CASING
 2.40 FT (0.73M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1971 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 5.37 FT (1.637M) BELOW LAND-SURFACE
 DATUM, JUNE 10, 1975; LOWEST, 9.26 FT (2.822M) BELOW LAND-SURFACE DATUM, AUG. 20, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	8.63	JAN 25, 1979	8.18	APR 15, 1979	7.62	JUL 10, 1979	7.54
10	8.37	31	8.45	20	7.51	15	7.82
15	8.50	FEB 05	8.30	25	7.31	20	7.81
20	8.44	10	8.26	30	7.54	25	7.81
25	8.43	15	8.50	MAY 05	7.45	31	8.10
31	8.00	20	8.14	10	7.45	AUG 05	8.12
NOV 05	8.36	25	8.23	15	7.55	10	8.18
10	8.51	28	8.12	20	7.47	15	8.27
15	8.39	MAR 05	8.14	25	7.63	20	8.28
20	8.45	10	8.24	31	7.74	25	8.33
25	8.22	15	8.27	JUN 05	7.47	31	8.50
30	8.20	20	7.88	10	7.66	SEP 15	8.19
DEC 05	8.18	25	7.71	25	7.45	20	8.57
JAN 15, 1979	8.52	31	7.85	30	7.44	25	8.82
20	8.10	APR 05	7.66	JUL 05	7.59	30	8.81

WTR YEAR 1979 MAX 7.31 APR 25, 1979 MIN 8.82 SEP 25, 1979

PAYNE COUNTY

360245096562001, LOCAL NUMBER, 18N-03E-12 CDC 1.
 LOCATION.--LAT 36 02'45", LONG 096 56'20", HYDROLOGIC UNIT 11050003, OWNER: J. WOLF.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 39 FT (11.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 830 FT (253M). MEASURING POINT: TOP OF NORTH
 EDGE OF CASING 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1951 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 7.40 FT (2.256M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 30.70 FT (9.357M) BELOW LAND-SURFACE DATUM, JULY 2, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	21.30	MAR 28, 1979	20.50	JUN 25, 1979	20.00	SEP 29, 1979	20.40

WTR YEAR 1979 MAX 20.00 JUNE 25, 1979 MIN 21.30 DEC 23, 1978

360515096564501, LOCAL NUMBER, 19N-03E-35 AAB 1.
 LOCATION.--LAT 36 05'15", LONG 096 56'45", HYDROLOGIC UNIT 11050003, OWNER: LOVELL BROS.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 900 FT (274M). MEASURING POINT: TOP OF CASING
 2.47 FT (0.75M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 11.33 FT (3.453M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 39.73 FT (12.110M) BELOW LAND-SURFACE DATUM, MAY 24, 1939.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	28.13	MAR 28, 1979	24.23	JUN 25, 1979	19.33	SEP 29, 1979	21.73

WTR YEAR 1979 MAX 19.33 JUNE 25, 1979 MIN 28.13 DEC 23, 1978

GROUND-WATER LEVELS

PAYNE COUNTY

360615097100501. LOCAL NUMBER, 19N-01E-23 CDC 1.
 LOCATION.--LAT 36 06'15", LONG 097 10'05", HYDROLOGIC UNIT 11050003, OWNER: E.T. POOL.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 47 FT (14.3M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1030 FT (314M). MEASURING POINT: TOP OF CASING
 1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 18.10 FT (5.517M) BELOW LAND-SURFACE
 DATUM, DEC. 24, 1962; LOWEST, 28.70 FT (8.748M) BELOW LAND-SURFACE DATUM, MAR. 25, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	25.00	MAR 28, 1979	25.80	JUN 25, 1979	24.00	SEP 28, 1979	25.50
WTR YEAR 1979	MAX 24.00	JUNE 25, 1979	MIN 25.80	MAR 28, 1979			

360725096521501. LOCAL NUMBER, 19N-04E-15 CBB 1.
 LOCATION.--LAT 36 07'25", LONG 096 52'15", HYDROLOGIC UNIT 11050003, OWNER: V.G. PHELPS.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 880 FT (268M). MEASURING POINT: TOP OF CASING
 2.20 FT (0.67M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.00 FT (0.305M) BELOW LAND-SURFACE
 DATUM, APR. 1, 1975; LOWEST, 7.92 FT (2.414M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	6.60	MAR 28, 1979	3.90	JUN 25, 1979	4.60	SEP 29, 1979	6.80
WTR YEAR 1979	MAX 3.90	MAR 28, 1979	MIN 6.80	SEP 29, 1979			

360930096573001. LOCAL NUMBER, 19N-03E-02 BBA 1.
 LOCATION.--LAT 36 09'30", LONG 096 57'30", HYDROLOGIC UNIT 11050003, OWNER: W.U. SNYDER.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 34 FT (10.4M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 920 FT (280M). MEASURING POINT: TOP OF CASING
 0.90 FT (0.27M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 6.73 FT (2.051M) BELOW LAND-SURFACE
 DATUM, APR. 27, 1942; LOWEST, 25.08 FT (7.644M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	24.00	MAR 28, 1979	20.60	JUN 25, 1979	23.20	SEP 28, 1979	23.00
WTR YEAR 1979	MAX 20.60	MAR 28, 1979	MIN 24.00	DEC 23, 1978			

361120097055001. LOCAL NUMBER, 20N-02E-21 CCD 1.
 LOCATION.--LAT 36 11'20", LONG 097 05'50", HYDROLOGIC UNIT 11050003, OWNER: A.L. SIMON.
 AQUIFER.--ROCKS OF PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 41 FT (12.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1010 FT (308M). MEASURING POINT: TOP OF CASING
 1.30 FT (0.40M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 10.95 FT (3.338M) BELOW LAND-SURFACE
 DATUM, APR. 29, 1942; LOWEST, 36.29 FT (11.061M) BELOW LAND-SURFACE DATUM, APR. 5, 1937.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	23.10	MAR 28, 1979	23.40	JUN 25, 1979	22.40	SEP 28, 1979	22.70
WTR YEAR 1979	MAX 22.40	JUNE 25, 1979	MIN 23.40	MAR 28, 1979			

GROUND-WATER LEVELS

623

PAYNE COUNTY

361205096572501. LOCAL NUMBER, 20N-03E-23 BAB 1.
 LOCATION.--LAT 36 12'05", LONG 096 57'25", HYDROLOGIC UNIT 11050003, OWNER: V.D. HESSER.
 AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 27 FT (8.23M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1045 FT (319M). MEASURING POINT: TOP OF CASING 0.77 FT (0.23M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD, 1934 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.20 FT (0.366M) BELOW LAND-SURFACE DATUM, MAY 27, 1943; LOWEST, 14.41 FT (4.392M) BELOW LAND-SURFACE DATUM, MARCH 1, 1957.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23, 1978	11.23	MAR 28, 1979	10.83	JUN 25, 1979	7.63	SEP 28, 1979	9.63
WTR YEAR 1979	MAX 7.63	JUNE 25, 1979	MIN 11.23	DEC 23, 1978			

PITTSBURGH COUNTY

350422095341901. LOCAL NUMBER, 07N-16E-24 BAB 1.
 LOCATION.--LAT 35 04'22", LONG 095 34'19", HYDROLOGIC UNIT 11090204, OWNER: SAM SUDWITH.
 AQUIFER.--BOGGY FORMATION.
 WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 63 FT (19.2M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 682 FT (208M). MEASURING POINT: TOP OF CASING 1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1977 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.16 (8.583M) BELOW LAND-SURFACE DATUM, JUNE 10, 1979; LOWEST, 33.52 FT (10.214M) BELOW LAND-SURFACE DATUM, JAN. 31, FEB 5, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1978	31.96	JAN 10, 1979	33.22	APR 25, 1979	30.01	JUL 20, 1979	30.33
20	32.28	15	32.93	30	30.36	25	30.22
25	32.17	25	31.42	MAY 05	30.25	31	30.32
31	32.59	31	31.94	10	30.96	AUG 05	30.51
NOV 05	32.44	FEB 05	31.91	25	30.46	10	30.54
10	32.50	10	31.73	31	29.64	15	30.71
15	32.63	15	31.07	JUN 05	29.51	20	30.75
30	31.84	20	31.04	10	28.16	25	30.84
DEC 05	31.82	MAR 20	29.98	15	29.03	31	30.97
10	32.34	25	29.64	20	29.48	SEP 05	31.06
15	32.32	31	29.81	25	29.74	10	31.24
20	32.32	APR 05	29.77	30	29.73	15	31.54
25	32.55	10	29.50	JUL 05	30.00	30	31.47
31	32.96	15	29.87	10	30.03		
JAN 05, 1979	33.15	20	30.06	15	30.27		
WTR YEAR 1979	MAX 28.16	JUNE 10, 1979	MIN 33.22	JAN 10, 1979			

SEQUOYAH COUNTY

352419094270401. LOCAL NUMBER, 11N-27E-21 CDD 1.
 LOCATION.--LAT 35 24'19", LONG 094 27'04", HYDROLOGIC UNIT 11110104, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M), DEPTH 48 FT (14.6M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 412 FT (126M). MEASURING POINT: TOP OF RECORDER PLATFORM 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1960 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 3.18 FT (0.969M) BELOW LAND-SURFACE DATUM, JUNE 20, 1973; LOWEST, 18.72 FT (5.706M) BELOW LAND-SURFACE DATUM, OCT. 10, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	13.29	JAN 25, 1979	12.76	APR 20, 1979	9.89	JUL 15, 1979	9.16
10	13.27	31	12.87	25	9.14	20	9.39
15	13.32	FEB 05	12.84	30	9.39	25	9.21
25	13.44	10	12.78	MAY 05	8.84	31	8.53
31	13.54	15	12.57	10	8.94	AUG 05	8.27
NOV 05	13.55	25	11.99	20	8.66	10	8.53
10	13.64	28	11.84	25	6.97	15	8.38
15	13.60	MAR 05	11.50	31	7.64	20	8.61
30	13.03	10	11.48	JUN 05	6.64	25	8.98
DEC 05	12.98	15	11.55	10	7.02	31	9.22
10	12.93	20	11.16	15	7.22	SEP 05	9.34
15	12.87	25	10.76	20	7.58	10	9.54
20	13.12	31	10.59	25	7.89	15	9.84
25	13.26	APR 05	10.34	30	7.92	20	9.75
31	13.17	10	10.29	JUL 05	8.37	30	10.22
JAN 20, 1979	13.70	15	9.92	10	8.67		
WTR YEAR 1979	MAX 6.64	JUNE 05, 1979	MIN 13.70	JAN 20, 1979			

GROUND-WATER LEVELS

TEXAS COUNTY

363033101440701. LOCAL NUMBER, 01N-12E-35 BDD 1.
 LOCATION.--LAT 36 30'33", LONG 101 44'07", HYDROLOGIC UNIT 11101033, OWNER: OTTO A. HARLAND.
 AQUIFER.--OGALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 386 FT (118M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3430 FT (1045M). MEASURING POINT: TOP OF FLOAT LINE
 HOLE ON NORTH SIDE 3.15 FT (0.96M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1956 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 191.87 FT (58.482M) BELOW LAND-SURFACE
 DATUM, JAN. 10, 1971; LOWEST, 202.17 FT (61.621M) BELOW LAND-SURFACE DATUM, AUG. 5, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	201.33	JAN 15, 1979	200.54	APR 01, 1979	201.24	JUN 25, 1979	201.39
10	201.11	20	200.73	10	200.83	30	201.37
15	201.13	25	200.68	15	201.43	JUL 05	201.76
20	201.01	31	200.80	20	201.73	20	201.51
25	200.79	FEB 05	200.80	25	201.50	25	201.96
31	201.03	10	200.78	30	201.70	31	202.12
NOV 05	200.97	15	200.99	MAY 05	201.76	AUG 05	202.17
10	201.25	20	200.62	10	202.01	31	201.85
20	200.98	25	201.00	15	201.89	SEP 05	201.66
25	200.94	28	200.73	20	201.69	10	201.82
30	200.91	MAR 05	200.96	25	201.31	15	202.10
DEC 05	200.96	10	200.98	31	201.63	20	201.60
10	201.02	15	201.08	JUN 05	201.16	25	201.80
15	200.85	20	201.20	10	201.46		
31	200.96	25	201.03	15	201.18		
JAN 10, 1979	200.85	31	201.39	20	201.32		

WTR YEAR 1979 MAX 200.54 JAN 15, 1979 MIN 202.17 AUG 05, 1979

WOODS COUNTY

365143098404201. LOCAL NUMBER, 28N-14W-35 BCC 1.
 LOCATION.--LAT 36 51'43", LONG 098 40'42", HYDROLOGIC UNIT 11060002, OWNER: WILCOX.
 AQUIFER.--CEDAR HILLS SANDSTONE.
 WELL CHARACTERISTICS.--DRILLED UNUSED MUNICIPAL WELL, DIAMETER 13 IN (0.33M), DEPTH 54 FT (16.5M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1360 FT (415M). MEASURING POINT: EDGE OF LARGE HOLE
 IN STEEL PLATE 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 18.77 FT (5.721M) BELOW LAND-SURFACE
 DATUM, JUNE 15, 1973; LOWEST, 24.25 FT (7.391M) BELOW LAND-SURFACE DATUM, MAR. 15, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	23.78	JAN 05, 1979	24.01	APR 05, 1979	24.15	JUL 05, 1979	22.62
10	23.71	10	24.01	10	24.01	10	22.56
15	23.75	15	23.97	15	24.06	15	22.68
20	23.73	20	24.03	20	24.08	20	22.56
25	23.80	25	24.07	25	24.03	25	22.50
31	23.85	31	24.12	30	24.00	AUG 05	22.40
NOV 05	23.86	FEB 05	24.13	MAY 05	23.76	10	22.43
10	23.90	10	24.10	10	23.61	15	22.45
15	23.89	15	24.22	15	23.06	20	22.44
20	23.92	20	24.14	20	22.69	25	22.48
25	23.84	25	24.22	25	22.78	31	22.52
30	23.90	28	24.18	31	22.74	SEP 05	22.28
DEC 05	23.96	MAR 05	24.21	JUN 05	22.64	10	22.16
10	23.95	10	24.24	10	22.67	15	22.17
15	23.99	15	24.25	15	22.53	20	22.15
20	23.96	20	24.24	20	22.55	25	22.21
25	24.01	25	24.13	25	22.55	30	22.20
31	24.04	31	24.15	30	22.56		

WTR YEAR 1979 MAX 22.15 SEP 20, 1979 MIN 24.25 MAR 15, 1979

GROUND-WATER LEVELS

625

WOODWARD COUNTY

361256099102101, LOCAL NUMBER, 20N-19W-13 ARR 1.
 LOCATION.--LAT 36 12'56", LONG 099 10'21", HYDROLOGIC UNIT 11100301, OWNER: M. JAZEN.
 AQUIFER.--RUSH SPRINGS FORMATION.
 WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 40 FT (12.2M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1895 FT (578M), MEASURING POINT: EDGE OF PLYWOOD
 SHELTER BASE 1.10 FT (0.34M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1972 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 10.51 FT (3.203M) BELOW LAND-SURFACE
 DATUM, SEPT. 20, 1979; LOWEST, 17.44 FT (5.316M) BELOW LAND-SURFACE DATUM, JULY 5, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	12.30	JAN 05, 1979	12.23	APR 05, 1979	12.12	JUL 15, 1979	11.71
10	12.10	10	12.23	15	11.96	20	11.66
15	12.11	15	12.27	20	12.01	25	11.48
20	11.96	20	12.10	25	11.89	31	11.40
25	11.49	25	12.13	30	11.82	AUG 05	11.28
31	12.05	31	12.36	MAY 05	11.81	10	11.15
NOV 05	11.82	FEB 05	12.37	10	12.00	15	11.08
10	12.04	10	12.26	20	11.93	20	10.87
15	11.90	15	12.58	25	11.98	25	10.82
20	12.01	20	12.26	31	12.07	31	10.73
25	11.78	25	12.53	JUN 05	11.83	SEP 05	10.66
30	11.86	28	12.32	10	12.12	10	10.62
DEC 05	11.98	MAR 05	12.42	15	11.69	15	10.72
10	12.07	10	12.51	20	11.80	20	10.51
15	11.89	15	12.46	25	11.77	25	10.66
20	12.10	20	12.42	30	11.63	30	10.60
25	12.13	25	12.23	JUL 05	11.75		
31	12.11	31	12.33	10	11.60		

WTR YEAR 1979 MAX 10.51 SEP 20, 1979 MIN 12.58 FEB 15, 1979

361714099315101, LOCAL NUMBER, 21N-22W-23 ARR 1.
 LOCATION.--LAT 36 17'14", LONG 099 31'51", HYDROLOGIC UNIT 11100203, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--GALLALA FORMATION.
 WELL CHARACTERISTICS.--DRILLED TEST HOLE, DIAMETER 6 IN (0.15M), DEPTH 322 FT (98.1M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2340 FT (713M), MEASURING POINT: TOP OF PLYWOOD WHEEL
 2.00 FT (0.61M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1957 TO 1963, 1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 27.32 FT (8.327M) BELOW LAND-SURFACE
 DATUM, SEPT. 5, 1961; LOWEST, 32.64 FT (9.949M) BELOW LAND-SURFACE DATUM, MAY 19, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	28.82	DEC 25, 1978	28.53	MAR 15, 1979	28.70	JUL 10, 1979	27.49
10	28.71	31	28.52	APR 15	28.36	15	28.03
15	28.71	JAN 05, 1979	28.53	20	28.35	20	28.05
20	28.65	10	28.50	25	28.32	AUG 10	27.99
25	28.63	15	28.41	30	28.31	15	27.96
31	28.62	20	28.44	MAY 05	28.31	20	27.90
NOV 05	28.56	25	28.46	20	28.17	25	27.89
10	28.62	31	28.54	25	28.11	31	27.89
15	28.57	FEB 05	28.54	31	28.11	SEP 05	27.86
20	28.66	10	28.50	JUN 05	28.02	10	27.86
25	28.51	15	28.68	10	28.14	15	27.92
30	28.50	20	28.59	15	28.04	20	27.85
DEC 05	28.52	25	28.72	20	28.04	25	27.91
10	28.57	28	28.61	25	28.03	30	27.89
15	28.49	MAR 05	28.67	30	27.98		
20	28.54	10	28.70	JUL 05	28.02		

WTR YEAR 1979 MAX 27.85 SEP 20, 1979 MIN 28.82 OCT 05, 1978

362707099174201, LOCAL NUMBER, 23N-20W-19 ARR 1.
 LOCATION.--LAT 36 27'07", LONG 099 17'42", HYDROLOGIC UNIT 11100301, OWNER: U.S. GEOLOGICAL SURVEY.
 AQUIFER.--ALLUVIUM.
 WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 4 IN (0.10M), DEPTH 27 FT (8.23M).
 DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1880 FT (573M), MEASURING POINT: TOP EDGE OF CASING
 ON NORTH SIDE 2.00 FT (0.10M) ABOVE LAND-SURFACE DATUM.
 PERIOD OF RECORD.--1945 TO 1963, 1965 TO CURRENT YEAR.
 EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.02 FT (0.311M) BELOW LAND-SURFACE
 DATUM, JULY 1, 1957; LOWEST, 6.94 FT (2.115M) BELOW LAND-SURFACE DATUM, OCT. 9, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1978	4.81	FEB 09, 1979	4.87	MAY 16, 1979	2.66	AUG 01, 1979	3.05
WTR YEAR 1979 MAX	2.66	MAY 16, 1979 MIN	4.87	FEB 09, 1979			

INDEX

	Page		Page
Accuracy of field data and computed results.....	12	Caney River, near Hulah.....	213-215
Acre-foot, definition of.....	2	near Ramona.....	220-226
Adams Creek near Beggs.....	610	Canton, Canton Lake near.....	402-404
Adenosine triphosphate, definition of....	2	North Canadian River at.....	405-407
Alabama Creek near Weleetka.....	610	Canton Lake near Canton.....	402-404
Alfalfa County, ground-water levels in...	611	Caston Creek at Wister.....	538-546
Algae, definition of.....	2	Catoosa, Bird Creek at.....	241-242
Algal growth potential, definition of....	2	Bird Creek near.....	238-240
Alva, Salt Fork Arkansas River near.....	28	Cells/volume, definition of.....	3
Aquifer, definition of.....	2	Cfs-day, definition of.....	3
Arcadia, Deep Fork near.....	442-452	Chemical oxygen demand, definition of....	3
Arkansas River at Ralston.....	67-82	Chikaskia River near Blackwell.....	62-64
at Robert S. Kerr Lock and Dam near		Chlorophyll, definition of.....	3
Sallisaw.....	498-500	Chouteau, Neosho River near.....	264-266
at Tulsa.....	185-199	Cimarron County, ground-water levels in....	611
near Haskell.....	202-204	Cimarron River, at Freedom.....	111-118
near Muskogee.....	275-276	at Perkins.....	168-182
near Ponca City.....	24-26	near Buffalo.....	89-99
Salt Fork, at Tonkawa.....	54-61	near Dover.....	138-148
near Alva.....	28	near Forgan.....	87
near Ingersoll.....	29-39	near Guthrie.....	163-164
near Jet.....	41-53	near Kenton.....	86
near White Eagle.....	65-66	near Mocane.....	88
near Winchester.....	27	near Waynoka.....	119-126
tributary near Eddy.....	609	Claremore, Verdigris River near.....	227-229
Artesian, definition of.....	2	Clear Creek, near Elmwood.....	386
Artificial substrate, definition of.....	7	tributary near Catesby.....	610
Ash mass, definition of.....	3	Cleveland County, ground-water levels in....	612-613
Avant, Bird Creek at.....	232-234	Coal Creek near Panama.....	585-594
		Coal Creek near Spiro.....	501-509
Bacteria, definition of.....	2	Coal Creek Tributary near Bokoshe.....	579-584
Barnsdall, Birch Creek below Birch Lake		Cold Springs Creek near Wheelless.....	609
near.....	231	Collection of data (ground water).....	14
Birch Lake near.....	230	and computation of data (surface water)...	10-12
Baron Fork at Eldon.....	286-288	and examination of data (water quality)...	13
Beaver, Beaver River at.....	377-385	Color unit, definition of.....	3
Beaver County, ground-water levels in....	611	Commerce, Neosho River near.....	250-252
Beaver River, at Beaver.....	377-385	Computation, accuracy of results.....	12
near Guymon.....	371-373	Contents, definition of.....	3
near Hardesty.....	376	Continuing water-quality record site,	
near Hooker.....	374	definition of.....	13
Beggs, Deep Fork near.....	454-465	Control, definition of.....	3
Bed material, definition of.....	3	Control structure, definition of.....	3
Bent Creek near Seiling.....	610	Cooperation.....	1
Big Black Fox Creek near Long.....	610	Copan, Little Caney River below Cotton	
Big Cabin, Big Cabin Creek near.....	261	Creek near.....	216-218
Big Cabin Creek, near Big Cabin.....	261	Cottonwood Creek, at Seward.....	154-162
near Pyramid Corners.....	609	near Navina.....	149-153
Biochemical oxygen demand, definition of.	3	near Vici.....	610
Biomass, definition of.....	3	Council Creek near Stillwater.....	183
Birch Creek below Birch Lake near		Creek County, ground-water levels in....	613
Barnsdall.....	231	Crest-stage partial-record stations.....	609-610
Birch Lake near Barnsdall.....	230	Crowder, Mathuldy Creek near.....	366-370
Bird Creek, at Avant.....	232-234	Cubic foot per second, definition of.....	3
at Catoosa.....	241-242	Cubic feet per second per square mile,	
near Catoosa.....	238-240	definition of.....	3
near Sperry.....	237	Custer County, ground-water levels in....	614
Black Bear Creek, at Pawnee.....	83-85		
Blackwell, Chikaskia River near.....	62-64	Deer Creek at Hydro.....	294-299
Blocker, Blue Creek near.....	360-365	Deep Fork at Eastern Ave., Oklahoma City....	610
Blue Creek Tributary near.....	355-359	at Portland Ave., Oklahoma City.....	610
Blue Creek near Blocker.....	360-365	near Arcadia.....	442-452
Blue Creek Tributary near Blocker.....	355-359	near Beggs.....	454-465
Bokoshe, Coal Creek Tributary near.....	579-584	Definition of terms.....	2-8
Bottom material, definition of.....	3	Discharge, definition of.....	3
Brazil Creek near Red Oak.....	547-551	Dissolved, definition of.....	4
near Walls.....	557-563	Diversity index, definition of.....	4
Bridgeport, Canadian River at.....	300-308	Dover, Cimarron River near.....	138-148
Brooken, Eufaula Lake near.....	466	Downstream order and station number.....	8
Brushy Creek near Haileyville.....	337-344	Drainage area, definition of.....	4
Buffalo, Cimarron River near.....	89-99	Drainage basin, definition of.....	4
Buffalo Creek near Lovedale.....	100-110	Dry Creek near Kendrick.....	453
		Dry mass, definition of.....	3
Calvin, Canadian River at.....	326-336		
Canadian River, at Bridgeport.....	300-308	Eldon, Baron Fork at.....	286-288
at Calvin.....	326-336	Elk River near Tiff City, MO.....	256
at Purcell.....	309-310	Ellis County, ground-water levels in....	614-615
near Whitefield.....	467-481	Elmwood, Clear Creek near.....	386
Candy Creek near Wolco.....	235	El Reno, North Canadian River near.....	408-410
		Eufaula Lake near Brooken.....	466

	Page		Page
Explanation of ground-water level records.....	14	Kingfisher Creek near Kingfisher.....	609
Explanation of stage and water-discharge records.....	10-12	Lake Hefner Canal near Oklahoma City.....	411
Explanation of water-quality records.....	13	Lakes and reservoirs:	
Fecal coliform bacteria, definition of...	2	Birch Lake near Barnsdall.....	230
Fecal streptococcal bacteria, definition of.....	3	Canton Lake near Canton.....	402-404
Flint Branch near Peoria.....	609	Eufaula Lake near Broken.....	466
Flint Creek near Kansas.....	280-282	Fort Gibson Lake near Fort Gibson.....	267
Forgan, Cimarron River near.....	87	Fort Supply Lake near Fort Supply.....	387
Fort Gibson, Fort Gibson Lake near.....	267	Great Salt Plains Lake near Jet.....	40
Neosho River below Fort Gibson Lake, near.....	268-274	Heyburn Lake near Heyburn.....	200
Fort Gibson Lake near Fort Gibson.....	267	Hudson, Lake, near Locust Grove.....	263
Fort Smith, AR, Poteau River near.....	605-606	Hulah Lake near Hulah.....	212
Fort Supply, Fort Supply Lake near.....	387	Kaw Lake near Ponca City.....	23
Wolf Creek near.....	388	Keystone Lake near Sand Springs.....	184
Fort Supply Lake near Fort Supply.....	387	O' The Cherokees, Lake, at Langley.....	257
Fourche Maline near Red Oak.....	522-524	Oologah Lake near Oologah.....	208
Fourche Maline near Wilburton.....	512-521	Optima Lake near Hardesty.....	375
Freedom, Cimarron River at.....	111-118	Overholser, Lake, near Oklahoma City.....	412
Gage height, definition of.....	4	Tenkiller Ferry Lake near Gore.....	289
Gaging station, definition of.....	4	Thunderbird, Lake, near Norman.....	312-314
Gore, Illinois River near.....	290-293	Wister Lake near Wister.....	534
Tenkiller Ferry Lake near.....	289	Land-surface datum, definition of.....	14
Great Salt Plains Lake near Jet.....	42	Langley, Lake O' The Cherokees near.....	257
Ground-water, level data.....	611-625	Neosho River near.....	258-260
Guthrie, Cimarron River near.....	163-164	Leader Creek tributary near Atwood.....	610
Guymon, Beaver River near.....	371-373	Leflore County, ground-water quality in.....	616
Hackett, AR, James Fork near.....	564-572	Lenapah, Verdigris River near.....	205-207
Hailyville, Brushy Creek near.....	337-344	Lincoln County, ground-water levels in.....	617
Peaceable Creek near.....	345-354	Little Caney River below Cotton Creek near Copan.....	216-218
Hardesty, Beaver River near.....	376	Little Lee Creek near Short.....	607-608
Optima Lake near.....	375	Little River below Lake Thunderbird near Norman.....	315-317
Harrah, North Canadian River near.....	414-428	near Sasakwa.....	319-325
Haskell, Arkansas River near.....	202-204	near Tecumseh.....	318
Heavener, Poteau River near.....	510-511	Locust Grove, Lake Hudson near.....	263
Heyburn, Heyburn Lake near.....	200	Lovedale, Buffalo Creek near.....	100-110
Polecat Creek below Heyburn Lake near..	201	Lovell, Skeleton Creek near.....	165-167
Heyburn Lake near Heyburn.....	200	Major County, ground-water levels in.....	617
Hogshooter Creek Tributary near Bartlesville.....	609	Mathuldy Creek near Crowder.....	366-370
Holi-Tuska Creek near Panama.....	595-604	Mean discharge, definition of.....	3
Hominy Creek near Skiatook.....	236	Metamorphic stage, definition of.....	4
Hooker, Beaver River near.....	374	Methylene blue active substance, definition of.....	4
Horse Creek at Afton.....	609	Micrograms per grams, definition of.....	4
Hudson, Lake, near Locust Grove.....	263	per liter, definition of.....	4
Hulah, Caney River near.....	213-215	Mill Creek near Park Hill.....	609
Hulah Lake near.....	212	Milligrams per liter, definition of.....	4
Hulah Lake near Hulah.....	212	Mocane, Cimarron River near.....	88
Hydro, Deer Creek at.....	294-299	Muskogee, Arkansas River near.....	275-276
Hydrologic bench-mark station, definition of.....	9	Muskogee County, ground-water levels in.....	617
Hydrologic conditions.....	2	National Geodetic Vertical Datum of 1929.....	4
Hydrologic unit, definition of.....	4	National stream-quality accounting network, definition of.....	9
Illinois River, near Gore.....	290-293	Navina, Cottonwood Creek near.....	149-153
near Tahlequah.....	283-285	Neosho River below Fort Gibson Lake near Fort Gibson.....	268-274
near Watts.....	277-279	near Chouteau.....	264-266
Ingersoll, Salt Fork Arkansas River near.....	29-39	near Commerce.....	250-252
Inola, Verdigris River near.....	243-249	near Langley.....	258-260
Instantaneous discharge, definition of...	3	Norman, Lake Thunderbird near.....	312-314
Introduction.....	1	Little River below Lake Thunderbird, near..	315-317
James Fork, near Hackett, AR.....	564-572	North Canadian River, at Canton.....	405-407
near Williams.....	573-578	at Woodward.....	389-398
Jet, Great Salt Plains Lake near.....	40	below Lake Overholser near Oklahoma City...	413
Salt Fork Arkansas River near.....	41-49	near El Reno.....	408-410
Julian Creek Tributary near Asher.....	610	near Harrah.....	414-428
Kansas, Flint Creek near.....	280-282	near Seiling.....	399-401
Kaw Lake near Ponca City.....	23	near Wetumka.....	429-441
Kay County, ground-water levels in.....	615	North Fork Clear Creek tributary near Balco..	610
Kendrick, Dry Creek near.....	453	Numbering system for wells and miscellaneous sites.....	9
Kenton, Cimarron River near.....	86	O' The Cherokees, Lake, near Langley.....	257
Keystone Lake near Sand Springs.....	184	Okeene, Salt Creek near.....	127-137
		Okesa, Sand Creek at.....	219
		Oklahoma City, Lake Hefner Canal near.....	411

	Page		Page
Oklahoma City, Lake Overholser near.....	412	Skiatook, Hominy Creek near.....	236
North Canadian River below Lake Overholser near.....	413	Solute, definition of.....	6
Oklahoma County, ground-water levels in..	618-620	Solutes.....	13
Oologah, Oologah Lake near.....	208	South Fork Tributary near Guymon.....	610
Verdigris River near.....	209-211	Spavinaw Creek near Sycamore.....	262
Oologah Lake near Oologah.....	208	Special Networks and Programs.....	9
Optima Lake near Hardesty.....	375	Specific conductance, definition of.....	6
Organic mass, definition of.....	3	Sperry, Bird Creek near.....	237
Organisms, definition of.....	4	Spiro, Coal Creek near.....	501-509
Count/area, definition of.....	4	Spring River near Quapaw.....	253-255
Count/volume, definition of.....	5	Stage discharge relation, definition of.....	6
Osage County, ground-water levels in.....	621	Station numbers, definition of.....	8
Other data available.....	12	Stigler, Taloka Creek at.....	482-487
Overholser, Lake, near Oklahoma City.....	412	Taloka Creek Tributary near.....	488-490
		Taloka Creek near.....	491-497
Panama, Coal Creek near.....	585-594	Stillwater, Council Creek near.....	183
Holi-Tuska Creek near.....	595-604	Streamflow, definition of.....	6
Partial-record stations.....	609-610	Substrate, definition of.....	7
Partial-record stations, definition of...	5	Surface area, definition of.....	7
Particle size, definition of.....	5	Surficial bed material, definition of.....	7
Particle-size classification, definition of.....	5	Suspended, definition of.....	7
Pawnee, Black Bear Creek at.....	83-85	Sycamore, Spavinaw Creek near.....	262
Payne County, ground-water levels in.....	621-623	Tahlequah, Illinois River near.....	283-285
Peaceable Creek near Haileyville.....	345-354	Taloka Creek at Stigler.....	482-487
Percent composition, definition of.....	5	Tributary near Stigler.....	488-490
Perkins, Cimarron River at.....	168-182	near Stigler.....	491-497
Pesticide program, definition of.....	9	Taxonomy, definition of.....	7
Pesticides, definitions of.....	5	Tecumseh, Little River near.....	318
Phytoplankton, definition of.....	5	Temperature.....	14
Picocurie, definition of.....	5	Tenkiller Ferry Lake near Gore.....	289
Pine Creek near Higgins.....	610	Terms and abbreviations, definition of.....	2-8
Pittsburg County, ground-water levels in.	623	Tesequite Creek near Kenton.....	609
Plankton, definition of.....	5	Texas County, ground-water levels in.....	624
Polecat Creek below Heyburn Lake near Heyburn.....	201	Thunderbird, Lake, near Norman.....	312-314
Polychlorinated biphenyls, definition of.	5	Tiff City, MO, Elk River near.....	256
Ponca City, Arkansas River near.....	24-26	Time-weighted average, definition of.....	7
Kaw Lake near.....	23	Tonkawa, Salt Fork Arkansas River at.....	54-61
Poteau River near Fort Smith, AR.....	605-606	Tons per acre-foot, definition of.....	7
near Heavener.....	510-511	Tons per day, definition of.....	7
near Wister.....	535-537	Total coliform bacteria, definition of.....	2
Preacher Creek near Dover.....	609	Total load, definition of.....	8
Primary productivity, definition of.....	6	Tulsa, Arkansas River at.....	185-199
Publications on techniques of water resources investigations.....	15-16	Turkey Creek tributary near Goltry.....	609
Purcell, Canadian River at.....	309-310	Verdigris River, near Claremore.....	227-229
Walnut Creek at.....	311	near Inola.....	243-249
		near Lenapah.....	205-207
Quapaw, Spring River near.....	253-255	near Oologah.....	209-211
Ralston, Arkansas River at.....	67-82	Walls, Brazil Creek near.....	557-563
Ramona, Caney River near.....	220-226	Walnut Creek at Purcell.....	311
Red Oak Creek near Red Oak.....	525-533	Water analysis, definition of.....	13
Red Oak, Brazil Creek near.....	547-551	Temperature, definition of.....	13
Fourche Maline near.....	522-524	Water year, definition of.....	8
Red Oak Creek near.....	525-533	Watts, Illinois River near.....	277-279
Rock Creek near.....	552-556	Waynoka, Cimarron River near.....	119-126
Reservoirs. See lakes and reservoirs.		Weighted average, definition of.....	8
Robert S. Kerr Lock and Dam near Sallisaw.....	498-500	West Beaver Creek near Orlando.....	609
Rock Creek near Red Oak.....	552-556	West Fork Creek near Knowles.....	609
Rough Creek near Thomas.....	609	Wet mass, definition of.....	3
Runoff in inches, definition of.....	6	Wetumka, North Canadian near.....	429-441
Sallisaw, Robert S. Kerr Lock and Dam near.....	498-500	White Eagle, Salt Fork Arkansas River near...	65-66
Salt Creek near Okeene.....	127-137	Whitefield, Canadian River near.....	467-481
Sand Creek at Okesa.....	219	Wilburton, Fourche Maline near.....	512-521
near Cromwell.....	610	Williams, James Fork near.....	573-578
Sand Springs, Keystone Lake near.....	184	Winchester, Salt Fork Arkansas River near...	27
Sasakwa, Little River near.....	319-325	Wister, Caston Creek at.....	538-546
Sediment.....	13	Poteau River near.....	535-537
Sediment, definition of.....	6	Wister Lake near.....	534
Seiling, North Canadian River near.....	399-401	Wister Lake near Wister.....	534
Sequoyah County, ground-water levels in..	623	Wolco, Candy Creek near.....	235
Seward, Cottonwood Creek at.....	154-162	Wolf Creek near Fort Supply.....	388
Short, Little Lee Creek near.....	607-608	Woods County, ground-water levels in.....	624
Skeleton Creek near Lovell.....	165-167	Woodward County, ground-water levels in.....	625
		Woodward, North Canadian River at.....	389-398
		Worley Creek near Tuttle.....	609
		WRD, definition of.....	8
		WSP, definition of.....	8

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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